Wetland Delineation Report

Master Plan Update Improvements Seattle-Tacoma International Airport



Parametrix, Inc.

December 2000

FINAL

WETLAND DELINEATION REPORT MASTER PLAN UPDATE IMPROVEMENTS SEATTLE-TACOMA INTERNATIONAL AIRPORT

Prepared for

PORT OF SEATTLE

Seattle-Tacoma International Airport P.O. Box 68727 Seattle, WA 98168

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EXECUTIVE SUMMARY

Parametrix, Inc. conducted a detailed wetland investigation of the Seattle-Tacoma International Airport (STIA) Master Plan Update improvement sites. The improvement sites are owned by the Port of Seattle (Port) and located in the cities of SeaTac and Des Moines in King County, Washington. This report describes the wetlands located within the study area and updates previous wetland studies conducted for the Master Plan Update improvements.

Wetland delineation followed methods outlined in the Washington State Wetland Identification and Delineation Manual (Washington Department of Ecology [Ecology] 1997) and the U.S. Army Corps of Engineers Wetland Delineation Manual (Environmental Laboratory 1987). Where applicable, farmed wetland and prior converted cropland were identified as defined by the Food Security Act of 1985 and other regulatory guidelines.

A total of 117 wetlands, ranging in size from 0.01 to over 35 acres, were identified in the study area. They include palustrine forested, scrub-shrub, emergent, and open-water wetland habitat. Ten of these wetlands are identified as farmed wetlands. Two ponds and eight drainage channels within the study area are classified as Other Waters of the U.S.

In addition to wetland studies completed at STIA wetlands were delineated at a 65-acre site located in the city of Auburn, Washington. This site is owned by the Port and is the location of an off-site mitigation project planned as mitigation for the wildlife habitat impacts of Master Plan Update improvements.

The U.S. Army Corps of Engineers (ACOE) made site visits to confirm these wetland determination and boundary delineations between July 1998 and November 2000. Modifications to delineated wetlands that were requested by ACOE during those site visits have been made and are reflected in the mapping and analysis presented in this report.

The findings of this report will be used to determine wetland impacts and mitigation requirements for the Master Plan Update improvements, as presented in a Wetland Functional Assessment and Impact Analysis Report (Parametrix 2000a) and Natural Resource Mitigation Plan (Parametrix 2000b).

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¹ As described in the Natural Resource Mitigation Plan (Parametrix 2000b), non-habitat impacts are mitigated on-site at STIA.

1. INTRODUCTION

1.1 PURPOSE OF REPORT

The Port of Seattle (Port) has updated the Master Plan for Seattle-Tacoma International Airport (STIA); the Plan includes construction of a new third runway and expansion of airport support facilities. This report documents the findings of wetland delineation studies conducted to identify and map wetlands on approximately 4 square miles of Port-owned property near STIA that could be affected by airport expansion. This report describes wetlands located within the study area, and updates previous wetland studies undertaken to support the Master Plan Update improvements. This information is used to support a wetlands impact assessment, an evaluation of wetland functions, and a wetland mitigation plan. The information is also required to obtain Clean Water Act (CWA) Section 404 and Section 401 approval from the U.S. Army Corps of Engineers (ACOE) and the Washington Department of Ecology (Ecology), respectively.

The Port will construct a wetland mitigation project on 65 acres of Port-owned property in the City of Auburn, Washington. The wetland mitigation is planned as off-site mitigation to partially compensate for wetlands filled by Master Plan Update improvements constructed at the STIA. A report describing the delineation of jurisdictional wetlands on this 65-acre property is attached in Appendix A.

1.2 STUDY AREA

STIA is located in the Cities of SeaTac and Des Moines, in King County, Washington (Figure 1). The study area includes STIA, the surrounding Port-owned property, and privately owned property that is to be acquired to accommodate proposed Master Plan Update improvements. The study area is generally bounded by State Route (SR) 99 to the east, South 140th Street to the north, SR 509 and Des Moines Memorial Drive to the west, and South 216th Street to the south. The study area consists of the following general areas (Figure 2):

- The North Employee Parking Lot Area is located between SR 518 and South 146th Street and between 16th Avenue South and 22nd Avenue South. Wetlands in this area are not impacted by Master Plan Update improvements.
- The Runway Safety Area Extension is located north of the existing airport runways and south of SR 518. The Port will modify portions of this area to provide runway safety areas (RSAs) for the existing runways to meet current Federal Aviation Administration (FAA) standards.
- The Third Runway Project Area is located west of the existing airport runways, portions
 of which would be affected by third runway construction and other associated facilities,
 including stormwater management facilities, construction equipment staging, security, and
 emergency access roads. This area is further divided into four sub-areas:
 - The north airfield, located northwest of the existing runways and South 154th Street
 - The west airfield, located just west of the existing runways

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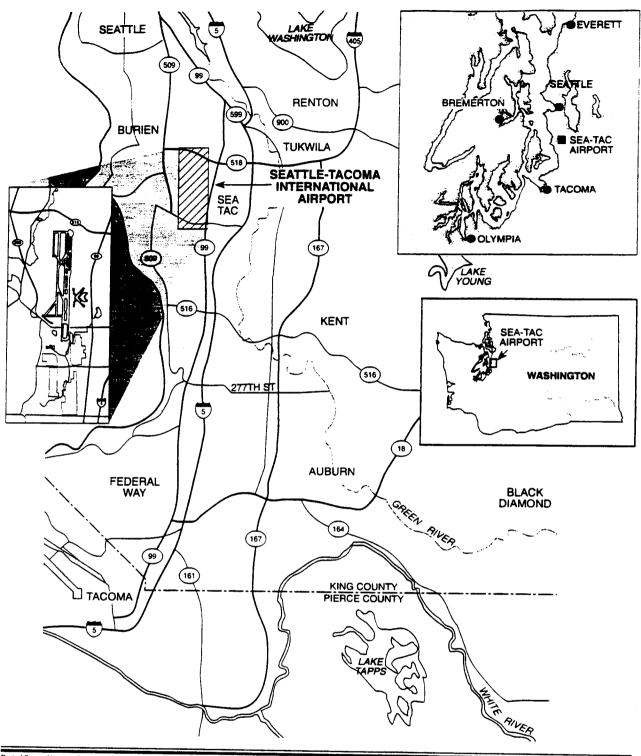
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- The west acquisition area, a residential area located between 12th Avenue South and Des Moines Memorial Drive or SR 509
- <u>Vacca Farm</u>, located south of Lora Lake, between Des Moines Memorial Drive and 12th Avenue South
- Borrow Areas 1, 3, and 4 are generally located south of the airport. Borrow Areas 1 and 3 are located between 24th Avenue South and 15th Avenue South, and between South 200th Street and South 216th Street (see Figure 2). Borrow Area 4 is located north of South 200th Street and west of 15th Avenue South. These areas may be excavated as a source of fill material to construct the runway embankment. Borrow Area 4 contains no wetlands, as verified by ACOE; therefore, it is not discussed further in this report.
- The Tyee Valley Golf Course is located south of the airport between South 188th Street and South 200th Street and between Des Moines Memorial Drive and 20th Avenue South. Existing wetlands on the Tyee Valley Golf Course are being considered for on-site wetland mitigation to support Master Plan Update improvements.
- The South Aviation Support Area (SASA) is located southeast of the airport, between 20th and 28th Avenue South, and north of South 200th Street. The SASA site includes the eastern portion of Tyee Valley Golf Course. This area will be used to construct aircraft maintenance and air cargo facilities.
- The South Aviation Support Area Detention Pond is located southeast of the airport, between the SASA and South 188th Street. Portions of this vacant land adjacent will be used for the stormwater management facilities required for the SASA. A new electrical substation for the airport is also proposed for this area.
- Industrial Waste System (IWS) Lagoon 3 Area is located southeast of the airport, south of South 188th Street and east of 16th Avenue South. The IWS lagoon system is expanding to meet treatment requirements of the Port's NPDES permit.
- The Auburn Wetland Mitigation Site is located in northeast Auburn, south of South 277th Street, east of Auburn Way, and west of the Green River. The evaluation of this site is described in Appendix A.

1.3 WETLAND JURISDICTION

Pursuant to the CWA and through the Section 404 permitting process, ACOE has responsibility and authority to regulate the discharge of dredged or fill material into waters of the United States, including wetlands (Federal Register 1986). Under these regulations, wetlands are defined as those "areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal conditions do support, a prevalence of vegetation typically adapted for life in saturated soil." The specific methods for determining wetland versus non-wetland areas are described in Section 3.

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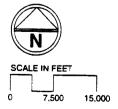
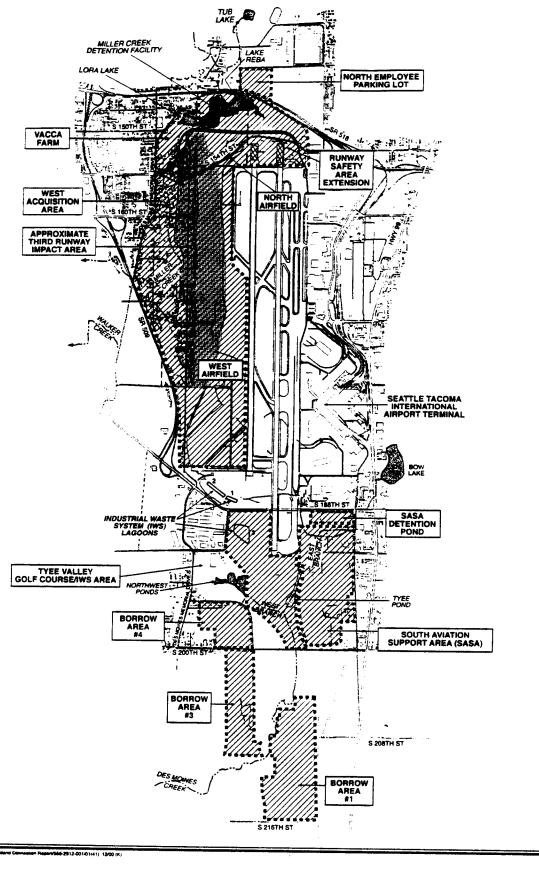


Figure 1 Location of Seattle-Tacoma International Airport

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Figure 2 Wetland Study Area for the Master Plan Update at STIA

2. METHODS

The wetland investigation included a review of existing reports, inventories, and historic aerial photographs and a complete field investigation following federal and state requirements for identifying wetlands.

2.1 LITERATURE REVIEW

Information on the project area was reviewed prior to fieldwork to identify vegetation, topography patterns, soils, streams, and other natural resources in the project area. Other wetland investigations that have been completed in the study area were also reviewed. Documents reviewed included the following:

- Seattle-Tacoma International Airport Master Plan Update Improvement Final Environmental Impact Statement, Appendix H-A: Jurisdictional Wetland Delineation (FAA 1995)
- Port of Seattle Des Moines Creek Technology Campus Draft Environmental Impact Statement (CH2M Hill and Associated Firms 1995)
- South Aviation Support Area Final Environmental Impact Statement (FAA 1994)
- U.S. Geological Service (USGS) Survey, 7.5 Minute Topographic Series Des Moines, Washington, Quadrangle (Photo-revised 1995)
- National Wetland Inventory Map. Des Moines, Washington, Quadrangle (U.S. Fish and Wildlife Service [USFWS] 1987)
- King County Sensitive Areas Map Folio (King County 1990a)
- King County Wetland Inventory (King County 1990b)
- Port of Seattle Wetlands Inventory (Butler and Associates and Sheldon and Associates 1992)

2.2 WETLAND DELINEATION

Field investigations for wetlands were completed between March 1998 and October 2000. During these site visits, the study area was inspected for wetland characteristics and surface water drainage features.

Wetlands were identified and delineated in the study area using the routine determination method outlined in the Washington State Wetland Identification and Delineation Manual (Ecology 1997) and the U.S. Army Corps of Engineers Wetland Delineation Manual (Environmental Laboratory 1987). The delineation incorporated the following regulatory guidance letters and memoranda: ACOE Regulatory Guidance Letters 82-2, 86-9, and 90-7; ACOE 3-92 Memorandum; ACOE, Seattle District, 5-94 Public Notice; and Ecology, 3/95 Public Notice.

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To be considered a wetland, under normal circumstances an area must have hydrophytic (wetland) vegetation, hydric soils, and wetland hydrology (Ecology 1997; Environmental Laboratory 1987). Areas that do not support indicators of these parameters are generally not regulated as wetlands.

Wetland determinations were made by evaluating vegetation, soil, and hydrologic conditions throughout the study area. These data were collected at sampling locations (data plots) that were established in potential wetlands and adjacent areas (Appendix B). For comparison purposes, additional data plots were established in adjacent upland areas to document differences in vegetation, soil, and hydrology. Specific methods used to record vegetation, soil, and hydrology data are described below.

Once an area was determined to be wetland, the boundary between wetland and upland areas was established by determining where wetland parameters were present or absent. These areas were marked with survey flagging that was sequentially lettered and numbered. A professional surveyor then surveyed and flag-marked the wetland boundaries.

2.2.1 Hydrology

Wetlands occur where soil is saturated or soil inundation is present; therefore, water must be present for wetlands to exist. However, water need not be present in wetlands throughout the year. An area is considered to have wetland hydrology when soils are inundated or saturated for at least 12.5 percent of the growing season (typically about 14 consecutive days of inundation during the February to mid-November period).

To determine if wetland hydrology was present, project staff recorded and described these observations of wetland hydrology and wetland hydrology indicators. The most reliable indicators of wetland hydrology are surface inundation or saturation within 12 inches of the soil surface, and soil pots were dug at each data plot to determine the depth to saturated soils. Other wetland hydrology indicators include oxidized root channels, wetland drainage patterns, watermarks on vegetation or other fixed objects, and water-stained leaves; the presence or absence of these indicators was also noted.

Direct observations of hydrology, such as ponding and soil saturation, may not be possible during the dry summer season, or they may be misleading during or following periods of heavy rain. However, under most circumstances, wetland hydrology indicators are present and observable throughout the year. When Parametrix staff conducted delineations during the dry season, wetland hydrology was inferred from the presence of hydric soil, hydrophytic vegetation, and wetland indicators such as oxidized root zones, water marks, and wetland drainage patterns. During the nongrowing season or other exceptionally wet periods, temporarily saturated soils were sometimes found that lacked hydrophytic vegetation or hydric soil indicators, and such areas were not considered wetland.

2.2.2 Soils

Hydric soils develop when soils are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part (10 inches) of the soil profile. By definition, organic soils (peats and mucks) are hydric soils (Ecology 1997; Environmental

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December 11, 2000 556-2912-001 (41) Laboratory 1987; USDA 1991). In mineral soils, soil colors become distinctive under anaerobic conditions: low-chroma colors are typical for the soil matrix, and mottles of bright color form within the matrix. These color patterns are the most commonly used indicators of hydric soil conditions. Other important indicators include high organic matter content in the surface horizon, reduced-sulfur odors, and staining by organic matter in the subsurface horizons.

Project staff examined soils at each data plot by digging sample pits to a depth of 18 inches or more to observe soil properties and determine hydrologic conditions. Using the Munsell color chart they determined soil colors in the field (Greytag MacBeth 1998). Soil texture, the presence of sulfidic odor, and the occurrence of oxidized rhizospheres were determined in the field.

2.2.3 Vegetation

Hydrophytic (wetland) vegetation is specially adapted for life in saturated or anaerobic conditions. To determine the presence of hydrophytic vegetation, plants species within each vegetation strata (tree, sapling/shrub, and herb), and their percent coverage at each data plot, were recorded on data sheets. Each species was then assigned an indicator status using the National List of Plant Species that Occur in Wetlands: Northwest - Region IX and its 1993 supplement (Reed 1988, 1993, hereafter cited as The Region IX List). The species indicator status defines the relative frequency with which the species occurs in jurisdictional wetlands (Table 1). All scientific and common plant names used in their delineation are consistent with Flora of the Pacific Northwest (Hitchcock and Cronquist 1991).

Table 1. Key to plant indicator status.

Category	Abbreviation ²	Definition
Obligate Wetland Plants	OBL	Plants that almost always (>99% of the time) occur in wetlands, but which may rarely (<1% of the time) occur in non-wetlands
Facultative Wetland Plants	FACW	Plants that often (67 to 99% of the time) occur in wetlands, but sometimes (1 to 33% of the time) occur in non-wetlands
Facultative Plants	FAC	Plants with a similar likelihood (33 to 67% of the time) of occurring in both wetlands and non-wetlands
Facultative Upland Plants	FACU	Plants that sometimes (1 to 33% of the time) occur in wetlands, but occur more often (67 to 99% of the time) in non-wetlands
Upland Plants	UPL	Plants that rarely (<1% of the time) occur in wetlands, and almost always (>99% of the time) occur in non-wetlands
Not Listed	NL	Plants not on the wetland indicator list (assumed to be non-wetland plants)

Source: Reed (1988, 1993).

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Within the FACW, FAC, and FACU categories, a plus (+) or a minus (-) sign specifies a relatively higher or lower probability, respectively, of a plant occurring in wetlands. Plants with a FAC- indicator status are not wetland plants.

To meet the hydrophytic vegetation criteria, more than 50 percent of the dominant² plant species within each stratum must have an indicator status of obligate wetland, facultative wetland, and/or facultative.

For a variety of reasons, non-wetland plants may sometimes occur in areas that contain wetland soils and experience wetland hydrology. For this reason, the ACOE Seattle District may determine areas dominated by facultative upland plants to be wetland when the presence of wetland hydrology and hydric soils are clearly present (ACOE 1994).

2.2.4 Disturbed Areas

Disturbed wetlands are wetlands that have been modified by human activity (such as vegetation clearing, grading, or filling) or by natural events. In disturbed wetlands, one or more of the three wetland parameters may be absent because of recent alteration. To determine whether a disturbed area was wetland, both on-site observations and off-site research (i.e., evaluation of aerial photographs) were used.

Project staff reviewed historic aerial photographs to identify the timing and nature of any disturbance, and to establish pre-disturbance site conditions. In areas that were cleared of vegetation, or where the vegetation was maintained as lawn or with landscaping plants, the wetland determinations were based on the presence of hydric soils and wetland hydrologic indicators. Fill material and disturbed soil may contain unweathered materials that have characteristics of hydric soil, or may exhibit hydric soil characteristics that formed at the fill source location. In fill areas, soils were examined to determine whether hydric characteristics occurred in place, or at their original location. Where it appeared that hydric soil characteristics were remnant from the source location, wetland determinations were based on the presence of hydrophytic vegetation and wetland hydrologic indicators.

2.3 OTHER WATERS OF THE U.S.

ACOE has jurisdiction over wetlands and other Waters of the U.S. under the CWA. These other Waters of the U.S. include, but are not limited to, perennial and intermittent streams, drainages, swales, and, under certain circumstances, constructed drainage ditches. Within the study site, water conveyances that had defined bed and bank, conveyed naturally occurring surface water, and did not meet the federal definition of a wetland were identified, flagged, and surveyed by Parametrix, Inc. as Waters of the U.S. These areas were evaluated by ACOE as potential "Waters of the U.S."

2.4 FARMED WETLANDS AND PRIOR CONVERTED CROPLAND

Parametrix staff conducted a partial review of the farming history on several parcels of farmland in the Port of Seattle's acquisition area (referred to as Vacca Farm) to classify these areas as upland,

² Dominant species are those species in each vegetation layer (stratum) that, when ranked in descending order of abundance and cumulatively totaled, immediately exceed 50 percent cover of the total dominance measure for that stratum, plus any species that comprises at least 20 percent cover.

farmed wetland (FW), prior converted (PC) cropland, or wetland. This review included an evaluation of aerial photographs, field studies during 1998 and 1999, discussions with local landowners, and contacting the USDA. The Vacca Farm site was visited on several occasions throughout the rainy seasons of 1998 and 1999 to determine the extent of inundation and saturation. Areas within the Vacca Farm site that satisfy the criteria for farmed wetlands were staked and surveyed in the field.

The Food Security Act (FSA, Sections 514.22a,d; USDA 1994) defines PC croplands as wetlands that were drained (or otherwise manipulated) for agricultural production and where an agricultural commodity was planted or produced prior to December 23, 1985. These areas are not subject to federal regulation under the CWA jurisdiction provided that:

- 1. The land has been in active agriculture since December 23, 1985, and that agricultural use has not been abandoned³.
- 2. Vegetation and hydrology have been extensively and permanently altered such that there is no prolonged (greater than 14 consecutive days) inundation during the growing season.

Some areas that had been converted to agricultural production prior to December 23, 1985 are considered farmed wetlands. FWs are used for agricultural purposes but have prolonged inundation during the growing season and are therefore considered wetlands. Areas that qualify as FWs have:

- 1. Land that has been in active agriculture since December 23, 1985 and agricultural use has not been abandoned.
- 2. At least a 50 percent chance of being seasonally inundated for at least 15 consecutive days or 10 percent of the growing season, whichever is less.

The presence of PC and FW at the Vacca Farm site was determined from field studies, evaluation of past agricultural uses, and evaluation of inundation of farmland within the study area. Agricultural uses and inundation were evaluated using historic aerial photographs (taken between May 1965 and April 1995) available at the University of Washington library. Based on this review, PC and FW determinations were made (Appendix C).

³ Agricultural lands are considered abandoned when cropping, forage production, or management has ceased for 5 consecutive years.

3. RESULTS

The 117 wetlands identified in the study area are described below. They include palustrine forested, scrub-shrub, emergent, and open-water wetland habitat. Additionally, there are eight drainage channels (including Miller and Des Moines Creeks) and two small ponds within the study area that are classified as Other Waters of the U.S. Six of the drainage channels convey natural runoff to Miller and Des Moines Creeks.

3.1 GENERAL SITE DESCRIPTION

3.1.1 Streams and Surface Hydrology

The study area includes portions of the Miller Creek and Des Moines Creek watersheds (Figure 3)⁴. Hydrologic features within the study area include small lakes, streams, groundwater seeps, and many seasonally to permanently saturated to permanently flooded depressions.

3.1.1.1 Miller Creek Watershed

The northern part of the study area lies in the Miller Creek watershed, which covers approximately 8.1 square miles of predominantly urban land. The upper reaches north of SR 518 drain a gently rolling plateau between the Duwamish/Green River Valley and Puget Sound. South of SR 518 the stream flows though the north airfield area, then through the residential neighborhood west of the airfield, passing through a series of roadway culverts throughout this reach. In its lower reaches, the stream flows in an incised ravine, which eroded through glacial material before draining to Puget Sound. A relatively small portion of STIA drains to Miller Creek, including the north end of the runways and air cargo areas north of the terminal.

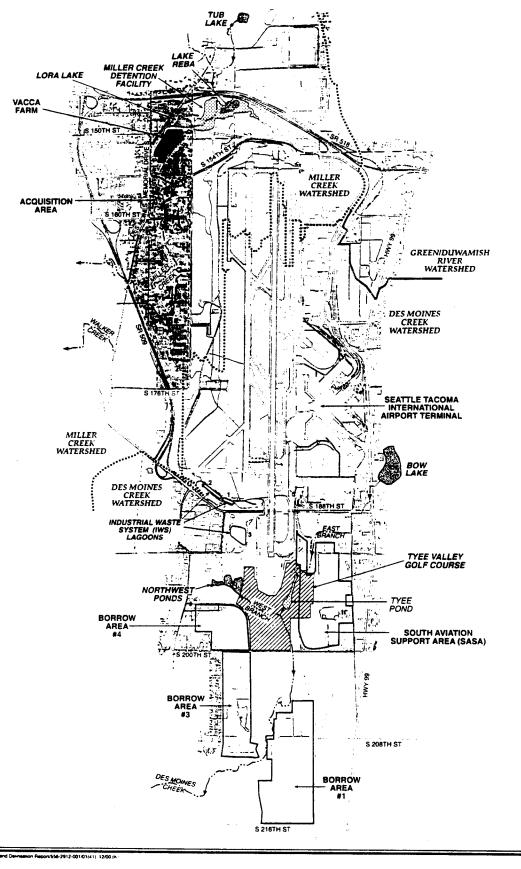
Tub Lake, the Miller Creek Detention Facility, and Lora Lake drain to Miller Creek. Tub Lake, located north of the study area, is surrounded by an extensive wetland system. The Miller Creek Detention Facility, located just south of SR 518, is a constructed stormwater detention facility that includes extensive wetlands. The facility receives stormwater runoff via conveyance systems from SR 518, South 154th Street, and STIA. Lora Lake is located west and southwest of the Miller Creek Detention Facility. Lora Lake was excavated from a peat wetland and receives its water from groundwater seeps. During flood events, the Miller Creek floodplain extends across the lake.

Two small ephemeral streams originate in the forested area west of the airfield and flow westward to Miller Creek. They are located in shallow ravines and are associated with small wetlands. Waters from these streams combine along the east side of 12th Avenue South in a roadside ditch and then enter a relatively large wetland system between South 160th Street and South 166th Street.

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⁴ While a water tower located in the Gilliam Creek watershed will be replaced, no wetlands occur on the paved site where this project will occur.



Approximate Aquisition Area

Approximate Aquisition Area

Water Features

Water Features

Typee Valley
Golf Course

Vacca Farm

Current Watershed Boundaires

Print Stream

Figure 3 Locations of Existing Water Features, Stormwater Facilities, Watershed Boundaries, and Aquisition Area of STIA

3.1.1.2 Des Moines Creek Watershed

The southern part of the study area lies in the Des Moines Creek watershed, which covers 5.9 square miles of predominantly urban area. Des Moines Creek drains most of the airport, the City of SeaTac commercial area along International Boulevard (SR 99), and residential areas in the remainder of the basin.

The east branch of Des Moines Creek originates at Bow Lake and is conveyed in culverts and an artificial stream channel excavated between parking lots for about 4,000 feet. The stream then flows to the northeast corner of Tyee Valley Golf Course where it is adjacent to a hillside seep wetland (Wetland 52). Finally, the stream flows into the Tyee Regional Detention Pond, which is connected to the west branch of Des Moines Creek by a 400-foot culvert.

The west branch of Des Moines Creek originates southwest of the airport and is fed by seeps and stormwater runoff. The intermittent stream flows into the Northwest Ponds, located just northwest of the Tyee Valley Golf Course, then through the golf course to its confluence with the east branch. The main stem of the stream flows south in a narrow, deeply-incised channel to Puget Sound. Borrow Areas 1 and 3 occur east and west (respectively) of this ravine.

3.1.2 Wetlands

A total of 117 wetlands occur in the project area (Figures 4 and 5). Wetlands within the study area are associated with lakes, streams, groundwater seeps, and seasonally saturated to permanently flooded depressions.

The wetlands in the RSA expansion are part of the Lake Reba wetland complex. Most of the wetlands in this area are separated from each other by fill associated with abandoned streets and emergency access roads. Culverts convey water generally west between wetlands. The Miller Creek Detention Facility is located in this group of wetlands, as is Lora Lake. Miller Creek also flows through the wetland complex. Several of these wetlands are seasonally inundated.

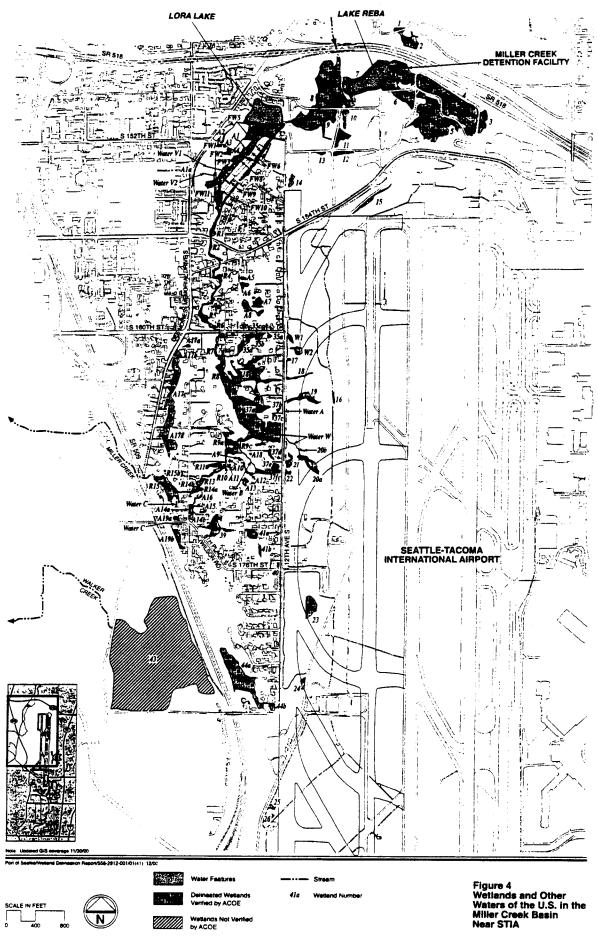
Several small wetlands occur along the Miller Creek riparian corridor within the west acquisition area. They receive surface runoff and groundwater from surrounding hillslopes as well as occasional overbank flow from the stream. A larger wetland in the west acquisition area that collects water from several hillside drainages is also connected to Miller Creek. Portions of this wetland are seasonally or permanently saturated.

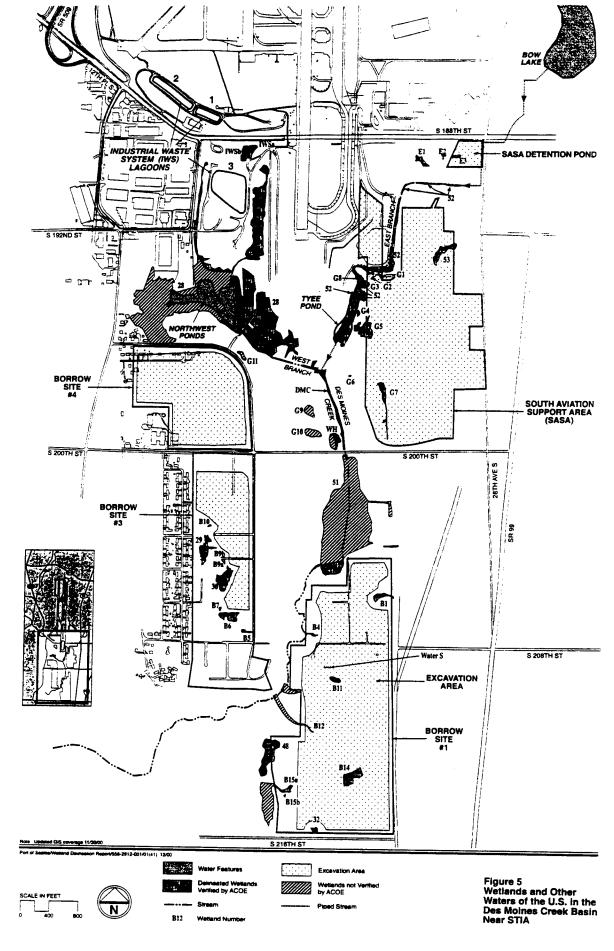
Several wetlands are associated with groundwater seeps. They occur in steep ravines that are fed by hillside seeps (on slopes in the west airfield area and surrounding Lake Reba) or at the toe of steep slopes (in the west acquisition and borrow source areas). Many of these wetlands are perennially saturated. Several wetlands at the north and west side of Runway 16R appear to be fed from seeps located near runway fill.

The remaining wetlands are isolated depressions or depressions along drainage swales that collect sufficient runoff to support hydrophytic vegetation. The north and west airfields have several depressions with compact soils that pool water during the wet season. Many of the depressional

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wetlands in the west acquisition area were historically part of continuous wetland systems, but these systems have been segmented by fill for road and building construction.

In the SASA, IWS, and borrow areas, several seasonally saturated, closed depressions and permanently saturated riparian and slope wetlands were identified. Generally, these wetlands have been impacted by various developments, including the Tyee Valley Golf Course, parking lots, residential development, and/or urban refuse and fill.

During field investigations that took place between March 1998 and November 2000, hydrology in the wetlands varied substantially. Many areas that were inundated or saturated during the early part of the 1998 growing season were dry to 18 inches or more below the soil surface during the summer. When Parametrix staff conducted delineations during the dry season, wetland hydrology was inferred from the presence of hydric soil, hydrophytic vegetation, and wetland indicators such as oxidized root zones, water marks, and wetland drainage patterns.

3.1.3 **Soils**

The Soil Survey of the King County Area, Washington (Snyder et al. 1973) identifies only soil series in the southernmost study area; the Soil Conservation Service (SCS) typically does not map soils in urban areas. The SCS identified six different soil series in the Borrow Areas: Alderwood gravelly sandy loam; Arents Alderwood material; Bellingham silt loam; Everett gravelly sandy loam; Indianola loamy fine sand; and Norma sandy loam. Only the Bellingham and Norma series are identified as hydric soils (USDA 1991); however, inclusions of hydric soils within the other soil series often occur.

The most common upland soil in the project area is generally a brown (10YR 3/3) loam over light brown (10YR 4/3) sandy loam. They most closely match the SCS description of Arents composed of Alderwood parent material. Because of a lack of hydric indicators, these soils are considered to be non-hydric.

The most common hydric soil in the project area generally has a very dark brown (10YR 3/2) to black (10YR 2/1) loam to sandy loam surface horizon overlying grayish brown (2.5Y 5/2) and gray (2.5Y 5/1) gravelly sandy loam. In places the subsoils are dark grayish brown (2.5Y 4/2) or very dark grayish brown (2.5YR 3/2). Distinct and prominent mottles are typically present in the subsurface horizons.

Very dark grayish brown (10YR 3/2) to black (10YR 2/1) loam and silt loam soils are also a common hydric soil in the project area. Mottles are typically present in the subsoils. These soils are most common in the west acquisition area and the borrow areas.

Hydric soils with gleyed colors occur in places throughout the study area. Gleyed horizons typically occur in the subsoil, are sand or silt loam in texture, and range from dark greenish gray (5G 4/1) to greenish gray (5BG 5/1) in color.

Within the riparian wetlands, the soils are hydric with a high organic content. Surface and subsoil colors are black (10YR 2/1), very dark gray (10YR 3/1), gray (10YR 5/1), and very dark brown

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(10YR 2/2). Textures range from sand to sandy clay loam, with lenses of muck occurring in places. Mottles are typically present in the subsurface horizons.

Organic soils occur within most of the larger wetlands. Two types of organic soils were found. The first is black (10YR 2/1) or very dark brown (10YR 2/2) muck. In some places, this soil is overlain by a layer of black loam. The second organic soil is a black or very dark brown muck or mucky peat overlying gleyed mineral subsoils.

3.1.4 Vegetation

A variety of upland and wetland plant communities occur in the study area. The more prevalent types are described below. Common and scientific names of plant species found in the study area are listed in Table 2.

3.1.4.1 Forested Wetland

Mixed deciduous forested wetland occurs throughout the study area. The overstory typically contains a mixture of red alder, black cottonwood, western redcedar, Pacific willow, and Sitka willow. The undergrowth varies considerably, depending on the wetland moisture regime and the density of the forest canopy. The most common shrubs include Himalayan blackberry, willow, salmonberry, and Douglas spirea. Common herb species include creeping buttercup, bentgrass, soft rush, lady fern, giant and field horsetail, and reed canarygrass.

Willow-dominated forested wetlands are also common. Sitka and Pacific willow dominate these communities. Red alder, black cottonwood, and Scouler willow are associated canopy species, with willow shrubs dominating the understory. Herb species that grow under the thick canopy include tall mannagrass, small-fruited bulrush, field and giant horsetail, lady fern, creeping buttercup, watercress, American brooklime, and soft rush.

3.1.4.2 Shrub Wetland

Small areas of shrub wetland communities occur primarily in the west acquisition area and the borrow areas. The dominant vegetation is salmonberry, Himalayan blackberry, and Pacific and Sitka willow. Common herbaceous plants include common velvet-grass, soft rush, bentgrass, and fireweed.

3.1.4.3 Emergent Wetland

Several emergent wetland plant communities occur in the project area. These communities include monotypic stands of reed canarygrass, mowed lawns and a golf course consisting of various grasses and forbs, and small stands of cattail. The grass-dominated wetlands generally occur in shallow depressions with compact soils, and in association with groundwater seeps located in disturbed areas. Common species include lady fern, giant horsetail, field horsetail, soft rush, fireweed, and a variety of grasses such as common velvet-grass, bentgrass, and reed canarygrass.

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Table 2. Plant species observed in the STIA Master Plan Update study area.

Common Name	Scientific Name	Indicator Status	Non-Native (x)
TREES			
big-leaf maple	Acer macrophyllum	FACU	
birch	Betula sp.	NL	x
bitter cherry	Prunus emarginata	FACU	
black cottonwood	Populus balsamifera ssp. trichocarpa	FAC	
Douglas fir	Pseudotsuga menziesii	FACU	
European mountain-ash	Sorbus aucuparia	UPL	x
hazelnut	Corylus cornuta	FACU	
horse chestnut	Aesculus hippocastanum	NL	x
Norway spruce	Picea abies	NL	x
Oregon ash	Fraxinus latifolia	FACW	
Pacific crabapple	Malus fusca	FACW	
Pacific madrone	Arbutus menziesii	NL	
paper birch	Betula papyrifera	FAC	
red alder	Alnus rubra	FAC	
Scouler willow	Salix scouleriana	FAC	
Sitka willow	Salix sitchensis	FACW	
sugar maple	Acer saccharinum	NL	x
western hemlock	Tsuga heterophvlla	FACU	
western redcedar	Thuja plicata	FAC	
willow	Salix sp.	FACW	
SHRUBS	•		
black hawthorn	Crataegus douglasii	FAC	
laurel cherry	Prunus laurocerasus	UPL	
current	Ribes sp.	FAC	
Douglas spirea	Spiraea douglasii	FACW	
English holly	Ilex aquifolium	FACU	x
evergreen blackberry	Rubus laciniatus	FACU+	x
hazelnut	Corylus cornuta	FACU	
Himalayan blackberry	Rubus discolor	FACU	x
Indian plum	Oemleria cerasiformis	FACU	x
Nootka rose	Rosa nutkana	FAC-	
ornamental cherry	Prunus sp.	NL	x
Pacific willow	Salix lucida	FACW+	
red alder	Alnus rubra	FAC	
red elderberry	Sambucus racemosa	FACU	
red-osier dogwood	Cornus stolonifera	FACW	
salal	Gaultheria shallon	FACU	
salmonberry	Rubus spectabilis	FAC+	

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Table 2. Plant species observed in the STIA Master Plan Update study area (continued).

Common Name	Scientific Name	Indicator Status	Non-Native (x)
Scots broom	Cynsus scoparius	UPL	x
vine maple	Acer circinatum	FAC-	
white poplar	Populus alba	FAC	x
willow	Salix sp.	FACW	
HERBS			
American brooklime	Veronica americana	OBL	
American vetch	Vicia americana	FAC	x
barnyard grass	Echinochloa crusgalli	FACW	x
bedstraw	Galium sp.	FACU	
bentgrass	Agrostis sp.	FAC	x
birdsfoot trefoil	Lotus corniculatus	FAC	x
bittersweet nightshade	Solanum dulcamara	FAC+	x
bluegrass	Poa sp.	FAC	x
bracken fern	Pteridium aquilinum	FACU	
broadleaf plantain	Plantago major	FACU+	x
Canada thistle	Cirsium arvense	FACU+	x
cattail	Typha latifolia	OBL	
cleavers bedstraw	Galium aparine	FACU	
clover	Trifolium sp.	FAC	
colonial bentgrass	Agrostis capillaris (tenuis)	FAC	x
common chickweed	Stellaria media	NL	x
common St. Johnswort	Hypericum perforatum	FAC	x
common tansy	Tanacetum vulgare	NL	x
common velvet-grass	Holcus lanatus	FAC	x
Cooley hedgenettle	Stachys cooleyae	FACW	
creeping bentgrass	Agrostis stolonifera	FAC	x
creeping buttercup	Ranunculus repens	FACW	x
curly dock	Rumex crispus	FAC	x
dagger-leaf rush	Juncus ensifolius	FACW	
dandelion	Taraxacum officinale	FACU	x
English daisy	Bellis perennis	NL	x
English ivy	Hedera helix	NL	x
fescue	Festuca sp.	NL	
field bindweed	Convolvulus arvensis	NL	x
field horsetail	Equisetum arvense	FAC	
fireweed	Epilobium ciliatum	FACW-	
geranium	Geranium robertianum	NL	x
giant horsetail	Equisetum telmateia	FACW	
giant mannagrass	Glyceria grandis	OBL	
impatiens	Impatiens sp.	NL	

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Table 2. Plant species observed in the STIA Master Plan Update study area (continued).

Common Name	Scientific Name	Indicator Status	Non-Native (x
Kentucky bluegrass	Poa pratensis	FAC	x
lady fern	Athyrium filix-femına	FAC+	
lanceleaf plantain	Plantago lanceolata	FAC	x
marsh horsetail	Equisetum palustre	FACW	
meadow fescue	Festuca pratensis	FACU+	x
morning glory	Convolvulus sp.	NL	
northern mannagrass	Glyceria borealis	OBL	
orchardgrass	Dactylis glomerata	FACU	x
perennial ryegrass	Lolium perenne	FACU	x
pineapple weed	Matricaria matricarioides	FACW	x
purple loosestrife	Lythrum salicaria	FACW+	x
quackgrass	Agropyron repens	FACU	x
red clover	Trifolium pratense	FACU	x
red fescue	Festuca rubra	FAC+	
redtop	Agrostis gigantea (alba)	FAC	x
reed canarygrass	Phalaris arundinacea	FACW	x
sawbeak sedge	Carex stipata	OBL	
self-heal	Prunella vulgaris	FACU-	x
skunk cabbage	Lysichiton americanum	OBL	
small bedstraw	Galium trifidum	FACW	
small-fruited bulrush	Scirpus microcarpus	OBL	
soft rush	Juncus effusus	FACW	
spotted cat's-ear	Hypochaeris radicata	FACU	x
stinging nettle	Urtica dioica	FAC+	
sweet vernalgrass	Anthoxanthum adoratum	FACU	x
sword fern	Polystichum munitum	FACU	
tall fescue	Festuca arundinacea	FAC-	x
tall mannagrass	Glyceria elata	FACW+	
thistle	Cirsium sp.	FACU	x
water parsley	Oenanthe sarmentosa	OBL	
western bitter-cress	Cardamine occidentalis	FACW+	
wheat brome	Bromus secalinus	NL	x
white clover	Trifolium repens	FACU+	x
lily-of-the-valley	Maianthemum dilatatum	FAC	
yellow iris	Iris pseudacorus	OBL	x

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3.1.4.4 Upland Forest

Mixed deciduous and coniferous forest occurs throughout the project area. Red alder, big-leaf mapie, western redcedar, Douglas fir, and black cottonwood are the most common tree species seen. Common shrubs include Indian plum, Himalayan blackberry, hazelnut, and English ivy. Creeping buttercup, sword fern, and bracken fern grow on the forest floor.

Douglas fir-dominated forest is found in portions of the borrow areas. Associated canopy species include big-leaf maple and western hemlock. The shrub layer is dominated by salal. Associated species include salmonberry, Himalayan blackberry, bracken fern, and Indian plum.

3.1.4.5 Upland Shrub Communities

Himalayan blackberry thickets occur throughout the study area in both upland and wetland locations, and blackberry is one of the most prevalent species in the project area. Relatively large thickets of Scots broom occur along unmowed edges of the airfield, in areas where houses have been removed, and along service roads.

3.1.4.6 Grassland

Much of the area north, west, and south of the airfield contains mowed grassland. Several small grassland areas are also located in the borrow areas. The most common species are sweet vernalgrass, bentgrass, perennial ryegrass, quackgrass, and white clover. In pastures in the west acquisition area, quackgrass and bluegrass are the dominant species. Tall fescue, thistle, dandelion, and perennial ryegrass also commonly occur. Large areas of mowed turf grasses occur on the Tyee Valley Golf Course and in residential lawns in the west acquisition area, and include ornamental trees, shrubs, and fruit trees.

3.2 WETLAND DESCRIPTIONS

One hundred and seventeen wetlands, two ponds, and ten channels (including Miller and Des Moines Creeks), were identified in the study area (Table 3; see Figures 4 and 5). Data collected at the wetlands are provided in Appendix B. Detailed maps and aerial photographs showing the location and extent of wetlands and the location of data plots are provided in Appendix D.

Table 3. Summary of wetland and Other Waters of the U.S. areas in the STIA Master Plan Update improvements area.

Wetland a	Classification b		Area (Acres)	Drainage Basin
North Employee Parking	Lot Area			
1	Forest		0.07	Miller
2	Forest		0.73	Miller
	Subtotal		0.80	
Runway Safety Area Exte	nsion			
3	Forest		0.56	Miller
4	Forest		5.00	Miller
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Table 3. Summary of wetland and Other Waters of the U.S. areas in the STIA Master Plan Update improvements area (continued).

Wetland a	Classification b	Area (Acres)	Drainage Basin
5	Forest/Scrub-Shrub	4.63	Milier
6	Scrub-Shrub	0.86	Miller
	Subtotal	11.05	
Third Runway Project	Агеа		
North Airfield			
<i>7</i> °	Forest/Open Water/Emergent	6.68	Miller
8	Scrub-Shrub/Emergent	4.95	Miller
9	Forest/ Emergent (40/60)	2.83	Miller
10	Scrub-Shrub	0.31	Miller
11	Forest/Emergent (80/20)	0.50	Miller
12	Forest/Emergent (20/80)	0.21	Miller
13	Emergent	0.05	Miller
14	Forest	0.19	Miller
West Airfield			
15	Emergent	0.28	Miller
16	Emergent	0.05	Miller
17	Emergent	0.02	Miller
18	Forest/Scrub-Shrub/Emergent (50/20/30)	3.56	Miller
19	Forest	0.56	Miller
20	Scrub-Shrub/Emergent (90/10)	0.57	Miller
21	Forest	0.22	Miller
22	Scrub-Shrub/Emergent (90/10)	0.06	Miller
23	Emergent	0.77	Miller
24	Emergent	0.14	Miller
25	Forest	0.06	Miller
26	Emergent	0.02	Miller
W1	Emergent	0.10	Miller
W2	Forest/Emergent (20/80)	0.22	Miller
	Other Waters of the U.S.	0.02	Miller
Vacca Farm Site			
FW1	Farmed Wetland	0.03	Miller
FW2	Farmed Wetland	0.09	Miller
FW3	Farmed Wetland	0.59	Miller
FW5	Farmed Wetland	0.08	Miller
FW6	Farmed Wetland	0.07	Miller
FW8	Farmed Wetland	0.03	Miller
FW9	Farmed Wetland	0.01	Miller
FW10	Farmed Wetland	0.02	Miller
FW11	Farmed Wetland	0.11	Miller

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Table 3. Summary of wetland and Other Waters of the U.S. areas in the STIA Master Plan Update improvements area (continued).

Wetland *	Classification b	Area (Acres)	Drainage Basin
West Acquisition Area			2
35a-d	Forest/Emergent (40/60)	0.67	Miller
37 a -f	Forest/Emergent (70/30)	5.73	Miller
39	Forest/Scrub-Shrub/Emergent (25/50/25)	0.90	Miller
40	Scrub-Shrub	0.03	Miller
41a and b	Emergent/Open Water	0.44	Miller
44a and b	Forest/Scrub-Shrub (70/30)	3.08	Miller
A1	Forest/Scrub-Shrub/Emergent (15/15/70)	4.66	Miller
A2	Scrub-Shrub	0.05	Miller
A 3	Scrub-Shrub	0.01	Miller
A4	Scrub-Shrub	0.03	Miller
A 5	Emergent	0.03	Miller
A 6	Forest	0.16	Miller
A7	Forest	0.30	Miller
A 8	Forest/Scrub-Shrub (30/70)	0.38	Miller
A9	Scrub-Shrub	0.04	Miller
A10	Scrub-Shrub	0.01	Miller
A11	Scrub-Shrub	0.02	Miller
A12	Scrub-Shrub	0.11	Miller
A13	Forest	0.12	Miller
A14a and b	Forest/Scrub-Shrub/Emergent (50/25/25)	0.19	Miller
A15	Emergent	0.04	Miller
A16	Scrub-Shrub/Emergent (20/80)	0.09	Miller
A17	Forest/Scrub-Shrub/Emergent (20/80)	2.66	Miller
A18	Scrub-Shrub	0.01	Miller
A19	Emergent	0.04	Miller
Lora Lake	Open Water	3.06	Miller
	Other Waters of the U.S.	0.33	Miller
Riparian Wetlands			
R1	Emergent	0.17	Miller
R2	Scrub-Shrub/Emergent (70/30)	0.12	Miller
R3	Scrub-Shrub	0.02	Miller
R4	Emergent	0.11	Miller
R4b	Forest/Emergent (25/75)	0.11	Miller
R 5	Emergent	0.05	Miller
R5b	Forest/Emergent (25/75)	0.07	Miller
R6	Forest/Emergent (25/75)	0.21	Miller
R6b	Emergent	0.09	Miller
R 7	Forest/Emergent (25/75)	0.04	Miller
R7a	Emergent	0.04	Miller

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Table 3. Summary of wetland and Other Waters of the U.S. areas in the STIA Master Plan Update improvements area (continued).

	Wetland ^a	Classification b	Area (Acres)	Drainage Basin
	R8	Scrub-Shrub/Emergent (40/60)	0.40	Miller
	R9	Forest	0.38	Miller
	R9a	Forest/Scrub-Shrub/Emergent (25/50/25)	0.74	Miller
	R10	Scrub-Shrub	0.04	Miller
	R11	Emergent	0.42	Miller
	R12	Forest	0.03	Miller
	R13	Emergent	0.12	Miller
	R14a	Scrub-Shrub/Emergent (25/27)	0.13	Miller
	R14b	Emergent	0.08	Miller
	R15a	Forest/Scrub-Shrub/Emergent (25/65/10)	0.79	Miller
	R15b	Forest/Emergent (25/75)	0.25	Miller
	RI7	Forest	0.31	Miller
		Subtotal	51.33	
Borrow Ar	ea 1			
	32	Emergent	0.09	Des Moines
	48	Forest/Emergent (20/80)	1.58	Des Moines
	B 1	Forest/Scrub-Shrub (30/70)	0.27	Des Moines
	B4	Scrub-Shrub	0.07	Des Moines
	B11	Emergent	0.18	Des Moines
	B12 ^d	Scrub-Shrub	0.63	Des Moines
	B14	Scrub-Shrub/Emergent (70/30)	0.78	Des Moines
	B15 a and b d	Scrub-Shrub	2.05	Des Moines
		Other Waters of U.S.	0.01	Des Moines
		Subtotal	5.66	
Borrow Are	ea 3			
	29	Forest	0.74	Des Moines
	30	Forest/Scrub-Shrub (80/20)	0.88	Des Moines
	B 5	Forest/Scrub-Shrub (40/60)	0.08	Des Moines
	B 6	Forest/Scrub-Shrub (30/70)	0.55	Des Moines
	B 7	Forest/Scrub-Shrub (30/70)	0.03	Des Moines
	B9	Forest	0.05	Des Moines
	B10	Forest	0.02	Des Moines
		Subtotal	2.35	
South Aviat		ea (SASA)/Tyee Valley Golf Course		
	28 ^d	Scrub-Shrub/Emergent/Open Water (50/30/20)	35.45	Des Moines
	52	Forest/Scrub-Shrub/Emergent (80/20/20)	4.70	Des Moines
	53	Forest	0.60	Des Moines
	G1	Emergent	0.05	Des Moines
	G2	Emergent	0.02	Des Moines
	G3	Emergent	0.06	Des Moines

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Table 3. Summary of wetland and Other Waters of the U.S. areas in the STIA Master Plan Update improvements area (continued).

Wetland 2	Classification b	Area (Acres)	Drainage Basin
G4	Emergent	0.04	Des Moines
G5	Emergent	0.87	Des Moines
G6	Emergent	0.01	Des Moines
G 7	Forest/Scrub-Shrub (30/70)	0.50	Des Moines
G8	Emergent	0.04	Des Moines
WH	Open Water	0.25	Des Moines
DMC	Forest/Scrub-Shrub/Emergent	1.08	Des Moines
	Subtotal	43.67	
IWS Area			
TWS a and b	Forest	0.67	Des Moines
	Subtotal	0.67	
South Aviation Support A	rea Detention Pond		
E1	Forest	0.23	Des Moines
E2	Forest	0.04	Des Moines
E3	Forest	0.06	Des Moines
	Subtotal	0.33	Des Moines
TOTAL		115.86	

Due to the number of wetlands, their location within the project area, and the history of their documentation, a wetland labeling protocol was developed.

- Wetlands with numbered designations (e.g., Wetland 35 or Wetland 44) were described by Shapiro and Associates, Inc. (FAA 1995).
- Wetlands with an 'A' designation (e.g., Wetland A5 or A10) are new wetlands occurring within the west
 acquisition area.
- Wetlands with an 'R' designation (e.g., Wetland R5 or R6) are new riparian wetlands occurring within the west acquisition area.
- Wetlands with a 'W' designation (e.g., Wetland W1 or W2) are new wetlands occurring within the west airfield
 area.
- Wetlands with a 'G' designation (e.g., Wetland G5 or G6) are new wetlands occurring within the Tyee Valley Golf Course or the SASA areas.
- Wetlands with an 'E' designation (e.g., Wetland E1 or E2) are new wetlands occurring within the SASA detention pond area.
- Wetlands with an 'IWS' designation (e.g., IWSa and IWSb) are new wetlands occurring near the IWS lagoon.
- Wetlands with a 'B' designation (e.g., Wetland B5 or B10) are new wetlands occurring within the borrow sites.
- Wetland numbers followed by a small case letter designate subsections of a wetland (i.e., Wetland 35a, or 35b) where constructed features (i.e., driveways) fragment a larger wetland.
- Numbers indicate approximate percentage of cover by respective wetland classes (Cowardin et al. 1979).
- Includes Lake Reba.
- d Portions of the wetland area are estimated.

Several of the wetlands delineated by Shapiro and Associates and previously confirmed by ACOE (letter dated October 18, 1996, see Appendix E) were reexamined. No changes have been made to Wetlands 1 through 4, 6 through 17, 19, 21 through 26, 29, 32, 53, and portions of Wetland 18. The Draft Environmental Impact Statement (DEIS) descriptions (FAA 1995) and the Final Environmental Impact Statement (FEIS) areas (FAA 1996) of these wetlands are presented in Appendix E of this document.

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Parametrix, Inc. modified boundaries of Wetlands 5, 20, 28, 30, 48, and 52 and the new wetland boundaries were verified by ACOE. Wetlands 20, 28, 30, 48, and 52 are described in this chapter, and Wetland 5 is described in Appendix E.

Due to property access restrictions, Shapiro and Associates, Inc. could not delineate and survey several wetlands that were identified in the DEIS and FEIS. These include Wetlands 35, 37, 40, 41, 44, and portions of Wetland 18. Parametrix, Inc. delineated and surveyed these wetlands and their boundaries were confirmed by ACOE. These wetlands are described in this chapter.

Additional wetlands, Wetlands 43, 51, and A20, are located near Master Plan Update improvements, but will not be impacted by the improvements (Table 4). Delineated portions of these wetlands that are close to construction activities were confirmed by ACOE. Wetland A20 will not be affected by Master Plan Update improvements and was not confirmed by ACOE.

Parametrix staff conducted the field investigations for wetlands from March 1998 to October 2000. ACOE made site visits to confirm wetland identifications and boundary delineations on July 6, 8, 14, and 16, 1998; August 6, 1998; September 23, 1998; October 19, 22, 27, and 29, 1998; November 17, 18, and 19, 1998; January 8 and 12, 1999; March 8, 1999; June 7 and 21, 1999; August 2, 1999; January 18, 2000; February 3, 2000; October 26, 2000; and November 3, 8, 20, and 30, 2000.

Table 4. Significant wetlands near the STIA project area (areas are estimated).

Wetland	Classification ²	Approximate Area (Acres)	Drainage Basin
43	Forest/Scrub-Shrub/Emergent (25/50/25)	33.4	Miller
51	Forest/Scrub-Shrub (30/70)	16.0	Des Moines
A20	Emergent	0.3	Miller
	TOTAL	49.7	

Numbers indicate approximate percentage of cover by respective wetland classes (Cowardin et al. 1979).

3.2.1 North Employee Parking Lot Area

The North Employee Parking Lot Area is located between SR 518 and South 146th Street and between 16th Avenue South and 22nd Avenue South. The wetlands in this area will not be impacted by Master Plan Update improvements.

Shapiro and Associates (FAA 1995) delineated two predominantly forested wetlands, identified as Wetlands 1 and 2, in this area during previous investigations; ACOE confirmed their boundaries (see Appendix E). The locations of these wetlands are shown in Figure 4 and on Maps No. 2 and 3 in Appendix D, and are described in Appendix E.

3.2.2 Runway Safety Area Extension

The RSA extension area lies north of the existing runways in the area bounded on the south by South 154th Street and on the north by SR 518. Northward expansion of the RSA will require relocation of South 154th Street. Houses that were once located in this area were removed during the 1960s and 1970s. The old residential streets provide access to most of the area.

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December 12, 2000 556-2912-001 (41) The area is predominantly forested and contains the Miller Creek Detention Facility (Wetland 9). The surrounding system of wetlands is referred to as the Lake Reba wetland complex. Lake Reba (approximately 3 acres of open water) is contained within Wetland 7. Miller Creek enters the north end of the area and flows past the north end of Lake Reba.

Shapiro and Associates (FAA 1995) delineated four wetlands, identified as Wetlands 3 through 6, in this area during previous investigations; ACOE confirmed their boundaries (see Appendix E). The locations of these wetlands are shown in Figure 4 and on Maps No. 2 and 3 in Appendix D, and descriptions are provided in Appendix E. Parametrix staff evaluated the wetlands for changed conditions during site investigations in 1999, and minor changes were made to Wetland 5. An additional 0.05 acre was added to Wetland 5 to increase its size to a total of 4.63 acres.

3.2.3 Third Runway Project Area

As previously noted, portions of this area will be affected by construction of the new third runway, stormwater management facilities, other support facilities, and wetland or stream mitigation. For discussion purposes, the area is divided into four sub-areas: the north airfield, the west airfield, the west acquisition area, and the Vacca Farm site.

3.2.3.1 North Airfield

In this area the terrain slopes to the north and northeast and is generally forested. Eight wetlands, identified as Wetlands 7 through 14, were delineated in this area during previous wetland investigations (FAA 1996 and Appendix E), and their boundaries were confirmed by ACOE (see Appendix E). Wetland locations are shown in Figure 4 and in Maps 2, 3, and 5 in Appendix D. During site investigations in 1998 and 1999, the wetlands were examined for changed conditions; no changes to previously delineated boundaries were made.

3.2.3.2 West Airfield

The west airfield lies west of the existing airfield, south of South 154th Street, and east of 12th Avenue South. The terrain slopes to the west and is generally forested. Wetlands in this area will be filled for construction of the new runway.

Twelve wetlands (Wetlands 15 through 26) located in this area were delineated during previous wetland investigations (FAA 1996); their boundaries were confirmed by ACOE (see Appendix E). Appendix E contains descriptions of these wetlands. During site investigations in 1998 and 1999, Wetland 20 was redelineated to include additional wetland areas (20a and 20b), and Wetlands W1 and W2 were identified and delineated. These wetlands are described below. Wetland locations are shown in Figure 4, and on Maps 5, 6, 10, 12, 14, and 15 in Appendix D.

Wetland 20

USFWS Classification: PSS/EM

Size: 0.57 acre

Wetland data plots: 20a-A1, 20a-A2, 20b-A

Upland data plots: None

Maps No. 10, 12

Wetlands 20a and 20b lie west of the airfield and east of 12th Avenue South in a shallow drainageway on a west-facing slope. Wetland 20 was originally described in the FEIS (FAA 1996) as a 0.16-acre scrub-shrub/emergent wetland. During a January 1999 site visit, three additional wetland areas surrounding and hydrologically connected to Wetland 20 were delineated. Emergent wetlands located northwest and a forested/scrub-shrub area to the southeast of the original Wetland 20 were delineated and mapped as Wetland 20a. A small forested/scrub-shrub wetland area to the north is mapped as Wetland 20b. The area to the north is connected to the other wetland areas via a non-wetland swale (identified in this report as Water W).

Hydrology: The wetland may receive surface runoff from the airfield to the east and groundwater from hillside seeps. Water leaving the wetlands drains to a swale (Water W) that flows toward the northwest to a drainage ditch along 12th Avenue (Water A). A culvert beneath 12th Avenue conveys this surface water into Wetland 37. During the January 1999 site visit, portions of the wetland were inundated with several inches of water, and surface water was flowing downslope through the wetland.

Soils: Soil characteristics vary throughout the wetland. Near the west end, the wetland soils are black (10YR 2/1) muck. Farther downslope, wetland subsoils are a light brownish gray (2.5Y 6/2) loamy sand with mottles. Within the small lobe at the north end of the wetland, the soils are disturbed and are very dark grayish brown (10YR 3/2) loam without mottles. Although this soil does not meet color criteria of a hydric soil, the soil was determined to be hydric because the area was inundated for at least two weeks during the growing season in February and March 1999.

<u>Vegetation</u>: The shrub community is dominated by Himalayan blackberry and salmonberry. Red alder and black cottonwood trees occur in places. The emergent community is comprised of fireweed, field horsetail, creeping buttercup, small-fruited bulrush, and American brooklime. Grasses present in the area include creeping bentgrass and common velvet-grass.

<u>Upland</u>: The upland area is dominated by big-leaf maple and Himalayan blackberry. The soils are well drained and no evidence of wetland hydrology is apparent.

<u>Delineation</u>: The wetland boundary was delineated based on changes in hydrology, soil characteristics, and vegetation.

Wetland W1

USFWS Classification: PEM

Size: 0.10 acre

Wetland data plot: W1-A Upland data plot: W2-B

Map No. 10

Wetland W1 is located in a shallow depression and immediately south of temporary water treatment ponds that are located between the airfield and 12th Avenue South. A paved security road borders the west side of the wetland.

Hydrology: Hydrology is supported by precipitation and runoff. During portions of 1999, treated stormwater from the treatment ponds was pumped upslope of this wetland, which may have supplied additional water to this area. Portions of the wetland were inundated to a depth of 4 inches during the January 1999 site visit. Inundation was also observed during the March 8, 1999 ACOE visit. There is no surface water outlet from the wetland.

Soils: The soil beneath the A horizon is black (10YR 2/1) loam with mottles. A sulfidic odor was detected during soil sampling.

<u>Vegetation</u>: The emergent community is comprised of bentgrass, soft rush, and reed canarygrass. Himalayan blackberry and black cottonwood saplings are scattered throughout the wetland.

<u>Upland</u>: The forested upland area surrounding the wetland contains black cottonwood and red alder with an understory of dense Himalayan blackberry and reed canarygrass. Greater than 50 percent of the dominant plant species is hydrophytic. However, the soils are non-hydric. The subsoil is dark gravish brown (10YR 4/2) silt loam without mottles.

<u>Boundary:</u> The wetland boundary was delineated based on changes in soil characteristics and vegetation associated with the presence of wetland hydrology. The western margin of the wetland was delineated along the edge of access road fill.

Wetland W2

USFWS Classification: PFO/EM

Size: 0.22 acre

Wetland data plot: W2-A Upland data plot: W2-B

Map No. 10

Wetland W2, which is located on a hillslope west of the airfield and south of Wetland W1, sits in a closed depression.

<u>Hydrology:</u> Wetland hydrology is supported by precipitation, runoff, and shallow groundwater. There is no surface water outlet from the wetland. During the January 1999 site visit, soils were saturated at a depth of 1 inch from the surface, and a water table was observed at a depth of 10 inches.

Soils: The soil beneath the A horizon is very dark gray (10YR 2/1) gravelly loam without mottles.

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<u>Vegetation:</u> The emergent community is dominated by reed canarygrass. Himalayan blackberry shrubs, red alder trees, and black cottonwood trees are scattered throughout the wetland.

<u>Upland:</u> A deciduous forest community surrounds the wetland and is composed of black cottonwood and red alder with an understory of dense Himalayan blackberry and reed canarygrass. More than 50 percent of the dominant plant species is hydrophytic, although the soils are non-hydric. The subsoil is dark grayish brown (10YR 4/2) silt loam without mottles.

<u>Delineation:</u> The wetland boundary was delineated based on the presence of wetland hydrology and hydric soils.

3.2.3.3 Other Waters of the U.S.

One area (Water W) within the west airfield area is classified as Waters of the U.S. This area conveys natural surface runoff within a natural drainage channel that lacks wetland soil or vegetation. East of 12th Avenue South, Water W is 337 ft long by 3 ft wide (0.02 acre) and conveys water from Wetland 20 to a culvert on the east side of the perimeter fence along 12th Avenue South. The culvert drains to Water A located along the west side of the 12th Avenue South perimeter fence. Portions of these areas are mapped as streams by King County (1990a).

3.2.3.4 Vacca Farm Site

Past agricultural use and historical documentation of inundation within the Vacca Farm site area were determined by examining aerial photographs taken between the May 1965 and April 1995 (available at the University of Washington Library). Except for areas fringing Miller Creek or drainage ditches and land southeast of Lora Lake, the area has been in agricultural uses since at least 1965. Aerial photographs were taken during the dry part of the year and, therefore, failed to demonstrate that ponding occurs on the site. Additionally, no records for the site were available from the USDA offices.

Based on field observations, nine low-lying areas within the Vacca Farm site satisfied the criteria for farmed wetlands. These areas (FW1, FW2, FW3, FW5, FW6, FW8, FW9, FW10, and FW11) had hydric soil and were inundated for more than 15 days in the growing season (see Figure 4, and Maps No. 1 and 4 of Appendix D). The areas range in size from 0.01 to 0.59 acre and reach a total combined size of 1.03 acres. The boundaries of these farmed wetlands were observed over two winters with above normal precipitation (1998 and 1999). Except for FW11, the analysis was conducted in late February 1999, following 4 months of above normal to near record rainfall. These wet periods allowed accurate determination of farmed wetland boundaries over a 2-year period and served as the basis of ACOE's confirmation of the delineation. Due to property access limitations, FW11 was delineated from aerial photos taken in March of 1974 following ACOE guidance. March of 1974 was a month of above normal precipitation.

Other actively farmed areas within the Vacca Farm site parcels were found to meet the criteria for PC cropland. These areas total 7.88 acres and have hydric soils and saturation within 12 inches of the soil surface for more than 15 consecutive days. However, these areas lacked inundation for at least 15 consecutive days and, therefore, do not meet the criteria for FWs according to the FSA (Section 514.22). It is likely that these areas were wetlands before being converted to active

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December 11, 2000 556-2912-001 (41) G. Dannworking 2912052912014 i washed Final Washed Dalmannan Raport doc farmland. Federal jurisdiction is not taken over PC cropland according to the CWA requirements. The analysis for PC cropland at the Vacca Farm site parcels is summarized in Appendix C.

3.2.3.5 Other Waters of the U.S.

Two drainage ditches within the Vacca Farm site are classified as Waters of the U.S. These maintained ditches, Waters V1 and V2, total about 0.02 acre (V1 is approximately 215 ft long by 2 ft wide and V2 is approximately 155 ft long by 2 ft wide). The channels convey flowing water from tile drains to Wetland A1 and do not contain wetland vegetation.

3.2.3.6 West Acquisition Area

The portion of the west acquisition area addressed in this document was a former residential area located west of 12th Avenue South and generally east of Miller Creek. It was acquired by the Port for the construction of the third runway, the associated stormwater management and other support facilities, and noise mitigation. Property located west of Miller Creek is in the process of being acquired by the Port.

Wetlands identified and delineated within the west acquisition area during the 1998-2000 field investigations are described below. Wetlands 18, 35, 37, 39, 40, 41, and 44 were identified during a previous wetland investigation (FAA 1996); however, they were not delineated because permission to access the properties had not been obtained. In previous studies, the wetlands were identified using aerial photographs and from observations made from public streets. These wetlands were delineated during the 1998-2000 field investigations. Additional wetlands were identified in the west acquisition area during the 1998-2000 field investigations. These isolated wetlands in the acquisition area are identified as Wetlands A1 through A19. Riparian wetlands along Miller Creek are labeled Wetlands R1 through R15 and R17.

Wetland 18

USFWS Classification: PFO/SS/EM

Size: 3.56 acres

Wetland data plots: 18-A1, 18-A2, 18-A3 Upland data plots: 18-B1, 18-B2, 18-B3, 18-B4

Maps No. 7, 9, 10

The eastern portion of Wetland 18 is in a shallow ravine that begins east of 12th Avenue South west of the airfield. The wetland drains through a culvert beneath 12th Avenue South, into a narrow drainage ditch, then widens into a broad emergent and forested area that slopes westward to Miller Creek. Riparian portions of Wetland 18 connect to riparian portions of Wetland 37.

Wetland 18 has been filled in several locations to develop residential properties and these fill pads form the wetland boundary in many locations. A large portion of the wetland west of 12th Avenue South has been grazed, and a tilled garden is located at the north end of the wetland. A young red alder forest grows at the western end of the wetland along Miller Creek.

The portion of Wetland 18 east of 12th Avenue South was delineated for the FEIS (FAA 1996). The portion of the wetland located west of 12th Avenue South was delineated during site visits conducted in July, October, and November 1998.

Hydrology: Wetland hydrology is supported by groundwater discharge and precipitation. The wetland is located on a slope, and water entering the wetland flows west to Miller Creek. Periodic flooding of Miller Creek augments hydrology in limited riparian areas. On several site visits, Parametrix staff observed standing water in the northern portion of Wetland 18 and soil saturation within 12 inches of the surface was present throughout the remainder of the wetland. Oxidized rhizospheres, an indicator of prolonged saturation during the growing season, were also observed in several locations.

Soils: Within the wetland, surface soils are black (10YR 2/1) or very dark gray (10YR 3/1). Soils immediately below the A horizon typically ranged from black (10YR 2/1) to dark grayish brown (10YR 4/2) with mottles. Soil textures ranged from clay loam to gravelly sandy loam.

<u>Vegetation</u>: East of 12th Avenue South, the forested wetland overstory is a mixture of red alder, bigleaf maple, and western redcedar trees. The shrub layer is dominated by salmonberry. Associated forbs include giant horsetail and lady fern. West of 12th Avenue South, the forested wetland community is dominated by red alder. In some areas, Himalayan blackberry dominates the understory. Forested areas along Miller Creek have an understory dominated by creeping buttercup and lady fern. Shrub communities are typically dominated by Himalayan blackberry. Grazed and mowed emergent communities are dominated by redtop and common velvet-grass with perennial ryegrass, sawbeak sedge, giant horsetail and small-fruited bulrush as associated species. Other emergent plants consist of reed canarygrass and soft rush with a few skunk cabbages.

<u>Upland</u>: Surrounding upland areas include yards, gardens, and other disturbed vegetation on fill. Herbaceous vegetation is predominantly bluegrass, creeping bentgrass, fescue, and reed canarygrass. Communities dominated by giant horsetail occur in some areas. Where present, forested areas are dominated by red alder and big-leaf maple, with Himalayan blackberry as the dominant shrub. Many upland areas are dominated by greater than 50 percent wetland plants. However, these areas do not have hydric soils or wetland hydrology and, therefore, are not wetlands.

Subsurface horizons of adjacent upland soils generally range from very dark yellowish brown (10YR 3/2) to yellowish brown (10YR 5/4) without mottles. An exception to this occurs at Plot 18-B2, where soils are dark yellowish brown (10YR 3/2) with mottles throughout. These soils were determined by ACOE to be fill material with relict hydric soil colors, and, therefore, not wetland soils.

<u>Delineation</u>: The western wetland boundary was delineated along the ordinary high water mark (OHWM) of Miller Creek. On some residential lots where lawns were present, the wetland boundary was delineated at the limits of wetland hydrology along the edges of fill pads. On Parcel 281, where facultative plants dominate vegetation, the wetland edge was based on changes of soil color and hydrology. In remaining areas, the wetland boundary was determined by the presence of wetland vegetation growing on hydric soil with the presence or indicators of wetland hydrology.

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Wetland 35

USFWS Classification: PFO/EM

Size: 0.67 acre

Wetland data plots: 35a/b-A, 35c-A, 35d-A

Upland data plots: 35c-B, 35d-B

Map No. 7

Wetland 35, located on a gentle slope along the south side of South 160th Street, lies in a shallow drainage swale that terminates in a French drain at its westernmost end. Driveways segment the wetland into four sections (Wetlands 35a through 35d). Culverts beneath the driveways hydrologically connect these wetland areas.

<u>Hydrology</u>: Wetland hydrology is supported by seasonal shallow groundwater and surface water runoff. A French drain and culvert at the west end of the wetland collects surface water and directs it to roadside ditches and storm sewers that eventually convey the water to Miller Creek. At the time of the July 1998 site visit, soils were generally saturated to the soil surface throughout most of the wetland. In Wetland 35a, the soils were not saturated; however, wetland drainage patterns were present.

Soils: Within the wetland, the soil immediately below the A horizon typically ranged from black (10YR 2/1) silt loam to dark grayish brown (2.5Y 4/2) sand with mottles.

<u>Vegetation</u>: Black cottonwood and red alder dominate the small area of forested wetland with bittersweet nightshade, giant horsetail, and skunk cabbage in the understory. The emergent community is dominated by lawn grasses. However bentgrass, common velvet-grass, tall mannagrass, giant horsetail, and lady fern occur in localized unmowed areas.

<u>Upland:</u> Surrounding uplands are dominated by mowed lawn and ornamental woody plants. Subsurface soil color ranges from brown (10YR 4/3) with mottles to dark yellowish brown (10YR 4/4) without mottles. Soil textures range from silt loam to sandy loam.

<u>Delineation</u>: The eastern portion of the wetland was delineated based on the presence of hydric soils and wetland hydrology indicators. The western portion of the wetland was delineated based on the presence of hydric soils and wetland hydrology.

Wetland 37

USFWS Classification: PFO/EM

Size: 5.73 acres

Wetland data plots: 37a-A1, 37a-A2, 37a-A3, 37e-A, 37f-A

Upland data plots: 37a-B1, 37a-B2, 37e/f-B

Map No. 9

Wetland 37 is located west of 12th Avenue South, between South 160th Street and South 166th Place. A previous wetland investigation (FAA 1996) identified only a portion of this wetland. During the 1998/1999 investigation, project personnel determined the wetland to be much larger than previously identified, and it was found to be hydrologically connected to Wetland 18.

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The wetland has been fragmented by residential development into six sections (labeled 37a through 37f). Wetland 37a, the largest wetland section (5.09 acres), is located on the east bank of Miller Creek. Wetlands 37b and 37c drain to Wetland 37a from the north, and Wetlands 37d, 37e, and 37f drain to the same section from the south.

Hydrology: Wetland hydrology throughout most of the wetland is supported by groundwater seepage from upslope areas. Portions of the western side of the wetland are occasionally flooded by Miller Creek. The wetland conveys groundwater seepage, surface water runoff, and discharge from Wetland 20 to Miller Creek. During the October 1998 site visit, soils were saturated within 12 inches of the surface throughout most of the wetland, and inundation and flowing were present in the center of Wetland 37a. Because the site visit was conducted during the dry season, wetland hydrology was not evident in some places near the wetland margin. These areas were assumed to have wetland hydrology because they have hydric soils and support wetland vegetation.

Wetland 37a receives water from several sources, including seepage water entering through a culvert beneath 12th Avenue South and overbank flow from Miller Creek.

Water entering the north side of Wetland 37 originates as groundwater that surfaces in Wetland 19 and flows via a culvert beneath 12th Avenue South to Wetlands 37b, Wetland 37c, and finally via a French drain to Wetland 37a. During the October 1998 site visit, saturation within 12 inches of the soil surface and areas of shallow inundation and flowing water were observed in these wetlands.

Water entering the south side of the wetland flows through three discontinuous wetlands (Wetlands 37f through Wetland 37e, then through Wetland 37d) that are maintained by groundwater seeps. Wetland 37f is located on a small bench at the highest elevation of the drainage. A portion of Wetland 37f drains northward to Wetland 37e via surface and subsurface flow, and an additional portion drains westward to Wetland A9 via a drainage channel (Water B). Wetland 37e drains through a culvert to a small ravine (Wetland 37d) where the flowing water is impounded by driveway fill at the northern end of the wetland section. The impounded water drains through two 4-inch pipes for approximately 200 feet to Wetland 37a. During the July 1998 site visit, soils were saturated to the surface in Wetland 37e, and Wetlands 37f and 37d were inundated.

Water entering the east side of the wetland originates in Wetland 20, Wetland 21, and Water A. These flows combine in Water W and are carried to the wetland through a culvert beneath 12th Avenue South.

Soils: Within Wetland 37, soil colors immediately below the A horizon typically ranged from black (10YR 2/1) to dark brown (10YR 2/2) with mottles. Soil textures ranged from sandy clay loam to silt loam, with some areas of organic muck in Wetland 37a.

<u>Vegetation</u>: The largest portion of Wetland 37 is predominantly a red alder-dominated forest with an understory of Himalayan blackberry, field horsetail, and lady fern. A shrub community in Wetland 37a is dominated by salmonberry with water parsley and skunk cabbage in the understory. Red alder with an understory of Sitka willow, field horsetail, and Himalayan blackberry dominates forested communities in Wetland 37e and 37f; skunk cabbage occurs in low spots. Himalayan blackberry and salmonberry dominate shrub communities of these wetlands. The northern portion

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of Wetland 37 is emergent pasture dominated by colonial bentgrass, common velvet-grass, and creeping buttercup.

<u>Upland</u>: Upland areas surrounding Wetland 37 include disturbed lawns, pasture, undeveloped hillslopes, and roads. Dominant plants include colonial bentgrass, reed canarygrass, and common velvet-grass with patches of Himalayan blackberry. Although some upland areas are dominated by greater than 50 percent wetland plants, these areas do not have hydric soils or wetland hydrology and, therefore, are not wetland. The soil color immediately below the A horizon generally ranged from dark yellowish brown (10YR 3/2) without mottles to olive (5Y 5/3) with mottles.

<u>Delineation</u>: The wetland boundaries of the smaller sections of Wetland 37 were based on distinct changes in hydrology, vegetation composition, and soil color. The western boundary of Wetland 37a was delineated at the ordinary high water mark (OHWM) along Miller Creek, and portions of the eastern and southern boundaries were delineated at the edge of fill associated with 12th Avenue South and several driveways.

Wetland 39

USFWS Classification: PFO/SS/EM

Size: 0.90 acre

Wetland data plots: 39-A1, 39-A2, 39-A3, and 39-A4

Upland data plots: 39-B1, 39-B2, and 39-B3

Map No. 11

Wetland 39 is a 0.90-acre shrub and forested slope wetland located east of 8th Avenue South and north of Wilson Road. The wetland consists of two parts separated by an upland slope. The area was identified in the FEIS (FAA 1996). The site has been disturbed by logging and farming.

<u>Hydrology</u>: Direct indicators of hydrology were observed in Wetland 39 during several site visits in both the dry (August 1999) and wet season (February 2000). Shallow groundwater expresses at the soil surface throughout the wetlands. Groundwater seeps and discharge from a 12-inch plastic stormwater pipe coalesce in a ravine at the eastern lobe of Wetland 39. This flowing water descends downslope in sheet and channelized flow. The surface water is collected in a cement ditch at the terminus of Wetland 39's western lobe and is directed into the storm sewer on Wilson Road. Other areas in Wetland 39 range from seasonally to permanently saturated.

Soils: Within Wetland 39, the soil immediately below the A horizon typically ranged from grayish brown (2.5Y 5/2) gravelly loam to black (10YR 2/1) loam with mottles throughout.

<u>Vegetation</u>: Within Wetland 39, black cottonwood and red alder dominate the small area of forested wetland, with Himalayan blackberry and giant horsetail in the understory. Himalayan blackberry dominates the shrub portion of the wetland, with giant horsetail and creeping buttercup present in the understory.

<u>Upland</u>: Surrounding uplands are dominated by mowed lawn, Himalayan blackberry, or upland forest. Subsurface soil color ranges from dark brown (10YR 3/3) with mottles to reddish brown (10YR 4/4) without mottles. Soil textures range from silt loam to clay loam.

<u>Delineation:</u> Wetland 39 was delineated based on the presence of hydric soils, wetland hydrologic indicators, wetland hydrology, and hydrophytic plants.

Wetland 40

USFWS Classification: PSS

Size: 0.03 acre

Wetland data plot: 40-A Upland data plot: 41b-B

Map No. 12

Wetland 40 is an isolated wetland in a steep-sided depression located at the northwest corner of 12th Avenue South and South 170th Street.

<u>Hydrology:</u> Surface water runoff and shallow groundwater maintain wetland hydrology. No surface water drains from this wetland. Wetland hydrology was not present during dry season sampling (October 1998), but is assumed to occur in the wetland based on the presence of watermarks, sediment deposits, and wetland drainage patterns. Standing water was observed in the wetland on December 1, 1998. Stormwater runoff from 12th Avenue South enters the wetland through a culvert located at the southern edge of the wetland.

Soils: Soils within the wetland are very dark grayish brown (10YR 3/2) sandy loam with abundant mottles.

<u>Vegetation:</u> The shrub community of Wetland 40 is dominated by Pacific willow and Himalayan blackberry. Yellow iris grows in the center of the wetland.

<u>Upland</u>: The surrounding upland is similar to the upland surrounding Wetland 41b.

<u>Delineation:</u> The boundary of Wetland 40 was delineated based on the presence of wetland vegetation, hydric soil characteristics, and wetland hydrologic indicators. These wetland conditions correspond to sharp changes in topography.

Wetland 41a

USFWS Classification: PEM/POW

Size: 0.35 acre

Wetland data plot: 41a-A Upland data plot: 41b-B

Map No. 12

Wetland 41a is located south of South 168th Street and west of 12th Avenue South within a grazed pasture. The wetland is a small farm pond surround by wet pasture. Ducks and cattle graze the wetland and surrounding buffer. Soils within the wetland have been disturbed by grading and tilling.

Hydrology: Wetland 41a occurs in a shallow closed depression where precipitation and localized runoff collect. At the time of the October 1998 site visit, the pond was inundated with about 10 inches of water, but wetland hydrology was not present in the surrounding emergent (pasture) areas.

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Seasonal wetland hydrology was assumed to be present in portions of the pasture based on the presence of hydrophytic vegetation and hydric soils.

Soils: The soil in the wetland is compacted due to cattle grazing and is a very dark grayish brown (10YR3/2) loam with mottles.

<u>Vegetation</u>: The heavily grazed emergent community is dominated by bluegrass. White clover, broadleaf plantain, and pineapple weed are associated species. The open-water area is unvegetated. Red alder and black cottonwood saplings and a few Pacific willow shrubs grow along the edge of the water.

Upland: Upland vegetation and soils are the same as described for uplands around Wetland 41b.

<u>Delineation:</u> Along the north and east wetland boundary, the delineation was based on the OHWM of the pond, which corresponds to the presence of hydric soils. Along the west and south wetland boundary, the delineation was based on the presence of hydric soil colors and wetland vegetation.

Wetland 41b

USFWS Classification: PEM

Size: 0.09 acre

Wetland data plot: 41b-A Upland data plot: 41b-B

Map No. 12

Wetland 41b is located approximately 100 ft south of Wetland 41a. Ongoing grazing has disturbed vegetation within the wetland, and grading and tilling have disturbed the soils.

<u>Hydrology</u>: Wetland 41b occurs in a shallow closed depression that is seasonally saturated by precipitation and local runoff. Because the wetland was examined during the dry season (October 1998), wetland hydrology was not observed. The presence of wetland drainage patterns combined with topographic conditions and the observation of flooding during the winter months (December 1998) indicate seasonal wetland hydrology.

Soils: The upper 10 inches of the wetland soil were dry and compacted, and are very dark grayish brown (10YR3/2) loam with mottles. Below a depth of 10 inches, the soil is a dusky red (2.5YR3/2).

<u>Vegetation</u>: The emergent community is dominated by bluegrass and is grazed to such an extent that identification to species was not possible. Associated species include creeping bentgrass, pineapple weed, and broadleaf plantain. Based on the presence of hydric soils and wetland hydrology, ACOE assumes hydrophytic species would dominate the area if grazing were discontinued.

<u>Upland</u>: In the surrounding upland, white clover, creeping bentgrass, and spotted cat's-ear dominate vegetation. The upper 12 inches of upland soil are dark brown (10YR3/3) sandy loam with mottles. Below a depth of 12 inches, the soil is dark yellowish brown (10YR3/4) with no mottles.

<u>Delineation</u>: Because the delineation was conducted during the dry season, wetland boundaries were identified based on the presence of hydric soil.

Wetland 44

USFWS Classification: PFO/SS

Size: 3.08 acres

Wetland data plots: 44-A1, 44A-2, 44-A3, 44-A4 Upland data plot: 44-B1, 44-B2, 44-B3, 44-B4

Maps No. 13, 14

Wetland 44 is located in a steep-sided ravine between South 174th Street and SR 509. The base of the ravine is crossed by SR 509 road fill, which creates an artificial depression. Water entering the ravine is conveyed in a culvert beneath SR 509 to a ditch on the west side of the highway, and then to Wetland 43 (see FAA 1996), which is the source of Walker Creek, a tributary of Miller Creek. The wetland was examined during several site visits between July 1998 and October 2000. In June 2000, approximately 0.01 acre of wetland occurring on the SR 509 road fill was added to Wetland 44b. In October 2000, the eastern edge of the wetland was modified when about 0.25 acre was determined to be upland.

<u>Hydrology:</u> Wetland 44 is maintained by groundwater that seeps from upslope areas. Groundwater seeps concentrate into a small creek near the downslope end of the ravine. During the site visits, flowing water, discontinuous surface water, or soil saturation within 12 inches of the surface were evident within the wetland.

Soils: Colors of mineral soils immediately below the A horizon typically range from dark brown (10YR 2/2) with mottles to gleyed colors (N4/7 and 5BG5/1). Textures range from loam to sand. Organic soils within the wetland include black (10YR2/1) peat and very dark brown (7.5YR 2.5/2) muck.

<u>Vegetation</u>: Wetland 44 is a forested wetland that is fringed by shrub communities. The forested component is dominated by an open canopy of red alder, with lesser amounts of big-leaf maple, willow, and bitter cherry. Himalayan blackberry, Sitka willow, Pacific willow, salmonberry, and vine maple occur in the shrub layer. The herbaceous understory, when present, is dominated by giant horsetail, lady fern, tall mannagrass, and reed canarygrass. A shrub community that occurs near the edge of the wetland is dominated by Himalayan blackberry in many areas, with salmonberry, Sitka willow, and Pacific willow in others.

<u>Upland</u>: Upland forest communities surrounding the wetland are dominated by big-leaf maple, red alder trees with Indian plum, and large amounts of Himalayan blackberry. Also present in the shrub layer are red alder saplings, vine maple, salmonberry, and English holly. Large amounts of English ivy are found in portions of the understory. Limited upland areas (data plot 44-B1) have hydric soils, but were determined to be non-wetland because they lack hydrophytic vegetation.

<u>Delineation:</u> The western margin of the wetland was delineated near the toe of the SR 509 fill slopes. The remaining wetland boundary was delineated based on the presence of wetland hydrology, hydric soils, and wetland vegetation.

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Wetland A1

USFWS Classification: PFO/SS/EM

Size: 4.66 acres

Wetland data plots: A1-A1, A1-A2, A1-A3, A1-A4, A1-A5

Upland data plots: A1-B1, A1-B2, A1-B3, A1-B4

Maps No. 1, 4

Wetland A1 is located in the Vacca Farm site area. The wetland is a scrub-shrub/forested system that includes Lora Lake to the north, and is bound by Miller Creek to the east and the Vacca Farm site to the south and west. The wetland extends to the south, forming emergent and forested riparian wetland along the banks of Miller Creek. Another elongated band of emergent and scrub-shrub wetland parallels a ditch that drains to Miller Creek. Site visits took place in April, July, and September 1998, June 1999, and September 2000.

Wetland A1a is an emergent wetland located on the western edge of Parcel 062R. The wetland has a ditch that drains through a culvert to Wetland A1 at the eastern edge of Parcel 062R.

Hydrology: In the northern portion of the wetland and the Miller Creek riparian area (data plots A1-A1 and A1-A2) soils were saturated to the surface and free water was observed within 10 inches of the surface in April 1998. Wetland hydrology was not observed in the western arm of the wetland during the dry season (July and September). The area was assumed to have wetland hydrology based on the presence of wetland vegetation and hydric soils. During later field visits (November 1998 through February 1999), wetland hydrology was observed throughout Wetland A1. Adjacent to Lora Lake, the soils were saturated at 6 inches and oxidized root channels were present during a September 2000 site visit.

Soils: Within the wetland, mineral soils occur along the creek and the drainage ditch. Immediately below the A horizon, soil colors typically range from black (10YR 2/1) with mottles to very dark gray (7.5YR 3/1) with mottles. Most of the wetland has organic soils consisting of black (10YR2/1) muck over dark yellowish brown (10YR 4/4) peat. Adjacent to Lora Lake, the soils are a gray (10RY 5/1), very sandy loam with mottles.

<u>Vegetation</u>: Emergent communities in the northern part of the wetland are predominantly reed canarygrass. Emergent areas in the southern lobes are dominated by bentgrass, common velvet-grass, small-fruited bulrush, birdsfoot trefoil, and creeping buttercup. The forested community has a red alder and black cottonwood canopy with an understory dominated by Himalayan blackberry. The shrub community is dominated by Himalayan blackberry. Bittersweet nightshade and nettles are often associated with the blackberry. Adjacent to Lora Lake, the vegetation consisted of lawn grass.

<u>Upland</u>: Agricultural activities or housing development have disturbed all upland areas surrounding Wetland A1. Upland data plots A1-B1 and A1-B2 are located in PC cropland. These are actively farmed areas with no vegetation and black organic soils (10YR 2/1). Upland data plot A1-B3 was located in a disturbed area between a house and Miller Creek. The woody vegetation contains predominantly ornamental species with lawns of bentgrass and velvet-grass. The soil color immediately below the A horizon is dark brown (10YR 2/2) without mottles.

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The upland area adjacent to Lora Lake consists mainly of maintained lawns that lack indicators of wetland hydrology or hydric soils.

<u>Delineation</u>: The northern edge of the Wetland A1 was delineated along the southern margin of Lora Lake. Portions of the wetland adjacent to farmed wetlands were delineated along the boundary between the vegetation and the tilled soils. The southern extreme of the wetland was delineated along fill margins. The remaining segments of the wetland boundary were delineated based on the presence of wetland hydrology, vegetation, and soil characteristics.

Wetlands A2, A3, and A4 USFWS Classification: PSS

Size: A2 = 0.05 acre, A3 = 0.01 acre, A4 = 0.03 acre

Wetland data plots: A2-A, A3-A, A4-A

Upland data plot: A2-B, A3/4-B

Maps No. 1, 4

Wetlands A2, A3, and A4 are Himalayan blackberry-dominated wetlands located on the Vacca Farm site. The wetlands are surrounded by farmland. Fill for a parking area forms the western margin of Wetland A2.

<u>Hydrology</u>: At the time of April 1998 site visit, Wetland A2 was saturated to within 4 inches of the soil surface, Wetland A3 was saturated to within 6 inches of the surface, and Wetland A4 was inundated with up to 6 inches of water.

Soils: Soils in Wetland A2 are black (10YR 2/1) sandy loam over gleyed subsoils of bluish black (10B 5/1) sandy loam. Below a depth of 4 inches, soils in Wetlands A3 and A4 are black (10YR 2/1) and very dark brown (10YR 2/2) peat.

<u>Vegetation</u>: Dense thickets of Himalayan blackberry vegetate the wetlands. Creeping buttercup is present in places, particularly near the wetland edge. Although Himalayan blackberry is not rated as a wetland plant, the presence of wetland hydrology and hydric soil conditions indicate the area is wetland, in accordance with guidelines in ACOE Public Notice (1994).

<u>Upland</u>: The area surrounding these wetlands is tilled as part of ongoing farming operations. The farmland is classified as PC cropland and is not subject to Section 404 jurisdiction.

<u>Delineation:</u> Wetland boundaries were generally delineated along the edge of tilled farmland, except for the western boundary of Wetland A2, where the edge of the wetland corresponds to the edge of parking lot fill.

Wetland A5

USFWS Classification: PEM

Size: 0.03 acre

Wetland data plot: A5-A Upland data plot: None

Map No. 7

Wetland A5 is a mowed lawn in a residential yard, located approximately 40 ft north of Wetland A6. A driveway is located along the western edge the wetland, and a house is located along the southern edge.

Hydrology: Wetland A5 is a shallow depression that is maintained by seasonally high groundwater. It is approximately 1 to 3 ft lower than the surrounding area and has no inflow or outflow channel. On the October 1998 site visit, the homeowner told Parametrix staff that the wetland portion of the yard has prolonged saturation during the winter and spring months. The southwest corner of the wetland was inundated at that time. Inundation and soil saturation were not observed at the sample plot location, but the area was assumed to have wetland hydrology based on the presence of hydric soils and oxidized root channels.

Soils: The wetland surface soil is very dark grayish brown (10YR 3/2) sandy loam with mottles. The soil immediately below the A horizon is black (10YR 2/1) loam with mottles.

<u>Vegetation</u>: The wetland vegetation is predominantly non-native lawn grasses dominated by bentgrass, fescue, common velvet-grass, and bluegrass.

<u>Upland</u>: Surrounding uplands consist of yard and deciduous forest and are similar to uplands surrounding Wetland A6 described below.

<u>Delineation:</u> Driveway fill marks the western wetland boundary, and the house marks the southern boundary. The remaining wetland boundary was delineated based on wetland hydrology indicators and hydric soil conditions.

Wetland A6

USFWS Classification: PFO

Size: 0.16 acre

Wetland data plot: A6-A Upland data plot: A6-B

Map No. 7

Wetland A6 is approximately 40 ft south of Wetland A5.

<u>Hydrology</u>: The wetland is in a closed depression with no apparent surface water channels. During the July 1998 site visit, neither saturation nor inundation was evident. The area was assumed to have wetland hydrology based on the presence of water marks, sediment deposits, and drainage patterns in the wetland, as well as hydric soils and hydrophytic vegetation.

Soils: Below a depth of 10 inches, the wetland soil is black (10YR 2/1) silt loam without mottles with a high organic content.

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<u>Vegetation</u>: The wetland is generally forested with red alder and black cottonwood trees, and has a dense understory of Himalayan blackberry. Among the blackberry are patches of other wetland plants, including yellow iris, cooley hedgenettle, giant horsetail, and creeping buttercup. The northern margin of the wetland is residential lawn.

<u>Upland</u>: The surrounding upland is typically red alder forest with a Himalayan blackberry understory and no other wetland vegetation. Soils immediately below the surface horizon are dark yellowish brown (10YR 4/6) loam without mottles.

<u>Delineation</u>: The wetland boundary was delineated based primarily on hydric soil characteristics and minor topographic changes. The northern wetland boundary follows the edge of fill associated with adjacent lots. The western boundary occurs along fill placed for a sewer line that runs north/south through the area. Along the eastern and southern boundaries of the wetland, delineation was based on the presence of hydric soil color, wetland vegetation, and gradual changes in topography.

Wetland A7

USFWS Classification: PFO

Size: 0.30 acre

Wetland data plot: A7-A Upland data plot: A7-B

Map No. 7

This wetland area has been subject to grazing and farming, but these land uses were discontinued about 20 years ago. The site is currently covered with a 15- to 20-year-old red alder forest.

<u>Hydrology</u>: Wetland A7 is in a closed depression and has seasonal wetland hydrology. No significant surface flow to or from the wetland occurs. At the time of the June 1998 site visit, saturation or inundation was not evident. The area was assumed to have wetland hydrology based on the presence of oxidized root channels, hydrophytic vegetation, and hydric soil. A low earthen berm along the southern and western edges of the wetland may block seasonal drainage.

Soils: The wetland soil consists of black (10YR 2/1) sandy loam with a high organic content over dark gray (10YR 4/1) loamy sand with mottles.

<u>Vegetation</u>: Wetland A7 is a forested wetland with a red alder overstory and a dense Himalayan blackberry and salmonberry understory. The herb layer includes wetland plants such as sawbeak sedge, soft rush, creeping bentgrass, and creeping buttercup.

<u>Upland</u>: The surrounding upland is also red alder forest with a Himalayan blackberry and English holly understory without associated wetland plants. The soils are black (10YR 2/1) silt loam over dark yellowish brown (10YR 4/4) loamy sand with mottles.

<u>Delineation</u>: The eastern and northern wetland boundaries were delineated based on the presence of hydric soil characteristics, which corresponded to a gradual rise in topography. The western and southern boundaries were delineated based on the presence of wetland vegetation, hydric soils, and changes in topography.

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Wetland A8

USFWS Classification: PFO/SS

Size: 0.38 acre

Wetland data plots: A8-A1, A8-A2, A8-A3, A8-A4

Upland data plots: A8-B1, A8-B2, A8-B3

Map No. 7

The wetland is composed of two broad lobes connected by a narrow swale. The wetland has been disturbed by fill, debris, and land clearing.

Hydrology: The wetland occurs in a shallow depression that has seasonal hydrology. No significant surface waters flow into or out of the wetland. At the time of the June 1998 site visit, neither saturation nor inundation was present. The area was assumed to have wetland hydrology based on the presence of oxidized root channels, hydrophytic vegetation, and hydric soils.

<u>Soils:</u> Wetland surface soils are black (10YR 2/1), very dark gray, or very dark brown. Soils beneath the A horizon are mottled with matrix colors ranging from black (10YR 2/1) to grayish brown (10YR 5/2). Textures are typically loam or sandy loam.

<u>Vegetation</u>: The eastern lobe of the wetland is forested. The canopy is dominated by black cottonwood, red alder, and western redcedar, with salmonberry and skunk cabbage in the understory. The western lobe is a shrub community dominated by Himalayan blackberry, soft rush, and giant horsetail.

<u>Upland</u>: Dominant plant species in surrounding upland areas include red alder, English holly, Himalayan blackberry, and English ivy. Subsurface soils generally range in color from dark yellowish brown (10YR 3/2) without mottles to yellowish brown (10YR 5/4) with mottles, and are sandy loam in texture. Some upland areas contain piles of fill and other debris and the vegetation is predominantly Himalayan blackberry.

<u>Delineation</u>: The northwest portion of the wetland was delineated based on the presence of wetland plants in the understory and hydric soil colors. Distinct changes between the hydric and non-hydric soil were used to delineate the southern wetland boundary. The eastern portion of the wetland was delineated based on the presence of obligate wetland plant species.

Wetland A9

USFWS Classification: PSS

Size: 0.04 acre

Wetland data plot: A9-A Upland data plot: A11-B

Map No. 9

Wetland A9 is located on a west-facing hillslope in the Miller Creek Nursery (Parcel 313). The wetland is defined by a service road to the east and west, a sidewalk and garden to the south, and a ditch to the north. This ditch connects to Wetland A12. The wetland is partially filled with rubble and yard waste.

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<u>Hydrology</u>: Wetland A9 is located in a closed depression. At the time of the September 1998 site visit, soils were saturated at a depth of 12 inches and free water was observed at 14 inches. Oxidized root channels were also observed in the wetland soils.

Soils: The wetland soils are dark gray (10YR 3/1) loam and silt loam, to a depth of 15 inches, over gray (10 YR 5/1) loamy sand. Mottles occur below a depth of 9 inches.

<u>Vegetation</u>: Himalayan blackberry dominates the shrub community. Giant mannagrass, giant horsetail, birdsfoot trefoil, creeping buttercup, and lady fern occur in the herb layer. One western redcedar is also present. Upland vegetation within the wetland is composed of non-native nursery stock.

<u>Upland</u>: The wetland is surrounded by the nursery facilities and non-native nursery stock. The soil immediately below the surface horizon is yellowish brown (10YR 5/4) without mottles.

<u>Delineation</u>: The wetland boundary was delineated based on the presence of wetland hydrology and hydric soil conditions, and the edges of various constructed features, such as roads, sidewalks, and ditches.

Wetland A10

USFWS Classification: PSS

Size: 0.01 acre

Wetland data plot: A10-A Upland data plot: A11-B

Map No. 9

Wetland A10 is located at the base of a steep slope in the Miller Creek Nursery. Service roads, planted nursery stock, or lawn surround the wetland. A house is located between Wetlands A10 and A11.

<u>Hydrology</u>: The wetland is located in a shallow depression that has seasonal wetland hydrology. Neither inundation nor saturation was observed during the September 1998 site visit. The area is assumed to have wetland hydrology based on the presence of oxidized root channels, hydric soils, and hydrophytic vegetation.

Soils: The soil immediately below the A horizon is greenish gray (10G 6/1) sandy clay loam with mottles.

<u>Vegetation</u>: The shrub community is dominated by Himalayan blackberry. The herb layer consists of yellow iris, giant horsetail, and lady fern with small amounts of small-fruited bulrush and American brooklime.

<u>Upland</u>: The wetland is surrounded by nursery stock of non-native plants. The soil immediately below the surface horizon is yellowish brown (10YR 5/4) sandy loam without mottles. The soil material may be fill.

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December 11, 2000 556-2912-001 (41) G:Uma-morking:2912:3529120141 weilnd/Final Watland Dalmantum Rapport doc <u>Delineation</u>: Driveways, parking lots, residential lawn, and planted nursery stock surround the wetland. The wetland boundary was delineated based on distinct changes in soil color, vegetation, and hydrology.

Wetland A11

USFWS Classification: PSS

Size: 0.02 acre

Wetland data plot: A11-A Upland data plot: A11-B

Map No. 9

Wetland A11 is located at the base of a steep slope in the Miller Creek Nursery. Service roads, planted nursery stock, or yard surround the wetland. A house is located between Wetlands A10 and A11.

<u>Hydrology</u>: The wetland is located in a depression that has seasonal wetland hydrology. Neither inundation nor saturation was observed during the September 1998 site visit. The area is assumed to have wetland hydrology based on the presence of oxidized root channels, hydric soils, and hydrophytic vegetation.

Soils: The soil immediately below the A horizon is very dark grayish brown (10YR 4/2) gravelly loam with mottles.

<u>Vegetation:</u> Himalayan blackberry dominates the shrub community. The herb layer is dominated by yellow iris, giant horsetail, and small-fruited bulrush.

<u>Upland</u>: The wetland is largely surrounded by nursery stock of non-native plants. The soil immediately below the surface horizon is yellowish brown (10YR 5/4) sandy loam without mottles. The soil horizon is disturbed.

<u>Delineation</u>: Driveways, parking lots, residential lawn, and planted nursery stock surround each wetland. The wetland boundary was delineated based on distinct changes in soil color, vegetation, and hydrology.

Wetland A12

USFWS Classification: PSS

Size: 0.11 acre

Wetland data plot: A12-A Upland data plot: A12/13-B

Map No. 9

Wetland A12 occurs in a shallow drainageway on a steep west-facing slope. The upslope end of the wetland is located behind a residence. The downslope end narrows into a swale that terminates in a drainage ditch that drains to Miller Creek through Wetland A9.

<u>Hydrology</u>: During the September 1998 site visit, Parametrix staff found that soils were saturated to the surface and the water table was within 3 inches of the soil surface. In other locations, surface water and wetland drainage patterns were also present.

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Soils: The surface horizon has high organic matter content. The subsoil is dark gray (2.5YR 4/1) sandy loam with mottles immediately between 10 and 16 inches of the soil surface.

<u>Vegetation</u>: The shrub community is dominated by Himalayan blackberry and salmonberry. Skunk cabbage and lady fern occur in the herb layer, but are not dominant.

<u>Upland</u>: Adjacent uplands are dominated by big-leaf maple and Indian plum. The soils below the surface horizon are brown (10YR 5/3) and yellowish brown sand without mottles.

<u>Delineation</u>: The wetland was delineated based on the presence of wetland hydrology and hydric soil conditions; these generally related to changes in topography.

Wetland A13

USFWS Classification: PFO

Size: 0.12 acre

Wetland data plot: A13-A Upland data plot: A12/13-B

Maps No. 9, 12

The wetland is located on a slope behind a residential area where the vegetation has been disturbed by nearby homeowners.

Hydrology: Wetland A13 is an isolated wetland that is fed by groundwater seeps. During the September 1998 site visit, saturation to the soil surface and a water table at 9 inches from the soil surface were observed.

<u>Soils:</u> The wetland surface soils have a high organic matter content. The subsoils are gray (5N 4/1) cobbley sand with mottles immediately below 10 inches.

<u>Vegetation</u>: Red alder dominates the forested community. Himalayan blackberry, giant horsetail, lady fern, and field bindweed occur in the understory.

<u>Upland</u>: Upland conditions surrounding the wetland are similar to those described for Wetland A12.

<u>Delineation:</u> The wetland boundary was delineated based on the presence of hydric soil colors, wetland vegetation, and wetland hydrology.

Wetland A14

USFWS Classification: PFO/SS/EM

Size: 0.19 acre

Wetland data plots: A14a-A, A14b-A

Upland data plots: A14-B

Map No. 11

Wetland A14 is located on Parcels 326 and 327 and is a 0.19-acre wetland that is divided into two sections by driveway fill. The two sections, A14a (0.12 acre) and A14b (0.07 acre), are forested

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siope wetlands. A steep slope bounds the wetlands to the east and roads or driveway fill along the remaining sections.

<u>Hvdrology:</u> Saturation to within 10 inches of the soil surface was observed in Wetland A14a and saturation to the soil surface was observed in A14b during the dry season (September 1999). The wetland is maintained by shallow groundwater that discharges along the toe of the eastern slope. A jurisdictional ditch occurs within the wetland and drains to Miller Creek.

Soils: The soil in Wetland A14 range from eleven inches of a black (10YR2/1) muck over a mottled dark gray (10YR 4/1) silt loam to a dark gray (10YR 3/1) silt loam over a very dark gray (10YR 3/1) fine sandy silt.

<u>Vegetation</u>: Wetland A14 is a red alder-dominated forested wetland with Himalayan blackberry and salmonberry in the shrub layer and lady fern, giant horsetail, and traces of mannagrass and skunk cabbage in the understory.

<u>Upland</u>: The upland area to the east of Wetland A14 is composed of a red alder and big-leaf maple forest. The upland soils to the east of Wetland A14 are a grayish brown (2.5Y 5/2) loam.

<u>Delineation</u>: Wetland A14 was delineated on the clear break in wetland hydrology, soils, and vegetation at the toe of the slope to the east and driveway and road fill in the remaining sections.

Wetland A15

USFWS Classification: PEM

Size: 0.04 acre

Wetland data plots: A15-A Upland data plots: A14-B

Map No. 11

Wetland A15 is located on Parcel 325 and results from grading on the site for residential development. Leveling of the eastern portion of the site exposed compacted till. The extent of the wetland is limited to the shallow compacted material exposed by this grading. ACOE determined that the wetland is jurisdictional.

<u>Hydrology</u>: Wetland hydrology was not observed during the September 1999 field visit when the wetland data was collected. However, saturation to the soil surface was observed on previous site visits during spring 1999.

Soils: The soil in Wetland A13 is 3 inches of a dark yellowish brown (10YR 4/4) silty clay over a mottled gray (10YR 6/1) silty clay.

<u>Vegetation:</u> Wetland A15 is an emergent wetland limited to the residential yard on Parcel 325. The grasses are dominated by common velvet-grass and bluegrass with a co-dominance of creeping buttercup.

<u>Upland</u>: The upland area to the east of Wetland A15 is composed of a red alder and big-leaf maple forest. The upland soils to the east of Wetland A15 are a grayish brown (2.5Y 5/2) loam.

<u>Delineation</u>: Wetland A15 was delineated on the presence of hydric soils and wetland vegetation that corresponded to the compacted, silty clay.

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Wetland A16

USFWS Classification: PSS/EM

Size: 0.06 acre

Wetland data plots: A16-A Upland data plots: A16-B

Map No. 11

Wetland A16 is a narrow wetland (ranging from approximately 2 to 10 feet wide) that occurs on a hillslope subject to groundwater seepage. The southern portion of the wetland (on Parcels 323 and 322) has been altered by fill.

<u>Hydrology</u>: During the September 1999 site visit, Wetland A16 was saturated to the soil surface. The hydrology of the wetland is supported by groundwater seepage that perches on shallow clay soils.

Soils: The soil in Wetland A16 consists of a 6-inch mottled dark gray (10YR 4/1) gravelly loam surface layer. The subsoil is a dark greenish gray (5BG 4/1) clay.

<u>Vegetation</u>: Portions of Wetland A16 are dominated by red alder saplings and soft rush. Other portions of the wetland are mowed lawn. Greater than 50 percent of the dominant plants within Wetland A16 are hydrophytic and therefore satisfy the wetland plant criteria.

<u>Upland</u>: The upland area surrounding Wetland A16 is composed of landscaped yards and gardens that lack wetland hydrology, soils, and wetland vegetation.

<u>Delineation:</u> Wetland A16 was delineated on the clear break in wetland hydrology, soils, and vegetation along the narrow band where groundwater surfaces.

Wetland A17

USFWS Classification: PFO/PSS/PEM

Size: 2.66 acre

Wetland data plots: A17a-A, A17b-A, A17c-A1, A17c-A2, A17c-A3, A17d-A1, A17d-A2, and

A17c-A3

Upland data plots: A17-B1, A17-B2, and A17-B3

Maps No. 8, 11

Wetland A17 is a discontinuous slope wetland that is segmented by several roads and driveways. The wetland is located on several parcels east of Des Moines Memorial Drive, west of 8th Avenue South, and south of South 160th Street. Water D, an intermittent channel, flows through wetland sections A17c through A17d and eventually drains to Miller Creek.

<u>Hydrology</u>: Wetland hydrology consisting of inundation and soil saturation was observed in several locations throughout the wetland in both the wet (April 2000) and dry (October 2000) seasons. An intermittent channel (Water D) flows through A17b, A17c, and A17d. The wetland hydrology is maintained by shallow groundwater and periodic overbank flow from Water D.

Soils: Within the Wetland A17, the soil immediately below the A horizon typically is a very dark gray (10YR 3/1) sandy loam with mottles. In areas adjacent to Water D within the center of

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Wetland A17, the soil immediately below the A horizon typically ranged from very dark gray (10YR 3/1) loam with a high organic content to black (10YR 2/1) sapric muck.

<u>Vegetation</u>: Wetland A17 contains areas of emergent, shrub, and forested vegetation. In several locations there are saturated lawns dominated by red fescue, bluegrass, common velvet-grass, and creeping buttercup. The shrub-dominated areas consist of Himalayan blackberry and salmonberry with giant horsetail in the understory. The forested sections are typically dominated by red alder.

<u>Upland</u>: The upland area surrounding Wetland A17 is composed of landscaped yards and gardens that lack wetland hydrology, soils, and wetland vegetation.

<u>Delineation</u>: Wetland A17 was delineated by the presence of wetland hydrology, hydric soils, and hydrophytic vegetation. In several locations, the wetland boundaries are defined by areas of road and driveway fill.

Wetland A18

USFWS Classification: PSS

Size: 0.01

Wetland data plots: A18-A Upland data plot: A18-B

Map No. 9

Wetland A18 is a small depressional wetland located in the northwest corner of Parcel 305.

<u>Hydrology</u>: During the January 2000 site visit, soils in Wetland A18 were saturated to within 4 inches of the soil surface. The hydrology of Wetland A18 is supported by precipitation and shallow interflow that enters the wetland from upslope areas.

Soils: Surface soils in Wetland A18 are very dark gray (10YR 3/1) sandy loam with high organic content. Below 11 inches, the soils are a coarse sand. The soil color and high organic content in the upper 11 inches satisfy the hydric soil criteria. The subsoils in upland area adjacent to the wetland are generally a very dark grayish brown (10YR 3/3) silt loam with no mottles.

<u>Vegetation</u>: The vegetation within Wetland A18 is dominated by salmonberry, Himalayan blackberry, sword fern, lady fern, and creeping buttercup. Greater than 50 percent of the dominant plants within Wetland A18 are hydrophytic and therefore satisfy the wetland plant criteria.

The upland areas surrounding the wetlands are well drained and dominated by upland plant species, including big-leaf maple, Indian plum, and Himalayan blackberry.

<u>Delineation</u>: The wetland boundary was delineated by the presence of distinct changes in hydrology and soil conditions.

Wetland A19

USFWS Classification: PEM

Size: 0.04 acre

Wetland data plots: A19-A Upland data plots: A19-B

Map No. 11

Wetland A19 is a 0.04-acre depression located along the toe of a rockery retaining the South 168th Street road fill. Wetland A19 contains a garden, mowed lawn, and landscaping.

Hydrology: Water C, a ditch that contains perennial flow, enters Wetland A19 via a 4-inch pipe and into a cement-lined basin. The basin drains into a buried culvert that daylights farther down the slope. Wetland A19 may also drain into the cement basin. The remaining area of Wetland A19 is seasonally saturated. During the September 2000 site visit, Wetland A16 was saturated to the soil surface.

Soils: The subsoil in Wetland A19 is a mottled very dark gray (10YR 3/1) loam that has been gardened for several years.

<u>Vegetation</u>: Wetland A19 is dominated by creeping buttercup and field horsetail that occurs under and around garden and landscape plants. Less than 50 percent of the dominant plants within Wetland A19 are hydrophytic and therefore do not satisfy the wetland plant criteria. Because of recent and ongoing disturbance, vegetation at this site cannot be used to indicate the presence or absence of wetlands.

<u>Upland</u>: The upland area surrounding Wetland A19 is composed of landscaped yards and gardens that lack wetland hydrology, soils, and vegetation community.

<u>Delineation:</u> Wetland A19 was delineated on the presence of wetland hydrology and soils. Vegetation was not used to establish the wetland boundary because of ongoing disturbance.

3.2.3.7 Miller Creek Riparian Wetlands

Wetlands R1 through R13, R4b, R5b, R6b, R7a, R9a, R14a, R14b, R15a, R15b, and R17 USFWS Classification: PFO/SS/EM

Size: 4.72 acre

Wetland data plots: R1-A through R13-A, R4b-A, R5b-A, R6b-A, R7a-A, R9a-A1/A2, R14a-

A, R14b-A, R15a-A1/A2, R15b-A1/A2, and R17-A

Upland data plots: R-3/4B, R5b-B, R6-B, R7-B, R8-B1/B2, R9-B, R11-B, R15a-B, R15b-B

Maps No. 4, 7, 9, 11

Site visits between September 1998 and November 2000 identified several riparian wetlands that occur along Miller Creek between South 154th Street and Des Moines Memorial Drive. The larger of these, Wetlands A1, 18, and 37 are described above. Sixteen smaller riparian wetlands (labeled R1 through R7, R9 through R15, and R17) were identified. The riparian wetlands along Miller Creek range in size from 0.02 to 0.79 acre (see Table 3), and collectively total 4.72 acres. These

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small riparian wetlands have similar hydrology, soils, and vegetation, and because of these similarities, they are described together.

<u>Hydrology:</u> The riparian wetland is typically a slope wetland that is adjacent to and contiguous with Miller Creek. Shallow groundwater surfaces on the slopes and supports the hydrology of the wetlands. However, adjacent to the stream, the hydrology of the wetlands is also supported by periodic overbank flow from Miller Creek.

Soils in all of the wetlands (with the exception of Wetlands R6 and R7a) were saturated to the soil surface or within 12 inches of the surface during the September and October 1998 site visits. Although neither inundation nor saturation was present in Wetlands R6 and R7a, the areas were assumed to have wetland hydrology based on the presence of oxidized root channels, hydric soils, and hydrophytic vegetation.

Soils: Typical surface soil colors in the riparian wetlands are black (10YR 2/1), very dark gray (10 YR 3/1), gray (10YR 5/1), and very dark brown (10YR 2/2). Soils immediately below the A horizon are black (10YR 2/1), very dark gray (10 YR 3/1), gray (10YR 5/1), very dark brown (10YR 2/2) with mottles, and dark brown (7.5YR 3/2) with mottles. Soil textures range from sand to sandy clay loam to muck.

<u>Vegetation:</u> Wetlands R1, R4, R5, R6b, R7a, R11, R13, and R14b are emergent wetlands. Dominant species within emergent communities include creeping buttercup and common velvet-grass, with lesser amounts of lady fern, stinging nettle, horsetail, and bentgrass species. Portions of several wetlands are maintained lawns.

Wetlands R3 and R10 are scrub-shrub wetlands dominated by salmonberry and Himalayan blackberry. Wetlands R2, R8, and R14a contain both emergent and shrub wetland habitat. Dominant species include Himalayan blackberry in the shrub stratum with lady fern, reed canarygrass, redtop, and stinging nettle below.

Wetlands R4b, R5b, R6, R7, R9, R15a, and R15b are forested wetlands with an emergent component. Dominant species are red alder and black cottonwood in the canopy and salmonberry, red-osier dogwood, and Himalayan blackberry in the shrub stratum. Bentgrass species, giant horsetail, English holly, creeping buttercup, and bittersweet nightshade are dominant in the herbaceous and vine stratum. Wetland R7 contains a uniform canopy of red alder with Himalayan blackberry in the shrub stratum.

<u>Upland</u>: Uplands surrounding the riparian wetlands are predominantly coniferous forest or areas of residential yards with mowed lawn grasses. The upland forest is comprised of western redcedar in the overstory with smaller amounts of red alder. Shrubs present include Indian plum, salmonberry, Himalayan blackberry, cherry laurel, and English holly. Grasses include reed canarygrass, colonial bentgrass, and orchardgrass. Hydrophytic vegetation dominates some upland areas, but the areas were determined not to be wetland because they lacked hydric soils and wetland hydrology. Soil color immediately below the surface horizon in the upland areas was generally dark yellowish brown (10YR 3/2 to 10YR 3/4) without mottles.

<u>Delineation</u>: Each riparian wetland was delineated based on changes in hydrology, soil characteristics, and plant community composition in relation to changes in topography.

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3.2.3.8 Other Waters of the U.S.

Within the West Acquisition Area, there are six channels (Waters A, B, C, D, W, and Miller Creek) and one pond (Lora Lake) that are classified as Waters of the U.S. These areas either convey or store natural surface runoff water but lack wetland soil or vegetation. Miller Creek is described in Section 3.1.1.

Water A is an approximately 814-ft-long by 5-ft-wide (0.09-acre) drainage ditch. This ditch collects surface water runoff from 12th Avenue South, the airport security road, and several upslope wetlands (Wetlands 19, 21, and 22). A portion of Water W, which originates in Wetland 20, also drains westward into Water A. These waters drain into Wetland 37 through a culvert under 12th Avenue South and convey channelized flow through a continuation of Water W for approximately 494 feet (0.03 acre) to Miller Creek. Water A and portions of Water W are mapped in the King County sensitive area map folio (King County 1990) as an unclassified stream.

Water B is an approximately 314-ft-long by 4-ft-wide (0.03-acre) incised channel that conveys water from the east end of Wetland 37f northeast to riparian Wetland R9, which, in turn, drains to Miller Creek. Water C is a discontinuous ditch that flows through culverts or cement-lined landscaped channels on Parcel 251. The exposed ditch totals approximately 170 linear feet (0.01 acre) from South 168th Street to Miller Creek. Lastly, Water D is a intermittent stream that begins east of Des Moines Memorial Drive and north of South 160th Street. The channel flows approximately 1,830 linear feet (0.16 acre) through several sections of Wetland A17 and enters Miller Creek on Parcel 243, approximately 200 feet upslope of Des Moines Memorial Drive.

3.2.4 Borrow Areas 1 and 3

Borrow Areas 1 and 3 are located south of the airfield between 24th Avenue South and 15th Avenue South, and between South 200th Street and South 216th Street (see Figure 2). Historically these areas were made up of forest, small farms, and residences.

3.2.4.1 Borrow Area 1

In 1980, Borrow Area 1 consisted of a residential neighborhood (Figure 6). Between 5 and 20 years ago, the Port acquired Borrow Area 1 as part of a noise abatement program. By 1990, a demolition program cleared the area north of 210th Street South of structures. By 1996, the area south of 210th Street South was cleared (Figure 7). The demolition process included removing structures, filling excavated areas, and grading the site. In some areas, clay or clay loam fill was used, and grading frequently created shallow, closed depressions.

Once demolition was complete, drainage facilities such as ditches, culverts, storm sewer lines, and French drains were no longer maintained and began to deteriorate. As these facilities became nonfunctional, local hydrology was altered, and localized areas became seasonally wet. Over time, mowed and landscaped areas began to naturalize, converting yards and fields into forest and shrub communities of mixed native and ornamental species.

Eight wetlands and one Water of the U.S. are located in Borrow Area 1; they have a total area of 2.16 acres. Wetland 32 was identified during a previous investigation (FAA 1995) and its boundary

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was confirmed by ACOE (see Appendix E). This wetland is described in Appendix E, and its location is shown on Map No. 24 in Appendix C. Wetland 48 was also identified during a previous investigation (FAA 1996), but was redelineated in 1999 and is described below. Wetlands B1. B4. B11, B12, B14, and B15 were delineated in 1998 and 1999 and are also described below.

Wetland B1

USFWS Classification: PFO/SS

Size: 0.27 acre

Wetland data plot: B1-A Upland data plot: B1-B

Maps No. 22, 24

Wetland B1 is located along the eastern edge of the Port-owned property and is connected via a ditch to the residential neighborhoods east of 24th Avenue South. To the north, west, and south the wetland is surrounded by upland forest.

<u>Hydrology:</u> Wetland B1 is a shallow depression that receives residential stormwater runoff from the ditch to the east. At the time of the May 1998 site visit, the soil was saturated to the surface and free water filled the soil pit. Additional hydrological indicators such as water-stained leaves, watermarks, and wetland drainage patterns were also observed.

Soils: The wetland surface soil has high organic matter content. The soil immediately below 10 inches is very dark gray (10YR 3/1) clay loam without mottles.

<u>Vegetation</u>: The forested community has a canopy of red alder and black cottonwood. The shrub community is predominantly Douglas spirea, salmonberry, and Himalayan blackberry, with sedges and horsetail in the herbaceous layer.

<u>Upland</u>: Big-leaf maple with a Himalayan blackberry and Indian plum understory dominate the adjacent upland plant community. Upland subsoils are dark yellowish brown (10YR 4/4) and yellowish brown (10YR5/8) sandy loams without mottles.

<u>Delineation</u>: The wetland was delineated based on the presence of hydric soil colors, wetland hydrology, and wetland vegetation.

Wetland B4

USFWS Classification: PSS

Size: 0.07 acre

Wetland data plot: B4-A Upland data plot: B4-B

Map No. 24

Wetland B4 is located at the base of a steep ravine where groundwater seeps into a seasonal drainage. The area is part of a failed stormwater discharge channel, and the ravine is littered with disconnected sections of 12-inch-diameter clay culvert. The culvert was designed to convey storm water from 208th Street South to Des Moines Creek. Within the last 30 years, however, the pipe sections separated and stormwater has eroded the ravine.

Hydrology: Groundwater seeps into the ravine slopes and stormwater runoff enters the area from developed areas east of South 208th Street. A channel in the base of the ravine conveys water to Des Moines Creek. Flowing water was observed in the channel in July 1998, when the wetland soils were saturated to the surface. Other indicators of wetland hydrology, including water-stained leaves, watermarks, and wetland drainage patterns, were also observed.

Soils: The wetland soils are black (10YR 2/1) loam over gray (10 YR 5/1) loam with mottles.

<u>Vegetation</u>: The shrub community is dominated by salmonberry and Himalayan blackberry, with creeping buttercup in the herb layer. Small areas along the wetland fringe are dominated by less than 50 percent wetland vegetation, but were determined to be included in the wetland by ACOE during a July 1998 site visit because of the presence of wetland hydrology.

<u>Upland</u>: Big-leaf maple forest with an Indian plum and vine maple understory dominate the surrounding upland plant community. Upland subsoils are dark yellowish brown (10YR 3/3) loam without mottles.

<u>Delineation</u>: The wetland was delineated predominantly because of wetland hydrology along the north and south slopes of the ravine. To the east, the wetland edge is at the stormwater outfall. To the west, the wetland edge is at the OHWM of Des Moines Creek.

Wetland B11

USFWS Classification: PEM

Size: 0.18 acre

Wetland data plot: B11-A Upland data plot: B11-B

Map No. 24

This wetland occurs in a previously farmed area. The farm has been abandoned for about 20 years. The southern and eastern edges of the wetland have been filled with clay, gravel, and rubble.

<u>Hydrology</u>: Wetland B11 is located in an isolated depression. During the January 1999 site visit, 1.5 inches of inundation, saturation to the soil surface, watermarks, and wetland drainage patterns were observed in the wetland.

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December 11, 2000 556-2912-001 (41) G:Umaworlang/2912/5529120141walind/Finel Walland Delmantian Report doc Soils: Below a depth of 9 inches, the wetland soil is a reddish gray (2.5YR 5/1) gravelly sandy loam with mottles.

Vegetation: Reed canarygrass dominates the emergent vegetation.

<u>Upland</u>: The surrounding upland vegetation is bentgrass and reed canarygrass. Greater than 50 percent of the vegetation is hydrophytic. The filled areas outside the wetland were inundated during the January 1999 site visit; however, this area was determined to be non-wetland because the subsoils are reddish brown (2.5YR 4/3) without mottles, which does not satisfy the hydric soil criteria.

<u>Delineation</u>: Wetland B11 was delineated along the southern and eastern edges based on the presence of native hydric soils and changes in soil composition associated with the edge of fill. The remaining boundary was delineated based on the presence of hydric soil colors, reed canarygrass, and the presence of wetland hydrology.

Wetland B12

USFWS Classification: PSS

Size: 0.63 acre

Wetland data plot: B12-A Upland data plot: B12-B

Map No. 25

Wetland B12 is located north of 208th Street at the head of a ravine. The ravine and wetland continue to slope to the west, off the Port of Seattle property, eventually draining toward Des Moines Creek. The surveyed portion of Wetland B12 on Port property totals 0.07 acre; however, the total area is estimated to be 0.63 acre.

<u>Hydrology</u>: Groundwater discharge from the ravine sideslopes supports hydrology within the wetland. During the January 1999 site visit, surface water was observed flowing in the ravine. Saturation to the soil surface, water marks, and drainage patterns were also observed in the wetland. Water surfacing in the wetland flows downslope to Des Moines Creek.

Soils: The wetland soil immediately below the A horizon is very dark gray (10YR 3/1) silt loam with mottles.

<u>Vegetation</u>: The shrub community is dominated by vine maple with a lady fern and sword fern understory.

<u>Upland</u>: The surrounding upland forest is dominated by big-leaf maple, Douglas fir, and hemlock forest, with salmonberry and sword fern in the understory. The soil below the surface horizon is dark brown (10YR 3/3) sandy loam without mottles.

<u>Delineation</u>: The wetland boundary was delineated based on the presence of wetland hydrology, hydric soil colors, and wetland vegetation.

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Wetland Delineation Report - Master Plan Update Improvement Seattle Tacoma International Airport, Port of Seattle Parametrix, Inc. December 11, 2000 556-2912-001 (41) Data wartang 1291215529120141 washah Final Waland Dahmanan Rason dar Wetland B14

USFWS Classification: PSS/EM

Size: 0.78 acre

Wetland data plot: B14-A Upland data plot: B14-B

Map No. 26

The edges of this wetland have been disturbed by the removal of the residential area and filled with clay loam soil.

<u>Hydrology</u>: The wetland is a closed, shallow depression. Drainage ditches were observed within the wetland. During the January 1998 site visit, 1 inch of inundation was observable in the wetland.

Soils: The wetland soil is black (10YR 2/1) mucky loam over black sandy loam.

<u>Vegetation</u>: The shrub community is dominated by Himalayan blackberry, the emergent community by soft rush, reed canarygrass, and creeping buttercup.

<u>Upland</u>: Houses that once surrounded the wetland were removed within the last 5 years, and the soil and vegetation are disturbed. The dominant vegetation is red alder with an understory of Himalayan blackberry, bentgrass, and common velvet-grass. Outside the wetland, the soil is disturbed dark brown (10YR 3/3) loam with mottles.

<u>Delineation</u>: The western and northern edges of the wetland were delineated based on the presence of hydric soil colors and the boundary between native and fill soils. The remaining boundary was delineated based on the presence of wetland hydrology, hydric soil colors, and wetland vegetation.

Wetland B15

USFWS Classification: PSS

Size: 2.05 acres

Wetland data plot: B15a-A Upland data plot: B15a-B

Map No. 25

Wetland B15 occurs on a gentle slope and is the eastern end of a larger wetland extending to the west beyond the borrow area boundary. The portion of Wetland B15 on Port property totals 0.23 acre; however, the total area is estimated to be 2.05 acres. Only the portion of the wetland on Portowned property was delineated. The wetland's two lobes are divided by a narrow upland strip. Figure 6 shows that most of the wetland existed prior to the demolition of the neighborhood, but the wetland edges have been disturbed.

<u>Hydrology</u>: During the December 1998 site visit, 2 inches of inundation, water marks, and wetland drainage patterns were observed in the wetland.

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Soils: The wetland soils are black (10YR 2/1) mucky loam to a depth of 13 inches or greater.

<u>Vegetation</u>: Salmonberry is the only dominant plant in the wetland.

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<u>Upland</u>: The adjacent upland community is a big-leaf maple forest with Himalayan blackberry. English holly, and sword fern in the understory. The subsoil is dark brown (7.5YR 3/3) loam.

<u>Delineation</u>: The wetland boundary was delineated along the northern edge based on the presence of hydric soil colors and the boundary between native and fill soils. The remaining boundary was delineated based on hydric soil colors, wetland vegetation, and wetland hydrology.

Wetland 48

USFWS Classification: PFO/EM

Size: 1.58 acres

Wetland data plot: 48-A
Upland data plot: 48-B

Map No. 25

Wetland 48, located at the west end of South 212th Street, is the east end of a large wetland that extends to the west beyond the borrow area boundary. All of Wetland 48 has been delineated and surveyed. The portion of Wetland 48 on Port property is 0.46 acre; however, the entire area is 1.58 acres. The wetland occurs on a slope that extends between the borrow area and Des Moines Creek. Only that portion of the wetland on Port-owned property was delineated.

<u>Hydrology</u>: Groundwater seeps from the toe of the surrounding upland slopes drain into the wetland and then downslope to Des Moines Creek. During the January 1998 site visit, 1 inch of inundation, oxidized root channels, and wetland drainage patterns were observed in the wetland.

Soils: The wetland soil is grayish brown (10YR 5/2) gravelly sand with mottles to a depth of 18 inches.

<u>Vegetation:</u> The forested community is dominated by red alder, Himalayan blackberry, soft rush, bentgrass, and creeping buttercup. The emergent community is dominated by soft rush and creeping buttercup.

<u>Upland</u>: The adjacent upland community is a red alder and Douglas fir forest with Himalayan blackberry in the understory. The soils are brown (10YR 4/3) sand with mottles in the subsoil.

<u>Delineation</u>: The western edge of the wetland was delineated along the fence marking the edge of Port property. The remainder of the wetland was delineated based on hydric soil colors, wetland hydrology, and wetland vegetation. These indicators correlated to distinct changes in topography that define most of the wetland edge.

3.2.4.2 Other Waters of the U.S.

A small conveyance within the borrow area is classified as a Water of the U.S. This area, Water S, is a naturally intermittent drainage area, but does not contain wetland soil or vegetation. Water S is a 90-ft-long by 3-ft-wide (0.01-acre) channel that conveys water from a small spring into a 4-inch drainage pipe.

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3.2.4.3 Borrow Area 3

Seven wetlands located in Borrow Area 3 have a total area of 2.35 acres. Wetlands 29 and 30 were identified during a previous investigation (FAA 1995) and their boundaries were confirmed by ACOE (see Appendix D). Wetland 29 is described in Appendix E and shown on Map No. 23 in Appendix D. Wetland 30 was delineated in March 1998 and is described below. Wetlands B5, B6, B7, B9, and B10 were delineated in May and June 1998 and are also described below.

Wetland B5

USFWS Classification: PFO/SS

Size: 0.08 acre

Wetland data plot: B5-A Upland data plot: B5-B

Map No. 23

The wetland is located near the corner of South 18th Street and 208th Avenue South. In 1980 the wetland was surrounded by structures to the north; to the south it was cleared and leveled. Remnants of this former development, such as fill, ditches, and an old well, were seen during the site visit.

Hydrology: Wetland B5 occurs in a shallow swale that drains to the southeast. During the June 1998 site visit, the soil was saturated at 18 inches below the surface, and water-stained seaves were observed; these indicate areas of ponding. The wetland was inundated during additional site visits in the spring of 1998 and winter of 1998/1999.

Soils: The wetland soil immediately below the surface horizon is weak red (2.5Y 4/2) with mottles. A layer of black (10YR 2/1) muck occurs below a depth of 17 inches.

<u>Vegetation</u>: The forested community is composed of red alder and Oregon ash. The shrub community is predominantly willow and Douglas spirea, with creeping buttercup and bedstraw in the herb layer.

<u>Upland</u>: The adjacent upland community is a red alder forest interspersed with fruit trees and English holly. The upland soil immediately below the surface horizon is dark brown (10YR 3/3) sandy loam without mottles. A layer of black (10YR 2/1) sandy loam occurs between a depth of 8 and 17 inches. This non-hydric layer was determined to be a buried A horizon.

<u>Delineation:</u> The wetland was delineated based on hydric soil colors, wetland hydrology, and wetland vegetation. These indicators correspond to topographic changes that define the wetland edge.

Wetlands B6 and B7

USFWS Classification: PFO/SS Size: B6 = 0.55 acre, B7 = 0.03 acre

Wetland data plot: B6-A
Upland data plot: B5-B

Map No. 23

Wetlands B6 and B7 have similar hydrologic indicators, soil conditions, and plant communities. Approximately 20 ft of upland separates the two wetlands. Because of the similarity and proximity of these wetlands, they are described collectively.

<u>Hydrology</u>: Wetlands B6 and B7 occur in isolated depressions. Wetland hydrology is supported by a seasonally high groundwater table. During the June 1998 site visit, neither inundation nor soil saturation was present. The area was assumed to have wetland hydrology based on the presence of oxidized root channels, hydric soils, and hydrophytic vegetation. The wetland was inundated during site visits conducted in the winter of 1998/1999.

<u>Soils</u>: Wetland soil immediately below the A horizon is highly organic with a black (10YR 2/1) color and no mottles.

<u>Vegetation</u>: The forested component of the wetland is dominated by red alder, and the shrub component is dominated by salmonberry with false lily-of-the-valley in the herb layer.

Upland: The adjacent upland is similar to that described for Wetland B5.

<u>Delineation</u>: The wetland boundary was delineated based on the presence of hydric soil colors, wetland hydrology, and wetland vegetation.

Wetland B9

USFWS Classification: PFO

Size: 0.05 acre

Wetland data plot: B9-A Upland data plot: B8/9-B

Map No. 23

This wetland, located on a south-facing slope, is bisected by South 205th Street. Its two sections are connected by a culvert.

Hydrology: The wetland is maintained by a groundwater seep at the edge of a slope at the north wetland edge. During the June 1998 site visit, the area north of the road was inundated and small amounts of surface water were flowing over the abandoned street and into the south section of the wetland. Up to 2 inches of standing water could be seen in the wetland area south of the road. There is no outlet from the wetland.

Soils: Soils within the wetland have a surface horizon of 11 inches of black (10YR 2/1) muck overlying a light brownish gray (10YR 6/2) sandy substrate with mottles.

<u>Vegetation</u>: In the forested community, red alder, willow, and big-leaf maple trees form the overstory, and red alder saplings, bedstraw, and creeping buttercup form the understory.

<u>Upland</u>: The wetland is surrounded by a red alder forest and shrub community composed of English holly, bitter cherry, Himalayan blackberry, and Douglas spirea. The soil immediately below the surface horizon is brown (10YR 4/3) silt loam.

<u>Delineation</u>: The northern portion of the wetland was delineated based on the presence of wetland hydrology, which was associated with changes in slope and the presence of road fill. The remainder of the wetland was delineated based on the presence of hydric soil colors, wetland hydrology, and wetland vegetation.

Wetland B10

USFWS Classification: PFO

Size: 0.02 acre

Wetland data plot: B10-A Upland data plot: B10-B

Map No. 23

The wetland is located at the edge of a rock wall at the bottom of a steep, southeast-facing slope.

<u>Hydrology</u>: Groundwater discharge from the toe of the slope maintains the area as wetland. Surface water flows from the seep for approximately 75 ft to the southeast before recharging into sandy soil. During the June 1998 site visit, up to 2 inches of inundation, watermarks, and wetland drainage patterns could be seen in the wetland.

Soils: The hydric soils consist of 4 inches of black (10YR 2/1) sapric organic matter overlying a 1-inch-thick gray (10YR 5/1) clay loam layer. Below 5 inches, the soil is yellowish brown (10YR 5/4) with mottles.

<u>Vegetation</u>: The forested overstory of the wetland is composed of red alder. The dominant understory species are salmonberry and giant horsetail.

<u>Upland</u>: Upland areas surrounding the wetland are red alder and madrone forest with an understory of English holly and salmonberry. The soils immediately below 10 inches are brown (10YR 5/3) clay loam with mottles.

<u>Delineation</u>: The western edge of the wetland was delineated based on the presence of wetland hydrology and hydric soil colors. The remaining boundary was delineated based on hydric soil colors, wetland vegetation, and wetland hydrology.

Wetland 30

USFWS Classification: PFO/SS

Size: 0.88 acre

Wetland data plots: 30a-A, 30b-A

Upland data plot: B9-B

Map No. 23

Wetland 30 was originally delineated as a 0.08-acre wetland in 1994 and its boundary was confirmed by ACOE. During a June 1998 site visit, the wetland boundary was expanded by 10 ft to encompass wetland indicators found outside the original flagged boundary. Additionally, a larger wetland lobe extending northeast of the original wetland was included in the wetland boundary. The area of expansion totaled 0.80 acre and was confirmed by ACOE on a July 8, 1998 site visit. Wetland 30 now totals 0.88 acre. The area of expansion of Wetland 30 is described below.

Hydrology: Wetland 30 is an isolated depression supported by shallow groundwater. No surface water inlets or outlets are visible. During the June 1998 site visit, soils in the northeast lobe of wetland were saturated to a depth of 12 inches. Along the remainder of the wetland, soils were saturated to the surface and standing water was present 12 inches below the surface.

Soils: In the northeast lobe of the wetland, the soil beneath the A horizon is very dark gray (10YR 3/1) sandy loam with mottles. Elsewhere, near the wetland boundary, the soil consists of 10 inches of black (10YR 2/1) muck overlying a highly organic black (10YR 2/1) silt loam. In the remaining portions of the wetland, the soils consist of black (10YR 2/1) mucky peat overlying gray (5Y 5/1 and 6/1) silt loam.

<u>Vegetation</u>: The shrub community in the northeast lobe of the wetland is composed of Himalayan blackberry and salmonberry with an understory of giant horsetail and lady fern. Between the original and adjusted wetland edge, the vegetation is composed of western redcedar, red alder, and big-leaf maple trees with Sitka willow. The understory is dominated by salmonberry, Himalayan blackberry, and nettles. The remainder of the wetland is dominated by Pacific and Sitka willow trees. Associated species include Douglas spirea, creeping buttercup, water parsley, and tall mannagrass.

<u>Upland</u>: The adjacent upland is dominated by a red alder forest and upland shrub community composed of English holly, bitter cherry, Himalayan blackberry, and Douglas spirea. The soils below 10 inches are brown (10YR 5/3) with mottles.

<u>Delineation</u>: The northeast lobe of the wetland was delineated using wetland hydrology, hydric soil colors, and wetland vegetation. These parameters correspond with the edge of the depression.

3.2.5 South Aviation Support Area (SASA)/Tyee Valley Golf Course

The SASA/Tyee Valley Golf Course area is located southwest of the airport between South 188th Street and South 200th Street and between 18th and 28th Avenue South (see Figure 2). The SASA site is located on the western slope of a broad hill and extends down to the east branch of Des Moines Creek. The SASA footprint covers a portion of the Tyee Valley Golf Course and areas that have experienced residential, commercial, industrial, and airport-related development. Wetlands on

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the Tvee Valley Golf Course outside the SASA footprint are being considered for on-site wetland mitigation as part of the Master Plan Update improvements.

In the SASA/Tyee Valley Golf Course area, Wetlands 28, 52, and 53 were delineated during previous wetland investigations (Parametrix 1992; FAA 1996). Wetlands 28 and 52 are described below because their boundaries were modified during the 1998 to 2000 site investigations. The boundaries of Wetland 53, a 0.60-acre forested wetland, were found to correspond to previous delineations, and are described in Appendix E. An additional area, Wetland DMC, was originally delineated by Shapiro and Associates, Inc. and is presented in the SR 509/South Access Road Discipline Report (509 Discipline Report: CH2M Hill, April 2000) and is summarized below. Nine wetlands, G1 through G8 and WH (water hazard), were identified through the 1998 to 2000 field seasons. These wetlands are also described below.

Wetland 28

USFWS Classification: PSS/EM/OW

Size: 35.45 acres

Wetland data plots: 28-A1, 28-A2, 28-A3

Upland data plot: 28-B Maps No. 16, 18, 19

Wetland 28 is located south of the existing airfield, on and west of the Tyee Valley Golf Course. A portion of the wetland extends north along the west side of the runway almost to South 188th Street. The portion of the wetland west of the Tyee Valley Golf Course, just south of the runways, was delineated during previous investigations (FAA 1996). The portion of the wetland on the golf course was delineated in January 1999.

Collectively, the portions of the wetland on the golf course are 9.75 acres in size and consist of fairways and rough for the golf course. The wetlands are separated by fill used for service or golf cart roads. Historically, the area was a peat wetland. Prior to use as a golf course (about 1970), the area was farmed. When the golf course operations began, the area was landscaped for topographic variability (i.e., tees and greens) and planted with mixed lawn grasses.

Hydrology: The wetland is maintained by a high groundwater table and groundwater seeps that are found along the northern and southwestern portions of the wetland. Stormwater enters the north end of the wetland via a large culvert.

The west branch of Des Moines Creek originates at the Northwest Ponds, located in the western portion of Wetland 28. The ponds are located southwest of the existing runways, between South 192^{nd} Street and South 196^{th} Street. They were excavated in the early 1970s as part of the airport stormwater management system. The creek flows south to the northern edge of Tyee Valley Golf Course, where it enters a narrow drainageway. The stream runs along the southern margin of the golf course portions of the wetland.

The golf course portions of the wetland are maintained by a seasonally high water table, occasional flooding from the creek, and the Northwest Ponds. On the January 1999 site visit, saturation occurred at the soil surface and the water table was found within 6 inches of the surface at each wetland data plot location in the golf course area.

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Soils: In the golf course area, the wetland soil is primarily black (10YR 2/1) histic peat to a depth greater than 18 inches. Mineral soils consist of 4 to 10 inches of very dark gray (10YR 3/1) surface soils without mottles overlying gray (10YR 5/1) subsoils with mottles. Soils in other portions of the wetland are black (10YR 2/1) muck and loam.

<u>Vegetation</u>: Golf course area vegetation consists of planted turf grass. Dominant grass species are bluegrass and bentgrass. Because of specific planting and maintenance for golfing, vegetation is not a reliable indicator of wetland and non-wetland conditions.

The shrub community west of the golf course is dominated by Sitka and Pacific willow. Red elderberry and red alder are also found in the shrub layer. The understory is dominated by a mixture of cattail, bittersweet nightshade, creeping buttercup, and bentgrass. Associated species include soft rush, reed canarygrass, small-fruited bulrush, and fireweed. Several small patches of emergent vegetation in the northern arm of the wetland are dominated by cattail. Associated species include soft rush, spike rush, and bittersweet nightshade.

<u>Upland</u>: Upland golf course areas adjacent to the wetland are dominated by planted turf grass. The upland areas lack wetland hydrology and, in most areas, lack hydric soils. The upland soils are disturbed with a very dark grayish brown (10YR 3/2) buried A horizon with no mottles at a depth of 7 to 15 inches. A dark yellowish brown (10YR 4/4) B horizon occurs below 15 inches.

<u>Delineation:</u> The wetland boundary was delineated based on the distinct boundary between native organic soil and fill material associated with roads, golf greens, and tees.

Wetland 52

USFWS Classification: PFO/SS/EM

Size: 4.70 acres

Wetland data plot: 52-A Upland data plot: None

Maps No. 17, 20

Wetland 52, located along the west branch of Des Moines Creek on the Tyee Valley Golf Course, drains to the creek upstream of the Tyee detention pond. Most of Wetland 52 was delineated during a previous investigation (Parametrix 1992). During site visits in 1999, additional wetland areas just south of the original wetland were delineated. Because these areas are hydrologically connected via the detention pond, they are discussed as part of Wetland 52.

<u>Hydrology</u>: The wetland is located along the south bank of Des Moines Creek at the base of a steep hillside; it is fed by hillside seeps, many of which flow throughout the summer months. The newly identified areas at the south end of the wetland had shallow inundation (up to 2 inches) at the time of the March 1999 site visit.

Soils: Soils near the stream are dark grayish brown (10YR 4/2) loam. Very dark brown (10YR 2/2) muck can be seen in the western part of the wetland. At the southern end of the wetland, subsoil colors are gray (Gley N/4 and N/5).

<u>Vegetation:</u> Red alder dominates the forested community, with Himalayan blackberry, madrone saplings, and Indian plum found in the understory. The shrub community is dominated by willow,

Wetland Delineation Report - Master Plan Update Improvement Seattle Tacoma International Airport, Port of Seattle Parametrix, Inc. December 11, 2000 556-2912-001 (41) G:Datemorking(29)23529)2014) washed/Final Westerd Datematism Report day with creeping buttercup, soft rush, and grasses in the herb layer. The riparian zone is dominated by Himalayan blackberry and field horsetail. The emergent area at the southern end of the wetland, on the golf course, contains a mixture of seeded turf grasses and other herbaceous vegetation. Colonial bentgrass, creeping buttercup, soft rush, and tall fescue are dominant species in the emergent area.

<u>Upland</u>: The surrounding upland areas are maintained golf course, parking lots, and forested hillside. On the golf course, dominant vegetation adjacent to the wetland includes colonial bentgrass, English daisy, spotted cat's-ear, and white clover. Soil in this upland area ranged from very dark brown (10YR 2/2) sandy loam without mottles to dark yellowish brown (10YR 3/4) gravelly sandy loam with mottles.

<u>Delineation:</u> For areas on the golf course, the wetland boundary was delineated based the presence of wetland hydrology and hydric soil colors. In other areas, the wetland was delineated based on the presence of wetland vegetation, as well as hydric soil and wetland hydrology.

Wetland G7

USFW Classification: PFO/SS

Size: 0.50 acre

Wetland data plot: G7-A Upland data plot: G7-B

Map No. 21

Wetland G7 is located in the city of SeaTac in a fenced area that was mined for fill material to construct other airport facilities. It is located north of South 200th Street, south of the Tyee Valley Golf Course, east of a gravel parking lot, and west of a forested hill slope. Most of the wetland is located in a flat area at the base of a hill slope. The wetland extends south to South 200th Street within a constructed ditch. Water from the wetland eventually enters Des Moines Creek via the South 200th Street drainage system.

<u>Hydrology</u>: Wetland hydrology is supported by groundwater and precipitation. An artificially created ditch, ranging from 1 to 3 ft wide, borders the east side of the wetland. This ditch intercepts groundwater from the base of the hill slope. During the March 1999 site visit, 1 to 2 inches of standing water was present in the northern portion of the wetland. From 1 to 3 inches of water was flowing south in the constructed ditch. Soils were saturated from the surface to a depth of 6 inches, where groundwater was encountered.

Soils: Soil in the upper horizon is greenish gray (5GY 6/1) gravelly sandy loam with mottles, and the subsoil is reddish brown (2.5Y 5/3) gravelly sandy loam with mottles.

<u>Vegetation</u>: Vegetation in the forested and shrub communities consists of variable aged and sized black cottonwood and red alder trees, with colonial bentgrass, Himalayan blackberry, and soft rush in the understory.

<u>Upland</u>: The upland hill slope east of the wetland consists of a closed canopy forest dominated by red alder and black cottonwood to the north; western redcedar is also dominant to the south. The upland area west of the wetland contains red alder, Scots broom, Himalayan blackberry, and colonial bentgrass, with Pacific madrone scattered throughout. Soils were brown and dark yellowish brown (10YR 4/3 and 4/4) gravelly sandy loam and gravelly loamy sand without mottles.

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<u>Delineation</u>: The wetland boundary was delineated based on the presence of wetland hydrology, hydric soil colors, and wetland vegetation.

Wetlands G1, G2, G3, G4, G5, G6, G8, WH

USFW Classification: PEM

Size: 1.34 acres

Wetland data plot: G1-A, G2-A, G4-A, G5-A, G6-A, and G8-A Upland data plot: G1-B, G2-B, G3-B, G4-B, G5-B, G6-B, and G8-B

Maps No. 17, 20, 21

Seven new wetlands were identified on the Tyee Valley Golf Course during site visits conducted in January and March 1999: Wetlands G1, G2, G3, G4, G5, G6, G8, and WH. All are emergent wetlands, ranging in size from 0.01 to 0.87 acre (see Table 3); collectively they are 1.34 acres. The wetland locations are shown on Figure 5 and Maps 16, 19, and 20 of Appendix D. Wetland data plots were established in each wetland, and are identified as Data Plots G1-A, G2-A, G4-A, G5-A, G6-A, G8-A, and WH-A. Upland comparison plots were established outside the wetlands, and are identified as Data Plots G1-B, G2-B, G3-B, G4-B, G5-B, G6-B, and G8-B.

Hydrology: Wetlands on the Tyee Valley Golf Course are maintained by groundwater and precipitation. Some of these wetlands are located on a hill slope where groundwater surfaces and wetland conditions have developed. Inundation during the March 1999 site visit ranged up to 1.5 inches in Wetlands G5. Soils were saturated to the surface in all other wetlands. Wetland WH contains a perennial pond that is partially used for irrigation return.

Soils: All soils sampled within the wetlands contained a combination of low-chroma colors, mottles, and an aquatic moisture regime. Soil colors ranged from very dark brown (10YR 2/2) with mottles to gray (N4/1) with mottles. Soil textures within the wetlands are primarily gravelly sandy loam and gravelly loam. Sulfidic odor was detected in Wetlands G1, G4, and G5 during the March 1999 field investigation.

<u>Vegetation</u>: Vegetation in these wetlands is a mixture of seeded turf grass and other herbaceous vegetation. Dominant species include colonial bentgrass, creeping buttercup, English daisy, soft rush, and tall fescue. Because the area is planted with turf grass and is maintained as golf greens, vegetation is not a reliable indicator of wetland and non-wetland conditions.

<u>Upland</u>: Upland areas surrounding the wetlands are golf course dominated by turf grass. Species include colonial bentgrass, English daisy, spotted cat's-ear, and white clover. Soil in the upland areas ranged from very dark brown (10YR 2/2) sandy loam without mottles to dark yellowish brown (10YR 3/4) gravelly sandy loam with mottles.

<u>Delineation:</u> The wetland boundary was delineated based on the presence of wetland hydrology and hydric soil colors.

Wetland DMC

USFWS Classification: PFO/SS/EM

Size: 1.08 acres

Wetland data plots: Shapiro Data Plot

Maps No. 19, 20, 21

Wetland DMC is a 1.08-acre riparian slope wetland, which includes a portion of Des Moines Creek. The wetland is located downstream from Wetland 28 on the Tyee Valley Golf Course, east of the Runway 16L/34R light towers and north of South 200th Street. Shapiro and Associates, Inc. delineated the boundary of this wetland and their results are presented in *the SR 509 Wetland Discipline Report* (see Wetland G, CH2M Hill 2000).⁵ Parametrix, Inc. verified the wetland delineation and presented the boundary to ACOE on October 26, 2000.

Shapiro and Associates, Inc. describes this area as an emergent and shrub wetland with wetland hydrology and hydric soils. The emergent component contains mowed grasses of the Tyee Valley Golf Course and the shrub component contains Pacific willow and red alder. Parametrix, Inc. confirmed these observations over several sight visits. However, an additional forested area of red alder and Pacific willow should be noted.

3.2.6 Industrial Waste System (IWS)

The IWS area is located southwest of the airport between South 188th Street and South 200th Street and east of 16th Avenue South (see Figure 2). The wetlands on this site are located north of the IWS Lagoon 3.

Wetlands IWSa and IWSb USFWS Classification: PFO

Size: 0.67 acre

Wetland data plot: IWSa-A, IWSb-A

Map No. 16

Wetlands IWSa and IWSb are located north of the IWS lagoon and are separated from each other by a gravel access road. They are bordered by compacted fill to the south, a road to the east, and a steep slope to the north and west. Because of their small size and physical similarities, they are described together.

<u>Hydrology</u>: These wetlands are maintained by shallow groundwater. During the June 1999 site visit, areas within the wetland were inundated to approximately 4 inches. Soil was saturated to the surface at both data plot locations. No outlet from the wetland was observed.

Soils: Soil identified within both wetlands have a surface horizon of very dark gray (10YR 3/1) loamy sand overlying a dark gray (10YR 4/1) gravelly coarse sand with mottles. Other areas of the

⁵ Wetland G is described as 7.88 acres in size and includes 6.80 acres of wetland included in Wetland 28 in this report.

wetland have a very dark grayish brown (10YR 3/2) loamy sand with high organic content over a gray (2.5Y 5/1) sandy loam with mottles.

<u>Vegetation:</u> In the forested community, red alder, willow, and black cottonwood form the overstory. Giant horsetail and Himalayan blackberry are the dominant plant species in the understory.

<u>Delineation:</u> The wetlands were delineated on sharp changes in hydrology and hydric soil conditions related to topography. The wetland boundary along the road was delineated along the fill edge. The southern portions of the wetlands were delineated along the edge of compacted fill.

3.2.7 SASA Detention Pond Area

The SASA detention pond area, located east of the airport and south of South 188th Street (see Figure 2), is the proposed site for a new airport electrical substation. Vacant land east of the south substation is earmarked for the stormwater management facilities required for SASA. Three small wetlands occur in this area, as described below.

Wetland E1

USFW Classification: PFO

Size: 0.23 acre

Wetland data plot: E1-A Upland data plot: E1-B

Map No. 17

Wetland E1, located in the western portion of the site, is separated from a roadside ditch by an elongated berm.

<u>Hydrology:</u> Wetland E1 is located on a hill slope and has no surface water outlet. Hydrology is derived from groundwater seeps and surface water runoff. Small portions of the wetland were inundated at the time of the January 1999 site visit.

Soils: The wetland soil consists of black (10YR 2/1) gravelly sandy loam over gray (10YR 5/1) gravelly sandy loam without mottles.

<u>Vegetation:</u> The forested wetland community is dominated by black cottonwood, Scouler willow, and red alder saplings. The understory consists of soft rush and creeping buttercup, with patches of Himalayan blackberry.

<u>Upland</u>: The surrounding upland community is dominated by Himalayan blackberry with scattered black cottonwood saplings. Colonial bentgrass dominates the herb layer. The upland soil is reddish brown (2.5YR 4/3) gravelly sandy loam with mottles below a depth of 10 inches.

<u>Delineation:</u> The wetland boundary was delineated based on the presence of wetland vegetation, wetland hydrology, and hydric soil characteristics.

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Wetland E2

USFW Classification: PFO

Size: 0.04 acre

Wetland data plot: E2-A Upland data plot: E2-B

Map No. 17

Wetland E2 is a highly disturbed wetland north of a gravel parking area and east of a gravel driveway. The wetland appears to have been created from excavation activities associated with previous land uses.

<u>Hydrology</u>: Wetland hydrology is maintained by groundwater discharge and precipitation. Pockets of standing water, ranging in depth from 4 to 14 inches, were observed during the February 1999 field investigations. In other areas, soils were saturated to the surface.

Soils: Soil in the upper 2 inches of the wetland consists of black (10YR 2/1) gravelly sandy loam. Gray (10YR 5/1) gravelly sandy loam was observed between a depth of 2 to 12 inches.

<u>Vegetation</u>: Wetland E2 contains both shrub and forested communities. Dominant tree species in the canopy are red alder and black cottonwood, with Himalayan blackberry dominant in the shrub layer.

<u>Upland</u>: Dominant vegetation in upland areas north, east, and west of the wetland consists of Himalayan blackberry, colonial bentgrass, and black cottonwood saplings. Scots broom, Pacific madrone, and Douglas fir are also present to the north. A gravel parking lot borders the south side of the wetland.

<u>Delineation</u>: The wetland boundary was delineated based on the presence of wetland vegetation, wetland hydrology, and hydric soil characteristics.

Wetland E3

USFW Classification: PFO

Size: 0.06 acre

Wetland data plot: E3-A Upland data plot: E2-B

Map No. 17

Vegetation and soils in Wetland E3 are highly altered. The wetland is located north of a gravel parking area and east of a gravel driveway. Similar to Wetland E2, Wetland E3 appears to have been created from excavation activities associated with previous land uses.

<u>Hydrology</u>: Wetland hydrology is supported by groundwater and precipitation. Pockets of standing water up to 12 inches deep were observed during the February 1999 field investigation.

Soils: The wetland soils consist of gray (10YR 5/1) fine sand down to a depth of 8 inches, with white (2.5Y 5/1) fine sand to a depth of 18 inches.

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<u>Vegetation</u>: The forested wetland community is dominated by black cottonwood, with soft rush present in the understory.

<u>Upland</u>: Dominant vegetation in upland areas north, east, and west of the wetland consists of Himalayan blackberry, colonial bentgrass, and black cottonwood saplings. Scots broom, Pacific madrone, and Douglas fir are also present to the north. A gravel parking lot borders the south side of the wetland.

<u>Delineation:</u> The wetland boundary was delineated based on the presence of wetland vegetation, wetland hydrology, and hydric soil characteristics.

4. SUMMARY

Parametrix. Inc. conducted a detailed wetland investigation of the Seattle-Tacoma International Airport (STIA) Master Plan Update improvement sites. The improvement sites are owned by the Port of Seattle (Port) and located in the cities of SeaTac and Des Moines in King County, Washington. This report describes the wetlands located within the study area and updates previous wetland studies conducted for the Master Plan Update improvements.

This study found total of 117 wetlands, ranging in size from 0.01 to 35.45 acres, were delineated in the study area, totaling 115.89 acres of wetland. They include palustrine forested, scrub-shrub, emergent, and open-water wetland habitat. Ten of the identified wetlands are farmed wetlands. Other Waters of the U.S. within the study area include Miller Creek and Des Moines Creek as well as ponds and several drainage channels that convey natural runoff to these streams. These areas, ranging in size from 0.01 to 3.09 acres, total 3.43 acres. Several other large wetlands that extend outside the study area will not be impacted and were not delineated. These areas total approximately 50.00 acres.

The results of this study have been reviewed and confirmed by ACOE. Site visits by ACOE to confirm wetland boundary delineations took place on July 6, 8, 14, and 16, 1998; August 6, 1998; September 23, 1998; October 19, 22, 27, and 29, 1998; November 17, 18, and 19, 1998; January 8 and 12, 1999; March 8, 1999; June 7 and 21, 1999; August 2, 1999; January 18, 2000; February 3, 2000; October 26, 2000; and November 3, 8, 20, and 30, 2000.

Modifications that were requested by ACOE during these site visits have been made and are reflected in the mapping and analysis presented in this report.

The findings of this report will be used to determine wetland impacts and mitigation requirements for the Master Plan Update improvements, as presented in a Wetland Functional Assessment and Impact Analysis Report (Parametrix 2000a) and Natural Resource Mitigation Plan (Parametrix 2000b).

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APPENDIX A

WETLAND DELINEATION REPORT - AUBURN MITIGATION SITE

WETLAND DELINEATION REPORT FOR THE AUBURN WETLAND MITIGATION SITE

MASTER PLAN UPDATE IMPROVEMENTS SEATTLE-TACOMA INTERNATIONAL AIRPORT

Prepared for

PORT OF SEATTLE

Seattle-Tacoma International Airport P.O. Box 68727 Seattle, WA 98168

Prepared by

Parametrix, Inc.
5808 Lake Washington Blvd. NE, Suite 200
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EXECUTIVE SUMMARY

In October 2000, Parametrix conducted a jurisdictional wetland delineation on a 67-acre land parcel located in the City of Auburn, Washington. The site (hereafter referred to as the "mitigation site") is owned by the Port of Seattle and planned as an off-site wetland mitigation project. The project will mitigate, in part, wildlife habitat functions impacted by filling wetlands near the Seattle-Tacoma International Airport for Master Plan Update improvement projects.

The wetland delineation followed required methods of the U.S. Army Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987) and the Washington State Wetlands Identification and Delineation Manual (Ecology 1997). This report describes the results of the delineation.

Two palustrine emergent wetlands, dominated by non-native pasture grasses, were delineated on the mitigation site: Wetland 1 occurs in the northwest and central portions of the site. About 20.45 acres of Wetland 1 occur on the mitigation site, and the wetland extends off-site to the west and north. Wetland 2 is 0.60 acre in size and is located in the south-central part of the site. Wetland 3 is 0.01 acre in size and is located in the north-central part of the site. Wetlands 1 and 2 meet the Washington Department of Ecology criteria of a Category III wetland and Wetland 3 meets the criteria for a Category IV wetland. The remainder of the mitigation site (about 44 acres) was determined to be non-wetland. The Seattle District of the U.S. Army Corps of Engineers, Washington State, and the City of Auburn have jurisdiction over activities that may impact these wetlands.

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1. INTRODUCTION

The Port of Seattle (hereafter cited as the Port) will construct a wetland mitigation project on 65 acres of property it owns in the City of Auburn, Washington (Figure 1). The wetland mitigation is planned as off-site mitigation to partially compensate for wetlands filled by Master Plan Update (MPU) projects constructed at the Seattle-Tacoma International Airport (STIA). The wetland mitigation is part of a Section 404 individual permit, as described in the Port's JARPA # 96-4-02325 (Port of Seattle 1996, 2000). The wetland mitigation design is explained in detail in the Revised Draft Natural Resource Mitigation Plan (Parametrix 1999).

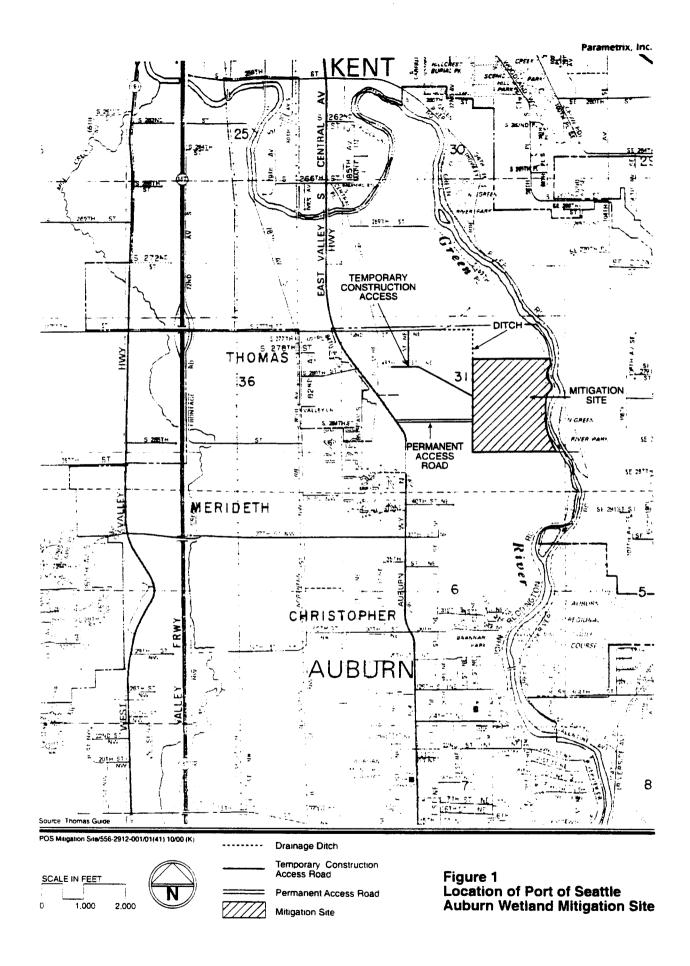
The purpose of this report is to describe and map jurisdictional wetlands that occur on the mitigation site. A jurisdictional determination of wetlands on the mitigation site was made by the U.S. Army Corps of Engineers (ACOE) based on a March 1997 field evaluation and delineations conducted by David Evans and Associates, Inc. (1995) and Parametrix (1999). Recent data collected from groundwater monitoring wells installed on site to document shallow groundwater hydrology and observations of recently formed hydric soil characteristics on the wetland mitigation have prompted ACOE to require a revision of the previous wetland delineation. A revised delineation of the mitigation site was completed during October 2000; this report documents the methods and results of that delineation.

The report is organized into four sections. The location and general site conditions are described in Chapter 2. Chapter 3 summarizes the wetland delineation methodology and Chapter 4 describes the results of the wetland delineation. Appendices A through E provide data and other documentation that support the wetland delineation and regulatory discussion.

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2. SITE LOCATION AND DESCRIPTION

2.1 SITE LOCATION

The mitigation site is located in the City of Auburn, King County, Washington (Section 31, Township 22N, Range 5E W.M.) (Figure 1). The site is located west of the Green River, south of 277th Street Southeast, and west of Auburn Way North. Figure 2 shows an aerial photograph of the Site and surrounding properties.

2.2 SITE DESCRIPTION

The site is nearly level, with typical slopes ranging from 0 to 1 percent. Elevations on the site range from approximately 45 to 50 feet above mean sea level. Historically, the site has been in the floodplain of the Green River; however, the mapped floodplain of the river is currently in only a small portion of the northwest corner of the site (Figure 3).

The mitigation site was farmed until the late 1980s. No significant land disturbance has occurred on the site since that time. Agricultural operations continue on properties north and south of the site.

2.2.1 **Soils**

The soils on the mitigation site are alluvial in origin, developed from material deposited on the site by the Green River. The surficial layers of these soils are a complex of silty mineral soils, frequently intermixed with lenses of fine sand. Plowing has mixed the surficial layers of soil, typically to a depth of 9 to 10 inches.

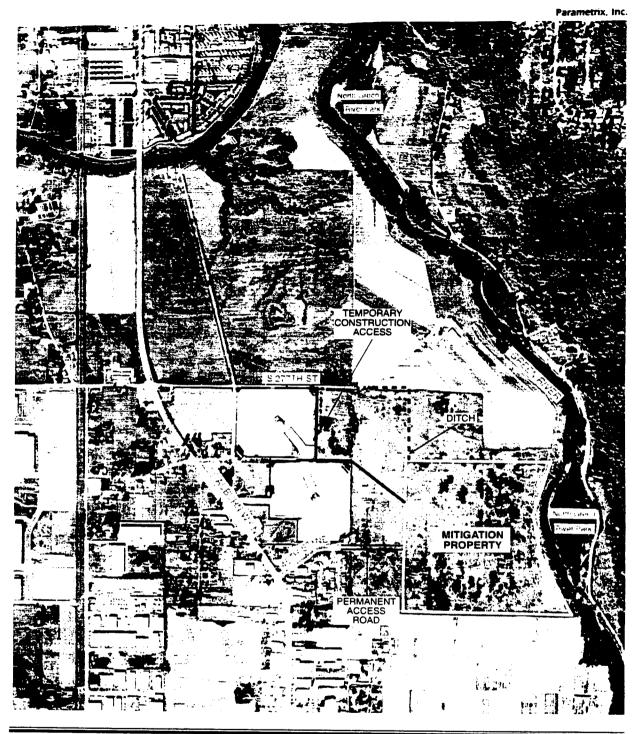
The King County Soil Survey (Snyder et al. 1973) maps soils on the site as the poorly drained Briscot, Oridia, and Woodinville silt loams and the somewhat poorly drained Renton silt loam (Figure 4; Table 1; Appendix A). Briscot, Oridia, Renton, and Woodinville silt loams are designated as hydric soils on the King County, Washington Hydric Soil List (NRCS 1992).

Since abandonment of agricultural activities approximately 10 years ago, redoximorphic¹ features have developed in areas with wetland hydrology in the upper 10 inches of the soil profile, indicating that these areas contain hydric soil. The hydric soil indicators typically found on the site are oxidized rhizospheres and the presence of mottles in soils with a low chroma matrix color.

In areas where high water tables are absent, the redoximorphic features or other hydric soil indicators are absent. The non-wetland soils are characterized by soil matrix color of 10YR 3/3 or 10YR 4/3 without prominent mottles.

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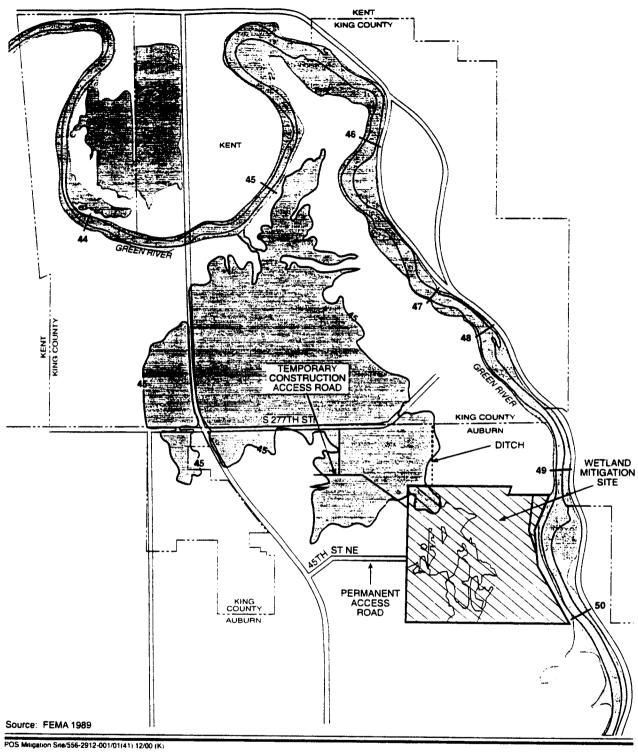
Redoximorphic features are patterns of soil color that develop from the repeated chemical oxidation and reduction process found in many hydric (wetland) soils.



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Figure 2 Aerial Photograph of the Wetland Mitigation Site





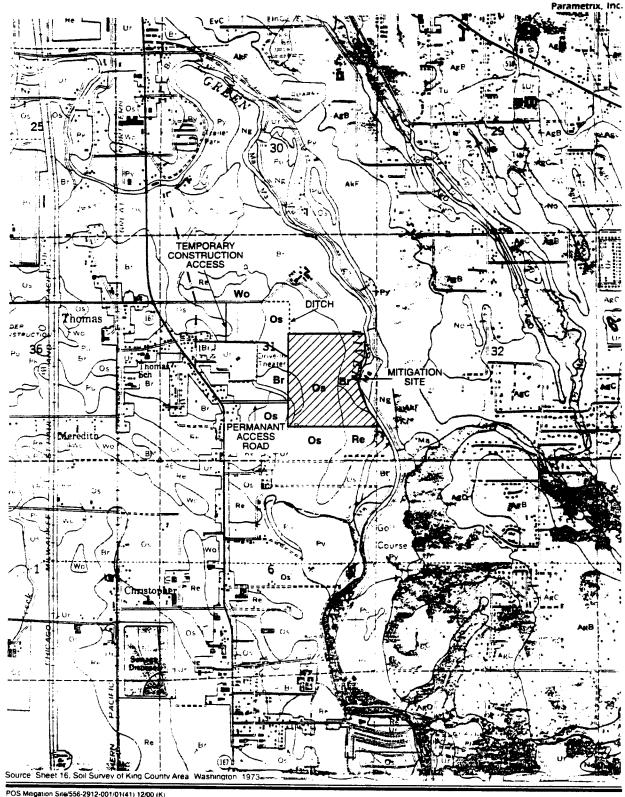


100-Year Floodplain

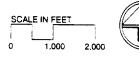
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Flood Elevations

Figure 3 100-Year Floodplain On and Near the **Wetland Mitigation Site**



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Oridia Silt Loam

Br Briscot Silt Loam

Wo Woodinville Silt Loam

Renton Silt Loam

Figure 4 Soil Types on the **Wetland Mitigation Site**

Table 1. Hydrologic characteristics of soils present on the mitigation site.

	Drainage Class	High Water Table		Flooding			
Soil Series		Permeability (in/hr)	Depth (ft)	Months	Frequency	Duration	Months
Briscot	Poorly	0.63-2.0	1 to -1	Nov-Apr	Occasional	Brief	Dec-Feb
Oridia	Poorly	0.20-2.0	1 to 3	Nov-Apr	Occasional	Brief	Nov-Apr
Renton	Somewhat poorly	2.0-6.3	1 to 1.5	Nov-Apr	Common	Brief	Nov-Apr
Woodinville	Poorly	2.0-6.3	l to -1	Nov-May	Common	Brief	Oct-Apr

Source: Snyder et al. (1973).

2.2.2 Hydrology

There are no natural surface water features on the mitigation site. Two streams, the Green River and Auburn Creek, are located near the mitigation site. The Green River flows from south to north about 100 feet east of the mitigation site. At this location, the river base elevation is about 12 to 15 feet below the site elevation. The river channel consists of a steep bank, largely vegetated with alder and black cottonwood saplings. North of the mitigation site and South 277th Street, King County et al. (1990) maps an intermittent stream (Auburn Creek). This creek drains pasture and farmland and flows into the Green River about 1 mile north of the site (Figure 5). At its confluence with the Green River, a small dike, culvert, and flap gate provide flood control.

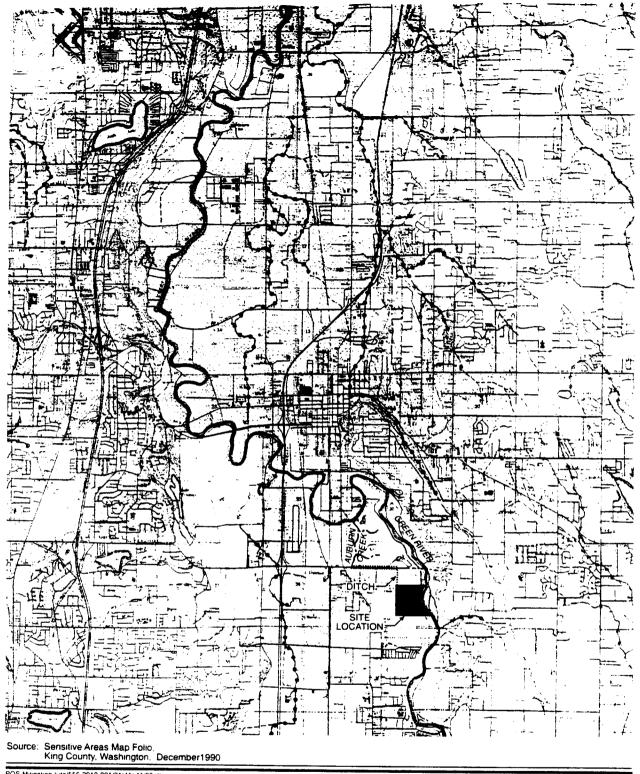
A drainage ditch on the mitigation site conveys stormwater and groundwater runoff from the northwest portion of the site to other ditches along South 277th Street. This water eventually enters Auburn Creek.

Since September 1995, the groundwater hydrology of the site has been monitored using shallow groundwater monitoring wells (Figures 6 through 10; Appendix B). The well data indicate groundwater levels that are within 18 inches of the surface at a number of locations, and generally within 36 to 24 inches of the soil surface for extended periods of time during the late fall, winter, and early spring months.

Wetlands on the mitigation site appear to be largely supported by on-site precipitation that perches in the low permeability soils. During periods of excessive rain, backwater flow from the 100-year floodplain enters the northwest corner of the site. Overland flow also enters the site through a wetland drainageway crossing the site from south to north. This drainageway contains surface flow for short time periods (up to several days) following periods of heavy rain.

^a All soils mapped are classified as hydric; however, evaluation of on-site conditions indicate non-hydric soil inclusions occur throughout the site.

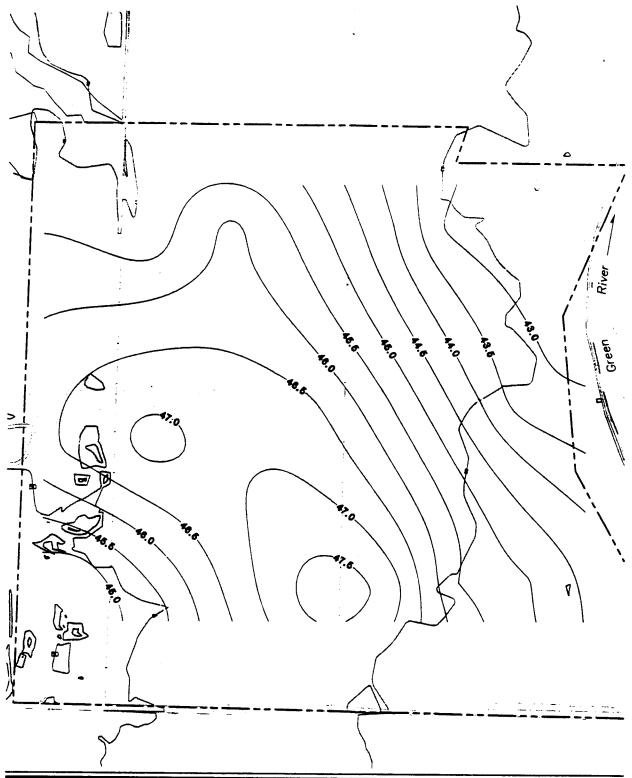
b Within the top 20 inches of soil.



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Figure 5 Streams and Surface Water **Near the Mitigation Site**



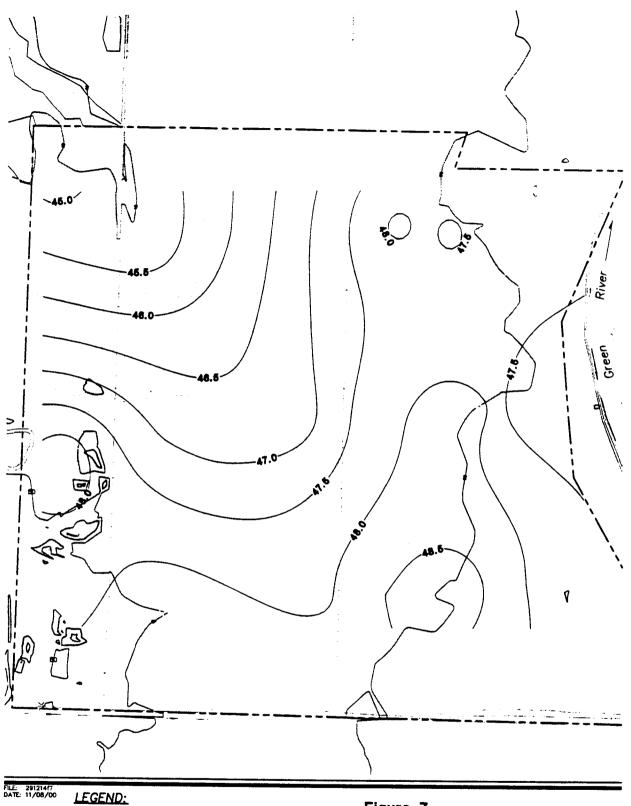
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Groundwater Contour and Elevation
Existing Wetland
Well Locations and Number
Existing Ground Surface Contour
and Elevation

Figure 6 Groundwater Elevations on the Auburn Wetland Mitigation Site (December 2, 1999)

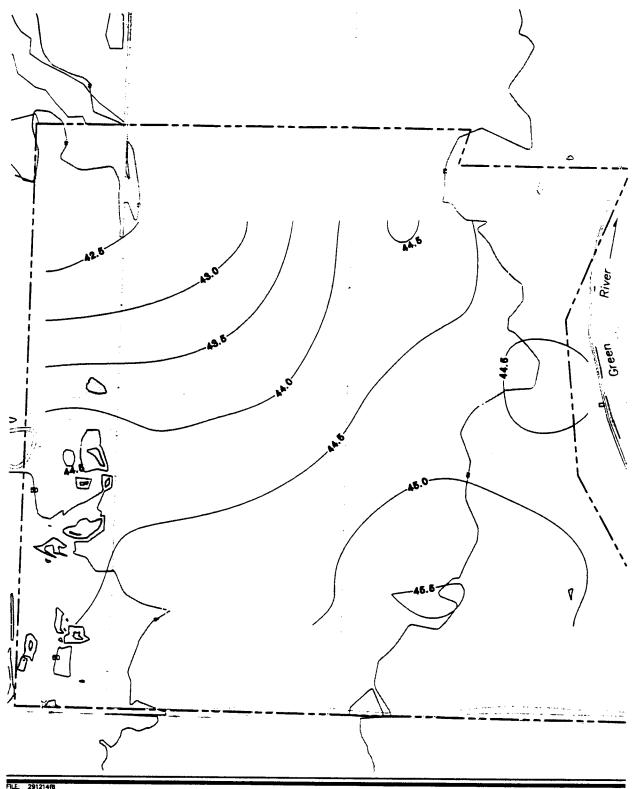


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Groundwater Contour and Elevation
Existing Wetland
Well Locations and Number
Existing Ground Surface Contour
and Elevation

Figure 7 Groundwater Elevations on the Auburn Wetland Mitigation Site (March 8, 2000)



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Groundwater Contour and Elevation Existing Wetland Well Locations and Number Existing Ground Surface Contour and Elevation

Figure 8 Groundwater Elevations on the Auburn Wetland Mitigation Site (June 2, 2000)

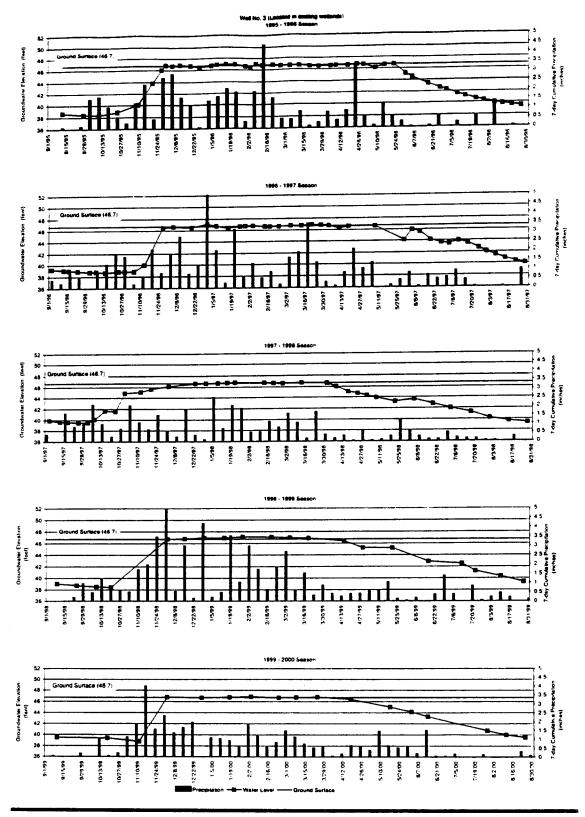


Figure 9 Variations in Groundwater and Daily Precipitation (Wetland)

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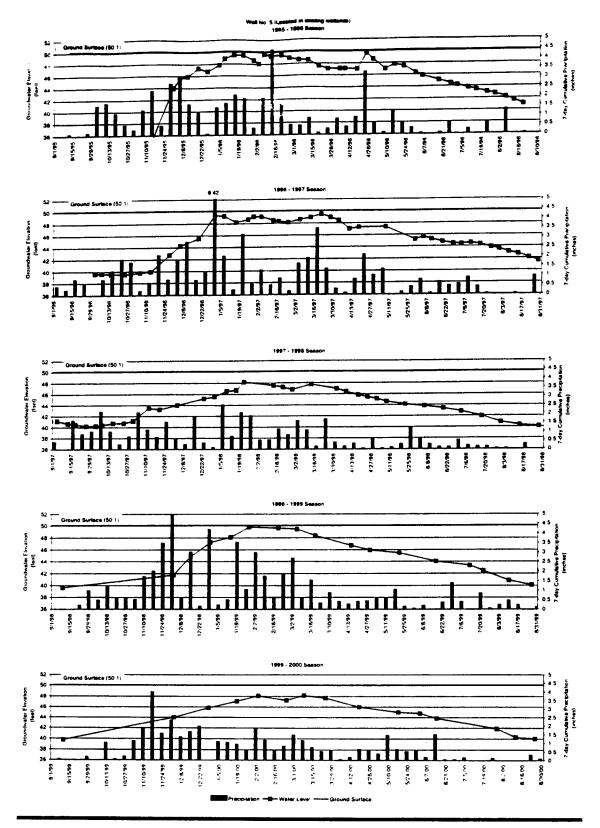


Figure 10 Variations in Groundwater and Cumulative Precipitation (Upland)

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Given the well monitoring data, the soils data, and field evidence of surface hydrology, the primary drivers of wetland hydrology on the mitigation site are:

- The seasonally high groundwater table
- Low soil permeability coupled with high seasonal levels of precipitation
- · Overland flow during heavy precipitation from adjacent land south of the site

2.3 VEGETATION

Vegetation on the mitigation site and vicinity consists predominantly of a mix of non-native grasses and herbaceous plants, including species that are typical of abandoned agricultural land (Table 2). Locally dominant plants on the site include: meadow foxtail (Alopecurus pratensis), tall fescue (Festuca arundinacea), red fescue (Festuca rubra), Canada thistle (Cirsium arvense), quackgrass (Agropyron repens), timothy (Phleum pratense), orchardgrass (Dactylis glomerata). common velvet-grass (Holcus lanatus), perennial ryegrass (Lolium perenne), colonial bentgrass (Agrostis tenuis), and patches of reed canarygrass (Phalaris arundinacea). Other non-native species scattered throughout these areas include cocklebur (Xanthium strumarium), common dandelion (Taraxacum officinale), and nightshade (Solanum sp.). A few patches of Himalayan blackberry (Rubus discolor) shrubs occur in scattered areas on sidecast piles of soil. A small stand of young black cottonwood (Populus balsamifera ssp. trichocarpa) is located along the west central property boundary.

Table 2. Mitigation site dominant vegetation.

Common Name	Scientific Name	Indicator Status	Non-Native (x)
TREES			
black cottonwood	Populus balsamisera ssp. trichocarpa	FAC	
red alder	Alnus rubra	FAC	
willow	Salix sp.	FACW	
SHRUBS			
Himalayan blackberry	Rubus discolor	FACU	x
red-osier dogwood	Cornus stolonifera	FACW	
salmonberry	Rubus spectabilis	FAC+	
Scot's broom	Cytisus scoparius	UPL	x
willow	Salix sp.	FACW	
HERBS			
American vetch	Vicia americana	FAC	x
bedstraw	Galium sp.	FACU	
bentgrass	Agrostis sp.	FAC	x
bittersweet nightshade	Solanum dulcamara	FAC+	x
bluegrass	Poa sp.	FAC	x
bracken fern	Pteridium aquilinum	FACU	
Canada thistle	Cirsium arvense	FACU+	x

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Table 2. Mitigation Site dominant vegetation (continued).

Common Name	Scientific Name	Indicator Status	Non-Native (x
HERBS (continued)			
clover	Trifolium sp.	FAC	
colonial bentgrass	Agrostis capillaris (tenuis)	FAC	x
common velvet-grass	Holcus lanatus	FAC	x
creeping bentgrass	Agrostis stolonifera	FAC	x
creeping buttercup	Ranunculus repens	FACW.	x
curly dock	Rumex crispus	FAC	x
dandelion	Taraxacum officinale	FACU	x
fescue	Festuca sp.	NL	
field horsetail	Equisetum arvense	FAC	
fireweed	Epilobium ciliatum	FACW-	
giant mannagrass	Glyceria grandis	OBL	
Kentucky bluegrass	Poa pratensis	FAC	x
meadow fescue	Festuca pratensis	FACU+	x
orchardgrass	Dactylis glomerata	FACU	x
perennial ryegrass	Lolium perenne	FACU	x
quackgrass	Agropyron repens	FACU	x
red clover	Trifolium pratense	FACU	x
red fescue	Festuca rubra	FAC+	
redtop	Agrostis gigantea (alba)	FAC	x
reed canarygrass	Phalaris arundinacea	FACW	x
soft rush	Juncus effusus	FACW	
tall fescue	Festuca arundinacea	FAC-	x
thistle	Cirsium sp.	FACU	x
white clover	Trifolium repens	FACU+	x

3. WETLAND DELINEATION METHODS

The mitigation site was examined for wetland conditions, and all wetlands (as defined in 33 CFR 328.3(a)(1-8)) were delineated consistent with procedures and guidelines provided in the Environmental Laboratory (1987) and Washington State Department of Ecology (Ecology) (1997) manuals. The wetland delineation followed applicable ACOE Regulatory Guidance Letter and Memoranda, Natural Resource Conservation Service Memoranda, and Ecology Guidance letters concerning wetland delineations.

General information on the property and local area relating to wetlands was reviewed. This information included the Soil Survey of King County Area, Washington (Snyder et al. 1973), Federal Emergency Management Agency maps (FEMA 1989), and previous wetland evaluations (David Evans & Associates, Inc. 1995; Parametrix 1996). Wetland inventory maps, including the Mill Creek Special Areas Management Plan (City of Auburn et al. 1997) and the National Wetland Inventory (USFWS 1987), were also reviewed (Appendix C).

3.1 SOILS

Hydric soils are "soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part" (USDA et al. 1996). The presence of hydric soils was determined based on criteria described in the Environmental Laboratory (1987) and Ecology (1997) manuals and current regulatory guidance (ACOE 1992; NRCS 1992).

The presence of hydric soils was determined based on extensive field evaluation. Soils were characterized as hydric or non-hydric based on field indicators. Indicators of hydric soils (non-sandy soils) include: organic soils (histosols), histic epipedons, sulfidic material, aquic or periaquic moisture regime, reducing soil conditions, soil colors (gleyed soils, soils with contrasting mottles and/or low chroma matrix), soil appearing on the hydric soil list, and iron and manganese concretions (Ecology 1997).

3.2 HYDROLOGY

Consistent with the Environmental Laboratory (1987) and Ecology (1997) manuals, and current regulatory guidance (ACOE 3-92 Memorandum; ACOE, Seattle District, 5-94 Public Notice), the presence of wetland hydrology was determined by evaluating a variety of direct and indirect indicators. Field indicators of wetland hydrology must be present within 12 inches of the soil surface. These indicators include: visual observation of inundation and/or soil saturation, oxidized rhizospheres associated with living roots, water marks on vegetation or fixed objects, drift lines, water-born sediment deposits, water-stained leaves, surface scoured areas, wetland drainage patterns, morphological plant adaptations, and hydric soil characteristics.

Areas that are inundated and/or saturated to the surface at least 12.5 percent of the growing season (typically about 14 days during the period of February to mid-November) generally meet the technical criteria for wetlands (Environmental Laboratory 1987 and Ecology 1997 manuals). These

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areas are wetlands when hydric soil indicators and hydrophytic vegetation are also present (ACOE, Seattle District, 5-94 Public Notice).

Many wetlands lack saturated soils during the dry summer months. Because the study was completed prior to the onset of heavy fall rains, direct observation of hydrology was not possible. Therefore, in most cases, wetland hydrology was inferred from the presence of hydric soils and oxidized root zones. However, direct observations of groundwater hydrology in shallow groundwater wells measured between October 1999 and July 2000² were used to supplement the field study.

3.3 VEGETATION

The presence of hydrophytic vegetation was identified consistent with the Environmental Laboratory (1987) and Ecology (1997) manuals and current regulatory guidance. Species identifications and taxonomic nomenclature follow Hitchcock and Cronquist (1973). Dominant species³ were identified. Each species' wetland indicator status was assigned using the National List of Plant Species that Occur in Wetlands: Northwest - Region LX (Reed 1988, 1993; hereafter cited as The Region LX List). The wetland indicator status (Table 3) designates the relative frequency with which the species occurs in jurisdictional wetlands.

Table 3. Wetland plant indicator categories.

Indicator Status	Definition		
Obligate Wetland (OBL)	Occur almost always (estimated probability >99%) in wetlands.		
Facultative Wetland (FACW)	Usually occur in wetlands (estimated probability 67% to 99%), but occasionally found in non-wetlands.		
Facultative (FAC)	Equally likely to occur in wetlands or non-wetlands (estimated probability 34% to 66%). Considered wetland when growing on hydric soils and subject to wetland hydrology.		
Facultative Upland (FACU)	Usually occur in non-wetlands, but occasionally found in wetlands (1% to 33%).		
Upland (UPL)	Plants that rarely occur (estimated probability <1%) in wetlands, but occur almost always in non-wetlands.		
No Indicator Status (NI)	Insufficient information exists to assign an indicator status.*		
Not Listed (NL)	Not on the National List in any region. ²		

Source: Reed (1988).

For purposes of wetland delineation, species with these designations are presumed upland.

During this time period, precipitation at STIA was measured to be near normal, and groundwater hydrology on the site should be representative of typical conditions.

Dominant species are those species that, when ranked in descending order of abundance and cumulatively totaled, immediately exceed 50 percent cover of the total dominance measure for that stratum, plus any species that comprises at least 20 percent cover.

An area meets the hydrophytic (wetland) vegetation criteria when, under normal circumstances, more than 50 percent of the dominant species are obligate wetland (OBL), facultative wetland (FACW), and/or facultative (FAC) species. A plus (+) or a minus (-) sign is often included in the indicator designation to specify a higher or lower level of the indicator status. For purposes of determining wetlands, plants with a FAC- indicator status are not considered to be an indicator of hydrophytic vegetation (i.e., it is treated as a facultative upland [FACU], upland [UPL], or a not listed [NL] species). In the Pacific Northwest, where a pronounced summer drought occurs, the ACOE Seattle District may include FACU dominated plant communities as wetland plants where the presence of wetland hydrology and hydric soils is clearly identified (ACOE 1994).

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4. RESULTS

4.1 WETLAND IDENTIFICATION AND DELINEATION RATIONALE

Wetlands were identified and delineated consistent with procedures recommended for routine level jurisdictional determinations. The site has not been subjected to significant new soil, hydrologic, or vegetation disturbance for a period of at least 10 years, and "normal circumstances" were determined to exist throughout the site during the Parametrix October 2000 wetland delineation.

A total of 15 data plots were sampled on the mitigation site (Figure 11; Appendix D). Four of these data plots were sampled adjacent to groundwater monitoring wells, while eleven were located throughout the site representing the variety of existing upland and wetland conditions. In addition to these plots, throughout the delineation process numerous soil pits were examined using a dutch soil augur or shovel to determine soil characteristics and define wetland boundaries.

Three jurisdictional wetlands were delineated on the mitigation site. Wetland 1 extends from the northwest corner to the south-central portion of the site (Figure 11) and covers 20.45 acres of the site. The wetland also extends east through the access easement for the site. Wetland 2 is adjacent to Wetland 1, is located in the south-central portion of the site, and is about 0.60 acre in size. Wetland 3 is located in the north-central portion of the site, and is about 0.01 acre in size. Wetlands 1 and 2 are Washington State Category III Wetlands (Appendix E). Wetland 3 is a Washington State Category IV wetland (Appendix C). The soil, hydrologic, and vegetation of these wetlands are similar.

4.2 SOILS

The Soil Survey of the King County Area. Washington (Snyder et al. 1973) identifies Briscot, Oridia, Renton, and Woodinville silt loam soils on the site (Figure 4). All of these soils are listed as hydric on the current King County Hydric Soils List (NRCS 1992). Soil sample characterizations on-site were found to be most similar to descriptions of Oridia silt loam (Appendices A and D). A silt loam plow horizon (Ap) 8 to 12 inches in depth was evident throughout most of the site. Soils in this layer typically consisted of a dark grayish-brown (10YR 4/2, 10YR 3/2 to 10YR 4/3, 10YR 3/3) matrix with common to many, fine to medium, faint to distinct mottles (7.5YR 4/6 to 7.5YR 5/6).

Soils were examined for hydric or non-hydric conditions immediately below the A-horizon or at 10 inches (whichever was shallower). The primary field indicators used to determine hydric versus non-hydric soil included:

- Matrix chroma of 2 with mottles
- Matrix chroma of 2 with mottles and oxidized rhizospheres

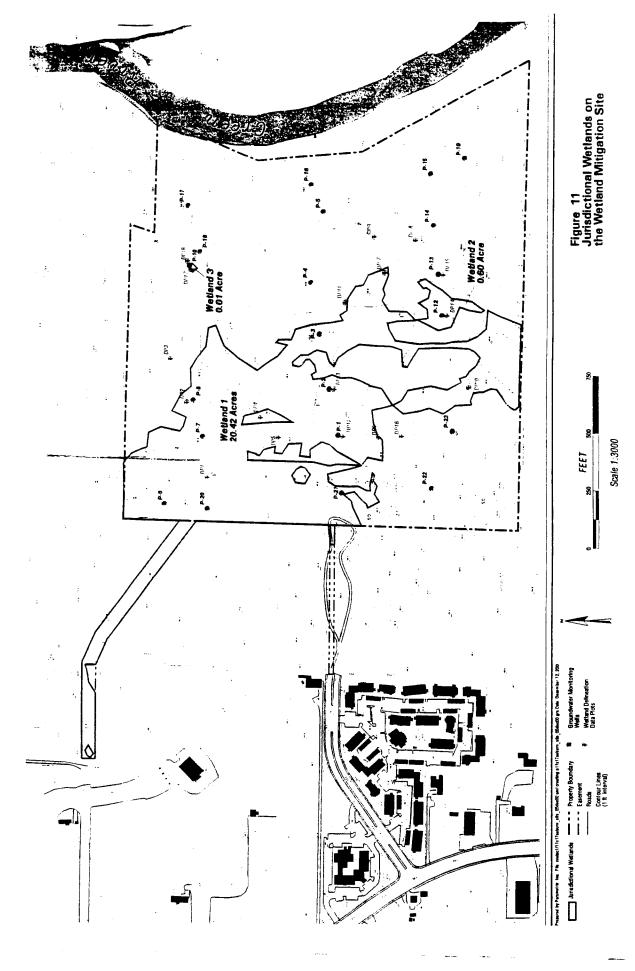
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The phrase normal circumstances means human or natural disturbances have not altered the site's vegetation, soils, or hydrology in the recent past (Ecology 1997; ACOE 1994).



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Although all soils mapped on the mitigation site are listed as hydric on the King County Hydric Soil List (NRCS 1992), field verification indicated that soils over much of the mitigation site do not meet the hydric soil criterion (see Figure 4). These non-hydric soils were generally a silt loam, and had the following characteristics:

- Matrix color of 10YR 4/3 or 10YR 3/3
- Matrix color of 10YR 4/2 or 3/2, but lacking mottles or oxidized rhizospheres

Throughout the site, distinct layers of well-sorted fine to medium sand lenses were observed at depths below 10 inches. The sand lenses were generally 3 to 6 inches thick and consisted of gleyed loamy sand.

4.3 HYDROLOGY

During the wetland delineation, soils were moist or dry. Saturated soil conditions were not observed in any of the sample plot locations. However, the groundwater well monitoring data indicate groundwater at or near the surface (within 12 inches) during the growing season at a number of wells on site during 1999-2000 (Figures 6 through 10; Appendix B). An 18-inch depth to groundwater was selected for data presentation due to attendant capillary fringe associated with actual groundwater elevation. Indicators used to determine the status of wetland hydrology at the mitigation site included:

- Recorded well monitoring data
- Oxidized rhizospheres surrounding living roots in the upper 12 inches of the soil profile
- Field indicators of hydric soils

The recorded well monitoring data indicate that Wells 1 through 4, 6 through 10, 12 through 14, and 20 through 21 had water at or near the surface (within 12 inches) for more than 14 days during the 1999-2000 growing season (Appendix D). The well data indicate the presence of groundwater at or near the surface at these well point locations; however, these data do not indicate the extent of wetlands throughout the site for jurisdictional purposes. Field sampling was used to delineate the extent of wetland hydrology and jurisdictional wetlands. The wetland field delineation included observations of several hundred soil samples taken throughout the site.

4.4 VEGETATION

The hydrophytic vegetation criterion was met at 10 of the 15 data plots (Appendix D).

Grasses including meadow foxtail, redtop, colonial bentgrass, quackgrass, tall fescue, common velvet-grass, and patches of reed canarygrass dominate Wetland 1. Other herbaceous species in the wetland include soft rush and creeping buttercup (*Ranunculus repens*). The vegetation in Wetland 2 is similar to that found in Wetland 1

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5. DISCLAIMER

Parametrix, Inc. has prepared this report for use by Port of Seattle. The results and conclusions of this report represent the professional opinion of Parametrix, Inc. They are based in part upon (a) site reconnaissance and testing, (b) information provided by the property owner(s), and (c) examination of public domain information concerning the proposed site.

Work performed conforms to accepted standards in the field of jurisdictional delineation using the U.S. Army Corps of Engineers Wetland Delineation Manual (Environmental Laboratory 1987) and the Washington State Wetlands Identification and Delineation Manual (Ecology 1997). However, final determination of wetland boundaries pertinent to Clean Water Act Section 404 or local regulations is the responsibility of the Seattle District of the U.S. Army Corps of Engineers and/or local government. Thus, the findings and conclusions contained in this report should be reviewed by appropriate regulatory agencies prior to any detailed site planning and/or construction activities.

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APPENDIX A

SOIL PROFILE DESCRIPTIONS KING COUNTY SOIL SURVEY

Briscot Series

The Eriscot series is made up of somewhat poorly drained soils. These soils formed in alluvium, under conifers and grass in river valleys. Slopes are less than 2 percent. The annual precipitation is 35 to 55 inches, and the mean annual temperature is about 50° F. The frost-free season is about 200 days. Elevation ranges from about sea level to 85 feet.

In a representative profile, the surface layer is dark grayish-brown silt loam about 9 inches thick. The subsoil is mottled grayish-brown and dark-gray, stratified fine sandy loam, silt loam, and fine sand to a depth of 60 inches or more.

Briscot soils are used for row crops and seeded grass pasture and for urban development.

Briscot silt loam (Br).--Areas of this soil are irregularly snaped and range from 5 to more than 80 acres in size.

Representative profile of Briscot silt loam, cultivated, 1,000 feet north and 1,410 feet east of the southeast corner of sec. 25, T. 22 N., R. 4 E.:

- Ap--0 to 9 inches, dark grayish-brown (10YR 4/2) silt loam, grayish brown (10YR 5/2) dry; moderate, medium, granular structure; slightly hard, friable, sticky, plastic; many roots; neutral; abrupt, smooth boundary. 8 to 10 inches thick.
- B21g--9 to 17 inches, grayish-brown (2.5Y 5/2) silt loam, light brownish gray (2.5Y 6/2) dry; many, large, prominent, dark-brown (7.5YR 4/4 and 3/4) mottles, brownish yellow (10YR 6/6) dry; weak, very coarse, prismatic structure; slightly hard, friable, sticky, plastic; common roots; neutral; abrupt, wavy boundary. 7 to 9 inches thick.
- B22--17 to 44 inches, grayish-brown (2.5Y 5/2)
 lenses of fine sandy loam, silt loam, and fine
 sand, light brownish gray (2.5Y 6/2) dry;
 many, large, prominent, dark-brown (7.5YR
 4/4) mottles, yellowish brown (10YR 5/6) and
 light yellowish brown (10YR 6/4) dry; massive;
 slightly hard, very friable, slightly sticky,
 nonplastic; few roots; neutral; diffuse,
 smooth boundary. 25 to 28 inches thick.
- B23g--44 to 60 inches, dark-gray (5Y 4/1) lenses of fine sandy loam, silt loam, and fine sand, grayish brown (2.5Y 5/2) dry; many, large, prominent, dark-brown (7.5YR 4/4) and dark-red (2.5YR 3/6) mottles, brown (7.5YR 5/4) and yellowish brown (10YR 5/6) dry; massive; very friable, slightly sticky, nonplastic; few roots; neutral. Many feet thick.

The A horizon ranges from dark gray to dark grayish brown and from silt loam to very fine sandy loam. The B horizon is grayish brown to olive gray mottled with dark brown. It is mostly fine sandy loam but is stratified with fine sand and silt loam.

Some areas are up to 5 percent included Puyallup soils, which are well drained and are on natural stream levees, and Newberg soils, which also are well drained and are in stream valleys; some areas are up to 2 percent the poorly drained Puget and Woodinville soils; and some are up to 5 percent Oridia and Renton soils.

Permeability is moderate. In winter the seasonal water table is within a depth of 1 to 2 feet. In drained areas, roots penetrate easily to a depth of 60 inches or more. In undrained areas, effective rooting depth is restricted. Available water capacity is high. Runoff is slow, and the erosion harard is slight. Stream overflow is a moderate hazard.

This soil is used for row crops and seeded grass pasture and for urban development. Capability unit IIw-2; woodland group 3w1.

Renton Series

The Renton series is made up of somewhat poorly drained soils that formed in alluvium in river valleys. Slopes are 0 to 1 percent. The annual precipitation is 35 to 55 inches, and the mean annual air temperature is about 50° F. The frost-free season is about 200 days. Elevation ranges from near sea level to 85 feet.

In a representative profile, the surface layer is very dark grayish-brown silt loam about 6 inches thick. The subsoil is mottled dark grayish-brown very fine sandy loam and fine sandy loam about 10 inches thick. The substratum is mottled black sand to a depth of 60 inches or more.

Renton soils are used for row crops and seeded grass pasture and for urban development.

Renton silt loam (Re).--This soil is nearly level to very gently undulating. Slopes are 0 to 1 percent. Areas are irregular in shape and range from 2 to nearly 300 acres in size.

Representative profile of cultivated Renton silt loam, 470 feet west and 1,050 feet north of the east quarter corner of sec. 23, T. 22 N., R. 4 E.:

- Ap--0 to 6 inches, very dark grayish-brown (10YR 3/2) silt loam, light brownish gray (10YR 6/2) dry; moderate, medium and coarse, granular structure; slightly hard, very friable, slightly sticky, slightly plastic; many roots; medium acid; abrupt, wavy boundary. 6 to 8 inches thick.
- B21--6 to 11 inches, dark grayish-brown (2.5Y 4/2) very fine sandy loam, grayish brown (2.5Y 5/2) dry; many, medium, prominent, dark-brown (7.5YR 4/4) mottles, yellow (10YR 7/6) dry; massive; slightly hard, very friable, slightly sticky, slightly plastic; many roots; neutral (pH 6.6); clear, wavy boundary. 3 to 12 inches thick.
- B22--11 to 16 inches, dark grayish-brown (2.5Y 4/2) fine sandy loam and thin lenses of fine sand, grayish brown (2.5Y 5/2) dry; many, medium, prominent, dark-brown (7.5YR 4/4) mottles, reddish yellow (7.5YR 6/6 and 7/6) dry; massive; soft, very friable, nonsticky, non-plastic; common roots; slightly acid; abrupt, irregular boundary. 3 to 12 inches thick.
- IIC--16 to 60 inches, black (10YR 2/1) sand, dark grayish-brown (10YR 4/2) dry; common, medium, prominent, strong-brown (7.SYR 5/6) mottles, reddish yellow (7.SYR 7/6) and strong brown (7.SYR 5/6) dry; single grain; loose, non-sticky, nonplastic; few roots; slightly acid.

The A horizon ranges from dark grayish brown to very dark grayish brown. The B horizon ranges from mottled dark gray to grayish brown or dark grayish brown and from silt loam to fine sandy loam. The IIC horizon is mottled, ranges from black to dark

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APPROXIMATE
SCALE IN FEET
Approximate Boundary of Borrow Site 1

Approximate Boundary of Borrow Site 3

Des Moines Creek

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Approximate Boundary of Borrow Site 1 Approximate Boundary of Borrow Site 3

APPROXIMATE SCALE IN FEET

Des Moines Creek

grayish brown, and is sand or loamy sand. Depth to the IIC horizon ranges from 15 to 30 inches. Thick, silty layers occur in the IIC horizon in some places.

Some mapped areas of this soil are up to 2 percent inclusions of the well-drained Puyallup soils on natural stream levees; some are up to 2 percent the poorly drained Puget and Woodinville soils; and some are up to 5 percent the somewhat poorly drained Briscottand Oridia soils. Total inclusions do not exceed 10 percent.

Permeability is moderately rapid in the surface layer and subsoil and very rapid in the substratum. There is a seasonal high water table at a depth of 1 to 2 feet. In drained areas, the effective rooting depth is 60 inches or more. In undrained areas, rooting depth is restricted. The available water capacity is moderate to moderately high. Rumoff is slow, and the erosion hazard is slight. Flood protection is provided. Thus, the hazard of stream overflow is slight. Capability unit IIIw-1; woodland group 3wl.

Oridia Series

The Oridia series is made up of somewhat poorly drained soils that formed in alluvium in river valleys. Slopes are 0 to 2 percent. The annual precipitation is 35 to 55 inches, and the mean annual air temperature is about 50° F. The frost-free season is about 200 days. Elevation ranges from about 0 to 85 feet.

In a representative profile, the surface layer is dark grayish-brown silt loam about 9 inches thick. The subsoil is grayish-brown, dark grayish-brown, and gray silt loam and silty clay loam that extends to a depth of 60 inches or more.

Oridia soils are used for row crops and pasture and for urban development.

Oridia silt loam (Os).--This gently undulating soil is in irregularly shaped areas. Slopes are less than 2 percent. Areas range from 10 to more than 200 acres in size.

Representative profile of Oridia silt loam, in pasture, 850 feet north, 620 feet east of the southwest corner of sec. 12, T. 22 N., R. 4 E.:

- Ap--0 to 9 inches, dark grayish-brown (10YR 4/2) heavy silt loam, light brownish gray (2.5Y 6/2) dry; few, fine, prominent, strong-brown (7.5YR 5/6) mottles, reddish yellow (7.5YR 7/6) dry; moderate, medium, granular structure; hard, friable, sticky, plastic; many roots; medium acid; abrupt, smooth boundary. 9 to 21 inches thick.
- B21g--9 to 17 inches, grayish-brown (2.5Y 5/2) heavy silt loam, light gray (2.5Y 7/2) dry; many, medium, prominent, brown (7.5YR 4/4) mottles, strong brown (7.5YR 5/6) and very pale brown (10YR 7/3 and 7/4) dry; moderate, medium and coarse, subangular blocky structure; hard, friable, sticky, plastic; many roots; slightly acid; clear, wavy boundary. 6 to 10 inches thick.
- B22g--17 to 42 inches, dark grayish-brown (2.5Y 4/1) silt loam and fine sand, white (2.5Y 8/2) dry; fine sand is light gray (10YR 6/1) dry; mottles are many, large, prominent, brown (7.5YR 4/4) and strong brown (7.5YR 5/6) and medium, prominent, very pale brown (10YR 7/4) and reddish yellow (7.5YR 6/6) dry; silt loam is massive, hard, friable, sticky, plastic; fine sand is single grain; loose, nonsticky, nonplastic; common roots; neutral; abrupt, smooth boundary. 23 to 26 inches thick.

- B23--42 to 54 inches, dark grayish-brown (2.5Y 4/2) silty clay loam, light gray (5Y 7/2) dry; mottles are many, large, prominent, strong-brown (7.5YR 5/6) and medium, prominent, yellow (10YR 7/6) and brownish yellow (10YR 6/6) dry; a discontinuous strong-brown (7.5YR 5/6) and dark-brown (7.5YR 3/4) ortstein layer 1/4 inch thick; massive; hard, friable, sticky, plastic; few roots, neutral; abrupt, wavy boundary. S to 15 inches thick.
- B24g--54 to 64 inches, gray (5Y 5/1) heavy silt loam, gray (5Y 6/1) dry; few, medium, prominent, dark-brown (7.5YR 4/4) mottles; massive; hard, friable, sticky, plastic; few roots; very strongly acid.

The B horizon is mottled dark gray and dark grayish brown to olive gray. It is dominantly silt loam but contains layers of silty clay loam, fine sand, loamy fine sand, and very fine sandy loam. The sandy lenses commonly occur below a depth of 20 inches.

Some areas mapped are up to 10 percent inclusions of poorly drained Puget and Woodinville soils; and some are up to 10 percent the well-drained Newberg and Puyallup soils.

Permeability is moderate to moderately slow in the subsoil. The seasonal high water table is at a depth of 1 to 2 feet. In drained areas, the effective rooting depth is 60 inches or more. In undrained areas, rooting depth is restricted. Available water capacity is high. Runoff is slow, and the erosion hazard is slight. The flood hazard is

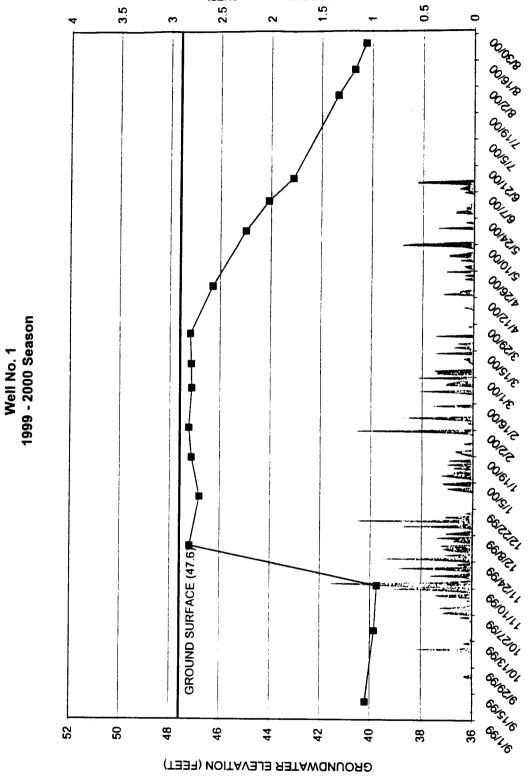
This soil is used for row crops and seeded grass pasture and for urban development. Capability unit IIw-2; woodland group 3wl.

APPENDIX B GROUNDWATER WELL DATA

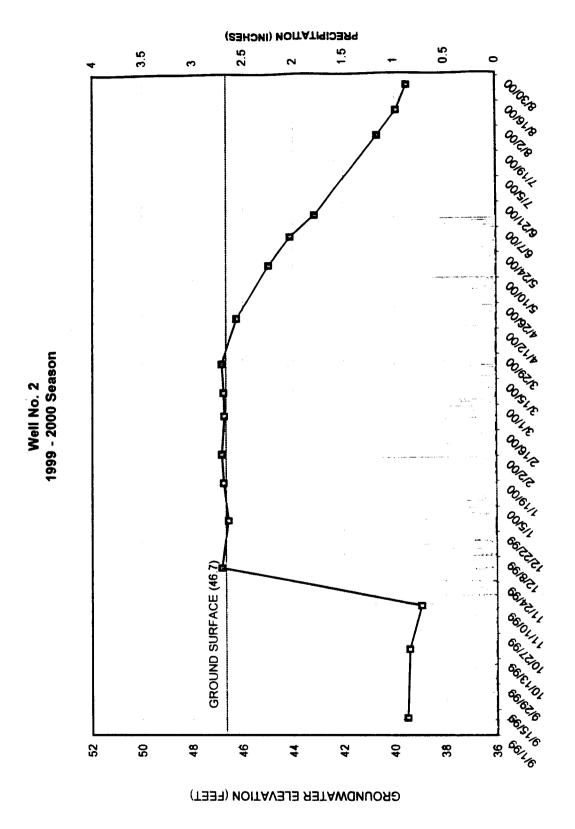
Table B-1. Summary of groundwater monitoring data in relation to wetlands.

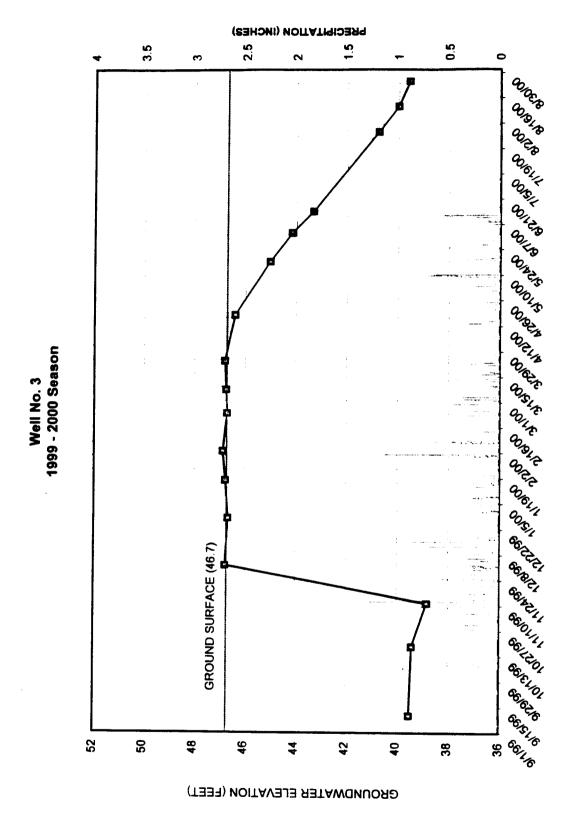
Well Number	Wetland Data Plot	Location in Wetlands	Dates Groundwater is Within 12 inches of Surface
P-1	DP-12	No	Dec 2 -4.8", Dec 28 -9.6", Jan 18 -6", Feb 3 -4.8", Feb 24 -6", Mar 8 -6", Mar 24 -4.8"
P-2	DP-13	Yes	Dec 2 - April 18
P-3		Yes	Dec 2 - April 18
P-4		No	Jan 18 -10.8", Feb 3 -3.6", Feb 24 -12", Mar 8 -8.4", Mar 24 -8.4"
P-5		No	NONE
P-6		Yes	Dec 2 - March 24
P-7		Yes	Dec 2 - April 18
P-8		Yes	Dec 2 - March 24
P-10		Yes	Feb 3 -10.8", Mar 8 -12", Mar 24 -12"
P-12	DP-14	Yes	Dec 2 - March 24
P-13	DP-15	No	Dec 28 -8.4", Jan 18 -1.2", Feb 3 +2.4", Feb 24 -2.4", Mar 8 -0", Mar 24 -0"
P-14		No	NONE
P-15		No	NONE
P-16		No	NONE
P-17		No	NONE
P-18		No	NONE
P-19		No	NONE
P-20		Yes	Dec 2 - March 24
P-21		Yes	NONE
P-22		No	NONE
P-23		No	NONE

^a See Appendix C and Figure 6. Depths are given for wells located outside of wetlands.



РРЕСІРІТАТІОН (ІИСНЕS)





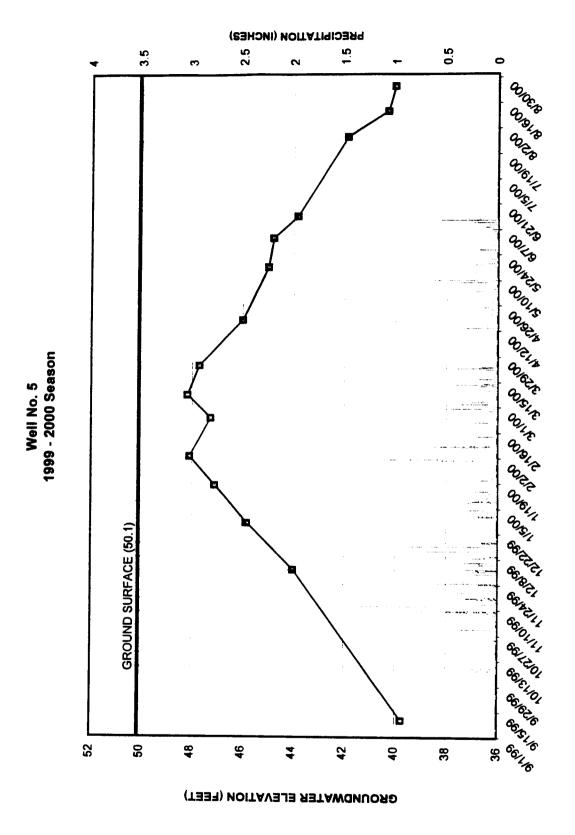
0.5 0 က Oloca Olors 0026 OFIL 95/ O) Lès ON RICK Pols 9,84 Well No. 4 1999 - 2000 Season OSIE Oly 0022 **GROUND SURFACE (48.5)** 65/8/5/ 66/E1/01 66/62/6 85516 36 Leg 1/6 **\$** 52 20 8 46 42 44 38

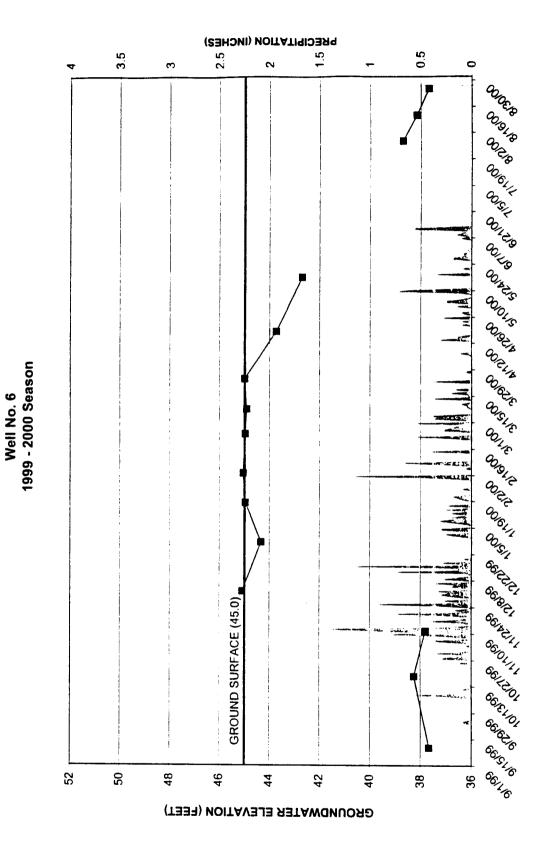
GROUNDWATER ELEVATION (FEET)

PRECIPITATION (INCHES)

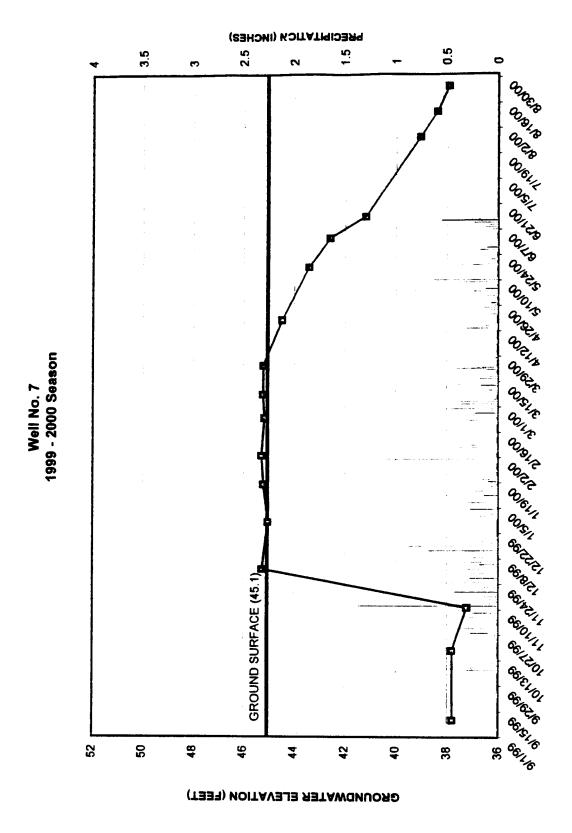
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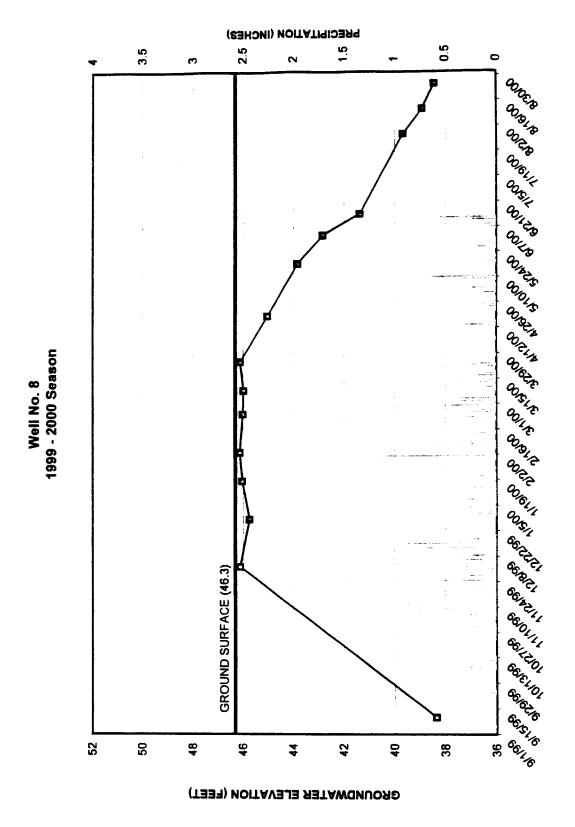
AR 047517

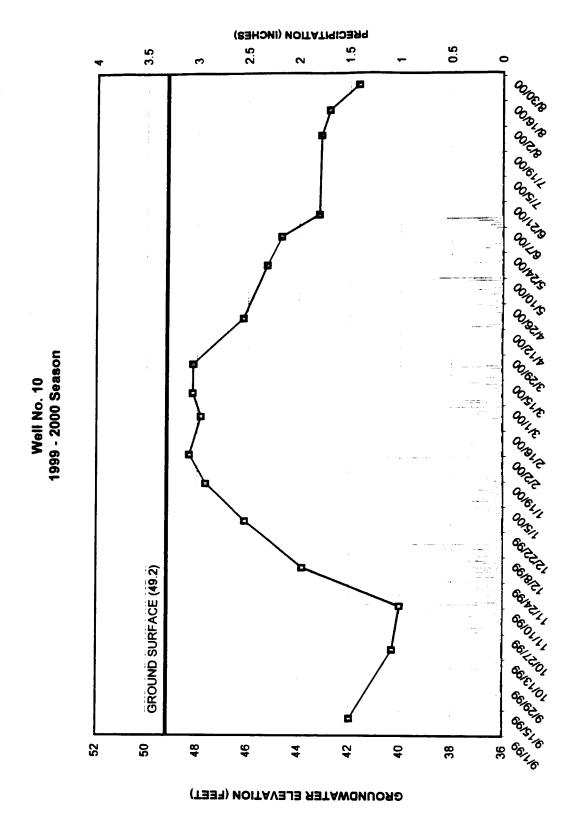


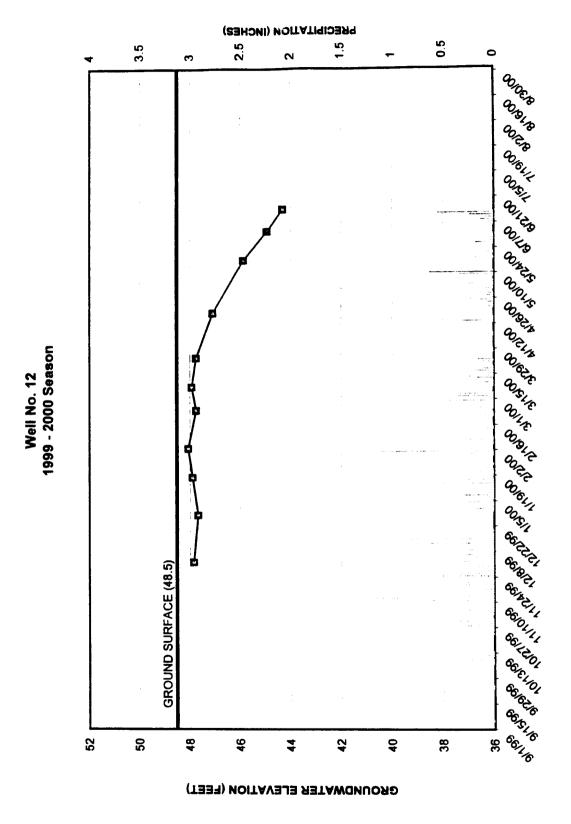


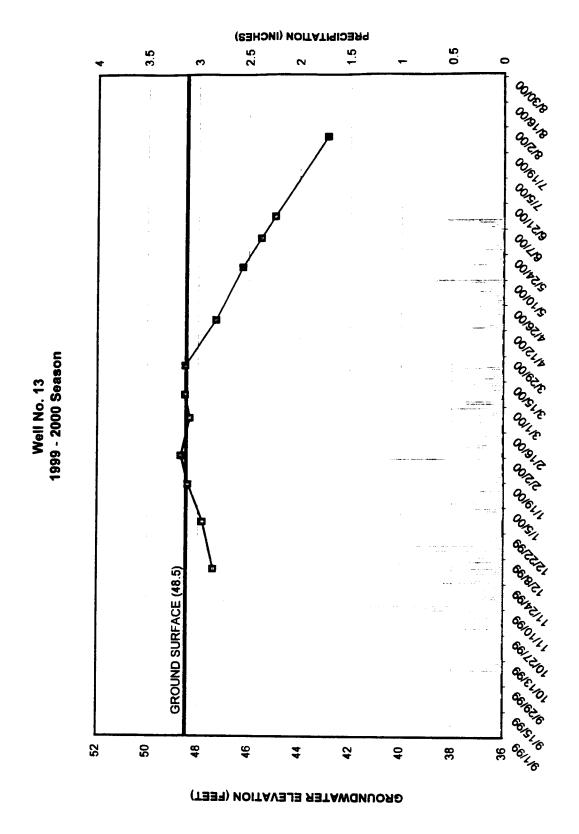
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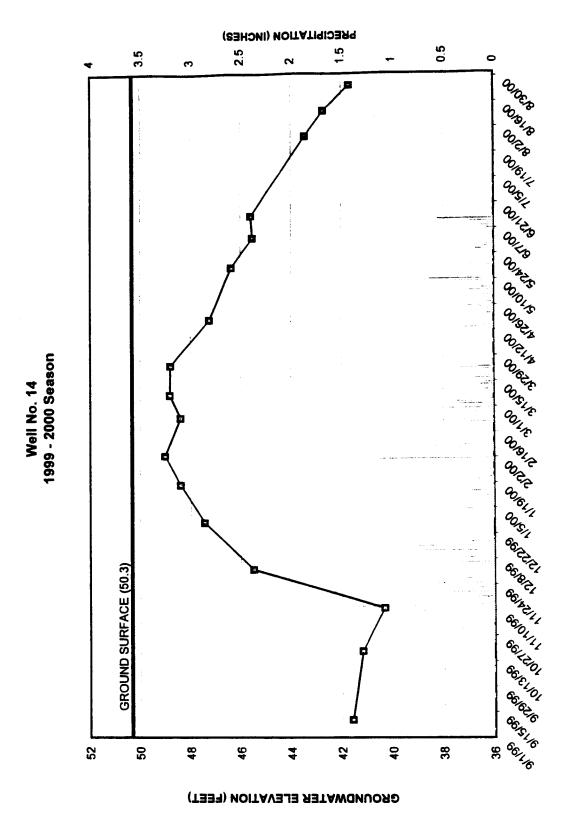


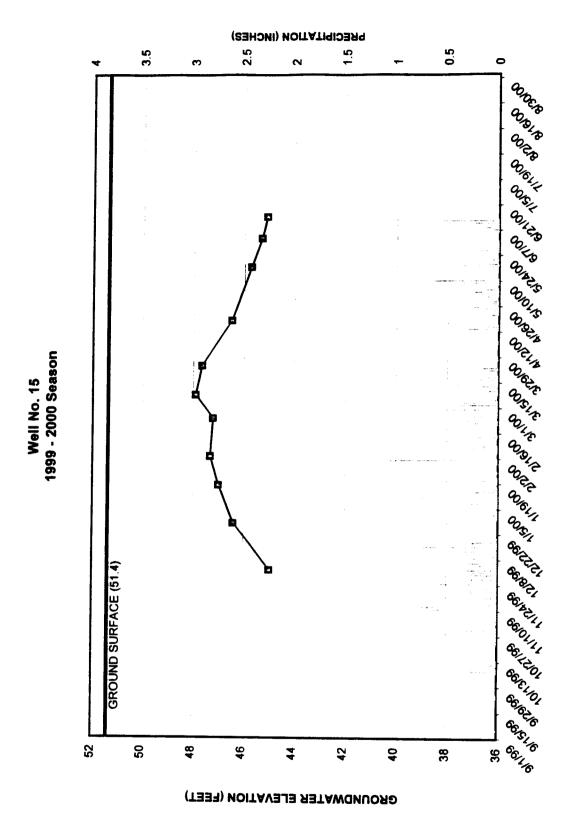


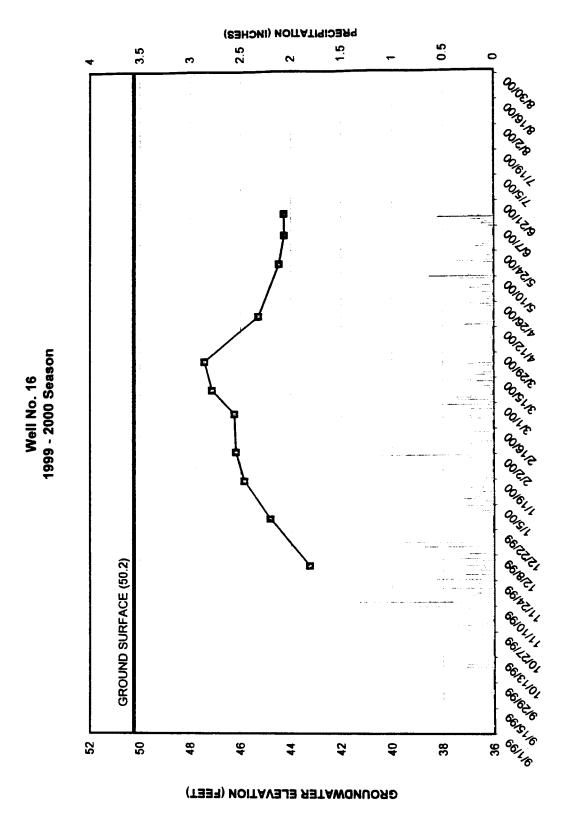


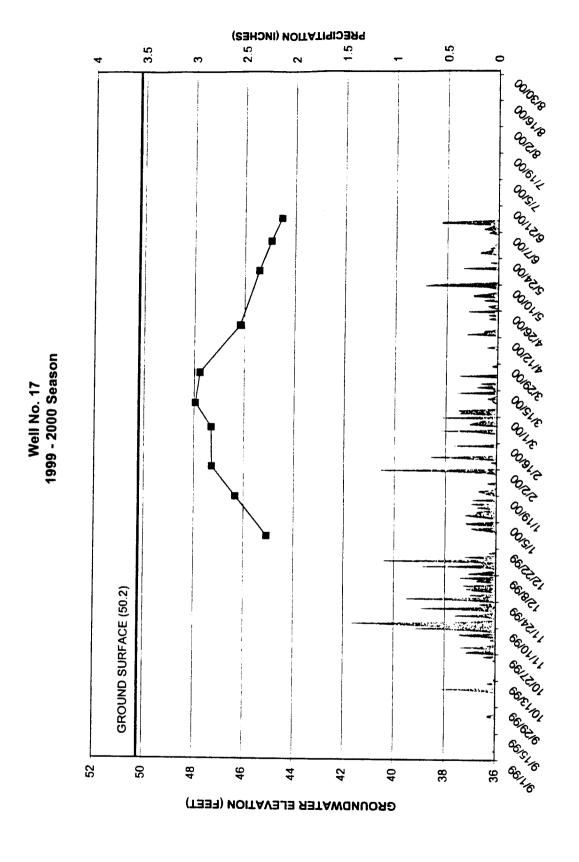




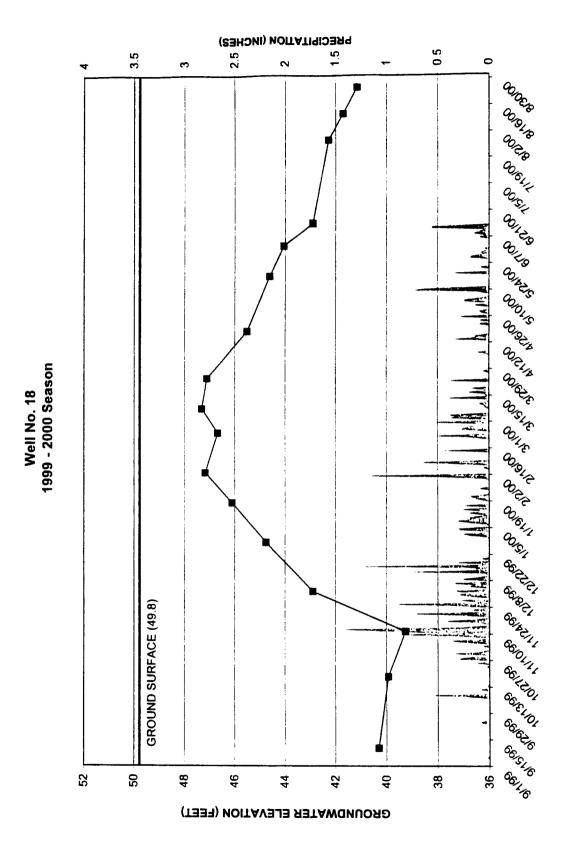


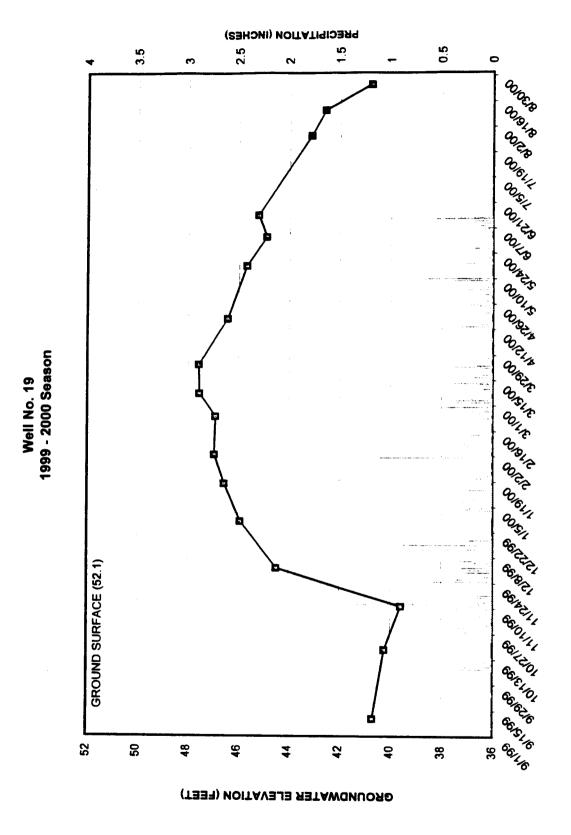


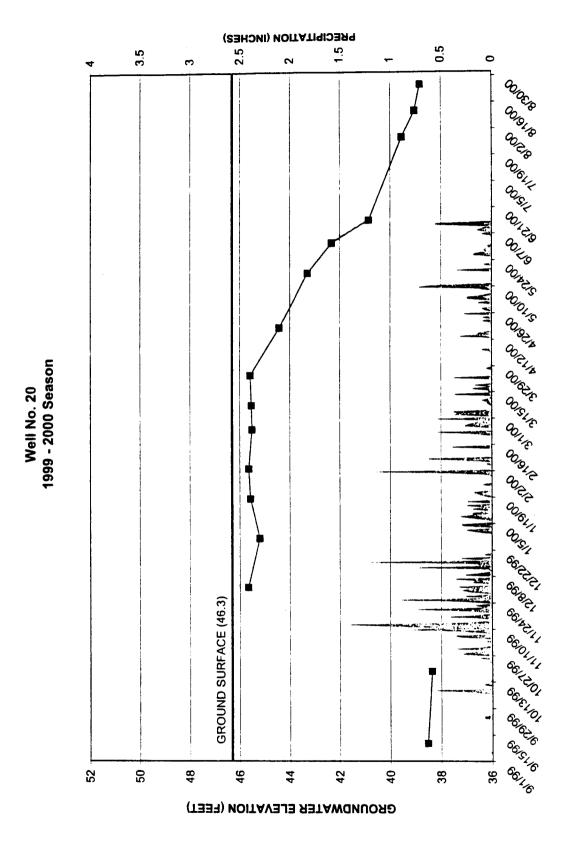




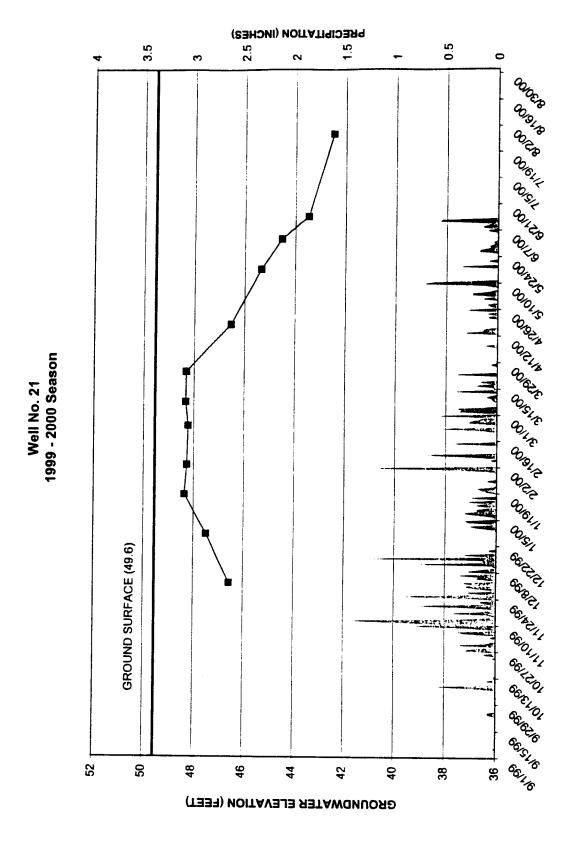
AR 047527

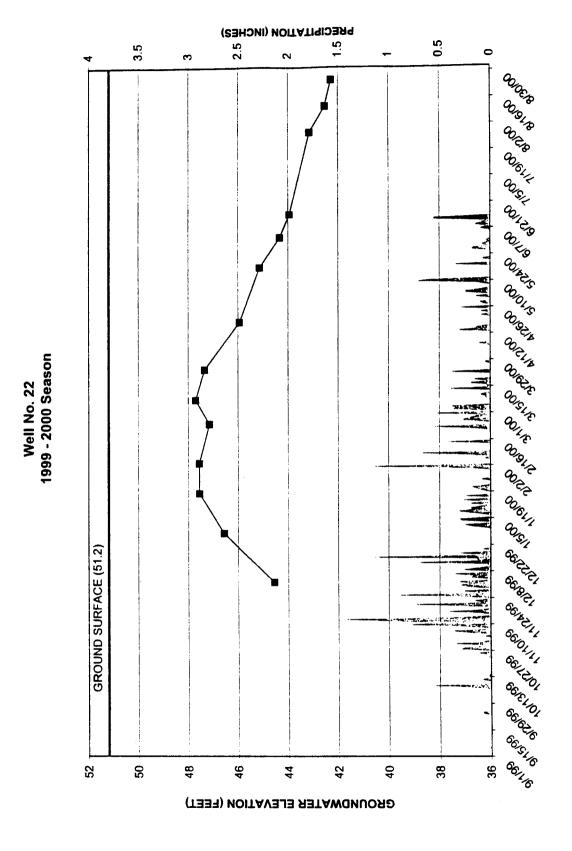




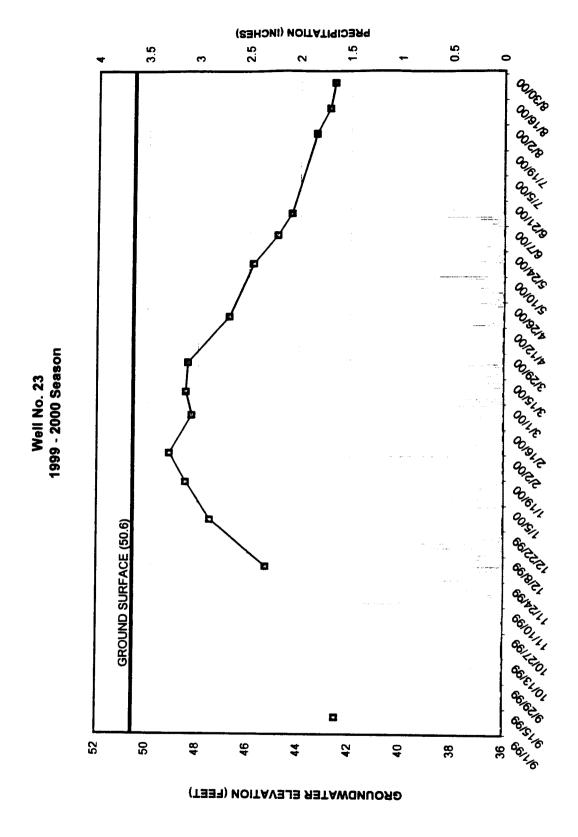


AR 047531

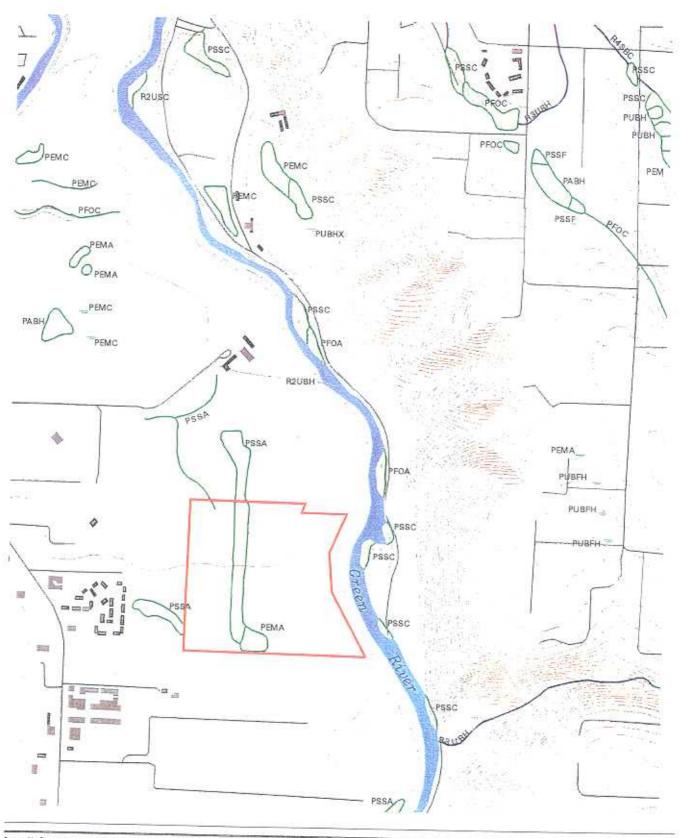




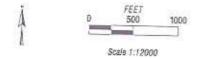
AR 047532



APPENDIX C MILL CREEK AND NATIONAL WETLAND INVENTORY MAP



Prepared by Parametrix, Inc. File: seatact/8x11_nwl.ami creating p6x11_nwl.prs Date: December 08, 2000



Property Boundary

PEMA Palustrine emergent temporarily flooded PSSA Palustrine scrub-shrub temporarily flooded Appendix C National Wetland Inventory Map (1987) Auburn Quadrangle

APPENDIX D WETLAND DETERMINATION DATA SHEETS

						Data Plot	t #:	1
WET	ΓΙ ΔΝΓ	DETE	RMINA	TION		Wetland:	:	Auburn
(Modified from: 19					ation N	(leuneN		
,				10/18/0				
roject/Site: Auburn Mitigation Site								
pplicant/Owner: Port of Seattle vestigator: Kevin Featherston and Jennifer Hawkins			County: State:	King WA		,		
1987 Method 1989 Method	<u> </u>	_	SIMIE.	***				
	W	v			Comr	nunity ID:	PEN	<u> </u>
o Normal Circumstances exist on the site?	Yes	<u>×</u>	No _		Field	Plot ID:	DP-1	
the site significantly disturbed (Atypical Situation)?	Yes		No _	<u> </u>				
the area a potential Problem Area?	Yes		No _	<u> </u>				
		% Cover	Stratum	n ind	licator	.		
EGETATION (> Dominant species are checked)		% Cover	Stratum		licator		_	
1 Alopecurus pratensis 2 Festuca arundinacea					cw+			
EGETATION (> Dominant species are checked) Plant Species 1. Alooecurus pratensis	or FAC	50 50 50	Herb Herb	FA FA:	CW+	etiand.		
Plant Species Alooecurus pratensis Festuca arundinacea rocent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing imphological adaptations to wetlands. "T" indicates tra	or FAC	50 50 50	Herb Herb	FA FA:	CW+	etiand.		
Plant Species 1. Alopecurus pratensis 2. Festuca arundinacea recent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing imphological adaptations to wetlands. "T" indicates trainmarks (Describe disturbances, relevant local variations wetland vegetation criteria is not met because only statements."	or FAC	50 sonal eff	Herb Herb	FA FA :.):	CW+ C-	etiand.	cribe in	n Remark
Plant Species Alooecurus pratensis Festuca arundinacea rocent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as snowing imphological adaptations to wetlands. "T" indicates trainmarks (Describe disturbances, relevant local variations wetland vegetation criteria is not met because only strainmarks."	or FAC	50 50 isonal effect of the	Herb Herb	FA FA	CW+ C- es are w		cribe in	n Remark
Plant Species Alooecurus pratensis Tentuca arundinacea recent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as snowing riphological adaptations to wetlands. "T" indicates trainmarks (Describe disturbances, relevant local variable a wetland vegetation criteria is not met because only stronged Data (Describe in Remarks):	or FAC	50 50 isonal effect of the	Herb Herb fects, etc.	FA FAI i.): int special prology indicator	CW+ C- es are w		cribe in	n Remark
Plant Species 1. Alopecurus pratensis 2. Festuca arundinacea recent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing riphological adaptations to wetlands. "T" indicates trainmarks (Describe disturbances, relevant local variation wetland vegetation criteria is not met because only 5 DROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	or FAC	50 50 isonal effect of the	Herb Herb fects, etc.	FA FA int special rology andicator Inuit Satisfactor	CW+ C- es are we Indicate s: indated urated in	Ors (Des	2 inche:	s
Plant Species Alooecurus pratensis Festuca arundinacea recent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as snowing riphological adaptations to wetlands. "T" indicates trainmarks (Describe disturbances, relevant local variation wetland vegetation criteria is not met because only stream, Lake, or Tide Gage Aerial Photograph	or FAC	50 50 isonal effect of the	Herb Herb fects, etc.	FA FA FA FA FA FA FA FA FA FA	CW+ C- es are we Indicate s: Indated urated in	Upper 12	2 inche:	s
Plant Species 1. Alopecurus pratensis 2. Festuca arundinacea recent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing imphological adaptations to wetlands. "T" indicates trainmarks (Describe disturbances, relevant local variations wetland vegetation criteria is not met because only stream, Lake, or Tide Gage Aerial Photograph Other	or FAC	50 50 isonal effect of the	Herb Herb fects, etc.	FA FA FA FA FA FA FA FA FA FA	CW+ C- es are we Indicate s: indated urated in	Upper 12	2 inche:	s

Remarks (As relevant, describe recent precipitation, hydrologic modifications, local variations, etc.):

(in.)

(In.)

(in.)

None

>18

>18

Field Observations: Depth of Surface Water:

Depth to Free Water in Pit:

Depth to Saturated Soil:

Wetland hydrology is not expected due to the time of year when the delineation was completed. The presence of oxidized rhizospheres and mapped soils on the King County Hydric Soils List satisfy the wetland hydrology criteria.

Drainage Patterns in Wetlands

Oxidized Root Channels in Upper 12 inches

Secondary Indicators (2 or more required):

Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)

									Data Plot #:	1
P									Wetland:	Auburn
Project/S	Site: Auburn M	litigation Site				_	Date:	10/18/00		
SOILS Soil Sur	vey Data:									
Map Uni	t Name: Orid	a Silt Loam						Drainage Class	Somewhat p	oorly drained
								Field Observation	ons Confirm M	apped Type?
Faxonon	ny (Subgroup):	Typic Fluvagents						Yes X N	o N	Α
	Description:							 -		
Depth Inches)	Honzon Designation	Matrix Color (Munsell Moist)			Color ell Mos	st)		Mottle Abundance/Cor		exture, Concretions, nizospheres, etc.
-0.5	0	-		-					Ro	oots and Shoots
.5-9	Ap	10YR 3/3						•	Sit	t loam, oxidized mizosphere
->16	В	10YR 4/2		7.5YR	4/6			Many, Medium, Dis	tinct Sil	t loam; oxidized rhizosphere
lydric S	ioil Indicators:	:								
· .	Histosol				_	X	Listed	on Local Hydric	Soils List	
	Histic Epipedon	ı			_	Х	Listed	on State Hydric	Soils List	
	Sulfidic Odor				_		Listed	on National Hyd	nc Soils List	
<u> </u>	Probable Aquic	Moisture Regime			_		Aquic	Moisture Regime	•	
	Reducing Cond				_		•	ic Streaking in Si	andy Soils	
	*	Chroma Colors			_	×	Mottle	_		
	•	ontent in Surface Lay			_		- Ouler	(Explain in Rema	IIRS)	
		l disturbances, local dric soil indicators me				losio.				
50,, 60,0	, and other my	me don morators me		nyane	30// 6///	C//G				
VETLA	AND DETER	MINATION								
ydroph	ytic Vegetation	n Present?	Yes		No	X		Is this	Sampling Poi	nt Within a Wetland?
ydric S	oils Present?		Yes	×	No				V V	N.
					•				Yes X	No

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results):

The presence of wetland hydrology indicators and hydric soils indicate the site is a wetland. The predominance (greater than 60 percent coverage) of the site by wetland plant species is consistent with this finding.

Pa	rametri	ix, Inc.							
P							-	Data Plot #: Wetland:	2 Auburn
Project/	Site: <u>Auburn M</u>	litigation Site				Date:	10/18/00		
SOILS	S rvey Data:								
Map Ur	nit Name: Orid	ia Silt Loam					Drainage Class:	Somewhat por	orly drained
							Field Observation	s Confirm Ma	pped Type?
Taxono	my (Subgroup):	Typic Fluvagents					Yes X No	NA	
Profile	Description:								
Depth (inches)	Horizon Designation	Matrix Color (Munsell Moist)		Mottle (Munse		st)	Mottle Abundance/Contra	_	ture, Concretions, cospheres, etc.
0-0.5	0	-						Roo	ts and Shoots
0.5-11	Αp	10YR 3/2		7.5YR 4	16		Common, Fine, Distin	ct Sitt i	oam; oxidized mizospheres
11->20	В	10YR 4/2		7.5YR 4	/ 6		Common, Medium, Pr	ominent Silt i	oam: oxidized rhizosoheres
	Soil Indicators: Histosol Histic Epipedon				-		f on Local Hydric Sc on State Hydric Sc		
	Sulfidic Odor	Adams Danima			_		on National Hydric	Soils List	
	Probable Aquic Reducing Condi	Moisture Regime			-		Moisture Regime iic Streaking in San	dv Sails	
	Gleyed or Low-(-	X Mottle	•	2 , 3	
	High Organic Co	ontent in Surface Lay	er		_	Other	(Explain in Remark	s)	
		disturbances, local v			-	teria.			
WETL	AND DETER	MINATION							
Hydroph	ytic Vegetation	Present?	Yes	<u> x</u>	No		Is this Sa	mpling Point	Within a Wetland?
Hydric S	oils Present?		Yes	х	No		V_	e Y 141	•
Wetland	Hydrology Pre	sent?	Yes	X	No		Te.	s <u>X</u> N	·

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): All technical criteria are met.

Pa	rar	neti	rix	inc.
			IA.	



Data Piot #:	2
Mississet:	Anna

					Wetland: Auburn
•	WET	LAND	DETE	RMINAT	
	(Modified from: 19	87 CC	E Wet	lands De	elineation Manual)
Project/Site: Auburn Mitigation	n Site			Date: 10	0/1 8/0 0
Applicant/Owner: Port of Se	pattle			County:	King
Investigator: Kevin Featherst	on and Jennifer Hawkins	5		State:	WA
1987 Method 1989	Method		-	•	Community ID: PEM
Do Normal Circumstances exis	it on the site?	Yes	<u>x</u>	No	Field Plot ID: DP-2
s the site significantly disturbe	d (Atypical Situation)?	Yes	_	No X	
s the area a potential Problem	Area?	Yes		No X	
temarks (Explain sample loca			as):	-	
ocated in Wetland 1.	·				
/EGETATION (Domina	nt species are checked)				
Plant Species	,		% Cover	Stratum	Indicator
1 Juncus effusus			<1	Herb	FACW
· · · · · · · · · · · · · · · · · · ·				Herb	FAC
except FAC-). Include species norphological adaptations to we	noted (*) as showing etlands. "T" indicates tra	ece.	100		
ercent of Dominant Species except FAC-). Include species norphological adaptations to with the disturbance greater than 50% of the disturbance.	noted (*) as showing etlands. "T" indicates traces, relevant local variable	ons, sea	100	fects, etc.):	
Percent of Dominant Species except FAC-). Include species norphological adaptations to with the disturbance greater than 50% of the disturbance.	noted (*) as showing etlands. "T" indicates traces, relevant local variable	ons, sea	100	fects, etc.):	
Percent of Dominant Species except FAC-). Include species norphological adaptations to with temarks (Describe disturbanciance greater than 50% of the disturbance of	noted (*) as showing etlands. "T" indicates traces, relevant local variable forminant plants are hydrominant plants.	ons, sea	100 asonal ef the wetla	fects, etc.): and vegetal	
ercent of Dominant Species except FAC-). Include species forphological adaptations to with emarks (Describe disturbancince greater than 50% of the disturbance greater than 50	noted (*) as showing attands. "T" indicates traces, relevant local variable dominant plants are hydrosenarks): Tide Gage	ons, sea	100 asonal ef the wetta	fects, etc.): and vegetal	: tion criteria is met. ology Indicators (Describe in Remarks):
ercent of Dominant Species except FAC-). Include species norphological adaptations to we emarks. (Describe disturbancince greater than 50% of the disturbancing greater than 50% o	noted (*) as showing attands. "T" indicates traces, relevant local variable dominant plants are hydrosenarks): Tide Gage	ons, sea	100 asonal ef the wetta	fects, etc.): and vegetal	: tion criteria is met. ology Indicators (Describe in Remarks):
rercent of Dominant Species except FAC-). Include species forphological adaptations to with the control of the distribution of	noted (*) as showing etlands. "T" indicates traces, relevant local variable forminant plants are hydrogenerals." Remarks): Tide Gage	ons, sea	100 asonal ef the wetta	fects, etc.): and vegetal	clion criteria is met. clogy Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches
ercent of Dominant Species except FAC-). Include species norphological adaptations to we semarks (Describe disturbancince greater than 50% of the disturbance disturbance greater than 50% of the disturbance greater grea	noted (*) as showing etlands. "T" indicates traces, relevant local variable forminant plants are hydrogenerals." Remarks): Tide Gage	ons, sea	100 asonal ef the wetta	fects, etc.): and vegetal	clion criteria is met. clogy Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches
Percent of Dominant Species except FAC-). Include species norphological adaptations to with the second part of the distribution of the distributio	noted (*) as showing etlands. "T" indicates traces, relevant local variable forminant plants are hydrogenerals." Remarks): Tide Gage	ons, sea	100 asonal ef the wetta	fects, etc.): and vegetal	clion criteria is met. cology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks
Percent of Dominant Species except FAC-). Include species norphological adaptations to with the second part of the distribution of the distributio	noted (*) as showing etlands. "T" indicates traces, relevant local variable forminant plants are hydrogenerals." Remarks): Tide Gage	ons, sea	100 asonal ef the wetta	fects, etc.): and vegetal	clion criteria is met. cology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
Percent of Dominant Species except FAC-). Include species norphological adaptations to with temarks (Describe disturbance ince greater than 50% of the disturbance divided Data (Describe in Foundation of the disturbance) Stream, Lake, or Aerial Photograp Other	noted (*) as showing etlands. "T" indicates traces, relevant local variable forminant plants are hydrogenerals." Remarks): Tide Gage	ons, sea	100 asonal ef the wetta	fects, etc.): and vegetal	clion criteria is met. cology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks
Percent of Dominant Species except FAC-). Include species horphological adaptations to we temarks (Describe disturbance lince greater than 50% of the di IYDROLOGY Lecorded Data (Describe in F Stream, Lake, or Aerial Photograp Other No Recorded Data eld Observations:	noted (*) as showing etlands. "T" indicates traces, relevant local variable forminant plants are hydrogenerals." Remarks): Tide Gage	ons, sea	100 asonal ef the wetta	fects, etc.): and vegetal	clion criteria is met. cology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
ercent of Dominant Species except FAC-). Include species prophological adaptations to with emarks (Describe disturbancince greater than 50% of the disturbance greate	noted (*) as showing etlands. "T" indicates traces, relevant local variable formant plants are hydrocentric format plants are hydrocentric format plants." Tide Gage h ta Available None (in.)	ons, sea	100 asonal eff the wetta Wet	fects, etc.): and vegetal	clion criteria is met. cology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
ercent of Dominant Species except FAC-). Include species prophological adaptations to we emarks (Describe disturbancince greater than 50% of the distribution of the d	noted (*) as showing etlands. "T" indicates traces, relevant local variable lominant plants are hydrominant plants	ons, sea	100 asonal eff the wetta Wet	fects, etc.): and vegetal	clon criteria is met. clogy Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required):
Percent of Dominant Species except FAC-). Include species horphological adaptations to we temarks (Describe disturbance lince greater than 50% of the di IYDROLOGY Recorded Data (Describe in F Stream, Lake, or Aerial Photograp Other No Recorded Data eld Observations: Depth of Surface Water:	noted (*) as showing etlands. "T" indicates traces, relevant local variable formant plants are hydrocentric format plants are hydrocentric format plants." Tide Gage h ta Available None (in.)	ons, sea	100 asonal eff the wetta Wet	fects, etc.): and vegetal tland Hydro Primary Ind	clon criteria is met. clogy Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
Percent of Dominant Species except FAC-). Include species norphological adaptations to we remarks (Describe disturbance greater than 50% of the disturbance greater than 50% o	noted (*) as showing etlands. "T" indicates traces, relevant local variable lominant plants are hydrominant plants	ons, sea	100 asonal eff the wetta Wet	fects, etc.): and vegetal tland Hydro Primary Ind	clon criteria is met. clogy Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches

and mapped soils on the King County Hydric Soils List satisfy the wetland hydrology criteria

1 611 61	711001	x, Inc.		====				Data Dist	4.	3
1								Data Plot: Wetland:	# :	Aubum
Project/Site	: Aubum M	itigation Site			_	Date:	10/18/00		<u> </u>	
SOILS Soil Surve	y Data:									
Map Unit N	ame: Oridi	a Silt Loam					Drainage Class:			
							Field Observation	ns Confirm	Mapp	ed Type?
Taxonomy	(Subgroup):	Typic Fluvagents					Yes X No		NA	
Profile Des	cription:									
Depth Inches)	Horizon Designation	Matrix Color (Munsell Moist)		e Color sell Moi:	st)		Mottle Abundance/Cont			re, Concretions, spheres, etc.
)-0.5	С	-					-		Roots	and Shoots
).5-9	Ap	10YR 3/3					•		Sitt los	m
-14	В	10YR 4/3	7.5YR	5/6			Common Medium, E	Distinct	Silt los	ım
14-18		10YR 3/2					-		Sandy	Loam
•	Indicators:				U	l inema	an Land Mudrin S	Paila I int		
	tosol tic Epipedon			-			on Local Hydric S on State Hydric S			
	fidic Odor						on National Hydri			
Pro	bable Aquic	Moisture Regime		_		Aquic	Moisture Regime			
	lucing Condi			_		-	ic Streaking in Sa	ndy Soils		
	•	Chroma Colors		-		Mottle	-	- \		
	•	ontent in Surface Layer		-		Otner	(Explain in Remai	rks)		
•		l disturbances, local vana idno soil are present.	tions, e	tc.):						
WETLAN	D DETER	MINATION								
łydrophytic	: Vegetation	n Present? Yes	<u> </u>	_ No		_	Is this S	Sampling P	oint \	Within a Wetlan
tydric Soils	Present?	Yes		No	x	_		' e s	No	x
Vetland Hy	drology Pre	sent? Yes	,	No	X		•			

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): Hydric soils and wetland hydrology are not present, therefore the area is not a wetland.

Param Param	etrix,	Inc
Λ		

	(Modified from: 19	87 CC	E Wetla	ands D	elineation Manual)
					0/ 18/0 0
Project/Site: Auburn Mitigatio				_	
Applicant/Owner: Port of Science				County:	King
	ton and Jennifer Hawkins			State:	WA
	Method				Community ID: Upland
o Normal Circumstances exis		Yes		No _	Field Plot ID: DP-3
the site significantly disturbe	d (Atypical Situation)?	Yes		No _2	<u> </u>
the area a potential Problem	Area?	Yes		No _>	<u><</u>
emarks (Explain sample loc ample location is in NW come			:as):		
EGETATION (Domina	int species are checked)		% Cover	Stratum	indicator
1 Cirsium arvense			20	Herb	FAC-
2 Cirsium vulgare			10	Herb	FACU
3 Hoicus ianatus			40	Herb	FAC
A Ranunculus repens A Ranunculus repens Percent of Dominant Species Except FAC-). Include speces Orphological adaptations to we	noted (*) as showing etlands. "T" indicates tra	ice.	<u>66</u>	Herb	FACW
A Ranunculus repens A Ranunculus repens Bercent of Dominant Species accept FAC-). Include species orphological adaptations to we semarks (Describe disturbance)	i noted (*) as showing etlands. "T" indicates tra ces, relevant local variatio	ice. ons, sea	66 asonal effe	Herb	FACW
A Holcus lanatus A Ranunculus repens ercent of Dominant Species except FAC-). Include species orphological adaptations to we emarks (Describe disturbance force greater than 50% of the dis-	i noted (*) as showing etlands. "T" indicates tra ces, relevant local variatio	ice. ons, sea	66 asonal effe	Herb	FACW
A Ranunculus repens arcent of Dominant Species (Acept FAC-). Include species perphological adaptations to we amarks (Describe disturbancing greater than 50% of the day DROLOGY	noted (*) as showing etlands. "T" indicates traces, relevant local variable forminant plants are hydrominant plants.	ice. ons, sea	66 asonal effe	Herb	FACW D: tion criterie is met.
A Ranunculus repens A Ranuncu	enoted (*) as showing etlands. "T" indicates traces, relevant local variation in the indicates traces, relevant local variation in the indicates traces. The indicates traces in the indicates in the indicates traces in the indicates i	ice. ons, sea	66 asonal effe	Herb	rology Indicators (Describe in Remarks):
A Ranunculus repens A Ranu	enoted (*) as showing etlands. "T" indicates traces, relevant local variable dominant plants are hydrominant plants. Tide Gage	ice. ons, sea	66 asonal effe	ects, etc.)	rology Indicators (Describe in Remarks):
A Holcus lanatus A Ranunculus repens Frecent of Dominant Species Except FAC-). Include species Except FAC-). Include species Except FAC-) adaptations to with Example of the disturbance Except FAC-) adaptation of the disturbance Except FAC-) and the disturbance of the disturbance	enoted (*) as showing etlands. "T" indicates traces, relevant local variable dominant plants are hydrominant plants. Tide Gage	ice. ons, sea	66 asonal effe	ects, etc.)	tion criteria is met. cology Indicators (Describe in Remarks): dicators:
A Holcus lanatus A Ranunculus repens Freent of Dominant Species Recept FAC-). Include species Remarks (Describe disturbance Rece greater than 50% of the disturbance Stream, Lake, or Aerial Photograp	enoted (*) as showing etlands. "T" indicates traces, relevant local variation dominant plants are hydrominant plants. "Tide Gage with "Tide Gage."	ice. ons, sea	66 asonal effe	ects, etc.)	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches
A Holcus lanatus A Ranunculus repens Procent of Dominant Species Recept FAC-). Include species Prophological adaptations to we Proced that (Describe disturbance Proced Data (Describe in F Stream, Lake, or Aerial Photograp Other	enoted (*) as showing etlands. "T" indicates traces, relevant local variation dominant plants are hydrominant plants. "Tide Gage with "Tide Gage."	ice. ons, sea	66 asonal effe	ects, etc.)	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks
A Holcus lanatus A Ranunculus repens Percent of Dominant Species Except FAC-). Include species Percent of Dominant Species Except FAC-). Include species Exc	enoted (*) as showing etlands. "T" indicates traces, relevant local variation dominant plants are hydrominant plants. "Tide Gage with "Tide Gage."	ice. ons, sea	66 asonal effe	ects, etc.)	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
Holcus lanatus A Ranunculus recens ercent of Dominant Species except FAC-). Include species orphological adaptations to we emarks (Describe disturbance ince greater than 50% of the di YDROLOGY ecorded Data (Describe in F Stream, Lake, or Aerial Photograp Other	enoted (*) as showing etlands. "T" indicates traces, relevant local variation dominant plants are hydrominant plants. "Tide Gage with "Tide Gage."	ice. ons, sea	66 asonal effe	ects, etc.)	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
A Ranunculus repens Percent of Dominant Species except FAC-). Include species except FAC-). Inc	enoted (*) as showing etlands. "T" indicates traces, relevant local variation dominant plants are hydrominant plants. "Tide Gage with "Tide Gage."	ice. ons, sea	66 asonal effe	ects, etc.)	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
A Holcus lanatus A Ranunculus repens Percent of Dominant Species Except FAC-). Include species Percent of Dominant Species Except FAC-). Include species Except Government of the describe disturbance Except Government of the describe in Face	noted (*) as showing etlands. The indicates traces, relevant local variation forminant plants are hydrominant plants. Tide Gage the hydrominant plants are hydrominant plants are hydrominant plants are hydrominant plants.	ice. ons, sea	66 asonal effethe wettar Wetti	ects, etc.) nd vegeta and Hydr	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
A Ranunculus repens A Ranuncu	enoted (*) as showing etlands. "T" indicates traces, relevant local variation dominant plants are hydrominant plan	ice. ons, sea	66 asonal effethe wettar Wetti	ects, etc.) nd vegeta and Hydr	rology indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
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A Holcus lanatus A Ranunculus recens ercent of Dominant Species except FAC-). Include species orphological adaptations to wi emarks (Describe disturbance ance greater than 50% of the di YDROLOGY ecorded Data (Describe in F Stream, Lake, or Aerial Photograp Other No Recorded Da eld Observations: Depth of Surface Water: Depth to Free Water in Pit:	enoted (*) as showing etlands. "T" indicates traces, relevant local variation dominant plants are hydrominant plan	ice. ons, sea	66 asonal effethe wettar Wetti	ects, etc.) nd vegeta and Hydr	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches

Par	ametri	x, Inc.						
不							Data Piot #: Wetland:	
L							Wetiano.	Auburn
Project/S	ite: Auburn M	itigation Site			Date:	10/18/00		
SOILS Soil Sur	vey Data:							
Map Unit	Name: Orid	a Silt Loam				Drainage Class		
			-			Field Observation	ons Confirm N	Aapped Type?
Taxonom	ny (Subgroup):	Typic Fluvagents				Yes X N	• N	IA
Profile D	escription:							. . .
Depth Inches)	Honzon Designation	Matrix Color (Munsell Moist)	Mottle ((Munse)	Mottle Abundance/Cor		exture, Concretions, hizospheres, etc.
-0.5	C	-	-			•	R	oots and Shoots
1.5-12	Ap	10YR 3/3	-			-	Si	ift toam
2-17	В	10YR 4/2	7.5YR 4/	4		Many, Medium, Dis	tinct Si	itt toam
lydric S	oil Indicators							
+	istosol					on Local Hydric		
	tistic Epipedon	1		_		on State Hydric		
	Sulfidic Odor	Majatura Basima				on National Hyd Moisture Regime		
	ropable Adulc Reducing Cond	Moisture Regime				ic Streaking in S		
	-	Chroma Colors		_	— Organ Mottle	-	andy cons	
	•	ontent in Surface Layer		_		(Explain in Rema	arks)	
	•	l disturbances, local var	nations, etc.):			·	
No field i	indicators of ny	rdnc soil are present.						
WETI A	ND DETER	MINATION						
	ytic Vegetatio		es	No	x	lg thie	Sampling Po	int Within a Wetland
	ytic vegetation oils Present?				$\frac{}{x}$	14 UIIS	-ampany ro	
•	Hydrology Pre		es —	No No	$\frac{\hat{x}}{x}$		Yes	No X
Tellano i	nyarology Pre	raentr :	=5	INU	^			

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): None of the three parameters are present, therefore the area is not a wetland.

Parametrix,	Inc.		
[]	WETLAND DETERMINATION	Data Plot #: Wetland:	4:4:
	(Modified from: 1987 COE Wetlands Delineation	on Manual)	

WE	TLAND	DETE	RMINAT	TION Wetland: Auburn
				elineation Manual)
Project/Site: Aubum Mitigation Site			Date: 1	0/18/00
Applicant/Owner: Port of Seattle			County:	King
nvestigator: Kevin Featherston and Jennifer Hawkin		State:	WA	
2 1987 Method 1989 Method		_		Community ID: PEM
o Normal Circumstances exist on the site?	Yes	X	No _	Field Plot ID: DP-4
s the site significantly disturbed (Atypical Situation)?		No >	(
the area a potential Problem Area?	Yes		No 2	
EGETATION (>Dominant species are checked)			W977
Plant Species		% Cover	Stratum	Indicator
		50	Herb	FACU
1 Dactylis glomerata				FAC
ercent of Dominant Species that are OBL, FACW xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tremarks (Describe disturbances, relevant local varial	ace. tions, sea			:
ercent of Dominant Species that are OBL, FACW xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tr	ace. tions, sea	50	fects, etc.	:
ercent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tremarks (Describe disturbances, relevant local variations wetland vegetation criteria is not met because only	ace. tions, sea	50 asonal ef	fects, etc.,	n: plants are wetland.
ercent of Dominant Species that are OBL, FACW xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T indicates tremarks (Describe disturbances, relevant local varial ne wetland vegetation criteria is not met because only YDROLOGY	ace. tions, sea	50 asonal effect of the	fects, etc.,	i: plants are wetland. rology Indicators (Describe in Remarks):
ercent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tremarks (Describe disturbances, relevant local variation wetland vegetation criteria is not met because only YDROLOGY ecorded Data (Describe in Remarks):	ace. tions, sea	50 asonal effect of the	fects, etc.,	rology Indicators (Describe in Remarks):
ercent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tremarks (Describe disturbances, relevant local variative wetland vegetation criteria is not met because only YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage	ace. tions, sea	50 asonal effect of the	fects, etc.,	rology Indicators (Describe in Remarks):
2 Holcus ianatus ercent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tremarks (Describe disturbances, relevant local variative wetland vegetation criteria is not met because only YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph	ace. tions, sea	50 asonal effect of the	fects, etc.,	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches
ercent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tremarks (Describe disturbances, relevant local varial ne wetland vegetation criteria is not met because only YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other	ace. tions, sea	50 asonal effect of the	fects, etc.,	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks
ercent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tremarks (Describe disturbances, relevant local varial ne wetland vegetation criteria is not met because only YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other	ace. tions, sea	50 asonal effect of the	fects, etc.,	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
ercent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tremarks (Describe disturbances, relevant local varial ne wetland vegetation criteria is not met because only YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other	ace. tions, sea	50 asonal effect of the	fects, etc.,	cology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
ercent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T' indicates to emarks (Describe disturbances, relevant local variations wetland vegetation criteria is not met because only YDROLOGY ecorded Data. (Describe in Remarks): Stream, Lake, or Tide Gage. Aenal Photograph. Other. No Recorded Data Available.	ace. tions, sea	50 asonal effect of the	fects, etc.,	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
ercent of Dominant Species that are OBL, FACW xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T' indicates to emarks (Describe disturbances, relevant local variations wetland vegetation criteria is not met because only YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other No Recorded Data Available	ace. tions, sea	50 asonal effent of the	fects, etc., e dominant	cology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
ercent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T' indicates to emarks (Describe disturbances, relevant local variations wetland vegetation criteria is not met because only YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other No Recorded Data Available eld Observations: Depth of Surface Water: None (in.) Depth to Free Water in Pit: >18 (in.)	ace. tions, sea	50 asonal effent of the	fects, etc., e dominant	cology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
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ercent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T' indicates to emarks (Describe disturbances, relevant local variations wetland vegetation criteria is not met because only YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other No Recorded Data Available eld Observations: Depth of Surface Water: None (in.) Depth to Free Water in Pit: >18 (in.)	ace. tions, sea	50 asonal effent of the	fects, etc., e dominant	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches

Project/Site: Auburn Mitigation Site Date: 10/18/00 SOILS SOILS Soil Survey Data: Map Unit Name: Oridia Silt Loam Drainage Class: Somewhat poorly drained Field Observations Confirm Mapped Type? Taxonomy (Subgroup): Typic Fluvagents Profile Description: Depth Horizon Matrix Color Mottle Color (Munsell Most) Designation (Munsell Most) Designation (Munsell Mo											Da	ta Piot	#:	5
SOILS SOILS SOILS Soil Survey Data: App Unit Name: Oridia Silt Loam Drainage Class: Somewhat boorly drained Field Observations Confirm Mapped Type? Faxonomy (Subgroup): Typic Fluvagents Yes X No NA Frofile Description: Pepth Horizon Matrix Color (Munsell Morst) (Munsell Morst) Designation (Munsell Morst) (Munsell Morst) O Roots and Shoots Fig. Ap 10YR 4/2 Silt Isam, oxidized mizosor Soil Indicators: Histosol X Listed on Local Hydric Soils List Histic Epipedon X Listed on State Hydric Soils List Histic Epipedon X Listed on National Hydric Soils List Sulfidic Odor Listed on National Hydric Soils List X Probable Aquic Moisture Regime Aquic Moisture Regime Reducing Conditions X Gleyed or Low-Chroma Colors High Organic Content in Surface Layer Financks (Describe soil disturbances, local vanations, etc.): Fool color and other hydric soil indicators meet the hydric soil criteria. VETLAND DETERMINATION Addrain Side Somewhat boorly drained Field Observations Confirm Mapped Type? Texture, Concretions. Mottle Common, Medium, Destinct Stil Isam, oxidized mizosor Stil Isam, ox														Auburn
Soil Survey Data: Map Unit Name: Oridia Silt Loam Drainage Class: Somewhat poorly drained Field Observations Confirm Mapped Type? Yes X No NA Profile Description: Designation (Munsell Moist) Designation (Munsell M	Project/S	ite: Aubum M	itigation Site				_	Date:	10/18	70 0				
Field Observations Confirm Mapped Type? Yes X No NA		vey Data:												
Profile Description: Depth Horizon Matrix Color (Munsell Moist) (Munsell Moist) Abundance/Contrast Rhizospheres, etc. Depth Horizon Matrix Color (Munsell Moist) (Munsell Moist) Abundance/Contrast Rhizospheres, etc. Roots and Shoots Ap 10YR 4/2 - Roots and Shoots Sit loam, oxidized rhizospheres Profile Description: Mottle Color Mottle Texture, Concretions, Rhizospheres, etc. Roots and Shoots Sit loam, oxidized rhizospheres, etc. Sit loam, oxidized rhizospheres, etc. Sit loam, oxidized rhizospheres, etc. X Listed on Local Hydric Soils List Histosol X Listed on Local Hydric Soils List Listed on National Hydric Soils List X Probable Aquic Moisture Regime Aquic Moisture Regime Organic Streaking in Sandy Soils X Gleyed or Low-Chroma Colors X Mottles High Organic Content in Surface Layer Other (Explain in Remarks) VETLAND DETERMINATION Versum No Yes X N	Map Unit	Name: Oridi	a Silt Loam						Draina	ige Cl	ass: So	mewha	t poor	rly drained
Profile Description: Depth Horizon Matrix Color (Munsell Moist) Mottle Color (Munsell Moist) Abundance/Contrast Rhizospheres, etc. Depth Horizon Designation (Munsell Moist) (Munsell Moist) Abundance/Contrast Rhizospheres, etc. Designation (Munsell Moist) Abundance/Contrast Rhizospheres, etc. Designation (Munsell Moist) Abundance/Contrast Rhizospheres, etc. Profile Description: Roots and Shoots Stiff loam. oxidized rhizospheres, etc. Siff loam. oxidized rhizospheres, etc. Siff loam. oxidized rhizospheres, etc. Listed on Local Hydric Soils List Histosol X Listed on Local Hydric Soils List Histosol X Listed on State Hydric Soils List Sulfidic Odor Listed on National Hydric Soils List X Probable Aquic Moisture Regime Aquic Moisture Regime Reducing Conditions Organic Streaking in Sandy Soils X Gleyed or Low-Chroma Colors X Mottles High Organic Content in Surface Layer Other (Explain in Remarks) Remarks (Describe soil disturbances, local variations, etc.): Soil color and other hydric soil indicators meet the hydric soil criteria. NETLAND DETERMINATION Yes X No Yes X No Yes X No Yes X No									Field (Obser	vations (Confirm	Map	ped Type?
Profile Description: Depth Horzon Matrix Color (Munsell Moist) (Munsell Moist) Abundance/Contrast Rhizospheres, etc. Designation (Munsell Moist) (Munsell Moist) Abundance/Contrast Rhizospheres, etc. Designation (Munsell Moist) (Munsell Moist) Abundance/Contrast Rhizospheres, etc. Designation (Munsell Moist) Abundance/Contrast Rhizospheres, etc. Designation (Munsell Moist) Abundance/Contrast Rhizospheres, etc. Proposed April 10YR 4/2 Roots and Shoots Saft loam, oxidized mizospheres Bydric Soil Indicators: Histosol X Listed on Local Hydric Soils List Histic Epipedon X Listed on State Hydric Soils List X Probable Aquic Moisture Regime Aquic Moisture Regime Organic Streaking in Sandy Soils X Gleyed or Low-Chroma Colors X Mottles High Organic Content in Surface Layer Other (Explain in Remarks) Remarks (Describe soil disturbances, local variations, etc.): Soil color and other hydric soil indicators meet the hydric soil criteria. NETLAND DETERMINATION Yes X No Yes X No Yes X No Yes X No	Taxonom	ny (Subaroup):	Typic Fluvagents						Yes	x	No		NA	
Horizon Designation Matrix Color (Munsell Moist) Mottle Color (Munsell Moist) Mottle Abundance/Contrast Texture, Concretions, Rhizospheres, etc.			.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,						•					
Ap 10YR 4/2 - Sitt loam. oxidized mizosoft loam. Sitt loam. oxidized mizosoft load. Soll Indicators: Histosol	Depth	Horizon				-	st)			ance/	Contras	t		
B 10YR 3/2 7 5YR 4/6 Common, Medium, Distinct Silf loam; oxidized rhizosof stydric Soil Indicators: Histosol X Listed on Local Hydric Soils List Histic Epipedon X Listed on State Hydric Soils List Sulfidic Odor Listed on National Hydric Soils List X Probable Aquic Moisture Regime Aquic Moisture Regime Organic Streaking in Sandy Soils X Gleyed or Low-Chroma Colors X Mottles High Organic Content in Surface Layer Other (Explain in Remarks) WETLAND DETERMINATION Verydrophytic Vegetation Present? Yes X No Is this Sampling Point Within a Wetland Address Soils Present? Yes X No Yes X No Yes X No)-1	0	-		•				-				Roots	and Shoots
Histosol X Listed on Local Hydric Soils List Histoc Epipedon X Listed on State Hydric Soils List Sulfidic Odor Listed on National Hydric Soils List X Probable Aquic Moisture Regime Aquic Moisture Regime Organic Streaking in Sandy Soils X Gleyed or Low-Chroma Colors X Mottles High Organic Content in Surface Layer Other (Explain in Remarks) Hernarks (Describe soil disturbances, local variations, etc.): Soil color and other hydric soil indicators meet the hydric soil criteria. VETLAND DETERMINATION Yes X No Yes X No Yes X N	-9	Ap .	10YR 4/2		-				•				Sift lo	em. oxidized mizosphe
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ydrophytic Vegetation Present? Yes X No Is this Sampling Point Within a Wetland ydric Soils Present? Yes X No Yes X No	X P X G X G H Remarks	distosol distic Epipedon sulfidic Odor probable Aquic deducing Condi dieyed or Low-C digh Organic Co (Describe soil	tions Chroma Colors Intent in Surface Laye disturbances, local v	ariati			X	Listed Listed Aquic Organ Mottle	on Stat on Nati Moistur ic Strea s	te Hyd onal i e Reg king i	dric Soils Hydric S hime n Sandy	s List ioils Lis r Soils	t	
lydric Solls Present? Yes X No Yes X No	NETLA	ND DETER	MINATION											
		_				No	_			is ti	his Sam	pling F	Point 1	Within a Wetland?
Vetland Hydrology Present? Yes X No	-				_			_			Yes	_x	_ No	

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): All technical criteria are met.

Parai	metrix	, Inc.



Data Plot #:	5
Wetland:	Auburn

policant/Owner: Port of Seattle Vestigator: Kevin Featherston and Jennifer Hawkins 1989 Method 1	WETLAND DETERMINATION (Modified from: 1987 COE Wetlands Delineation Manual) Project/Site: Auburn Mitigation Site							Data Plot #:	5		
(Modified from: 1987 COE Wetlands Delineation Manual) roject/Site: Auburn Mitigation Site Date: 10/18/00	Modified from: 1987 COE Wetlands Delineation Manual)		14 r			OMINI		Wetland:	Auburn		
Date: 10/18/00 Date	Project/Site: Auburn Mitigation Site Date: 10/18/00 County: King State: WA Community ID: PEM State: WA Community ID: PEM State: WA Community ID: PEM State: WA State: WA Community ID: PEM State: WA Community ID: PEM State: WA State: WA										
Potentian	County: King County: King County: King County: King County: King Community D: PEM	(Modified from: 19	87 CO	E 1180						
westpator: Nevnr Featherston and Jennifer Hawkins 1987 Method	State WA	roject/Site: Aubum Mitigation	Site		_						
1 1987 Method 1989 Metho	1987 Method 1989 Method	pp				•					
the site significantly disturbed (Atypical Situation)? Yes No Field Plot ID: DP-5 the site significantly disturbed (Atypical Situation)? Yes No X the area a potential Problem Area? Yes No X amarks (Explain sample location, disturbances, problem areas): cated in Wetland 1. EGETATION (**Dominant species are checked) Plant Species	o Normal Circumstances exist on the site? In the site significantly disturbed (Atypical Situation)? Yes No X the area a potential Problem Area? Yes No X Ithe area a potential Problem Area? Yes No X Ithe area a potential Problem Area? Yes No X Ithe area a potential Problem Area? Yes No X Ithe area a potential Problem Area? Yes No X Ithe area a potential Problem Area? Yes No X Ithe area a potential Problem Area? Yes No X Ithe area a potential Problem Area? Yes No X Ithe area a potential Problem Area? Yes No X Ithe area a potential Problem Area? Yes No X Ithe area a potential Problem Area? Yes No X Ithe area a potential Problem Area? Yes No X Ithe area a potential Problem Area? Yes No X Ithe area a potential Problem Area? Yes No X Ithe area a potential Problem Area? Yes No X Ithe area a potential Problem Area? Yes No X Ithe area a potential Problem Area? Yes No X Ithe area a potential Problem Area? Yes No X Yes No X Yes No X Yes No X Ithe area a potential Problem Area? Yes No X Yes Stratum Indicator Yes Ord Herb FACU Herb	vestigator: Kevin Feathersto	n and Jennifer Hawkins			State:	WA				
the site significantly disturbed (Atypical Situation)? Yes No X the area a potential Problem Area? Yes No X emarks (Explain sample location, disturbances, problem areas): Cover Stratum Indicator	it the area a potential Problem Area? Yes No X emarks (Explain sample location, disturbances, problem areas): Decided in Wetland 1.	1987 Method 🔲 1989 N	Method					Community ID: _f	PEM		
the area a potential Problem Area? Pres No X Amarks (Explain sample location, disturbances, problem areas): Detected in Wetland 1. EGETATION (**Dominant species are checked) Plant Species	the area a potential Problem Area? Permarks (Explain sample location, disturbances, problem areas): Cover Cover	o Normal Circumstances exist	on the site?	Yes	<u> </u>	No		Field Plot ID: DP	- 5		
the area a potential Problem Area? Pres No X Amarks (Explain sample location, disturbances, problem areas): Detected in Wetland 1. EGETATION (**Dominant species are checked) Plant Species	the area a potential Problem Area? Permarks (Explain sample location, disturbances, problem areas): Cover Cover	the site significantly disturbed	(Atypical Situation)?	Yes		No	<u> </u>				
#####################################	######################################			Yes		No	X				
Plant Species	Plant Species Y Cover Stratum Indicator			iem are	as):						
Plant Species	Plant Species Alopecurus pratensis 40 Herb FACW-					: .:. 					
Alopecurus pratensis Alopecurus pratensis Dactivis giomerata Dactivis giomerata Herb FACU Herb	Alopecurus pratensis Alopecurus gravensis Dacrivis giomerata Dacrivis giomerata Dacrivis giomerata Alopecurus pratensis Dacrivis giomerata		nt species are checked)		% Consu	r Stratu	en te	ndicator			
2 Dacrvis giomerata 2 Dacrvis giomerata 3 Holicus lanatus 40 Merb FAC Percent of Dominant Species that are OBL, FACW, or FAC except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace. Permarks (Describe disturbances, relevant local variations, seasonal effects, etc.): Ince greater than 50% of the dominant plants are hydrophytic, the wetland vegetation criteria is met. YDROLOGY Percorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other Other No Recorded Data Available Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands	2 Dactvis giomerata 3 Hotous tanatus 40 Merb FACU At the property of Dominant Species that are OBL, FACW, or FAC except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace. Bernarks (Describe disturbances, relevant local variations, seasonal effects, etc.): Ince greater than 50% of the dominant plants are hydrophylic, the wetland vegetation criteria is met. Variable of Surface Water in Pit: None (in.)										
Holcus lanatus 40 Herb FAC	3 Holicus lanatus 40 Herb FAC sercent of Dominant Species that are OBL, FACW, or FAC (xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace. ###################################	2									
recent of Dominant Species that are OBL, FACW, or FAC accept FAC-). Include species noted (*) as showing prohological adaptations to wetlands. "T" indicates trace. Imarks (Describe disturbances, relevant local variations, seasonal effects, etc.): Image greater than 50% of the dominant plants are hydrophytic, the wetland vegetation criteria is met. YDROLOGY Incorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands	ricent of Dominant Species that are OBL, FACW, or FAC recept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. Thindicates trace. Imarks (Describe disturbances, relevant local variations, seasonal effects, etc.): Ince greater than 50% of the dominant plants are hydrophytic, the wetland vegetation criteria is met. INTERPOLICENTAL (Poscribe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other No Recorded Data Available No Recorded Data Available Water Marks Depth of Surface Water: Depth to Free Water in Pit: Depth to Saturated Soil: Depth to Saturated Soil: None (in.) Secondary Indicators (2 or more required): X Oxidized Root Channels in Upper 12 inches X Uster-Stained Leaves X Local Soil Survey Data Other (Explain in Remarks)	*									
Stream, Lake, or Tide Gage Aenal Photograph Other Other No Recorded Data Available No Recorded Data Available Saturated in Upper 12 inches Saturated in Upper 18 inches Sediment Deposits Drainage Patterns in Wetlands	Stream, Lake, or Tide Gage		Man and OD! FACIAL	EAC	`			-			
Stream, Lake, or Tide Gage Aerial Photograph Other Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands	Stream, Lake, or Tide Gage Aenal Photograph Other No Recorded Data Available Saturated in Upper 12 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Property Indicators (2 or more required): Depth of Surface Water in Pit: Depth to Free Water in Pit: Depth to Saturated Soil: Depth to Saturated Soil: None (in.) Secondary Indicators (2 or more required): X Oxidized Root Channels in Upper 12 inches Water-Stained Leaves X Local Soil Survey Data Other (Explain in Remarks)		ominant plants are hydri	ophytic.	the wet	land veg	etation (criteria is met.			
Aenal Photograph Other Saturated in Upper 12 inches No Recorded Data Available Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands	Aeral Photograph Other Other Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Depth of Surface Water: None (in.) Secondary Indicators (2 or more required): Depth to Free Water in Pit: Depth to Saturated Soil: Depth to Saturated Soil: None (in.) Secondary Indicators (2 or more required): Water-Stained Leaves X Local Soil Survey Data Other (Explain in Remarks)	ecorded Data (Describe in R	lemarks):		We	itland H	drolog	y Indicators (Descri	be in Remarks):		
Aenal Photograph Other Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands	Aerial Photograph Other Other No Recorded Data Available No Recorded Data Available No Recorded Data Available Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Depth of Surface Water: None (in.) Secondary Indicators (2 or more required): X Oxidized Root Channels in Upper 12 inches Water-Stained Leaves X Local Soil Survey Data Other (Explain in Remarks)	Stream, Lake, or	Tide Gage								
Other No Recorded Data Available No Recorded Data Available Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands	Other No Recorded Data Available Vater Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Depth of Surface Water: Depth to Free Water in Pit: Depth to Saturated Soil: None (in.) Secondary Indicators (2 or more required): X Oxidized Root Channels in Upper 12 inches Water-Stained Leaves X Local Soil Survey Data Other (Explain in Remarks)		-				in	nundated			
No Recorded Data Available Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands	No Recorded Data Available No Recorded Data Available Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Popth of Surface Water: Depth to Free Water in Pit: Depth to Saturated Soit: None (in.) Secondary Indicators (2 or more required): X Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)								nches		
Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands	Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Popth of Surface Water: Depth to Free Water in Pit: Depth to Saturated Soil: Depth to Saturated Soil: None (in.) Secondary Indicators (2 or more required): X Oxidized Root Channels in Upper 12 inches Water-Stained Leaves X Local Soil Survey Data Other (Explain in Remarks)		a Available				s	aturated in Upper 18 ii	nches		
Sediment Deposits Drainage Patterns in Wetlands	Sediment Deposits Drainage Patterns in Wetlands Popth of Surface Water: Depth to Free Water in Pit: Depth to Saturated Soil: Depth to Saturated Soil: None (in.) Secondary Indicators (2 or more required): X Oxidized Root Channels in Upper 12 inches Water-Stained Leaves X Local Soil Survey Data Other (Explain in Remarks)										
Drainage Patterns in Wetlands	Popth of Surface Water: None (in.) Secondary Indicators (2 or more required): Depth to Free Water in Pit: >18 (in.) X Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks) The stained Leaves (As relevant, describe recent precipitation, hydrologic modifications, local variations, etc.):										
eld Observations:	And Observations: Depth of Surface Water: Depth to Free Water in Pit: Depth to Saturated Soit: Depth to Saturated Soit: None (in.) Secondary Indicators (2 or more required): X Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)							•	- 41 4		
Double of Conference Marketine Alexander	Depth of Surface Water: Depth to Free Water in Pit: Depth to Saturated Soil: Depth to Saturated Soil: None (in.) Secondary Indicators (2 or more required): X Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)	old Observations					_ ^D	rainage Patterns in Wi	evands		
secondary indicators (2 or more required):	Depth to Free Water in Pit: Depth to Saturated Soil: Solid Soil		None (in)			Sacce	an, 154	ionton /2 or mass	ainmad).		
Depth to Free Water in Pit: >18 (in.)	Depth to Saturated Soil: Solid Soil										
Depth to Saturated Soit: >18 (in) X Oxidized Root Channels in Upper 12 inches	Water-Stained Leaves X Local Soil Survey Data Other (Explain in Remarks) marks (As relevant, describe recent precipitation, hydrologic modifications, local variations, etc.):					×			s in Upper 12 inches		
Water-Stained Leaves	Other (Explain in Remarks) marks (As relevant, describe recent precipitation, hydrologic modifications, local variations, etc.):										
	emarks (As relevant, describe recent precipitation, hydrologic modifications, local variations, etc.):					x					
							<u> </u>	ther (Explain in Remai	rks)		
							<u> </u>	ther (Explain in Remai	rks)		
		emarks (As relevant decom	e recent precipitation in	vetroice	io modifi		inani				
Other (Explain in Remarks)	whathe nyorology is not expected due to the time of year when the delineation was completed. The presence of ovidered wherever										
Other (Explain in Remarks) emarks (As relevant, describe recent precipitation, hydrologic modifications, local variations, etc.):	nd mapped soils on the King County Hydric Soils List satisfy the welland hydrology criteria	reliand hydrology is not expect	so due to the time of ye	ar when	the deli	neation	was con	npleted. The presence	of oxidized mizosphe		

1							Data Piot i Wetland:	F :	6 Auburn		
Project/S	Site: Aubum M	litigation Site			Date:	10/18/00					
SOILS Soil Su	; rvey Data:										
Map Uni	it Name: Orid	lia Silt Loam				Drainage Class:	Somewhat	poor	ty drained		
						Field Observatio	ns Confirm i	Mapr	oed Type?		
Taxonor	ny (Subgroup):	Typic Fluvagents		·		Yes X No	'	NA			
Profile C	Description:										
Depth (inches)	Horizon Designation	Matrix Color (Munsell Moist)	Mottle Co (Munsell			Mottle Abundance/Cont			re, Concretions, spheres, etc.		
-0.5	0	-	<u> </u>			-	F	Roots	and Shoots		
.5-12	Αp	10YR 3/3				-	5	Silt IOE	ım		
2-17	В	10YR 3/3	7.5YR 4/6			Common, Medium, E	Distinct S	Sift Ice	im, oxidized rhizosohe		
lvdric S	ioil Indicators:										
•	Histosol			Х	Listed	on Local Hydric S	ioils List				
<u> </u>	Histic Epipedon	l				on State Hydric S					
	Sulfidic Odor				Listed	on National Hydri	c Soils List				
F	Probable Aquic	Moisture Regime			Aquic Moisture Regime						
F	Reducing Condi	itions		(Organ	ic Streaking in Sai	ndy Soils				
G	Sleyed or Low-(Chroma Colors			Mottle	5					
—-⊦	ligh Organic Co	ontent in Surface Layer		(Other	(Explain in Remar	ks)				
_		l disturbances, local van dric soil are present.	ations, etc.):								
NETLA	ND DETER	MINATION									
ydrophy	rtic Vegetation	n Present? Ye	s I	No x		ls this S	amplino Po	oint Y	Vithin a Wetland?		
	oils Present?	Ye		No X	-		py				
			- '	~			es	No	X		

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): All three parameters absent, therefore the area is not a wetland.

P	WET	LAND	DETER	RMINA	ATIO	Data Plot #: 6 Wetland: Aubum
	(Modified from: 19	87 CC	E Wetia	ends l	Delii	neation Manual)
Project/Site: Aubum Mitigation	Site	8	Date:	10/18	8/00	
Applicant/Owner: Port of Se	attie	(County:	Kır	ng	
Investigator: Kevin Feathersto	on and Jennifer Hawkins		state:	WA	Α	
1987 Method						Community ID: Upland
Do Normal Circumstances exist	on the site?	Yes	<u> </u>	No		- Field Plot ID: DP-6
s the site significantly disturbed	(Atypical Situation)?	Yes		No	X	_
s the area a potential Problem /		Yes		No	х	
EGETATION (Dominar	nt species are checked)		% Cover	Stratu	m	Indicator
1 Cirsium arvense			15	Herb		FAC-
2 Dactviis giomerata	2 2000000			Herb		FACU
Dactvils glomerata Decrease (Agropyrol Percent of Dominant Species (except FAC-). Include species prophological adaptations to we	that are OBL, FACW, noted (*) as showing		40 45 0	Herb		FAC-
Elvingia repens (Agropyro Percent of Dominant Species except FAC-). Include species	that are OBL, FACW, noted (*) as showing triands. "T" indicates traces, relevant local variation	ice. ons, se	0 asonal eff	Herb	•	FAC-
Bivingia repens (Agropyro- Percent of Dominant Species except FAC-). Include species norphological adaptations to we Remarks (Describe disturbance Since less than 50% of the domi	that are OBL, FACW, noted (*) as showing triands. "T" indicates traces, relevant local variation	ice. ons, se	0 asonal eff	Herb	•	FAC-
Bivingia repens (Agropyrovercent of Dominant Species except FAC-). Include species norphological adaptations to we Remarks (Describe disturbance less than 50% of the domination of the dominati	that are OBL, FACW, noted (*) as showing stands. "T" indicates trailes, relevant local variational plants are hydroph.	ice. ons, se	0 asonal effi	ects, et	tion ci	FAC-
Percent of Dominant Species except FAC-). Include species norphological adaptations to we temarks (Describe disturbance less than 50% of the domination of t	that are OBL, FACW, noted (*) as showing stands. "T" indicates traines, relevant local variation in the plants are hydrophysical enacts."	ice. ons, se	0 asonal eff	ects, et	drole	riteria is not met. ogy Indicators (Describe in Remarks):
Bivingia repens (Agropyro- Percent of Dominant Species except FAC-). Include species norphological adaptations to we Remarks (Describe disturbance Since less than 50% of the dominated by the comments of the	that are OBL, FACW, noted (*) as showing stands. "T" indicates traces, relevant local variation in the plants are hydrophic ternarks): Tide Gage	ice. ons, se	0 asonal eff	ects, et	drote Indica	riteria is not met. ogy Indicators (Describe in Remarks): ators: Inundated
Bernarks (Describe in Recorded Data (Describe in	that are OBL, FACW, noted (*) as showing stands. "T" indicates traces, relevant local variation in the plants are hydrophic ternarks): Tide Gage	ice. ons, se	0 asonal eff	ects, et	rdrote Indica	riteria is not met. ogy Indicators (Describe in Remarks): ators: Inundated Saturated in Upper 12 inches
Bivingia repens (Agropyro- Percent of Dominant Species except FAC-). Include species norphological adaptations to we temarks (Describe disturbance lince less than 50% of the domi HYDROLOGY Recorded Data (Describe in R Stream, Lake, or Aerial Photograph	that are OBL, FACW, noted (*) as showing stands. "T" indicates traces, relevant local variation in the plants are hydroph sternarks): Tide Gage	ice. ons, se	0 asonal eff	ects, et	rdrote Indica	priteria is not met. Describe in Remarks): ators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches
Bivingia repens (Agropyrovercent of Dominant Species except FAC-). Include species norphological adaptations to we kemarks. (Describe disturbance less than 50% of the dominate less than 50% of the dominate less than 50%. Stream, Lake, or Aerial Photograph Other.	that are OBL, FACW, noted (*) as showing stands. "T" indicates traces, relevant local variation in the plants are hydroph sternarks): Tide Gage	ice. ons, se	0 asonal eff	ects, et	rdrote Indica	riteria is not met. ogy Indicators (Describe in Remarks): ators: Inundated Saturated in Upper 12 inches
Bivingia repens (Agropyroversection) Percent of Dominant Species except FAC-). Include species norphological adaptations to we Remarks (Describe disturbance Since less than 50% of the domination of the domination of the Company of the Agrial Photograph Other	that are OBL, FACW, noted (*) as showing stands. "T" indicates traces, relevant local variation in the plants are hydroph sternarks): Tide Gage	ice. ons, se	0 asonal eff	ects, et	rdrote Indica	riteria is not met. ogy Indicators (Describe in Remarks): ators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks
3. Elvingia repens (Agropyroversection) Percent of Dominant Species except FAC-). Include species morphological adaptations to we Remarks (Describe disturbance Since less than 50% of the domination of the domin	that are OBL, FACW, noted (*) as showing stands. "T" indicates traces, relevant local variation in the plants are hydroph sternarks): Tide Gage	ice. ons, se	0 asonal eff	ects, et	rdrote Indica	priteria is not met. Describe in Remarks): ators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
Bivingia repens (Agropyroversection) Percent of Dominant Species except FAC-). Include species norphological adaptations to we Remarks (Describe disturbance less than 50% of the domination of	that are OBL, FACW, noted (*) as showing stands. "T" indicates traines, relevant local variation in the plants are hydrophistemarks): Tide Gage Ta Available	ice. ons, se	asonal eff e wetland Weti	ects, et	rdrote Indica	priteria is not met. Describe in Remarks): ators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
Bivingia repens (Agropyrovercent of Dominant Species except FAC-). Include species increhological adaptations to we demarks. (Describe disturbance less than 50% of the dominance less tha	that are OBL, FACW, noted (*) as showing stands. "T" indicates traines, relevant local variation in the plants are hydrophysical emarks): Tide Gage Available None (in.)	ice. ons, se	asonal eff e wetland Weti	ects, et	rdrote Indica	priteria is not met. Describe in Remarks): ators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
Bivingia repens (Agropyrovercent of Dominant Species except FAC-). Include species increments (Describe disturbance) (Describe disturbance) (Describe disturbance) (Describe in Recorded Data (Describe in Recorde	that are OBL, FACW, noted (*) as showing stands. "T" indicates traines, relevant local variates inant plants are hydrophistemarks): Tide Gage Available None (in.) >18 (in.)	ice. ons, se	asonal eff e wetland Weti	ects, et	indica	interia is not met. logy Indicators (Describe in Remarks): ators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required):
Bivingia repens (Agropyro- Percent of Dominant Species except FAC-). Include species inorphological adaptations to we Remarks (Describe disturbance Since less than 50% of the dominate le	that are OBL, FACW, noted (*) as showing stands. "T" indicates traines, relevant local variates inant plants are hydroph. Remarks): Tide Gage Available None (in.) >18 (in.)	ice. ons, se	asonal eff e wetland Weti	ects, et	verole indicate in the second	riteria is not met. linundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands ndicators (2 or more required): Oxidized Root Channels in Upper 12 inches Water-Stained Leaves
Bivingia repens (Agropyroversection of Dominant Species except FAC-). Include species norphological adaptations to we Remarks. (Describe disturbance less than 50% of the domination of the domi	that are OBL, FACW, noted (*) as showing stands. "T" indicates traines, relevant local variates inant plants are hydrophistemarks): Tide Gage Available None (in.) >18 (in.)	ice. ons, se	asonal eff e wetland Weti	ects, et	rdrote indica	riteria is not met. logy Indicators (Describe in Remarks): ators: ators: lnundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands indicators (2 or more required): Oxidized Root Channels in Upper 12 inches

()	****		ERMINATI		'n
	(Modified from: 198	7 COE We	tlands Del	lineation Manual)	
Project/Site: Aubum Mitigatio	n Site		Date: 10/	18/00	
Applicant/Owner: Port of S	eattle		County: K	King	
investigator: Kristie Dunkin			State: V	VA	
✓ 1987 Method	Method	-		Community ID: PEM	
Do Normal Circumstances exis	it on the site?	Yes X	No	- Field Plot ID: DP-7	
s the site significantly disturbe	d (Atypical Situation)?	Yes	No X		
s the area a potential Problem	Area?	Yes	No X		
Plant Species Alonecurus pratensis	aprende alle entender	% Cove		Indicator FACW+	
Alopecurus pratensis Cirsium arvense		<u>80</u> <1	Herb Herb	FACW+	
2 Cirsium arvense 3 Dactylis glomerata		— 1 15	herb	FAC-	
4 Holcus lanatus		70	Herb	FAC	
ercent of Dominant Species except FAC-). Include species torphological adaptations to we emarks (Describe disturbanc ince greater than 50% of the di	noted (*) as showing etlands. "T" indicates trace test, relevant local variation	e. es, seasona l e	effects, etc.):	on criteria is met.	
YDROLOGY					
ecorded Data (Describe in F	Remarks):	W	etiand Hydrol	logy Indicators (Describe in Rema	rks)·
	Tide Gage		Primary India		
Stream, Lake, or					
	h			inundated	
Stream, Lake, or	h			Inundated Saturated in Upper 12 inches	
Stream, Lake, or Aerial Photograph				Saturated in Upper 12 inches Saturated in Upper 18 inches	
Stream, Lake, or Aerial Photograpi Other				Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks	
Stream, Lake, or Aerial Photograpi Other				Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines	
Stream, Lake, or Aerial Photograpi Other				Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits	
Stream, Lake, or Aerial Photograpi Other No Recorded Date	a Available			Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines	
Stream, Lake, or Aerial Photograpi Other No Recorded Date eld Observations: Depth of Surface Water:	None (in.)		Secondary III	Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits	
Stream, Lake, or Aerial Photograph Other No Recorded Date eld Observations: Depth of Surface Water: Depth to Free Water in Pit:	None (in.)		Secondary II	Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required):	? inche
Stream, Lake, or Aerial Photograpi Other No Recorded Date eld Observations: Depth of Surface Water:	None (in.)			Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands	? inches

Remarks (As relevant, describe recent precipitation, hydrologic modifications, local variations, etc.):

Wetland hydrology is not expected due to the time of year when the delineation was completed. The presence of oxidized rhizospheres and mapped soils on the King County Hydric Soils List satisfy the wetland hydrology criteria.

Other (Explain in Remarks)

AR 047549

$\overline{\Lambda}$								Data Plot #:	7				
								Wetland:	Auburn				
Project/S	Site: Aubum M	litigation Site				Date:	10/18/00						
SOILS Soil Sur	rvey Data:												
Map Uni	it Name: Orid	ia Silt Loam					Drainage Class:	Somewhat p	oorly drained				
							Field Observatio	ns Confirm M	apped Type?				
Taxonon	ny (Subgroup):	Typic Fluvagents					Yes X No	N	A				
Profile E	escription:												
Depth Inches)	Honzon Designation	Matrix Color (Munsell Moist)		Mottle (Munse		st)	Mottle Abundance/Cont		exture, Concretions, nizospheres, etc.				
- 6	Δ	10YR 4/2		10YR 4/	4		Common, Medium, F	amt Sil	Sitt toern				
-15	В	10YR 4/2		7.5YR 4	/6 and	7.5YR 4/4	Many, Medium, Distr	nct Sil	t loam: Oxidized rhizosohi				
5-24	С	2.5Y 4/2		7.5YR 4	/6		Many, Medium, Disti	nct Fir	ne Sandy Loam				
łydric S	oil Indicators	:											
+	Histosol					X Listed	f on Local Hydric S	Soils List					
<u> </u>	distic Epipedon	ı				X Listed							
	Sulfidic Odor				_	Listed	Listed on National Hydric Soils List						
F	Probable Aquic	Moisture Regime			_	Aquic	Moisture Regime						
F	Reducing Cond	itions			_	Organic Streaking in Sandy Soils							
<u> </u>	Gleyed or Low-(Chroma Colors			_	X Mottle	es .						
	ligh Organic Co	ontent in Surface Lay	er		_	Other	(Explain in Remar	ks)					
lemarks	(Describe soi	disturbances, local v	anati	ons. etc.	.):								
Soil colo	r and other hyd	inc soil indicators me	et the	hydric s	oil cri	teria.							
WETLA	ND DETER	MINATION											
vdrophy	rtic Vegetation	Present?	Yes	x	No		Is this S	ampling Poi	nt Within a Wetland?				
., ,													
	oils Present?		Yes	X	No								

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): All technical criteria are met.

Λ						Data Plo	t #:	8
				7101		Wetland	t:	Auburr
-			RMINA					
(Modified from: 1987	7 COE	Wet	iands I	Deline	ation	Manual)	
roject/Site: Aubum Mitigation Site			Date:	10/18/	00			
pplicant/Owner: Port of Seattle			County:	King	!			
ivesugator: Knste Dunkin	****	_	State:	WA				
1987 Method					Co	mmunity IE): Up	land
o Normal Circumstances exist on the site?	Yes	<u> </u>	No			ld Plot ID:	DP-8	3
the site significantly disturbed (Atypical Situation)?	Yes		No	X				
the area a potential Problem Area?	Yes		No -	×				
GETATION (Dominant species are checked)		_	_					
Plant Species	-	6 Cover			ndicator			
Ptant Species 1 Cirsium arvense	<	1	Herb	F	AC-			
Ptant Species 1 Cirsium arvense 2 Cirsium vulgare	{	1						
Ptant Species 1 Cirsum arvense	{	1 1 00	Herb	F	AC-			
Plant Species 1 Cirsium arvense 2 Cirsium vuigare 3 Dactviis giomerata	<u> </u>	1 1 0C	Herb Herb	F	ACU ACU			
Ptant Species 1 Cirsium arvense 2 Cirsium vulgare 3 Dactvis giomerata 4 Festuca arundinacea	< 	1 1 0C 0	Herb Herb Herb		ACU ACU ACU			
Ptant Species 1 Cirsium arvense 2 Cirsium vuigare 3 Dactvis giomerata 4 Festuca arundinacea 5 Hoicus lanatus		1 1 0C 0 0	Herb Herb Herb Herb		ACU ACU ACU AC-			
Plant Species 1 Cirsium arvense 2 Cirsium vulgare 3 Dactvlis giomerata 4 Festuca arundinacea 5 Hoicus lanatus 6 Lotus comiculatus	11 11 5 < 11 < TAC	1 1 0C 0 0	Herb Herb Herb Herb Herb		ACU ACU AC- AC			
Ptant Species 1 Cirsium arvense 2 Cirsium vulgare 3 Dactvis giomerata 4 Festuca arundinacea 5 Hoicus tanatus 6 Lotus comiculatus 7 Phieum pratense ercent of Dominant Species that are OBL, FACW, or complete the complete of	11 1: 5: 5: 5: 5: 5: 5: 5: 5: 5: 5: 5: 5: 5:	1 1 1 000 00 0 0 1 1 0 0 0 1 50	Herb Herb Herb Herb Herb Herb	F F F	ACU ACU AC- AC			
Plant Species 1 Cirsium arvense 2 Cirsium vulgare 3 Dactvis giomerata 4 Festuca arundinacea 5 Hoicus lanatus 6 Lotus comiculatus 7 Phieum pratense ercent of Dominant Species that are OBL, FACW, or except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. T indicates trace emarks (Describe disturbances, relevant local variation	11 11 50 < < < < < < < < < < < < < < < < < <	1 1 000 0 0 0 1 0 50 conal ef	Herb Herb Herb Herb Herb Herb Herb	F F F F F F F F F F F F F F F F F F F	AC- ACU ACU AC- AC AC			
Plant Species 1 Cirsium arvense 2 Cirsium vulgare 3 Dactvlis giomerata 4 Festuca arundinacea 5 Hoicus lanatus 6 Lotus corniculatus 7 Phieum pratense ercent of Dominant Species that are OBL, FACW, or except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace emarks. (Describe disturbances, relevant local variation be wetland vegetation criteria is not met because only 50	11 11 50 < < < < < < < < < < < < < < < < < <	1 1 000 0 0 0 1 0 50 conal ef	Herb Herb Herb Herb Herb Herb Herb	F F F F F F F F F F F F F F F F F F F	AC- ACU ACU AC- AC AC	vetiand		
Plant Species 1 Cirsium arvense 2 Cirsium vulgare 3 Dactvis giomerata 4 Festuca arundinacea 5 Hoicus lanatus 6 Lotus comiculatus 7 Phieum pratense ercent of Dominant Species that are OBL, FACW, or except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. To indicates trace emarks (Describe disturbances, relevant local variation we wetland vegetation criteria is not met because only 50 PYDROLOGY	11 11 50 < < < < < < < < < < < < < < < < < <	50 sonal el	Herb Herb Herb Herb Herb Herb Herb Herc	F F F F F F F F F F F F F F F F F F F	AC- ACU ACU AC- AC AC AC- AC-		escribe	e in Rema
Plant Species 1 Cirsium arvense 2 Cirsium vulgare 3 Dactvis giomerata 4 Festuca arundinacea 5 Holcus lanatus 6 Lotus comiculatus 7 Phieum pratense ercent of Dominant Species that are OBL, FACW, or except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace emarks (Describe disturbances, relevant local vanation for wetland vegetation criteria is not met because only 50 YDROLOGY ecorded Data (Describe in Remarks):	11 11 50 < < < < < < < < < < < < < < < < < <	1000 000 000 1100 500 sonal ef	Herb Herb Herb Herb Herb Herb Herb Herc	E.):	AC- ACU ACC- AC	vetland	escribe	e in Remai
Plant Species 1 Cirsium arvense 2 Cirsium vulgare 3 Dactvlis glomerata 4 Festuca arundinacea 5 Hoicus lanatus 6 Lotus comiculatus 7 Phieum pratense ercent of Dominant Species that are OBL, FACW, or xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace emarks (Describe disturbances, relevant local variation ne wetland vegetation critena is not met because only 50 YDROLOGY	11 11 50 < < < < < < < < < < < < < < < < < <	1000 000 000 1100 500 sonal ef	Herb Herb Herb Herb Herb Herb Herc Herb Hert Hert	F. F	AC- ACU ACC- AC	ators (De	escribe	ın Remai
Plant Species 1 Cirsium arvense 2 Cirsium vulgare 2 Dactviis giomerata 4 Festuca arundinacea 5 Holcus lanatus 6 Lotus comiculatus 7 Phieum pratense ercent of Dominant Species that are OBL, FACW, or except FAC-). Include species noted (*) as showing corphological adaptations to wetlands. "T' indicates trace emarks (Describe disturbances, relevant local vanation the wetland vegetation criteria is not met because only 50 YDROLOGY ecorded Data (Describe in Remarks):Stream, Lake, or Tide Gage	11 11 50 < < < < < < < < < < < < < < < < < <	1000 000 000 1100 500 sonal ef	Herb Herb Herb Herb Herb Herb Herc Herb Hert Hert	E.): ant plant drolog indicat	AC- ACU ACU AC- AC	ators (De		

Recorded Data (Describe in R	lemarks):	Wetland Hydrology Indicators (Describe in Remarks):
Stream, Lake, or	Tide Gage	Primary Indicators:
Aerial Photograpi Other No Recorded Dat		Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks
Field Observations:		Drift Lines Sediment Deposits Drainage Patterns in Wetlands
Depth of Surface Water: Depth to Free Water in Pit: Depth to Saturated Soil:	None (in.) >18 (in.) >18 (in.)	Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)
Remarks (As relevant, describ No field indicators of wetland hyd	e recent precipitation, hydrologi drology are present.	ic modifications, local vanations, etc.):

P						_	ata Plot #: Vetland:	Auburn
Project/S	ite: <u>Aubum N</u>	fitigation Site			Date:	10/18/00		
SOILS Soil Sur	vey Data:							
Map Unit	Name: Orid	na Silt Loam				Drainage Class: S	omewhat poo	riv drained
						Field Observations	Confirm Map	ped Type?
Taxonom	y (Subgroup):	Typic Fluvagents				Yes X No	NA	
Profile D	escription:							
Depth (inches)	Horizon Designation	Matrix Color (Munsell Moist)		Nottle Color Munsell Moi	st)	Mottle Abundance/Contras		ure, Concretions, ospheres, etc.
0-8	Ac	10YR 3/3				_	Sift to	sem .
3-12	В	10YR 4/2	_ :				Sitt to	nam .
12->18	С	2.5Y 4/2	_ :			-	Fine	Sandy Loam
H S P R G H	educing Cond leyed or Low-ligh Organic Ci (Describe soi	Moisture Regime	nation		X Listed Listed Aquic Organ Mottle	on Local Hydric Soil on State Hydric Soil on National Hydric S Moisture Regime ic Streaking in Sandi s (Explain in Remarks	ls List Soils List y Soils	
WETLA	ND DETER	MINATION						
	tic Vegetation		••	N/-		la abia a		****
	ils Present?		es es	No	$\frac{x}{x}$	is this San	npiing Point	Within a Wetland
		Y	5 5	No	X.	Yes		

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): All three parameters absent, therefore the area is not a wetland.

Param	etrix,	Inc.
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ata	Piot	#:	9
			-

7
Auburn

(A	Modified from: 19	87 CC)⊨ weti	ands L)eline	ation	manual))		
roject/Site: Aubum Mitigation S	Site			Date:	10/18/0	ю				_
policant/Owner: Port of Seat				County:	King					_
restigator: Marti Louther				State:	WA					_
1987 Method	ethod					Com	munity IC): Up	oland	
Normal Circumstances exist of	on the site?	Yes	<u>×</u>	No _		Field	Plot ID:	DP-9)	
ne site significantly disturbed ((Atypical Situation)?	Yes		No _	X					
he area a potential Problem Ai		Yes		No	X					
marks (Explain sample location of the location	ori, distillusificati, prod		,·							_
GETATION POPULATION	species are checked)					4				
Plant Species			% Cover			dicator				
1. Cirsium vulgare			25 25	Herb Herb		ACU				
				1 7615			_			
2 Dactylis glomerata			25	Herb	FA	AC-				
Festuca arundinacea Phieum pratense cent of Dominant Species cept FAC-). Include species no rephological adaptations to wetter	oted (*) as showing ands. "T" indicates tra	ice.	25 25 0 asonal eff	Herb Herb	FA	AC-	<u>-</u>			
Festuca arundinacea Phieum pratense recent of Dominant Species cept FAC-). Include species no rphological adaptations to wette marks. (Describe disturbances ce less than 50% of the domina	oted (*) as showing ands. "T" indicates tra	ice. ons, sea	0 asonal ef	fects, etc	FA	AC-	t met.			
Festuca arundinacea Phleum pratense recent of Dominant Species cept FAC-). Include species no rphological adaptations to wette marks. (Describe disturbances ce less than 50% of the domina	oted (*) as showing ands. "T" indicates tra s, relevant local vanation of plants are hydroph	ice. ons, sea	0 asonal eff	fects, etc	E.): on crite	AC- eria is no				
Festuca arundinacea Phieum pratense cent of Dominant Species cept FAC-). Include species no rphological adaptations to wetti marks (Describe disturbances ce less than 50% of the dominace DROLOGY corded Data (Describe in Rei	oted (*) as showing ands. "T" indicates tra s, relevant local vanation and plants are hydrophemarks):	ice. ons, sea	0 asonal eff	fects, etc	FA i.): on crite drology	ria is no		escribe	e in Remarks)	:
Festuca arundinacea Phieum pratense cent of Dominant Species cept FAC-). Include species no phological adaptations to wette marks (Describe disturbances ce less than 50% of the dominace DROLOGY corded Data (Describe in Rei Stream, Lake, or Ti	oted (*) as showing ands. "T" indicates tra s, relevant local vanation and plants are hydrophemarks):	ice. ons, sea	0 asonal eff	fects, etc	E.): on crite drology	nria is no y Indica		escribe	e in Remarks)	:
3. Festuca arundinacea 4. Phieum pratense cent of Dominant Species cept FAC-). Include species no phological adaptations to wette marks (Describe disturbances ce less than 50% of the dominic DROLOGY orded Data (Describe in Rei Stream, Lake, or Ti Aerial Photograph	oted (*) as showing ands. "T" indicates tra s, relevant local vanation and plants are hydrophemarks):	ice. ons, sea	0 asonal eff	fects, etc	FA c.): on crite drology indicato	ria is no y Indica vs: undated	tors (D			:
3. Festuca arundinacea 4. Phieum pratense cent of Dominant Species cept FAC-). Include species ne phological adaptations to wette narks (Describe disturbances ce less than 50% of the domina DROLOGY orded Data (Describe in Rei Stream, Lake, or Ti Aenal Photograph Other	oted (*) as showing ands. "T" indicates tra s, relevant local vanation and plants are hydrophic marks):	ice. ons, sea	0 asonal eff	fects, etc	c.): on crite drology indicato	ria is no y Indica vs: undated	tors (De	12 ind	hes	:
Festuca arundinacea Phieum pratense cent of Dominant Species cept FAC-). Include species no rephological adaptations to well: marks (Describe disturbances ce less than 50% of the dominic DROLOGY corded Data (Describe in Rei Stream, Lake, or Ti Aerial Photograph	oted (*) as showing ands. "T" indicates tra s, relevant local vanation and plants are hydrophic marks):	ice. ons, sea	0 asonal eff	fects, etc	c.): on crite drology ndicato inu Sa Sa	ria is no y Indica vs: undated	in Upper	12 ind	hes	:
Festuca arundinacea A Phieum pratense recent of Dominant Species cept FAC-). Include species nor rephological adaptations to wette marks (Describe disturbances ce less than 50% of the dominal DROLOGY Corded Data (Describe in Rei Stream, Lake, or Ti Aenal Photograph Other	oted (*) as showing ands. "T" indicates tra s, relevant local vanation and plants are hydrophic marks):	ice. ons, sea	0 asonal eff	fects, etc	c.): on crite drology indicato Inu. Sa Sa Wa	ria is no y Indica yis: undated sturated sturated	in Upper	12 ind	hes	:
Festuca arundinacea A Phieum pratense recent of Dominant Species cept FAC-). Include species nor rephological adaptations to wette marks (Describe disturbances ce less than 50% of the dominal DROLOGY Corded Data (Describe in Rei Stream, Lake, or Ti Aenal Photograph Other	oted (*) as showing ands. "T" indicates tra s, relevant local vanation and plants are hydrophic marks):	ice. ons, sea	0 asonal eff	fects, etc	drology Indicato Int. Sa Sa Wa Dri	y Indica y Indica yrs: undated sturated sturated ster Mar iff Lines diment i	in Upper in Upper ks	12 inc 18 inc	hes hes	:
3. Festuca arundinacea 4. Phieum pratense recent of Dominant Species cept FAC-). Include species no rephological adaptations to wette marks (Describe disturbances ice less than 50% of the dominal DROLOGY corded Data (Describe in Rei Stream, Lake, or Ti Aenal Photograph Other No Recorded Data	oted (*) as showing ands. "T" indicates tra s, relevant local vanation and plants are hydrophic marks):	ice. ons, sea	0 asonal eff	fects, etc	drology Indicato Int. Sa Sa Wa Dri	y Indica y Indica yrs: undated sturated sturated ster Mar iff Lines diment i	tors (De in Upper in Upper	12 inc 18 inc	hes hes	:
Festuca arundinacea A Phieum pratense Cent of Dominant Species Cept FAC-). Include species no rephological adaptations to wette marks (Describe disturbances Ce less than 50% of the dominace Corded Data (Describe in Rei Stream, Lake, or Ti Aenal Photograph Other No Recorded Data d Observations:	oted (*) as showing ands. "T" indicates tra s, relevant local vanation and plants are hydrophical marks): ide Gage Available	ice. ons, sea	0 asonal eff wetland	fects, etc vegetati	drology Indicato Int. Sa Sa Wa Dri Se Dra	ria is no y Indica yrs: undated tturated tturated ater Mar ift Lines diment I ainage F	in Upper in Upper in Upper ks Deposits Patterns in	12 ind 18 ind	hes hes ands	:
Festuca arundinacea Phieum pratense cent of Dominant Species cept FAC-). Include species no rephological adaptations to wette marks (Describe disturbances ce less than 50% of the dominal DROLOGY corded Data (Describe in Rei Stream, Lake, or Ti Aenal Photograph Other No Recorded Data d Observations: Depth of Surface Water:	oted (*) as showing ands. "T" indicates tra s, relevant local vanation and plants are hydrophic marks):	ice. ons, sea	0 asonal eff wetland	fects, etc vegetati	c.): on crite dirology indicato Ini Sa Sa Wa Dri Dri Iny Indicato	ria is no y Indica y	in Upper in Upper ks Deposits Patterns in	12 ind 18 ind n Wetti	hes hes ands ed):	
Festuca arundinacea A Phieum pratense recent of Dominant Species cept FAC-). Include species nor rephological adaptations to wette marks (Describe disturbances ce less than 50% of the dominal DROLOGY Corded Data (Describe in Rei Stream, Lake, or Ti Aenal Photograph Other	oted (*) as showing ands. Trindicates training and control variation and plants are hydroph marks): ide Gage None (in.)	ice. ons, sea	0 asonal eff wetland	fects, etc vegetati	c.): on crite drology indicato Ini. Sa Wa Dri Se Dri ry Indic	ria is no y Indica y	in Upper in Upper ks Deposits Patterns in or more toot Char	12 inci 18 inci n Wetk require	hes hes ands	
Festuca arundinacea A Phieum pratense recent of Dominant Species cept FAC-). Include species no rephological adaptations to wette marks (Describe disturbances ce less than 50% of the dominal DROLOGY corded Data (Describe in Rei Stream, Lake, or Ti Aenal Photograph Other No Recorded Data d Observations: Depth of Surface Water: Depth to Free Water in Pit:	oted (*) as showing ands. "T" indicates trained in indicates in indicates trained in indicates in in	ice. ons, sea	0 asonal eff wetland	fects, etc vegetati	c.): on crite drology indicato Ini. Sa Via Dri Dri Ox Wa	ria is no y Indica ris: undated iturated iturate	in Upper in Upper ks Deposits Patterns in	12 incl 18 incl n Weth require	hes hes ands ed):	

						Data	Plot #:	9
L						Weti	and:	Auburn
					Date	10/18/00		
roject/S	Site: Auburn M	litigation Site			Date:	10/18/00		
SOILS Soil Su	rvey Data:							
Map Un	it Name: Oridi	ia Silt Loam				Drainage Class: Some	what poo	rly drained
						Field Observations Co	nfirm Map	ped Type?
Taxonor	my (Subgroup):	Typic Fluvagents				Yes X No	NA	
Profile I	Description:						•	**
Depth Inches)	Honzon Designation	Matrix Color (Munsell Moist)		tie Color nsell Moi:	st)	Mottle Abundance/Contrast		ure, Concretions, ospheres, etc.
)-18	Α	10YR 4/3	•				Sift to	am
!	Soil Indicators: Histosol			_		I on Local Hydric Soils L		
;	Histosol Histic Epipedon			<u>-</u>	X Listed	on State Hydric Soils Li	ist	
	Histosol Histic Epipedon Sulfidic Odor			- - -	X Listed	•	ist	
!	Histosol Histic Epipedon Sulfidic Odor	Moisture Regime		- - -	X Listed Listed Aquic	l on State Hydric Soils Li on National Hydric Soils	ist s List	
	Histosol Histic Epipedon Sulfidic Odor Probable Aquic	Moisture Regime		- - - -	X Listed Listed Aquic	on State Hydric Soils Li on National Hydric Soils Moisture Regime iic Streaking in Sandy So	ist s List	
	Histosol Histic Epipedon Sulfidic Odor Probable Aquic Reducing Condi Gieyed or Low-(Moisture Regime	er	- - - -	X Listed Listed Aquic Organ Mottle	on State Hydric Soils Li on National Hydric Soils Moisture Regime iic Streaking in Sandy So	ist s List	
i i i i i i i i i i i i i i i i i i i	Histosol Histic Epipedon Sulfidic Odor Probable Aquic Reducing Condi Gleyed or Low-C High Organic Co s (Describe soil	Moisture Regime itions Chroma Colors		- - - - - -	X Listed Listed Aquic Organ Mottle	on State Hydric Soils Li on National Hydric Soils Moisture Regime iic Streaking in Sandy So is	ist s List	
Remarks	Histosol Histic Epipedon Sulfidic Odor Probable Aquic Reducing Condi Gleyed or Low-C High Organic Co s (Describe soil	Moisture Regime itions Chroma Colors ontent in Surface Laye I disturbances, local v		 etc.):	X Listed Listed Aquic Organ Mottle	on State Hydric Soils Li on National Hydric Soils Moisture Regime iic Streaking in Sandy So is	ist s List	
Remarks	Histosol Histic Epipedon Sulfidic Odor Probable Aquic Reducing Condi Gleyed or Low-(High Organic Co s (Describe soil indicators of hy	Moisture Regime itions Chroma Colors ontent in Surface Layed disturbances, local violator soil are present.		= - - - - - - - - - - - - - - - - - - -	X Listed Listed Aquic Organ Mottle	on State Hydric Soils Li on National Hydric Soils Moisture Regime lic Streaking in Sandy So s (Explain in Remarks)	ist s List pils	Within a Wetlan
Remarks No field VETLA	Histosol Histic Epipedon Sulfidic Odor Probable Aquic Reducing Condi Gleyed or Low-(High Organic Co s (Describe soil indicators of hy	Moisture Regime itions Chroma Colors ontent in Surface Layi I disturbances, local vidinc soil are present. MINATION The Present?	anations, (X Listed Listed Aquic Organ Mottle	on State Hydric Soils Li on National Hydric Soils Moisture Regime lic Streaking in Sandy So s (Explain in Remarks)	ist s List pils	

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): All three parameters absent, therefore the area is not a wetland.

Parametrix, Inc.							Data Pio	t#:	10
L.	TI AMT	DETE	:DMIN	ATIC)N	1	Wetland	t:	Auburn
(Modified from: 19						ion M	anual	1	
· · · · · · · · · · · · · · · · · · ·	<i>161</i> CC)_	_					,	
Project/Site: Auburn Mitigation Site			Date:	10/1		-			
Applicant/Owner: Port of Seattle			County	r. Kir W					· · · · · · · · · · · · · · · · · · ·
Investigator: Kevin Featherston and Jennifer Hawkins	<u> </u>		State:	<u> </u>	<u> </u>	····			
✓ 1987 Method ☐ 1989 Method						Comm	ounity ID	: PE	M
Do Normal Circumstances exist on the site?	Yes	<u>×</u>	No		-	Field F	Plot ID:	DP-1	0
Is the site significantly disturbed (Atypical Situation)?	Yes		No	<u>x</u>	-				
is the area a potential Problem Area?	Yes		No	<u> </u>	-				
Remarks (Explain sample location, disturbances, prob	ns mek	eas):							
VECETATION (C									
		% Cours	Strate		Indic	stor			
Plant Species		% Cover		um	Indic				
		% Cover	Strate	um	Indic FAC				***************************************
Plant Species 1 Phalans arundinacee		100		um					
Plant Species 1. Phalans arundmacee Percent of Dominant Species that are OBL, FACW,		100	Herb	um			10.400-2		
Plant Species Phalans anundinaces Percent of Dominant Species that are OBL. FACW, (except FAC-). Include species noted (*) as showing	or FAC	100	Herb	um					
Plant Species 1. Phalans anundinaces Percent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T" indicates tra	or FAC	100	Herb						
Plant Species 1. Phalans arundinaces Percent of Dominant Species that are OBL, FACW, (except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T" indicates transport (Describe disturbances, relevant local variations.	or FAC	100 100 asonal e	Herb	etc.):	FAC				
Plant Species	or FAC	100 100 asonal e	Herb	etc.):	FAC				
Plant Species 1. Phalans anundinaces Percent of Dominant Species that are OBL, FACW, (except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T' indicates transfer (Describe disturbances, relevant local variations of the dominant plants are hydrophytic, the HYDROLOGY	or FAC	100 100 asonal et	Herb	etc.): eria is i	FACI	N .	ers (De	escribe	in Remark
Plant Species Percent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T' indicates transcending the common of the dominant plants are hydrophytic, the HYDROLOGY	or FAC	100 100 asonal et vegetat	Herb	etc.): eria is i	met.	w ndicato	ers (De	escribe	in Remark
Plant Species Phalans arundinaces Percent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T" indicates transpersion of the dominant plants are hydrophytic, the HYDROLOGY Recorded Data (Describe in Remarks):	or FAC	100 100 asonal et vegetat	ffects, e	etc.): eria is i ydrolo y Indica	met.	w	ers (De	escribe	in Remark
Plant Species Phalans arundinacee Percent of Dominant Species that are OBL. FACW, except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates transport in the common of the dominant plants are hydrophytic, the HYDROLOGY Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage	or FAC	100 100 asonal et vegetat	ffects, e	etc.): eria is i ydrolo y Indica	met.	ndicato	Upper '	12 inct	nes
Plant Species 1. Phalans arundinaces Percent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T' indicates transport in the second of the dominant plants are hydrophytic, the HYDROLOGY Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	or FAC	100 100 asonal et vegetat	ffects, e	etc.): eria is i ydrolo y Indica	met. ogy ir ators: inunc Satur Satur	M dicato diated rated in	Upper '	12 inct	nes
Plant Species Phalans arundinaces Percent of Dominant Species that are OBL. FACW. (except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T' indicates transport in the species in the species in the species of the dominant plants are hydrophytic, the HYDROLOGY Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	or FAC	100 100 asonal et vegetat	ffects, e	ydrolo	met. met. satur Satur Water	ndicato	Upper '	12 inct	nes
Plant Species Phalans arundinacee Percent of Dominant Species that are OBL. FACW. (except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T" indicates transport in the species in the second of the dominant plants are hydrophytic, the HYDROLOGY Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	or FAC	100 100 asonal et vegetat	ffects, e	ydrolo	met. ogy ir ators: inunc Satur Wate Drift i	ndicated in rated in rated in rated increased in the control of th	Upper ' Upper '	12 inct	nes
Plant Species 1. Phalans arundinaces Percent of Dominant Species that are OBL. FACW. (except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T' indicates transport in the second of the dominant plants are hydrophytic, the HYDROLOGY Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	or FAC	100 100 asonal et vegetat	Herb ffects, e tion crite	ydrolo	met. pgy ir ators: Inunc Satur Wate Drift I Sedir	dated in rated in rat	Upper '	12 inct 18 inct	nes nes

Secondary Indicators (2 or more required):

Water-Stained Leaves
Local Soil Survey Data
Other (Explain in Remarks)

Oxidized Root Channels in Upper 12 inches

Remarks (As relevant, describe recent precipitation, hydrologic modifications, local variations, etc.):

Wetland hydrology is not expected due to the time of year when the delineation was completed. The presence of oxidized rhizospheres and mapped soils on the King County Hydric Soils List satisfy the wetland hydrology criteria.

(in.)

(in.)

(in.)

Depth of Surface Water:

Depth to Saturated Soil:

Depth to Free Water in Pit:

None

>18

>18

4							Dat	ta Piot#:	10
							We	itland:	Auburn
rniect/Si	te: Aubum I	Mitigation Site				Date:	10/18/00		
•									
SOILS Soil Sun	rey Data:								
Map Unit	_	dia Silt Loam					Drainage Class: So	mewhat po	oorly drained
VIBP OIN	TVallie.						Field Observations C		
_		T 51							•
	y (Subgroup)	: Typic Fluvagents					Yes X No	NA	
Profile De Depth Inches)	escription: Horizon Designatio	Matrix Color n (Munsell Morst)		Mottle (Muns	Color ell Mois	st)	Mottle Abundance/Contrast		xture, Concretions, izospheres, etc.
-1	0	•					-	Roc	ots and Shoots
-8	AD	10YR 3/2		5YR 3/4			Few, Medium, Distinct	Sin	icem; oxidized rhizosone
->1 9	В	10YR 3/2		5YR 3/4	1		Many. Medium, Distinct	Sitt	ioam; oxidized rhizosphe
lvdric Sc	il Indicators	*							
-	stosol					X Listed	on Local Hydric Soils	List	
Hi	stic Epipedo	n			_	X Listed	on State Hydric Soils	List	
Si	ılfidic Odor					Listed	on National Hydric Sc	oils List	
X Pr	obable Aquic	: Moisture Regime				Aquic	Moisture Regime		
R	educing Cond	titions			_	Organ	ic Streaking in Sandy	Soils	
X GI	eyed or Low-	-Chroma Colors			_	X Mottie	5		
Hi	gh Organic C	content in Surface Laye	₽r		_	Other	(Explain in Remarks)		
temarks	(Describe so	il disturbances, local v	ariatio	ons. etc) :				
Soil color	and other hy	dric soil indicators mee	t the	hydnc :	soil crite	eria.			
J									
VETLA	ND DETER	RMINATION							
ydrophyt	ic Vegetatio	n Present?	Yes	X	No		Is this Sam	pling Poin	it Within a Wetland?
ydric Soi	is Present?		Yes	×	No			•	
		esent?					Yes	X N	10

All technical criteria are met.

AR 047556

Param	etrix,	Inc.
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	\A/E**	T AND	NETE	RMINAT	Metland: Auburn
					elineation Manual)
	•				0/18/00
Project/Site: Aubum Mitigation				County:	King
Applicant/Owner: Port of Se			—	State:	WA
	on and Jennifer Hawkins				Community ID: PEM
E 100, 11102100		Yes	x	No	
o Normal Circumstances exist			<u> </u>	_	Field Plot ID: DP-11
s the site significantly disturbed		Yes		_	<u>×</u>
the area a potential Problem a emarks (Explain sample loca		Yes		No _	<u>x _</u>
ocated in Wetland 1.					
EGETATION (Dominar	nt species are checked))	8/ Cause		haddente-
			% Cover	r Stratum	Indicator
Plant Species					***
1 Dactvis glomerata ercent of Dominant Species except FAC-). Include species orphological adaptations to we	noted (*) as showing etlands. "T" indicates tra	ace.	60	Herb Herb	FACU
ercent of Dominant Species scrept FAC-). Include species sorphological adaptations to we emarks (Describe disturbance	noted (*) as showing etlands. "T" indicates trans. relevant local variate	ace. ions, se	40 60 0	Herb	FACU
creating arrense 2 Dactvis glomerata ercent of Dominant Species except FAC-). Include species ercentological adaptations to we ermarks (Describe disturbance ince less than 50% of the domi	noted (*) as showing etlands. "T" indicates trans. relevant local variate	ace. ions, se	40 60 0	Herb	FACU
1 Cirsium arvense 2 Dactvis glomerata ercent of Dominant Species except FAC-). Include species orphological adaptations to we emarks (Describe disturbance ince less than 50% of the domi	noted (*) as showing etiands. "T" indicates tra- les, relevant local variationant plants are hydrophical inant plants are hy	ace. ions, se	60 0 asonal e	Herb ffects, etc.	FACU
1 Cirsium arvense 2 Dactvis glomerata ercent of Dominant Species except FAC-). Include species orphological adaptations to we ermarks (Describe disturbance ince less than 50% of the domi	noted (*) as showing ettands. "T" indicates traces, relevant local variationant plants are hydropal temarks):	ace. ions, se	60 0 asonal e	Herb ffects, etc.	FACU .): on criteria is not met. Irology Indicators (Describe in Remarks):
1 Cirsium arvense 2 Dactvils glomerata ercent of Dominant Species except FAC-). Include species orphological adaptations to we emarks (Describe disturbance ince less than 50% of the dominance described Data (Describe in Re	noted (*) as showing trands. "T" indicates traces, relevant local variationant plants are hydropal (Remarks): Tide Gage	ace. ions, se	60 0 asonal e	Herb ffects, etc.	FACU .): on criteria is not met. Prology Indicators (Describe in Remarks):
1 Cirsium arvense 2 Dactvis glomerata ercent of Dominant Species except FAC-). Include species orphological adaptations to we emarks (Describe disturbance ince less than 50% of the dominate	noted (*) as showing trands. "T" indicates traces, relevant local variationant plants are hydropal (Remarks): Tide Gage	ace. ions, se	60 0 asonal e	Herb ffects, etc.	FACU .): on criteria is not met. Prology Indicators (Describe in Remarks): indicators: Inundated Saturated in Upper 12 inches
1 Cirsium arvense 2 Dactvis glomerata ercent of Dominant Species except FAC-). Include species orphological adaptations to we emarks (Describe disturbance nice less than 50% of the domi YDROLOGY ecorded Data (Describe in R Stream, Lake, or Aerial Photograpi	noted (*) as showing strands. "T" indicates tribes, relevant local variational plants are hydropidemarks): Tide Gage	ace. ions, se	60 0 asonal e	Herb ffects, etc.	FACU Irology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches
cream arvense 2 Dactvis glomerata ercent of Dominant Species except FAC-). Include species ercentod adaptations to we emarks (Describe disturbance ince less than 50% of the domi YDROLOGY ecorded Data (Describe in R Stream, Lake, or Aerial Photograph Other	noted (*) as showing strands. "T" indicates tribes, relevant local variational plants are hydropidemarks): Tide Gage	ace. ions, se	60 0 asonal e	Herb ffects, etc.	FACU Irology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks
ercent of Dominant Species except FAC-). Include species except FAC-). Include species except FAC-) and adaptations to we emarks (Describe disturbancince less than 50% of the dominate le	noted (*) as showing strands. "T" indicates tribes, relevant local variational plants are hydropidemarks): Tide Gage	ace. ions, se	60 0 asonal e	Herb ffects, etc.	FACU Irology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
recent of Dominant Species except FAC-). Include species except FAC-). Include species corphological adaptations to we temarks (Describe disturbancince less than 50% of the dominate less	noted (*) as showing strands. "T" indicates tribes, relevant local variational plants are hydropidemarks): Tide Gage	ace. ions, se	60 0 asonal e	Herb ffects, etc.	FACU Irology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks
ercent of Dominant Species except FAC-). Include species except FAC-). Include species except FAC-) and adaptations to we emarks (Describe disturbancince less than 50% of the dominate le	noted (*) as showing strands. "T" indicates tribes, relevant local variational plants are hydropidemarks): Tide Gage	ace. ions, se	60 0 asonal e	Herb ffects, etc.	FACU Irology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
1 Cirsium arvense 2 Dactvis glomerata ercent of Dominant Species except FAC-). Include species orphological adaptations to we ermarks (Describe disturbance nace less than 50% of the dome YDROLOGY ecorded Data (Describe in R Stream, Lake, or Aerial Photograph Other No Recorded Data eld Observations: Depth of Surface Water:	noted (*) as showing strands. "T" indicates traites, relevant local variationant plants are hydropole (emarks): Tide Gage h None (in.)	ace. ions, se	60 0 asonal e	ffects, etc.	rology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
1 Cirsium arvense 2 Dactvis glomerata ercent of Dominant Species except FAC-). Include species orphological adaptations to we emarks (Describe disturbance ince less than 50% of the domi YDROLOGY ecorded Data (Describe in R Stream, Lake, or Aerial Photograph Other No Recorded Data eld Observations: Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as showing strands. "T" indicates traites, relevant local variationant plants are hydropid strands. Tide Gage in the Available (in.)	ace. ions, se	60 0 asonal e	ffects, etc.	FACU In criteria is not met. Inclogy Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands y Indicators (2 or more required):
ercent of Dominant Species except FAC-). Include species corphological adaptations to we emarks (Describe disturbance less than 50% of the dominant Species (Describe disturbance less than 50% of the dominate less tha	noted (*) as showing strands. "T" indicates traites, relevant local variationant plants are hydropole (emarks): Tide Gage h None (in.)	ace. ions, se	60 0 asonal e	ffects, etc.	FACU Irology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
2 Dactvils glomerata Percent of Dominant Species except FAC-). Include species except FAC-). Include species horphological adaptations to we ternarks (Describe disturbance lince less than 50% of the dominant HYDROLOGY tecorded Data (Describe in R Stream, Lake, or Aerial Photograph Other No Recorded Data ield Observations: Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as showing strands. "T" indicates traites, relevant local variationant plants are hydropid strands. Tide Gage in the Available (in.)	ace. ions, se	60 0 asonal e	ffects, etc.	FACU Irology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands y Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches

A							Data Plot #:	11
1							Wetland:	Auburn
roject/Site	· Aubum M	litigation Site			Date:	10/18/00		
SOILS					_			
	lame: Oridi	ia Silt Loam				Drainage Class:	Somewhat po	orly drained
						Field Observation	ns Confirm Ma	pped Type?
Taxonomy	(Subgroup):	Typic Fluvagents				Yes X No	NA	·
rofile Des	scription:							
Depth Inches)	Honzon Designation	Matrix Color (Munsell Moist)		ottie Color unsell Mo		Mottle Abundance/Control		ture, Concretions zospheres, etc.
-0.5	0					-	Roc	its and Shoots
.5-16		10YR 3/3				-	Silt	loam
iydric Soil	I Indicators:							
His	tosol				X Listed	on Local Hydric S	Soils List	
His	tic Epipedon			_	X Listed	on State Hydric S	ioils List	
Suf	fidic Odor			_	Listed	on National Hydri	c Soils List	
Pro	bable Aquic	Moisture Regime		_	Aquic	Moisture Regime		
Red	ducing Condi	tions		_	Organ	ic Streaking in Sai	ndy Soils	
Gle	yed or Low-(Chroma Colors		_	Mottle	s		
Higl	h Organic Co	ontent in Surface Layer		_	Other	(Explain in Remar	ks)	
		disturbances, local val dric soil are present.	ations	, etc.):				
VETLAN	D DETER	MINATION						
ydrophytic	c Vegetation	Present? Y	es	No	×	Is this S	ampling Poin	t Within a Wetla
dric Soils	s Present?	Y	es —	— No	x			
							es N	lo X

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): All three parameters absent, therefore the area is not a wetland.

				Data Pic	ot #:	12
•			ATION	Wetland	đ:	Auburn
	LAND DE			Manual	11	
(Modified from: 19	187 COE V	vetiands	Deliues	Ition manua	')	
roject/Site: Auburn Mitigation Site		Date:	9/18/00			
oplicant/Owner: Port of Seattle		County	King			
nvestigator: Jan Cassin, Kristie Dunkin, Steve Emge		State:	WA			
1987 Method				Community II): Pl	EM
o Normal Circumstances exist on the site?	Yes	No No		Field Plot ID:	DP-	12
s the site significantly disturbed (Atypical Situation)?	Yes	No	<u> </u>			
the area a potential Problem Area?	Yes	No	Χ			
Plant Species		over Stratu		icator		
1 Alopecurus pratensis	20	Herb	FAC			
1 Alopecurus pratensis 2 Cirsium arvense	20	Herb	FAC			
Cirsium arvense Dactiviis giomerata	20 20	Herb	FAC FAC	> :U		
Cirsium arvense Dactviis giomerata Festuca arunginacea	20 20 20	Herb Herb	FAC	> > >		
Cirsium arvense Dactviis giomerata Festuca arundinacea Festuca rubra	20 20 20 20	Herb	FAC FAC	> > >		
2. Cirsium arvense 3. Dactvis giomerata 4. Festuca arundinacea 5. Festuca rubra ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing	20 20 20 20 20 or FAC	Herb Herb	FAC FAC	> > >		
2 Cirsium arvense 3 Dactivis giomerata 4 Festuca arundinacea 5 Festuca rubra procent of Dominant Species that are OBL, FACW, scept FAC-). Include species noted (*) as showing arphological adaptations to wetlands. "T" indicates tra	20 20 20 20 20 or FAC	Herb Herb Herb	FAC FAC	> > >		
2. Cirsium arvense 3. Dactvis giomerata 4. Festuca arundinacea 5. Festuca rubra ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates training or the property of the property	20 20 20 20 or FAC ace.	Herb Herb Herb Herb	FAC FAC FAC tc.):	5: 5: 5: 5:		
2 Cirsium arvense 3 Dactviis giomerata 4 Festuca arundinacea	20 20 20 20 or FAC ace.	Herb Herb Herb Herb	FAC FAC FAC tc.):	5: 5: 5: 5:		
2 Cirsium arvense 3 Dactvis giomerata 4 Festuca arundinacea 5 Festuca rubra ercent of Dominant Species that are OBL, FACW, except FAC.). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates traiting in the property of	20 20 20 20 or FAC ace.	Herb Herb Herb Herb	FAC FAC FAC tc.):	5: 5: 5: 5:		
2. Cirsium arvense 3. Dactivis giomerata 4. Festuca arundinacea 5. Festuca rubra precent of Dominant Species that are OBL, FACW, accept FAC-). Include species noted (*) as showing prophological adaptations to wetlands. "T" indicates training includes the state of the session of the dominant plants are hydrople typical adaptations."	20 20 20 20 or FAC ace.	Herb Herb Herb 40 all effects, e	FAC FAC FAC tc.):	ie is not met.	escrib	e in Remar
2. Cirsium arvense 3. Dactivis giomerata 4. Festuca arundinacea 5. Festuca rubra recent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing imphological adaptations to wetlands. "T" indicates training includes the state of the session of the dominant plants are hydropic for the session of the dominant plants are hydropic for the session of the dominant plants are hydropic for the session of the dominant plants are hydropic for the session of the	20 20 20 20 or FAC ace.	Herb Herb Herb 40 all effects, e	FAC FAC FAC tc.):	ie is not met.	escrib	e in Remar
2. Cirsium arvense 3. Dactivis giomerata 4. Festuca arundinacea 5. Festuca rubra recent of Dominant Species that are OBL, FACW, recept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates training less than 50% of the dominant plants are hydropic forced Data (Describe in Remarks):	20 20 20 20 or FAC ace.	Herb Herb Herb 40 all effects, e	FAC FAC FAC TAC FAC TAC TAC TAC TA	indicators (D		
2 Cirsium arvense 3 Dactivis giornerata 4 Festuca arundinacea 5 Festuca rubra sircent of Dominant Species that are OBL, FACW, Rocept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates training include service less than 50% of the dominant plants are hydropid type or the service in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other	20 20 20 20 or FAC ace.	Herb Herb Herb 40 all effects, e	FAC FAC FAC Table FAC	indicators (Disconding to the control of the contro	12 inc	thes
2 Cirsium arvense 3 Dactivis giornerata 4 Festuca arundinacea 5 Festuca rubra prent of Dominant Species that are OBL, FACW, recept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates training include species in the second of the dominant plants are hydropic type or the second of the dominant plants are hydropic type or the second of the dominant plants are hydropic type or the second of the dominant plants are hydropic type or the second of th	20 20 20 20 or FAC ace.	Herb Herb Herb 40 all effects, e	FAC FAC FAC Table FAC FAC Table FAC FAC FAC FAC FAC FAC FAC FAC	indicators (Disconding to the control of the contro	12 inc	thes
2 Cirisum arvense 3 Dactivis giornerata 4 Festuca arundinacea 5 Festuca rubra ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T' indicates training include service disturbances, relevant local variations than 50% of the dominant plants are hydropic type orded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other	20 20 20 20 or FAC ace.	Herb Herb Herb 40 all effects, e	FAC FAC FAC FAC Table FAC FAC FAC FAC FAC FAC FAC FA	indicators (Disconding to the control of the contro	12 inc	thes
2 Cirsium arvense 3 Dactivis giomerata 4 Festica arundinacea 5 Festica rubra irrcent of Dominant Species that are OBL, FACW, ccept FAC-). Include species noted (*) as showing irrphological adaptations to wetlands. "T" indicates training less than 50% of the dominant plants are hydropid type corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph X Other	20 20 20 20 or FAC ace.	Herb Herb Herb 40 all effects, e	tc.): tdon criteri ydrology Indicator Inui Sati	Indicators (Disconding to the control of the contro	12 inc	hes

Field Observations: Depth of Surface Water: (in.) None Secondary Indicators (2 or more required): Depth to Free Water in Pit: >18 (in.) Oxidized Root Channels in Upper 12 inches >18 Depth to Saturated Soit: (in.) Water-Stained Leaves Х **Local Soil Survey Data** X Other (Explain in Remarks)

Remarks (As relevant, describe recent precipitation, hydrologic modifications, local variations, etc.):

Wetland hydrology is not expected due to the time of year when the delineation was completed. Well data at this location indicates water within 12 inches of the surface for more than 2 weeks during the growing season. The presence of oxidized rhizospheres and mapped soils on the King County Hydric Soils List satisfy the wetland hydrology criteria.

$\overline{\Lambda}$									Data Plot	#:	12
									Wetland:		Auburn
Project/S	lite: Aubum N	Aitigation Site				c	Date:	9/18/00			
SOILS	vey Data:					-					
	•	lia Silt Loam						Drainage Class	: Somewha	t poor	rly drained
								Field Observati	ons Confirm	Map	ped Type?
Гахолоп	ny (Subgroup):	Typic Fluvagents						Yes X	·	NA	
Profile D Depth Inches)	escription: Horizon Designation	Matrix Color n (Munsell Moist)		Mottle (Munse		ıst)		Mottle Abundance/Co			ure, Concretions, ospheres, etc.
-0.5	0	•	-	•				•		Roots	and Shoots
.5-7	Α	10YR 3/2						-		Silt loa	em; oxidized rhizosph
-12	В	10YR 4/2	_	7.5YR 4	14			Faint, Common, Fi	ne	Silt los	am .
2-18+	B2	5YR 4/1	_	7.5YR 4	/3			Coarse, Common,	Prominent	Sin Lo	em
S P R X G	educing Cond leyed or Low-l igh Organic Co (Describe soi	n Moisture Regime	atic			X L X A A O X M	isted isted quic Irgan lottie	on Local Hydric on State Hydric on National Hyd Moisture Regime ic Streaking in S s (Explain in Rema	Soils List ric Soils List ≥ andy Soils		
A/ETLA	ND DETER	MINATION									
		MINATION									
yurophy	tic Vegetation	n Present? Ye	es		No	<u> </u>		Is this	Sampling P	oint l	Within a Wetland
udeia C-	ils Present?	Ye			No						

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): All three parameters are not met, therefore the area is not a wetland.

			Data Pio	t#: 13
	DET	EDMINIAT!	Wetland	: Auburt
-		ERMINATION		
(Modified from: 1987	COE We	tiands Del	ineation Manual)
Project/Site: Aubum Mitigation Site		Date: 9/18	8/00	
oplicant/Owner: Port of Seattle		County: K	ling	
nvestigator: Jan Cassin, Kristie Dunkin, Steve Emge		State: W	VA .	
1987 Method		_	Community ID	: PEM
to Normal Circumstances exist on the site?	Yes X	No	- Field Plot (D:	
the site significantly disturbed (Atypical Situation)?	Yes	No X		-:
the area a potential Problem Area?	Yes	No X		
marks (Explain sample location, disturbances, probler	n areas):			
Plant Species	% Cove		Indicator	
1 Agrostis capillaris (tenuis) 2 Agrostis gigantea (alba)	<u> 20</u>	Herb	FAC	
2 Agrostis gigantea (alba) 3 Alopecurus pratensis	 20	Herb	FACW+	
· · · · · · · · · · · · · · · · · · ·	20	Herb	FAC-	
4 Elytingia repens (Agropyron repens)				
4 Elytingia repens (Agropyron repens) 5 Holicus lanatus	20	Herb	FAC	
ercent of Dominant Species that are OBL, FACW, or except FAC-). Include species noted (*) as showing	20 FAC 80	Herb	FAC	
6. Holcus lanatus ercent of Dominant Species that are OBL, FACW, or xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. T* indicates trace	720 FAC 80		FAC	
5. Holcus lanatus ercent of Dominant Species that are OBL, FACW, or xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace emarks (Describe disturbances, relevant local variations	FAC 80	effects, etc.):		
Holcus lanatus ercent of Dominant Species that are OBL, FACW, or except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. Tr indicates trace emarks (Describe disturbances, relevant local variations ince greater than 50% of the dominant plants are hydroph	FAC 80	effects, etc.):		·
Holcus lanatus ercent of Dominant Species that are OBL, FACW, or except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace emarks (Describe disturbances, relevant local variations nice greater than 50% of the dominant plants are hydrophydrophydrology."	FAC 80 s, seasonal enytic, the wet	effects, etc.):	on criteria is met.	antho in Porror
holcus lanatus ercent of Dominant Species that are OBL, FACW, or except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace emarks (Describe disturbances, relevant local variations are greater than 50% of the dominant plants are hydrophydrocorded Data (Describe in Remarks):	FAC 80 s, seasonal enytic, the wet	effects, etc.): lland vegetation	on criteria is met.	escribe in Rema
5 Holcus lanatus ercent of Dominant Species that are OBL, FACW, or xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. Tr indicates trace emarks (Describe disturbances, relevant local variations ince greater than 50% of the dominant plants are hydroph YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage	FAC 80 s, seasonal enytic, the wet	effects, etc.):	on criteria is met. logy Indicators (Decators:	scribe in Rema
Holcus lanatus ercent of Dominant Species that are OBL, FACW, or except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace emarks (Describe disturbances, relevant local variations ince greater than 50% of the dominant plants are hydrophydrophydrophydrogae. (Describe in Remarks):	FAC 80 s, seasonal enytic, the wet	effects, etc.): lland vegetation	on criteria is met.	
5 Holcus lanatus ercent of Dominant Species that are OBL, FACW, or xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace emarks (Describe disturbances, relevant local variations ince greater than 50% of the dominant plants are hydroph YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph	FAC 80 s, seasonal enytic, the wet	effects, etc.): lland vegetation	on criteria is met. logy Indicators (Decators:	12 inches
recent of Dominant Species that are OBL, FACW, or except FAC-). Include species noted (*) as showing torphological adaptations to wetlands. "T" indicates trace temarks (Describe disturbances, relevant local variations ince greater than 50% of the dominant plants are hydroph IYDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other	FAC 80 s, seasonal enytic, the wet	effects, etc.): lland vegetation	on criteria is met. logy Indicators (Decators: Inundated Saturated in Upper 1	12 inches

Remarks (As relevant, describe recent precipitation, hydrologic modifications, local variations, etc.):

(in.)

(in.)

(in.)

None

>18

>18

Field Observations:
Depth of Surface Water:

Depth to Free Water in Pit:

Depth to Saturated Soil:

Wetland hydrology is not expected due to the time of year when the delineation was completed. Well data at this location indicates water within 12 inches of the surface for more than 2 weeks during the growing season. The presence of oxidized rhizospheres and mapped soils on the King County Hydric Soils List satisfy the wetland hydrology criteria.

Sediment Deposits

Secondary Indicators (2 or more required):

Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)

Drainage Patterns in Wetlands

Oxidized Root Channels in Upper 12 inches

1						,			Data Plot #:	:	13
L									Wetland:		Auburn
roject/S	Site: Aubum M	litigation Site				_	Date:	9/18/00			
OILS oil Su	; rvey Data:										
tap Un	it Name: Orid	ia Silt Loam			_			Drainage Class:			· · · · · · · · · · · · · · · · · · ·
								Field Observation	ns Confirm A	Mapp	ped Type?
axono	my (Subgroup):	Typic Fluvagents						Yes X No		NA.	
rofile !	Description:										
epth inches)	Horizon Designation	Matrix Color (Munsell Moist)		Mottle (Munse		st)		Mottle Abundance/Cont			ure, Concretions, ospheres, etc.
-3	Α	10YR 3/3							s	ilt Lo	oem .
-8	В	2.5Y 2/2		7.5YR 4	4			Fine, Common, Distr	nct S	ilt loi	am; oxidized rhizospher
18	С	5YR 4/1		10YR 4/3	3			Coarse, Common, D	istinct S	ilt Lo	en
ydric S	Soil Indicators	:									
	Histosol				_	X	Listed	on Local Hydric S	Soils List		
	Histic Epipedon	1			_	Х	Listed	on State Hydric S	Soils List		
	Sulfidic Odor				_		_	on National Hydri	c Soils List		
		Moisture Regime			-	<u> </u>	-	Moisture Regime			
	Reducing Cond				_		_ `	ic Streaking in Sa	ndy Soils		
	•	Chroma Colors			-	<u> </u>	Mottle		4 - 1		
	mign Organic C	ontent in Surface Laye	er		-		_ Other	(Explain in Remar	KS)		
	•	il disturbances, local v									
soli colo	or and other nyo	dnc soil indicators mee	t the	nyanc s	OII CIT	tena.					
VETL	AND DETER	RMINATION									
ydroph	ytic Vegetatio	n Present?	Yes	×	No			is this S	Sampling Po	oint '	Within a Wetland?
ydric \$	oils Present?		Yes	$\overline{\mathbf{x}}$	No	_					
				• •				_	'es X	No	

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): All technical criteria are met.

P	ar	an	ieti	'ix,	In	C.
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_	
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	_

Data Plot #:	14
Wetland:	Authurn

(Modified from: 19	87 CC	E Weti	ands Del	ineation Manual)
	_				
roject/Site: Aubum Mitigation			_		8/00
pplicant/Owner: Port of Ser				_	(ing
	te Dunkin, Steve Emge	-	<u> </u>	State: W	<u>VA</u>
1987 Method 1989 N					Community ID: PEM
Normal Circumstances exist	on the site?	Yes	<u> </u>	No	- Field Plot ID: DP-14
the site significantly disturbed	(Atypical Situation)?	Yes		No X	_
the area a potential Problem A	Area?	Yes		No X	
e is adjacent to well P-12 in W	····				
EGETATION (Dominan Plant Species	r species are checked)		% Cover	Stratum	Indicator
1 Cirsium arvense			25	Herb	FAC-
2 Dactviis giomerata			25	Herb	FACU
					
3 Juncus effusus			25	Herb	FACW
Phalans arundmacea recent of Dominant Species cept FAC-). Include species r rphological adaptations to wet	noted (*) as showing trans. "T" indicates tra	œ.	<u>50</u>	Herb	FACW
Phalans arundmacea recent of Dominant Species recept FAC-). Include species r imphological adaptations to wet marks (Describe disturbance wetland vegetation criteria is	noted (*) as showing transitions. "T indicates transitional variation of the control of the cont	ice. ons, sea	50 sonal eff	Herb	FACW
Phalans arundinacea recent of Dominant Species cept FAC-). Include species r rphological adaptations to wet marks (Describe disturbance wetland vegetation enteria is	noted (*) as showing trands. "T" indicates transs, relevant local variation in the transs of transs of the transs of t	ice. ons, sea	50 sonal effect of the	Herb rects, etc.): dominant p	FACW Hants are wetland.
Phalans arundinacea recent of Dominant Species recent FAC-). Include species r imphological adaptations to wet marks (Describe disturbance wetland vegetation criteria is	noted (*) as showing trands. "T" indicates trans, relevant local variation in the transfer only in the transfer of the transfe	ice. ons, sea	50 sonal effect of the	Herb rects, etc.): dominant p	FACW Illustrations are wetland. Illustrations (Describe in Remarks):
Phalans arundinacea recent of Dominant Species cept FAC-). Include species r riphological adaptations to wet marks (Describe disturbance e wetland vegetation criteria is DROLOGY corded Data (Describe in Re	noted (*) as showing trands. "T" indicates trans, relevant local variation in not met because only a transfer in the same transfer in t	ice. ons, sea	50 sonal effect of the	ects, etc.): dominant p	FACW Illustrations are wetland. Illustrations (Describe in Remarks):
Phalans arundinacea recent of Dominant Species cept FAC-). Include species r rphological adaptations to wet marks (Describe disturbance e wetland vegetation criteria is 'DROLOGY corded Data (Describe in Re Stream, Lake, or 1	noted (*) as showing trands. "T" indicates trans, relevant local variation in not met because only a transfer in the same transfer in t	ice. ons, sea	50 sonal effect of the	ects, etc.): dominant p	elants are wetland. logy Indicators (Describe in Remarks): cators:
Phalans arunomacea recent of Dominant Species cept FAC-). Include species r rphological adaptations to wet marks (Describe disturbance e welland vegetation criteria is 'DROLOGY corded Data (Describe in Re Stream, Lake, or 1 Aerial Photograph	noted (*) as showing trands. "T" indicates trans, relevant local variation not met because only demarks): Tide Gage	ice. ons, sea	50 sonal effect of the	ects, etc.): dominant p	elants are wetland. logy Indicators (Describe in Remarks): cators:
Phaians arundinacea recent of Dominant Species recent FAC-). Include species rephological adaptations to wet marks (Describe disturbance e wetland vegetation criteria is /DROLOGY corded Data (Describe in Re Stream, Lake, or 1 Aerial Photograph X Other	noted (*) as showing trands. "T" indicates trans, relevant local variation not met because only demarks): Tide Gage	ice. ons, sea	50 sonal effect of the	ects, etc.): dominant p	logy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks
Phalans arundinacea recent of Dominant Species recent FAC-). Include species in rephological adaptations to wet marks (Describe disturbance welland vegetation criteria is /DROLOGY corded Data (Describe in Re Stream, Lake, or 1 Aerial Photograph X Other	noted (*) as showing trands. "T" indicates trans, relevant local variation not met because only demarks): Tide Gage	ice. ons, sea	50 sonal effect of the	ects, etc.): dominant p	logy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
Phalans arundinacea recent of Dominant Species recept FAC-). Include species rephological adaptations to wet rmarks (Describe disturbance e wetland vegetation criteria is /DROLOGY corded Data (Describe in Re Stream, Lake, or 1 Aerial Photograph X Other	noted (*) as showing trands. "T" indicates trans, relevant local variation not met because only demarks): Tide Gage	ice. ons, sea	50 sonal effect of the	ects, etc.): dominant p	logy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
Phaians arundinacea recent of Dominant Species recent FAC-). Include species r imphological adaptations to wet marks (Describe disturbance e wetland vegetation enteria is /DROLOGY corded Data (Describe in Re Stream, Lake, or 1 Aerial Photograph X Other No Recorded Data	noted (*) as showing trands. "T" indicates trans, relevant local variation not met because only demarks): Tide Gage	ice. ons, sea	50 sonal effect of the	ects, etc.): dominant p	logy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
Phalans arundinacea recent of Dominant Species cept FAC-). Include species r riphological adaptations to wet marks (Describe disturbance e wetland vegetation enteria is TDROLOGY corded Data (Describe in Re Stream, Lake, or 1 Aerial Photograph X Other No Recorded Data d Observations: Depth of Surface Water:	noted (*) as showing trands. "T" indicates trans, relevant local variation in not met because only : emarks): Tide Gage Available None (in.)	ice. ons, sea	50 sonal effent of the Wett	ects, etc.): dominant p	logy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
Phaians arundinacea recent of Dominant Species recent FAC-). Include species reprinted properties and adaptations to wet marks (Describe disturbance wetland vegetation enteria is TOROLOGY corded Data (Describe in Reservation) Stream, Lake, or 1 Aerial Photograph X Other No Recorded Data Id Observations: Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as showing trands. "T" indicates trans, relevant local variation in not met because only : emarks): Tide Gage Available None (in.) >18 (in.)	ice. ons, sea	50 sonal effent of the Wett	ects, etc.): dominant p	logy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands indicators (2 or more required):
Phalans arundinacea recent of Dominant Species recept FAC-). Include species reprinted properties and adaptations to wet marks (Describe disturbance e wetland vegetation enteria is fDROLOGY corded Data (Describe in Reservation) Stream, Lake, or 1 Aerial Photograph X Other No Recorded Data Id Observations: Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as showing trands. "T" indicates trans, relevant local variation in not met because only : emarks): Tide Gage Available None (in.)	ice. ons, sea	50 sonal effent of the Wett	ects, etc.): dominant p	logy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches
Phalans arundinacea procent of Dominant Species (cept FAC-). Include species repropological adaptations to well promarks (Describe disturbance e welland vegetation criteria is YDROLOGY corded Data (Describe in Reserved Corded Data) Stream, Lake, or 1 Aerial Photograph Other	noted (*) as showing trands. "T" indicates trans, relevant local variation in not met because only demarks): Tide Gage Available None (in.)	ice. ons, sea	50 sonal effent of the Wett	ects, etc.): dominant p	logy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands indicators (2 or more required):

Wetland hydrology is not expected due to the time of year when the delineation was completed. Well data at this location indicates water within 12 inches of the surface for more than 2 weeks during the growing season. The presence of oxidized mizospheres and mapped soils on the King County Hydric Soils List satisfy the wetland hydrology criteria.

$\overline{}$							Data Piot #	:	14
							Wetland:		Aubum
Project/S	Site: Aubum M	litigation Site			Date:	9/18/00			
SOILS	rvey Data:								
Map Un	it Name: Orid	ia Silt Loam				Drainage Class:	Somewhat	poor	ly drained
						Field Observation	s Confirm N	Mapp	ed Type?
Taxonor	my (Subgroup):	Typic Fluvagents				Yes X No		AA	_
Profile I	Description:		_						
Depth (inches)	Horizon Designation	Matrix Color (Munsell Moist)	Mottle Col (Munsell A			Mottle Abundance/Contr			re, Concretions, ispheres, etc.
0-3	Α	10YR 4/3 to 10YR 4/4				•	s	ilt lo	em with very dense root m
3-9	В	10YR 4/3				•	s	ilt lor	ım
9-14	B 2	2.5Y 5/2	10YR 4/4 to	10YR 4/6		Few. faint	S	ilt lo	im; oxidized mizospheres
Hydric S	Soil Indicators	:							
	Histosol			×	Listed	on Local Hydric S	oils List		
	Histic Epipedor	1		X	Listed	on State Hydric S	oils List		
	Sulfidic Odor				Listed	on National Hydric	Soils List		
1	Probable Aquic	Moisture Regime		X	Aquic	Moisture Regime			
'	Reducing Cond	itions			Organ	ic Streaking in Sar	ndy Soils		
	-	Chroma Colors		<u>X</u>	Mottle	S			
'	High Organic C	ontent in Surface Layer			Other	(Explain in Remark	(S)		
_		il disturbances, local varial dric soil indicators meet the		cntena.					
WETL	AND DETER	RMINATION							
Hydroph	ytic Vegetatio	n Present? Yes	x N	No		is this S	ampling Po	oint ¹	Within a Wetland?
Hydric S	oils Present?	Yes			_		. •		
-	Hydrology Pre		<u> </u>	· —	_	Ye	es X	No	

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): All technical criteria are met.

					Data	Plot #	t: 15
LA PETE	AND	DETE	DARINI	A TIC	Weti	and:	Aub
						03	
(Modified from: 198	37 CC	E Meti	ands	Delii	neation Mani	Jai)	
pject/Site: Aubum Mitigation Site			Date:	9/18	/00		
oplicant/Owner: Port of Seattle			County:	Kit	ng		
vestigator: Jan Cassin, Kristie Dunkin, Steve Emge			State:	w/	Α		
1987 Method					Communit	y ID:	Upland
Normal Circumstances exist on the site?	Yes	x	No		- Field Plot	מ: ב	P-15
he site significantly disturbed (Atypical Situation)?	Yes		No	X	_		
he area a potential Problem Area?	Yes		No		-		
ETATION (Dominant species are checked)		Y Cour	Stratu		. Andlesses		<u> </u>
GETATION (Dominant species are checked) Plant Species		% Cover	Stratu	m	Indicator		<u> </u>
GETATION (~Dominant species are checked) Plant Species 1. Cirsium arvense		% Cover 33 33	Stratus Herb	m	Indicator FAC- FACU		,
GETATION (Dominant species are checked) Plant Species 1. Cirsium arvense		33	Herb	m	FAC-		
Plant Species 1. Cirsium arvense 2. Dactylis glomerata	:e. ns, sea	33 33 33 33	Herb Herb Herb	c.):	FACU FACU		
Plant Species Cirsium arvense Dactylis glomerata Holcus lanetus recent of Dominant Species that are OBL, FACW, o cept FAC-). Include species noted (*) as showing rephological adaptations to wetlands. "T" indicates trac	:e. ns, sea	33 33 33 33	Herb Herb Herb	c.):	FACU FACU		
Plant Species 1. Cirsium arvense 2. Dactylis glomerata 3. Holcus tanatus cent of Dominant Species that are OBL, FACW, o cept FAC-). Include species noted (*) as showing rephological adaptations to wetlands. "T' indicates tracemarks (Describe disturbances, relevant local variation ce less than 50% of the dominant plants are hydrophysic DROLOGY	:e. ns, sea	33 33 33 33 sonal eff wetland	Herb Herb Herb	c.): ion cr	FACU FACU FAC	•	
Plant Species Circum arvense Dactylis glomerata Holicus lanatus Cent of Dominant Species that are OBL, FACW, o cept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T" indicates trace marks (Describe disturbances, relevant local variation celess than 50% of the dominant plants are hydrophysicorded Data (Describe in Remarks):	:e. ns, sea	33 33 33 33 33 wetland	Herb Herb Herb Herb	c.): ion cr	FACU FACU FACU riteria is not met.	(Desc	ribe ın Ren
GETATION (→ Dominant species are checked) Plant Species 1. Cirsium arvense 2. Dactylis glomerata 3. Holcus lanstus cent of Dominant Species that are OBL, FACW, o cept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T" indicates trace narks (Describe disturbances, relevant local variation be less than 50% of the dominant plants are hydrophysical phology DROLOGY orded Data (Describe in Remarks): Stream, Lake, or Tide Gage	:e. ns, sea	33 33 33 33 33 wetland	Herb Herb Herb	c.): ion cr	FACU FACU FACU FACU FACU FACU FACU FACU	(Desc	ribe in Ren
Plant Species 1. Cirsium arvense 2. Dactylis glomerata 3. Holcus lanatus cent of Dominant Species that are OBL, FACW, o ept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T" indicates trace narks (Describe disturbances, relevant local variations to less than 50% of the dominant plants are hydrophysical edges." DROLOGY Orded Data (Describe in Remarks):	:e. ns, sea	33 33 33 33 33 wetland	Herb Herb Herb Herb	c.): ion cr	FACU FACU FACU riteria is not met.		
Plant Species Cirsum arvense Dactylis glomerata Holcus lanatus cent of Dominant Species that are OBL, FACW, o cept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T" indicates trace marks (Describe disturbances, relevant local variation ce less than 50% of the dominant plants are hydrophystorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	:e. ns, sea	33 33 33 33 33 wetland	Herb Herb Herb Herb	c.): ion cr	FACU FACU FACU FACU FACU FACU FACU FACU	er 12	inches
Plant Species 1. Cirsium arvense 2. Dactylis glomerata 3. Holcus lanatus recent of Dominant Species that are OBL, FACW, o cept FAC-). Include species noted (*) as showing rephological adaptations to wetlands. "T" indicates trace marks (Describe disturbances, relevant local variation ce less than 50% of the dominant plants are hydrophystorded Data. (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	:e. ns, sea	33 33 33 33 33 wetland	Herb Herb Herb Herb	c.): ion cr droto	FACU FACU FACU FACU FACU FACU FACU FACU	er 12	inches

Remarks (As relevant, describe recent precipitation, hydrologic modifications, local variations, etc.):

(in.)

(in.)

(in.)

None

>18

>18

Field Observations: Depth of Surface Water:

Depth to Free Water in Pit:

Depth to Saturated Soil:

All mapped soils on-site are on the King County Hydric Soils List. Well data at this location indicates water within 12 inches of the surface for more than 2 weeks during the growing season, therefore the wetland hydrology criteria is met.

Drainage Patterns in Wetlands

Oxidized Root Channels in Upper 12 inches

Secondary Indicators (2 or more required):

Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)

$\overline{\Lambda}$						_	ata Piot #:	15
•						٧	Vetland:	Auburn
_								
Project/Sit	e: Aubum M	litigation Site			Date:	9/18/00	_	
SOILS								
Soil Surv	ey Data:							
Map Unit I	Name: Orid	ia Silt Loam				Drainage Class: S		· · · · · · · · · · · · · · · · · · ·
						Field Observations	Confirm Mag	oped Type?
Taxonomy	(Subgroup):	Typic Fluvagents				Yes X No	NA	
Profile De	scription:							
Depth Inches)	Honzon Designation	Matrix Color (Munsell Moist)	Mottle Co (Munsell			Mottle Abundance/Contras		ture, Concretions, cospheres, etc.
)-6	Α	10YR 3/2	•			•	Sift L	.oam
⊱12	В	10YR 3/2	-			•	Sitt L	.osm
2-18	B 2	2.5Y 4/2	10YR 5/4			Few and Faint	Fine	Sandy Loam
dydric So	il Indicators	:						
-	stosol			×	Listed	on Local Hydric Soi	ls List	
His	stic Epipedon	1		$\overline{}$	Listed	on State Hydric Soi	ls List	
Su	ılfidic Odor				Listed	on National Hydric !	Soils List	
Pn	obable Aquic	Moisture Regime		X	Aquic	Moisture Regime		
	ducing Cond					ic Streaking in Sand	y Soils	
	•	Chroma Colors			Mottie			
—— Hig	gn Organic O	ontent in Surface Layer			Other	(Explain in Remarks)	
Remarks	(Describe soi	i disturbances, local varia	tions, etc.):					
Soil color i	and other hyd	dnc soil indicators do not r	neet the hy	dric soi	criteria a	10 inches.		
METI AL	ID DETER	MINATION						
			•			1- Ab 1- 6		
	II: VACATATIOI	n Present? Yes		No	X	is this Sar	npling Point	l Within a Wetlan
lydrophyt	is Present?	Yes		4 0	×		. •	

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): Vegetation and hydric soils criteria are not met, therefore the area is not a wetland.

<u> </u>						- 1	Data Pi	ot#:	16
				. T.,	0 N		Wetlan	d:	Aubi
,,,,,		DETE					_	••	
(Modified from: 19	87 CC	E Wet	lands	Deli	ineat	ion y	lanua	1)	
roject/Site: Auburn Mitigation Site			Date:	12/1	1/00			-	
policant/Owner: Port of Seattle			County:	K	ing				
vestigator: William Kleindi			State:	w	/A				
1987 Method						Comn	nunity ((D: L	Jpland
o Normal Circumstances exist on the site?	Yes	<u> x</u>	No		_	Field	Plot ID:	DP	-16
the site significantly disturbed (Atypical Situation)?	Yes		No	<u>x</u>	_		_		
the area a potential Problem Area?	Yes		No	х					
GETATION (Dominant species are checked)							<u></u>		·
EGETATION (Dominant species are checked) Plant Species		% Cover	Stratu	m	Indica	ator			
		20	Herb	m	FAC-				
Plant Species 1 Cirsium arvense 2 Cirsium vulgare		20 20	Herb Herb	m	FAC-	J			
Plant Species 1 Cirsium arvense 2 Cirsium vulgare 3 Dactylis glomerata		20 20 20	Herb Herb	m	FACL FACL	J	•		
Plant Species 1 Cirsium arvense 2 Cirsium vulgare 3 Dactylis glomerata 4 Holcus lanatus		20 20	Herb Herb	m	FAC-	J			
Plant Species 1 Cirsium arvense 2 Cirsium vulgare 3 Dactylis glomerata 4 Hoicus lanatus recent of Dominant Species that are OBL, FACW.		20 20 20	Herb Herb	m	FACL FACU	J			
Plant Species 1 Cirsium arvense 2 Cirsium vulgare 3 Dactylis glomerata	or FAC	20 20 20 60	Herb Herb	m	FACL FACU	J			
Plant Species 1 Cirsium arvense 2 Cirsium vulgare 3 Dactyis glomerata 4 Holcus lanatus recent of Dominant Species that are OBL, FACW, coept FAC-). Include species noted (*) as showing imphological adaptations to wetlands. "T" indicates tra	or FAC	20 20 20 60 25	Herb Herb Herb		FACL FACU	J			
Plant Species 1 Cirsium arvense 2 Cirsium vulgare 3 Dactylis glomerata 4 Hoicus lanatus creent of Dominant Species that are OBL, FACW, scept FAC-). Include species noted (*) as showing	or FAC	20 20 20 60 25	Herb Herb Herb	c.):	FACL FACU FAC	J	net.		
Plant Species 1. Cirsium arvense 2. Cirsium vulgare 3. Dactylis glomerata 4. Holicus lanatus recent of Dominant Species that are OBL, FACW, recept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates training includes the second of the dominant plants are hydrophic less than 50% of the dominant plants are hydrophic."	or FAC	20 20 20 60 25	Herb Herb Herb	c.):	FACL FACU FAC	J	met.		
Plant Species 1. Cirsium arvense 2. Cirsium vulgare 3. Dactylis glomerata 4. Holcus lanatus creent of Dominant Species that are OBL, FACW, coept FAC-). Include species noted (*) as showing prohological adaptations to wetlands. "T" indicates trainmarks (Describe disturbances, relevant local variations less than 50% of the dominant plants are hydrophysical process."	or FAC	20 20 20 60 25 asonal et	Herb Herb Herb Herb Herb	c.):	FAC- FACU FACU FAC	is not		escrit	ne in Ren
Plant Species 1 Cirsium arvense 2 Cirsium vulgare 3 Dactylis glomerata 4 Holcus lanatus creent of Dominant Species that are OBL, FACW, coept FAC-). Include species noted (*) as showing prohological adaptations to wetlands. "T" indicates trainmarks (Describe disturbances, relevant local variations."	or FAC	20 20 20 60 25 asonal ef	Herb Herb Herb Herb Herb	c.):	FAC- FACU FACU FAC	is not		escrit	be in Ren
Plant Species 1 Cirsium arvense 2 Cirsium vulgare 3 Dactylis glomerata 4 Holcus lanatus recent of Dominant Species that are OBL, FACW, coept FAC-). Include species noted (*) as showing prohological adaptations to wetlands. "T" indicates training less than 50% of the dominant plants are hydrophic IDROLOGY corded Data (Describe in Remarks):	or FAC	20 20 20 60 25 asonal ef	Herb Herb Herb Herb Herb	c.):	FAC- FACU FACU FAC	is not		escrit	pe in Ren
Plant Species 1 Cirsium arvense 2 Cirsium vulgare 3 Dactylis glomerata 4 Holcus lanatus creent of Dominant Species that are OBL, FACW, coept FAC-). Include species noted (*) as showing prohological adaptations to wetlands. "T" indicates training less than 50% of the dominant plants are hydrophic COROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage	or FAC	20 20 20 60 25 asonal ef	Herb Herb Herb Herb Herb	c.):	FAC- FACU FACU FAC	is not			

Aerial Photograph	n	inundated
Other		Saturated in Upper 12 inches
X No Recorded Dat	a Available	Saturated in Upper 18 inches
		Water Marks
		Drift Lines
		Sediment Deposits
		Drainage Patterns in Wetlands
Field Observations:		
Depth of Surface Water:	None (in.)	Secondary Indicators (2 or more required):
Depth to Free Water in Pit:	>18 (in.)	•
Depth to Saturated Soil:	>18 (in.)	Oxidized Root Channels in Upper 12 inches
		Water-Stained Leaves
		Local Soil Survey Data
		Other (Explain in Remarks)
Remarks (As relevant, describ No field indicators of wetland hyd	e recent precipitation, h	ydrologic modifications, local vanations, etc.):

					Data Pid	ot #:	16
				Ē	Wetland	t:	Aubum
					The section of the section of the section of		
		····•					
Project/S	Site: Aubum M	itigation Site		Date:	12/1/00		
SOILS							
Soil Su	rvey Data:						
Map Uni	it Name: Orid	ia Silt Loam			Drainage Class: Somewi	nat poo	orly drained
					Field Observations Confir	m Mar	oped Type?
Taxonor	ny (Subgroup):	Typic Fluvagents			Yes X No	NA	
Drofile f	Description:						
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)		Mottle Abundance/Contrast		ture, Concretions zospheres, etc.
D-18	A	10YR 4/3			-	Sin I	Loam
18+	B	10YR 3/3	10YR 4/4		coarse, Common, Faint	Sitt	Loam
•	Soil Indicators:			.:	l I		
	Histosol		4		l on Local Hydric Soils List I on State Hydric Soils List		
1		J		LISIEL	•		
	Histic Epipedon Sulfidic Odor			i isted	l on National Hydric Soils L	ısı	
	Sulfidic Odor	Moisture Regime			l on National Hydric Soils L Moisture Regime	ısi	
	Sulfidic Odor	Moisture Regime		Aquic	on National Hydric Soils L Moisture Regime nic Streaking in Sandy Soils		
	Sulfidic Odor Probable Aquic Reducing Cond	-		Aquic	Moisture Regime nic Streaking in Sandy Soils		
	Sulfidic Odor Probable Aquic Reducing Cond Gleyed or Low-	itions		Aquic Organ Mottle	Moisture Regime nic Streaking in Sandy Soils		
Remarks	Sulfidic Odor Probable Aquic Reducing Cond Gleyed or Low- High Organic Cost (Describe soi	itions Chroma Colors ontent in Surface Layer I disturbances, local varia		Aquic Organ Mottle Other	Moisture Regime nic Streaking in Sandy Soils is (Explain in Remarks)		
Remarks	Sulfidic Odor Probable Aquic Reducing Cond Gleyed or Low- High Organic Cost (Describe soi	itions Chroma Colors ontent in Surface Layer		Aquic Organ Mottle Other	Moisture Regime nic Streaking in Sandy Soils is (Explain in Remarks)		
Remarks	Sulfidic Odor Probable Aquic Reducing Cond Gleyed or Low- High Organic Co s (Describe soin or and other hyd	itions Chroma Colors Ontent in Surface Layer I disturbances, local vana dinc soil indicators do not i		Aquic Organ Mottle Other	Moisture Regime nic Streaking in Sandy Soils is (Explain in Remarks)		
Remarks Soil cold	Sulfidic Odor Probable Aquic Reducing Cond Gleyed or Low- High Organic Co s (Describe soil or and other hyde AND DETER	itions Chroma Colors content in Surface Layer I disturbances, local varia dric soil indicators do not i	meet the hydric soil	Aquic Orgar Mottle Other	Moisture Regime nic Streaking in Sandy Soils is (Explain in Remarks) f 10 inches.		A Wahin a Walla
Remarks Soil cold	Sulfidic Odor Probable Aquic Reducing Cond Gleyed or Low- High Organic Co s (Describe soin or and other hyd	itions Chroma Colors content in Surface Layer I disturbances, local varia dric soil indicators do not i	meet the hydric soil	Aquic Organ Mottle Other	Moisture Regime nic Streaking in Sandy Soils is (Explain in Remarks) f 10 inches.		t Within a Wetla

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): All three parameters are not met, therefore the area is not a wetland.

P	ar	ar	ne	tr	ix.	In	C.
•	~,,	~	•••		•••		•



	Modified from: 19	27 CC	E Was	ionde	Deli-	estion Manual\
(**	Modified from: 19	187 CU	E MAI	CUINEL	Dem	eation mailual)
roject/Site: Aubum Mitigation	Site			Date:	12/1/0	00
pplicant/Owner: Port of Sea	ittle			County:		<u> </u>
vestigator: William Kleindi				State:	WA	
1987 Method 1989 M	ethod					Community ID: PEM
o Normal Circumstances exist o	on the site?	Yes	<u> </u>	No		Field Plot ID: DP-17
the site significantly disturbed	(Atypical Situation)?	Yes		No	<u> </u>	
the area a potential Problem A	rea?	Yes		No	X	
marks (Explain sample locati te is adjacent to well P-10 in Wi		em are:	2 5):			
					-	
EGETATION (Dominant Plant Species	species are checked)		% Cover	Stratu	m i	Indicator
1 Dactylis glomerata			40	Herb	1	FACU
· · · · · · · · · · · · · · · · · · ·						FAC
cept FAC-). Include species no orphological adaptations to wetli ormarks. (Describe disturbances	oted (*) as showing ands. "T" indicates tra	or FAC			c.):	
rcent of Dominant Species (cept FAC-). Include species numbhological adaptations to wettermarks. (Describe disturbances (ce 50% of the dominant plants)	oted (*) as showing ands. "T" indicates tra	or FAC	50	ffects, et	c.):	
recent of Dominant Species recept FAC-). Include species no imphological adaptations to wetlemarks (Describe disturbances are 50% of the dominant plants	oted (*) as showing ands. "T" indicates tra s, relevant local variation are hydrophytic, the ware hydrophytic, hyd	or FAC	50 sonal et	ffects, et	c.): e is no	t met.
recent of Dominant Species cept FAC-). Include species nurphological adaptations to wettermarks (Describe disturbances ice 50% of the dominant plants	oted (*) as showing ands. "T" indicates tra s, relevant local variation are hydrophytic, the warmarks):	or FAC	50 isonal el regetatio	ffects, et	c.): s is no	it met. gy Indicators (Describe in Remarks):
rcent of Dominant Species (cept FAC-). Include species no orphological adaptations to wetling marks (Describe disturbances (Describe disturbances) (DROLOGY corded Data (Describe in Reserved)	oted (*) as showing ands. "T" indicates tra s, relevant local variation are hydrophytic, the warmarks):	or FAC	50 isonal el regetatio	ffects, et	c.): e is no edrolo indica	it met. gy Indicators (Describe in Remarks):
rcent of Dominant Species (cept FAC-). Include species no prohological adaptations to wette marks (Describe disturbances (ce 50% of the dominant plants /DROLOGY corded Data (Describe in Re Stream, Lake, or Ti	oted (*) as showing ands. "T" indicates tra s, relevant local variation are hydrophytic, the warmarks):	or FAC	50 isonal el regetatio	ffects, et	c.): a is no edrolog indica	gy Indicators (Describe in Remarks): tors:
recent of Dominant Species cept FAC-). Include species no rephological adaptations to wette marks. (Describe disturbances ce 50% of the dominant plants 'DROLOGY corded Data. (Describe in Re Stream, Lake, or Ti Aenal Photograph	oted (*) as showing ands. "T" indicates tra s, relevant local variation are hydrophytic, the warmarks): ide Gage	or FAC	50 isonal el regetatio	ffects, et	c.): a is no rdrolog indica	gy Indicators (Describe in Remarks): tors: nundated Saturated in Upper 12 inches Saturated in Upper 18 inches
recent of Dominant Species (cept FAC-). Include species no phological adaptations to wette marks (Describe disturbances (ce 50% of the dominant plants (DROLOGY (corded Data (Describe in Reserved Data) Stream, Lake, or Till Aenal Photograph Other	oted (*) as showing ands. "T" indicates tra s, relevant local variation are hydrophytic, the warmarks): ide Gage	or FAC	50 isonal el regetatio	ffects, et	c.): a is no rdrolog indica in s v	gy Indicators (Describe in Remarks): tors: nundated Saturated in Upper 12 inches Saturated in Upper 18 inches Vater Marks
recent of Dominant Species (cept FAC-). Include species in orphological adaptations to wette (marks) (Describe disturbances (ince 50% of the dominant plants (YDROLOGY) (corded Data) (Describe in Reserved Data) Stream, Lake, or Till Aerial Photograph (Other)	oted (*) as showing ands. "T" indicates tra s, relevant local variation are hydrophytic, the warmarks): ide Gage	or FAC	50 isonal el regetatio	ffects, et	c.): a is no rdroto; indica is s v	gy Indicators (Describe in Remarks): tors: nundated Saturated in Upper 12 inches Saturated in Upper 18 inches Vater Marks
recent of Dominant Species (cept FAC-). Include species no prohological adaptations to wettermarks (Describe disturbances noe 50% of the dominant plants /DROLOGY corded Data (Describe in ReStream, Lake, or Takenal Photograph X Other No Recorded Data	oted (*) as showing ands. "T" indicates tra s, relevant local variation are hydrophytic, the warmarks): ide Gage	or FAC	50 isonal el regetatio	ffects, et	c.): a is no rdrotog indica s V	gy Indicators (Describe in Remarks): tors: nundated Saturated in Upper 12 inches Saturated in Upper 18 inches Vater Marks
recent of Dominant Species recept FAC-). Include species no rephological adaptations to wetlemarks (Describe disturbances are 50% of the dominant plants) /DROLOGY corded Data (Describe in Research Lake, or Taken Photograph Other No Recorded Data	oted (*) as showing ands. "T" indicates tra s, relevant local variation are hydrophytic, the warmarks): ide Gage Available	or FAC	50 esonal ef regetation Wet	ffects, et on criterion tiand Hy Primary	cc.): a is no refrologi Indica It is so S V C S C C	gy Indicators (Describe in Remarks): tors: nundated Saturated in Upper 12 inches Saturated in Upper 18 inches Vater Marks Orift Lines Sediment Deposits Orainage Patterns in Wetlands
recent of Dominant Species recept FAC-). Include species no rephological adaptations to wetlemarks (Describe disturbances are 50% of the dominant plants) /DROLOGY corded Data (Describe in Research Lake, or Taxon Aenal Photograph Other No Recorded Data dd Observations: Depth of Surface Water:	oted (*) as showing ands. "T" indicates trass, relevant local variation are hydrophytic, the warmarks): ide Gage Available None (in.)	or FAC	50 esonal ef regetation Wet	ffects, et on criterion tiand Hy Primary	cc.): a is no refrologi Indica It is so S V C S C C	gy Indicators (Describe in Remarks): tors: nundated Saturated in Upper 12 inches Saturated in Upper 18 inches Vater Marks Orift Lines Sediment Deposits
recent of Dominant Species (cept FAC-). Include species no prohological adaptations to wetle marks (Describe disturbances noe 50% of the dominant plants YDROLOGY corded Data (Describe in Research Lake, or Take, and Photograph Other No Recorded Data Id Observations: Depth of Surface Water: Depth to Free Water in Pit:	oted (*) as showing ands. "T" indicates trained indicates trained indicates trained in are hydrophytic, the warmarks): ide Gage Available None (in.)	or FAC	50 esonal ef regetation Wet	ffects, et on criterion tiand Hy Primary	c.): a is no indica indica S V C S C C S C C C C C C C C C C C C C	gy Indicators (Describe in Remarks): tors: nundated Saturated in Upper 12 inches Saturated in Upper 18 inches Vater Marks Orift Lines Sediment Deposits Orainage Patterns in Wetlands dicators (2 or more required):
ercent of Dominant Species (cept FAC-). Include species no prohological adaptations to wetle (marks) (Describe disturbances (nee 50% of the dominant plants) YDROLOGY (Describe in Reserved Data) (Describe in Reserved Data) (Alexander Photograph) (Other No Recorded Data) Id Observations: Depth of Surface Water: Depth to Free Water in Pit:	oted (*) as showing ands. "T" indicates trais, relevant local variation are hydrophytic, the warmarks): ide Gage None (in.) >18 (in.)	or FAC	50 esonal ef regetation Wet	ffects, et on criterion tiand Hy Primary	cc.): a is no refrologindica indica S S V C C S C C C V	gy Indicators (Describe in Remarks): tors: nundated Saturated in Upper 12 inches Saturated in Upper 18 inches Vater Marks Orift Lines Sediment Deposits Orainage Patterns in Wetlands dicators (2 or more required): Oxidized Root Channels in Upper 12 inches Vater-Stained Leaves
ercent of Dominant Species xcept FAC-). Include species incorphological adaptations to wetter emarks (Describe disturbances ince 50% of the dominant plants YDROLOGY ecorded Data (Describe in Re Stream, Lake, or Ti Aenal Photograph Other	oted (*) as showing ands. "T" indicates trained indicates trained indicates trained in are hydrophytic, the warmarks): ide Gage Available None (in.)	or FAC	50 esonal ef regetation Wet	ffects, et on criterion tiand Hy Primary	cc.): a is no redrological indica S S V V C C C C C C C C C C C C C C C C	gy Indicators (Describe in Remarks): tors: nundated Saturated in Upper 12 inches Saturated in Upper 18 inches Vater Marks Orift Lines Sediment Deposits Orainage Patterns in Wetlands dicators (2 or more required): Oxidized Root Channels in Upper 12 inches

All mapped soils on-site are on the King County Hydric Soils List. Well data at this location indicates water within 12 inches of the surface for more than 2 weeks during the growing season, therefore the wetland hydrology criteria is met.

一						Data Plot #:	17
						Wetland:	Auburn
						c ·	
Project/S	ite: Auburn M	litigation Site		Date:	12/1/00		
SOILS Soil Sur	vey Data:						
Map Unit	t Name: Orid	ia Silt Loam			Drainage Class	Somewhat poo	orly drained
					Field Observation	ons Confirm Mag	oped Type?
Taxonom	ny (Subgroup):	Typic Fluvagents			Yes X No	NA	
Profile D	escription:						
Depth (inches)	Horizon Designation	Matrix Color (Munsell Moist)	Mottle Colo (Munsell Mo		Mottle Abundance/Con		ture, Concretions, cospheres, etc.
)-9	Α	10YR 3/3	•		-	Silt	oem
-18+	8	10YR 4/2	10YR 3/3		Many, Coarse, Dist	anct Sitt is	oam
S P R G H	Reducing Condi Gleyed or Low-(ligh Organic Co (Describe soi	Moisture Regime itions Chroma Colors ontent in Surface Layer I disturbances, local vana		Listed Listed Aquid Orgal X Mottle Other	(Explain in Rema	Soils List ric Soils List e andy Soils	
Soil coloi	r and other hyd	inc soil indicators do mee	t the hydric so	il critena at 10	inches.	· · · · · · · · · · · · · · · · · · ·	
WETLA	ND DETER	MINATION					
iydrophy	rtic Vegetation	n Present? Yes	No	<u> </u>	Is this	Sampling Point	Within a Wetlar
lydric Sc	ils Present?	Ye:	X No		,	Yes X N	•

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results):

Vegetation criteria is not met, however well data inticates that wetland hydrology is present for at least 2 weeks in the growing season.

Para	m	etri:	x, I	nc.



Data Plot #:	18
Wetland:	Aubum

4 \							Data P		18	
L'	WET	I AND	DETE	RMINA	ATION	ı	Wetia	nd:	Aubum	
(M	lodified from: 19						Manua	al)		
Project/Site: Aubum Mitigation Si	ite			Date:	12/1/00)				
Applicant/Owner: Port of Seatt				County:	King					
ivestigator: William Kleindl	J.C.			State:	WA					
1987 Method 1989 Met	thod							D: 14	unnel .	_
_		Yes	x	No			mmunity	_	Mand	
o Normal Circumstances exist or						Fie	ld Plot <u>iD</u>	: DP-1	8	
the site significantly disturbed (A		Yes		No .	<u> </u>					
the area a potential Problem Are	Ba?	Yes		No .	<u> </u>					
oland companson plot for Wetlan	nd 3									
EGETATION - Dominant s	species are checked)									
Plant Species			% Cover	Stratu	m In	dicator				
1. Cirsium arvense			40	Herb		AC-				
2 Cirsium vulgare			40	Herb		CU	_			
			-20	Herb	FA	VC.				
3 Hoicus ianatus			20				_			
Ranunculus repens 5. Rumex crispus ercent of Dominant Species to coept FAC-). Include species not prohological adaptations to wetter	ted (*) as showing nds. "T" indicates tra	ce.	30 10 50	Herb	FA	ICW	-			
Ranunculus repens 5. Rumex crispus recent of Dominant Species the copt FAC-). Include species not orphological adaptations to wettar marks. (Describe disturbances, ince 50% of the dominant plants a	ted (*) as showing nds. "T" indicates tra relevant local variation	ce. ons, sea	30 10 50 isonal eff	Herb Herb	FA	ACW	_			
Ranunculus repens 5 Rumex crispus recent of Dominant Species to cept FAC-). Include species not prophological adaptations to wetian marks (Describe disturbances, ice 50% of the dominant plants a	ted (*) as showing nds. "T" indicates tra relevant local variate are hydrophytic, the w	ce. ons, sea	30 10 50 isonal eff	Herb Herb	C.): o is not i	ACW	etors (F		in Romedus	
A Ranunculus repens 5 Rumex crispus recent of Dominant Species the recept FAC-). Include species not imphological adaptations to wettar marks. (Describe disturbances, ince 50% of the dominant plants a CDROLOGY corded Data. (Describe in Remoters)	ted (*) as showing nds. "T" indicates tra relevant local variate are hydrophytic, the warrants):	ce. ons, sea	50 sonal eff	Herb Herb fects, etc	c.): i is not i	net.	ntors (E	Describe	in Remarks	3):
Ranunculus repens Rumex crispus recent of Dominant Species to cept FAC-). Include species not rephological adaptations to wettar marks. (Describe disturbances, ce 50% of the dominant plants a PROLOGY Corded Data. (Describe in Rem Stream, Lake, or Tid	ted (*) as showing nds. "T" indicates tra relevant local variate are hydrophytic, the warrants):	ce. ons, sea	50 sonal eff	Herb Herb	c.): is not i drology	met.		Describe	in Remarks	3):
Ranunculus repens Rumex crispus recent of Dominant Species to cept FAC-). Include species not rephological adaptations to wettar marks. (Describe disturbances, ce 50% of the dominant plants a DROLOGY Corded Data. (Describe in Rem Stream, Lake, or Tid Aenal Photograph	ted (*) as showing nds. "T" indicates tra relevant local variate are hydrophytic, the warrants):	ce. ons, sea	50 sonal eff	Herb Herb fects, etc	FA c.): i is not i drology Indicato	net. Indicates:	i			s):
Ranunculus repens Rumex crispus Tecent of Dominant Species to cept FAC-). Include species not rephological adaptations to wettar marks (Describe disturbances, ce 50% of the dominant plants at DROLOGY Torded Data (Describe in Rem Stream, Lake, or Tid Aenal Photograph Other	ted (*) as showing inds. "T" indicates trained variates trained in the hydrophytic, the water hydrophytic, the water hydrophytic in the water hydr	ce. ons, sea	50 sonal eff	Herb Herb fects, etc	drology Indicato	net. Indicated turated		r 12 inch	nes	s):
A Ranunculus repens 5 Rumex crispus recent of Dominant Species to cept FAC-). Include species not rephological adaptations to wettar marks. (Describe disturbances, ice 50% of the dominant plants at DROLOGY corded Data. (Describe in Rem Stream, Lake, or Tid Aenal Photograph	ted (*) as showing inds. "T" indicates trained variates trained in the hydrophytic, the water hydrophytic, the water hydrophytic in the water hydr	ce. ons, sea	50 sonal eff	Herb Herb fects, etc	drology Indicato	net. Indicated turated	d I in Uppel I in Uppel	r 12 inch	nes	3):
Ranunculus repens 5 Rumex crispus recent of Dominant Species to cept FAC-). Include species not rephological adaptations to wettar marks. (Describe disturbances, ice 50% of the dominant plants at DROLOGY corded Data. (Describe in Rem Stream, Lake, or Tid Aenal Photograph Other	ted (*) as showing inds. "T" indicates trained variates trained in the hydrophytic, the water hydrophytic, the water hydrophytic in the water hydr	ce. ons, sea	50 sonal eff	Herb Herb fects, etc	drology Indicato Int. Sa Sa Wa	net. Indicates undates turated turated	i I in Uppei I in Uppei irks	r 12 inch	nes	(i):
4. Ranunculus repens 5. Rumex crispus recent of Dominant Species to copt FAC-). Include species not rephological adaptations to wettair marks. (Describe disturbances. Ince 50% of the dominant plants a /DROLOGY corded Data. (Describe in Rem Stream, Lake, or Tid Aenal Photograph Other	ted (*) as showing inds. "T" indicates trained variates trained in the hydrophytic, the water hydrophytic, the water hydrophytic in the water hydr	ce. ons, sea	50 sonal eff	Herb Herb fects, etc	drology Indicato Inc. Sa Sa Wa Dri Se	met. Indicated turated turated ater Ma ft Lines diment	d In Upper In Upper rks Deposits	r 12 inch r 18 inch	nes nes):
A Ranunculus repens 5. Rumex crispus recent of Dominant Species the recept FAC-). Include species not imphological adaptations to wettar marks. (Describe disturbances, ince 50% of the dominant plants a CDROLOGY corded Data. (Describe in Rem Stream, Lake, or Tid Aenal Photograph Other X No Recorded Data. A	ted (*) as showing inds. "T" indicates trained variates trained in the hydrophytic, the water hydrophytic, the water hydrophytic in the water hydr	ce. ons, sea	50 sonal eff	Herb Herb fects, etc	drology Indicato Inc. Sa Sa Wa Dri Se	met. Indicated turated turated ater Ma ft Lines diment	i In Uppel In Uppel Inks	r 12 inch r 18 inch	nes nes	(s):
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Ranunculus repens Rumex crispus recent of Dominant Species to cept FAC-). Include species not rephological adaptations to wettar marks. (Describe disturbances, ce 50% of the dominant plants at DROLOGY corded Data. (Describe in Rem Stream, Lake, or Tid Aenal Photograph Other X. No Recorded Data Add Observations: Depth of Surface Water:	ted (*) as showing inds. "T" indicates trained variates trained in the hydrophytic, the water hydrophytic, the water hydrophytic in the water hydr	ce. ons, sea	30 10 50 ssonal eff regetation Weti	fects, etc.	drology Indicato Inc. Sa Sa Wa Dri Sec Try Indic	met. / Indicates turated turated diment ainage	i in Uppei in Uppei rks Deposits Patterns	r 12 inch r 18 inch in Wetta e require	nes nes inds	
4. Ranunculus repens 5. Rumex crispus recent of Dominant Species the recept FAC-). Include species not imphological adaptations to wettar marks. (Describe disturbances, ince 50% of the dominant plants at CDROLOGY corded Data. (Describe in Remain Stream, Lake, or Tide Aenal Photograph Other X. No Recorded Data. A No Recorded Data. A No Recorded Data. (Describe in Remain Photograph Other). No Recorded Data. A No Recorded Data. (Depth of Surface Water: No Recorded Data.)	ted (*) as showing inds. "T" indicates trained variates trained in the series of the s	ce. ons, sea	30 10 50 ssonal eff regetation Weti	fects, etc.	drology Indicato Sa Sa Wa Dri Se Dra	met. Indicated turated atter Mainage cators (idized)	in Upper in Upper rks Deposits Patterns 2 or more Root Cha	r 12 inch r 18 inch ; in Wetta e require	nes nes	
Ranunculus repens 5. Rumex crispus recent of Dominant Species the Recept FAC-). Include species not orphological adaptations to wettar remarks. (Describe disturbances. Ince 50% of the dominant plants a process of the dominant plants and process. Stream, Lake, or Tide Aerial Photograph Other X. No Recorded Data A. A. No Recorded Data A. A. No Recorded Data A. Depth of Surface Water: Depth to Free Water in Pit:	ted (*) as showing inds. "T" indicates trained variates trained in the hydrophytic, the wards: The Gage in the second in the se	ce. ons, sea	30 10 50 ssonal eff regetation Weti	fects, etc.	drology Indicato Sa Sa Wa Dri Se Dra Ty Indicato	met. Indicated turated ster Ma fit Lines diment sinage sators (sidized later-States)	in Upper in Upper in Upper inks Deposits Patterns 2 or more Root Cha	r 12 inch r 18 inch in Wetta e require innels in ves	nes nes inds	
Ranunculus repens Rumex crispus Except FAC-). Include species to torphological adaptations to wettar emarks. (Describe disturbances. Ince 50% of the dominant plants a sydnormal plants a corded Data. (Describe in Rem Stream, Lake, or Tid Aerial Photograph Other X. No Recorded Data. A No Recorded Data. A No Recorded Data. (Describe in Rem Depth of Surface Water: No Recorded Data. (Describe in Rem Depth of Surface Water:	ted (*) as showing inds. "T" indicates trained variates trained in the hydrophytic, the wards: The Gage in the second in the se	ce. ons, sea	30 10 50 ssonal eff regetation Weti	fects, etc.	drology Indicato Sa Sa Wa Dri Se Dra Ty Indicato	met. Indicated turated diment ainage attors (idized later-States)	in Upper in Upper rks Deposits Patterns 2 or more Root Cha	r 12 inch r 18 inch in Wetta require innels in ves Data	nes inds id): Upper 12 ir	

一								Data Plot #	:	18
								Wetland:	,	Auburn
Project/S	Site: Aubum M	itigation Site				Date:	12/1/00			
SOILS										
Soil Sur	rvey Data:									
Map Uni	it Name: Oridi	a Silt Loam					Drainage Class	Somewhat I	DOORLY	drained
							Field Observation	ons Confirm A	Aappe	d Type?
Taxonon	ny (Subgroup):	Typic Fluvagent	s				Yes X No	。 ^	۱A	
Profile D	Description:								-	_
Depth (inches)	Horizon	Matrix Color (Munsell Moist)		Mottie	Color ell Moist)		Mottle Abundance/Con			e, Concretions, pheres, etc.
D-18	Α	10YR 3/3		-			-	s	ilt loan	n
18+	c	-					-	<u> </u>	and	
F F Remarks	Reducing Condi Gleyed or Low-(High Organic Co	Moisture Regime itions Chroma Colors ontent in Surface L I disturbances, loca		ons, etc		Listed Listed Aquic Organ	i on Local Hydric on State Hydric on National Hyd Moisture Regime iic Streaking in Si is (Explain in Rema	Soils List ric Soils List e andy Soils		
WETLA	AND DETER	MINATION								
lydrophy	ytic Vegetation	n Present?	Yes		No _	<u>x</u>	Is this	Sampling Po	oint W	/ithin a Wetlan
lydric Sc	oils Present?		Yes		No :	x	,	Yes	No	×
.,										

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): All three parameters are not met, therefore the area is not a wetland.

APPENDIX E WASHINGTON DEPARTMENT OF ECOLOGY WETLAND RATING

Wetlands Rating Field Data Form	
Background Information:	
Name of Rater: William Keill Miss Affiliation: Transcent Tuc De	nte: 10/30/00
Name of wetland (if known): Prof Scattle - Aussau 5:72 word	3 2: 2
Government Jurisdiction of wetland: FEJML (WA . STATE / CITY F A.	ue m
Location: 1/4 Section: of 1/4 S: Section: Township:	Range:
Sources of Information: (Check all sources that apply)	
Site visit: USGS Topo Map: NWI map: Aerial Photo: Soi	ls survey: 🗡
Other: Describe: 0N-Site metal Selineutine	
When The Field Data form is complete enter Category here:	
Q.1. High Quality Natural Wetland	Circle Answers
Answer this question if you have adequate information or experience to do so. If not find someone with the expertise to answer the questions. Then, if the answer to questions 1a, 1b and 1c are all NO, contact the Natural Heritage program of DNR.	
1a. Human caused disturbances.	
Is there significant evidence of human-caused changes to topography or hydrology of the wetland as indicated by any of the following conditions? Consider only changes that may have taken place in the last 5 decades. The impacts of changes done earlier have probably been stabilized and the wetland ecosystem will be close to reaching some new equilibrium that may represent a high quality wetland.	
1a1. Upstream watershed > 12% impervious. 1a2. Wetland is ditched and water flow is not obstructed. 1a3. Wetland has been graded, filled, logged. 1a4. Water in wetland is controlled by dikes, weirs, etc. 1a5. Wetland is grazed. 1a6. Other indicators of disturbance (list below)	Yes: go to Q.2 No: go to 1b.

1b Are there populations of non-native plants which are currently present, cover more than 10% of the wetland, and appear to be invading native populations? Briefly describe any non-native plant populations and Information source(s):	YES: go to Q.2 No: go to 1c. YES: go to Q.2 NO: Possible Cat. I contact DNR	
lc. Is there evidence of human-caused disturbances which have visibly degraded water quality. Evidence of the degradation of water quality include: direct (untreated) runoff from roads or parking lots; presence, or historic evidence, of waste dumps; oily sheens; the smell of organic chemicals; or lifestock use. Briefly describe:		
 Q.2. Irreplaceable Ecological Functions: Does the wetland: ♦ have at least 1/4 acre of organic soils deeper than 16 inches and the wetland is relatively undisturbed; OR [Iff the answer is NO because the wetland is disturbed briefly describe: Indicators of disturbance may include: Wetland has been graded, filled, logged: Organic soils on the surface are dried-out for more than half of the year: Wetland receives direct stormwater runoff from urban or agricultural areas.]; OR 	(NO 16 all: go to Q.3) YES go to 2a	
have a forested class greater than 1 acre;	YES: Go to 2b	
OR have characteristics of an estuarine system; OR	YES: Go to 2c	
have eel grass, floating or non-floating kelp beds?	YES: Go to 2d	
2a. Bogs and Fens Are any of the three following conditions met for the area of organic soil? 2a.1. Are Sphagnum mosses a common ground cover (>30%) and the		
cover of invasive species (see Table 3) is less than 10%?		
Is the area of sphagnum mosses and deep organic soils > 1/2 acre? Is the area of sphagnum mosses and deep organic soils 1/4-1/2 acre?	YES: Category I YES: Category II	
	NO: Go to 2a.3	
2a.2. Is there an area of organic soil which has an emergent class with at least one species from Table 2, and cover of invasive species is < 10% (see Table 3)?		
Is the area of herbaceous plants and deep organic soils > 1/2 acre? Is the area of herbaceous plants and deep organic soils 1/4-1/2 acre?	YES: Category I YES: Category II	
	NO: Go to 2a.3	

2a.3. Is the vegetation a mixture of only herbaceous plants and Sphagnum mosses with no scrub/shrub or forested classes?	
Is the area of herbaceous plants, Sphagnum, and deep organic soils > 1/2 acre? Is the area of herbaceous plants, Sphagnum, and deep organic soils 1/4-1/2 acre?	YES: Category I
	YES: Category II
	NO: Go to Q.3.
Q.2h. Mature forested wetland.	
2b.1. Does 50% of the cover of upper forest canopy consist of evergreen trees older than 80 years or deciduous trees older than 50 years? Note: The size of trees is often not a measure of age, and size cannot be used as a surrogate for age (see guidance).	YES: Category I NO: Go to 2b.2
2b.2. Does 50% of the cover of forest canopy consist of evergreen trees older than 50 years, AND is the structural diversity of the forest high as characterized by an additional layer of trees 20'-49' tall, shrubs 6' - 20', tall, and a herbaceous groundcover'?	YES: Go to 2b.3 NO: Go to Q.3
2b.3. Does < 25% of the areal cover in the herbaceous/groundcover or the shrub layer consist of invasive/exotic plant species from the list on p. 19?	YES: Category I NO: Go to Q.3
Q.2c. Estuarine wetlands.	
2c1. Is the wetland listed as National Wildlife Refuge. National Park. National Estuary Reserve. Natural Area Preserve. State Park. or Educational. Environmental or Scientific Reserves designated under WAC 332-30-151?	YES: Category I NO: Go to 2c.2
2c.2. Is the wetland > 5 acres; Note: If an area contains patches of salt tolerant vegetation that are 1) less than 600 feet apart and that are separated by mudflats that go dry on a Mean Low Tide, or 2) separated by tidal channels that are less than 100 feet wide; all the vegetated areas are to be considered together in calculating the wetland area.	YES: Category I
or is the wetland 1-5 acres;	YES: Go to 2c.3
or is the wetland < 1 acre?	YES: Go to 2c.4

2c.5. Does the wetland meet at least 3 of the following 4 criteria:	YES: Category I NO: Category II
 minimum existing evidence of human related disturbance such as diking, ditching, filling, cultivation, grazing or the presence of non- native plant species (see guidance for definition); 	
- surface water connection with tidal saltwater or tidal freshwater;	
- at least 75% of the wetland has a 100' buffer of ungrazed pasture, open water, shrub or forest;	
- has at least 3 of the following features: low marsh; high marsh; tidal channels; lagoon(s); woody debris; or contiguous freshwater wetland.	
2c.4. Does the wetland meet all of the four criteria under 2c3. (above)?.	YES: Category II NO: Category III
Q.2d. Eel Grass and Kelp Beds. 2d.1. Are eel grass beds present?	YES: Category I NO: go to 2d.2
2d.2. Are there floating or non-floating kelp bed(s) present with greater than 50% macro algal cover in the month of August or September?	YES: Category I NO: Category II
Q.3. Category IV wetlands. 3a. Is the wetland: less than 1 acre and. hydrologically isolated and, comprised of one vegetated class that is dominated (> 80% areal cover) by one species from Table 3 (page 19) or Table 4 (page 20)	YES: Category IV SD ≥ go to 3b
3b. Is the wetland: less than two acres and, hydrologically isolated, with one vegetated class, and > 90% of areal cover is any combination of species from Table 3 (page 19)	YES: Category IV
3c. Is the wetland excavated from upland and a pond smaller than 1 acre without a surface water connection to streams, lakes, rivers, or other wetland, and has < 0.1 acre of vegetation.	YES: Category IV

Q.4. Significant habitat value. Answer all questions and enter data requested. 4a. Total wetland area Estimate area, select from choices in the near-right column far column: Enter acreage of wetland here:acres, and source:		Circle scores acres > 200 4()- 2(X) 1() - 4() 5 - 1() 1 - 5 ().1 - 1 < ().1	that qualify points 6 4 3 2 1
4b. Wetland classes: Circle the wetland classes below to Open Water: if the area of open water is > 1/4 acre Aquatic Beds: if the area of aquatic beds > 1/4 acre.	that qualify:		
Emergent: if the area of emergent class is > 1/4 acre.		# of classes	<u>Points</u> 0
Scrub-Shrub: if the area of scrub-shrub class is > 1/4 acr	re.	2	3
Forested: if area of forested class is > 1/4 acre,		4	8
Add the number of wetland classes, above, that qualify, a score according to the columns at right. e.g. If there are 4 classes (aquatic beds, open water, emer scrub- shrub), you would circle 8 points in the far right of	rgent &		
4c. Plant species diversity. For each wetland class (at right) that qualifies in 4b above, count the number of different plant species you can find that cover more than 5% of the ground. You do not have to name them.	Class Aquatic Bed	# species in class 1 2 3 > 3	Points () 1 2 3
Score in column at far right: e.g. If a wetland has an aquatic bed class with 3 species, an emergent class with 4 species and a scrub-shrub class with 2 species you would circle 2, 2, and 1 in the far column. Note: Any plant species with a cover of > 5% qualifies for points within a class, even those that are not of that class.	Emergent	1 2-3 4-5 > 5	0 1 2 3
	Scrub-Shrub	1 2 3-4 > 4	() 1 2 3
	Forested	1 2 3-4 > 4	() 1 2 3

classes is present within the finances > 50° tail -trees 20° 49° tail -shrubsherbaceous ground cover. Also add i point if there is any	"open water" or "aquatic bed" classed area (ie. there is no scrub/shrub or	YES - 1 YES - 1 YES - 1 YES - 1
wetland classes is high, moder amount of interspersion falls in	below whether interspersion between ate, low or none? If you think the a between the diagrams score accordingly to finsterspersion would score a 4, at would score a 2)	Hign - 5 Moderate - 3 Low - 1
none	low	low
moderate	moderate	high
Is there evidence, that the open Is a heron rookery located with Are raptor nest/s located within Are there at least 3 standing de 10" in diameter at "breast heigh Are there at least 3 downed log > 6", for at least 10, in length? Are there areas evegetated or up	a 300"? ad trees (snags) per acre greater than at" (DBH)? s per acre with a diameter avegetated) within the wetland that are at of the year, and the wetland has not	YES = 2 YES = 1 YES = 1 YES = 1 YES = 1

4g. Connection to streams. (Score one answer only.) 4g.1. Does the wetland provide habitat for fish at any time of the year AND does it have a perennial surface water connection to a fish bearing stream.	YES = 6
4g.2 Does the wetland provide fish habital seasonally AND does it have a seasonal surface water connection to a fish hearing stream.	YES = 4
4g.3 Does the wetland function to export organic matter through a surface water connection at all times of the year to a perennial stream.	YES = 4
4g.4 Does the wetland function to export organic matter through a surface water connection to a stream on a seasonal basis?	YES = 2
4h. Buffers. Score the existing buffers on a scale of 1-5 based on the following four descriptions. If the condition of the buffers do not exactly match the description, score either a point higher or lower depending on whether the buffers are less or more degraded.	
Forest, scrub, native grassland or open water buffers are present for more than 100° around 95% of the circumference.	Score = 5
Forest, scrub, native grassland, or open water buffers wider than 100° for more than 1/2 of the wetland circumference, or a forest, scrub, grasslands, or open water buffers for more than 50° around 95% of the circumference.	Score = 3
Forest, scrub, native grassland, or open water buffers wider than 100' for more than 1/4 of the wetland circumference, or a forest, scrub, native grassland, or open water buffers wider than 50' for more than 1/2 of the wetland circumference.	Score = 2
No roads, buildings or paved areas within 100° of the wetland for more than 95% of the wetland circumference.	Score = 2
No roads, buildings or paved areas within 25' of the wetland for more than 95% of the circumference, or No roads buildings or paved areas within 50' of the wetland for more than 1/2 of the wetland circumference.	Score = 1
Paved areas, industrial areas or residential construction (with less than 50' between houses) are less than 25 feet from the wetland for more than 95% of the circumference of the wetland.	Score = ()

 Connection to other habitat areas: Select the description which best matches the site being evaluated. 		
-Is the wetland connected to, or part of, a riparian corridor at least 100' wide connecting two or more wetlands; or, is there an upland connection present >100' wide with good forest or shrub cover (>25% cover) connecting it with a Significant Habitat Area?	YES = 5	
- Is the wetland connected to any other Habitat Area with either 1) a forested/shrub corridor $< 100'$ wide, or 2) a a corridor that is $> 100'$ wide, but has a low vegetative cover less than 6 feet in height?	YES = 3	
-Is the wetland connected to, or a part of, a riparian corridor between 50 - 100' wide with scrub/shrub or forest cover connection to other wetlands?	YES = 3	
- Is the wetland connected to any other Habitat Area with narrow corridor (<100) of low vegetation (< 6' in height)?	YES = 1	
- Is the wetland and its buffer (if the buffer is less than 50' wide) completely isolated by development (urban, residential with a density greater than 2/acre, or industrial)?	YES = ()	
Now add the scores circled (for Q.5a - Q.5i above) to get a total. Is the Total greater than or equal to 22 points? YES = Category II NO = Category III		

Wetlands Rating Field Data Form	
Background Information:	
Name of Rateriolition KIETOOL Affiliation: PARAMETIT JUL D	ate: 12/1/6*
Name of wetland (if known): Pon- & Stattle - Aubim site wer	1-63
Government Jurisdiction of wetland: Felmal (LA State (City & Astrono	>
Location: 1/4 Section:of 1/4 S: Section: Township:	Range:
Sources of Information: (Check all sources that apply)	
Site visit:USGS Topo Map: NWI map: Aerial Photo: Soi	ls survey: 💳
Other: Describe: on sire werd delimerion	
When The Field Data form is complete enter Category here:	
Q.1. High Quality Natural Wetland	Circle Answers
Answer this question if you have adequate information or experience to do so. If not find someone with the expertise to answer the questions. Then, if the answer to questions 1a, 1b and 1c are all NO, contact the Natural Heritage program of DNR.	
1a. Human caused disturbances.	
Is there significant evidence of human-caused changes to topography or hydrology of the wetland as indicated by any of the following conditions? Consider only changes that may have taken place in the last 5 decades. The impacts of changes done earlier have probably been stabilized and the wetland ecosystem will be close to reaching some new equilibrium that may represent a high quality wetland.	
1a1. Upstream watershed > 12% impervious. 1a2. Wetland is ditched and water flow is not obstructed. 1a3. Wetland has been graded, filled, logged. 1a4. Water in wetland is controlled by dikes, weirs, etc. 1a5. Wetland is grazed. 1a6. Other indicators of disturbance (list below) France Secretary well places.	Yes: go to Q.2 No: go to 1b.

1b Are there populations of non-native plants which are currently present, cover more than 10% of the wetland, and appear to be invading native populations? Briefly describe any non-native plant populations and Information source(s):	YES: go to Q.2 No: go to 1c.
lc. Is there evidence of human-caused disturbances which have visibly degraded water quality. Evidence of the degradation of water quality include: direct (untreated) runoff from roads or parking lots; presence, or historic evidence, of waste dumps; oily sheens; the smell of organic chemicals; or lifestock use. Briefly describe:	YES: go to Q.2 NO: Possible Cat. I contact DNR
Q.2. Irreplaceable Ecological Functions: Does the wetland: have at least 1/4 acre of organic soils deeper than 16 inches and the wetland is relatively undisturbed; OR [If the answer is NO because the wetland is disturbed briefly describe: Indicators of disturbance may include: - Wetland has been graded, filled, logged; - Organic soils on the surface are dried-out for more than half of the year; - Wetland receives direct stormwater runoff from urban or agricultural areas.]; OR	(NO to all: go to Q.3) YES go to 2a
have a forested class greater than I acre:	YES: Go to 2h
OR have characteristics of an estuarine system;	YES: Go to 2c
OR have eel grass, floating or non-floating kelp beds?	YES: Go to 2d
2a. Bogs and Fens Are any of the three following conditions met for the area of organic soil?	
2a.1. Are Sphagnum mosses a common ground cover (>30%) and the cover of invasive species (see Table 3) is less than 10%?	
Is the area of sphagnum mosses and deep organic soils > 1/2 acre? Is the area of sphagnum mosses and deep organic soils 1/4-1/2 acre?	YES: Category I YES: Category II
	NO: Go to 2a.3
2a.2. Is there an area of organic soil which has an emergent class with at least one species from Table 2, and cover of invasive species is < 10% (see Table 3)?	
Is the area of herbaceous plants and deep organic soils > 1/2 acre? Is the area of herbaceous plants and deep organic soils 1/4-1/2 acre?	YES: Category I YES: Category II
	NO: Go to 2a.3

2c.3. Does the wetland meet at least 3 of the following 4 criteria:	YES: Category I NO: Category II
 minimum existing evidence of human related disturbance such as diking, ditching, filling, cultivation, grazing or the presence of non- native plant species (see guidance for definition); 	
- surface water connection with tidal saltwater or tidal freshwater;	
- at least 75% of the wetland has a 100' buffer of ungrazed pasture, open water, shrub or forest;	
- has at least 3 of the following features: low marsh; high marsh; tidal channels; lagoon(s); woody debris; or contiguous freshwater wetland.	
2c.4. Does the wetland meet all of the four criteria under 2c3. (ahove)?	YES: Category II NO: Category III
Q.2d. Eel Grass and Keip Beds. 2d.1. Are eel grass beds present?	YES: Category I NO: go to 2d.2
2d.2. Are there floating or non-floating kelp bed(s) present with greater than 50% macro algal cover in the month of August or September?	YES: Category I NO: Category II
Q.3. Category IV wetlands. 3a. Is the wetland: less than 1 acre and. hydrologically isolated and, comprised of one vegetated class that is dominated (> 80% areal cover) hy one species from Table 3 (page 19) or Table 4 (page 20)	VES: Category IV NO: go to 3h
3b. Is the wetland: less than two acres and, hydrologically isolated, with one vegetated class, and > 90% of areal cover is any combination of species from Table 3 (page 19)	YES: Category IV NO: go to 3c
3c. Is the wetland excavated from upland and a pond smaller than 1 acre without a surface water connection to streams, lakes, rivers, or other wetland, and has < 0.1 acre of vegetation.	YES: Category IV NO: go to Q.4

2a.3. Is the vegetation a mixture of only herbaceous plants and Sphagnum mosses with no scrub/shrub or forested classes?		
Is the area of herbaceous plants, Sphagnum, and deep organic soils > 1/2 acre? Is the area of herbaceous plants, Sphagnum, and deep organic	YES: Category I	
soils 1/4-1/2 acre?	YES: Category II	
	NO: Go to Q.3.	
Q.2b. Mature forested wetland.		
2h.1. Does 50% of the cover of upper forest canopy consist of evergreen trees older than 80 years or deciduous trees older than 50 years? Note: The size of trees is often not a measure of age, and size cannot be used as a surrogate for age (see guidance).	YES: Category I NO: Go to 2b.2	
2b.2. Does 50% of the cover of forest canopy consist of evergreen trees older than 50 years. AND is the structural diversity of the forest high as characterized by an additional layer of trees 20'-49' tall, shrubs 6' - 20', tall, and a herbaceous groundcover'.	YES: Go to 2b.3 NO: Go to Q.3	
2b.3. Does < 25% of the areal cover in the herbaceous/groundcover or the shrub layer consist of invasive/exotic plant species from the list on p. 19?	YES: Category I NO: Go to Q.3	
Q.2c. Estuarine wetlands.		
2c1. Is the wetland listed as National Wildlife Refuge. National Park, National Estuary Reserve, Natural Area Preserve, State Park, or Educational. Environmental or Scientific Reserves designated under WAC 332-30-151?	YES: Category I NO: Go to 2c.2	
2c.2. Is the wetland > 5 acres: Note: If an area contains patches of salt tolerant vegetation that are 1) less than 600 feet apart and that are separated by mudflats that go dry on a Mean Low Tide, or 2) separated by tidal channels that are less than 100 feet wide; all the vegetated areas are to be considered together in calculating the wetland area.	YES: Category I	
or is the wetland 1-5 acres;	YES: Go to 2c.3	
or is the wetland < 1 acre?	YES: Go to 2c.4	

Q.4. Significant habitat value. Answer all questions and enter data requested. 4a. Total wetland area Estimate area, select from choices in the near-right column: Enter acreage of wetland here: acres, and source:		acres	s that qualify points 6 5 4 3 2 1
4b. Wetland classes: Circle the wetland classes below Open Water: if the area of open water is > 1/4 acre Aquatic Beds: if the area of aquatic beds > 1/4 acre.	that qualify:	# of classes	Printe
Emergent: if the area of emergent class is > 1/4 acre. Scrub-Shrub: if the area of scrub-shrub class is > 1/4 ac	re.	1	0
Forested: if area of forested class is > 1/4 acre.	sted: if area of forested class is > 1/4 acre,		6 8 10
Add the number of wetland classes, above, that qualify, score according to the columns at right, e.g. If there are 4 classes (aquatic beds, open water, eme scrub- shrub), you would circle 8 points in the far right	rgent &		
4c. Plant species diversity. For each wetland class (at right) that qualifies in 4b above, count the number of different plant species you can find that cover more than 5% of the ground. You do not have to name them.	<u>Class</u> # Aquatic Bed	1 2 3 > 3	Points () 1 2 3
Score in column at far right: e.g. If a wetland has an aquatic bed class with 3 species, an emergent class with 4 species and a scrub-shrub class with 2 species you would circle 2, 2, and 1 in the far column. Note: Any plant species with a cover of > 5%		1 2-3 4-5 > 5	0 1 2 3
qualifies for points within a class, even those that are not of that class.	Scrub-Shrub	1 2 3-4 > 4	0 1 2 3
	Forested	1 2 3-4 > 4	0 1 2 3

4d. Structural diversity.			
	ass, add 1 point if each of the following		
	prested class and is larger than 1/4 acre:	l	YES - !
-trees > 50' tall		i	YES - 1
-trees 20' 40' tall		i	YES - 1
-snrubs.) 	YES - 1
-herbaceous ground cover.	"open water" or "aquatic bed" class	:	۱ - س
	d area (ie. there is no scrub/shrub or	:	
emergent vegetation between t		:	YES - 1
4e. Decide from the diagrams	below whether interspersion between	1	High - 5
_	ue, low or none? If you think the	1	Moderate - 3
T	between the diagrams score accordingly		Low - 1
	of insterspersion would score a 4,		None - 0
while a moderately low amoun	t would score a 2)	_	
none	low	low	
moderate	moderate	high	
4f. Habitat features.			
Answer questions below, circle	features that apply, and score to right:		
Is there evidence that the open (or standing water was caused by beavers		YES = 2
ls a heron rookery located within		1	YES = 1
Are raptor nest/s located within	300"?		YES = I
	d trees (snags) per acre greater than		
10" in diameter at "breast height	"(DBH)".		YES = I
Are there at least 3 downed logs	per acre with a diameter		}
> 6" for at least 10" in length?			YES = 1
Are there areas (vegetated or un-	vegetated) within the wetland that are		
conded for at least 4 months out	of the year, and the wetland has not		
qualified as having an open water	er class in Question 4b. ?		YES = 2
		1	1

4g. Connection to streams. (Score one answer only.) 4g.1. Does the wetland provide habitat for fish at any time of the year AND does it have a perennial surface water connection to a fish bearing stream.	YES = 6
4g.2 Does the wetland provide fish habitat seasonally AND does it have a seasonal surface water connection to a fish hearing stream.	YES = 4
4g.3 Does the wetland function to export organic matter through a surface water connection at all times of the year to a perennial stream.	YES = 4
4g.4 Does the wetland function to export organic matter through a surface water connection to a stream on a seasonal basis?	YES = 2
4h. Buffers. Score the existing buffers on a scale of 1-5 based on the following four descriptions. If the condition of the buffers do not exactly match the description, score either a point higher or lower depending on whether the buffers are less or more degraded.	
Forest, scrub, native grassland or open water buffers are present for more than 100 around 95% of the circumference.	Score = 5
Forest, scrub, native grassland, or open water buffers wider than 100° for more than 1/2 of the wetland circumference, or a forest, scrub, grasslands, or open water buffers for more than 50° around 95% of the circumference.	Score = 3
Forest, scrub, native grassland, or open water buffers wider than 100° for more than 1/4 of the wetland circumference, or a forest, scrub, native grassland, or open water buffers wider than 50° for more than 1/2 of the wetland circumference.	Score = 2
No roads, buildings or paved areas within 100° of the wetland for more than 95% of the wetland circumference.	Score = 2
No roads, buildings or paved areas within 25' of the wetland for more than 95% of the circumference, or No roads buildings or paved areas within 50' of the wetland for more than 1/2 of the wetland circumference.	Score = 1
Paved areas, industrial areas or residential construction (with less than 50° between houses) are less than 25 feet from the wetland for more than 95% of the circumference of the wetland.	Score = ()

4i. Connection to other habitat areas:	
Select the description which best matches the site being evaluated.	
-is the wetland connected to, or part of, a riparian corridor at least 1(X) wide connecting two or more wetlands; or, is there an upland connection present >1(X) wide with good forest or shrub cover (>25% cover) connecting it with a Significant Habitat Area?	YES = 5
- Is the wetland connected to any other Habitat Area with either 1) a forested/shrub corridor < 100' wide, or 2) a a corridor that is > 100' wide, but has a low vegetative cover less than 6 feet in height?	YES = 3
-Is the wetland connected to, or a part of, a riparian corridor between 50 - 100° wide with scrub/shrub or forest cover connection to other wetlands?	YES = 3
- Is the wetland connected to any other Habitat Area with narrow corridor (<1007) of low vegetation (< 6' in height)?	YES = 1
- Is the wetland and its buffer (if the buffer is less than 50° wide) completely isolated by development (urban, residential with a density greater than 2/acre, or industrial)?	YES = ()

Now add the scores circled (for Q.5a - Q.5i above) to get a total.

Is the Total greater than or equal to 22 points?

YES = Category II

NO = Category III

APPENDIX B FIELD DATA SHEETS

(bound separately)

APPENDIX C PRIOR CONVERTED CROPLANDS AT THE VACCA FARM SITE

APPENDIX C PRIOR CONVERTED CROPLAND

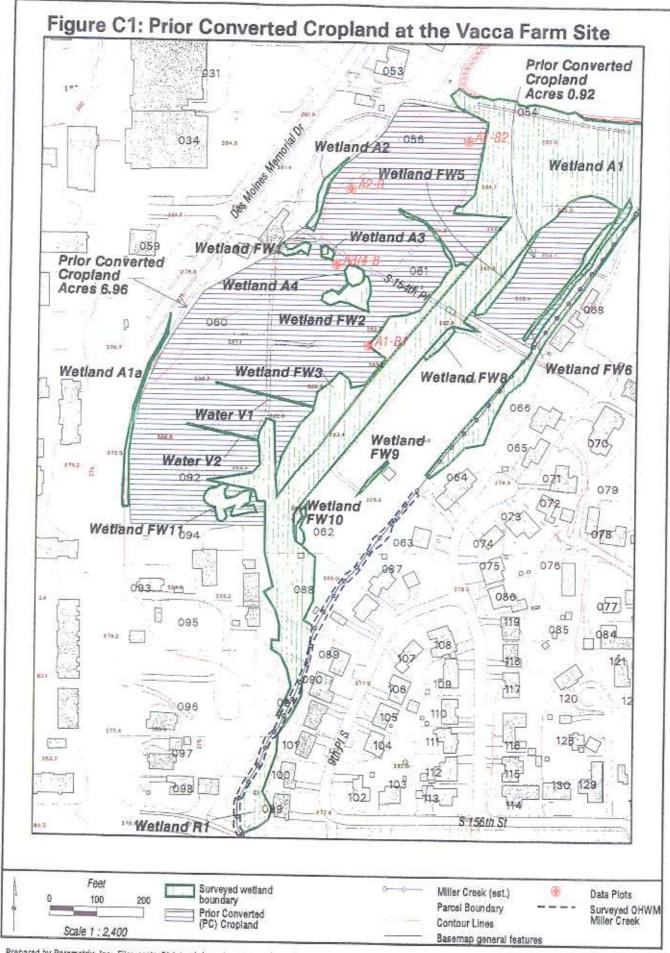
Parametrix, Inc. staff conducted a review of the farming history on several parcels of farmland in the Port of Seattle's acquisition area (referred to as Vacca Farm) to classify these areas as upland, farmed wetland (FW), prior converted (PC) cropland, or wetland. This review included an evaluation of aerial photographs, field studies during 1998 and 1999, discussions with local landowners, and contacting the U.S. Department of Agriculture (USDA). The Vacca Farm was visited on several occasions throughout the rainy seasons of 1998 and 1999 to determine the extent of inundation and soil saturation. Areas within the Vacca Farm that satisfy the criteria for farmed wetlands were staked and surveyed in the field. Areas that meet the farmed wetland criteria are described on pages 3-18 and 3-19 in the report text and Maps 1 and 4 in Appendix D.

A total of 7.88 acres of actively farmed area within the Vacca Farm parcels were found to meet the criteria for PC cropland (see Figure B.1 and attached data sheets). These areas have hydric soils and soil saturation within 12 inches of the soil surface for more than 15 consecutive days during the growing season. It is likely that these areas were wetlands before being converted to active farmland. However, these areas lacked inundation for at least 15 consecutive days during the early growing season. They do not meet the criteria for farmed wetlands according to the Food Security Act (Section 514.22).

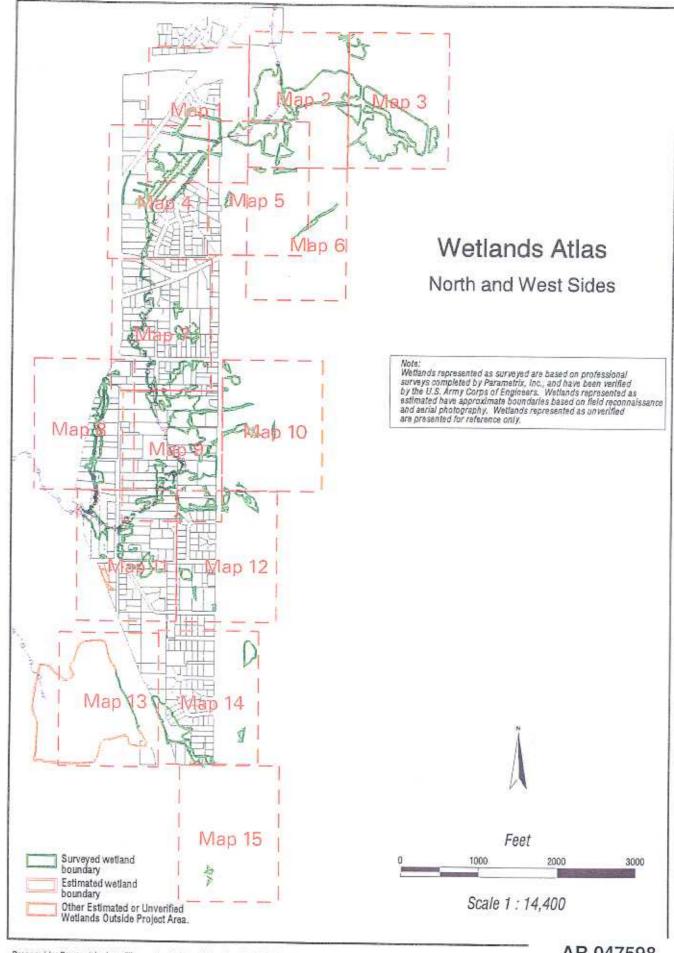
A system of tile drains has altered the soil saturation within the Vacca Farm site. However, saturation was observed within the prior converted area for greater than 14 consecutive days during the growing season during several site visits in 1998 and 1999. Portions of the PC area near Wetland A1, in the lowest portions of the site, remain saturated for much of the growing season. Other areas along the western edge of the site are better drained and soils are saturated during the winter and early spring months. Most of the PC areas are within the 100-year floodplain of Miller Creek and are subjected to periodic, short-term (typically 1 to several days) inundation during storm events.

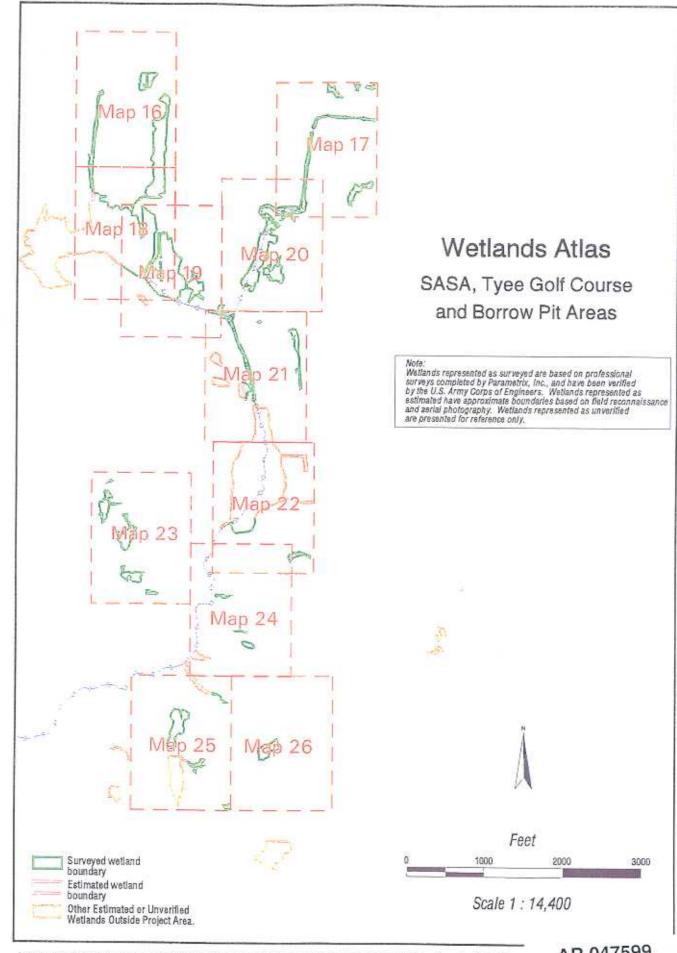
The soils found in the prior converted cropland generally have a 6-inch till (Ap) layer of black (10YR 2/1) silt loam or highly organic loam over a highly organic loam or peat. The sub-soils range from black to dark yellowish brown (10YR 3/4) to gray (10YR 6/1) with mottles. Lenses of sands were also found in the sub-soil, indicating historic flooding.

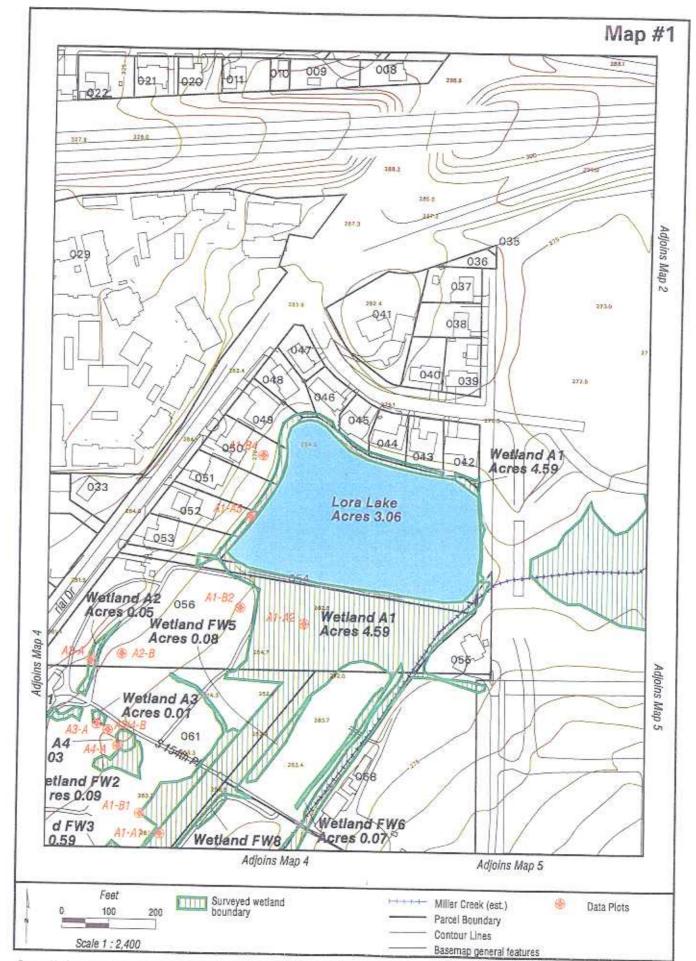
Other farmed areas in the Vacca Farm site that lacked wetland hydrology or soil indicators were not considered or PC cropland (see Figure B.1). These areas include portions of Parcel 62 and the eastern farmed area of Parcel 68. Parcel 62 had been filled with approximately 3 feet of sandy loam obtained from the Highline High School expansion in the 1970s. The eastern farmed area of Parcel 68 is a well-drained upland.

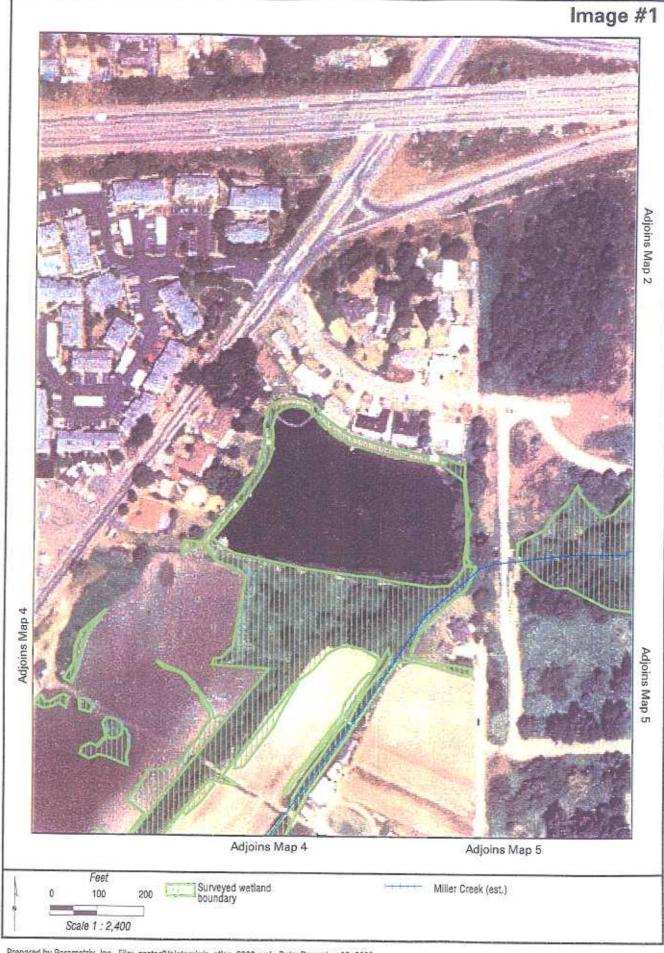


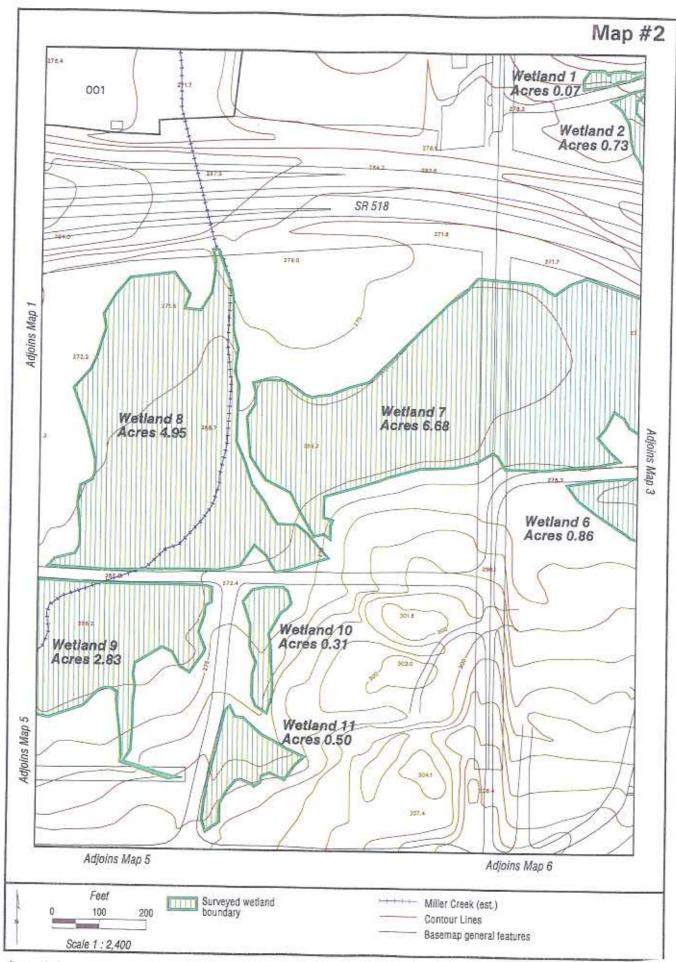
APPENDIX D MAP ATLAS

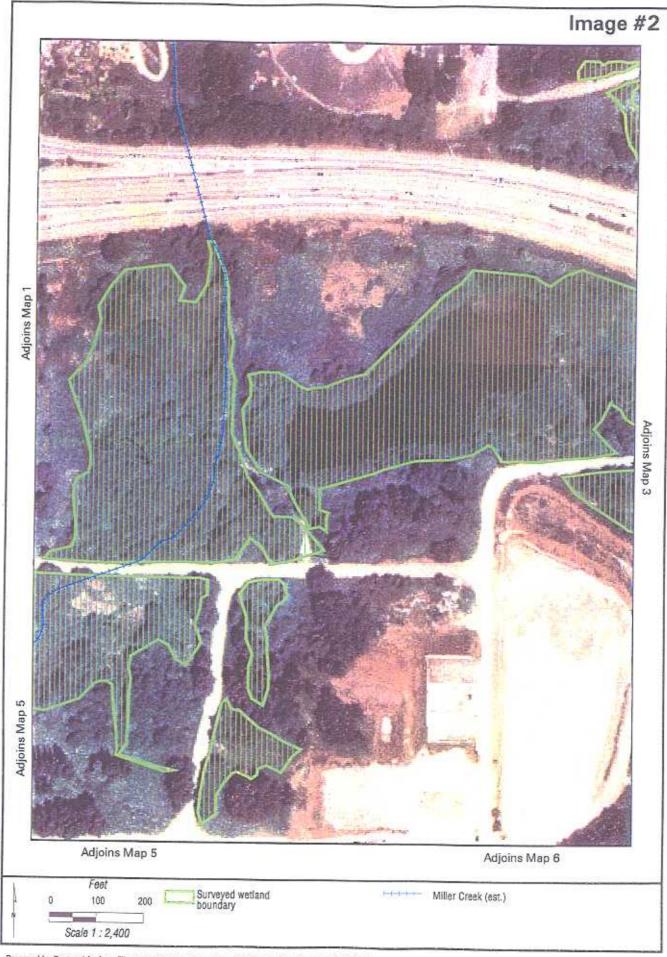


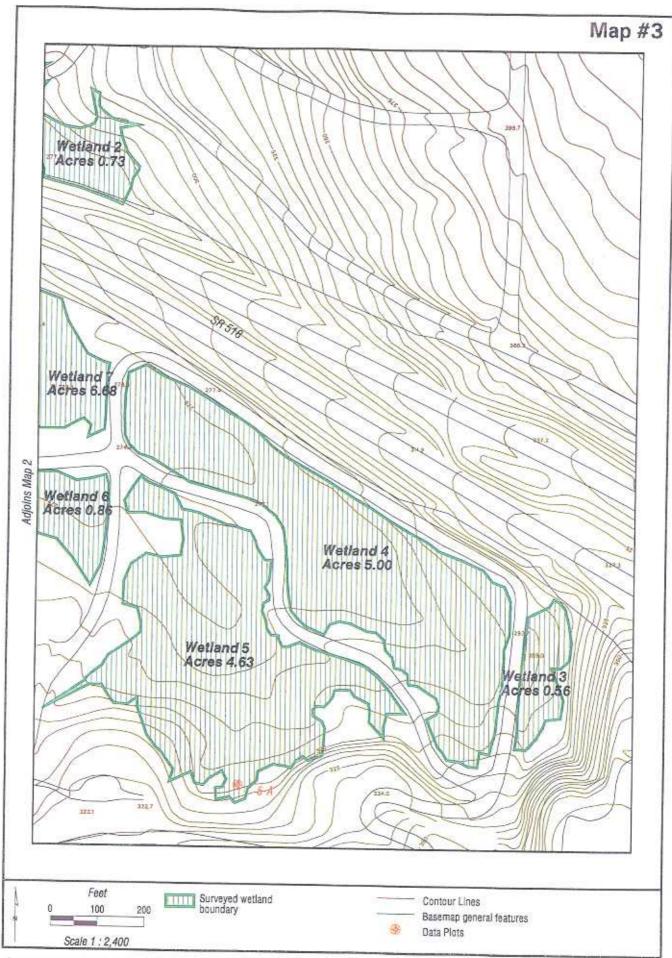


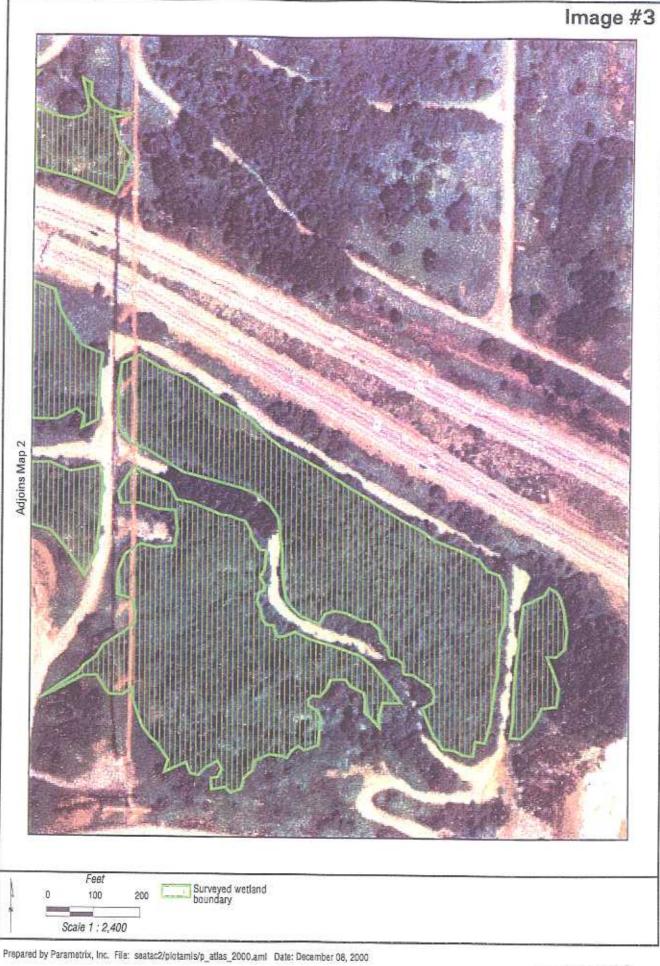


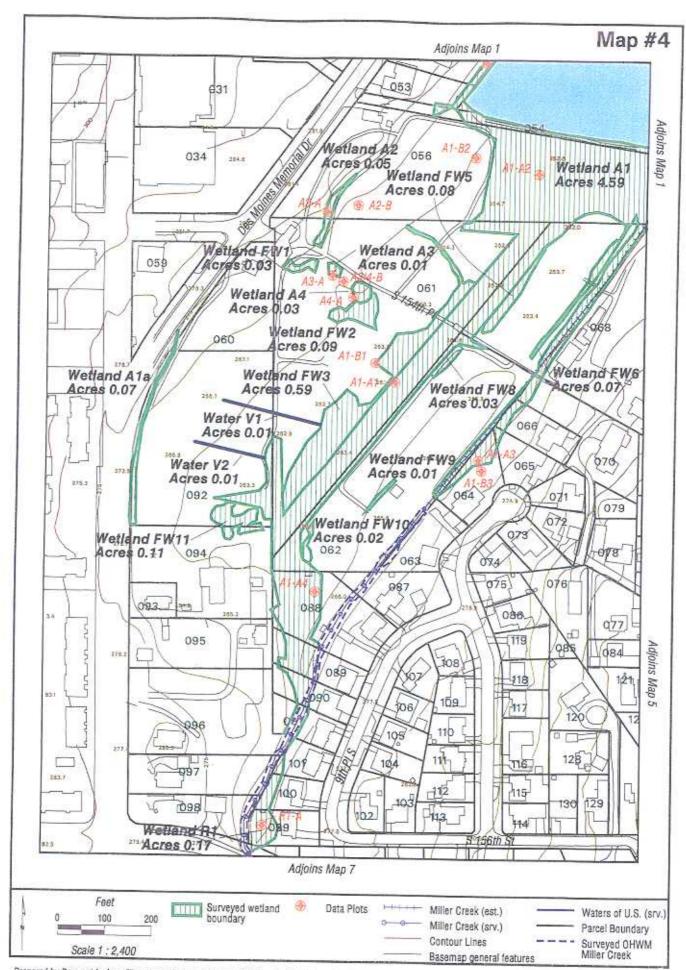


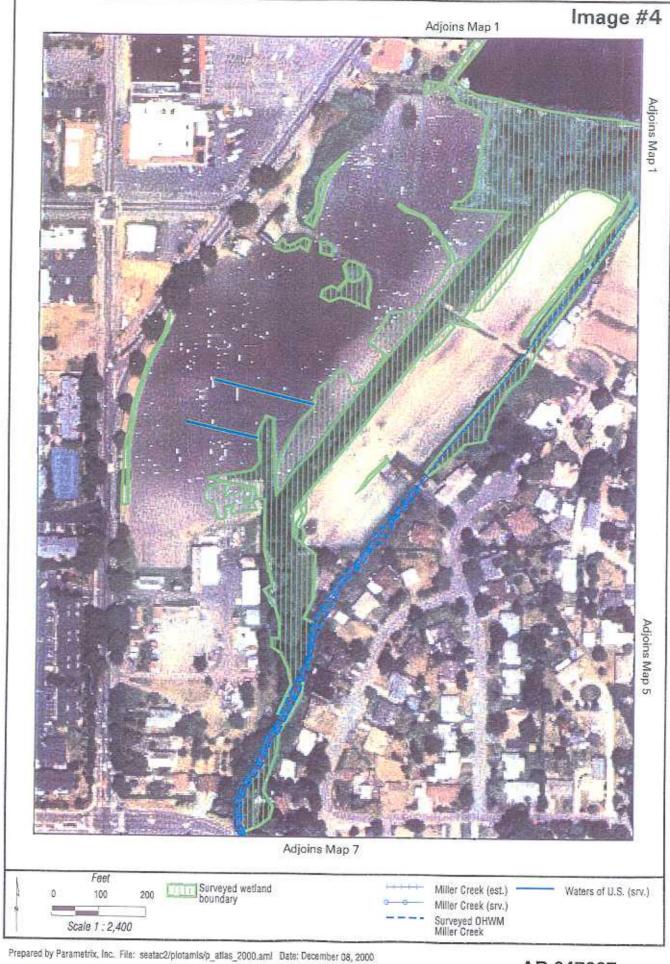


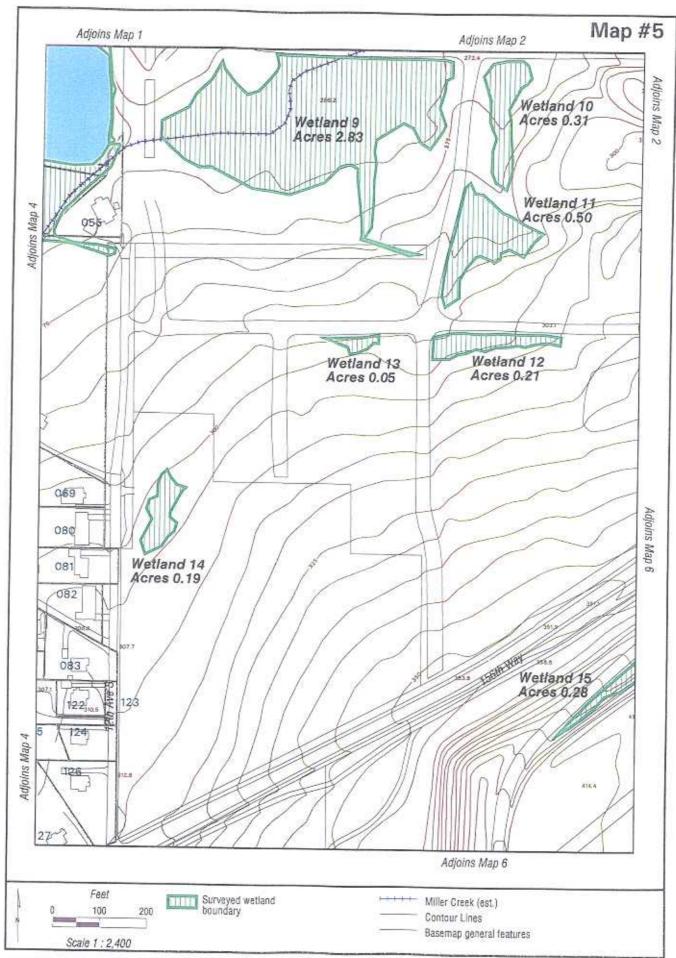


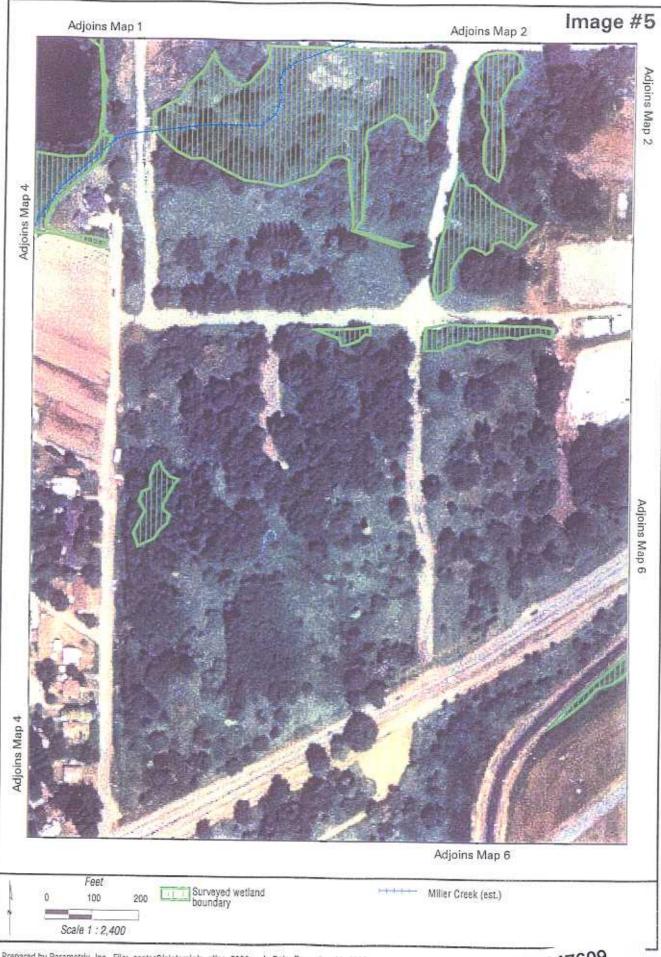


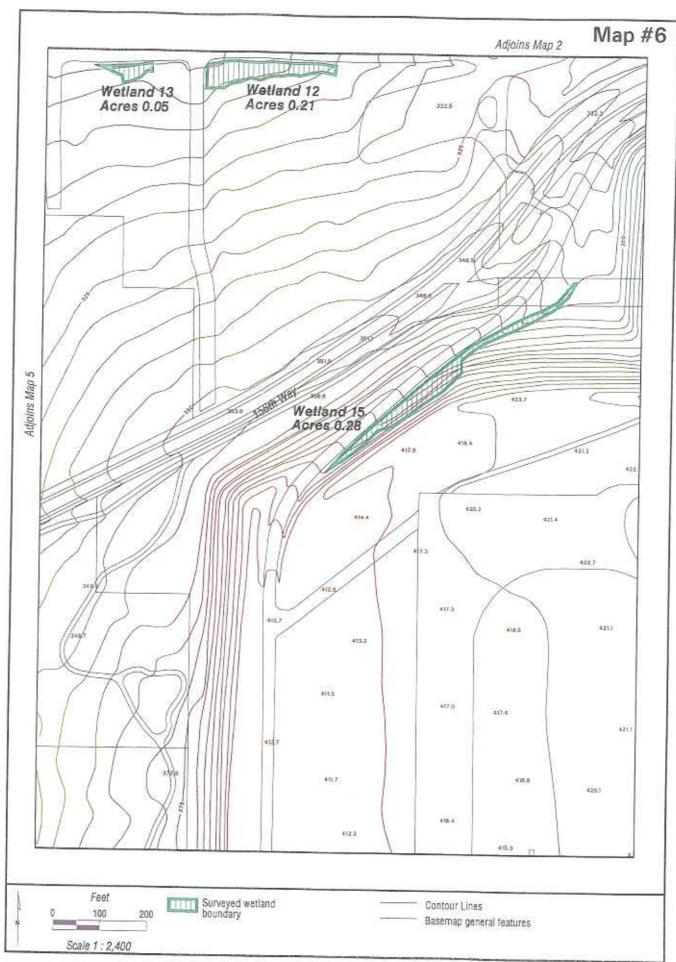


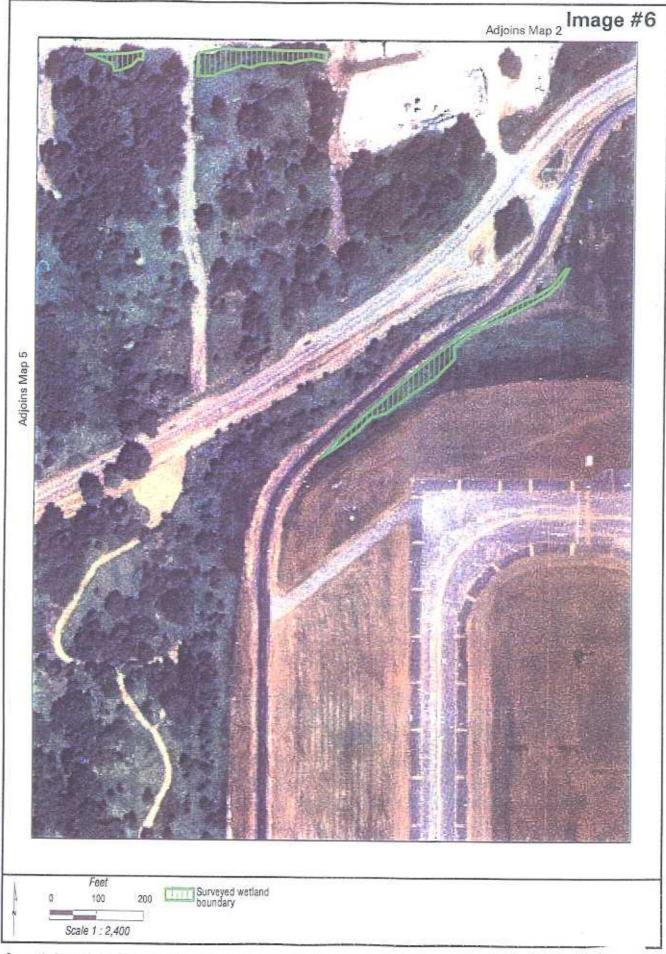


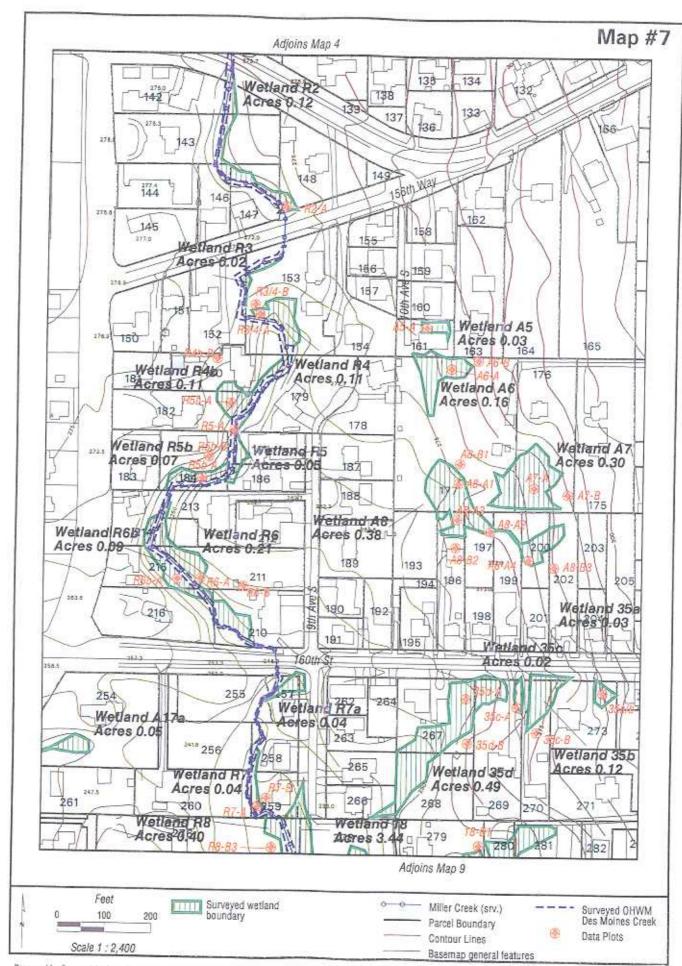


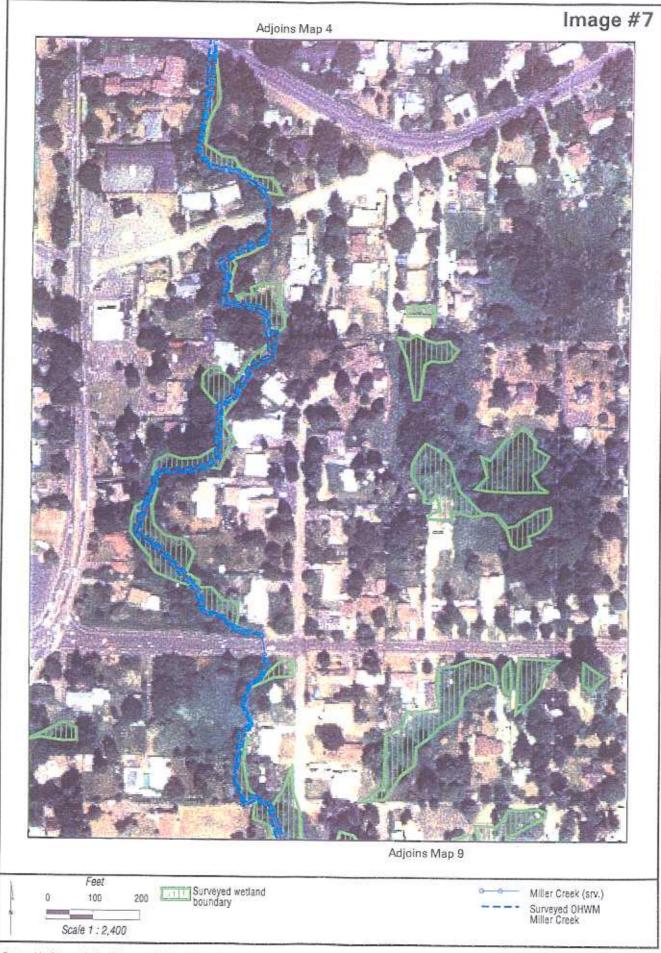


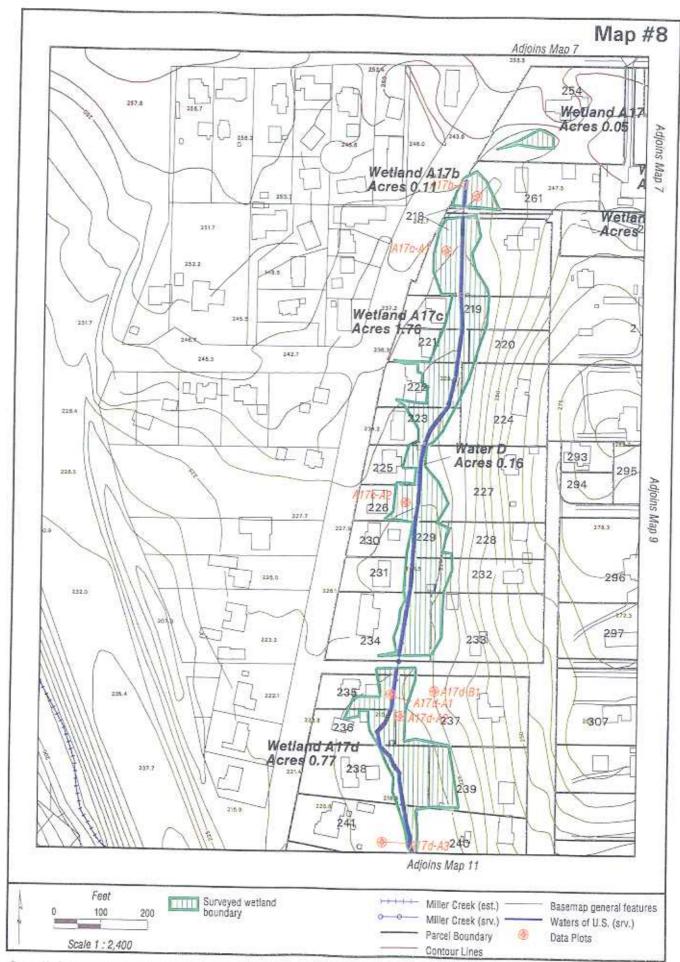


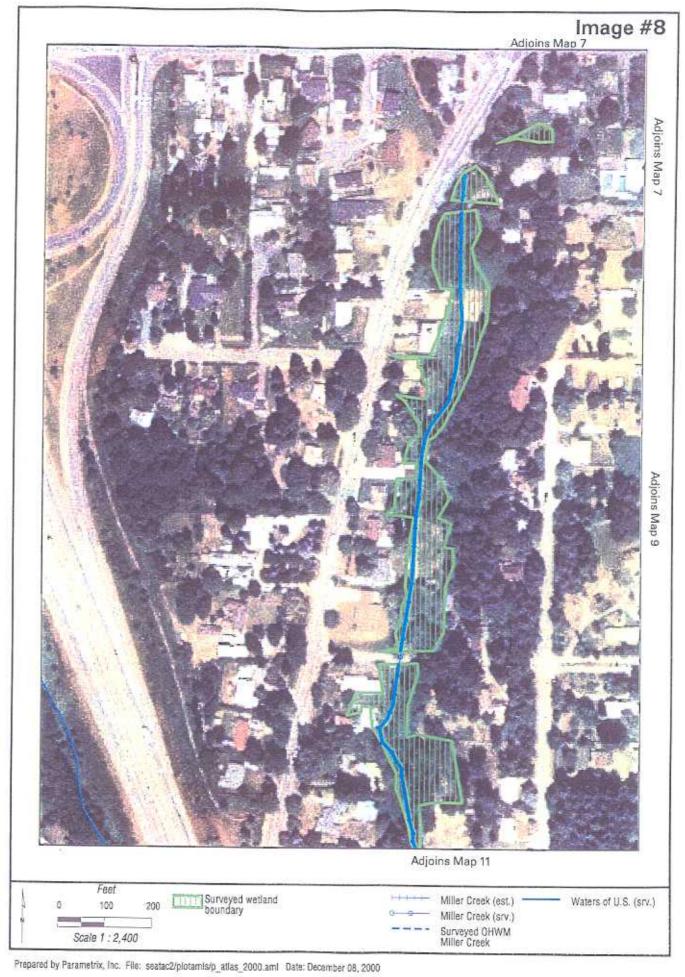


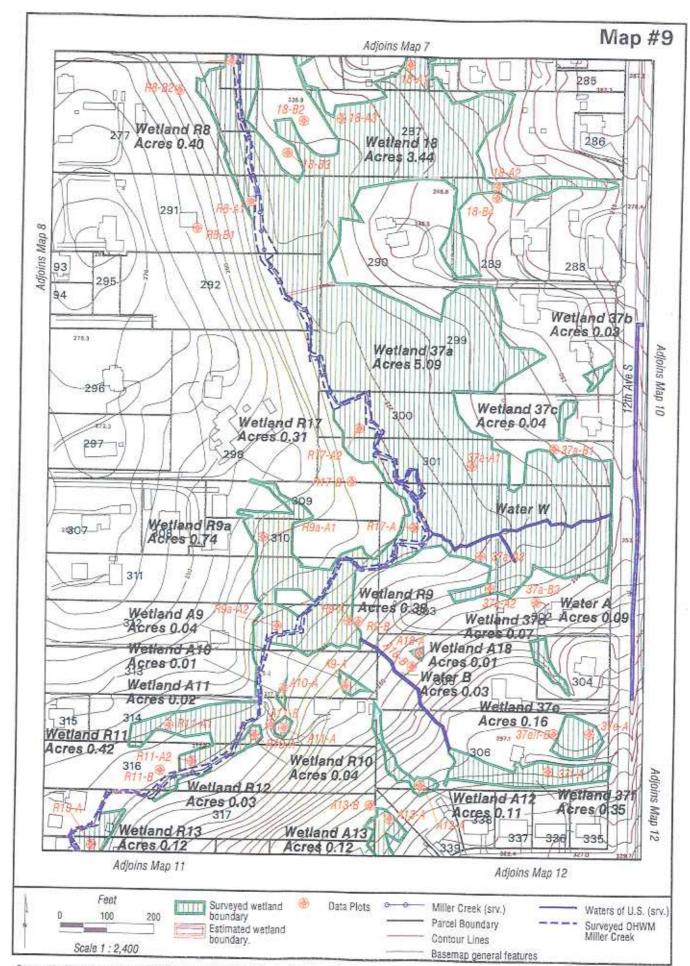


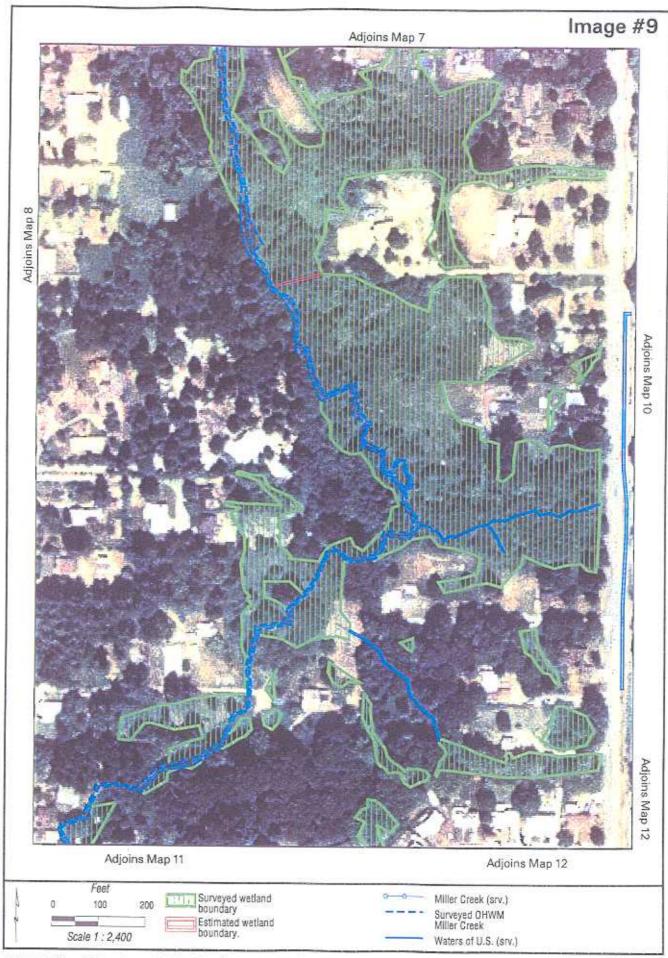


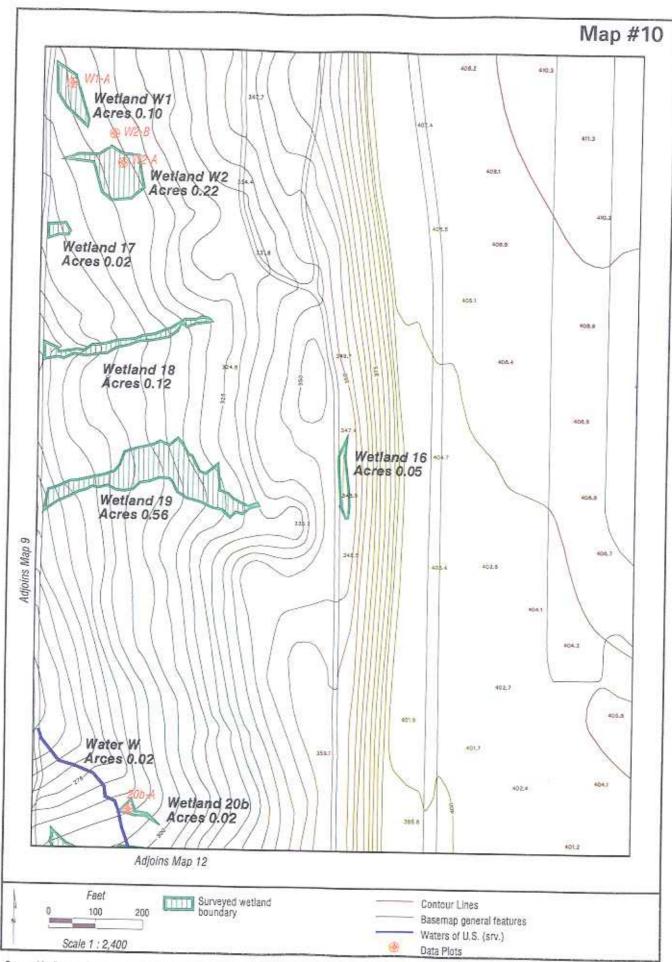


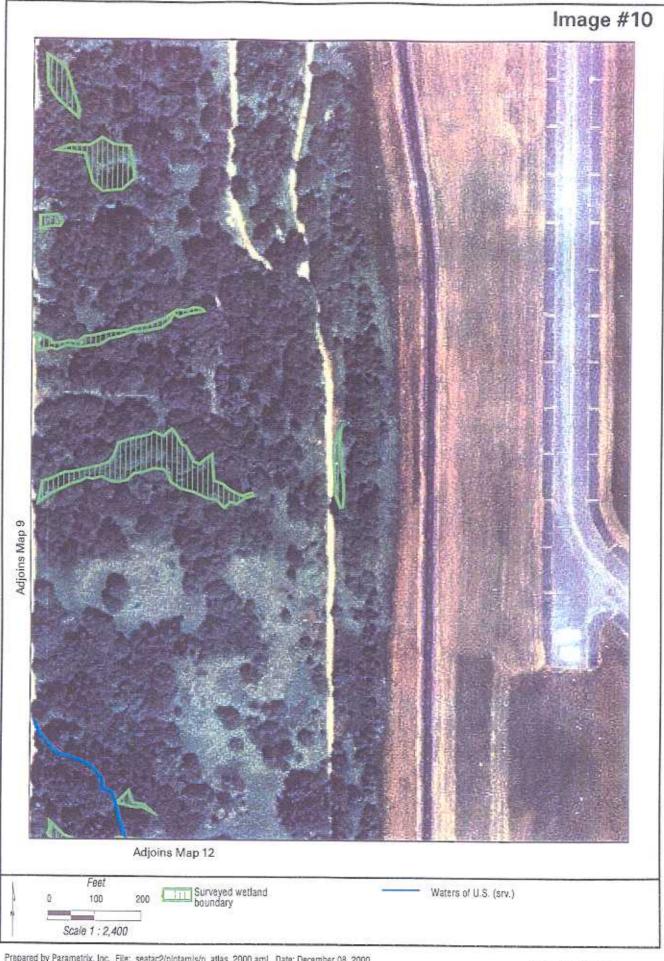


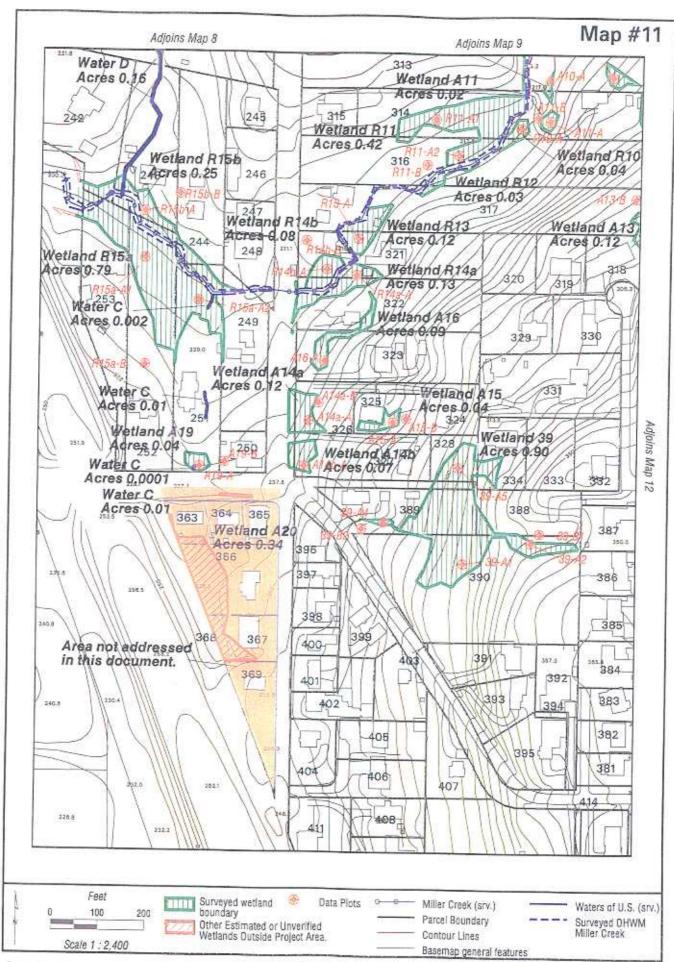


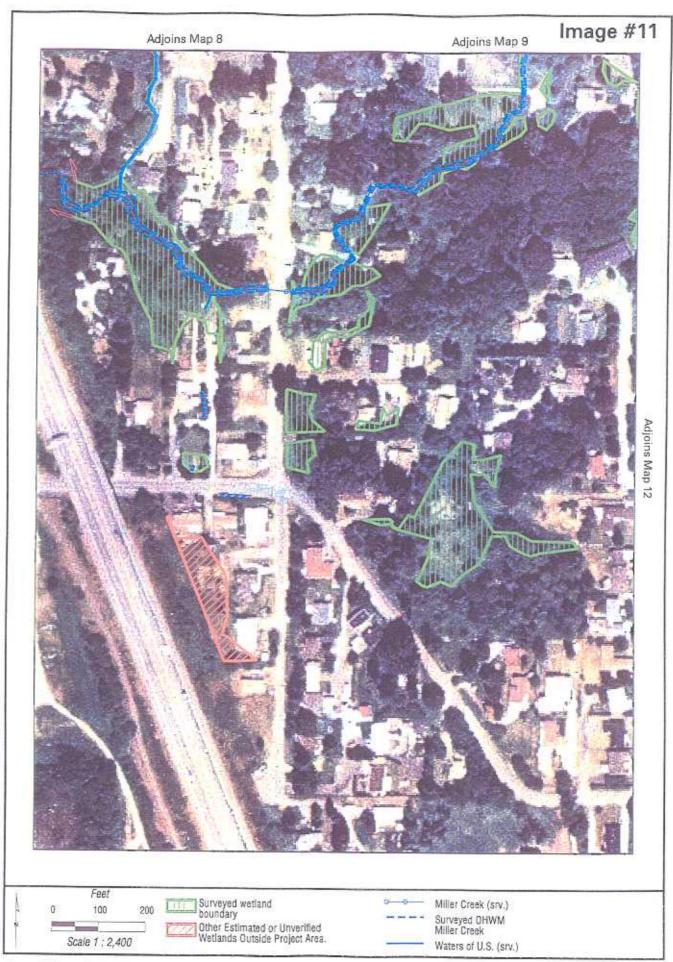


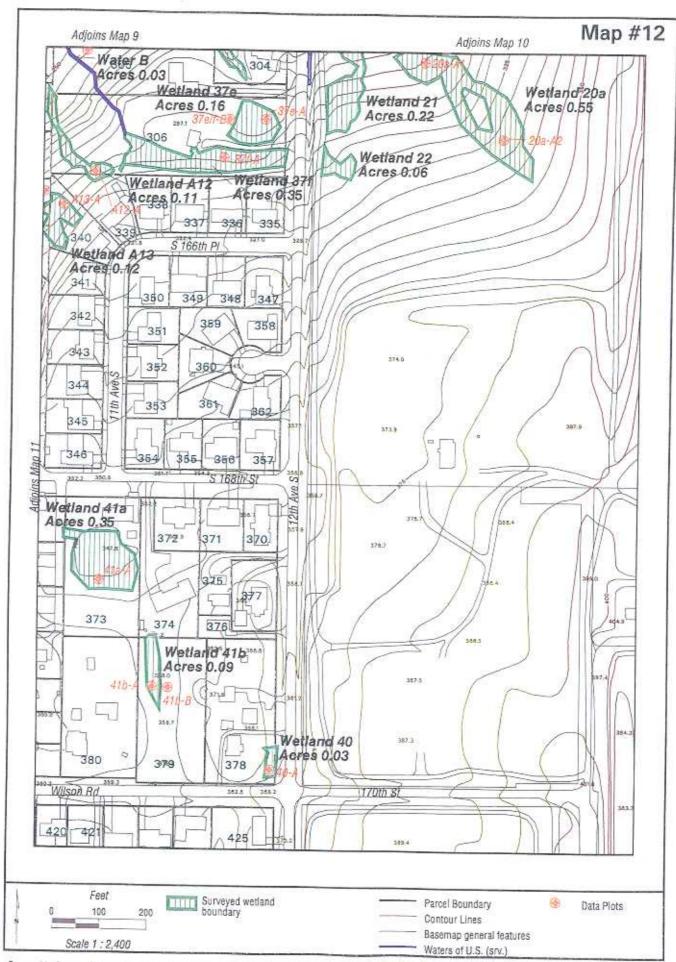




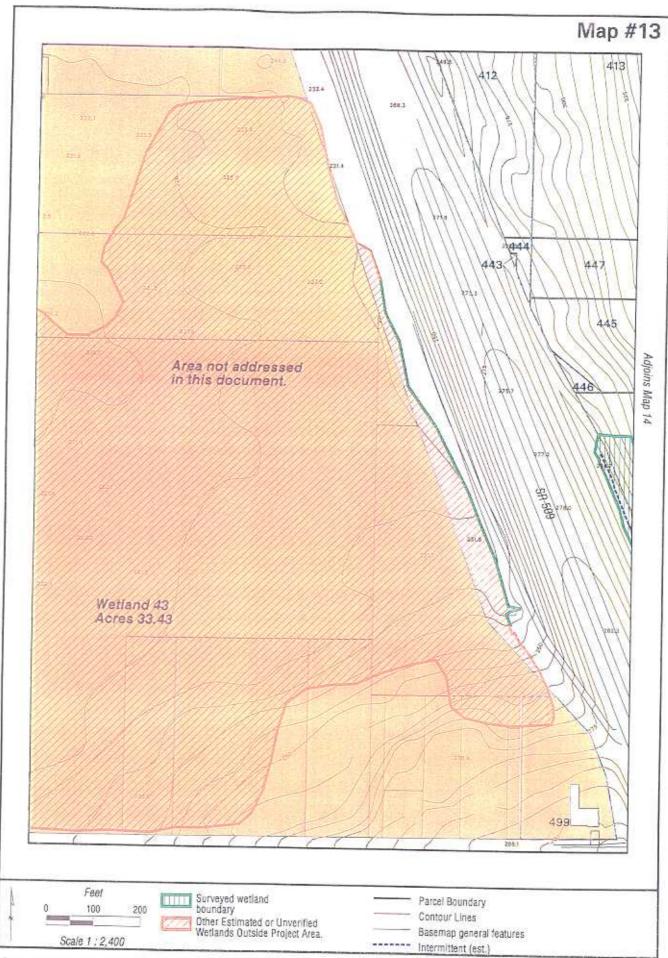


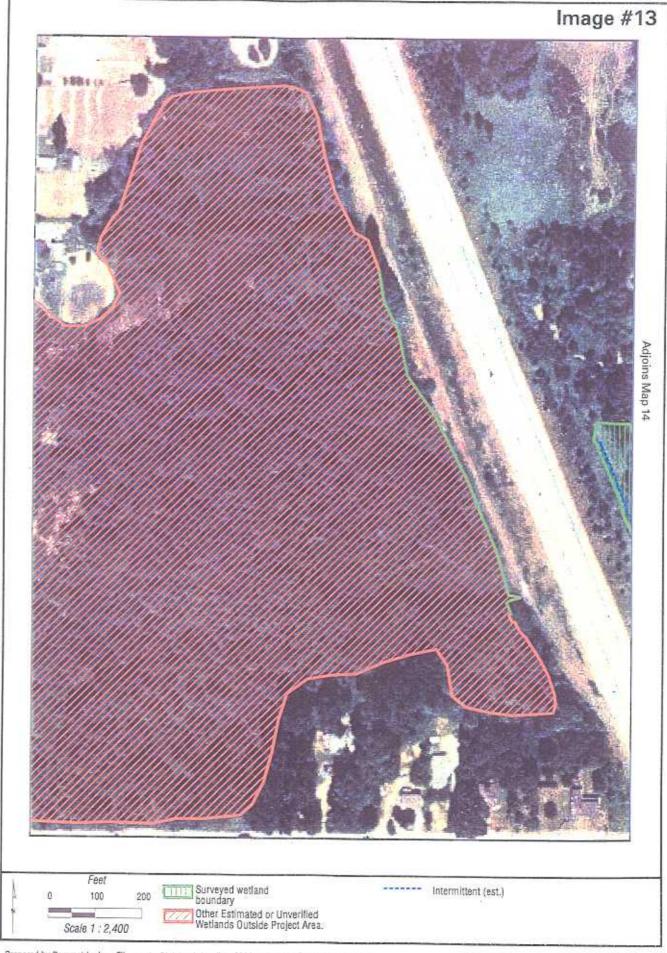












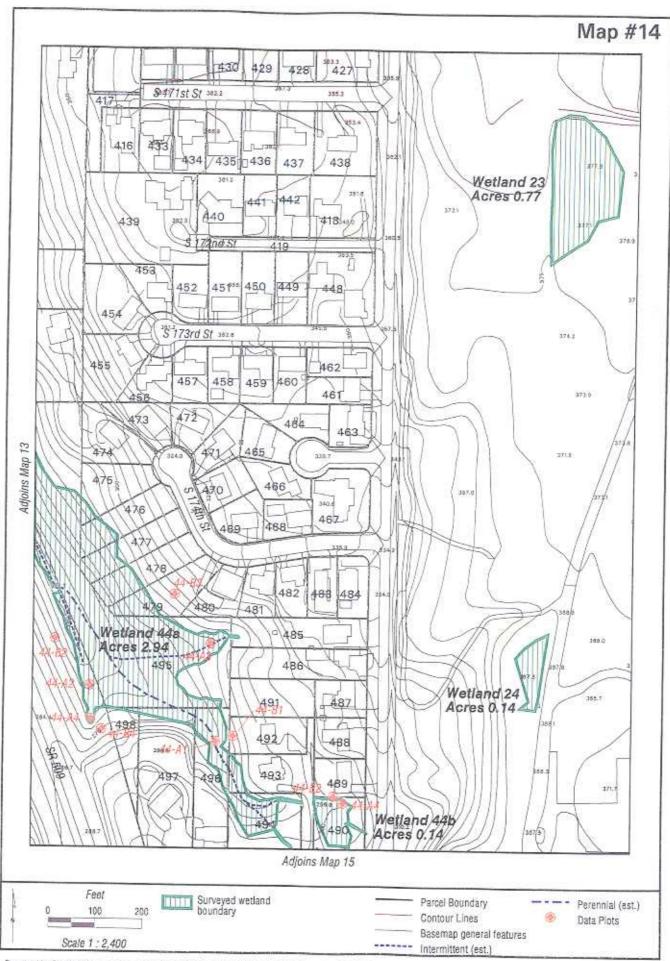
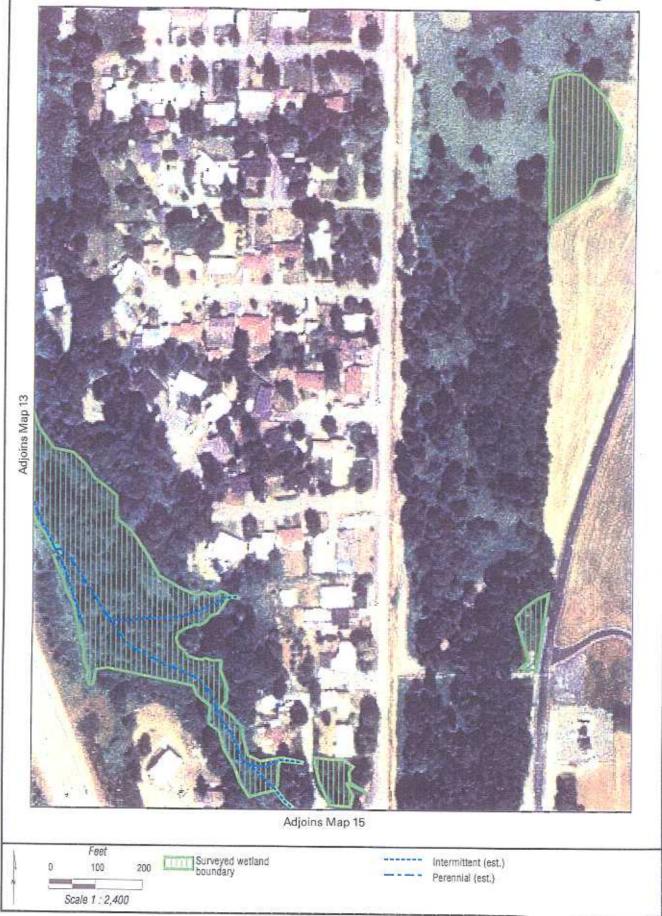
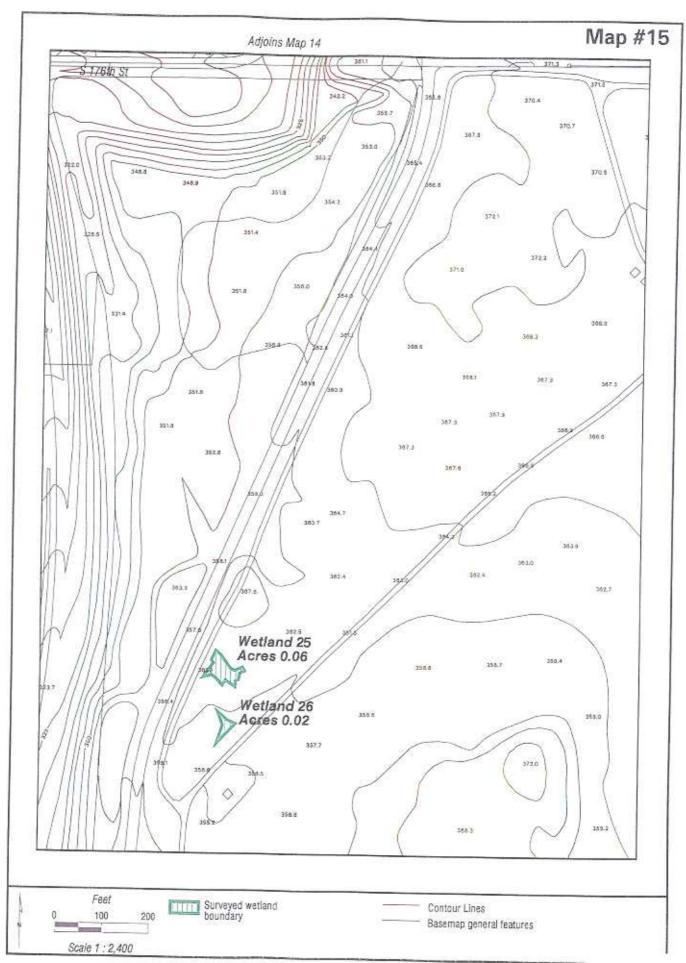
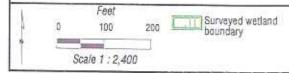


Image #14









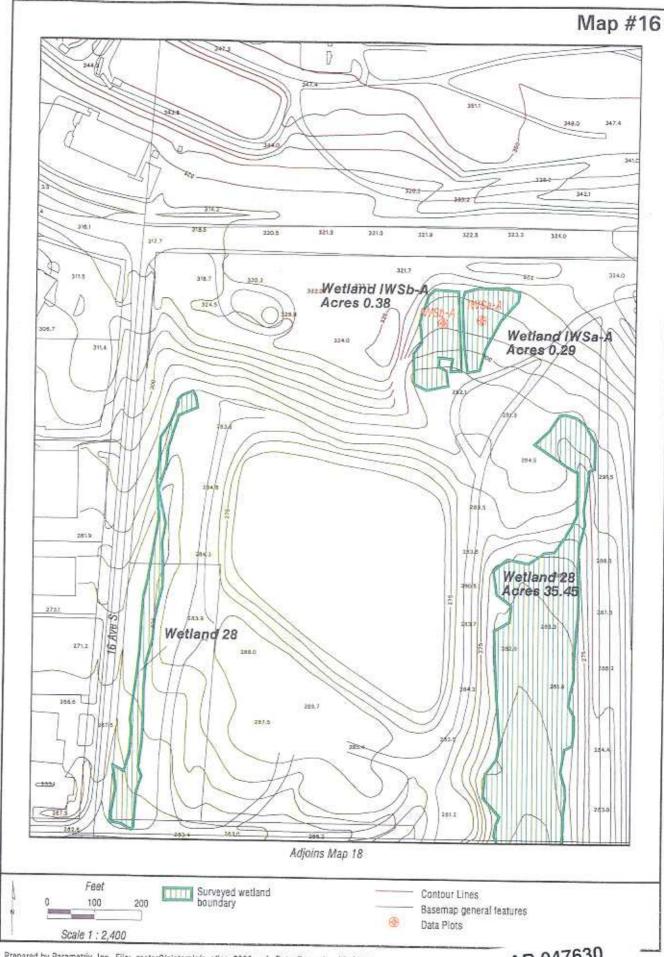
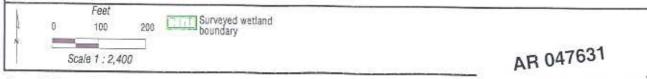


Image #16



Adjoins Map 18



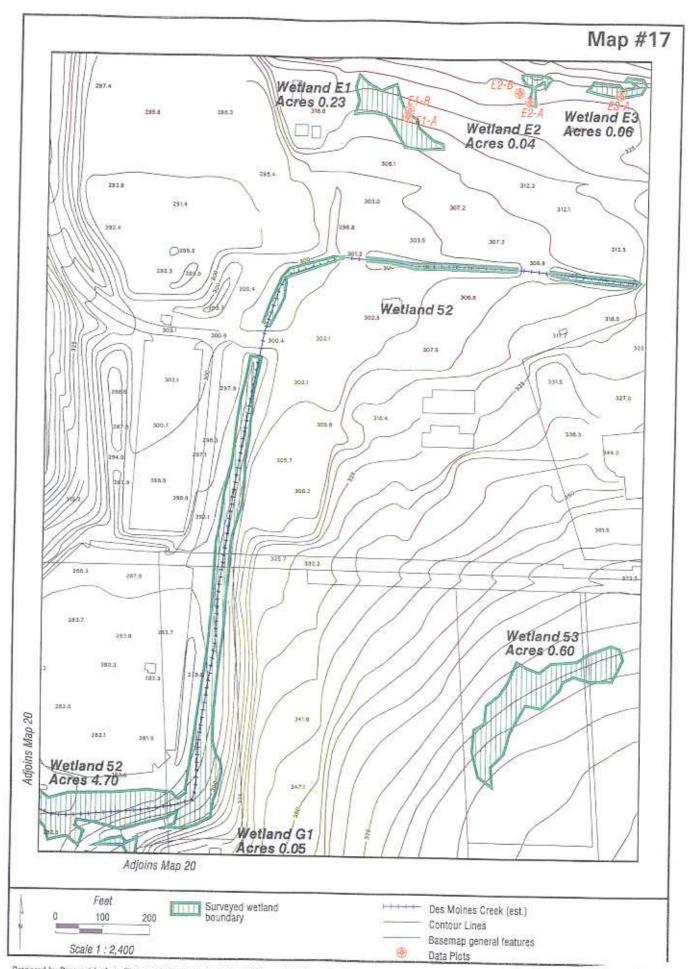
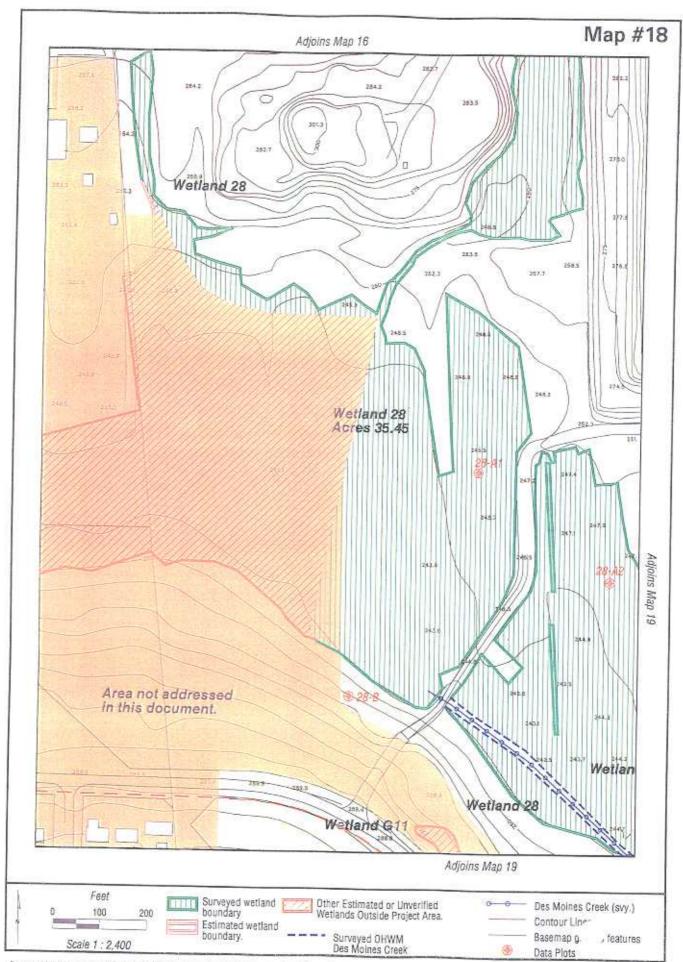
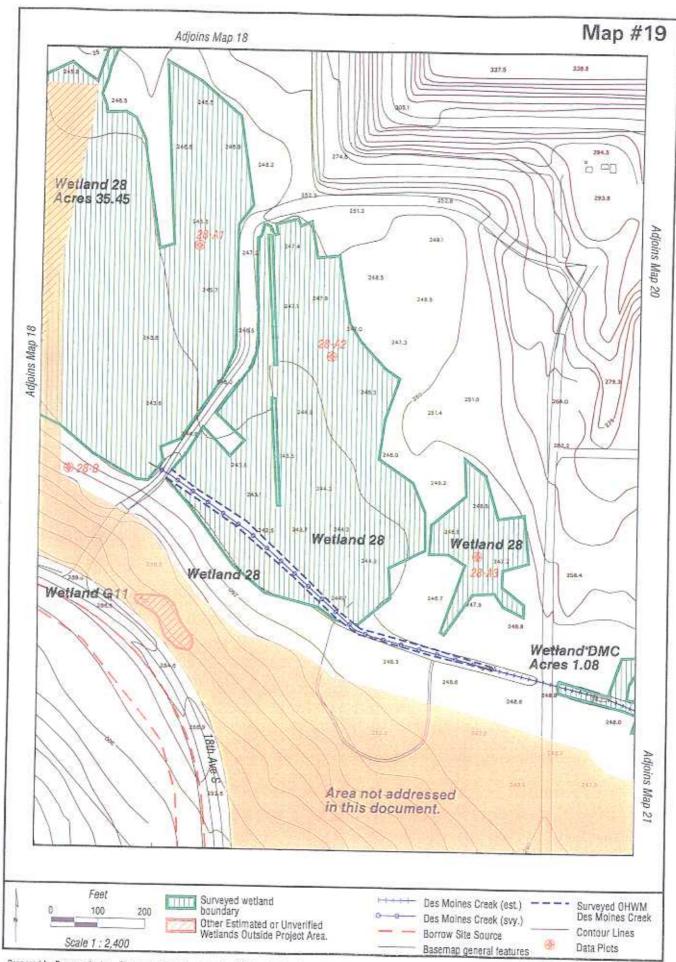


Image #17

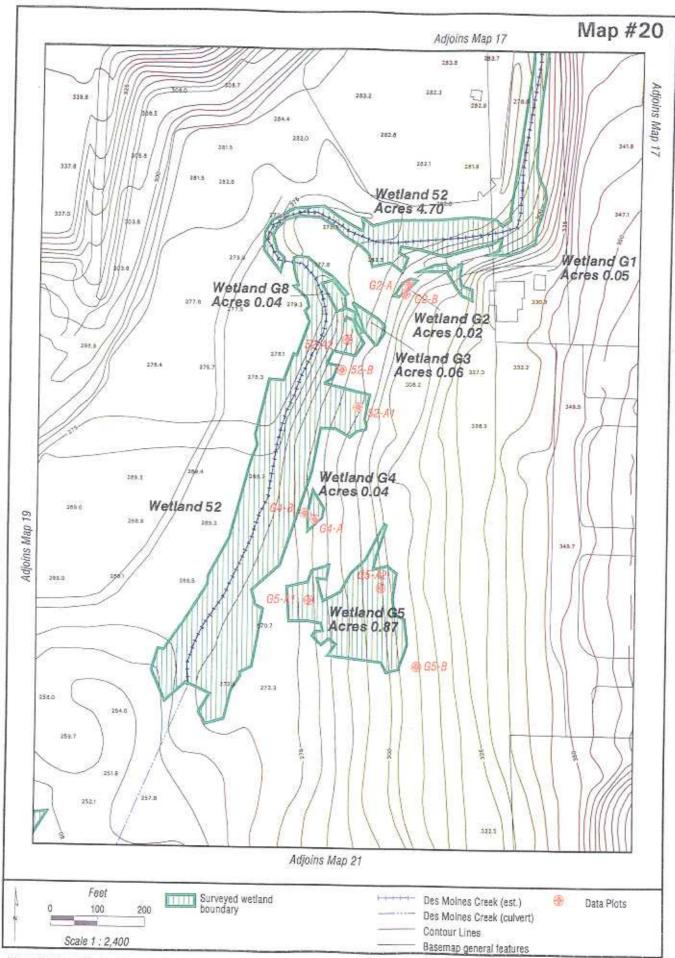




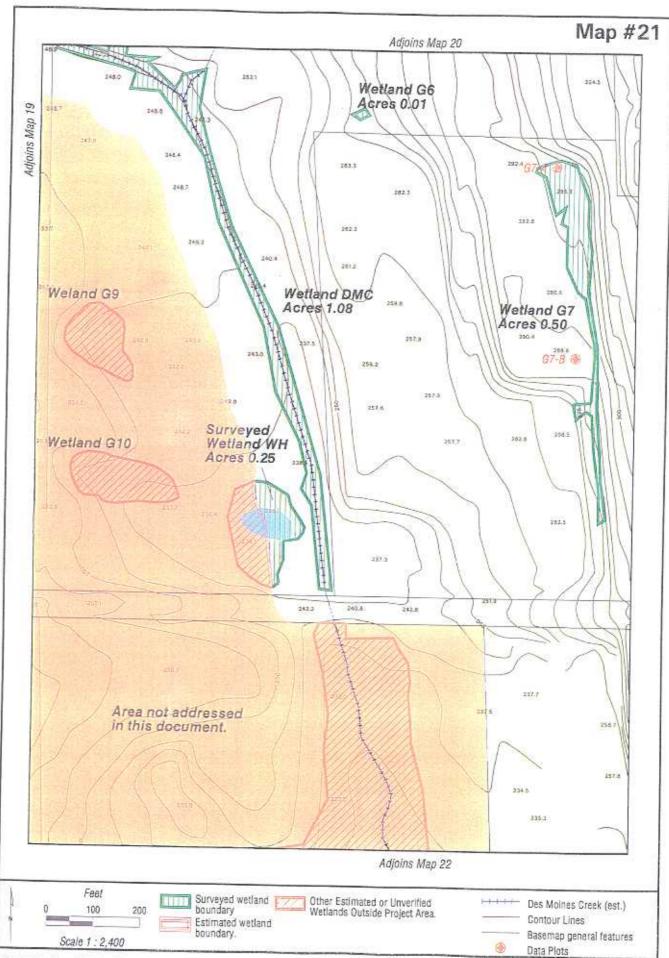




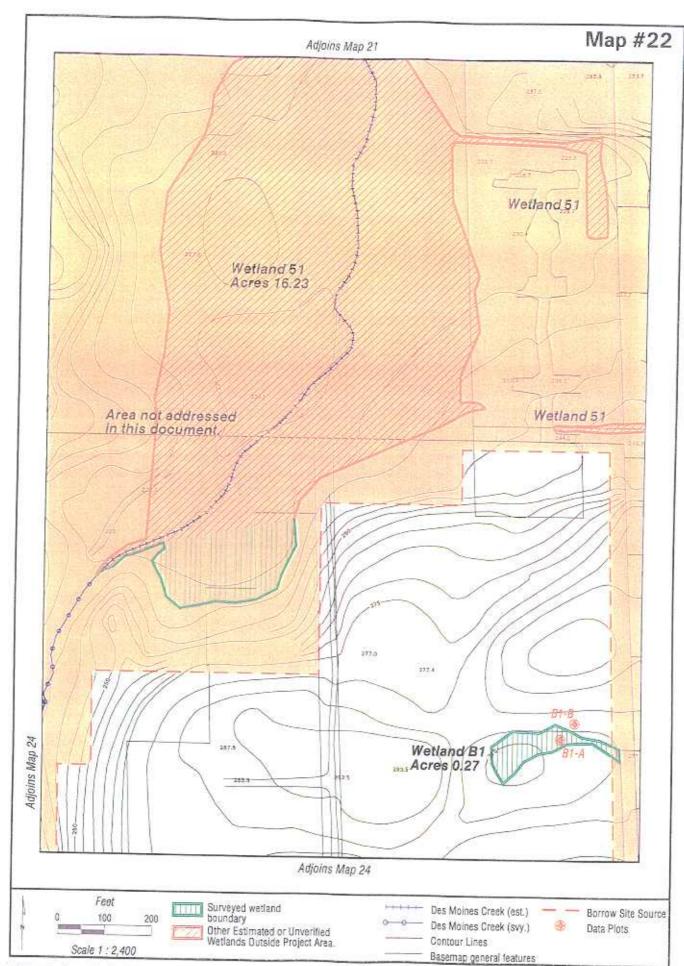


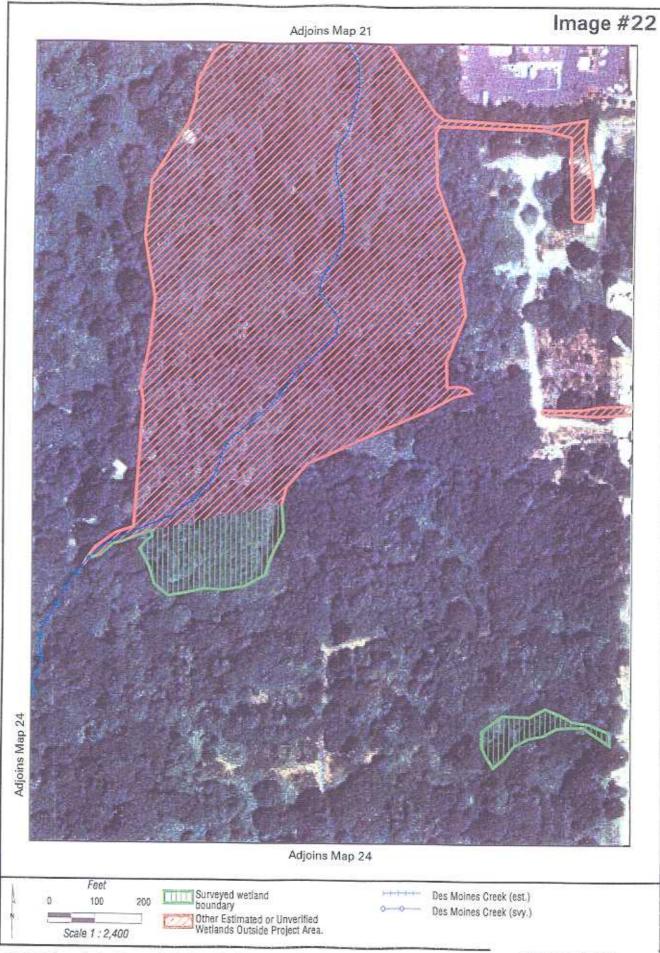


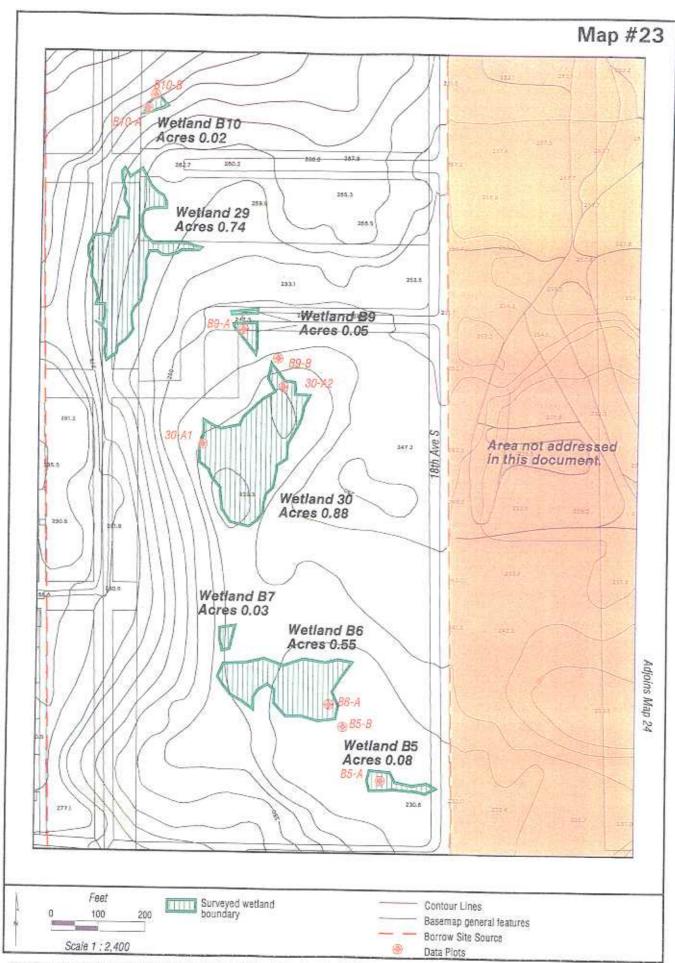


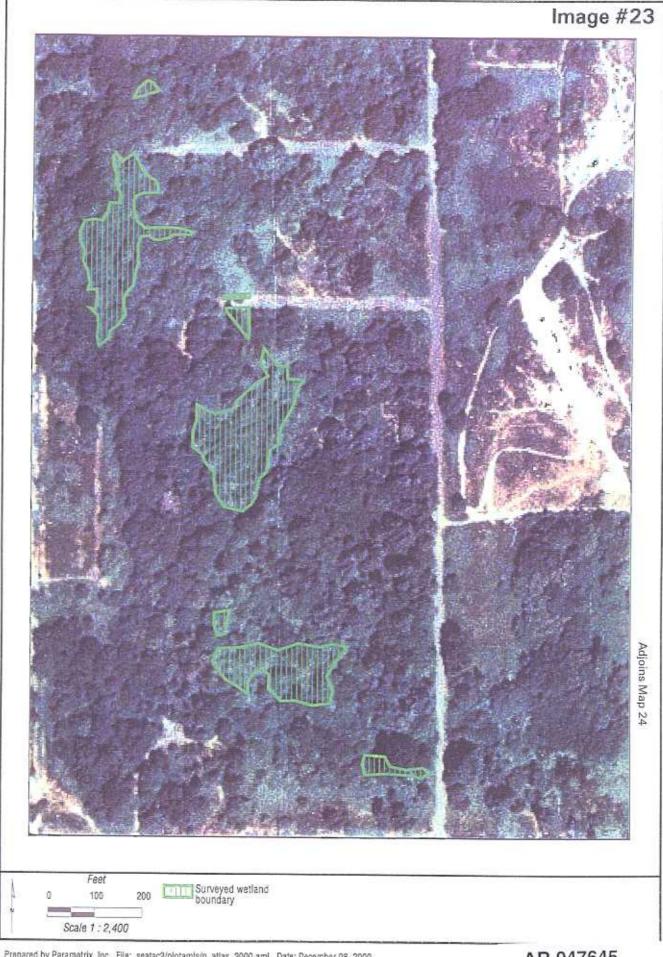


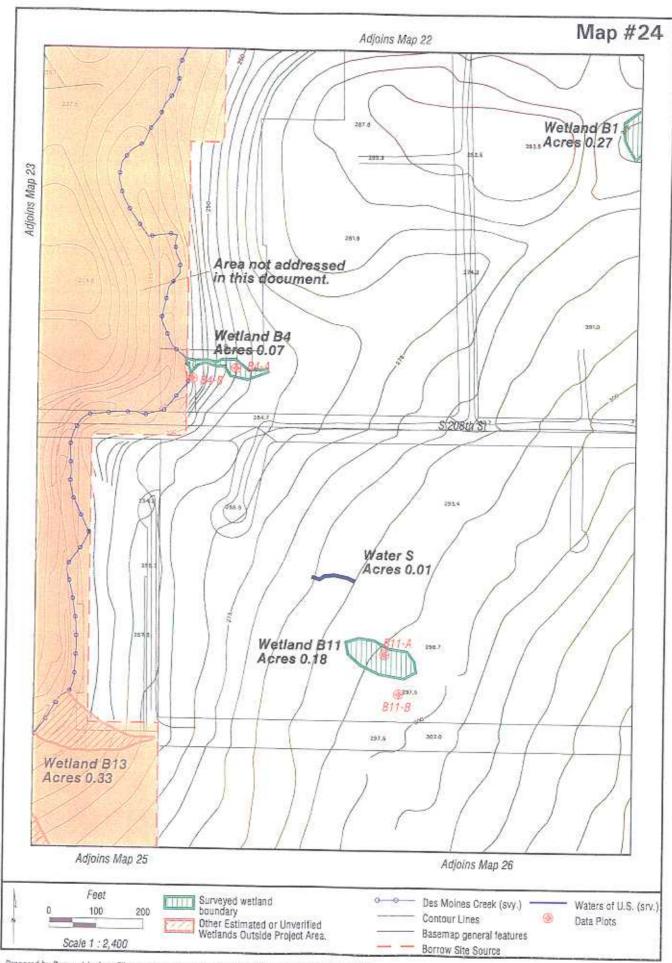


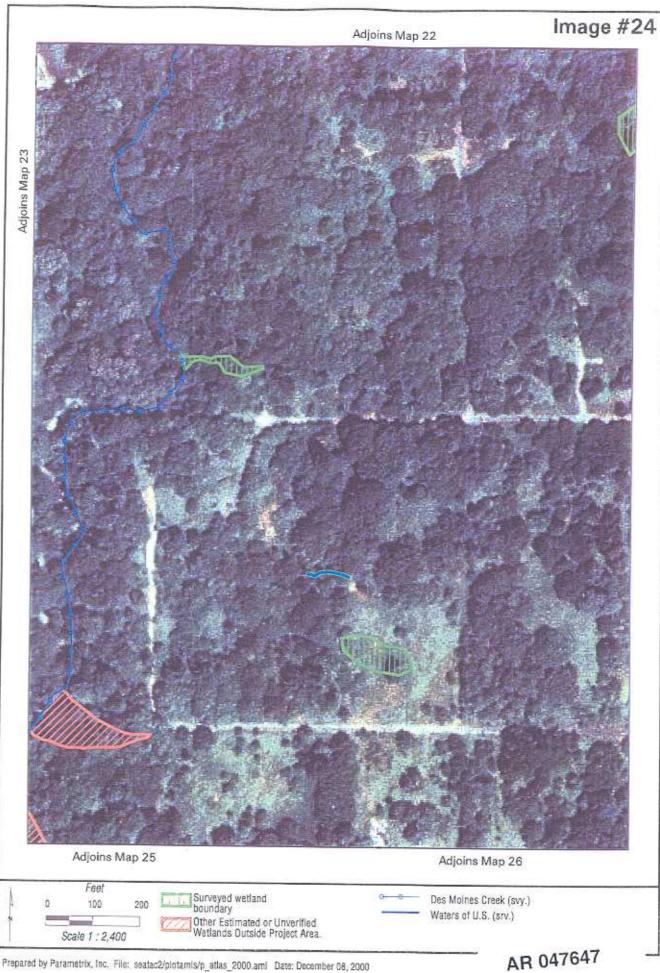


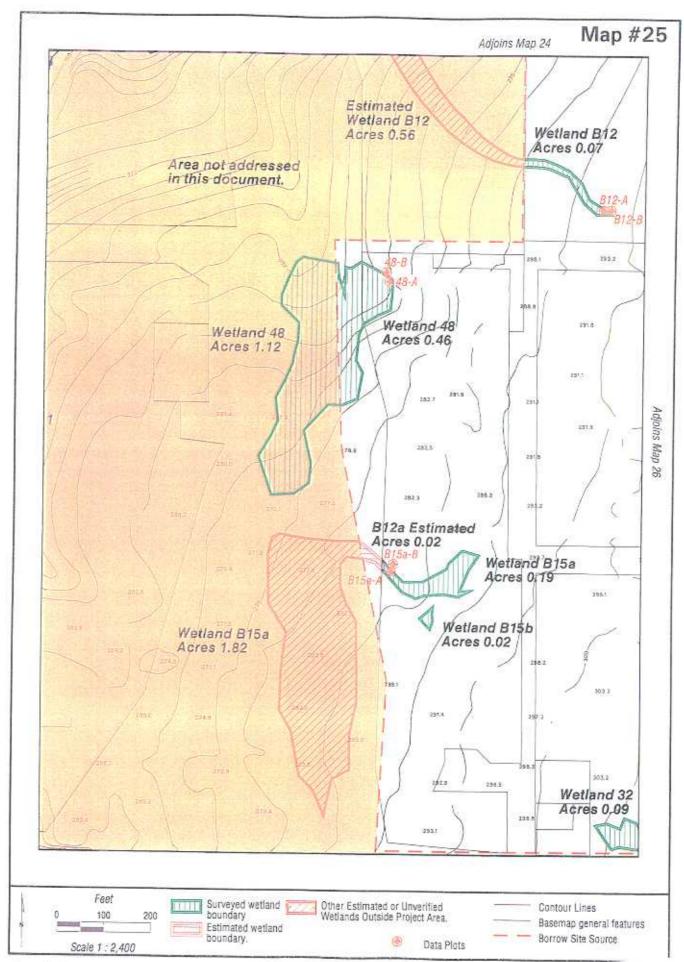




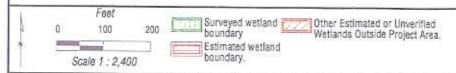


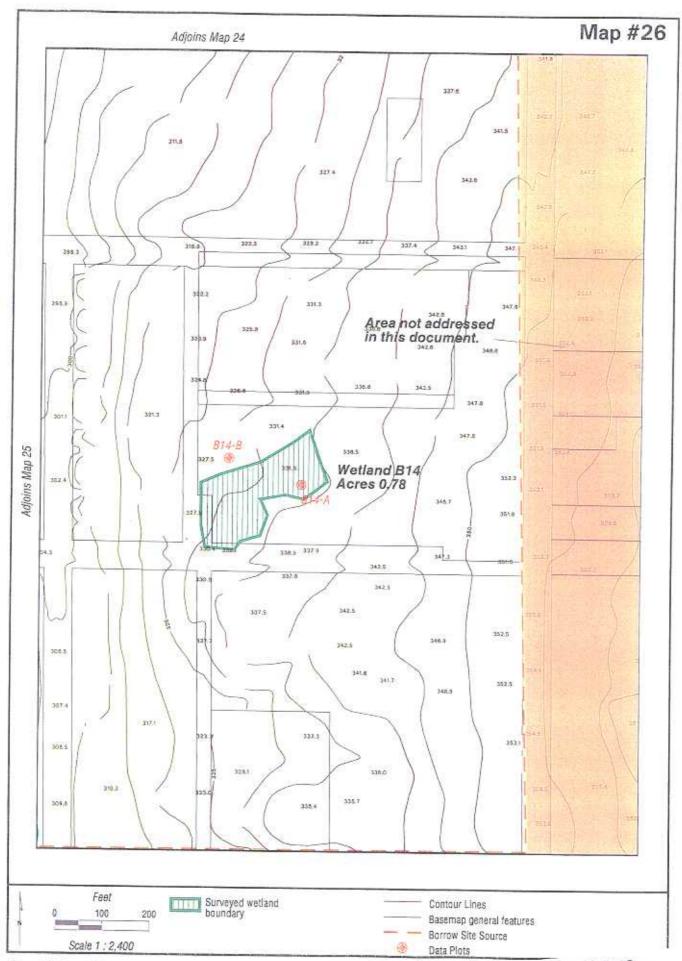














APPENDIX E PREVIOUSLY DELINEATED WETLANDS

The following table summarizes surveyed wetlands and areas that were provided in the Final Environmental Impact Statement (FEIS) (FAA, 1996: Table IV.11-1). The associated descriptions of wetlands were prepared by Shapiro and Associates. Inc (Shapiro) in the 1995 Draft EIS document (FAA, 1995: Appendix H-A). These wetlands were delineated by Shapiro and confirmed by the U.S. Corps of Engineers in 1996. Except for a few rounding differences, these surveyed areas are the same as the areas provided in this, the Wetland Delineation Report Seattle-Tacoma International Airport Master Plan Update Improvements document.

Table D-1. FEIS wetland classification and area (FAA 1996)^a.

Wetland	Classification	Area (Acres)				
1	Forested	0.07				
2	Forested, Emergent Marsh	0.74				
3	Forested	0.56				
4	Forested	5.02				
5	Forested, Shrub/Scrub	4.58				
6	Shrub/Scrub	0.87				
7	Forested, Open Water, Emergent Marsh	6.70				
8	Shrub/Scrub, Emergent Marsh	4.95				
9	Emergent Marsh, Forested	2.85				
10	Shrub/Scrub	0.31				
11	Forested, Emergent Marsh	0.50				
12	Emergent Marsh, Forested	0.21				
13	Emergent Marsh	0.05				
14	Forested	0.19				
15	Emergent Marsh	0.28				
16	Emergent Marsh	0.06				
17	Emergent Marsh	0.03				
18	Forested	0.12				
19	Forested	0.57				
21	Forested	0.22				
22	Shrub/Scrub, Emergent Marsh	0.06				
23	Emergent Marsh	0.78				
24	Emergent Marsh	0.14				
25	Forested	0.06				
26	Emergent Marsh	0.02				
29	Forested	0.74				
32	Emergent Marsh	0.05				
53	Forested	0.60				

Format modified from Table IV.11-1 from the FEIS (FAA 1996).

Source: Parametrix, Inc. and Shapiro & Associates. Wetland area values for Wetlands 1 through 31 based on survey conducted by Port of Seattle (1995). Area values for Wetlands 32 though 48 based on GIS data provided by Gambrell-Urban.

Wetland descriptions from: Jurisdictional Wetland Delineation Report, Sea-Tac Master Plan Update. (FAA 1995)

Wetland 1 is located north of SR 518 in the west-central portion of the north borrow area. It is classified under the U.S. Fish and Wildlife Survey classification system (Coward et al. 1979) as palustrine forested and broad-leaved deciduous saturated. It is bounded on the south by a road and on the north by fill. The wetland is dominated by black cottonwood in the overstory. Red alder and willow are also present. The understory is dominated by blackberry and Douglas spirea. Reed canarygrass and soft rush grow in the forb layer. Soils consist of very dark brown (10YR 2/2) loam overlying very dark grayish brown (10YR 3/2) gravelly sandy loam. Dark brown (7.5YR 3/3) mottles are present in the subsoil. At the time of the field investigation (December 6, 1994), water was seeping into the soil pit along a cemented soil layer at 16 inches below the surface.

Wetland 2 occupies a depression north of SR 518 in the north borrow area. It would be classified as a palustrine forested, broad-leaved deciduous, emergent, saturated system. The forested portions of the wetland are dominated by a mixture of black cottonwood, red alder, and willow. The understory is dominated by patches of spirea, Himalayan blackberry, and willow shrubs. Bentgrass, Watson's willow-herb, soft rush, sword fern, and sedge grow in the forb layer. The emergent area of the wetland is dominated by reed canarygrass. Cattail grows in the lowest portions of the wetland and soft rush grows throughout. Himalayan blackberry hedges define the boundary of the emergent areas. Soils consist of dark brown (10YR 5/8) mottles, and oxidized rhizospheres occur in the subsoil. Soils in the lowest portions of the wetland were saturated to the surface at the time of the investigation (December 6, 1994).

Wetland 3 is located near the southeast corner of the north borrow area and is the easternmost wetland in the Lake Reba complex. This wetland would classify as palustrine forested and broadleaved deciduous, seasonally flooded. It is bounded on its eastern side by a relatively steep embankment and on its west side by a service road. Willow dominates the overstory. Black cottonwood and red alder are additional components of the overstory. Himalavan blackberry, willow shrubs, red alder saplings, salmonberry, and Pacific blackberry grow in the overstory. The forb layer is dominated by horsetail. Associated species include reed canarygrass, bittersweet nightshade, creeping buttercup, lady fern, and sword fern. Soils consist of dark grayish brown (2.5Y 4/2) sand; which becomes gleyed at 32 inches below the ground surface. The sandy surface material apparently has washed down from a sand stockpile upslope to the east of the wetland. Soils in the lower area to the north consist of mucks and mineral soil. A 36-inch culvert conveys water from the hill (to the east) to the southeast corner of the wetland. A channel along the western side of the wetland at the base of the road carries water to two 5-foot outlet culverts, one of which is filled with sediment. The operational culvert conveys water to Wetland 4. At the time of the investigation (December 7, 1994), flows in the channel were about 4 inches wide and 1 inch deep. Soils in the southern half of the wetland were moist at the time of the investigation. Standing water was observed in the north half of the wetland.

Wetland 4 is a relatively large wetland in the east portion of the Lake Reba wetland complex. This wetland would classify as a palustrine, forested, broad-leaved deciduous, and seasonally flooded system. Wetland 4 is surrounded by service roads. Willow is the dominant overstory species. Black cottonwood and red alder occur as associated species. The understory is dominated by

willow shrubs. Salmonberry also grows in the wetland. Herbaceous species include horsetail. American speedwell, tall mannagrass, creeping buttercup, reed canarygrass, sedges, small-fruited bulrush, sword fern, soft rush, stinging nettle, and bentgrass. At the east end of the wetland, soils consist of dark greenish gray (5GY 4/1) sand. Organic soils, muck, and mucky peat increase in the western portion of the wetland. At the time of the investigation (December 7, 1994), soils were saturated to the surface and pools of standing water were present throughout the wetland. Water was observed flowing from the hillside in the southeast corner of the wetland. Culverts convey water to Wetland 4 from impervious surfaces associated with SR 518 to the north and the Airport Operations Area (AOA) to the south. Surface water generally flows to the west in several braided channels.

Wetland 5 is located in the north borrow area. This is a palustrine, forested, scrub-shrub, and broad-leaved deciduous wetland. Vegetation in its northern half is similar to that of Wetland 4. The southern half of the wetland is dominated by red alder and salmonberry. Arborescent willows and several large hemlock trees were also observed in the southern portion of this wetland. Indian plum, Himalayan blackberry, and willow shrubs are found in the understory. Herbaceous species growing in the wetland include lady fern, horsetail, tall mannagrass, creeping buttercup, and small-fruited bulrush. Soils in the wetland's northern half consist of dark gray (10YR 4/1) loam over very dark brown (10YR 2/2) mucky loam. Soils along the hillslope in the southern half of the wetland consist of layers of black (10YR 2/1) peaty muck and dark greenish gray (5GY 4/1) loamy sand. Soils were saturated to the surface at the time of the investigation (December 12, 1994). Small depressions and channels throughout the wetland were inundated with water. Seeps along the hillslope contribute water to this wetland. Two culverts discharge water to the wetland's south side and southwest corner. Water also enters this wetland via a culvert from Wetland 4. A culvert at the northwest end of Wetland 5 discharges water to Wetland 6.

Wetland 6 is located south of Lake Reba in the northern borrow area. It is bounded on the north and east sides by roads. Its southern edge is at the base of a fill. A silt fence is just upslope of the southern boundary. This wetland would classify as a palustrine, scrub-shrub, broad-leaved deciduous, and seasonally-flooded system. The vegetation composition is similar to that of Wetland 4. Soils consist of black (10YR 2/1) loam. At the time of the investigation (December 12, 1994), soils were saturated to the surface. A culvert conveys water to the southeast corner of this wetland, where it sheetflows to the northwest.

Wetland 7 is located in the north borrow area. Lake Reba lies within the wetland boundary. This is a palustrine, forested, broad-leaved deciduous, open-water, and emergent seasonally, permanently flooded wetland. The vegetative composition of the forested portion of this wetland is similar to that described for Wetland 4. The emergent vegetation community is dominated by reed canarygrass. Canadian thistle, bittersweet nightshade, and bentgrass also grow in emergent areas. Soils consist of black (10YR 2/1) loam over black (10YR 2.1) gravely sandy loam. At the time of the investigation (December 29, 1994), soils were saturated to the surface throughout most of the wetland. A culvert conveys water from Wetland 4, past the eastern portion of Wetland 7, to the east end of Lake Reba. Lake Reba outflow is conveyed past a water detention structure at the west end of the lake to Miller Creek. Lake Reba is used as a regional stormwater detention facility.

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Wetland 8 is located west of Lake Reba and separated from Wetland 7 by fill that serves to dam Lake Reba. This wetland would be classified as palustrine scrub-shrub, broad-leaved deciduous, emergent, and semi-permanently and seasonally saturated. Forested portions of the wetland have a vegetation community very much like Wetland 4. A monotypic stand of reed canarygrass occurs along the northern side of the wetland. This wetland receives water from a variety of sources. Miller Creek enters the northeast corner, the outflow of Lake Reba is conveyed via a culvert to the east side, and runoff from SR 518 is conveyed to the north side of this wetland. Miller Creek flows southwest to the south side of the wetland, where it flows through a culvert to Wetland 9 and ultimately to Lora Lake. On December 29, 1994, soils throughout the wetland were saturated to the surface and, in many areas, inundated to varying depths.

Wetland 9 is located southwest of Lake Reba in the north borrow area. It is a palustrine, emergent, and forested broad-leaved deciduous, intermittently-exposed, saturated system. The eastern and northern portions of this wetland are dominated by cattail and reed canarygrass. The scrub-shrub portions are dominated by willow shrubs. Associated species include Himalayan blackberry, spirea, and red elderberry. Herbaceous species include reed canarygrass, horsetail, lady fern, and creeping buttercup. Red alder, paper birch, and black cottonwood grow in some areas. Watercress dominates a permanently inundated area that extends south and east of the main portion of the wetland. Soils consist of black (10YR 2/1) silt loam with strong brown (7.5 YR 4/6) mottles. Soils have a high organic content. At the time of the investigation (December 29, 1994), soils were saturated to the surface or inundated. Miller Creek enters the northern side of the wetland via several culverts and flows west toward Lora Lake.

Wetland 10 is located south of Lake Reba. This is a palustrine, scrub-shrub, and broad-leaved deciduous, seasonally flooded wetland. The dominant overstory species is willow. Himalayan blackberry, salmonberry, and red elderberry grow in association with the willow. Himalayan blackberry dominates the northwest corner of the wetland. Soils consist of black (10YR 2/0) loamy muck over very dark gray (10YR 3/1) and black (10YR 2/1) mucky loam and black (10YR 2/1) mucky peat. Soils were saturated to the surface and depressions were inundated at the time of the investigation. A newly installed polyvinyl chloride (PVC) pipe conveys stormwater from a recently constructed stormwater detention facility east of the wetland. A silt fence has been installed on fill material deposited to the east. Another culvert conveys water from Wetland 9 to the south side of Wetland 10. Water flows north to the lowest portion of the wetland. Soils throughout the wetland were saturated to the surface during the field investigation on December 12, 1994.

Wetland 11 is located west of, and approximately 20-feet higher than, Wetland 10 in the north borrow area. It is a palustrine, forested, broad-leaved deciduous, emergent, and intermittently exposed and saturated wetland. There are three distinct vegetation zones that occur in this wetland. The southern arm is dominated by red alder and has an understory dominated by reed canarygrass, horsetail, and small-fruited bulrush. The eastern portion of the wetland is dominated by lady fern and reed canarygrass. Associated species include small-fruited bulrush, horsetail, tall mannagrass, Watson's willow-herb, and soft rush. A large number of black cottonwood seedlings were also seen. The forested portion of the wetland, in the northwest corner, is dominated by black cottonwood. These trees overhang a semi-permanently flooded depression. Himalayan blackberry borders the north side of the wetland. Soils in the southern arm consist of very dark gray (10YR 3/1) mucky loam overlying black (5Y 2.5/1) sandy loam with dark red (2.5YR 4/6) mottles. Soils in

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the emergent area consist of black (10YR 2/0) loam overlying dark greenish gray (10YR 4/1 and 5GY 4/1) loam with strong brown (7.5YR 4/6) mottles. At the time of the investigation (December 13, 1994), soils were saturated to the surface in most areas. Water in both the southern arm and the emergent area flows to the forested section. The depression under the canopy retains water throughout most years. Water flows out of this depression to the roadside ditch, where it enters a culvert. The culvert conveys water to Wetland 10 to the east.

Wetland 12 is a hillside seep located in the southwest portion of the north borrow area. This wetland would classify as a palustrine, emergent, and forested broad-leaved deciduous, saturated system. The wetland is located on a 10 percent slope. The north side borders a road and the south side borders a hedge of Himalayan blackberry and Scots broom. Willow and red alder are the dominant overstory species. The understory is dominated by a mixture of soft rush, cattail, small-fruited bulrush, Watson's willow-herb, and blackberry seedlings. Soils consist of very dark grayish brown (10YR 3/2) sandy loam overlying dark greenish gray (5GY 4/1 and 5GY 3/1) sandy loam with gravel. Brown (7.5YR 4/4) and strong brown (7.5YR 4/6) mottles occur in the subsoil. The hydrology source appears to be discharge of shallow groundwater along the hillside.

Wetland 13 is associated with a hillside seep located in the southwest portion of the north borrow area. This wetland would classify as a palustrine, emergent, and permanently saturated system. Wetland B is separated from Wetland 12 by a service road. It is located on a 10 percent slope. The vegetation is essentially the same as that of Wetland 12. Like Wetland 12, the source of hydrology appears to be discharge of shallow groundwater along the hillside.

Wetland 14 is located in a depression in the southwest corner of the north borrow area. This is a palustrine forested and broad-leaved deciduous, saturated wetland. Red alder and black cottonwood dominate the overstory. The herbaceous undergrowth is dominated by creeping buttercup. Soft rush, horsetail, bentgrass, and Himalayan blackberry were also observed. Soils consist of very dark gray (10YR 3/1) loam over dark gray (10YR 3/1) and gray (10YR 4/1) silt loam. The silt loam horizon has strong brown (7.5 YR 4/6) mottles. Soils were saturated at a depth of 18 inches at the time of investigation (December 13, 1994).

Wetland 15 is located north of, and below, the western existing runway at the north side of the AOA. It is associated with a seep that originates halfway up the 40-degree slope south of the perimeter road. Water flows downhill to a ditch along the road. This is a palustrine, emergent, and permanently saturated wetland. Horsetail, Watson's willow-herb, and Himalayan blackberry are the dominant plant species on the hill. The ditch along the road contains cattail, soft rush, bentgrass, and red alder, willow, and black cottonwood saplings. Soils are dark grayish brown (10YR 4/2) loam overlying gray (5Y 5/2) gravelly silty loam with yellowish brown (10YR 5/6) mottles. Soils were moist or saturated to the surface at the time of the investigation (September 1, 1994).

Wetland 16 is located in a narrow depression along the east side of a north-south oriented service road in the center of the AOA. This wetland is classified as a palustrine emergent, seasonally saturated system. This wetland is dominated by bentgrass and common velvet-grass. Associated species include soft rush, curly dock, Himalayan blackberry, Scots broom, and red alder. Soils consist of extremely compact dark grayish brown (2.5Y 4/2) loam with (7.5YR 4/3) rhizospheres and mottles overlying olive gray (5Y 5/2) silt loam. Soils were dry at the time of the investigation (August 19, 1994). Wetland hydrology was inferred based upon a predominance of hydrophytic

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Wetland Delineation Report – Master Plan Update Improvement Seattle Tacoma International Airport, Port of Seattle Parametrix, Inc

December 11, 2000 556-2912-001 (41) vegetation and presence of hydric soils. A stormwater drain located at the south end of the wetland conveys water from the wetland.

Wetland 17 is located in the west-central portion of the AOA. This is a palustrine, emergent, and permanently saturated wetland. Reed canarygrass is the dominant plant species. Associated species include horsetail and Himalayan blackberry. Red alder and weeping willow hang over the wetland. Soils were moist at the time of investigation (September 23, 1994). The wetland terminates at a culvert that conveys water west underneath a service road to a ditch on the east side of 12th Avenue South.

Wetland 18 is located in a narrow east-west oriented trough in the wet-central portion of the AOA. This wetland is a palustrine, forested, broad-leaved deciduous, and seasonally saturated system. A mixture of red alder, big-leaf maple, and redcedar dominates the overstory. The understory is dominated by salmonberry. Himalayan blackberry occurs along wetland's edge. Dominant forbs include lady fern and horsetail. Associated forbs include skunk cabbage, tall mannagrass, Watson's willow-herb, and bracken fern. Soils at the wetland's eastern end consist of dark gray (10YR 4/1) sandy loam. Muck soils occur in the wetland's central portion. The west end of the wetland contains gleyed loam soil. Soils were saturated at depths ranging from 8 inches to the surface at the time of the investigation (September 1, 1994). A small perennial stream flows west to a culvert at the west end of the wetland. The culvert conveys water to the ditch on the east side of 12th Avenue South.

Wetland 19 is a relatively large forested wetland located in the west-central portion of the AOA. This wetland would classify as a palustrine, forested, broad-leaved deciduous, and semi-permanently and seasonally saturated system. The wetland is confined by the side-slopes of a ravine. Red alder dominates the overstory. Black cottonwood, big-leaf maple, and redcedar also occur in the overstory. The understory is dominated by salmonberry. Indian plum, Himalayan blackberry, Pacific blackberry, and hazelnut occur as associated species. The forb layer is dominated by lady fern and horsetail. Associated species include reed canarygrass, skunk cabbage, and stinging nettle. Soils consist of very dark gray (10YR 3/1) silt loam overlying greenish gray (5Y 5/1) silt loam. High concentrations of organic matter occur throughout the soil profile. A perennial stream flows the length of the wetland. The stream originates as a seep at the base of fill in the wetland's eastern end. The stream enters a culvert at the wetland's west end and is discharged to the eastern side of 12th Avenue South. At the time of the investigation (August 25, 1994), water flowing in the stream was 3 inches wide and 2 inches deep at its western end. Soils throughout the wetland were moist or saturated to the surface.

Wetland 21 is located in the west-central portion of the AOA east of 12th Avenue South. and a service road. It is a palustrine, forested, broad-leaved deciduous, and semi-permanently and seasonally saturated wetland. Wetland 21 occurs on a 15 percent slope and is associated with a hillside seep. Precipitation likely infiltrates the soil in the AOA to the east and flows along relatively impervious soil layers, ultimately discharging to the surface at this location. Topography of the wetland is a series of hummocks and depressions. The dominant overstory species is red alder. The understory is dominated by salmonberry, horsetail, and Himalayan blackberry. Associated understory species include lady fern, ivy, and reed canarygrass. Soils consist of black (10YR 2/1) loam overlying gray (10YR 5/1) and dark gray (10YR 4/1) silt clay loam and dark gray

E-6

Wetland Delineation Report - Master Plan Update Improvement Seattle Tacoma International Airport, Port of Seattle Parametrix, Inc

December 11, 2000 556-2912-001 (41) (10YR 4 1) and bluish gray (5B 5/1) silt loam. Lenses of sand occur below 14 inches. At the time of the investigation (August 23, 1994), soils were moist.

Wetland 22 is located south and uphill of Wetland 21 in the west-central portion of the site. It is located in a depression, and would classify as a palustrine, scrub-shrub, broad-leaved deciduous, and emergent, saturated system. Red alder saplings dominate the shrub layer. Sitka willow, Pacific willow, black cottonwood saplings, and Himalayan and Pacific blackberry are also found. The herbaceous layer is dominated by bentgrass and common velvet-grass. Associated herbaceous species include creeping buttercup, reed canarygrass, curly dock, and Watson's willow-herb. Soils consist of very dark grayish brown (10YR 3/2) gravelly sandy loam overlying dark grayish brown (2.5Y 4/2) and grayish brown (2.5Y 5/2) sandy loam. Strong brown (7.5Y 4/6) mottles are present in the subsoil. Soils were dry at the time of the investigation (August 25, 1994); wetland hydrology was assumed from vegetation and soils data.

Wetland 23 is located in the central portion of the AOA in the regularly mowed grassy fields. A public observation area is northeast of the wetland. The wetland would classify as a palustrine, emergent, and seasonally saturated system. Bentgrass and common velvet-grass are the dominant plant species. Associated species include soft rush, white clover, common plantain, Watson's willow-herb, and sweet vernalgrass. Regular mowing keeps trees and shrubs from growing in this wetland. Soils consist of dark grayish brown (10YR 4/2) and grayish brown (10YR 5/2) fine sandy loam overlying dark grayish brown (10YR 4/2) and dark brown (10YR 4/3) gravely loam with brown (7.5YR 4.4) mottles. At the time of the investigation (August 30, 1994), soils were dry. Stormwater drains convey water from the center and south end of the wetland.

Wetland 24 is located in the southern portion of the AOA and northwest of the Weyerhaeuser hanger. It is located in a small depression and is bounded on the east by a service road and on the south by a fence. A small portable building is located in the southeast corner of the wetland. This is a palustrine emergent and seasonally flooded wetland. It is dominated by bentgrass and common velvet-grass. Associated species include white clover, common plantain, soft rush, cattail, and cudweed. Soils are compacted and were dry at the time of the investigation (September 1, 1994). Wetland hydrology was inferred from the presence of algal mats, predominance of hydrophytic vegetation, and presence of hydric soils.

Wetland 25 is located at the south end of the AOA and is bounded on its west side by a service road. This is a palustrine, forested, broad-leaved deciduous, and seasonally flooded wetland. It lies in a depression that is characterized by hummock and swale topography. The overstory is dominated by black cottonwood and willow. The understory is largely unvegetated due to inundation for much of the year. Spike-rush, cattail, bentgrass, and soft rush grow in some areas. Dried algal mats and water lines on tree trunks were present at the time of the investigation. Pacific madrone, Himalayan blackberry, and Scots broom occur on the hummocks. Soils consist of dark gray (10YR 4/1) loamy sand overlying dark gray (10YR 4/1) very gravelly loamy coarse sand. Soils were dry at the time of the investigation (August 19, 1994). Wetland hydrology was inferred from algal mats and water marks on tree trunks. The depression provides some stormwater storage.

Wetland 26 is located at the south end of the AOA southeast of Wetland 25. It is bounded on the east by the perimeter road. This wetland would classify as palustrine, emergent, and seasonally saturated. Bentgrass dominates this wetland. Associated species include tall fescue, common

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December 11, 2000
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velvet-grass, curly dock, soft rush, and Himalayan blackberry. Although soils were dry at the time of the investigation (August 19, 1994), the presence of wetland hydrology was inferred from dried algal mats located in the center of the wetland.

Wetland 29 is located in the northwest portion of the south borrow area. This wetland would classify as palustrine, forested, broad-leaved deciduous, and seasonally flooded. The overstory is dominated by red alder. Salmonberry dominates the understory. Himalayan blackberry and Pacific blackberry occur as associated species. Lady fern, horsetail, tall mannagrass, reed canarygrass, and sword fern grow below the shrub layer. Soils consist of black (10YR 2/0) loam over very dark gray (10YR 3/1) gravelly sandy loam. The western boundary of this wetland occurs along the upper edge of a hillside seep. Water generally flows downhill to the east, where it collects in a depression. During wetter times of the year, water likely flows southeast from the depression via an intermittent stream. Soils were saturated and standing water was observed at a depth of 10 inches at the time of the investigation (December 1, 1994). Old building foundations are located at the wetland's north end, near the road.

Wetland 32 is located in the south borrow area at the northwest quadrant of the intersection of South 216th Street and 20th Avenue South. This wetland would classify as palustrine, emergent, and temporarily flooded. Bentgrass is the dominant species. Associated species include common velvet-grass, soft rush, dandelion, horsetail, Watson's willow-herb, and black cottonwood saplings. A weeping willow overhangs the north arm of this L-shaped wetland. Soils consist of dark brown (10YR 3/3) loam overlying olive brown (2.5Y 4/3) sandy loam with dark yellowish brown (10YR 3/6 and 4/6) rhizospheres. At the time of the investigation (December 1, 1994), soils were saturated to the surface and water was seeping into the observation hole at 5 inches below the surface. The source of hydrology for this wetland appears to be runoff from a road.

Wetland 53 is located in depression between the southern tip of the southernmost runway and Highway 99, between South 192nd Street and South 194th Street. This wetland was delineated by Parametrix, Inc. during November 1991 and is described in the *Port of Seattle South Aviation Support Area Final EIS, Technical Appendices* (1991). It is a palustrine, forested, broad-leaved, and deciduous wetland. Red alder dominates the overstory. Douglas spirea, Indian plum, and Himalayan and Pacific blackberry form a sparse shrub layer. Herbaceous vegetation includes dense horsetail, slough sedge, and bracken fern. Very dark gray (10YR 3/1) silt loam with brown mottles was observed. Wetland hydrology was not present at the time of the investigation.

Wetland Delineation Report

Master Plan Update Improvements Seattle-Tacoma International Airport



Appendix B

Parametrix, Inc.

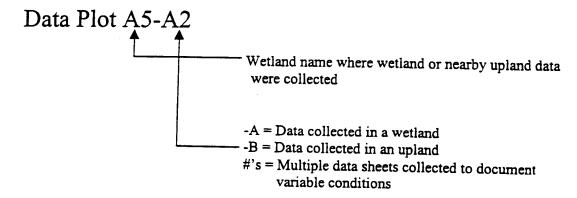
December 2000

This Appendix contains field data sheets supporting wetland determinations made in support of the Seattle-Tacoma International Airport Master Plan Update Improvements. The wetland data sheets are organized by project study area as discussed in the wetland delineation report.

Data sheets are organized as follows:

- Runway Safety Area Extension
- Third Runway
- Miller Creek Riparian
- Borrow Area 1
- Borrow Area 3
- Tyee Valley Golf Course/IWS
- South Aviation Support Area
- South Aviation Support Area Detention Pond
- Shapiro and Associates, Inc. Data Sheets

Data plot numbers indicated on data sheets are unique and designate the following:



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(Modified from: 19			_		
roject/Site: Seattle Tacoma Airport - Master Plan Up	odate		Date: 9	9/2/98	
pplicant/Owner: Port of Seattle		_	County:	King	
vestigator: Louther and Dunkin			State:	WA	
1987 Method					Community ID: PFO
o Normal Circumstances exist on the site?	Yes	<u> </u>	No _		Field Plot ID: 154-1A
the site significantly disturbed (Atypical Situation)?	Yes		No _	<u>x</u>	
the area a potential Problem Area?	Yes		No	X	
emarks (Explain sample location, disturbances, prob	olem area	 as):			
GETATION (Dominant species are checked) Plant Species		% Cover	Stratum	Indica	itor
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2. Lysichiton americanum		3 0	Herb	OBL	
3 Rubus spectabilis 4 Alnus rubra		25	Shrub	FAC+	
		40	Tree	EAC	
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'roject/	Site: Seattle T	acoma Airport - Master	Plan	Updat	<u>e</u>	Date:	9/2/98			
SOILS Soil Su	S rvey Data:									
Map Ur	nit Name: Unr	napped					Drainage Class	s:		
							Field Observat	tions Confirm	Map	ped Type?
Taxono	my (Subgroup):						Yes N	√ 0	NA	<u>x</u>
Profile i	Description:									
Depth (inches)	Horizon Designation	Matrix Color (Munsell Moist)		Mottle (Munse	Color ell Moist)		Mottle Abundance/Co		_	ure, Concretions, ospheres, etc.
0-1	0								Muck	· · ·
1-6	A	10YR 2/1					-		Sandy	v loam
5-12+	В	10YR 2/1		-					Grave	iliy sandy loam
Hydric (Soil Indicators	:								
	Histosol					Listed	on Local Hydric	Soits List		
Х	Histic Epipedor	ı				Listed	on State Hydric	Soils List		
Х	Sulfidic Odor					Listed	on National Hyd	dnc Soils List		
	Probable Aquic	Moisture Regime				Aquic	Moisture Regim	e		
X	Reducing Cond	itions				Organ	ic Streaking in S	Sandy Soils		
X	Gleyed or Low-	Chroma Colors				Mottie	s			
	High Organic C	ontent in Surface Laye	r			Other	(Explain in Rem	arks)		
Remark	s (Describe soi	l disturbances, local va	riatio	ns, etc	.):					
	saturated, diffi	cult to dig deeper than				high orga	nic content. Soil	l Colors and i	ndica	itors meet the hy
									-	
WETL	AND DETER	MINATION								
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lydric S	ioils Present?	•	res .	×	No -			_		
					_			Yes X	No	

P	ara	m	etr	ix,	Inc.



	(Moninga itolii: 186	37 COE Wet	iands De	elineation	Manual)	
December Comme Tonne			_			,	
Project/Site: Seattle Tacoma		late		2/98			
Applicant/Owner: Port of Se	earde		•	King			
Investigator: William Kleindl			State:	WA			
✓ 1987 Method	Method			Com	munity ID	: PEM	1
Do Normal Circumstances exist	t on the site?	Yes X	No	Field	Plot ID:	16-A	***************************************
s the site significantly disturbed	d (Atypical Situation)?	Yes	No X				
s the area a potential Problem.	Area?	Yes	No X				
Remarks (Explain sample loca	ation, disturbances, proble	em areas):		_			
Sample plot is located at the bot			am of Pam	el 270			
		ne reordermar y	D, C C, 7 B, C	CI LI S.			
/ECETATION							
EGETATION (✓Dominar	nt species are checked)						
Plant Species		% Cover		Indicator			
Agrostis gigantea Carex stipata		50	Herb	FACW	-		
2 Carex stipata 3 Equisetum telmateia		5 5	Herb	FACW	-		
Hoicus ianatus		5 C	Herb Herb	FACW FAC	-		
5 Lolium perenne		5	Herb	FACU	-		
6 Ranunculus repens		5	Herb	FACW	-		
7 Scirpus microcarpus		5	Herb	OBL	-		
8 Rubus discolor		5	Shrub	FACU	-		
xcept FAC-). Include species i	noted (*) as showing	100					
ercent of Dominant Species except FAC-). Include species is torphological adaptations to we emarks (Describe disturbance ince greater than 50% of the do	noted (*) as showing stlands. "T" indicates trac es, relevant local variation	e. 100 ns. seasonal eff	fects, etc.):	ion criteria is	met.		
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except FAC-). Include species is corphological adaptations to well emarks. (Describe disturbance ince greater than 50% of the dotted than	noted (*) as showing trands. "T" indicates trac es, relevant local variation orminant plants are hydrogemarks): Tide Gage	e. 100 ns. seasonal eff phytic, the wetia	land Hydro	plogy Indicaticators:	ors (De:		
except FAC-). Include species is corphological adaptations to well emarks. (Describe disturbance ince greater than 50% of the dotted by the second of the se	noted (*) as showing itlands. "T" indicates traces, relevant local variation orminant plants are hydroperemarks); Tide Gage	e. 100 ns. seasonal eff phytic, the wetia	and vegetat	plogy Indicat licators: Inundated Saturated i	ors (De:	2 inches	;
except FAC-). Include species is corphological adaptations to well emarks. (Describe disturbance ince greater than 50% of the dotted to the second of the se	noted (*) as showing itlands. "T" indicates traces, relevant local variation orminant plants are hydroperemarks); Tide Gage	e. 100 ns. seasonal eff phytic, the wetia	land Hydro	plogy Indication criteria is plogy Indicators: Inundated Saturated is Saturated in	ors (Des	2 inches	;
except FAC-). Include species is corphological adaptations to well emarks. (Describe disturbance ince greater than 50% of the dollar than	noted (*) as showing itlands. "T" indicates traces, relevant local variation orminant plants are hydroperemarks); Tide Gage	e. 100 ns. seasonal eff phytic, the wetia	land Hydro	plogy Indicat licators: Inundated Saturated i Saturated i Water Mark	ors (Des	2 inches	;
except FAC-). Include species is corphological adaptations to well emarks. (Describe disturbance ince greater than 50% of the dollar than	noted (*) as showing itlands. "T" indicates traces, relevant local variation orminant plants are hydroperemarks); Tide Gage	e. 100 ns. seasonal eff phytic, the wetia	land Hydro	plogy Indicat licators: Inundated Saturated i Saturated i Water Mark Drift Lines	n Upper 1 n Upper 1	2 inches	;
except FAC-). Include species is corphological adaptations to well emarks. (Describe disturbance ince greater than 50% of the dotted by the do	noted (*) as showing itlands. "T" indicates traces, relevant local variation orminant plants are hydroperemarks); Tide Gage	e. 100 ns. seasonal eff phytic, the wetia	land Hydro	plogy Indicaticators: Inundated Saturated i Saturated i Water Mark Drift Lines Sediment E	n Upper 1 n Upper 1 s eposits	2 inches 8 inches	; ;
except FAC-). Include species is corphological adaptations to well emarks. (Describe disturbance ince greater than 50% of the dote in Research Lake, or Aerial Photograph Other X. No Recorded Data eld Observations:	noted (*) as showing trands. "T" indicates traces, relevant local variation orminant plants are hydroperemarks): Tide Gage a Available	e. 100 ns. seasonal eff phytic, the wetia	land Hydro	plogy Indicat licators: Inundated Saturated i Saturated i Water Mark Drift Lines	n Upper 1 n Upper 1 s eposits	2 inches 8 inches	; ;
except FAC-). Include species is corphological adaptations to well emarks. (Describe disturbance ince greater than 50% of the document of the	noted (*) as showing trands. "T" indicates traces, relevant local variation orminant plants are hydroperemarks): Tide Gage a Available None (in.)	e. 100 ns. seasonal eff ohytic, the wetla Weti	land Hydro	plogy Indicaticators: Inundated Saturated i Saturated i Water Mark Drift Lines Sediment E Drainage P	n Upper 1 n Upper 1 is Deposits atterns in	2 inches 8 inches Wetland	is is
except FAC-). Include species is corphological adaptations to well emarks. (Describe disturbance ince greater than 50% of the dologous disturbance ince greater than 50% of the dologous disturbance. Stream, Lake, or Aerial Photograph Other No Recorded Data and Observations: Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as showing trands. "T" indicates traces, relevant local variation orminant plants are hydroperated as a control of the state	e. 100 ns. seasonal eff ohytic, the wetla Weti	land Hydro Primary Ind X Becondary	Dlogy Indicated icators: Inundated Saturated i Saturated i Water Mark Drift Lines Sediment Drainage P	n Upper 1 n Upper 1 s Deposits atterns in	2 inches 8 inches Wetland	ds.
except FAC-). Include species is corphological adaptations to well emarks. (Describe disturbance ince greater than 50% of the document of the	noted (*) as showing trands. "T" indicates traces, relevant local variation orminant plants are hydroperemarks): Tide Gage a Available None (in.)	e. 100 ns. seasonal eff ohytic, the wetla Weti	land Hydro	plogy Indicated Saturated is Saturated is Water Mark Drift Lines Sediment Drainage P	n Upper 1 n Upper 1 s Deposits atterns in or more re	2 inches 8 inches Wetland equired):	ds.
except FAC-). Include species is corphological adaptations to well emarks. (Describe disturbance ince greater than 50% of the dologous disturbance ince greater than 50% of the dologous disturbance. Stream, Lake, or Aerial Photograph Other No Recorded Data and Observations: Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as showing trands. "T" indicates traces, relevant local variation orminant plants are hydroperated as a control of the state	e. 100 ns. seasonal eff ohytic, the wetla Weti	land Hydro Primary Ind X Becondary	plogy Indicated Saturated is Saturated is Water Mark Drift Lines Sediment Drainage P	n Upper 1 n Upper 1 s Deposits atterns in or more re pot Channel	2 inches 8 inches Wetland equired): nels in U	ds.
except FAC-). Include species is corphological adaptations to well emarks. (Describe disturbance ince greater than 50% of the dologous disturbance ince greater than 50% of the dologous disturbance. Stream, Lake, or Aerial Photograph Other No Recorded Data and Observations: Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as showing trands. "T" indicates traces, relevant local variation orminant plants are hydroperated as a control of the state	e. 100 ns. seasonal eff ohytic, the wetla Weti	land Hydro Primary Ind X Becondary	blogy Indicated icators: Inundated Saturated i Saturated i Water Mark Drift Lines Sediment Drainage P Indicators (2 Oxidized Reward Soil Sediment Soil Soil Sediment Soil Sediment Sedi	n Upper 1 n Upper 1 s Deposits atterns in or more re bot Channed Leave Survey Dat	2 inches 8 inches Wetland equired): nels in U _I s ta	is is
except FAC-). Include species is corphological adaptations to well emarks. (Describe disturbance ince greater than 50% of the doing to the doing	noted (*) as showing trands. "T" indicates traces, relevant local variation orminant plants are hydroperated as a control of the state	e. 100 ns. seasonal eff ohytic, the wetla Weti	land Hydro	blogy Indicaticators: Inundated Saturated i Saturated i Water Mark Drift Lines Sediment E Drainage P Indicators (2 Oxidized Ri Water-Stair Local Soil S Other (Expl	n Upper 1 n Upper 1 is Deposits atterns in or more re pot Chann led Leave survey Dat ain in Ren	2 inches 8 inches Wetland equired): nels in U _I s ta	ds.

Project/Site: Seattle Tacoma Airport - Master Plan SOILS Soil Survey Data: Map Unit Name: Unmapped	Update C	Wetland Date: 7 <u>/2/98</u>	18
SOILS Soil Survey Data:	Update C	Date: 7/2/98	
SOILS Soil Survey Data:	Update C	Date: 7/2/98	
Soil Survey Data:			
Map Unit Name: Unmapped			
		Drainage Class:	
		Field Observations Confirm	n Mapped Type?
Taxonomy (Subgroup):		Yes No	NA X
Profile Description:			
	Mottle Color (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Rhizospheres, etc.
0-4 A/C 10YR 2/1 -		·	Clay Loam
4-8 A 10YR 2/1	5YR 3/3	Common, Medium, Distinct	Clav Loam
8-16 B 10YR 2/2		•	Clay Loam
Hydric Soll Indicators:			
Histosol	L	isted on Local Hydric Soils List	
Histic Epipedon		isted on State Hydric Soils List	
Sulfidic Odor		isted on National Hydric Soils Lis	st
Probable Aquic Moisture Regime Reducing Conditions		quic Moisture Regime	
X Gleyed or Low-Chroma Colors		rganic Streaking in Sandy Soils lottles	
High Organic Content in Surface Layer		ther (Explain in Remarks)	
		(English Mitternaling)	
Remarks (Describe soil disturbances, local variation			

D	ar		~	0	tr	iv	,	1	_	_
1	a,	CI i	1	C	ĻI		١,		1 1	L.



Data Plot #:	18-A2
Wetland:	18

		Data Plot #: 18-A2
LAND DET	TERMINA	ATION Wetland: 18
87 COE W	etiands [Delineation Manual)
odate	Date:	9/28/98
	County:	King
	State:	WA
		Community ID: PFO
Yes X	_ No _	Field Plot ID: 61-A
Yes	No	X
Yes	- No	×
blem areas):	rth side of P	Parcel # 289.
)		
% Co	ver Stratur	m Indicator
20	Herb	FAC
	Herb Herb	FACW OBL
		OBL FACU
		FAC
ace. ions, seasonal	l effects, etc	
v	Vetiand Hv	drology Indicators (Describe in Remarks):
_	_	
		Inundated
	X	Saturated in Upper 12 inches
		Saturated in Upper 18 inches
		Water Marks
		Drift Lines
		Sediment Deposits
	^	CCGITICITE DEPOSIES
	$\frac{\hat{x}}{\hat{x}}$	Drainage Patterns in Wetlands
	X	Drainage Patterns in Wetlands
	X	
	X	Drainage Patterns in Wetlands iry Indicators (2 or more required):
	X	Drainage Patterns in Wetlands
	X	Drainage Patterns in Wetlands ry Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches
	X	Drainage Patterns in Wetlands ry Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches Water-Stained Leaves
vetrologio — -	Seconda	Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)
ydrologic mod	Seconda Seconda	Drainage Patterns in Wetlands In Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data
	Yes X Yes Yes Othern areas): Ope on the note 20 30 10 80 90 or FAC ace. ons, seasona	Yes X No Yes No

4 1								Data Piot	# :	18-A2
								Wetland:		18
Project/S	Site: Seattle T	acoma Airport - Mas	ter Pi	an Upd	ate	Date:	9/28/98			
SOILS										
Soil Sur	vey Data:									
Map Uni	t Name: <u>Unn</u>	napped					Drainage Clas	ss:		
							Field Observa	ations Confirm	Марр	ed Type?
Taxonom	ny (Subgroup):						Yes	No I	NA	x
	escription:								*	<u>^</u>
Depth	Honzon	Matrix Color			e Color		Mottle	T	rextu	re. Concretions
(Inches)		(Munsell Moist)		(Mun:	sell Moist)		Abundance/C	ontrast F	Rhizo	spheres, etc.
0-8	A1	10YR 2/1					-	<u></u>	.oam	
8-17	<u>A2</u>	10YR 2/1					-	<u>L</u>	oam :	with lenses of pea
17+	<u>B</u>	5Y 5/1					·	L	.oamy	sand
Hydric S	oil Indicators:									
	listosol					Listed	on Local Hydri	c Soils List		
	listic Epipedon						on State Hydri			
	ulfidic Odor	Majatura Danina					on National Hy			
	educing Condi	Moisture Regime				_	Moisture Regin			
		Chroma Colors					c Streaking in S	Sandy Soils		
	•	entent in Surface Lay	·0.			- Mottles				
						— Other (Explain in Rem	narks)		
Coil color	(Describe soil	disturbances, local	variati	ons, etc	C.):					
0017 00707 1	and other nyur	ic soil indicators mee	ets the	nyanc	soil criteria	·				
VETLA	ND DETER	MINATION								
ydrophyl	tic Vegetation	Present?	Yes	X	No		is this	Sampling Do	i 18	/iahim - 181-41-
	ils Present?		Yes	X	No _		13 [11]	- cemping PO	117t V 1	/ithin a Wetlan
				/\	710					

Parame	etrix,	Inc.
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Data Plot #: 18-A3 Wetland:

Project/Site: Seattle Tacoma	Airport - Master Plan Up	date	Date	11/	2/98	
Applicant/Owner: Port of S	eattle		Cour	ity: K	(ing	
Investigator: William Kleindl	and Marti Louther		State	: v	VA	
✓ 1987 Method 1989	Method			_	Comn	nunity ID: PFO/PSS
Do Normal Circumstances exis	st on the site?	Yes _	X No			Plot ID: 18-a3
s the site significantly disturbe	ed (Atypical Situation)?	Yes	No	×		10110
s the area a potential Problem	Area?	Yes	— No	×		
Remarks (Explain sample loc	ation, disturbances, prob		<u> </u>		_	
/EGETATION (>Domina					. "	
Plant Species		% (Cover Str	tum	Indicator	
1. Athyrium filix-femina		25	He:	b	FAC	
2 Juncus effusus		5	Her		FACW	•
Phalans arundinacea Ranunculus repens		20 25	Her		FACW FACW	
Rubus discolor 6 Ainus rubra ercent of Dominant Specie except FAC-). Include species iorphological adaptations to wi	s noted (*) as showing etlands. "T" indicates tra	70 50 or FAC	Shr Tree	e J	FACU FAC	
Rubus discolor 6 Ainus rubra ercent of Dominant Species except FAC-). Include species iorphological adaptations to wi emarks (Describe disturbance	s noted (*) as showing etlands. "T" indicates traces traces traces traces relevant local variations.	70 50 or FAC	Shr Tree 100	etc.):	FACU FAC	πet.
Rubus discolor Annus rubra ercent of Dominant Species except FAC-). Include species forphological adaptations to with emarks (Describe disturbance ince greater than 50% of the color IYDROLOGY	e noted (*) as showing etlands. "T" indicates traces, relevant local variation dominant plants are hydrominant pla	70 50 or FAC	Shr Tre- 100 nal effects, wetland vo	etc.):	FACU FAC on critena is r	
Rubus discolor 6 Ainus rubra ercent of Dominant Species except FAC-). Include species orphological adaptations to we ernarks (Describe disturbance ince greater than 50% of the or YDROLOGY ecorded Data (Describe in f	e noted (*) as showing etlands. "T" indicates traces, relevant local variation dominant plants are hydrosenarks):	70 50 or FAC	100 100 nal effects. wetland viewetland	etc.): egetatio	FACU FAC on criteria is re	net. Drs (Describe in Remarks):
Rubus discolor 6 Ainus rubra ercent of Dominant Species except FAC-). Include species orphological adaptations to we ernarks (Describe disturbance ince greater than 50% of the or YDROLOGY ecorded Data (Describe in F	e noted (*) as showing etlands. "T" indicates traces, relevant local variation dominant plants are hydrometric et al. (*). Remarks): r Tide Gage	70 50 or FAC	100 100 nal effects. wetland viewetland	etc.): egetatio	FACU FAC on critena is r	
5 Rubus discolor 6 Alnus rubra ercent of Dominant Species except FAC-). Include species orphological adaptations to we emarks (Describe disturbance nice greater than 50% of the or YDROLOGY ecorded Data (Describe in F Stream, Lake, or Aerial Photograp	e noted (*) as showing etlands. "T" indicates traces, relevant local variation dominant plants are hydrometric et al. (*). Remarks): r Tide Gage	70 50 or FAC	100 100 nal effects. wetland viewetland	etc.): egetation Hydro ry India	FACU FAC on criteria is religional formation is religional formation in the control of the cont	ors (Describe in Remarks):
Rubus discolor 6 Alnus rubra ercent of Dominant Species except FAC-). Include species orphological adaptations to we emarks (Describe disturbanc nce greater than 50% of the or YDROLOGY ecorded Data (Describe in F Stream, Lake, or Aerial Photograp Other	e noted (*) as showing etlands. "T" indicates traces, relevant local variation dominant plants are hydrosecutive states. "Remarks): Tide Gage	70 50 or FAC	100 100 nal effects. wetland viewetland	etc.): egetatio	FACU FAC on criteria is relogy Indicate cators: Inundated Saturated in	Ors (Describe in Remarks):
Rubus discolor Alnus rubra ercent of Dominant Specie: xcept FAC-). Include species orphological adaptations to we emarks (Describe disturbance ance greater than 50% of the of YDROLOGY ecorded Data (Describe in fine Stream, Lake, or Aerial Photograp	e noted (*) as showing etlands. "T" indicates traces, relevant local variation dominant plants are hydrosecutive states. "Remarks): Tide Gage	70 50 or FAC	100 100 nal effects. wetland viewetland	etc.): egetation Hydro ry India	FACU FAC on criteria is relogy Indicate cators: Inundated Saturated in	Drs (Describe in Remarks): Describe in Remarks): Dupper 12 inches Dupper 18 inches
ercent of Dominant Species except FAC-). Include species orphological adaptations to with the control of the co	e noted (*) as showing etlands. "T" indicates traces, relevant local variation dominant plants are hydrosecutive are hyd	70 50 or FAC	100 100 nal effects. wetland viewetland	etc.): egetation Hydro ry India	FACU FAC On criteria is related to cators: Inundated Saturated in Saturated in	Drs (Describe in Remarks): Describe in Remarks): Dupper 12 inches Dupper 18 inches
ercent of Dominant Species except FAC-). Include species orphological adaptations to with the control of the co	e noted (*) as showing etlands. "T" indicates traces, relevant local variation dominant plants are hydrosecutive are hyd	70 50 or FAC	100 100 nal effects. wetland viewetland	etc.): egetation Hydro ry Indu	FACU FAC FAC On criteria is related to the cators: Inundated Saturated in Saturated in Water Mark: Drift Lines Sediment D	Drs (Describe in Remarks): n Upper 12 inches n Upper 18 inches s
Rubus discolor 6 Alnus rubra ercent of Dominant Species except FAC-). Include species orphological adaptations to we emarks (Describe disturbance ince greater than 50% of the of YDROLOGY ecorded Data (Describe in F Stream, Lake, or Aerial Photograp Other No Recorded Data	e noted (*) as showing etlands. "T" indicates traces, relevant local variation dominant plants are hydrosecutive are hyd	70 50 or FAC	100 100 nal effects. wetland viewetland	etc.): egetation Hydro ry India	FACU FAC FAC On criteria is related to the cators: Inundated Saturated in Saturated in Water Mark: Drift Lines Sediment D	Drs (Describe in Remarks): 1 Upper 12 inches 1 Upper 18 inches 5
Rubus discolor Alnus rubra ercent of Dominant Species except FAC-). Include species erphological adaptations to we emarks (Describe disturbance except than 50% of the companies of the compani	e noted (*) as showing etlands. "T" indicates traces, relevant local variation dominant plants are hydrosecutive are hyd	70 50 or FAC	100 nal effects, wetland vi	etc.): egetation Hydro ry Indu	FACU FAC FAC On criteria is related in the cators: Inundated in Saturated in Water Marks Drift Lines Sediment De Drainage Pa	Drs (Describe in Remarks): n Upper 12 inches n Upper 18 inches s eposits atterns in Wetlands
Rubus discolor 6 Alnus rubra ercent of Dominant Species except FAC-). Include species orphological adaptations to we emarks (Describe disturbance ince greater than 50% of the co YDROLOGY ecorded Data (Describe in F Stream, Lake, or Aerial Photograp Other X No Recorded Data eld Observations: Depth of Surface Water: Depth to Free Water in Pit:	e noted (*) as showing etlands. "T" indicates traces, relevant local variation dominant plants are hydrometric formation of the control of th	70 50 or FAC	100 nal effects, wetland vi	etc.): egetatic Hydro ry Indii	FACU FAC FAC FAC FAC FAC FAC FAC	Drs (Describe in Remarks): n Upper 12 inches n Upper 18 inches s eposits etterns in Wetlands or more required):
Rubus discolor 6 Alnus rubra ercent of Dominant Species except FAC-). Include species except F	enoted (*) as showing etlands. "T" indicates traces, relevant local variation dominant plants are hydroxide. Remarks): r Tide Gage oh ata Available	70 50 or FAC	100 nal effects, wetland vi	etc.): egetation Hydro ry Indu	FACU FAC FAC FAC FAC FAC FAC FAC	Drs (Describe in Remarks): In Upper 12 inches In Upper 18 inches In Upper 19 inches In Upper 19 inches In Upper 19 inches In Upper 19 inches
Rubus discolor Alnus rubra Recent of Dominant Species Recent FAC-). Include species Remarks (Describe disturbance Remarks (Describe disturbance) Remarks (Describe disturb	enoted (*) as showing etlands. "T" indicates traces, relevant local variation dominant plants are hydrotectic formula (*) are hydrotectic form	70 50 or FAC	100 nal effects, wetland vi	etc.): egetatic Hydro ry Indii	FACU FAC FAC FAC FAC FAC FAC FAC	Drs (Describe in Remarks): In Upper 12 inches In Upper 18 inches In Upper 18 inches In Upper 18 inches In Upper 18 inches In Upper 19 inches In U

Wetland hydrology was present in July and observed as saturation to the soils surface, oxidized root channels in upper 12 inches of the soil and a shallow water table

4 N		 -				Data Plot	#:	18-A3
1						Wetland:		18
2roject/Si	te: Seattle Ta	acoma Airport - Master P	lan Update	Date:	11/2/98			
SOILS Soil Surv	vey Data:							
Map Unit	Name: Unm	napped			Drainage Clas	is:		
					Field Observa	tions Confirm	Марр	ed Type?
Taxonomy	y (Subgroup):				Yes I	No	NA	x
Profile De	escription:	····						
Depth (inches)	Horizon Designation	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)		Mottle Abundance/Co	ontrast	Textu Rhizo	re, Concretions spheres, etc.
0-12	A	10YR 3/1	•		•		Loam	*
12-15	С	10YR 4/2	10YR 4/3		Common. Mediur	n, Faint	Sandy	loam
Hydric So	il Indicators:							
X Hi	stosol			Listed	on Local Hydric	c Soils List		
Hi:	stic Epipedon			_	on State Hydric			
	Ilfidic Odor			Listed	l on National Hy	dric Soils List		
		Moisture Regime	X	Aquic	Moisture Regim	ne		
	ducing Condi			Organ	ic Streaking in S	Sandy Soils		
	-	Chroma Colors		Mottle	-			
HIG	gh Organic Co	ontent in Surface Layer		Other	(Explain in Rem	arks)		

The presence of all three parameters indicate this area is a wetland.

Hydrophytic Vegetation Present?

Hydric Soils Present?

Wetland Hydrology Present?

Is this Sampling Point Within a Wetland?

Yes X No ___

Parametrix, Inc.



L'					
	WETLAND D	ETEDMIN/	ATION	Wetland:	18 Upland Pio
			·		
(Modified from	n: 1987 COE 1	Wetiands I	Delineatio	n Manual)	
Project/Site: Seattle Tacoma Airport - Master Pl	an Update	Date:	7/2/98		
Applicant/Owner: Port of Seattle		County:	King		
nvestigator: William Kleindl		State:	WA		
✓ 1987 Method			C	ommunity ID: U	pland
Do Normal Circumstances exist on the site?	Yes	XNo		eid Plot ID: 16-E	
s the site significantly disturbed (Atypical Situatio	יים פח)? Yes	No .	<u> </u>	EIG F 101 1D. 10-1	,
s the area a potential Problem Area?	Yes	_ •	×		
emarks (Explain sample location, disturbances		-	^		
pland plot located on Parcel 279.					
EGETATION (Dominant species are che	•				
Plant Species		Cover Stratu		r	
1 Equisetum telmateia	80	Herb	FACW		
2 Hypochaens radicata 3 Prunus sp	<u>5</u>	Shrub	PACU NL	_	
3 1.0.103.55		Shrub	FACU		
4 Rubus discolor	5				
5 Acer macrophyllum ercent of Dominant Species that are OBL. For except FAC-). Include species noted (*) as show orphological adaptations to wetlands. "T" indicates the control of the c	ing tes trace.	100	FACU	_	
Acer macrophylium ercent of Dominant Species that are OBL. For except FAC-). Include species noted (*) as snow its prophological adaptations to wetlands. "T" indicatemarks (Describe disturbances, relevant local in the control of t	5 ACW, or FAC ing tes trace. variations, seasor	100 Tree	c.):	s met.	
Acer macrophyllum ercent of Dominant Species that are OBL. Freezept FAC-). Include species noted (*) as snow orphological adaptations to wetlands. "T" indicatemarks (Describe disturbances, relevant local vince more than 50% of the dominant plants are in	5 ACW, or FAC ing tes trace. variations, seasor	100 Tree	c.):	: met.	
Acer macrophyllum ercent of Dominant Species that are OBL. Facept FAC-). Include species noted (*) as show orphological adaptations to wetlands. "T" indicatemarks (Describe disturbances, relevant local vince more than 50% of the dominant plants are helps of the property	5 ACW, or FAC ing tes trace. variations, seasor	100 nai effects, etcetland vegeta	c.): tion critena is		e in Remarks):
Acer macrophyllum ercent of Dominant Species that are OBL. Fr xcept FAC-). Include species noted (*) as snow orphological adaptations to wetlands. "T" indicatemarks (Describe disturbances, relevant local ince more than 50% of the dominant plants are helphyllogy	5 ACW, or FAC ing tes trace. variations, seasor	100 nal effects, etcetland vegeta Wetland Hy	c.): tion critena is	cators (Describ	e in Remarks):
Acer macropnyllum ercent of Dominant Species that are OBL. Friedrich FAC-). Include species noted (*) as snowl orphological adaptations to wetlands. "T" indicate marks (Describe disturbances, relevant local value more than 50% of the dominant plants are hercorded Data (Describe in Remarks):	5 ACW, or FAC ing tes trace. variations, seasor	100 nal effects, etcetland vegeta Wetland Hy	c.): ition criteria is drology Indi	cators (Describ	e in Remarks):
Acer macropnyllum ercent of Dominant Species that are OBL. Fr except FAC-). Include species noted (*) as snowled prophological adaptations to wetlands. "T" indicate the second of the dominant plants are in the second of the second	5 ACW, or FAC ing tes trace. variations, seasor	100 nal effects, etcetland vegeta Wetland Hy	c.): ition criteria is drology Indi Indicators: Inundate	cators (Describ	
Acer macropnyllum ercent of Dominant Species that are OBL. Fricept FAC-). Include species noted (*) as snown orphological adaptations to wetlands. "T" indicate the second of the dominant plants are in the second of th	5 ACW, or FAC ing tes trace. variations, seasor	100 nal effects, etcetland vegeta Wetland Hy	c.): tion criteria is drology Indi Indicators: Inundate Saturate	cators (Describ	⊅es
Acer macropovilum Percent of Dominant Species that are OBL. Facept FAC-). Include species noted (*) as snown or phological adaptations to wetlands. "T" indicate marks (Describe disturbances, relevant local since more than 50% of the dominant plants are high the process of the dominant plants are high process of the dominant plants are highly process of th	5 ACW, or FAC ing tes trace. variations, seasor	100 nal effects, etcetland vegeta Wetland Hy	drology Indi Indicators: Inundate Saturate Water M	cators (Described in Upper 12 inced in Upper 18	⊅es
5 Acer macrophyllum ercent of Dominant Species that are OBL. Fr xcept FAC-). Include species noted (*) as snowled orphological adaptations to wetlands. "T" indical emarks (Describe disturbances, relevant local ance more than 50% of the dominant plants are in YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	5 ACW, or FAC ing tes trace. variations, seasor	100 nal effects, etcetland vegeta Wetland Hy	drology Indi Indicators: Inundate Saturate Water M Drift Line	cators (Described in Upper 12 inced in Upper 18	⊅es
acer macrophyllum ercent of Dominant Species that are OBL. Frince FAC-). Include species noted (*) as snown orphological adaptations to wetlands. "T" indical emarks (Describe disturbances, relevant local since more than 50% of the dominant plants are high the species of the dominant plants are high the species of the dominant plants are high the species of the spe	5 ACW, or FAC ing tes trace. variations, seasor	100 nal effects, etcetland vegeta Wetland Hy	drology Indi Indicators: Inundate Saturate Water M Drift Line	cators (Described in Upper 12 included in Upper 18	thes thes
acer macrophyllum ercent of Dominant Species that are OBL. Friexcept FAC-). Include species noted (*) as snown orphological adaptations to wetlands. "T" indicatemarks (Describe disturbances, relevant local vince more than 50% of the dominant plants are his YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake. or Tide Gage Aerial Photograph Other X No Recorded Data Available	5 ACW, or FAC ing tes trace. variations, seasor	100 nal effects, etcetland vegeta Wetland Hy	drology Indi Indicators: Inundate Saturate Water M Drift Line	cators (Described in Upper 12 inced in Upper 18	ches ches
acer macrophyllum ercent of Dominant Species that are OBL. From Except FAC-). Include species noted (*) as snown orphological adaptations to wetlands. "T" indicate that shows the dominant plants are incomposed than 50% of the dominant plants are incomposed than 50% of the dominant plants are incomposed to the shows the shows that it is shown in the shows that it is shown in the shown in the shows that it is shown in the shown in the shows that are shown in the shown in the shows that it is shown in the sho	5 ACW, or FAC ing tes trace. variations, seasor by drophytic, the w	Tree 100 nai effects, etcetiand vegeta Wetland Hy Primary	drology Indi Indicators: Inundate Saturate Water M Drift Line Sedimer Drainage	cators (Described in Upper 12 included in Upper 18	ches ches dands
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acer macrophyllum ercent of Dominant Species that are OBL. Frecept FAC-). Include species noted (*) as snown orphological adaptations to wetlands. "T" indicatemarks (Describe disturbances, relevant local vince more than 50% of the dominant plants are his YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake. or Tide Gage Aerial Photograph Other X No Recorded Data Available alid Observations: Depth of Surface Water: None (in Depth to Free Water in Pit: >16 (in	5 ACW, or FAC ing tes trace. variations, seasor ydrophytic, the w	Tree 100 nai effects, etcetiand vegeta Wetland Hy Primary	drology Indi Indicators: Inundate Saturate Water M Drift Line Sedimer Drainage iny Indicators Water-S Water-S	cators (Describ	ches ches dands red):
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Acer macroprollum Percent of Dominant Species that are OBL. Freecept FAC-). Include species noted (*) as snown prophological adaptations to wetlands. "T" indicatemarks (Describe disturbances, relevant local value fince more than 50% of the dominant plants are his stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Peld Observations: Depth of Surface Water: Depth to Free Water in Pit: >16 (in	5 ACW, or FAC ing tes trace. variations, seasor ydrophytic, the w	Tree 100 nai effects, etcetiand vegeta Wetland Hy Primary	drology Indi Indicators: Inundate Saturate Water M Drift Line Sedimer Drainage Oxidized	cators (Describ	ches ches dands red):
Acer macroprollum Percent of Dominant Species that are OBL. Freecept FAC-). Include species noted (*) as snown prophological adaptations to wetlands. "T" indicatemarks (Describe disturbances, relevant local value fince more than 50% of the dominant plants are his stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Peld Observations: Depth of Surface Water: Depth to Free Water in Pit: >16 (in	5 ACW, or FAC ing tes trace. variations, seasor ydrophytic, the w	Tree 100 nai effects, etcetiand vegeta Wetland Hy Primary	drology Indi Indicators: Inundate Saturate Water M Drift Line Sedimer Drainage iny Indicators Water-S Water-S	cators (Described in Upper 12 included in Upper 18 in Weting 18 included in Upper 18 included	ches ches dands red):
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4 1								Data Piot	#:	18-B1
•								Wetland:	;	18 Upland Plo
.	0'4 - 0 - M - T									
'roject/	Site: Seattle I	acoma Airport - Mas	ter Pia	an Upd	ate	Date:	7/2/98			
SOILS Soil Su	rvey Data:									
Map Un	it Name: <u>Unn</u>	napped					Drainage Cla	ss:		
							Field Observ	ations Confirm	Марр	ed Type?
Taxono	m∨ (Subgroup):						Yes	No	NA	_x_
Profile I	Description:									
Depth Inches)	Horizon Designation	Matrix Color (Munsell Moist)			e Color sell Moist)		Mottle Abundance/0	Contrast		re, Concretions, spheres, etc.
)-4	0/4	10YR 3/2							Silt loa	m
-10	В	10YR 3/4					-		Silt loa	m
lvdric S	ioil Indicators	:								
-	Histosol					Listed	on Local Hydi	ric Soils List		
	Histic Epipedon	•					on State Hydr			
	Sulfidic Odor							ydric Soils List	t	
		Moisture Regime					Moisture Regi			
	Reducing Cond					_	ic Streaking in	Sandy Soils		
	Gleyed or Low-(digh Organic Co	ontent in Surface Lay	.			_ Mottle:				
					. —	_ Other ((Explain in Rei	marks)		
		disturbances, local oil are present.	vanatı	ons, et	C.):					
					<u> </u>		**********			
VETLA	ND DETER	MINATION								
ydroph	rtic Vegetation	Present?	Yes	_x	No		is thi	is Sampling P	oint W	/ithin a Wetiand
ydric S	oils Present?		Yes		No X			Yes	No	

Wetland vegetation is present, however both wetland hydrology and hydric soils are absent. Therefore, the area is not a wetland.

Parametrix, Inc.



Data Piot #: 18-B2

	TLAND	DETE	DMINA.	TION	Wetland	d:	18 Upland Plot
-							
(Modified from: 1	1987 CO	E weti	ands D	elinea	tion Manua	')	
Project/Site: Seattle Tacoma Airport - Master Plan U	Jpdate		Date:	1/2/98			
Applicant/Owner: Port of Seattle			County:	King			
investigator: William Kleindl, Marti Louther		_	State:	WA			
✓ 1987 Method 1989 Method					Community II	D: Upla	nd
Do Normal Circumstances exist on the site?	Yes	x	No		Field Plot ID:		
s the site significantly disturbed (Atypical Situation)?	Yes		No -	X	FIELD FIOLID.	10-0	
s the area a potential Problem Area?	Yes		_	×			
Remarks (Explain sample location, disturbances, pro		36):	_	^_			
EGETATION (Dominant species are checked	d)		- -				
Plant Species	-,	% Cover	Stratum	n Indi	cator		
Agrostis capillans (tenuis)		25	Herb	FAC			
2 Dactvius glomerata		5	Herb	FAC			
3 Lotus comiculatus		5	Herb	FAC			
Phalans arundinacea		2 5	Herb	FAC	·w		
5 Piantago ianceolata		10	Herb	FAC	U+		
5 Plantago lanceolata							
7 Rubus discolor ercent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing		5 <u>66</u>	Herb Shrub	PAC	U		
Rubus discolor Rubus discolor ercent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing horphological adaptations to wetlands. "T" indicates the marks (Describe disturbances, relevant local variations).	trace. ations, sea	5 66 asonal ef	Shrub	FAC			
Rubus discolor Rubus discolor ercent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing iorphological adaptations to wetlands. "T" indicates the marks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydrogeness.	trace. ations, sea	5 66 asonal ef	Shrub	FAC			
Rubus discolor ercent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates the emarks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hypersequents. YDROLOGY	trace. ations, sea	5 66 asonal ef	Shrub fects, etc	FAC	eria is met.	assriba ir	2 Pomerke)
Rubus discolor ercent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing inorphological adaptations to wetlands. "T" indicates the marks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydrograms of the dominant plants are hydrograms." EXPOROLOGY ecorded Data (Describe in Remarks):	trace. ations, sea	5 66 asonal ef the wetla	Shrub fects, etc	FAC	eria is met.	escribe in	n Remarks):
Rubus discolor ercent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates the semants (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hyd YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage	trace. ations, sea	5 66 asonal ef the wetla	Shrub fects, etc	FAC	eria is met. Indicators (D	escribe ir	n Remarks):
6 Poa sp 7 Rubus discolor ercent of Dominant Species that are OBL, FACW xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates the marks (Describe disturbances, relevant local variating greater than 50% of the dominant plants are hyperocorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	trace. ations, sea	5 66 asonal ef the wetla	Shrub fects, etc	FAC .): eation crit drology indicators inun	eria is met. Indicators (Discussion of the control		
6 Poa sp 7 Rubus discolor ercent of Dominant Species that are OBL, FACW xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates the marks (Describe disturbances, relevant local variance greater than 50% of the dominant plants are hydrograph of the dom	trace. ations, sea	5 66 asonal ef the wetla	Shrub fects, etc	FAC	eria is met. Indicators (D	12 inche	s
6 Poa sp 7 Rubus discolor ercent of Dominant Species that are OBL, FACW xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates the marks (Describe disturbances, relevant local variating greater than 50% of the dominant plants are hyperocorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	trace. ations, sea	5 66 asonal ef the wetla	Shrub fects, etc	FAC	eria is met. Indicators (Discrete discrete disc	12 inche	s
recent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing corpnological adaptations to wetlands. "T" indicates the emarks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hyperocorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	trace. ations, sea	5 66 asonal ef the wetla	Shrub fects, etc	FAC	eria is met. Indicators (D. Idated Irrated in Upper	12 inche	s
recent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing corpnological adaptations to wetlands. "T" indicates the emarks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hyperocorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	trace. ations, sea	5 66 asonal ef the wetla	Shrub fects, etc	FACO inclose the free free free free free free free fr	eria is met. Indicators (Disciplinated in Upper in Upper er Marks Lines ment Deposits	12 inche 18 inche	s s
recent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing torphological adaptations to wetlands. "T" indicates the emarks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hyperore described in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available	trace. ations, sea	5 66 asonal ef the wetla	Shrub fects, etc	FACO inclose the free free free free free free free fr	eria is met. Indicators (D.: Idated Irrated in Upper Irrated in Upper Irrated in Upper Irrated in Upper	12 inche 18 inche	s s
6 Poa sp 7 Rubus discolor ercent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates the marks (Describe disturbances, relevant local variating greater than 50% of the dominant plants are hydrograph of the dominant plants are hydrograph of the marks or Tide Gage Aerial Photograph Other No Recorded Data Available	trace. ations, sea	66 asonal ef the wetla	fects, etc and veget	irology (ation crit drology (adicators Inun Satu Satu Drift Sedi Drail	eria is met. Indicators (D.: Idated in Upper irrated in Upper er Marks Lines ment Deposits nage Patterns i	12 inche 18 inche n Wetlan	s s
6 Poa sp 7 Rubus discolor ercent of Dominant Species that are OBL, FACW xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates the marks (Describe disturbances, relevant local variatince greater than 50% of the dominant plants are hydrograph of the dominant plants are hydrograph of the control of the c	trace. ations, sea	66 asonal ef the wetla	fects, etc and veget	irology (ation crit drology (adicators Inun Satu Satu Drift Sedi Drail	eria is met. Indicators (Disciplinated in Upper in Upper er Marks Lines ment Deposits	12 inche 18 inche n Wetlan	s s
recent of Dominant Species that are OBL, FACM except FAC-). Include species noted (*) as showing torphological adaptations to wetlands. "T" indicates the marks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hyperotectic process." YDROLOGY Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	trace. ations, sea	66 asonal ef the wetla	fects, etc and veget	irology indicators inun Satu Satu Vatu Drift Sedi Drail	indicators (Discrete in Upper irrated in Upper er Marks Lines ment Deposits nage Patterns i tors (2 or more lized Root Chai	12 inche 18 inche n Wetlan required	s s
Rubus discolor recrent of Dominant Species that are OBL, FACM except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates the marks (Describe disturbances, relevant local variatince greater than 50% of the dominant plants are hyperitarian plants are hyperitarian plants. The second plants are hyperitarian plants are hyperitarian plants. The second plants are hyperitarian plants. The second plants are hyperitarian plants are hyperitarian plants. The second plants are hyperitarian plants are hyperitarian plants are hyperitarian plants are hyperitarian plants. The second plants are hyperitarian plants are hyperitarian plants are hyperitarian plants. The second plants are hyperitarian plants are hyperitarian plants are hyperitarian plants. The second plants are hyperitarian plants. The second plants are hyperitarian pl	trace. ations, sea	66 asonal ef the wetla	fects, etc and veget	irology indicators Satu Satu Drift Sedi Drail y Indica Oxic Wate	Indicators (Discontinuo) Indicators (Discon	12 inche. 18 inche. n Wetlan- required nnels in Ures	s s ds
Reverent of Dominant Species that are OBL. FACM except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates the temarks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hyperitarions (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available ield Observations: Depth of Surface Water: Depth to Free Water in Pit: None (in.)	trace. ations, sea	66 asonal ef the wetla	fects, etc and veget	drology findicators Satu Satu Drift Sedi Drail Y Indica Vate Vate Loca	Indicators (Disciplinated in Upper er Marks Lines ment Deposits hage Patterns intors (2 or more lized Root Chaiter-Stained Leavel Soil Survey Disciplination (2 Soil Survey Disciplination)	12 inche 18 inche: n Wetlan- required nnels in U	s s ds
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<u>Par</u>	ametr	ix, Inc.			_		
41					Data	Piot #:	18-B2
					Weti	land:	18 Upland Plot
SOILS		acoma Airport - Maste	er Plan Update	Date: <u>11/</u>	2/98		
Soil Sur Map Unit	vey Data: :Name: <u>Unm</u>	napped		Drai	nage Class:		
				Field	Observations Co	nfirm Map	ped Type?
Taxonom	y (Subgroup):			Yes	No	NA	x
Profile D	escription:						
Depth Inches)	Honzon Designation	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)	Mott Abur	le ndance/Contrast		ure, Concretions, ospheres, etc.
0-10	Fili	10YR 3/2	10YR 4/6, 10YR 5/2	Comm	on. Coarse, Distinct		
Н	oil Indicators:			_	ocal Hydric Soils Li		
	istic Epipedon ulfidic Odor				ate Hydric Soils Li		
		Moisture Regime		_	ational Hydric Soils	s List	
	educing Condi	-		_ Aquic Moist	ure Regime eaking in Sandy Sc	nila	
GI	eyed or Low-C	Chroma Colors	×	_ Organic Stre Mottles	ening in Sandy St	JIIS	

X Mottles

Other (Explain in Remarks)

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results):

High Organic Content in Surface Layer

WETLAND DETERMINATION Hydrophytic Vegetation Present?

Hydric Soils Present?

Wetland Hydrology Present?

Remarks (Describe soil disturbances, local variations, etc.):

material, and do not reflect environmental conditions present on the site.

Wetland vegetation is present, however both wetland hydrology and hydric soils are absent. Therefore, the area is not a wetland.

Soil is fill material; contains gravel, asphalt, and buried organic matter. Hydric soil colors are presumed to be a result of fill parent

is this Sampling Point Within a Wetland?

Yes _____ No __X

Parametrix, Inc.



4 1						Data Piot #	: 18-B 3
L	WET	LAND	ETE	DAIN! A	TION	Wetland:	18 Upland Plot
						MN	
	(Modified from: 19	87 COE	vveti	anus L	Jenneau	on manual)	
Project/Site: Seattle Tacoma	Airport - Master Plan Up	date	_ 1	Date:	1/10/99		
Applicant/Owner: Port of S	eattle		_ (County:	King		
Investigator: William Kleindi	and Marti Loutner		_	State:	WA		
✓ 1987 Method	Method					Community ID:	Upland
Do Normal Circumstances exis	st on the site?	Yes _	x	No		-	B-B3
s the site significantly disturbe	ed (Atypical Situation)?	Yes		No	X		
s the area a potential Problem	Area?	Yes		No -	X		
Remarks (Explain sample loc	ation disturbances prob	_	<u>):</u>	_			
The sample is located on Parce						3 2 3 100 10We	than plot rubz.
/EGETATION (✓Domina Plant Species	ant species are checked)	%	Cover	Stratum	n Indicat	or	
1 Agrostis capillans (tenuis	3)	15		Herb	FAC		
2 Dactviis giomerata		5		Herb	FACU		
3. Polystichum munitum		5		Herb	FACU		
4 Crataegus douglasii				Shrub	FAC		
5 Rubus discolor		80 10		Shrub	FACU		
				Shrub	FACU+		
6 Rubus laciniatus 7 Alnus rubra							
7 Alnus rubra ercent of Dominant Species except FAC-). Include species torphological adaptations to we	noted (*) as showing etlands. "T" indicates tra-	75 or FAC ce.	50	Tree	FAC	·	
Alnus rubra ercent of Dominant Species except FAC-). Include species erophological adaptations to we emarks (Describe disturbance egetation consists of species to	enoted (*) as showing etlands. "T" indicates trai ces, relevant local variation typical of disturbed areas	or FAC ce.	50 onal effe	Tree	FAC	not met because	e only 50% of the domi
ercent of Dominant Species except FAC-). Include species corphological adaptations to with emarks. (Describe disturbance egetation consists of species to pecies are adopted to wetlands.	enoted (*) as showing etlands. "T" indicates trai ces, relevant local variation typical of disturbed areas	or FAC ce.	50 onal effe	Tree	FAC	not met because	e only 50% of the domi
arcent of Dominant Species except FAC-). Include species orphological adaptations to we emarks (Describe disturbance agetation consists of species to becies are adopted to wetland:	enoted (*) as showing etlands. "Thindicates traines, relevant local variation typical of disturbed areas s	or FAC ce.	50 onal effe and veg	Tree ects, etc	FAC .): criteria are		
7 Alnus rubra ercent of Dominant Species except FAC-). Include species prophological adaptations to we emarks (Describe disturbance egetation consists of species to eccess are adopted to wetlands	enoted (*) as showing etlands. "T" indicates traces, relevant local variation typical of disturbed areas s.	or FAC ce.	50 onal efficient veg Wetl	Tree ects, etc	FAC .): criteria are		e only 50% of the domi
7 Alnus rubra ercent of Dominant Species except FAC-). Include species except FAC-). Include species except FAC-). Include species except FAC-). Include species ermarks (Describe disturbance getation consists of species te ecies are adopted to wetlands YDROLOGY ecorded Data (Describe in F	enoted (*) as showing ettands. "T" indicates traces, relevant local variation typical of disturbed areas s. Remarks):	or FAC ce.	50 onal efficient veg Wetl	Tree ects, etc	FAC): criteria are drology indindicators:	licators (Desci	
7 Alnus rubra ercent of Dominant Species except FAC-). Include species prophological adaptations to we emarks (Describe disturbance getation consists of species to ecies are adopted to wetlands YDROLOGY corded Data (Describe in F	enoted (*) as showing ettands. "T" indicates traces, relevant local variation typical of disturbed areas s. Remarks):	or FAC ce.	50 onal efficient veg Wetl	Tree ects, etc	FAC): criteria are drology ind ndicators: Inunda	licators (Desci	ribe in Remarks):
7 Alnus rubra ercent of Dominant Species except FAC-). Include spe	enoted (*) as showing etlands. "T indicates traites, relevant local variation typical of disturbed areas s. Remarks): Tide Gage	or FAC ce.	50 onal efficient veg Wetl	Tree ects, etc	racineria are drology indicators: Inunda Saturat	licators (Desci	ribe in Remarks):
7 Alnus rubra ercent of Dominant Species except FAC-). Include species prophological adaptations to with emarks (Describe disturbance egetation consists of species to ecies are adopted to wetlands YDROLOGY corded Data (Describe in F Stream, Lake, or Aerial Photograp Other	enoted (*) as showing etlands. "T indicates traites, relevant local variation typical of disturbed areas s. Remarks): Tide Gage	or FAC ce.	50 onal efficient veg Wetl	Tree ects, etc	racineria are drology indicators: Inunda Saturat	licators (Descrited in Upper 12 ided in Upper 18 ided in	ribe in Remarks):
7 Alnus rubra ercent of Dominant Species xcept FAC-). Include species corphological adaptations to with emarks (Describe disturbance egetation consists of species to eccies are adopted to wetlands YDROLOGY ecorded Data (Describe in F Stream, Lake, or Aerial Photograp Other	enoted (*) as showing etlands. "T indicates traites, relevant local variation typical of disturbed areas s. Remarks): Tide Gage	or FAC ce.	50 onal efficient veg Wetl	Tree ects, etc	drology Indindicators: Inunda Saturat Water I Drift Lir	licators (Descrited led in Upper 12 ided in Upper 18 ided	ribe in Remarks):
7 Alnus rubra ercent of Dominant Species xcept FAC-). Include species corphological adaptations to with emarks (Describe disturbance egetation consists of species to eccies are adopted to wetlands YDROLOGY ecorded Data (Describe in F Stream, Lake, or Aerial Photograp Other	enoted (*) as showing etlands. "T indicates traites, relevant local variation typical of disturbed areas s. Remarks): Tide Gage	or FAC ce.	50 onal efficient veg Wetl	Tree ects, etc	drology Indindicators: Inunda Saturat Water I Drift Lir Sedime	icators (Descrited ted in Upper 12 ided in Upper 18 ided in Upper 18 idea idea idea idea idea idea idea idea	nibe in Remarks); niches niches
ercent of Dominant Species except FAC-). Include species corphological adaptations to with emarks (Describe disturbance egetation consists of species are adopted to wetlands: YDROLOGY Corded Data (Describe in Foundation Stream, Lake, or Aerial Photograp Other X No Recorded Data	enoted (*) as showing etlands. "T indicates traites, relevant local variation typical of disturbed areas s. Remarks): Tide Gage	or FAC ce.	50 onal efficient veg Wetl	Tree ects, etc	drology Indindicators: Inunda Saturat Water I Drift Lir Sedime	licators (Descrited led in Upper 12 ided in Upper 18 ided	nibe in Remarks); nches nches
7 Alnus rubra ercent of Dominant Species except FAC-). Include species corphological adaptations to we emarks (Describe disturbance egetation consists of species to eccies are adopted to wetlands YDROLOGY ecorded Data (Describe in F Stream, Lake, or Aerial Photograp Other X No Recorded Data eld Observations: Depth of Surface Water:	enoted (*) as showing etlands. "T indicates traites, relevant local variation typical of disturbed areas s. Remarks): Tide Gage	or FAC ce.	50 onal efficient veg Wetli	ects, etc getation	drology Indindicators: Inunda Saturat Water I Drift Lir Sedime	ted ted in Upper 12 if ted in Upper 18 if Marks nes ent Deposits ge Patterns in W	nibe in Remarks): inches inches etlands
7 Alnus rubra ercent of Dominant Species except FAC-). Include species except Acceptable disturbance except acceptable disturb	enoted (*) as showing etlands. "T indicates traites, relevant local variation typical of disturbed areas s. Remarks): Tide Gage in the Available	or FAC ce.	50 onal efficient veg Wetli	ects, etc getation	drology Indicators: Inunda Satural Satural Water I Drift Lir Sedime Drainagy Indicator.	ted ted in Upper 12 if ted in Upper 18 if Warks nes ent Deposits ge Patterns in W	nibe in Remarks): inches inches etlands
arcent of Dominant Species except FAC-). Include species orphological adaptations to we emarks. (Describe disturbance agetation consists of species are adopted to wetlands: YDROLOGY Corded Data (Describe in Faction Stream, Lake, or Aerial Photograp Other X No Recorded Data Redd Observations:	enoted (*) as showing etlands. "T indicates traices, relevant local variation typical of disturbed areas s. Remarks): Tide Gage with ta Available None (in.)	or FAC ce.	50 onal efficient veg Wetli	ects, etc getation	drology Indicators: Inunda Satural Satural Water I Drift Lir Sedime Drainag	ted ted in Upper 12 ited in Upper 18 ited Marks nes ent Deposits ge Patterns in W s (2 or more req ed Root Channel	nibe in Remarks): inches inches etlands
ercent of Dominant Species except FAC-). Include species except FAC-). Include species except FAC-). Include species increhological adaptations to with emarks. (Describe disturbance egetation consists of species are adopted to wetland: YDROLOGY ecorded Data (Describe in Factorial Photograp Other X No Recorded Data eld Observations: Depth of Surface Water: Depth to Free Water in Pit:	enoted (*) as showing etlands. "T indicates traices, relevant local variation typical of disturbed areas s. Remarks): Tide Gage in ta Available None (in.) None (in.)	or FAC ce.	50 onal efficient veg Wetli	ects, etc getation	drology Indicators: Inunda Satural Satural Water I Drift Lir Sedime Drainag	ted ted in Upper 12 ited in Upper 18 ited Marks hes ent Deposits he Patterns in W s (2 or more req d Root Channel Stained Leaves	nibe in Remarks): inches inches etlands
Percent of Dominant Species except FAC-). Include species except for species of species of species of species of species are adopted to wetland: YPROLOGY	enoted (*) as showing etlands. "T indicates traices, relevant local variation typical of disturbed areas s. Remarks): Tide Gage in ta Available None (in.) None (in.)	or FAC ce.	50 onal efficient veg Wetli	ects, etc getation	drology indicators: Inunda Satural Satural Water I Drift Lir Sedime Drainag y Indicator. Oxidize Water-S Local S	ted in Upper 12 is ded in Upper 18 is des in Upper	nibe in Remarks): Inches Inche
Percent of Dominant Species except FAC-). Include species except FAC-). Include species except FAC-). Include species morphological adaptations to with the second consists of species of species are adopted to wetlands. IYDROLOGY Recorded Data (Describe in Foundation of Stream, Lake, or Aerial Photograp Other X No Recorded Data (Describe in Foundation of Surface Water: Depth of Surface Water: Depth to Free Water in Pit: Depth to Saturated Soil:	enoted (*) as showing etlands. "T indicates traices, relevant local variation typical of disturbed areas is seen relevant local variation typical of disturbed areas is seen relevant local variation typical of disturbed areas is seen relevant local variation typical of disturbed areas is seen relevant local variation typical variation	or FAC ce. ons. seaso	50 onal efficient veg Wetli	ects, etc getation and Hyd Primary I	drology indindicators: Inunda Saturat Saturat Water I Drift Lir Sedime Drainag y Indicator Oxidize Water-S Local S Other (I	ted in Upper 12 is ded in Upper 18 is Marks nes ent Deposits ge Patterns in Was (2 or more requed Root Channel Stained Leaves oil Survey Data Explain in Rema	nibe in Remarks): Inches Inche
Percent of Dominant Species except FAC-). Include species except FAC-). Include species inorphological adaptations to with Remarks (Describe disturbance (Pegetation consists of species of species are adopted to wetlands). Image: Percent of Stream, Lake, or Aerial Photograp Other	enoted (*) as showing etlands. "T indicates traices, relevant local variation typical of disturbed areas is seen that the seen typical of disturbed areas is seen that the seen typical of disturbed areas is seen typical of dist	or FAC ce. ons. seaso	50 onal efficient veg Wetli	ects, etc getation and Hyd Primary I	drology indindicators: Inunda Saturat Saturat Water I Drift Lir Sedime Drainag y Indicator Oxidize Water-S Local S Other (I	ted in Upper 12 is ded in Upper 18 is Marks nes ent Deposits ge Patterns in Was (2 or more requed Root Channel Stained Leaves oil Survey Data Explain in Rema	nibe in Remarks): Inches Inche

1						Data F	iot#:	18-B3
						Wetia	nd:	18 Upland Plo
Project/Site	: Seattle Ta	acoma Airport - Master	Plan Update	Date:	1/10/99			
SOILS Soil Surve	y Data:							
Map Unit N	lame: Unm	apped			Drainage C	lass:		
			-		Field Obser	vations Con	firm Map	ped Type?
Taxonomy	(Subgroup):				Yes	No	_ NA	_x_
Profile Des	cription:				,			
Depth (inches)	Horizon Designation	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)		Mottle Abundance	Contrast		ure, Concretions, ospheres, etc.
0-4	A	10YR 3/3					Loan	1
4-11	В	10YR 4/4	-				Loam	l
11+	<u>c</u>	10YR 4/6	7.5 YR 4/4		Common, Coai	rse. Distinct	Sand	y loam
His	Indicators: tosol tic Epipedon		<u>.,,</u>		on Local Hyd			
	fidic Odor				on National I			
		Moisture Regime		Aquic	Moisture Reg	jime		
	lucing Condi			_	ic Streaking i	n Sandy Soi	is	
		Chroma Colors ontent in Surface Layer		_ Mottle	-			
Remarks (I	Describe soil	disturbances, local val oil are present.		_ Other	(Explain in Ri	emarks)		
								
NETLAN	D DETER	MINIATION						

This area is an upland since all wetland parameters are absent.

Hydric Soils Present?

Wetland Hydrology Present?

Yes ____ No _X

Parametrix, Inc.



Data Plot #:	18-B4
Wetland:	18

WETLAND DETERMINATION (Modified from: 1987 COE Wetlands Delineation Manifered from: 1987 COE Wetlands Delineation Manifered from: 1987 COE Wetlands Delineation Manifered from: 1989 Method	ty ID: Upland ID: 18-B4
Project/Site: Seattle Tacoma Airport - Master Plan Update Applicant/Owner: Port of Seattle County: King Newstigator: William Kleindi 1989 Method 1989 Method ONOrmal Circumstances exist on the site? State: WA Community On Normal Circumstances exist on the site? State site significantly disturbed (Atypical Situation)? Yes No X State area a potential Problem Area? State area a potential Problem Area? Stemarks (Explain sample location, disturbances, problem areas): The sample is located on Parcel 289 in a mowed upland area with undisturbed soils. The location is 2 and 1 and 2 and 2 and 3 a	ty ID: Upland ID: 18-B4
Applicant/Owner: Port of Seattle County: King 1987 Method	ID: 18-B4
Typestigator: William Kleindi 2 1987 Method	ID: 18-B4
Community of Normal Circumstances exist on the site? The site significantly disturbed (Atypical Situation)? Yes No X in the area a potential Problem Area? Yes No X i	ID: 18-B4
Community Normal Circumstances exist on the site? No Normal Circumstances exist on the site? Yes X No Field Plot is the site significantly disturbed (Atypical Situation)? Yes No X the area a potential Problem Area? Yes No X Imarks (Explain sample location, disturbances, problem areas): It is simple is located on Parcel 289 in a mowed upland area with undisturbed soils. The location is 2 EGETATION (*Dominant species are checked) Plant Species	ID: 18-B4
The site significantly disturbed (Atypical Situation)? Yes No X The area a potential Problem Area? Yes No X The area a potential Problem Area? Yes No X The area a potential Problem Area? Yes No X The area a potential Problem Area? Yes No X The area a potential Problem Area? Yes No X The area a potential Problem Area? Yes No X The area a potential Problem Area? Yes No X The area a potential Problem Area? The area a	ID: 18-B4
the site significantly disturbed (Atypical Situation)? Yes No X the area a potential Problem Area? Yes No X emarks (Explain sample location, disturbances, problem areas): the sample is located on Parcel 289 in a mowed upland area with undisturbed soils. The location is 2 EGETATION (*Dominant species are checked) Plant Species	
the area a potential Problem Area? The semarks (Explain sample location, disturbances, problem areas): The sample is located on Parcel 289 in a mowed upland area with undisturbed soils. The location is 2 EGETATION (*Dominant species are checked) Plant Species **Cover Stratum Indicator 1. Agrostis sp. 2. Fescue sp. 30. Herb. NL 2. Fescue sp. 30. Herb. NL 3. Poa sp. 30. Herb. NL 4. Poa sp. 30. Herb. NL 4. Poa sp. 30. Herb. NL 4. Recent of Dominant Species that are OBL. FACW, or FAC coept FAC-). Include species noted (*) as showing 0.	2- 3 feet high than plot 18-A
EGETATION (✓Dominant species are checked) Plant Species Agrostis sp Agrostis sp Pescue sp Rescue sp Res	2- 3 feet high than plot 18-A
EGETATION (Dominant species are checked) Plant Species	2- 3 feet high than plot 18-A
1 Agrostis sp 30 Herb NL 2 Fescue sp 30 Herb NL 3 Poa sp 30 Herb NL 3 Poa sp 30 Herb NL 4 Cent of Dominant Species that are OBL. FACW, or FAC 5 Cept FAC-). Include species noted (*) as showing 0	
2. Fescue sp. 30 Herb NL 3 Poa sp. 30 Herb NL recent of Dominant Species that are OBL. FACW, or FAC (cept FAC-). Include species noted (*) as showing 0	
creent of Dominant Species that are OBL. FACW, or FAC (cept FAC-). Include species noted (*) as showing 0	
cept FAC-). Include species noted (*) as showing 0	
nce greater than 50% of the dominant plants are hydrophytic, the wetland vegetation criteria is met ecies.	Grasses were unidentifiabl
/DROLOGY	
corded Data (Describe in Remarks): Wetland Hydrology Indicators	(Describe in Remarks):
Stream, Lake, or Tide Gage Primary Indicators:	
Aerial Photograph Inundated	
Other Saturated in Upp	per 12 inches
	40:
X No Recorded Data Available Saturated in Upp	per 18 inches
Water Marks	per 18 inches
Water Marks Drift Lines	•
Water Marks Drift Lines Sediment Depos	sits
Water Marks Drift Lines Sediment Depos Drainage Pattern	sits
Water Marks Drift Lines Sediment Depos Drainage Pattern Depth of Surface Water: None (in.) Secondary Indicators (2 or mark)	sits ns in Wetlands
Water Marks Drift Lines Sediment Depos Drainage Patterr Depth of Surface Water: None (in.) Secondary Indicators (2 or me	sits ns in Wetlands nore required):
Water Marks Drift Lines Sediment Depos Drainage Pattern Depth of Surface Water: None (in.) Secondary Indicators (2 or me) Depth to Free Water in Pit: >18 (in.)	sits ms in Wetlands nore required): Channels in Upper 12 inches
Water Marks Drift Lines Sediment Depos Drainage Pattern	sits ms in Wetlands hore required): Channels in Upper 12 inches Leaves

		- 1 				Da	ta Plot#:	18-B4
1						We	etiand:	18
Project/S	ite: Seattle Ta	acoma Airport - Ma	ster Pla	n Update	Date	11/2/98		
SOILS Soil Sur	vey Data:							
Map Unit	Name: Unm	apped				Drainage Class:		
						Field Observations (Confirm Map	ped Type?
Taxonom	y (Subgroup):					Yes No	NA	x
Profile D	escription:							
Depth (Inches)	Horizon Designation	Matrix Color (Munsell Moist)		Mottle Color (Munsell Moist)		Mottle Abundance/Contrast		ure, Concretions ospheres, etc.
)-3	Α	10YR 2/1		-		•	Sand	ly loam (fill)
3-9	С	10YR 3/2		•		•	Grav	elly sand loam (fill)
-	oil Indicators:				Listed	on Local Hydric Soils	: List	
H Si Pi Ri G Hi	educing Condi leyed or Low-C gh Organic Co (Describe soil	Moisture Regime		ons, etc.):	Listed Aquic Organ Mottle	on State Hydric Soils on National Hydric So Moisture Regime ic Streaking in Sandy	oils List	
H. Si Pi Ri Gl Hi Remarks	ulfidic Odor robable Aquic educing Condi leyed or Low-C gh Organic Co (Describe soil	Moisture Regime tions Chroma Colors ontent in Surface La disturbances, loca oil are present		ons, etc.):	Listed Aquic Organ Mottle	on State Hydric Soils on National Hydric So Moisture Regime ic Streaking in Sandy s	oils List	
H Si	utfidic Odor robable Aquic educing Condi leyed or Low-Cogh Organic Cogn (Describe soil ors of hydric so	Moisture Regime tions Chroma Colors ontent in Surface La disturbances, loca oil are present. MINATION		ons, etc.):	Listed Aquic Organ Mottle	on State Hydric Soils on National Hydric So Moisture Regime ic Streaking in Sandy s (Explain in Remarks)	oils List	Within a Wetlar
H Si	utfidic Odor robable Aquic educing Condi leyed or Low-C gh Organic Co (Describe soil ors of hydric so	Moisture Regime tions Chroma Colors ontent in Surface La disturbances, loca oil are present. MINATION Present?	l vanatio	·	Listed Aquic Organ Mottle	on State Hydric Soils on National Hydric So Moisture Regime ic Streaking in Sandy s (Explain in Remarks)	oils List	Within a Wetlar

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): This area is an upland since all wetland parameters are absent.

Par	ame	etrix	, Inc.



FTI AND DETERMINATION

Data Piot #:	:
Wetland:	

20a-A1 20a

rojecusite: Seattle racoma	Airport - Master Plan Up	date		Date: <u>1/</u>	/5/ 9 9		
pplicant/Owner: Port of Se	eattie			County:	King		
vestigator: William Kleindl			:	State:	WA		
1987 Method 1989	Method					Community II	D: PEM
Normal Circumstances exis	t on the site?	Yes	<u>x</u>	No _		Field Plot ID:	
the site significantly disturbed	d (Atypical Situation)?	Yes		No X	······		
the area a potential Problem	Area?	Yes		No X			
marks (Explain sample loca etland 20a is a westem exten			is):				
GETATION (Domina	nt species are checked)			_			
Plant Species		•	% Cover	Stratum	Indic	ator	
1 Agrostis gigantea			5	Herb	FAC		
2. Epilobium ciliatum			40	Herb	- FAC	<u>W-</u>	
3 Equisetum arvense 4 Hoicus ianatus			30 5	Herb Hert	- FAC		
5 Ranunculus repens			20	Herb	- FAC		
6 Scirpus microcarpus			15	Herb	OBL	' —	
7 Veronica amencana			15	Herb	OBL		
5							
8 Rubus discolor		2	20	Shrub	FACL	ز	
g Rubus spectabilis			20 20	Shrub Shrub	FAC+		
Rubus spectabilis Populus balsamifera ssp. cent of Dominant Species cept FAC-). Include species	that are OBL, FACW, noted (*) as showing	or FAC					
Rubus spectabilis Populus balsamilera ssp. cent of Dominant Species sept FAC-). Include species phological adaptations to we marks (Describe disturbance are greater than 50% of the do DROLOGY Orded Data (Describe in R Stream, Lake, or	that are OBL, FACW, noted (*) as showing etiands. "T" indicates traces, relevant local vanation ominant plants are hydrometers.): Tide Gage	or FAC	80 sonal effi he wetla	Tree ects. etc.) and vegetal	FAC-FAC	ena is met.	escribe in Remarks):
Rubus spectabilis Populus balsamilera sspirocent of Dominant Species cept FAC-). Include species phological adaptations to we marks (Describe disturbance greater than 50% of the described Data (Describe in Research Lake, or Aerial Photograph	that are OBL, FACW, noted (*) as showing etiands. "T" indicates traces, relevant local vanation ominant plants are hydrometers.): Tide Gage	or FAC	80 sonal effi he wetla	ects, etc.) nd vegetal and Hydri Primary Inc. X	FAC-FAC	ena is met.	escribe in Remarks):
Rubus spectabilis Populus balsamifera sspirocent of Dominant Species cept FAC-). Include species phological adaptations to we marks (Describe disturbance greater than 50% of the de DROLOGY corded Data (Describe in R Stream, Lake, or Aerial Photograph Other	that are OBL, FACW. noted (*) as showing etiands. "T" indicates trailes, relevant local variation ominant plants are hydroxical etians." Remarks): Tide Gage	or FAC	80 sonal effi he wetla	ects, etc.) nd vegetal and Hydri	FAC- FAC ition crite rology ir dicators: Inunc Satur	ena is met. Indicators (De	12 inches
Rubus spectabilis Populus balsamilera sspirocent of Dominant Species cept FAC-). Include species phological adaptations to we marks (Describe disturbance greater than 50% of the described Data (Describe in Research Lake, or Aerial Photograph	that are OBL, FACW. noted (*) as showing etiands. "T" indicates trailes, relevant local variation ominant plants are hydroxical etians." Remarks): Tide Gage	or FAC	80 sonal effi he wetla	ects, etc.) nd vegetal and Hydri Primary Inc X X	FAC- FAC FAC Follogy in dicators: Inunc Satur Satur	ena is met. Indicators (Definition of the content	12 inches
Rubus spectabilis Populus balsamilera sspirocent of Dominant Species cept FAC-). Include species riphological adaptations to we marks (Describe disturbance greater than 50% of the disturbance greater than 50% o	that are OBL, FACW. noted (*) as showing etiands. "T" indicates trailes, relevant local variation ominant plants are hydroxical etians." Remarks): Tide Gage	or FAC	80 sonal effi he wetla	ects, etc.) nd vegetal and Hydri Primary Inc. X	FAC- FAC FAC Follogy in dicators: Inunc Satur Satur	ena is met. Indicators (Definition of the content	12 inches
Rubus spectabilis Populus balsamilera sspirocent of Dominant Species cept FAC-). Include species riphological adaptations to we marks (Describe disturbance greater than 50% of the disturbance greater than 50% o	that are OBL, FACW. noted (*) as showing etiands. "T" indicates trailes, relevant local variation ominant plants are hydroxical etians." Remarks): Tide Gage	or FAC	80 sonal effi he wetla	ects, etc.) nd vegetal and Hydri Primary Inc X X	FAC- FAC FAC FOLOgy in dicators: Inunc Satur Satur Wate Drift L	ena is met. Indicators (Definition of the content	12 inches
Rubus spectabilis Populus balsamilera ssp. cent of Dominant Species cept FAC-). Include species phological adaptations to we marks (Describe disturbance ce greater than 50% of the de DROLOGY corded Data (Describe in R Stream, Lake, or Aerial Photograph Other X No Recorded Data	that are OBL, FACW. noted (*) as showing etiands. "T" indicates trailes, relevant local variation ominant plants are hydroxical etians." Remarks): Tide Gage	or FAC	80 sonal effi he wetla	ects, etc.) nd vegetal and Hydri Primary Inc X X	FAC- FAC FAC FOLOgy in dicators: Inunc Satur Satur Wate Drift L Sedin	ena is met. Indicators (Definition of the control	12 inches 18 inches
Rubus spectabilis Populus balsamilera ssp. recent of Dominant Species cept FAC-). Include species rephological adaptations to we marks (Describe disturbanc ce greater than 50% of the de CDROLOGY corded Data (Describe in R Stream, Lake, or Aerial Photograph Other X No Recorded Data d Observations:	that are OBL, FACW. noted (*) as showing etlands. "T" indicates traines, relevant local vanation or in an are hydrometric format plants are hydrometric format plants." Remarks): Tide Gage Tide Gage The description of the state of the st	or FAC	80 sonal effi he wetta. Weti	ects, etc.) nd vegetal and Hydri Primary Inc X X	FAC- FAC FAC FOLOgy in dicators: Inunc Satur Satur Wate Drift L Sedin Drain	ena is met. dated rated in Upper rated in Upper r Marks Lines nent Deposits age Patterns in	12 inches 18 inches n Wetlands
Rubus spectabilis Populus balsamilera ssp. recent of Dominant Species cept FAC-). Include species rephological adaptations to we marks (Describe disturbance ce greater than 50% of the de DROLOGY corded Data (Describe in R Stream, Lake, or Aerial Photograph Other X No Recorded Data d Observations: Depth of Surface Water:	that are OBL, FACW. noted (*) as showing etlands. "T" indicates traites, relevant local vanation or in an are hydrometric format plants are hydrometric format plants." Remarks): Tide Gage the discontinuous and a Available 0.5 (in.)	or FAC	80 sonal effi he wetta. Weti	ects, etc.) nd vegetal and Hydri Primary Inc X X	FAC- FAC FAC FOLOgy in dicators: Inunc Satur Satur Wate Drift L Sedin Drain	ena is met. dated ated in Upper rated in Upper r Marks Lines ment Deposits	12 inches 18 inches n Wetlands
Rubus spectabilis Populus balsamilera ssp. Pop	that are OBL, FACW. noted (*) as showing etlands. "T" indicates tra les, relevant local variation cominant plants are hydro Remarks): Tide Gage th ta Available 0.5 (in.) (in.)	or FAC	80 sonal effi he wetta. Weti	ects, etc.) nd vegetal and Hydri Primary Inc X X	rology indicators: Inunc Satur Satur Wate Drain Indicator	ena is met. Indicators (Delated in Upper rated in Upper rated in Upper rated in Upper parks age Patterns in the core (2 or more)	12 inches 18 inches n Wetlands
Rubus spectabilis Populius balsamifera sspirocent of Dominant Species cept FAC-). Include species rphological adaptations to we marks (Describe disturbance greater than 50% of the dominant Lake, or Aerial Photograph Other X No Recorded Data d Observations: Depth of Surface Water: Depth to Free Water in Pit:	that are OBL, FACW. noted (*) as showing etlands. "T" indicates traites, relevant local vanation or in an are hydrometric format plants are hydrometric format plants." Remarks): Tide Gage the discontinuous and a Available 0.5 (in.)	or FAC	80 sonal effi he wetta. Weti	ects, etc.) nd vegetal and Hydri Primary Inc X X	rology ir dicators: Inunc Satur Satur Wate Drift L Sedin Drain Indicate Oxidia	ena is met. Indicators (Delated in Upper rated in Upper rated in Upper rated in Upper parks age Patterns in the core (2 or more)	12 inches 18 inches n Wetlands required): inels in Upper 12 inches
Rubus spectabilis Populus balsamifera sspirocent of Dominant Species (cept FAC-). Include species (phological adaptations to we marks (Describe disturbance greater than 50% of the described bata (Describe in Raman Stream, Lake, or Aerial Photograph Other	that are OBL, FACW. noted (*) as showing etlands. "T" indicates tra les, relevant local variation cominant plants are hydro Remarks): Tide Gage th ta Available 0.5 (in.) (in.)	or FAC	80 sonal effi he wetta. Weti	ects, etc.) nd vegetal and Hydri Primary Inc X X	FAC- FAC FAC FAC FAC FAC FAC FAC	ena is met. Indicators (Definition of the content	12 inches 18 inches n Wetlands required): inels in Upper 12 inches

Pai	rametr	ix, Inc.								
7								Data	Plot #:	20a-A1
1								Wetla	end:	20a
_										
Project/S	Site: Seattle T	acoma Airport - Masti	er Pla	n Upda	ite	Date:	1/5/99			
SOILS Soil Su	rvey Data:									
Map Un	it Name: <u>Unrr</u>	napped					Drainage	e Class:		
							Field Ob	servations Cor	nfirm Map	ped Type?
Taxonor	ny (Subgroup):						Yes	No	NA	×
Profile I	Description:								_	
Depth Inches)	Horizon Designation	Matrix Color (Munsell Moist)			Color sell Moist)	Mottle Abundar	nce/Contrast	_	ure, Concretions, ospheres, etc.
9 - 9	Α	10YR 2/2		10YR	5/2		Few. Medii	um, Distinct	Loan	1
9-18+	<u> </u>	2.5Y 6/2		2.5Y 5/	3		Many, Coa	rse. Distinct	Loan	ny sand
tvdric S	Soil Indicators:	· •								
•	Histosol					Listed	on Local	Hydric Soils Li	st	
	Histic Epipedon							Hydric Soils Li		
	Sulfidic Odor							nal Hydric Soils		
	Probable Aquic	Moisture Regime			_	Aquic	Moisture	Regime		
f	Reducing Condi	itions		,		Organ	ic Streaki	ng in Sandy So	oils	
	Gleyed or Low-(•		X Mottle	s			
<u> </u>	ligh Organic Co	ontent in Surface Laye	er		_	Other	(Explain ii	n Remarks)		
lemarks	(Describe soil	disturbances, local v	ariati	ons, et	c.):					
Soil coloi	and other hydi	ric soil indicators mee	t the	hydric :	soil criter	ia.				
NETL/	AND DETER	MINATION								
ydroph	ytic Vegetation	Present?	Yes	Х	No		i	is this Sampli	ng Point	Within a Wetland
ydric S	oils Present?		Yes	X	No					
	Hydrology Pre				No			Yes	X No)

_		4	
Pa	ram	ietrix,	inc
	1 CILI		

Data Plot #:	20a-A2
Wetland:	20a

			Data Piot #:	20a-A2
AND DET	EDMINA	TION	Wetland:	20a
			n Manual\	
COE We	ilianus i	Jenneatic	n Manual)	
te	Date:	1/5/99		
	County:	King		
	State:	WA		
<u> </u>			Community ID:	PFO/PSS
Yes X	No		-	
Yes —	No -		Telo Plot ID. VV	DD-A
	•			
	. NO -	<u>^_</u>		
mareas).				
			or	
	Herb			
15	Herb	OBL		
50	Shrub	FACU		
50	Shrub	FAC+		
85	Tree	FAC		
FAC 80	Tree	FAC		
FAC 80	effects, etc) :	a is met	
FAC 80	effects, etc) :	a is met.	
FAC 80 s, seasonal enytic, the wet	effects, etc	i.): tation criteri		
FAC 80 s, seasonal enytic, the wet	effects, etc): tation criteri drology Ind	e is met.	be in Remarks):
FAC 80 s, seasonal enytic, the wet	effects, etc lland vege etland Hyd Primary i	i.): lation criteri drology Ind ndicators:	icators (Descri	be in Remarks):
FAC 80 s, seasonal enytic, the wet	effects, etc lland vege etland Hyr Primary I	ation criteri drology Ind ndicators:	i cators (Descri	
FAC 80 s, seasonal enytic, the wet	effects, etc lland vege etland Hyd Primary i	drology Indicators: Inundal Saturat	icators (Descri ted ed in Upper 12 in	ches
FAC 80 s, seasonal enytic, the wet	effects, etc lland vege etland Hyr Primary I	drology Indindicators: Inundal Saturat Saturat	icators (Descri ted ed in Upper 12 in ed in Upper 18 in	ches
FAC 80 s, seasonal enytic, the wet	effects, etc lland vege etland Hyr Primary I	drology Indicators: Inundal Saturat	icators (Descri ted ed in Upper 12 in ed in Upper 18 in Marks	ches
FAC 80 s, seasonal enytic, the wet	effects, etc lland vege etland Hyr Primary I	drology Indindicators: Inundal Saturat Water I	icators (Descri ted ed in Upper 12 in ed in Upper 18 in Marks	ches
FAC 80 s, seasonal enytic, the wet	effects, etc lland vege etland Hyr Primary I	drology Indindicators: Inundal Saturat Water I Drift Lir Sedime	icators (Descri ted ed in Upper 12 in ed in Upper 18 in Marks tes	ches ches
FAC 80 s, seasonal enytic, the wet	effects, etc	drology Indindicators: Inundai Saturat Water I Drift Lir Sedime	icators (Descripted led in Upper 12 in ed in Upper 18 in Marks les int Deposits le Patterns in We	ches ches tlands
FAC 80 s, seasonal enytic, the wet	effects, etc	drology Indindicators: Inundai Saturat Water I Drift Lir Sedime	icators (Descri ted ed in Upper 12 in ed in Upper 18 in Marks tes ent Deposits	ches ches tlands
FAC 80 s, seasonal enytic, the wet	effects, etc	drology Indindicators: Inundai Saturat Saturat Water I Drift Lir Sedime Drainag	icators (Descrii	ches ches tlands
FAC 80 s, seasonal enytic, the wet	effects, etc	drology Indicators: Inundal Saturat Water I Drift Lir Sedime Drainag	icators (Descrii	ches ches tlands
FAC 80 s, seasonal enytic, the wet	effects, etc	drology Indicators: Inundal Saturat Water I Drift Lir Sedime Drainag	icators (Descrii	ches ches tlands
FAC 80 s, seasonal enytic, the wet	effects, etc	drology Indicators: Inundai Saturat Saturat Water M Drainag Ty Indicators Oxidize Water-S Local S	icators (Descrii	iches ches tlands ired): in Upper 12 inche
FAC 80 s, seasonal enytic, the wet	effects, etc	drology Indicators: Inundal Saturat Vater I Drift Lir Sedime Drainag y Indicators Oxidize Water-S Local S Other (I	icators (Descripted ded in Upper 12 in Marks des int Deposits de Patterns in West (2 or more required Root Channels Stained Leaves oil Survey Data Explain in Remarks	iches ches tlands ired): in Upper 12 inche
	Yes X Yes Yes areas): % Cove 20 20 15 50 50	COE Wetlands County: County: State:	County: King State: WA County: King State: WA County: King State: WA County: King State: WA County: King C	AND DETERMINATION

4 6							Data Plot #:	20a-A2
-							Wetland:	20a
roject/Site:	Seattle Ta	icoma Airport - Mas	ter Plan	Update	_ Date:	1/5/99		
OILS ioil Survey	y Data:							
Map Unit Na	ame: <u>Unm</u>	apped				Drainage Cla	I S S:	
						Field Observ	ations Confirm N	tapped Type?
Taxonomy ((Subgroup):					Yes	No N	IA X
Profile Desc	cription:							
	Horizon Designation	Matrix Color (Munsell Moist)		Mottle Color (Munsell Moist)	Mottle Abundance/C		exture, Concretions hizospheres, etc.
)-24	0 .	10YR 2/1						***
						•	M	uck
X Histo Histo X Sulfio Prob Redu Gleyo High	osol ic Epipedon idic Odor bable Aquic I ucing Condit red or Low-C Organic Co	hroma Colors ntent in Surface La disturbances, local	variatio		Listed Listed Aquic Organ Mottle: Other	Moisture Regi ic Streaking in	ric Soils List ric Soils List ydric Soils List me Sandy Soils	uck
Histin X Sulfin Prob Redu Gleye High Remarks (Desoil color and	osol ic Epipedon idic Odor nable Aquic I ucing Condit red or Low-C Organic Co describe soil d other hydri	ions throma Colors ntent in Surface La disturbances, local c soil indicators me	variatio		Listed Listed Aquic Organ Mottle: Other	on State Hydron National H Moisture Reginic Streaking in	ric Soils List ric Soils List ydric Soils List me Sandy Soils	uck
X Histor Histor X Sulfior Prob Redu Gleyo High Remarks (Do Soil color and	osol ic Epipedon idic Odor bable Aquic I ucing Condit red or Low-C Organic Co rescribe soil d other hydri	ions throma Colors ntent in Surface Lat disturbances, local c soil indicators me	variation		Listed Listed Aquic Organ Mottle: Other	on State Hydron National H Moisture Reginic Streaking in S	ric Soils List ric Soils List ydric Soils List me Sandy Soils marks)	
X Histo Histo X Sulfio Prob Redu Gleyo High Remarks (Do Soil color and	osol ic Epipedon idic Odor vable Aquic I ucing Condit red or Low-C Organic Co rescribe soil d other hydri DETERI Vegetation	ions throma Colors ntent in Surface Lat disturbances, local c soil indicators me	variatio		Listed Listed Aquic Organ Mottle: Other	on State Hydron National H Moisture Reginic Streaking in S	ric Soils List ric Soils List ydric Soils List me Sandy Soils marks)	int Within a Wetlar

The presence of all three parameters indicate this area is a wetland. Wetland delineated on changes in hydrology.

Parametrix, Inc.



Data	Piot	#:
Mass		

	WETLAND	DETER	RMINAT	ION W	etland	1:	20b
_ (Modified fr	rom: 1987 COI				nual))	
roject/Site: Seattle Tacoma Airport - Master		_		5/99	•	•	
	r Fiair Opdate						
Applicant/Owner: Port of Seattle		-		King			
vestigator: William Kleindi		_	State: V	<u> </u>			
1987 Method 1989 Method				Commu	nity ID	: <u>P</u> F	O/PSS
o Normal Circumstances exist on the site?	Yes	<u> </u>	No	- Field Ple	ot ID:	W3c	-A
the site significantly disturbed (Atypical Situation	ation)? Yes		No X	_			
the area a potential Problem Area?	Y e s		No X				
ECETATION AS DETERMINED							
EGETATION (Dominant species are of Plant Species		% Cover	Stratum	Indicator			
1. Polystichum munitum		r	Herb	FACU			
2 Ranunculus repens			Herb	FACW			
		50	Shrub	FACU			
3 Rubus discolor							
Rubus discolor Rubus spectabilis		50	Shrub	FAC+			
Rubus spectabilis Alnus rubra		50 50	Shrub Tree	FAC+			
Rubus spectabilis Alnus rubra Populius balsamifera ssp. tnchocarpa creent of Dominant Species that are OBL, coept FAC-). Include species noted (*) as sho	FACW, or FAC owing licates trace.	75	Tree Tree				
Rubus spectabilis Alnus rubra Populius balsamifera ssp. trichocarpa recent of Dominant Species that are OBL, recept FAC-). Include species noted (*) as she orphological adaptations to wetlands. Trindi marks (Describe disturbances, relevant locations greater than 50% of the dominant plants of	FACW, or FAC owing icates trace.	75 Sonal effe	Tree Tree	FAC FAC	t		
Rubus spectabilis Alnus rubra Populius balsamifera ssp. tnchocarpa recent of Dominant Species that are OBL, coept FAC-). Include species noted (*) as shorphological adaptations to wetlands. "I indi rmarks (Describe disturbances, relevant locate greater than 50% of the dominant plants of	FACW, or FAC owing icates trace.	75 sonal effe	Tree Tree ects, etc.):	FAC FAC for criteria is me			
Rubus spectabilis Alnus rubra Populus balsamifera ssp. trichocarpa recent of Dominant Species that are OBL, recept FAC-). Include species noted (*) as shortphological adaptations to wetlands. "T" indimarks (Describe disturbances, relevant locate greater than 50% of the dominant plants of CDROLOGY corded Data (Describe in Remarks):	FACW, or FAC owing icates trace.	75 sonal effe	Tree Tree ccts, etc.): and vegetati	FAC FAC fon criteria is me		scribe	ın Remarks):
Rubus spectabilis Alnus rubra Populus balsamifera ssp. trichocarpa recent of Dominant Species that are OBL, include species noted (*) as shorphological adaptations to wetlands. "T" indimarks (Describe disturbances, relevant locate greater than 50% of the dominant plants of CPROLOGY Corded Data (Describe in Remarks): Stream, Lake, or Tide Gage	FACW, or FAC owing icates trace.	75 sonal effe	Tree Tree ects, etc.):	FAC FAC fon criteria is me		scribe	in Remarks):
Rubus speciabilis Alnus rubra Populus balsamifera ssp. trichocarpa recent of Dominant Species that are OBL, cept FAC-). Include species noted (*) as she riphological adaptations to wetlands. "T" indimarks (Describe disturbances, relevant locate greater than 50% of the dominant plants of the Corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	FACW, or FAC owing icates trace.	75 sonal effe	Tree Tree ccts, etc.): and vegetation with the common state of th	FAC FAC fon criteria is me		scribe	ın Remarks):
Rubus spectabilis Alnus rubra Populus balsamifera ssp. trichocarpa recent of Dominant Species that are OBL, cept FAC-). Include species noted (*) as shi rphological adaptations to wetlands. Tindi marks (Describe disturbances, relevant loc ce greater than 50% of the dominant plants of CPROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	FACW, or FAC owing icates trace.	75 sonal effe	Tree Tree ccts. etc.): and vegetati	FAC FAC FAC FAC FAC FAC FAC FAC	De:	2 inch	nes
Rubus speciabilis Alnus rubra Populus balsamifera ssp. trichocarpa recent of Dominant Species that are OBL, cept FAC-). Include species noted (*) as she riphological adaptations to wetlands. "T" indimarks (Describe disturbances, relevant locate greater than 50% of the dominant plants of the Corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	FACW, or FAC owing icates trace.	75 sonal effe	Tree Tree ccts, etc.): and vegetation with the common state of th	FAC FAC FAC FAC FAC FAC FAC FAC	De:	2 inch	nes
Rubus spectabilis Alnus rubra Populus balsamifera ssp. trichocarpa recent of Dominant Species that are OBL, scept FAC-). Include species noted (*) as shorphological adaptations to wetlands. To indimarks (Describe disturbances, relevant locate greater than 50% of the dominant plants of CPROLOGY Corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	FACW, or FAC owing icates trace.	75 sonal effe	Tree Tree ccts, etc.): and vegetation with the common state of th	FAC FAC FAC FAC FAC FAC FAC FAC	De:	2 inch	nes
Rubus spectabilis Alnus rubra Populius balsamifera ssp. trichocarpa recent of Dominant Species that are OBL, coept FAC-). Include species noted (*) as shorphological adaptations to wetlands. "T" indi- rmarks (Describe disturbances, relevant loc- fice greater than 50% of the dominant plants of POROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	FACW, or FAC owing icates trace.	75 sonal effe	Tree Tree ccts, etc.): and vegetation with the common state of th	FAC FAC FAC FAC FAC FAC FAC FAC F	De:	2 inch	nes
Rubus spectabilis Alnus rubra Populius balsamifera ssp. trichocarpa Precent of Dominant Species that are OBL, recept FAC-). Include species noted (*) as shorphological adaptations to wetlands. "T" individe species relevant loc are greater than 50% of the dominant plants o	FACW, or FAC owing icates trace.	75 sonal effe	Tree Tree ccts, etc.): and vegetation with the common state of th	FAC	(Desper 1 pper 1 osits	2 inch 8 inch	nes nes
Rubus spectabilis Alnus rubra Populus balsamifera ssp. trichocarpa recent of Dominant Species that are OBL, recept FAC-). Include species noted (*) as shorphological adaptations to wetlands. "T" indicate greater than 50% of the dominant plants of th	FACW, or FAC owing icates trace. cal variations, seas	75 sonal effe	Tree Tree ccts, etc.): and vegetation with the common state of th	FAC FAC FAC FAC FAC FAC FAC FAC F	(Desper 1 pper 1 osits	2 inch 8 inch	nes nes
Rubus spectabilis Alnus rubra Populus balsamifera ssp. trichocarpa recent of Dominant Species that are OBL, recept FAC-). Include species noted (*) as she orphological adaptations to wetlands. Trinding marks (Describe disturbances, relevant locate greater than 50% of the dominant plants of the d	FACW, or FAC owing icates trace. cal variations, seasone hydrophytic, ti	50 50 75 Sonal effe wetlar Wetla	Tree Tree ccts, etc.): d vegetati and Hydro rimary Indi X X	FAC	pper 1 pper 1 osits	2 inch 8 inch Wetta	nes nes
Rubus spectabilis Alnus rubra Populus balsamifera ssp. trichocarpa recent of Dominant Species that are OBL, recept FAC-). Include species noted (*) as shorthological adaptations to wetlands. "T" indigentaries (Describe disturbances, relevant locate greater than 50% of the dominant plants of the	FACW, or FAC owing licates trace. cal variations, seas are hydrophytic, ti	50 50 75 Sonal effe wetlar Wetla	Tree Tree ccts, etc.): d vegetati and Hydro rimary Indi X X	FAC	ipper 1 pper 1 osits erns in	2 inch 8 inch Wetta	nes nes ands
Rubus spectabilis Alnus rubra Populus balsamifera ssp. trichocarpa recent of Dominant Species that are OBL, recept FAC-). Include species noted (*) as shorphological adaptations to wetlands. "T" individual imarks (Describe disturbances, relevant locations for the dominant plants of the dominant	FACW, or FAC owing icates trace. cal variations, seasone hydrophytic, ti	50 50 75 Sonal effe wetlar Wetla	Tree Tree ccts, etc.): d vegetati and Hydro rimary Indi X X	FAC	pper 1 pper 1 posits erns in more ri	2 inch 8 inch Wetta equire	nes nes ands
Autous speciabilis Alnus rubra Populus balsamifera ssp. trichocarpa Bercent of Dominant Species that are OBL, except FAC-). Include species noted (*) as she orphological adaptations to wetlands. The indiversal action of the dominant plants of the domin	FACW, or FAC owing licates trace. cal variations, seas are hydrophytic, ti	50 50 75 Sonal effe wetlar Wetla	Tree Tree ccts, etc.): d vegetati and Hydro rimary Indi X X	FAC	pper 1 pper 1 osits erns in more ri Chanr Leave	2 inch 8 inch Wetta equire nels in	nes nes ands

11							Data P Wetla		20b-A
							veua:	na.	20b
							·		
Project/Si	te: Seattle Ta	acoma Airport - Master F	Plan Upda	ite	_ Date:	1/5/99			
SOILS Soil Surv	vey Data:								
Map Unit	Name: Unm	apped				Drainage	Class:		
		-				Field Ob	servations Conf	firm Map	ped Type?
Taxonom	y (Subgroup):					Yes	No	NA	×
Profile De	escription:	· · · · · · · · · · · · · · · · · · ·						_	
Depth (Inches)	Horizon	Matrix Color (Munsell Moist)		Color sell Mois	st)	Mottle Abundan	ce/Contrast		ure, Concretions, ospheres, etc.
0-10	A	10YR 3/2	-			-		Loam)
Hi Hi Su Pr Re Gi X Hi	educing Condi leyed or Low-C gh Organic Co	Moisture Regime	ations, et		Listed Listed Aquic Organ Mottle	on State I on Nation Moisture F ic Streakin	Hydric Soils Lis Hydric Soils Lis al Hydric Soils Regime ng in Sandy Soi n Remarks)	t List	
		nches. Soil color does n			soil criteria.				
	ND DETER								
	tic Vegetation	Present? Ye	s <u>x</u>	No		i	s this Samplin	g Point	Within a Wetlan
-	is Present? ydrology Pre	Ye	s	No	<u>x</u>		Yes X	(No	•
			s X	No					

Hydric soil is not present at site, however inundation was observed over several site visits in the spring of 1998. Therefore, hydric soils assumed and the area was delineated as a wetland.

P	ar	ar	ne	trix	ĸ, i	nc.
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35a/b-A	
35a/b	

AMETI ANI	D DETER		Wetland: 35a/b
WETLAN			
(Modified from: 1987 C	OE Wetla	ands De	elineation Manual)
Project/Site: Seattle Tacoma Airport - Master Plan Update		Date: 7	/1/98
Applicant/Owner: Port of Seattle		County:	King
Investigator: William Kleindi	s	State:	WA
✓ 1987 Method			Community ID: PEM & PFO
Do Normal Circumstances exist on the site? Yes	<u> </u>	No _	Field Plot ID: 12/13-A
Is the site significantly disturbed (Atypical Situation)? Yes	·	No _	x
Is the area a potential Problem Area?	·	No _	<u>x</u>
Remarks (Explain sample location, disturbances, problem ar	reas):		
Sample taken on parcel 273. Wetland 35 is a discontinuous t	wetiand cor	nsisting m	nostly of residential yards. In the eastern portion i
supported by shallow subsurface groundwater. Culverts under	r dnveways	connect	t portions of the wetland.
VEGETATION (✓Dominant species are checked)			
Plant Species	% Cover	Stratum	Indicator
1 Galium trifidum	10	Herb	FACW
2 liex aquifolium	15	Shrub	UPL
Rubus discolor	- 20 35	Shrub Tree	FACU FAC
4 Ainus rubra 5 Populus tnchocarpa	35	Tree	FAC
Percent of Dominant Species that are OBL, FACW, or FA			
(except FAC-). Include species noted (*) as showing	66		
morphological adaptations to wetlands. T indicates trace.			
Remarks (Describe disturbances, relevant local variations, se	easonal eff	ects, etc.	.):
Since greater than 50% of the dominant plants are hydrophytic	c. the wetla	nd vegeta	ation criteria is met.
HYDROLOGY			
Recorded Data (Describe in Remarks):	Weti	and Hvd	trology Indicators (Describe in Remarks):
Stream, Lake, or Tide Gage	_		ndicators:
Aerial Photograph		, ,	Inundated
Other			Saturated in Upper 12 inches
X No Recorded Data Available			Saturated in Upper 18 inches
110 New Joed Bala Available			Water Marks
			Drift Lines
			Sediment Deposits
Field Observations			Drainage Patterns in Wetlands
Field Observations: Depth of Surface Water: None (in.)			
Depth to Free Water in Pit: >18 (in.)		secondar	ry Indicators (2 or more required):
Depth to Saturated Soil: >18 (in.)			Oxidized Root Channels in Upper 12 inches
` '			Water-Stained Leaves
			Local Soil Survey Data
			Other (Explain in Remarks)
Remarks (As relevant, describe recent precipitation, hydrolo	gic modific	ations to	ocal variations, etc.);
Wetland hydrology is frequently absent from wetlands during the hydric soil the wetland hydrology criteria is assumed to be presented.	he dry sum	mer mon	ths. Based of the presence of wetland vegetation

4 1					Data Plot	¥:	35a/b-A
L					Wetland:		35a/b
				-			
Project/Site: Seattle Tacoma Airport -	Master Pla	in Update	Date:	7/1/98			
SOILS Soil Survey Data:							
Map Unit Name: Unmapped				Drainage Clas	SS:		
				Field Observa	tions Confirm	Mapp	ed Type?
Taxonomy (Subgroup):				Yes	No	NA	<u>x</u>
Profile Description:							
Pepth Horizon Matrix Color Inches) Designation (Munsell Mois	t)	Mottle Colo (Munsell Mo		Mottle Abundance/C			re, Concretions, spheres, etc.
-18 Disturbed 10YR 2/1		•			ı	oam	
Histosol Histic Epipedon Sulfidic Odor			Listed	on Local Hydri on State Hydri on National Hy	c Soils List		
Probable Aquic Moisture Regim Reducing Conditions Gleyed or Low-Chroma Colors High Organic Content in Surface	e Layer		Aquic Organi Mottles	Moisture Regin c Streaking in s Explain in Ren	Sandy Soils		
Probable Aquic Moisture Regime Reducing Conditions Gleyed or Low-Chroma Colors High Organic Content in Surface emarks (Describe soil disturbances, in the content of the colors of t	e Layer ocal variati		Aquic Organi Mottles Other	c Streaking in	Sandy Soils		
Probable Aquic Moisture Regim Reducing Conditions Gleyed or Low-Chroma Colors High Organic Content in Surfacemarks (Describe soil disturbances, I oil color and other hydric soil indicator	e Layer ocal variati		Aquic Organi Mottles Other	c Streaking in	Sandy Soils		
Probable Aquic Moisture Regime Reducing Conditions Gleyed or Low-Chroma Colors High Organic Content in Surface emarks (Describe soil disturbances, it indicators) /ETLAND DETERMINATION	e Layer ocal variati		Aquic Organi Mottles Other	c Streaking in	Sandy Soils	The Park	
Probable Aquic Moisture Regime Reducing Conditions Gleyed or Low-Chroma Colors High Organic Content in Surfactional Color and other hydric soil indicator VETLAND DETERMINATION Adrophytic Vegetation Present?	e Layer ocal variati		Aquic Organi Mottles Other	c Streaking in s Explain in Ren	Sandy Soils narks)	oint W	/ithin a Wetlan
Probable Aquic Moisture Regim Reducing Conditions X Gleyed or Low-Chroma Colors	e Layer ocal variati	hydric soil ci	Aquic Organi Mottles Other (c Streaking in s Explain in Ren	Sandy Soils narks)	nint W	/ithin a Wetlan

The presence of all three parameters indicate this area is a wetland. Delineation of Wetland 35 sections a and b were based on sharp changes on soil color, changes in plant species composition and topography.

P	ar	aı	m	e	tr	i	Χ,	۱	n	ıC	
•				-		_	,	_	•	. —	1



)ata	Piot	# :	

35c-A 35c

	LAND DET	ERMINA	ATION Wetland: 35c
(Modified from: 19	87 COE We	tiands i	Delineation Manual)
roject/Site: Seattle Tacoma Airport - Master Plan Up	date	Date:	7/2/98
pplicant/Owner: Port of Seattle		County:	King
vestigator: William Kleindi		State:	WA
1987 Method			Community ID: PEM
o Normal Circumstances exist on the site?	Yes X	No	— Field Plot ID: 14-A
the site significantly disturbed (Atypical Situation)?	Yes	No	X X
the area a potential Problem Area?	Yes	- No	×
emarks (Explain sample location, disturbances, prob			<u></u>
the middle of the sections. EGETATION (Dominant species are checked)			
Plant Species	% Cov	er Stratu	m Indicator
1 Agrostis gigantea	30	Herb	FACW
2 Convolvulus arvensis	6 0	Herb	NL NL
3 Equisetum telmateia	100	Herb	FACW
Solanum duicamare Rubus discolor	60 70	Herb Shrub	FAC+
6 Atnus rubra	70	Tree	FAC FAC
ce greater than 50% of the dominant plants are hydro	ophytic, the we	tland vege	tation criteria is met.
/DROLOGY			
corded Data (Describe in Remarks):	W	etiand Hy	drology Indicators (Describe in Remarks):
corded Data (Describe in Remarks): Stream, Lake, or Tide Gage	w	_	drology Indicators (Describe in Remarks): Indicators:
	w	_	
Stream, Lake, or Tide Gage Aerial Photograph Other	w	_	Indicators: Inundated Saturated in Upper 12 inches
Stream, Lake, or Tide Gage Aerial Photograph	w	_	Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches
Stream, Lake, or Tide Gage Aerial Photograph Other	w	_	Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks
Stream, Lake, or Tide Gage Aerial Photograph Other	w	_	Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	w	_	Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks
Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available d Observations:	w	Primary	Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available d Observations: Depth of Surface Water: None (in.)	w	Primary	Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available d Observations: Depth of Surface Water: None (in.) Depth to Free Water in Pit: >16 (in.)	w	Primary	Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available d Observations: Depth of Surface Water: None (in.) Depth to Free Water in Pit: >16 (in.)	w	Primary	Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands ry Indicators (2 or more required):
Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available d Observations: Depth of Surface Water: None (in.) Depth to Free Water in Pit: >16 (in.)	w	Primary	Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands ry Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches
Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Id Observations: Depth of Surface Water: None (in.) Depth to Free Water in Pit: >16 (in.)	w	Primary	Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands ry Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches Water-Stained Leaves
Aerial Photograph Other X No Recorded Data Available Id Observations: Depth of Surface Water: None (in.) Depth to Free Water in Pit: >16 (in.)	/drologic modif	Seconda	Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands ry Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)

4 1					· · · · · · · · · · · · · · · · · · ·	_	Data P	lot#:	35c-A
							Wetia	nd:	35c
Project/Sit	e: Seattle T	acoma Airport - Master P	an Upda	ate	Date:	7/2/98			
SOILS Soil Surv	ey Data:								
Map Unit	Name: <u>Unr</u>	паррес				Drainage	e Class:		
						Field Ob	servations Conf	irm Map	ped Type?
Taxonomy	(Subgroup):					Yes	No	NA	X
Profile De	scription:						_	- "	
Depth (inches)	Horizon Designation	Matrix Color (Munsell Moist)		e Color sell Moi	st)	Mottie Abundan	ce/Contrast		ure, Concretions, ospheres, etc.
0-4	A1	10YR 2/1	-			-		Silt to	am
4-16	A2	10YR 3/1	10YR :	3/6		Common, N	fedium, Distinct	Silt io	am
Hvdric So	il Indicators:	:							
-	stosol				Listed	on Local	Hydric Soils Lis	t	
His	stic Epipedon			-			Hydric Soils List		
Su_	lfidic Odor			_			al Hydric Soils I		
Pro	obable Aquic	Moisture Regime		_		Moisture F			
	ducing Condi			_	Organ	ic Streakir	g in Sandy Soil	S	
		Chroma Colors		_	X Mottle	s			
X Hig	h Organic Co	ontent in Surface Layer		_	Other	(Explain in	Remarks)		
Remarks (Describe soil	disturbances, local varia	tions, et	c.):					
oil color a	nd other hydr	ic soil indicators meet the	hydric :	soil crite	епа				
VEILAN	ID DETER	MINATION							
	- 14 14.	Dresent? V	v	No		1.	e this Complin	n Daine	
lydrophyti	_	Present? Yes	_ <u>x</u> _	. '10		•	a ma sampini	y Point	Within a Wetland
lydric Soil	c vegetation s Present? drology Pre	Yes		No.		•	Yes X		

The presence of all three parameters indicate this area is a wetland. Delineation of the middle section of wetland 35 was based on sharp changes on soil color, changes in plant species composition and hydrology.



				Wetland:	25 - 11 - 1
WETLA	AND DETE	RMINATI	ON	vvetianie.	35c Upland P
(Modified from: 1987	COE Wet	ands De	lineation N	lanual)	
Project/Site: Seattle Tacoma Airport - Master Plan Update	e	Date: 7/1	/98		
Applicant/Owner: Port of Seattle		_	(ing		
Investigator: William Kleindl		-	VA		
✓ 1987 Method 1989 Method			_		
<u> </u>	Yes X	No			oland
- Maria de la compansión de la compansió	Yes			Plot ID: 14-B	
n the area a netertial Dankier Area		No X	_		
Remarks (Explain sample location, disturbances, problem	Yes	No X	_		
Ipland plot sampled on parcel 270 and corresponds to plot	ts 35a/b-A, an	d 35c-A.			
EGETATION (Dominant species are checked)				·	
Plant Species	% Cover	Stratum	indicator		
1 Moss	100	h	NL NL		
2 Agrostis sp 3 Hypochaens radicata	5 5	Herb	- NL FACU		
4 Ranunculus repens	$-\frac{3}{5}$	Herb	FACW		
5 Prunus laurocerasus	20	Shrub	UPL		
6 Thuia plicata	20	Tree	FAC		
xcept FAC-). Include species noted (*) as showing	50	_			
except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates trace, lemarks (Describe disturbances, relevant local variations	50 seasonal effe	ects, etc.):	ia is not met.		
except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates trace. Remarks (Describe disturbances, relevant local variations lince only 50% of the dominant plants are hydrophytic, the	50 seasonal effe	ects, etc.): tation cnten	ia is not met.		
except FAC-). Include species noted (*) as showing perphological adaptations to wetlands. "T" indicates trace, emarks (Describe disturbances, relevant local variations ince only 50% of the dominant plants are hydrophytic, the YDROLOGY		tation criter		· (Describe	·
except FAC-). Include species noted (*) as showing corphological adaptations to wetlands. "T" indicates trace. emarks (Describe disturbances, relevant local variations ince only 50% of the dominant plants are hydrophytic, the YDROLOGY ecorded Data (Describe in Remarks):	. seasonal effewetland vege:	and Hydro	logy Indicato	rs (Describe	in Remarks):
except FAC-). Include species noted (*) as showing corphological adaptations to wetlands. "T" indicates trace. emarks (Describe disturbances, relevant local variations ince only 50% of the dominant plants are hydrophytic, the YDROLOGY ecorded Data (Describe in Remarks):	. seasonal effewetland vege:	tation criter	logy Indicato	rs (Describe	in Remarks):
except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace. emarks (Describe disturbances, relevant local variations ince only 50% of the dominant plants are hydrophytic, the YDROLOGY ecorded Data (Describe in Remarks):	. seasonal effewetland vege:	and Hydro	logy Indicato cators: Inundated		
except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace. emarks (Describe disturbances, relevant local variations ince only 50% of the dominant plants are hydrophytic, the YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	. seasonal effewetland vege:	and Hydro	logy Indicato cators: Inundated Saturated in	Upper 12 inch	es
except FAC-). Include species noted (*) as showing torphological adaptations to wetlands. "T" indicates trace. emarks (Describe disturbances, relevant local variations ince only 50% of the dominant plants are hydrophytic, the YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	. seasonal effewetland vege:	and Hydro	logy Indicato cators: Inundated Saturated in	Upper 12 inch Upper 18 inch	es
except FAC-). Include species noted (*) as showing torphological adaptations to wetlands. "T" indicates trace. emarks (Describe disturbances, relevant local variations ince only 50% of the dominant plants are hydrophytic, the YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	. seasonal effewetland vege:	and Hydro	logy Indicato cators: Inundated Saturated in Saturated in Water Marks Drift Lines	Upper 12 inch Upper 18 inch	es
except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates trace. Itemarks (Describe disturbances, relevant local variations ince only 50% of the dominant plants are hydrophytic, the IYDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	. seasonal effewetland vege:	and Hydro	logy Indicato cators: Inundated Saturated in Saturated in Water Marks Drift Lines Sediment De	Upper 12 inch Upper 18 inch	nes nes
except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates trace. Remarks (Describe disturbances, relevant local variations since only 50% of the dominant plants are hydrophytic, the IYDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available	. seasonal effewetland vege:	and Hydro	logy Indicato cators: Inundated Saturated in Saturated in Water Marks Drift Lines Sediment De	Upper 12 inch Upper 18 inch	nes nes
except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates trace. Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates trace. Include species in the same included i	seasonal effi wetland vege: Wett	and Hydro	logy Indicato cators: Inundated Saturated in Saturated in Water Marks Drift Lines Sediment De Drainage Pa	Upper 12 inch Upper 18 inch sposits Iterns in Wetla	nes nes
except FAC-). Include species noted (*) as showing torphological adaptations to wetlands. "T" indicates trace. The indicates trace in the indicates trace in the indicates trace in the indicates trace. The indicates trace in the indicates trace in the indicates trace. The indicates trace in the indicates trace in the indicates trace in the indicates trace. The indicates trace in the indicates trace in the indicates trace in the indicates trace. The indicates trace in the indicates trace. The indicates trace in the indicates trace	seasonal effi wetland vege: Wett	and Hydro	logy Indicato cators: Inundated Saturated in Saturated in Water Marks Drift Lines Sediment De Drainage Pa	Upper 12 inch Upper 18 inch eposits Items in Wetla	nes nes nds
except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates trace. emarks (Describe disturbances, relevant local variations ince only 50% of the dominant plants are hydrophytic, the YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available eld Observations: Depth of Surface Water: None (in.)	seasonal effi wetland vege: Wett	and Hydro	logy Indicator cators: Inundated Saturated in Saturated in Water Marks Drift Lines Sediment De Drainage Pa ndicators (2 of	Upper 12 inch Upper 18 inch posits Items in Wetla r more require of Channels in	nes nes nds
except FAC-). Include species noted (*) as showing horphological adaptations to wetlands. "T' indicates trace. Remarks (Describe disturbances, relevant local variations since only 50% of the dominant plants are hydrophytic, the IYDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available eld Observations: Depth of Surface Water: Depth to Free Water in Pit: None (in.)	seasonal effi wetland vege: Wett	and Hydro	logy Indicator cators: Inundated Saturated in Saturated in Water Marks Drift Lines Sediment De Drainage Pa ndicators (2 of Oxidized Roc Water-Staine	Upper 12 inch Upper 18 inch eposits Items in Wetla r more require of Channels in ind Leaves	nes nes
Aerial Photograph Other X No Recorded Data Available eld Observations: Depth of Surface Water: None (in.) Depth to Free Water in Pit: >18 (in.)	seasonal effi wetland vege: Wett	and Hydro	logy Indicator cators: Inundated Saturated in Saturated in Water Marks Drift Lines Sediment De Drainage Pa ndicators (2 of Oxidized Rod Water-Staine Local Soil Su	Upper 12 inch Upper 18 inch eposits Items in Wetla r more require of Channels in id Leaves ervey Data	ies inds id): Upper 12 inches
except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates trace. Remarks (Describe disturbances, relevant local variations since only 50% of the dominant plants are hydrophytic, the HYDROLOGY (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Control of Surface Water: None (in.)	seasonal effi wetland vegei Wetti F	and Hydro Primary India	logy Indicator cators: Inundated Saturated in Saturated in Water Marks Drift Lines Sediment De Drainage Pa ndicators (2 of Oxidized Roi Water-Staine Local Soil Su Other (Explaine	Upper 12 inch Upper 18 inch sposits Iterns in Wetla r more require of Channels in d Leaves irvey Data in in Remarks)	ies inds id): Upper 12 inches
except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T' indicates trace. Remarks (Describe disturbances, relevant local variations since only 50% of the dominant plants are hydrophytic, the HYDROLOGY (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available seld Observations: Depth to Free Water in Pit: >18 (in.)	seasonal effi wetland vegei Wetti F	and Hydro Primary India	logy Indicator cators: Inundated Saturated in Saturated in Water Marks Drift Lines Sediment De Drainage Pa ndicators (2 of Oxidized Roi Water-Staine Local Soil Su Other (Explaine	Upper 12 inch Upper 18 inch sposits Iterns in Wetla r more require of Channels in d Leaves irvey Data in in Remarks)	ies inds id): Upper 12 inches

								Data Plot	#:	35c-B
1								Wetland:		35c Upland Plot
Project/Si	te: Seattle T	acoma Airport - Mas	ter Pla	n Update		Date:	7/1/98			· · · · · · · · · · · · · · · · · · ·
SOILS										
Soil Sur	rey Data:									
Map Unit	Name: Unm	apped					Drainage Clas	ss:		
							Field Observa	tions Confirm	Мар	ped Type?
Taxonom	y (Subgroup):						Yes	No	NA	<u>x</u>
Profile De	escription:									
Depth (Inches)	Horizon Designation	Matrix Color (Munsell Moist)		Mottle Colo (Munsell Mo			Mottle Abundance/Co	ontrast		ure, Concretions, ospheres, etc.
)-4	Α	10YR 3/2		•			•		Sand	v loam
4-6	В	10YR 4/3		10YR 5/6			Few. Fine, Distinc	ct	Sand	y loam
>6	С	10YR 4/3		10YR 5/6 & 1	0YR 5/3		Common, Medium	n. Distinct	Sand	v loam
Hydric Sc	oil Indicators:	•								
Hi	istosol					Listed	on Local Hydri	ic Soils List		
Hi	stic Epipedon					-	on State Hydri			
Su	ulfidic Odor					_ Listed	on National Hy	rdric Soils List	t	
Pr	obable Aquic	Moisture Regime				Aquic	Moisture Regin	ne		
Re	educing Condi	itions				Organ	ic Streaking in	Sandy Soils		
	-	Chroma Colors				Mottle	s			
—— Hi	gh Organic Co	ontent in Surface La	yer	,		Other	(Explain in Ren	narks)		
Remarks	(Describe soi	disturbances, local	variati	ons, etc.):						
Vo indicate	ors of hydric s	oil are present.								
WETLAI	ND DETER	MINATION							•	
	tic Vegetation		Yes	No			la shi	• C! F	.	hamat ha a a
., c. opinyi	ils Present?	, , resent!		No			is this	s sampling F	roint	Within a Wetland
lydric Soi			Yes	No	· X			Yes	No	

This area is an upland since all wetland parameters are absent.

Parametrix, Inc



Data Plot #:	35d-A
Wetland:	35d

T						Wetland	t: 35d	
			DETER					
	(Modified from: 198	B7 CO	E Wetla	inds E)elineati	ion Manual)	
Project/Site: Seattle Tacoma	Airport - Master Plan Upo	date	נ	Date:	7/2/98			
Applicant/Owner: Port of Se			_	County:	King			
nvestigator: William Kleindl			— s	tate:	WA			
✓ 1987 Method 1989	Method		_			Community ID	D. PEM	
o Normal Circumstances exis	t on the site?	Yes	X	No		•		
s the site significantly disturbed		Yes			X	Field Plot ID:	15-A	
•				_	_			
the area a potential Problem emarks (Explain sample loca		Yes		No _	<u> </u>			
e in yard.	· · · · · · · · · · · · · · · · · · ·							
	int species are checked)		% Cover	Stratun	n ladie	ator		
Plant Species	١		% Cover	Herb		a.Uf		
1 Agrostis capillaris (tenuis) 2 Athynum felix-femina	,		5	Herb	— FAC			
3 Epilobium ciliatum			5	Herb	FACV	V-		
4 Equisetum teimateia			2C	Herb	FACV			
5. Giycena elata			10	Herb	FACV	V+		
6 Hoicus lanatus			5	Herb	FAC			
7 Alnus rubra ercent of Dominant Species except FAC-). Include species	noted (*) as showing	or FAC	100	Tree	FAC FAC			
Alnus rubra arcent of Dominant Species accept FAC-). Include species orphological adaptations to we amarks (Describe disturbanc ance greater than 50% of the described.	noted (*) as showing etlands. "T" indicates trad ces, relevant local variation	or FAC ce.	100 sonal effe	Tree	FAC	ria is met		
7 Alnus rubra ercent of Dominant Species except FAC-). Include species prophological adaptations to we emarks (Describe disturbanc ence greater than 50% of the described.	noted (*) as showing etlands. "T" indicates traces, relevant local variation forminant plants are hydro	or FAC ce.	100 sonal effe	ects, etc	FAC): tation crite			<u> </u>
7 Alnus rubra ercent of Dominant Species except FAC-). Include species prophological adaptations to we emarks (Describe disturbance ance greater than 50% of the disturbance except Alnus rubra.	noted (*) as showing etlands. "T" indicates tractes, relevant local variation dominant plants are hydrogenerally.	or FAC ce.	100 sonal effe the wetlan	Tree	FAC .): tation crite	ndicators (De	escribe in Rem	arks):
7. Ainus rubra recent of Dominant Species recept FAC-). Include species rephological adaptations to we rmarks (Describe disturbanc rice greater than 50% of the di PDROLOGY corded Data (Describe in F Stream, Lake, or	noted (*) as showing etlands. "T" indicates tractes, relevant local variation dominant plants are hydrometrics. Remarks): Tide Gage	or FAC ce.	100 sonal effe the wetlan	Tree	FAC): tation crite drology in	ndicators (De	escribe in Rem	arks):
7 Ainus rubra procent of Dominant Species (cept FAC-). Include species (prophological adaptations to we (marks (Describe disturbance (proceded Data) Stream, Lake, or Aerial Photograp	noted (*) as showing etlands. "T" indicates tractes, relevant local variation dominant plants are hydrometrics. Remarks): Tide Gage	or FAC ce.	100 sonal effe the wetlan	Tree	FAC Lation crite drology in ndicators:	ndicators (De		arks):
7 Ainus rubra procent of Dominant Species (cept FAC-). Include species (prophological adaptations to we (marks (Describe disturbance (nee greater than 50% of the disturbance) (Corded Data (Describe in Face and Corded Data) Stream, Lake, or Aerial Photograp Other	noted (*) as showing etlands. "T" indicates tractes, relevant local variation dominant plants are hydrometers. Remarks): Tide Gage	or FAC ce.	100 sonal effe the wetlan	Tree	FAC i.): itation crite drology in ndicators: Inund Satur	ndicators (Delated atted in Upper	12 inches	arks):
7 Alnus rubra ercent of Dominant Species except FAC-). Include species prophological adaptations to we emarks (Describe disturbance ence greater than 50% of the described Data (Describe in Face or Corded Data (Describe in Face or C	noted (*) as showing etlands. "T" indicates tractes, relevant local variation dominant plants are hydrometers. Remarks): Tide Gage	or FAC ce.	100 sonal effe the wetlan	Tree	FAC i.): tation crite drology in ndicators: inund Satur Satur	ndicators (De	12 inches	arks):
7 Alnus rubra ercent of Dominant Species except FAC-). Include species prophological adaptations to we emarks (Describe disturbance ence greater than 50% of the described bata (Describe in Face or Corded Data (Describe in Face or C	noted (*) as showing etlands. "T" indicates tractes, relevant local variation dominant plants are hydrometers. Remarks): Tide Gage	or FAC ce.	100 sonal effe the wetlan	Tree	FAC i.): tation crite drology in ndicators: inund Satur Satur	adicators (De lated ated in Upper ated in Upper r Marks	12 inches	arks):
7 Alnus rubra ercent of Dominant Species except FAC-). Include species prophological adaptations to we emarks (Describe disturbance ance greater than 50% of the di YDROLOGY ecorded Data (Describe in F Stream, Lake, or Aerial Photograp Other	noted (*) as showing etlands. "T" indicates tractes, relevant local variation dominant plants are hydrometers. Remarks): Tide Gage	or FAC ce.	100 sonal effe the wetlan	Tree	FAC drology in ndicators:	adicators (De lated ated in Upper ated in Upper r Marks	12 inches	arks):
7 Alnus rubra ercent of Dominant Species except FAC-). Include species except FAC-). Include species ermarks (Describe disturbance erce greater than 50% of the di YDROLOGY ecorded Data (Describe in F Stream, Lake, or Aerial Photograp Other X No Recorded Data	noted (*) as showing etlands. "T" indicates tractes, relevant local variation dominant plants are hydrometers. Remarks): Tide Gage	or FAC ce.	100 sonal effe the wetlan	Tree	FAC drology in ndicators: inund Satur Satur Wate Drift i	lated ated in Upper ated in Upper r Marks	12 inches 18 inches	arks):
7. Ainus rubra recent of Dominant Species recept FAC-). Include species rephological adaptations to we rmarks (Describe disturbance rice greater than 50% of the d //DROLOGY corded Data (Describe in F Stream, Lake, or Aerial Photograp Other X No Recorded Data Id Observations:	noted (*) as showing etlands. "T" indicates tractes, relevant local variation dominant plants are hydrometers; Remarks): Tide Gage th ta Available	or FAC ce.	100 sonal effe he wetlar Wetti	ects, etc. and veget	FAC intrology in indicators: inund Satur Satur Wate Drift it Sedin	lated ated in Upper ated in Upper Marks ines nent Deposits age Patterns in	12 inches 18 inches	arks):
7. Ainus rubra recent of Dominant Species recept FAC-). Include species rephological adaptations to we rmarks (Describe disturbance rice greater than 50% of the d //DROLOGY corded Data (Describe in F Stream, Lake, or Aerial Photograp Other X No Recorded Data Id Observations: Depth of Surface Water:	noted (*) as showing etlands. "T" indicates tractes, relevant local variation dominant plants are hydro Remarks): Tide Gage th ta Available None (in.)	or FAC ce.	100 sonal effe he wetlar Wetti	ects, etc. and veget	drology indicators: Inund Satur Satur Wate Drift in Drain	adicators (Delated atted in Upper atted in Upper r Marks Lines nent Deposits age Patterns in the pors (2 or more	12 inches 18 inches n Wetlands required):	
7. Ainus rubra recent of Dominant Species recept FAC-). Include species rephological adaptations to we rmarks (Describe disturbance rice greater than 50% of the d //DROLOGY corded Data (Describe in F Stream, Lake, or Aerial Photograp Other X No Recorded Data Id Observations: Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as showing etlands. "T" indicates tractes, relevant local variation forminant plants are hydro Remarks): Tide Gage th None (in.)	or FAC ce.	100 sonal effe he wetlar Wetti	ects, etc. and veget	drology in ndicators: Inund Satur Satur Wate Drift L Sedin Drain. Oxidi:	adicators (Delated atted in Upper atted in Upper r Marks ines pent Deposits age Patterns in press (2 or more zed Root Char	12 inches 18 inches n Wetlands required): nnels in Upper	
7 Alnus rubra ercent of Dominant Species except FAC-). Include species except FAC-). Include species ermarks (Describe disturbance erce greater than 50% of the di YDROLOGY ecorded Data (Describe in F Stream, Lake, or Aerial Photograp Other X No Recorded Data	noted (*) as showing etlands. "T" indicates tractes, relevant local variation forminant plants are hydrotectes. Tide Gage http://doi.org/10.1001/10.10	or FAC ce.	100 sonal effe he wetlar Wetti	ects, etc. and veget	tation crite trology in ndicators: Inund Satur Satur Wate Drift L Sedin Drain ry Indicate Wate Wate	adicators (Delated atted in Upper atted in Upper r Marks ines nent Deposits age Patterns in Deposits age Patterns in Deposits age Patterns in Deposits age Patterns in Deposits (2 or more zed Root Charr-Stained Leav	12 inches 18 inches In Wetlands required): Innels in Upper res	
7 Alnus rubra ercent of Dominant Species except FAC-). Include spe	noted (*) as showing etlands. "T" indicates tractes, relevant local variation forminant plants are hydro Remarks): Tide Gage th None (in.)	or FAC ce.	100 sonal effe he wetlar Wetti	ects, etc. and veget	drology in ndicators: Inund Satur Satur Wate Drift L Sedin Drain. Ty Indicator Wate Local	adicators (Delated atted in Upper atted in Upper r Marks ines pent Deposits age Patterns in press (2 or more zed Root Char	12 inches 18 inches n Wetlands required): nnels in Upper res ata	

1								Data Plot	#:	35d-A
L *								Wetland:		35d
Project/Site:	Seattle Ta	acoma Airport - Master	Pian	Updai	te	Date	7/2/98			
SOILS Soil Survey	Data:									
Map Unit Na	me: <u>Unm</u>	apped					Drainage Clas	is:		
							Field Observa	tions Confirm	Мар	ped Type?
axonomy (S	Subgroup):						Yes I	No	NA	x
rofile Desc	ription:									
	lorizon Pesignation	Matrix Color (Munsell Moist)		Mottle (Muns	Color ell Mois	t)	Mottle Abundance/Co			ure, Concretions, ospheres, etc.
5 F	ill	10YR 2/2							Sand	v loam
-8 <u>C</u>		2.5Y 4/2	1	10YR 3	/6		Common, Medium	n. Distinct	Sand	
-16 A	b	10YR 2/1					•		Sift w	th organics
ydric Soil I	ndicators:									
Histo	soi					Liste	on Local Hydri	c Soils List		
Histic	Epipedon				-	Listed	on State Hydric	c Soils List		
	lic Odor				_	Listed	l on National Hy	dric Soils List		
		Moisture Regime					Moisture Regim			
	cing Condi				_		ic Streaking in S	Sandy Soils		
		Chroma Colors			_	X Mottle				
—— High	Organic Co	ontent in Surface Layer	•			Other	(Explain in Rem	narks)		
		disturbances, local va								
oil color and	other hydr	ic soil indicators meet	the hy	/dnc s	oil crite	ria.				
/ETIAND	DETER	MINATION								
					•					
drophytic \ dric Soils	-		es .	<u> </u>	No		Is this	Sampling P	oint \	Within a Wetlan
	resent? ology Pre:		es .	<u> </u>	No			Yes X	No	
htiand U			es	Х	No					

The presence of all three parameters indicate this area is a wetland. Delineation of the upper reach of Wetland 35 was based on distinct changes on soil color, changes in plant species composition, and topography.



35d-B

(Modified from: 19 Project/Site: Seattle Tacoma Airport - Master Plan Up Applicant/Owner: Port of Seattle Investigator: William Kleindi I 1987 Method I 1989 Method	87 CO			(TIO	'N	
Project/Site: Seattle Tacoma Airport - Master Plan Up Applicant/Owner: Port of Seattle nvestigator: William Kleindi 1987 Method 1989 Method			lands i	Delir	neation Manual)	
Applicant/Owner: Port of Seattle nvestigator: William Kleindi 1987 Method 1989 Method	date				,	
nvestigator: William Kleindi 1987 Method 1989 Method				7/2/9		
2 1987 Method ☐ 1989 Method			County:	_		
_		_	State:	WA	\	
					Community ID: U	pland
Oo Normal Circumstances exist on the site?	Yes	<u>x</u>	No .		Field Plot ID: 15-8	3
s the site significantly disturbed (Atypical Situation)?	Yes		No .	X		
s the area a potential Problem Area?	Yes		No _	X	i	
pland comparison located on a hobby farm on Parcel	268.					
'EGETATION (✓Dominant species are checked) Plant Species		% Cover	Stratu	m	Indicator	
Agrostis sp		100	Herb	•••	NL NL	
2 Unknown grass		10	Herb		NL NL	
he wetland vegetation criteria are not met since the are		minated i	hv non-w	etian	d plants	
YDROLOGY		ninated i	by non-w	retian	d plants.	
						e in Remarks)
ecorded Data (Describe in Remarks):	3 00	Wet		droic	ogy Indicators (Describ	e in Remarks):
		Wet	lland Hy	drolo	ogy Indicators (Describ	e in Remarks):
ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage	38 13 401	Wet	lland Hy	drolo	ogy Indicators (Describ	
ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph		Wet	lland Hy	drolo	ogy Indicators (Describ ators: Inundated	ches
ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other		Wet	lland Hy	droic	ogy Indicators (Describ ators: Inundated Saturated in Upper 12 ind	ches
ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other		Wet	lland Hy	drolo	ogy Indicators (Describ ators: Inundated Saturated in Upper 12 ind Saturated in Upper 18 ind Water Marks Drift Lines	ches
Aerial Photograph Other	2 3 3 3 3	Wet	lland Hy	Indica	ogy Indicators (Describ ators: Inundated Saturated in Upper 12 ind Saturated in Upper 18 ind Water Marks Drift Lines Sediment Deposits	ches ches
ecorded Data (Describe in Remarks): Stream, Lake. or Tide Gage Aerial Photograph Other X No Recorded Data Available		Wet	lland Hy	Indica	ogy Indicators (Describ ators: Inundated Saturated in Upper 12 ind Saturated in Upper 18 ind Water Marks Drift Lines	ches ches
ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other		Wet	Primary	indica	ogy Indicators (Describ ators: Inundated Saturated in Upper 12 ind Saturated in Upper 18 ind Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wet	ches ches diands
Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available		Wet	Primary	indica	ogy Indicators (Describ ators: Inundated Saturated in Upper 12 ind Saturated in Upper 18 ind Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wet	ches ches dlands red):
Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available eld Observations: Depth of Surface Water: None (in.)		Wet	Primary	indica	ogy Indicators (Describ ators: Inundated Saturated in Upper 12 ind Saturated in Upper 18 ind Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wet idicators (2 or more requi	ches ches dlands red):
Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available eld Observations: Depth of Surface Water: None (in.) Depth to Free Water in Pit: >18 (in.)		Wet	Primary	droid Indica	ogy Indicators (Describators: Inundated Saturated in Upper 12 ind Saturated in Upper 18 ind Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wet idicators (2 or more requi-	ches ches dlands red):
Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available eld Observations: Depth of Surface Water: None (in.) Depth to Free Water in Pit: >18 (in.)		Wet	Primary	indica	ogy Indicators (Describ ators: Inundated Saturated in Upper 12 ind Saturated in Upper 18 ind Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wet idicators (2 or more requi	ches ches dlands red): in Upper 12 inches

							Data P	iot #:	35d-B
							Wetian	nd:	35d Upland Plo
trouget/Si	to: Saettle Ti	acoma Airport - Maste	o Dies Lie	-data	Data	772/00			
rojeci Si	ie. Seattle i	acoma Airport - Maste	r Plan Ut	Juate	Date:	7/2/98			
SOILS Soil Sur	ey Data:								
Map Unit	Name: <u>Unrr</u>	apped				Drainage	Class:		
						Field Obs	ervations Conf	im Mar	pped Type?
Γaxonom	y (Subgroup):					Yes	No	NA	x
	escription:						_	-	*******
Depth Inches)	Horizon	Matrix Color (Munsell Moist)		ttle Color Insell Moi:	st)	Mottle Abundano	e/Contrast		ture, Concretions, cospheres, etc.
-2	O/A	10YR 2/2	-		***************************************	•		Silt	
-10+	A/E	10YR 4/4						Silt	
ludric Sc	oil Indicators:								
•	istosol				Listed	on i ocal H	lydric Soils List	•	
Hi	stic Epipedon			-			ydric Soils List		
Sı	ulfidic Odor			•			I Hydric Soils I		
Pr	obable Aquic	Moisture Regime		_		Moisture R			
Re	educing Condi	tions			Organ	ic Streaking	in Sandy Soil	s	
GI	eyed or Low-(Chroma Colors		_	Mottle	s			
Hi	gh Organic Co	ontent in Surface Laye	er	_	Other	(Explain in	Remarks)		
		disturbances, local vi oil are present.	anations,	etc.):					
VETLAI	ND DETER	MINATION				**			
ydrophyt	ic Vegetation	Present?	Yes	No	x	ls	this Sampline	a Point	: Within a Wetland
dric Soi	Is Present?		Yes	No.	×			y . O	S MATISTIC
	ydrology Pre			—	^		Yes	No	o X

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): This area is an upland since all wetland parameters are absent.



Data Plot #:	37a-A1
Wetland:	37a

4 1						Data Piot #:	37a-A1
L'	WE1	TI AND	DETE	RMINA1	TION	Wetland:	37a
	(Modified from: 19		_			Manual)	
Project/Site: Seattle Tacoma					/1/98		
Applicant/Owner: Port of Se	eattle			County:	King		
Investigator: William Kleindl				State:	WA		
✓ 1987 Method ☐ 1989	Method				Cor	mmunity ID: Pl	
Do Normal Circumstances exis	t on the site?	Yes	x	No _		id Plot ID: 17-a	
s the site significantly disturbed	d (Atypical Situation)?	Yes		No 2		<u> </u>	· · · · · · · · · · · · · · · · · · ·
s the area a potential Problem	Area?	Yes		No >	X		
temarks (Explain sample loca	ation, disturbances, prot	olem are	as):	_			
Sample established on parcel 3	101 in northern portion of	f wetland	d 37a. Ti	his portion	of the wetial	nd is a disturbed	pasture.
/EGETATION - Dominal	nt species are checked)						
Plant Species	,,		% Cover	Stratum	Indicator		
Agrostis capillaris (tenuis))		100	Herb	FAC		
2 Holcus lanatus			80	Herb	FAC		
					FACW		
Percent of Dominant Species		or FAC	100	Herb	FACTV		
Percent of Dominant Species except FAC-). Include species norphological adaptations to we demarks (Describe disturbance)	noted (*) as showing etlands. "T" indicates traces, relevant local variations.	ace. ions, sea	100	fects, etc.):	-	
Percent of Dominant Species except FAC-). Include species norphological adaptations to we demarks (Describe disturbance) ince greater than 50% of the vision	noted (*) as showing etlands. "T" indicates traces, relevant local variations.	ace. ions, sea	100	fects, etc.):		
Ranunculus repens Percent of Dominant Species except FAC-). Include species norphological adaptations to we Remarks (Describe disturbance Since greater than 50% of the vi-	noted (*) as showing etlands. "T indicates traces, relevant local variation is hydrophytic	ace. ions, sea	100 asonal ef	fects, etc. etation cri): iteria is met.	ators (Describ	e in Remarks)
Ranunculus repens Percent of Dominant Species except FAC-). Include species horphological adaptations to we lemarks (Describe disturbance lince greater than 50% of the vi-	noted (*) as showing etlands. "T' indicates traces, relevant local variation is hydrophytic egetation is hydrophytic." Remarks):	ace. ions, sea	100 asonal ef tiand veg	fects, etc. etation cri	.): iteria is met. irology Indic	ators (Describe	e in Remarks):
Ranunculus repens Percent of Dominant Species except FAC-). Include species prophological adaptations to we Remarks (Describe disturbance since greater than 50% of the vice IYDROLOGY Recorded Data (Describe in Recorded Data)	noted (*) as showing etlands. Trindicates traces, relevant local variative egetation is hydrophytic Remarks): Tide Gage	ace. ions, sea	100 asonal ef tiand veg	fects, etc. etation cri	.): iteria is met. irology Indic		e in Remarks):
Ranunculus repens Percent of Dominant Species except FAC-). Include species norphological adaptations to we Remarks (Describe disturbance lince greater than 50% of the vi- IYDROLOGY Recorded Data (Describe in R Stream, Lake, or	noted (*) as showing etlands. Trindicates traces, relevant local variative egetation is hydrophytic Remarks): Tide Gage	ace. ions, sea	100 asonal ef tiand veg	fects, etc. etation cri); iteria is met. irology Indic ndicators; Inundate		
recent of Dominant Species except FAC-). Include species horphological adaptations to we semarks (Describe disturbance greater than 50% of the vicince greater	noted (*) as showing etlands. "T indicates traces, relevant local variative getation is hydrophytic Remarks): Tide Gage	ace. ions, sea	100 asonal ef tiand veg	fects, etc. letation cn land Hyd Primary In); iteria is met. irology Indic ndicators: Inundated Saturated	d	hes
Ranunculus repens Percent of Dominant Species Percent Of D	noted (*) as showing etlands. "T indicates traces, relevant local variative getation is hydrophytic Remarks): Tide Gage	ace. ions, sea	100 asonal ef tiand veg	fects, etc. letation cn land Hyd Primary In	iteria is met. Irology Indicators: Inundated Saturated Saturated Water Ma	d d in Upper 12 inc d in Upper 18 inc arks	hes
Percent of Dominant Species except FAC-). Include species horphological adaptations to we exemarks (Describe disturbance lince greater than 50% of the vi- except FAC-). Include species horphological adaptations to we exemarks (Describe disturbance lince greater than 50% of the vi- except Stream, Lake, or Aerial Photograph Other	noted (*) as showing etlands. "T indicates traces, relevant local variative getation is hydrophytic Remarks): Tide Gage	ace. ions, sea	100 asonal ef tiand veg	fects, etc. letation cn land Hyd Primary In	iteria is met. Irology Indicators: Inundated Saturated Water Ma	d d in Upper 12 inc d in Upper 18 inc arks s	hes
Percent of Dominant Species except FAC-). Include species norphological adaptations to we Remarks (Describe disturbance Since greater than 50% of the vi- HYDROLOGY tecorded Data (Describe in R Stream, Lake, or Aerial Photograph Other	noted (*) as showing etlands. "T indicates traces, relevant local variative getation is hydrophytic Remarks): Tide Gage	ace. ions, sea	100 asonal ef tiand veg	fects, etc. letation cn land Hyd Primary In	irology Indicadicators: Inundated Saturated Water Ma Drift Line: Sediment	d d in Upper 12 inc d in Upper 18 inc arks s t Deposits	hes hes
Ranunculus repens Percent of Dominant Species except FAC-). Include species morphological adaptations to we Remarks (Describe disturbance Since greater than 50% of the vi- HYDROLOGY Recorded Data (Describe in R Stream, Lake, or Aeria! Photograph Other X No Recorded Data	noted (*) as showing etlands. "T indicates traces, relevant local variative getation is hydrophytic Remarks): Tide Gage	ace. ions, sea	100 asonal ef tiand veg	fects, etc. letation cn land Hyd Primary In	irology Indicadicators: Inundated Saturated Water Ma Drift Line: Sediment	d d in Upper 12 inc d in Upper 18 inc arks s	hes hes
Ranunculus repens Percent of Dominant Species Except FAC-). Include species Percent of Dominant Species Percent Of	noted (*) as showing etlands. "T indicates traces, relevant local variative getation is hydrophytic Remarks): Tide Gage h ta Available	ace. ions, sea	100 asonal ef tiland veg Wet	land Hyd	irology Indicators: Inundated Saturated Water Ma Drift Line: Sediment	d d in Upper 12 inc d in Upper 18 inc erks s t Deposits Patterns in Weti	hes hes ands
Ranunculus repens Percent of Dominant Species Percent of Describe disturbance Percent of Describe disturbance Percent of Describe in Figure 1 Stream, Lake, or Aerial Photograph Other X No Recorded Data Percent of Dominant Species Percent of Dominant Spe	noted (*) as showing etlands. "T indicates traces, relevant local variative getation is hydrophytic Remarks): Tide Gage h ta Available	ace. ions, sea	100 asonal ef tiland veg Wet	fects, etc. retation cn land Hyd Primary In X	rology Indicators: Inundate Saturated Water Ma Drift Line: Sediment Drainage	d d in Upper 12 inc d in Upper 18 inc arks s t Deposits Patterns in Weti	thes thes ands ed):
Percent of Dominant Species except FAC-). Include species morphological adaptations to we Remarks (Describe disturbance Since greater than 50% of the vi- HYDROLOGY Recorded Data (Describe in R Stream, Lake, or Aerial Photograph Other X No Recorded Data ield Observations: Depth of Surface Water:	noted (*) as showing etlands. "T indicates traces, relevant local variative getation is hydrophytic Remarks): Tide Gage h ta Available None (in.)	ace. ions, sea	100 asonal ef tiland veg Wet	land Hyd	rology Indicators: Inundate Saturated Water Ma Drift Line: Sediment Drainage y Indicators (Oxidized	d d in Upper 12 inc d in Upper 18 inc arks s t Deposits Patterns in Weti (2 or more requir	hes hes ands
Ranunculus repens Percent of Dominant Species except FAC-). Include species norphological adaptations to we Remarks (Describe disturbance Since greater than 50% of the vi- HYDROLOGY Recorded Data (Describe in R Stream, Lake, or Aerial Photograph Other X No Recorded Data ield Observations: Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as showing etlands. "T indicates traces, relevant local variative getation is hydrophytic remarks): Tide Gage hta Available None (in.) 18 (in.)	ace. ions, sea	100 asonal ef tiland veg Wet	fects, etc. retation cn land Hyd Primary In X	rology Indicators: Inundated Saturated Water Ma Drift Line: Sediment Drainage y Indicators (Oxidized Water-State	d in Upper 12 inc in Upper 18 inc arks s it Deposits Patterns in Wetl (2 or more requir Root Channels in	thes thes ands ed):
Ranunculus repens Percent of Dominant Species except FAC-). Include species morphological adaptations to we Remarks (Describe disturbance Since greater than 50% of the vi HYDROLOGY Recorded Data (Describe in R Stream, Lake, or Aerial Photograph Other X No Recorded Data ield Observations: Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as showing etlands. "T indicates traces, relevant local variative getation is hydrophytic remarks): Tide Gage hta Available None (in.) 18 (in.)	ace. ions, sea	100 asonal ef tiland veg Wet	fects, etc. retation cn land Hyd Primary In X	rology Indicators: Inundated Saturated Water Ma Drift Line: Sediment Drainage y Indicators (Oxidized Water-State Local Soi	d d in Upper 12 inc d in Upper 18 inc arks s t Deposits Patterns in Weti (2 or more requir	hes hes ands ed): n Upper 12 inches

hydrology criteria is satisfied.

						Data Piot	#:	37a-A1
						Wetland:		37a
Project/S	ite: Seattle Ta	acoma Airport - Master	Plan Update	Date:	7/1/98			
SOILS Soil Sur	vey Data:							
Map Uni	t Name: <u>Unm</u>	apped			Drainage Class	s:		
					Field Observat	tions Confirm	Марр	ed Type?
Taxonom	ny (Subgroup):				Yes N	No	NA	x
	escription:					·· —		~~
Depth Inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)		Mottle Abundance/Co			re, Concretions spheres, etc.
-10	A	10YR 2/1			•		Sanov	silt
0-18+	B	2.5Y 2 /1	•		-		Sandy	silt
— н — н — s	educing Condi leyed or Low-C	Chroma Colors Intent in Surface Layer		Listed Listed Aquic Organ Mottle	on Local Hydric on State Hydric on National Hyd Moisture Regim ic Streaking in S s (Explain in Rema	: Soils List dric Soils List e Sandy Soils		
X H Remarks	(Describe soil	disturbances, local vari ic soil indicators meet th						
X H Remarks	(Describe soil and other hydri	ic soil indicators meet th			-			
G X H Remarks Soil color	(Describe soil and other hydri	c soil indicators meet tr	ne hydric soil criteria	·				
X History Color (Color	(Describe soil and other hydri	c soil indicators meet tr	e hydric soil criteria		ls this	Sampling Po	oint V	Vithin a Wetlan

The presence of all three parameters indicate this area is a wetland. Delineation was based on sharp changes on soil color and hydrology as it corresponds in changes in topography.

Parametri	x, Inc.
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Data Piot #:

WETLAND (Modified from: 1987 CO Project/Site: Seattle Tacoma Airport - Master Plan Update Applicant/Owner: Port of Seattle Investigator: Louther and Grialou 1987 Method 1989 Method Investigator: Yes Investigator: Louther and Grialou 1989 Method Investigator: Yes Investigator: Louther and Grialou 1989 Method Investigator: Yes In		Ands Deli Date: 10/4 County: K State: W No X No X	ineation Manual) 16/98 ling /A Community ID: PEM Field Plot ID: 66-A
(Modified from: 1987 CC Project/Site: Seattle Tacoma Airport - Master Plan Update Applicant/Owner: Port of Seattle Investigator: Louther and Gralou 1987 Method 1989 Method Involved (Atypical Situation)? Yes In the site significantly disturbed (Atypical Situation)? Yes In the area a potential Problem Area? Yes Internal Circumstances exist on the site? Yes In the site significantly disturbed (Atypical Situation)? Yes In the area a potential Problem Area? Yes Internal Circumstances exist on the site? Yes Internal Circumstances exist on the site? Yes In the site significantly disturbed (Atypical Situation)? Yes Internal Circumstances exist on the site? Yes In the site significantly disturbed (Atypical Situation)? Yes In the site significant (Atypical Situation)? Yes In the site signif		Ands Deli Date: 10/4 County: K State: W No X No X	ineation Manual) 16/98 ling /A Community ID: PEM Field Plot ID: 66-A
Project/Site: Seattle Tacoma Airport - Master Plan Update Applicant/Owner: Port of Seattle Investigator: Louther and Grialou 1987 Method 1989 Method In Normal Circumstances exist on the site? Yes Is the site significantly disturbed (Atypical Situation)? Yes Is the area a potential Problem Area? Yes Intermarks (Explain sample location, disturbances, problem are Not established on Parcel 302 near wetland edge. The vegetal		Date: 10/1 County: K State: W No X No X	16/98 ing /A Community ID: PEM Field Plot ID: 66-A
Applicant/Owner: Port of Seattle Investigator: Louther and Gralou 1987 Method 1989 Method Io Normal Circumstances exist on the site? It the site significantly disturbed (Atypical Situation)? It the area a potential Problem Area? Yes Investigator: Louther and Gralou Yes It the area a potential Problem Area? Yes Investigator: Yes		County: K State: W No X No X	Community ID: PEM Field Plot ID: 66-A
nvestigator: Louther and Gralou 1987 Method 1989 Method No Normal Circumstances exist on the site? Yes the site significantly disturbed (Atypical Situation)? Yes the area a potential Problem Area? Yes emarks (Explain sample location, disturbances, problem are tot established on Parcel 302 near wetland edge. The vegetal		No	Community ID: PEM Field Plot ID: 66-A
1987 Method 1989 Method No Normal Circumstances exist on the site? Yes the site significantly disturbed (Atypical Situation)? Yes the area a potential Problem Area? Yes emarks (Explain sample location, disturbances, problem are lot established on Parcel 302 near wetland edge. The vegetal	x 	No X	Community ID: PEM Field Plot ID: 66-A
to Normal Circumstances exist on the site? Yes the site significantly disturbed (Atypical Situation)? Yes the area a potential Problem Area? Yes emarks (Explain sample location, disturbances, problem are lot established on Parcel 302 near wetland edge. The vegetal	eas):	No X	Field Plot ID: 66-A
the site significantly disturbed (Atypical Situation)? Yes the area a potential Problem Area? Yes emarks (Explain sample location, disturbances, problem are lot established on Parcel 302 near wetland edge. The vegetal	eas):	No X	_
the area a potential Problem Area? Yes emarks (Explain sample location, disturbances, problem are lot established on Parcel 302 near wetland edge. The vegetal		No X	-
emarks (Explain sample location, disturbances, problem are lot established on Parcel 302 near wetland edge. The vegetal			_
ot established on Parcel 302 near wetland edge. The vegetal		turbed.	
EGETATION (Dominant species are checked)			
EGETATION (* Dominant Species are checken)	-		
Plant Species	% Cover	Stratum	Indicator
1 Cirsium sp.	т	Herb	FAC-
2 Equisetum arvense	25	Herb	FAC
3 Phalans arundinacea	10	Herb	FACW
4 Ranunculus repens	30	Herb	FACM
5. Rumex cnspus	<u>T</u>	Herb	FAC
6 Urtica dioica 7 Acer macrophylium	2 T	Herb Tree	FACU
emarks (Describe disturbances, relevant local variations, sea nice greater than 50% of the dominant plants are hydrophytic,			on criteria is met.
YDROLOGY			
corded Data (Describe in Remarks):	Wetl	and Hydrol	logy Indicators (Describe in Remarks):
Stream, Lake, or Tide Gage		rimary India	
Aerial Photograph			Inundated
			Saturated in Upper 12 inches
Other			Columntad in Linnas 40 :
Other X No Recorded Data Available			Saturated in Upper 18 inches
			Water Marks
			Water Marks Drift Lines
			Water Marks Drift Lines Sediment Deposits
X No Recorded Data Available		X	Water Marks Drift Lines
X No Recorded Data Available	c		Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
X No Recorded Data Available Id Observations: Depth of Surface Water: 0 (in.)	s		Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands indicators (2 or more required):
X No Recorded Data Available Id Observations: Depth of Surface Water: 0 (in.) Depth to Free Water in Pit: >18 (in.)	s		Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches
X No Recorded Data Available Ild Observations: Depth of Surface Water: 0 (in.) Depth to Free Water in Pit: >18 (in.)	s		Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches Water-Stained Leaves
X No Recorded Data Available Ild Observations: Depth of Surface Water: 0 (in.) Depth to Free Water in Pit: >18 (in.)	s		Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data
X No Recorded Data Available Ild Observations: Depth of Surface Water: 0 (in.) Depth to Free Water in Pit: >18 (in.)	s		Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches Water-Stained Leaves
X No Recorded Data Available Ild Observations: Depth of Surface Water: 0 (in.) Depth to Free Water in Pit: >18 (in.)	c modifica	econdary in	Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)
Stream, Lake, or Tide Gage			cators: Inundated Saturated in Upper 12 inches

										Data Piol	#:	37a-A2
-										Wetland	:	37a
Project/Sit	te: Seattle T	acoma Airport - Maste	r Pla	n Upda	te	_	Date:	10/16/9	8			
SOILS												
Soil Surv	ey Data:								~			
Map Unit	Name: Unm	napped						Drainage	Class:			
					-			Field Ob	servatio	ns Confirm	1 Мар	ped Type?
Taxonomy	(Subgroup):							Yes	No		NA	X
Profile De	scription:											
Depth (Inches)	Honzon Designation	Matrix Color (Munsell Moist)		Mottle Color (Munsell Moist)			Mottle Abundan	ce/Cont	trast	_	ure, Concretions ospheres, etc.	
D-8	<u> </u>	10YR 4/2		10YR 4	/6			Few. Fine, I	Faint		Sand	y loam (fill)
B-18	8	10YR 2/2		10YR 3	/4			Few. Coars	e. Distino		Sand	y Clay Ioam (fill)
His	educing Condi eyed or Low-(gh Organic Co	Moisture Regime		ons, etc	- - - - - -	x	Listed Listed Aquic Organ Mottle	Moisture f ic Streakir	Hydric S lal Hydri Regime ng in Sa	Soils List IC Soils Lis Indy Soils	t	
		ic soil indicators mee				eria.						
VETLAN	ND DETER	MINATION										
vdronhvdi	ic Vegetation	Present?	Yes	×	No				e thie S	ampline !	oin.	Mithin a Marti-
AGIODIIAL					140	_			a 11113 3	enhiiig i	JIIIC	Within a Wetlan
	s Present?		Yes	X	No							

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results):

Area is disturbed, however, the presence of all three parameters indicate this area is a wetland.

_				•		
Р	ar	am	etr	ΊX.	Ir	IC.
-				,		

Data Plot #:	37a-A3
Wetland:	37a

	7/1/98 King WA Community ID: PFO Field Plot ID: 65-a X
Applicant/Owner: Port of Seattle Count Investigator: William Kleindi State: 1987 Method 1989 Method Do Normal Circumstances exist on the site? Yes X No is the site significantly disturbed (Atypical Situation)? Yes No is the area a potential Problem Area? Yes No is the area a potential Problem Area? Yes No is the area a potential Problem Area? Yes No is the area a potential Problem Area? Yes No is the area a potential Problem Area? Yes No is the area a potential Problem Area? Yes No is the area a potential Problem Area? Yes No is the area a potential Problem Area? Yes No is the area a potential Problem Area? Yes No is the area a potential Problem Area? Yes No is the area a potential Problem Area? Yes No is the area a potential Problem Area? Yes No is the area a potential Problem Area? Yes No is the area a potential Problem Area? Yes No is the area a potential Problem Area? Yes No is the area a potential Problem Area? Yes No is the area a potential Problem Area? Yes No is the area a potential Problem Area? Yes No is the area of the a	T/1/98 King WA Community ID: PFO Field Plot ID: 65-a X X The indicator FAC
Applicant/Owner: Port of Seattle Count Investigator: William Kleindi State: 1987 Method 1989 Method Do Normal Circumstances exist on the site? Yes X No Is the site significantly disturbed (Atypical Situation)? Yes No Is the area a potential Problem Area? Yes No Itemarks (Explain sample location, disturbances, problem areas): Itemarks (Explain sample location, disturbances are checked) Plant Species	King WA Community ID: PFO Field Plot ID: 65-a X X The image of the
Nestigator: William Kleindi State: 1987 Method 1989 Method No Normal Circumstances exist on the site? Yes X No the site significantly disturbed (Atypical Situation)? Yes No the area a potential Problem Area? Yes No emarks (Explain sample location, disturbances, problem areas): ample established on parcel 302 in south portion of Wetland 37a. EGETATION Dominant species are checked) Plant Species % Cover Strain Athynum filix-femina 20 Herb Equisetum arvense 40 Herb Givena grandis 5 Herb Rubus discolor 40 Shru Except FAC-). Include species that are OBL. FACW, or FAC except FAC-). Include species noted (*) as showing 75 prophological adaptations to wetlands. Thindicates trace. Plant Species (Describe disturbances, relevant local variations, seasonal effects, or and grandis are hydrophytic, the wetland very the corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Primar Aerial Photograph Other	Community ID: PFO Field Plot ID: 65-a X X Indicator FAC
The site significantly disturbed (Atypical Situation)? Yes No the area a potential Problem Area? Yes No marks (Explain sample location, disturbances, problem areas): The area applies are checked) Plant Species '% Cover Strain Athyrium filix-femina 20 Herb 2 Equisetum arvense 40 Herb 3 Givcena grandis 5 Herb 4 Rubus discolor 40 Shru 5 Rubus speciabilis 10 Shru 6 Alnus rubra 75 Tree (Atopical adaptations to wetlands. The indicates trace. The area apotential Problem Area? Yes No No Plant Species 1 Athyrium filix-femina 20 Herb 2 Equisetum arvense 40 Herb 3 Givcena grandis 5 Herb 4 Rubus discolor 40 Shru 5 Rubus speciabilis 10 Shru 6 Alnus rubra 75 Tree (Atopical adaptations to wetlands. The indicates trace. The area of Dominant Species that are OBL, FACW, or FAC (Atopic FAC). Include species noted (*) as showing 75 prophological adaptations to wetlands. The indicates trace. The area of Dominant Species disturbances, relevant local variations, seasonal effects, or the greater than 50% of the dominant plants are hydrophytic, the wetland by the area of the greater than 50% of the dominant plants are hydrophytic, the wetland by the area of the greater than 50% of the dominant plants are hydrophytic, the wetland by the Aerial Photograph Other	Community ID: PFO Field Plot ID: 65-a X X Indicator FAC
the site significantly disturbed (Atypical Situation)? Yes No the area a potential Problem Area? Yes No emarks (Explain sample location, disturbances, problem areas): ample established on parcel 302 in south portion of Wetland 37a. EGETATION (*Dominant species are checked) Plant Species	Field Plot ID: 65-a X X m Indicator FAC
the site significantly disturbed (Atypical Situation)? Yes No the area a potential Problem Area? Yes No emarks (Explain sample location, disturbances, problem areas): sample established on parcel 302 in south portion of Wetland 37a. EGETATION (Dominant species are checked) Plant Species	X X m Indicator FAC
the area a potential Problem Area? Yes No Permarks (Explain sample location, disturbances, problem areas): Imple established on parcel 302 in south portion of Wetland 37a. EGETATION (**Dominant species are checked) Plant Species	m Indicator FAC
EGETATION (**Dominant species are checked) Plant Species 1 Athyrium filix-femina 20 Herb 2 Equisetum arvense 40 Herb 3 Givcena grandis 5 Herb 5 Rubus speciabilis 10 Shru 6 Alnus rubra 75 Tree Procept FAC-). Include species noted (*) as showing 75 Prophological adaptations to wetlands. "T" indicates trace. Prophological adaptations to wetlands. "T" indicates trace. Prophological dependences that are hydrophytic, the wetland very the greater than 50% of the dominant plants are hydrophytic, the wetland very the greater than 50% of the Gage Aerial Photograph Other Other	m Indicator FAC
EGETATION (*Dominant species are checked) Plant Species	FAC
EGETATION (Dominant species are checked) Plant Species	FAC
Plant Species	FAC
Equisetum arvense 40 Herb 3 Givcena grandis 5 Herb 4 Rubus discolor 40 Shru 5 Rubus spectabilis 10 Shru 6 Alnus rubra 75 Tree recent of Dominant Species that are OBL, FACW, or FAC (cept FAC-). Include species noted (*) as showing 75 urphological adaptations to wetlands. To indicates trace. marks (Describe disturbances, relevant local variations, seasonal effects, or accepted than 50% of the dominant plants are hydrophytic, the wetland very corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Primar Aerial Photograph Other	
Givcena grandis A Rubus discolor Rubus spectabilis Alnus rubra Alnus rubra Tree freent of Dominant Species that are OBL, FACW, or FAC freept FAC-). Include species noted (*) as showing Orphological adaptations to wetlands. Trindicates trace. free greater than 50% of the dominant plants are hydrophytic, the wetland very TOROLOGY Corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other	FAC
Rubus discolor Rubus spectabilis Rubus spectabilis Alnus rubra Tree Tree	
Rubus spectabilis 6 Ainus rubra 75 Tree recent of Dominant Species that are OBL. FACW, or FAC capt FAC-). Include species noted (*) as showing 75 prohological adaptations to wetlands. "T" indicates trace. marks (Describe disturbances, relevant local variations, seasonal effects, once greater than 50% of the dominant plants are hydrophytic, the wetland very corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	OBL
6 Ainus rubra 75 Tree recent of Dominant Species that are OBL. FACW, or FAC recept FAC-). Include species noted (*) as showing 75 orphological adaptations to wetlands. "T" indicates trace. rmarks (Describe disturbances, relevant local variations, seasonal effects, once greater than 50% of the dominant plants are hydrophytic, the wetland very **TOPOLOGY** Corded Data** (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	FACU FAC+
recent of Dominant Species that are OBL, FACW, or FAC (deept FAC-). Include species noted (*) as showing 75 orphological adaptations to wetlands. "T" indicates trace. marks (Describe disturbances, relevant local variations, seasonal effects, once greater than 50% of the dominant plants are hydrophytic, the wetland verification of the dominant plants are hydrophytic, the wetland verification of the dominant plants are hydrophytic, the wetland verification of the dominant plants are hydrophytic, the wetland verification of the dominant plants are hydrophytic, the wetland verification of the dominant plants are hydrophytic, the wetland verification of the dominant plants are hydrophytic, the wetland verification of the dominant plants are hydrophytic, the wetland verification of the dominant plants are hydrophytic, the wetland verification of the dominant plants are hydrophytic, the wetland verification of the dominant plants are hydrophytic, the wetland verification of the dominant plants are hydrophytic, the wetland verification of the dominant plants are hydrophytic, the wetland verification of the dominant plants are hydrophytic, the wetland verification of the dominant plants are hydrophytic, the wetland verification of the dominant plants are hydrophytic, the wetland verification of the dominant plants are hydrophytic, the wetland verification of the dominant plants are hydrophytic, the wetland verification of the dominant plants are hydrophytic, the wetland verification of the dominant plants are hydrophytic, the wetland verification of the dominant plants are hydrophytic, the wetland verification of the dominant plants are hydrophytic, the wetland verification of the dominant plants are hydrophytic, the wetland verification of the dominant plants are hydrophytic, the wetland verification of the dominant plants are hydrophytic, the wetland verification of the dominant plants are hydrophytic.	FAC
Stream, Lake, or Tide Gage Aerial Photograph Other	
Stream, Lake, or Tide Gage Primar Aerial Photograph Other	
Stream, Lake, or Tide Gage Primar Aerial Photograph Other	drology Indicators (Describe in Remarks):
Other	Indicators:
	Inundated
X No Recorded Data Available	Saturated in Upper 12 inches
	Saturated in Upper 18 inches
	Water Marks
	Drift Lines
	Sediment Deposits
ld Observations:	Drainage Patterns in Wetlands
Denth of Surface Water: None None	indicators /2 or more enquired):
Depth to Free Water in Pit: 16 (in.)	iry Indicators (2 or more required):
Depth to Saturated Soil: 5 (in.)	
	Water-Stained Leaves
	Water-Stained Leaves Local Soil Survey Data
emarks (As relevant, describe recent precipitation, hydrologic modifications, the presence of saturated soil within 12 inches of the surface in July indicates to	Local Soil Survey Data Other (Explain in Remarks)

					Weti	end:	37a
	Site: Seattle Ta	acoma Airport - Master I	Plan Update	Date:	7/1/98	<u>. </u>	
SOILS Soil Su	S Irvey Data:						
Map Un	nit Name: <u>Unm</u>	apped			Drainage Class:		
					Field Observations Co	nfirm Maj	pped Type?
Taxono	my (Subgroup):				Yes No	NA	X
Profile i	Description:					_	
Depth (Inches)	Horizon Designation	Matrix Color (Munsell Moist)	Mottle Color (Munsell Mo	ist)	Mottle Abundance/Contrast	_	ture, Concretions, cospheres, etc.
0-12	<u> </u>	10YR 2/2	-		-	Clay	Loam
2-17+	B	10YR 3/1	10YR 2/3		Common, Medium, Distinct	Ciav	Loam
lydric S	Soil Indicators:						
	Histosol			Listed	on Local Hydric Soils Li	st	
	Histic Epipedon		_		on State Hydric Soils Li		
<u> </u>	Sulfidic Odor		_	Listed	on National Hydric Soils	List	
		Moisture Regime	-	X Aquic	Moisture Regime		
	Reducing Condit		_	Organ	ic Streaking in Sandy Sc	ils	
	Gleyed or Low-C		_	X Mottle	_		
		ntent in Surface Layer	_	Other	(Explain in Remarks)		
		disturbances, local vari					
oii coloi	and other hydn	ic soil indicators meet th	e hydric soil crit	епа.			
VETI 4	AND DETERI	MINATION					
	ytic Vegetation		- V N				
	ync vegetation oils Present?				Is this Sampli	ng Point	Within a Wetiano
-	Hydrology Pres	Ye sent? Ye			Yes	X No	o

The presence of all three parameters indicate this area is a wetland. Delineation was based on sharp changes in soil color and hydrology as it corresponds to changes in topography.



Data Plot #: 37a-B1

· ·	TI AND	DETE	DMIN/	TION Wetland: 37a L	Jpland Pi
/Atautitian frame: 40				Delineation Manual)	
(Modified from: 13	901 66)E MAGN	allus i	Jenneation Manual)	
Project/Site: Seattle Tacoma Airport - Master Plan Up	pdate		Date:	7/1/98	
Applicant/Owner: Port of Seattle	_		County:	King	
Investigator: William Kleindl		<u> </u>	State:	WA	
1987 Method 1989 Method				Community ID: Upland	
Do Normal Circumstances exist on the site?	Yes	x	No	Field Plot ID: 17-b	
s the site significantly disturbed (Atypical Situation)?	Yes		No	×	
s the area a potential Problem Area?	Yes		No -	<u>×</u>	
Remarks (Explain sample location, disturbances, pro	blem are	======================================	-	·····	
Ipland comparison plot established in a disturbed past)		
, , , , , , , , , , , , , , , , , , , ,					
/EGETATION / Dominant species are checked)				
Plant Species	•	% Cover	Stratu	m Indicator	
Agrostis capillaris (tenuis)		100	Herb	FAC	
2 Festuca rubra		15	Herb	FAC+	
except FAC-). Include species noted (*) as showing		100			
norphological adaptations to wetlands. "T" indicates tr temarks (Describe disturbances, relevant local varial	tions, se		fects, et		
norphological adaptations to wetlands. "T indicates transmission (Describe disturbances, relevant local variations of the dominant plants are hydronical variations."	tions, se		fects, et		
norphological adaptations to wetlands. "T indicates to temarks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydrotyphology	tions, se	the wetia	fects, etc	tation criteria is met.	
norphological adaptations to wetlands. Trindicates to semarks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydrophydrophyddiaeth (Describe in Remarks):	tions, se	the wetta	fects, etcand vege	drology Indicators (Describe in Ren	narks):
norphological adaptations to wetlands. T indicates to temarks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydrograms by the dominant plants are hydrograms. YDROLOGY	tions, se	the wetta	fects, etcand vege	drology Indicators (Describe in Ren	narks):
norphological adaptations to wetlands. T indicates to temarks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydrograph (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	tions, se	the wetta	fects, etcand vege	drology Indicators (Describe in Ren Indicators:	narks):
norphological adaptations to wetlands. T indicates to temarks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydrograph other.	tions, se	the wetta	fects, etcand vege	drology Indicators (Describe in Ren Indicators: Inundated Saturated in Upper 12 inches	narks):
norphological adaptations to wetlands. T indicates to temarks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydrograph. YDROLOGY	tions, se	the wetta	fects, etcand vege	drology Indicators (Describe in Ren Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches	narks):
norphological adaptations to wetlands. T indicates to temarks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydrograph other.	tions, se	the wetta	fects, etcand vege	drology Indicators (Describe in Ren Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks	narks):
horphological adaptations to wetlands. T indicates to temarks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydrogeneous distributions of the dominant plants are hydrogeneous distributions. YPROLOGY	tions, se	the wetta	fects, etcand vege	drology Indicators (Describe in Ren Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines	narks):
norphological adaptations to wetlands. "T indicates to Remarks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydrody Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	tions, se	the wetta	fects, etcand vege	drology Indicators (Describe in Ren Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks	narks):
norphological adaptations to wetlands. T indicates to Remarks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydrody Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available	tions, se	the wetta	fects, etcand vege	drology Indicators (Describe in Ren Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits	narks):
norphological adaptations to wetlands. T indicates to temarks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydrograph (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available seld Observations: Depth of Surface Water: None (in.)	tions, se	Wet	fects, etcand vege	drology Indicators (Describe in Ren Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits	narks):
incorphological adaptations to wetlands. T indicates to temarks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydrograph of the dominant plants are hydrograph. Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available eld Observations: Depth of Surface Water: Depth to Free Water in Pit: >13 (in.)	tions, se	Wet	fects, etcand vege	drology Indicators (Describe in Ren Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands ry Indicators (2 or more required):	
norphological adaptations to wetlands. T indicates to Remarks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydrody the second	tions, se	Wet	fects, etcand vege	drology Indicators (Describe in Ren Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands	
norphological adaptations to wetlands. T indicates to Remarks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydrody Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available ield Observations: Depth of Surface Water: None (in.) Depth to Free Water in Pit: >13 (in.)	tions, se	Wet	fects, etcand vege	drology Indicators (Describe in Ren Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands ry Indicators (2 or more required): Oxidized Root Channels in Upper	
norphological adaptations to wetlands. T indicates to Remarks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydrody Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available ield Observations: Depth of Surface Water: None (in.) Depth to Free Water in Pit: >13 (in.)	tions, se	Wet	fects, etcand vege	drology Indicators (Describe in Ren Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands ry Indicators (2 or more required): Oxidized Root Channels in Upper Water-Stained Leaves Local Soil Survey Data	
norphological adaptations to wetlands. T indicates to Remarks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydrody Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available ield Observations: Depth of Surface Water: None (in.) Depth to Free Water in Pit: >13 (in.)	tions, se rophytic,	Wet I	fects, etcand vege	drology Indicators (Describe in Ren Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands ry Indicators (2 or more required): Oxidized Root Channels in Upper Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)	

Λ							Data P	lot#:	37a-B1
L							Wetia	nd:	37a Upland Plo
Project/Site: Seattl	e Tacoma Airport - N	Master Pla	n Upda	ate	Date:	7/1/98			
SOILS									
soil Survey Data:									
nap Unit Name: L	Inmapped					Drainage Cl	ass:		
						Field Obser	rations Conf	firm Map	ped Type?
axonomy (Subgrou	ι ρ):					Yes	No	NA	x
rofile Description	•							-	
epth Honzon	Matrix Color tion (Munsell Moist)			Color sell Moist)		Mottle Abundance/	Contrast		ure, Concretions, ospheres, etc.
13+ Fill	10YR 3/3		-		<u> </u>	•		Cobb	ly loam
Reducing Co Gleyed or Lo High Organio	don vic Moisture Regime enditions w-Chroma Colors c Content in Surface	Layer			Listed Listed Aquic Organ Mottle	on Local Hyd on State Hyd on National I Moisture Reg ic Streaking if s (Explain in Re	ric Soils Lisi lydric Soils I ime n Sandy Soil	t List	
	soil disturbances, lo nted digging below 1				f hydric soil	are present.			
ETLAND DET	ERMINATION								-
drophytic Vegeta	tion Present?	Yes	×	No		is th	is Samplin	a Point	Within a Wetland
dric Soils Present		Yes		No	×				
atland Hydrology i	Present?	V		• •			Yes	No	_X

Wetland Hydrology Present?

Wetland vegetation is present, however wetland hydrology and hydrosoils are not present. The vegetation in this area is a disturbed pasture.



WETLAND DE (Modified from: 1987 COE W Project/Site: Seattle Tacoma Airport - Master Plan Update Applicant/Owner: Port of Seattle	/etiands		. •				_
Project/Site: Seattle Tacoma Airport - Master Plan Update			eation I	/leursN			
				··········			
Applicant/Owner: Port of Seattle	Date:	10/16	/9 8				
	County		<u> </u>				-
Investigator: Louther and Gnalou	State:	WA				. <u>.</u>	
✓ 1987 Method			Com	munity ID:	Upla	and	
Do Normal Circumstances exist on the site? Yes X	No		Field	Plot ID:	66-B		
Is the site significantly disturbed (Atypical Situation)? Yes	No	<u> </u>					
is the area a potential Problem Area? Yes	No	<u> </u>					
Remarks (Explain sample location, disturbances, problem areas): Upland plot established on Parcel 303.							
VEGETATION (✓Dominant species are checked)							
Plant Species % Co	over Strat		Indicator				
1 Equisetum arvense T	Herb		FAC	-			
			FACW				
Phalans arundinacea Rubus discolor Percent of Dominant Species that are OBL. FACW, or FAC except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates trace. Remarks (Describe disturbances, relevant local variations, seasons.	Snrul	etc.):	FACU	-			
Phalans arundinacea Percent of Dominant Species that are OBL, FACW, or FAC except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates trace. Remarks (Describe disturbances, relevant local variations, seasonal file wetland vegetation criteria are not met since only 50% dominant	Snrul	etc.):	FACU	-			
Phalans arundinacea Rubus discolor Percent of Dominant Species that are OBL. FACW, or FAC except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates trace. Remarks (Describe disturbances, relevant local variations, seasons the wetland vegetation criteria are not met since only 50% dominant HYDROLOGY	50 snrui	etc.):	PACU	dors (De	scribe (in Remarks):	
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Phalans arundinacea 98 Rubus discolor 30 Percent of Dominant Species that are OBL. FACW, or FAC except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates trace. Remarks (Describe disturbances, relevant local variations, seasons for wetland vegetation criteria are not met since only 50% dominant HYDROLOGY Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	50 solution of the state of the	etc.): hydrop hydrology Indica	phytic. Injury indicated saturated is saturated is saturated in satur	n Upper 1 n Upper 1	2 inche	es	
Phalans arundinacea Rubus discolor Percent of Dominant Species that are OBL, FACW, or FAC except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates trace. Remarks (Describe disturbances, relevant local variations, seasons the wetland vegetation criteria are not met since only 50% dominant HYDROLOGY Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	50 solution of the state of the	etc.): hydrop hydrolo y Indica	phytic. gy Indicators: Inundated Saturated i	n Upper 1 n Upper 1	2 inche	es	
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Phalans arundinacea 98 Way 3 Rubus discolor 30 Percent of Dominant Species that are OBL, FACW, or FAC except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T" indicates trace. Remarks (Describe disturbances, relevant local variations, seasons the wetland vegetation criteria are not met since only 50% dominant HYDROLOGY Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	50 si effects, et plants are Wetland H	etc.): e hydrop lydrolo y Indica	phytic. Inundated Saturated i Saturated i Water Mari Drift Lines Sediment [Drainage F	in Upper 1 in Upper 1 ks Deposits Patterns in	2 inche 8 inche Wetlar	es es nds	
Phalans arundinacea 98 Rubus discolor 30 Percent of Dominant Species that are OBL, FACW, or FAC except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T" indicates trace. Remarks (Describe disturbances, relevant local variations, seasons the wetland vegetation criteria are not met since only 50% dominant HYDROLOGY Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	50 si effects, et plants are Wetland H	etc.): e hydrop lydrolo y Indica	phytic. gy Indicated saturated is Saturated if Water Mari Drift Lines Sediment [Drainage Fidicators (2)]	in Upper 1 in Upper 1 ks Deposits Patterns in or more r	2 inche 8 inche Wetlar required	es es nds d):	
Phalans arundinacea 98 2 Phalans arundinacea 98 Rubus discolor 30 Percent of Dominant Species that are OBL. FACW, or FAC except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T" indicates trace. Remarks (Describe disturbances, relevant local variations, seasons for wetland vegetation criteria are not met since only 50% dominant HYDROLOGY Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available ield Observations: Depth of Surface Water: 0 (in.)	50 si effects, et plants are Wetland H	etc.): e hydrop lydrolo y Indica	phytic. Inundated Saturated is Saturated if Water Mari Drift Lines Sediment [Drainage Full Control of the Cont	in Upper 1 in Upper 1 ks Deposits Patterns in or more r	2 inche 8 inche Wetlar required	es es nds	nes
Phalans arundinacea 98 Way 3 Rubus discolor 30 Percent of Dominant Species that are OBL, FACW, or FAC except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T" indicates trace. Remarks (Describe disturbances, relevant local variations, seasons the wetland vegetation criteria are not met since only 50% dominant HYDROLOGY Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Field Observations: Depth of Surface Water: 0 (in.) Depth to Free Water in Pit: >18 (in.)	50 si effects, et plants are Wetland H	etc.): e hydrop lydrolo y Indica i dary In	phytic. gy Indicated saturated is Saturated if Water Mari Drift Lines Sediment [Drainage Fidicators (2)]	in Upper 1 in Upper 1 ks Deposits Patterns in or more r coot Channed Leave	2 inche 8 inche Wetlar equired nels in	es es nds d):	nes

						Data Piot	#:	37a-B2
						Wetland:	:	37a Upland Plo
_						`` .		
Project/Sit	e: Seattle Ta	acoma Airport - Master P	ian Update	Date:	10/16/98			
SOILS								
Soil Surv	ey Data:							
Map Unit I	Name: Unm	apped			Drainage Clas	S :		
					Field Observa	tions Confirm	Mapp	ped Type?
Taxonomy	(Subgroup):				Yes I	No	NA	x
	scription:						,	
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)		Mottle Abundance/Co			re, Concretions,
0-13	A	10YR 3/2	-		Abundance/Co	muasi	Loam	spheres, etc.
>13	В	10YR 3/2	-					clay loam
tradicio Oct			=					0.07 100117
	il Indicators: stosol					.		
	stic Epipedon			_	on Local Hydric on State Hydric			
	lfidic Odor				on National Hy			
Pro	obable Aquic	Moisture Regime			Moisture Regim		•	
Re	ducing Condi	tions			ic Streaking in S			
Gle	eyed or Low-C	Chroma Colors		Mottle:		,		
Hig	h Organic Co	intent in Surface Layer		Other i	(Explain in Rem	arks)		
Remarks (disturbances, local varia	tions, etc.):					

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): This area is an upland since all wetland parameters are absent.

Yes ____ No

Hydrophytic Vegetation Present?

Hydric Soils Present?

Wetland Hydrology Present?

is this Sampling Point Within a Wetland?

Yes No X



_	Modified from: 19	187 CC	E West	ande l	ATION		nual)		
	•		E MAGN	anus i		ation Ma	iluai)		
Project/Site: Seattle Tacoma	Airport - Master Plan Up	odate		Date:	7/9/98				
pplicant/Owner: Port of Se	attle		 -	County:					
vestigator: William Kleindi				State:	WA				
1987 Method 🔲 1989 I	Method					Commun	nity ID: _f	PFO/PSS	
o Normal Circumstances exis	t on the site?	Yes	<u>X</u>	No .		Field Plo	ot ID: 23/	/24-A	
the site significantly disturbed	d (Atypical Situation)?	Yes		No .	X				
the area a potential Problem	Area?	Yes		No	<u> </u>				
emarks (Explain sample loca	ation, disturbances, prot	biem are	as):						
Plant Species	nt species are checked))	% Cover	Stratu		idicator			
1 Equisetum telmateia			85	Herb		ACW			
2 Rubus discolor 3 Salix sitchensis			50	Shrub Shrub		ACW			
						AC VV			
Alnus rubra ercent of Dominant Species except FAC-). Include species orphological adaptations to we	noted (*) as showing stlands. "T" indicates tra	ace.	50 <u>75</u>	Tree	F	AC			
Alnus rubra ercent of Dominant Species except FAC-). Include species orphological adaptations to we emarks (Describe disturbance	noted (*) as showing etlands. "T" indicates tra es, relevant local variati	ace. ions, sea	75 75 asonal eff	Tree	F/ C.):		ıt.		
Alnus rubra ercent of Dominant Species except FAC-). Include species orphological adaptations to we emarks (Describe disturbanc nce greater than 50% of the di	noted (*) as showing etlands. "T" indicates tra es, relevant local variati	ace. ions, sea	75 75 asonal eff	Tree	F/ C.):		ıt.		
4 Alnus rubra ercent of Dominant Species except FAC-). Include species prophological adaptations to we emarks (Describe disturbance ance greater than 50% of the de	noted (*) as showing etlands. "T" indicates tra- es, relevant local variati ominant plants are hydro-	ace. ions, sea	75 75 asonal eff	fects, et	c.):			be in Rem	arks):
Alnus rubra ercent of Dominant Species except FAC-). Include species prophological adaptations to we emarks (Describe disturbance fince greater than 50% of the dis-	noted (*) as showing stlands. "T" indicates traces, relevant local variationminant plants are hydrotemarks):	ace. ions, sea	75 asonal eff the wetla	fects, et	c.): etation c	criteria is me		be in Rem	arks):
Alnus rubra ercent of Dominant Species except FAC-). Include species prophological adaptations to we emarks. (Describe disturbance ance greater than 50% of the disturbance except than 50% of	noted (*) as showing stlands. "T" indicates traces, relevant local variationminant plants are hydrotemarks): Tide Gage	ace. ions, sea	75 asonal eff the wetla	fects, et	c.): etation c	criteria is me		be in Rem	arks):
Alnus rubra ercent of Dominant Species except FAC-). Include species prophological adaptations to we emarks (Describe disturbance ance greater than 50% of the de YDROLOGY ecorded Data (Describe in R Stream, Lake, or Aerial Photograph Other	noted (*) as showing stands. *T* indicates traces, relevant local variationminant plants are hydrotechnologies. Remarks): Tide Gage	ace. ions, sea	75 asonal eff the wetla	fects, et	c.): etation c etation c Indicate	y Indicators ors: undated aturated in U	Descri	nches	arks):
Alnus rubra ercent of Dominant Species except FAC-). Include species prophological adaptations to we emarks (Describe disturbance ance greater than 50% of the di YDROLOGY ecorded Data (Describe in R Stream, Lake, or Aerial Photograpi	noted (*) as showing stands. *T* indicates traces, relevant local variationminant plants are hydrotechnologies. Remarks): Tide Gage	ace. ions, sea	75 asonal eff the wetla	fects, etcand vegendand Hy	c.): etation c etation c Indicate In	y Indicators ors: undated aturated in U	Descri	nches	arks):
Alnus rubra ercent of Dominant Species except FAC-). Include species prophological adaptations to we emarks (Describe disturbance ance greater than 50% of the de YDROLOGY ecorded Data (Describe in R Stream, Lake, or Aerial Photograph Other	noted (*) as showing stands. *T* indicates traces, relevant local variationminant plants are hydrotechnologies. Remarks): Tide Gage	ace. ions, sea	75 asonal eff the wetla	fects, etcand vegendand Hy	c.): etation c etation c Inicate Sa W	y Indicators ors: undated aturated in U aturated in U ater Marks	Descri	nches	arks):
Alnus rubra ercent of Dominant Species except FAC-). Include species prophological adaptations to we emarks (Describe disturbance ance greater than 50% of the de YDROLOGY ecorded Data (Describe in R Stream, Lake, or Aerial Photograph Other	noted (*) as showing stands. *T* indicates traces, relevant local variationminant plants are hydrotechnologies. Remarks): Tide Gage	ace. ions, sea	75 asonal eff the wetla	fects, etcand vegendand Hy	c.): etation c etation c Inicate Sa W Dr	y Indicators ors: undated aturated in U	Descri	nches	arks):
4 Alnus rubra ercent of Dominant Species except FAC-). Include species orphological adaptations to we emarks (Describe disturbance nice greater than 50% of the di YDROLOGY ecorded Data (Describe in R Stream, Lake, or Aenal Photograph Other	noted (*) as showing stands. *T* indicates traces, relevant local variationminant plants are hydrotechnologies. Remarks): Tide Gage	ace. ions, sea	75 asonal eff the wetla	fects, etcand vegendand Hy	c.): etation c etation c Ini	y Indicators ors: undated aturated in U aturated in U ater Marks rift Lines ediment Dep	Descri	nches nches	arks):
4 Alnus rubra ercent of Dominant Species except FAC-). Include species orphological adaptations to we emarks. (Describe disturbance ance greater than 50% of the di YDROLOGY ecorded Data. (Describe in F Stream, Lake, or Aenal Photograph Other X No Recorded Data eld Observations:	noted (*) as showing stands. "T" indicates traces, relevant local variationminant plants are hydrotemarks): Tide Gage h a Available	ace. ions, sea	75 asonal eff the wetla	fects, etcand vegendand Hy	c.): etation c etation c Ini	y Indicators ors: undated aturated in U aturated in U ater Marks	Descri	nches nches	arks):
4 Alnus rubra ercent of Dominant Species except FAC-). Include species porphological adaptations to we emarks. (Describe disturbance ance greater than 50% of the di YDROLOGY ecorded Data. (Describe in File Stream, Lake, or Aenal Photograph Other X No Recorded Data eld Observations: Depth of Surface Water:	noted (*) as showing stands. "T" indicates traces, relevant local variationminant plants are hydrotemarks): Tide Gage a Available None (in.)	ace. ions, sea	75 asonal eff	fects, etcand vege	c.): etation c rdrolog Indicate In: Sa Sa W Dr Se Dr	y Indicators ors: undated aturated in U aturated in U ater Marks rift Lines ediment Dep	Descri	nches nches etlands	arks):
Alnus rubra ercent of Dominant Species except FAC-). Include speci	noted (*) as showing stands. "T" indicates traces, relevant local variationminant plants are hydrotemarks): Tide Gage in None None	ace. ions, sea	75 asonal eff	fects, etcand vege	c.): rdrolog Indicate In: Sa W Dr Dr Dr ary India	y Indicators ors: undated aturated in U aturated in U ater Marks rift Lines ediment Dep rainage Patte cators (2 or	Descri	nches nches etlands uired):	
ercent of Dominant Species except FAC-). Include species orphological adaptations to we emarks (Describe disturbancince greater than 50% of the disturbancince greater than 50	noted (*) as showing stands. "T" indicates traces, relevant local variationminant plants are hydrotemarks): Tide Gage a Available None (in.)	ace. ions, sea	75 asonal eff	fects, etcand vege	c.): etation c etation c Indicate In Sa Sa W Dr Se Dr ary Indi	y Indicators ors: undated aturated in U aturated in U ater Marks rift Lines ediment Dep	Descripper 12 in posits ems in We more required than the control of the control o	nches nches etlands uired):	
ercent of Dominant Species except FAC-). Include species orphological adaptations to we emarks (Describe disturbance ince greater than 50% of the disturbance dist	noted (*) as showing stands. "T" indicates traces, relevant local variationminant plants are hydrotemarks): Tide Gage in None None	ace. ions, sea	75 asonal eff	fects, etcand vege	c.): etation c etation c Indicate Indicate Sa W Dr Se Dr ary Indi	y Indicators ors: undated aturated in U later Marks rift Lines ediment Dep rainage Patte cators (2 or	Opper 12 in Upper 18 in Upper 18 in Westerns in Westerns Channels Leaves	nches nches etlands uired):	

					Data	Plot #:	37e-A
					Weti	and:	37e
			·				
Project/S	ite: Seattle T	acoma Airport - Maste	er Plan Update	Da	te: 7/9/98		
SOILS							
Soil Sur	vey Data:						
Map Uni	t Name: Unm	apped			Drainage Class:		
					Field Observations Co	onfirm Map	ped Type?
Taxonom	ny (Subgroup):				Yes No	NA	x
Profile D	escription:						
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Co (Munsell M	_	Mottle Abundance/Contrast		ure, Concretions, ospheres, etc.
0-10	Α	10YR 2/1	•		-	Loan	
10-18	В	10YR 2/1	10YR 3/4		Many, Medium Distinct	Loam	
X P X R G H Remarks	educing Condi leyed or Low-C igh Organic Co (Describe soil	Moisture Regime tions	ariations, etc.):	Liss Liss Aqu Org X Most	ted on Local Hydric Soils L ted on State Hydric Soils L ted on National Hydric Soils tic Moisture Regime tanic Streaking in Sandy So ttles er (Explain in Remarks)	ist s List	
ydrophy	ND DETER tic Vegetation ils Present?	Present?	Yes <u>X</u> N			ing Point X No	Within a Wetland

AR 047709



, *	WE?	LAND	DETE	RMINA	TION		Wetland	1:	37e/f Uplan
	(Modified from: 19					ation f	Manual	1	
	(modified from: 15	,0, 00	L WEL			41.0111	110111001	,	
roject/Site: Seattle Tacoma	Airport - Master Plan Up	date		Date:	7/9/98				
pplicant/Owner: Port of So	eattle			County:	King				
vestigator: William Kieindi				State:	WA				
1987 Method 1989	Method					Comi	nunity ID): Upi	and
o Normal Circumstances exis	st on the site?	Yes	<u> </u>	No _		Field	Plot ID:	23/19-	-B
the site significantly disturbe	d (Atypical Situation)?	Yes		No	Х				
the area a potential Problem	Area?	Yes		No -	X				
emarks (Explain sample loc	ation, disturbances, prob		as):	_					
ta plot is located in mowed la									
CETATION									
GETATION (Domina Plant Species	int species are checked)	ı	% Cover	Stratun	s les	licator			
			10						
1 Agrostis gigantea 2 Holcus ianatus			60	Herb Herb	— <u>FA</u>	<u>cw</u>	-		
3 Hypochaens radicata			5	Herb	— <u>12</u>		-		
			10	Herb	NL NL		-		
4 Moss spp							•		
5 Ranunculus repens recent of Dominant Species (cept FAC-). Include species riphological adaptations to we marks (Describe disturbance	noted (*) as showing etlands. "T" indicates traces traces, relevant local variations.	or FAC		fects, etc	.):	<u>cw</u>		540	
Ranunculus repens recent of Dominant Species cept FAC-). Include species rphological adaptations to we marks. (Describe disturbanc cording to the Washington St	noted (*) as showing etlands. "T" indicates traces, relevant local variation to the control of t	or FAC ace. ons, sea (Page 68	100 isonal ef	fects, etc	.):		inated by	y FAC p	plants but lack
Ranunculus repens recent of Dominant Species cept FAC-). Include species rphological adaptations to we marks (Describe disturbanc cording to the Washington St frology and hydric soils do no	noted (*) as showing etlands. "T" indicates traces, relevant local variation to the control of t	or FAC ace. ons, sea (Page 68	100 isonal ef	fects, etc	.):		inated by	y FAC p	plants but lack
Ranunculus repens recent of Dominant Species (cept FAC-). Include species orphological adaptations to we marks (Describe disturbanc cording to the Washington St drology and hydric soils do no	inoted (*) as showing etlands. "T" indicates traces, relevant local variation to the control of	or FAC ace. ons, sea (Page 68	100 isonal ef 3. Step 1 criteria	ffects, etc	.): as that	are don	-		
Ranunculus repens recent of Dominant Species cept FAC-). Include species rephological adaptations to we marks (Describe disturbanc cording to the Washington St trology and hydric soils do no CDROLOGY corded Data (Describe in F	inoted (*) as showing etlands. "T" indicates traces, relevant local variation tate Delineation Manual (oit satisfy the wetland veging Remarks):	or FAC ace. ons, sea (Page 68	100 isonal ef 3, Step 1 criteria.	ffects, etc 3 (a)) are	.): as that trology	are dom	-		olants but lack
Ranunculus repens recent of Dominant Species (cept FAC-). Include species (rphological adaptations to we marks (Describe disturbance cording to the Washington St trology and hydric soils do no	etlands. "T' indicates tra ces, relevant local variati- tate Delineation Manual (obt satisfy the wetland vegon Remarks):	or FAC ace. ons, sea (Page 68	100 isonal ef 3, Step 1 criteria.	ffects, etc	.): as that trology	are dom	-		
Ranunculus repens recent of Dominant Species recent FAC-). Include species rephological adaptations to we marks (Describe disturbanc cording to the Washington St trology and hydric soils do no TOROLOGY Stream, Lake, or	etlands. "T' indicates tra ces, relevant local variati- tate Delineation Manual (obt satisfy the wetland vegon Remarks):	or FAC ace. ons, sea (Page 68	100 isonal ef 3, Step 1 criteria.	ffects, etc 3 (a)) are	.): as that trology ndicator inu	are dom	ors (De	escribe i	n Remarks):
Ranunculus repens recent of Dominant Species cept FAC-). Include species rephological adaptations to we marks (Describe disturbanc cording to the Washington St trology and hydric soils do no 'DROLOGY corded Data (Describe in F Stream, Lake, or Aerial Photograp Other	etlands. "T indicates traces, relevant local variation to the control of the cont	or FAC ace. ons, sea (Page 68	100 isonal ef 3, Step 1 criteria.	ffects, etc 3 (a)) are	as that irology ndicator inu Sat	Indicat s: indated urated ii	ors (De	escribe i	n Remarks):
Ranunculus repens recent of Dominant Species recent FAC-). Include species rephological adaptations to we marks (Describe disturbanc cording to the Washington St trology and hydric soils do no 'DROLOGY Corded Data (Describe in F Stream, Lake, or Aerial Photograp Other	etlands. "T indicates traces, relevant local variation to the control of the cont	or FAC ace. ons, sea (Page 68	100 isonal ef 3, Step 1 criteria.	ffects, etc 3 (a)) are	irology ndicator Sat Sat	Indicat s: indated urated ii	ors (De	escribe i	n Remarks):
Ranunculus repens recent of Dominant Species recent FAC-). Include species rephological adaptations to we marks (Describe disturbanc cording to the Washington St drology and hydric soils do no /DROLOGY Corded Data (Describe in F Stream, Lake, or Aerial Photograp Other	etlands. "T indicates traces, relevant local variation to the control of the cont	or FAC ace. ons, sea (Page 68	100 isonal ef 3, Step 1 criteria.	ffects, etc 3 (a)) are	irology ndicator Inui Sat Sat Wa	Indicat s: Indated urated in	ors (De	escribe i	n Remarks):
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Ranunculus repens ercent of Dominant Species except FAC-). Include species prophological adaptations to we emarks (Describe disturbance cording to the Washington St drology and hydric soils do no YDROLOGY corded Data (Describe in F Stream, Lake, or Aerial Photograp Other No Recorded Data	etlands. "T indicates traces, relevant local variation to the control of the cont	or FAC ace. ons, sea (Page 68	100 isonal ef 3, Step 1 criteria.	ffects, etc 3 (a)) are	irology ndicator Inu Sat Wa Drif	Indicat s: ndated urated ii urated ii ter Mark t Lines liment D	ors (De n Upper 1 n Upper 1	escribe i 12 inche 18 inche	n Remarks): es
Ranunculus repens recent of Dominant Species cept FAC-). Include species rephological adaptations to we marks (Describe disturbanc cording to the Washington St drology and hydne soils do no /DROLOGY corded Data (Describe in F Stream, Lake, or Aerial Photograp Other X No Recorded Data d Observations:	inoted (*) as showing etlands. "T" indicates traces, relevant local variation to the content of	or FAC ace. ons, sea (Page 68	100 issonal ef 3. Step 1 conteria.	ffects, etc. 3 (a)) are	irology ndicator Inu Sat Sat Wa Drif Sec Dra	Indicat s: Indated urated ii urated ii ter Mark t Lines liment D	n Upper 1 n Upper 1 s reposits	escribe i 12 inche 18 inche	n Remarks): es es
Ranunculus repens recent of Dominant Species cept FAC-). Include species rephological adaptations to we marks (Describe disturbanc cording to the Washington St trology and hydric soils do no /DROLOGY corded Data (Describe in F Stream, Lake, or Aerial Photograp Other X No Recorded Dat d Observations: Depth of Surface Water:	etlands. "T indicates traces, relevant local variation to the control of the cont	or FAC ace. ons, sea (Page 68	100 issonal ef 3. Step 1 conteria.	ffects, etc 3 (a)) are	irology ndicator Sat Wa Drif Sec Dra	Indicat s: ndated urated in ter Mark t Lines liment D inage Pi	n Upper 1 n Upper 1 s eposits attems in	escribe i 12 inche 18 inche i Wetlar requirec	n Remarks): es es nds
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Ranunculus repens recent of Dominant Species recept FAC-). Include species rephological adaptations to we remarks (Describe disturbance cording to the Washington St drology and hydne soils do no PDROLOGY corded Data (Describe in F Stream, Lake, or Aerial Photograp Other No Recorded Data Id Observations: Depth of Surface Water: Depth to Free Water in Pit:	etiands. Thindicates traces, relevant local variations at the Delineation Manual (at satisfy the wetland vegical Remarks): Tide Gage Thindicates traces, relevant local variation Manual (at satisfy the wetland vegical relevant	or FAC ace. ons, sea (Page 68	100 issonal ef 3. Step 1 conteria.	ffects, etc. 3 (a)) are	irology indicator Sat Sat Drif Sec Dra y Indica Oxic	Indications: Indic	n Upper 1 n Upper 1 s reposits attems in or more r	12 inche 18 inche 18 wetlar required nels in les	n Remarks): es es nds
5 Ranunculus repens ercent of Dominant Species except FAC-). Include species prophological adaptations to we emarks (Describe disturbance excepting to the Washington St excepting to the	etiands. Thindicates traces, relevant local variations at the Delineation Manual (at satisfy the wetland vegical Remarks): Tide Gage Thindicates traces, relevant local variation Manual (at satisfy the wetland vegical relevant	or FAC ace. ons, sea (Page 68	100 issonal ef 3. Step 1 conteria.	ffects, etc. 3 (a)) are	irology indicator Sat Sat Drif Sec Dra y Indica Oxic	Indications: Indic	n Upper 1 n Upper 1 s eposits attems in or more r	escribe i 12 inche 18 inche 1 Wetlar required nels in les ata	n Remarks): es es nds

						Data Plot #	: 37e/f-B
L						Wetland:	37e/f Upland Plo
_				-			
Project/S	Site: Seattle T	acoma Airport - Mast	er Plan Update	Date	7/9/98		
SOILS Soil Su	rvey Data:						
Map Un	it Name: <u>Unrr</u>	napped			Drainage Class	ii	
					Field Observati	ons Confirm N	Mapped Type?
Taxonor	my (Subgroup):				Yes N	o N	IA <u>X</u>
Profile [Description:						
Depth inches)	Horizon Designation	Matrix Color (Munsell Moist)	Mottle Color (Munsell Mo		Mottle Abundance/Cor		exture, Concretions, hizospheres, etc.
0-6	Α	2.5Y 4/3	7.5YR 3/4		Few. Medium. Fain	t S	ilt loam
-18	В	5Y 5/3	5Y 5/6		Many, Coarse, Dist	inct S	ilt
tydric S	ioil Indicators:	:					
	Histosol			Listed	l on Local Hydric	Soits List	
	Histic Epipedon				on State Hydric		
	Sulfidic Odor			Listed	on National Hyd	nc Soils List	
F	Probable Aquic	Moisture Regime		Aquic	Moisture Regime	•	
	Reducing Condi			Orgar	ic Streaking in Si	andy Soils	
	Gleyed or Low-(Mottle			
		ontent in Surface Lay	-	Other	(Explain in Rema	irks)	
		disturbances, local v	rariations, etc.):				
Remarks		oil are present					
Remarks	(Describe soil	oil are present.	·				
Remarks No indica						-	
Remarks lo indica	tors of hydric s	MINATION	Yes No	×	Is this :	Sampling Po	int Within a Wetland?
Remarks No indica NETLA	ND DETER	MINATION	Yes No			Sampling Po	int Within a Wetland?

This area is an upland since all wetland parameters are absent.



			Wetland: 37f
WE	TLAND DETER	RMINATI	
(Modified from: 1	987 COE Wetia	ands De	lineation Manual)
roject/Site: Seattle Tacoma Airport - Master Plan U	pdate 1	Date: 7/9	n/ 9 8
pplicant/Owner: Port of Seattle			King
vestigator: William Kleindl		•	VA .
1987 Method 1989 Method		-	
	V V	N/=	Community ID: PFO/PSS
o Normal Circumstances exist on the site?	Yes X	No	Field Plot ID: 19-A
the site significantly disturbed (Atypical Situation)?	Yes	No X	
the area a potential Problem Area?	Yes	No X	_
ta Plot established on Parcel 306. Wetland located		ne south e	age of the parcel.
EGETATION (✓Dominant species are checked Plant Species) % Cover	Stratum	Indicator
1	40	Herb	OBL
Denanthe samentosa	35	Herb	OBL
		Shrub	FACU
	20		
	20 80	Shrub	FAC+
3 Rubus discolor		Shrub Tree	FAC+
Rubus discolor Rubus spectabilis Alnus rubra Salix fucida ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tri	80 40 40 , or FAC ace.	Tree Tree	
Rubus discolor Rubus spectabilis Ainus rubra Salix fucida recent of Dominant Species that are OBL, FACW, coept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates transmiss. (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydrogeneous properties."	80 40 40 , or FAC ace. 83 ace.	Tree Tree ects, etc.):	FACW+
Rubus discolor Rubus speciabilis Ainus rubra Salix fucida recent of Dominant Species that are OBL, FACW, scept FAC-), include species noted (*) as showing prophological adaptations to wetlands. "T" indicates to marks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydrophology."	or FAC ace. 83 ace. sions, seasonal efferophytic, the wetland	Tree Tree ects, etc.):	FAC FACW+ ion criteria is met.
Rubus discolor Rubus spectabilis Ainus rubra Salix lucida recent of Dominant Species that are OBL, FACW, coept FAC-). Include species noted (*) as showing imphological adaptations to wetlands. "T" indicates trimarks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydrograms (Describe in Remarks):	ace. sor seasonal efficiency by tic. the wetland wet.	Tree Tree cets, etc.): and vegetati	FAC FACW+ ion criteria is met. plogy Indicators (Describe in Remarks):
Rubus discolor Rubus spectabilis Ainus rubra Salix fucida recent of Dominant Species that are OBL, FACW, cept FAC-), include species noted (*) as showing imphological adaptations to wetlands. "T" indicates the marks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydrophology	ace. sor seasonal efficiency by tic. the wetland wet.	Tree Tree cets, etc.): and vegetative rimary India	FAC FACW+ ion criteria is met. lology Indicators (Describe in Remarks): locators:
Rubus discolor Rubus spectabilis Ainus rubra Salix lucida recent of Dominant Species that are OBL, FACW, coept FAC-). Include species noted (*) as showing imphological adaptations to wetlands. "T" indicates transitions (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydrocorded Data (Describe in Remarks): Stream, Lake, or Tide Gage	ace. sor seasonal efficiency by tic. the wetland wet.	Tree Tree cets, etc.): and vegetati	FAC FACW+ ion criteria is met. lology Indicators (Describe in Remarks): cators: Inundated
Rubus discolor Rubus spectabilis Ainus rubra Salix lucida recent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing riphological adaptations to wetlands. "T" indicates trimarks (Describe disturbances, relevant local variative greater than 50% of the dominant plants are hydrorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	ace. sor seasonal efficiency by tic. the wetland wet.	Tree Tree cects, etc.): and vegetative rimary India X	FAC FACW+ fon criteria is met. plogy Indicators (Describe in Remarks): locators: Inundated Saturated in Upper 12 inches
Rubus discolor Rubus spectabilis Ainus rubra Salix lucida recent of Dominant Species that are OBL, FACW, coept FAC-). Include species noted (*) as showing arphological adaptations to wetlands. "T" indicates transitions (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydrocorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	ace. sor seasonal efficiency by tic. the wetland wet.	Tree Tree cects, etc.): and vegetative rimary India X	FAC FACW+ ion criteria is met. lology Indicators (Describe in Remarks): cators: Inundated
Rubus discolor Rubus spectabilis Ainus rubra Salix lucida recent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing imphological adaptations to wetlands. "T" indicates trimarks (Describe disturbances, relevant local variative greater than 50% of the dominant plants are hydrocorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	ace. sor seasonal efficiency by tic. the wetland wet.	Tree Tree cects, etc.): and vegetative rimary India X	FAC FACW+ FACW+
Rubus discolor Rubus spectabilis Ainus rubra Salix lucida recent of Dominant Species that are OBL, FACW, coept FAC-). Include species noted (*) as showing arphological adaptations to wetlands. "T" indicates transitions (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydrocorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	ace. sor seasonal efficiency by tic. the wetland wet.	Tree Tree cects, etc.): and vegetative rimary India X	FAC FACW+ FACW+ FACW+ FACW+ FACW+ FACW+ FACW+ FACW+ FACW- FACW+ FACW- FACW-
Rubus discolor Rubus speciabilis Ainus rubra Salix lucida recent of Dominant Species that are OBL, FACW, ccept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates transfer greater than 50% of the dominant plants are hydrocorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available	ace. sor seasonal efficiency by tic. the wetland wet.	Tree Tree cects, etc.): and vegetative rimary India X	FAC FACW+ FACW+
Rubus discolor Rubus spectabilis Ainus rubra Salix lucida recent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing imphological adaptations to wetlands. "T" indicates trimarks (Describe disturbances, relevant local variative greater than 50% of the dominant plants are hydrograph of the Communication of the Gage Aerial Photograph Other X No Recorded Data Available	ace. sor FAC ace. ions, seasonal efferophytic, the wetlate Wett	Tree Tree cects, etc.): and vegetative rimary Indi X X	FAC FACW+ FACW+ FACW+ FACW+ FACW+ FACW+ FACW+ FACW+ FACW- FACW-
Rubus discolor Rubus spectabilis Ainus rubra Salix lucida recent of Dominant Species that are OBL, FACW, Include species noted (*) as showing imphological adaptations to wetlands. "T" indicates triangular formarks (Describe disturbances, relevant local variations are hydrocorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	ace. sor FAC ace. ions, seasonal efferophytic, the wetlate Wett	Tree Tree cects, etc.): and vegetative rimary Indi X X	FAC FACW+ FACW+ FACW+ FACW+ FACW+ FACW- FACW-
Rubus discolor Rubus spectabilis Ainus rubra Salix lucida recent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing riphological adaptations to wetlands. "T" indicates trimarks (Describe disturbances, relevant local variative greater than 50% of the dominant plants are hydropy corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available d Observations: Depth of Surface Water: Depth to Free Water in Pit: 0 (in.)	ace. sor FAC ace. ions, seasonal efferophytic, the wetlate Wett	Tree Tree cects, etc.): and vegetative rimary Indi X X	FAC FACW+ FACW+ FACW+ FACW+ FACW+ FACW- FACW-
Rubus discolor Rubus spectabilis Ainus rubra Salix lucida recent of Dominant Species that are OBL, FACW, coept FAC-). Include species noted (*) as showing imphological adaptations to wetlands. "T" indicates transitions (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydrocorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Id Observations: Depth of Surface Water: 4 (in.) Depth to Free Water in Pit: 0 (in.)	ace. sor FAC ace. ions, seasonal efferophytic, the wetlate Wett	Tree Tree cects, etc.): and vegetative rimary Indi X X	FAC FACW+ FACW+ FACW+ FACW+ FACW+ FACW+ FACW- FACW-
Rubus discolor Rubus spectabilis Ainus rubra Salix lucida recent of Dominant Species that are OBL, FACW, coept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates transfer greater than 50% of the dominant plants are hydrocorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Id Observations: Depth of Surface Water: Depth to Free Water in Pit: O (in.)	ace. sor FAC ace. ions, seasonal efferophytic, the wetlate Wett	Tree Tree cects, etc.): and vegetative rimary Indi X X	FAC FACW+ FACW+ FACW+ FACW+ FACW+ FACW- FACW-

						Data Pio Wetland	-	37f-A 37f
Denie at/Site	. Cawa Ta		- Ricc Lindote	Data	7/0/08			
rojecusile SOILS	Seame 12	coma Airport - Master	Plan Update	Date:	7/9/98	<u></u>		
Soil Surve	y Data:							
Map Unit N	ame: <u>U</u> nm	apped			Drainage Cla	ass:		
					Field Observ	rations Confirm	n Map	ped Type?
Taxonomy ((Subgroup):				Yes	No	NA	<u>_x</u>
Profile Des	cription:							
- r	Horizon Designation	Matrix Color (Munsell Moist)	Mottle Colo (Munsell M		Mottle Abundance/0	Contrast		ure, Concretions ospheres, etc.
-24	Oa	10YR 2/1	-		•		Muck	
X Hist Hist X Sulf Prot	ic Epipedon idic Odor pable Aquic I ucing Condit red or Low-C	Moisture Regime tions Chroma Colors Intent in Surface Layer disturbances, local va		Listed Listed Aquic Organ Mottle	on Local Hyd on State Hyd on National H Moisture Regi ic Streaking ir s (Explain in Re	ric Soils List lydric Soils Lis irne n Sandy Soils	st	
X High	escribe soil		11au0113, Etc. J.					
X High		ators meet the hydric :	soil criteria.					
X High emarks (D	d other indic	ators meet the hydric :	soil criteria.					
X High semarks (D oil color an	d other indic	ators meet the hydric :	soil criteria.				-	
X High Hemarks (C oil color and VETLANI ydrophytic	D DETER	ators meet the hydric :	soil criteria.		ls th	is Sampling	Point ¹	Within a Wetlar
× High emarks (Cool color and VETLANI ydrophytic ydric Soils	D DETER	MINATION Present?			ls th	nis Sampling Yes X	Point 1	Within a Wetlar

The presence of all three parameters indicate this area is a wetland.

Parametrix, Inc



Data Plot #:	39:A1
Wetland:	39

				W	etiand:		39
WE	TLAND D	ETERMI	NATIO				
(Modified from: 1	987 COE	Wetland	s Delin	eation Ma	nuai)		
Project/Site: Seattle Tacoma Airport - Master-Plan U	Jpdate	Date:	8/26/9	9			
Applicant/Owner: Port of Seattle	······································	- Coun	ty: King	3			
vestigator: William Kleindi, Linda Ellis		State	· —	<u> </u>			
1987 Method		•	_	Commi	nity ID:	PSS	
o Normal Circumstances exist on the site?	Yes	X No		Commu	•		
the site significantly disturbed (Atypical Situation)?	Yes	No	-	Field Pl	ot ID:	39:A1	
			<u>X</u>				
the area a potential Problem Area? emarks (Explain sample location, disturbances, pro	Yes _	No	<u>×</u>				
e area was historically a pasture and forest. Curren		is dominate	ed by blac	kberry.			
EGETATION (Dominant species are checked Plant Species	•	Cover Str	stum l	ndicator			
1 Epilobium angustifolium	10	Her		FACU+			
2 Equisetum telmateia	60	Her		FACW			
3 Ranunculus repens	20	Her		ACW			
4 Rubus discolor	8 5	Shr	ub F	ACU			
5 Ainus rubra	2 0	Tre	e F	FAC			
ccept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates to	тасе.	75	•	AC			
recent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing imphological adaptations to wetlands. "T" indicates to marks (Describe disturbances, relevant local varial contents.	V, or FAC race.	75	etc.):		ot.		
recent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing imphological adaptations to wetlands. "T" indicates to marks (Describe disturbances, relevant local variance greater than 50% of the dominant plants are hydrogeneous control of the dominant plants.	V, or FAC race.	75	etc.):		et.		
recent of Dominant Species that are OBL, FACW (cept FAC-). Include species noted (*) as showing imphological adaptations to wetlands. "T" indicates to marks (Describe disturbances, relevant local variance greater than 50% of the dominant plants are hydrophology	V, or FAC race.	75 nal effects, wetland ve	etc.): egetation	criteria is me		scribe in	n Remarks):
recent of Dominant Species that are OBL, FACW cept FAC-). Include species noted (*) as showing rphological adaptations to wetlands. "T" indicates to marks (Describe disturbances, relevant local variace greater than 50% of the dominant plants are hydrights)." **TOROLOGY**	V, or FAC race.	75 nal effects, wetland ve	etc.): egetation	criteria is me		scribe if	n Remarks):
recent of Dominant Species that are OBL, FACW cept FAC-). Include species noted (*) as showing rphological adaptations to wetlands. To indicates to marks (Describe disturbances, relevant local variace greater than 50% of the dominant plants are hydrographic corded Data (Describe in Remarks):	V, or FAC race.	75 nal effects, wetland ve	etc.): egetation Hydrolog iry Indica	criteria is me		scribe in	n Remarks):
recent of Dominant Species that are OBL, FACW cept FAC-). Include species noted (*) as showing rphological adaptations to wetlands. "T" indicates to marks (Describe disturbances, relevant local variace greater than 50% of the dominant plants are hydrography corded Data (Describe in Remarks): Stream, Lake, or Tide Gage	V, or FAC race.	75 nal effects, wetland ve	etc.): egetation Hydrolog iry Indical	criteria is me gy Indicatori tors:	(Des		
recent of Dominant Species that are OBL, FACW cept FAC-). Include species noted (*) as showing riphological adaptations to wetlands. "T" indicates to marks (Describe disturbances, relevant local variace greater than 50% of the dominant plants are hydrograph (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	V, or FAC race.	75 nal effects, wetland ve	etc.): egetation Hydrolog iry Indical	criteria is me gy Indicatori tors: nundated saturated in L saturated in L	Des	2 inche	s
recent of Dominant Species that are OBL, FACW (cept FAC-). Include species noted (*) as showing imphological adaptations to wetlands. "T" indicates to marks (Describe disturbances, relevant local variance greater than 50% of the dominant plants are hydrograded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	V, or FAC race.	75 nal effects, wetland ve	etc.): egetation Hydrolog iry Indicat S V	criteria is me gy Indicatora tors: nundated naturated in L vater Marks	Des	2 inche	s
recent of Dominant Species that are OBL, FACW (cept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates to marks (Describe disturbances, relevant local variance greater than 50% of the dominant plants are hydrograded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	V, or FAC race.	75 nal effects, wetland ve	etc.): egetation Hydrolog iry Indicat S V	criteria is me gy Indicatora tors: nundated iaturated in L Vater Marks Irift Lines	Des (Des	2 inche	s
ercent of Dominant Species that are OBL, FACW (scept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates to emarks (Describe disturbances, relevant local variance greater than 50% of the dominant plants are hydrograph of the Gage Aerial Photograph Other	V, or FAC race.	75 nal effects, wetland ve	etc.): egetation Hydrolog iry Indical S V D S	criteria is me gy Indicatora tors: nundated saturated in L Vater Marks brift Lines sediment Dep	(Des	2 inche 3 inche	s s
recent of Dominant Species that are OBL, FACW (cept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates to smarks (Describe disturbances, relevant local variance greater than 50% of the dominant plants are hydrograph of the Company of the Gage Aerial Photograph Other No Recorded Data Available	V, or FAC race.	75 nal effects, wetland ve	etc.): egetation Hydrolog iry Indical S V D S	criteria is me gy Indicatora tors: nundated iaturated in L Vater Marks Irift Lines	(Des	2 inche 3 inche	s s
recent of Dominant Species that are OBL, FACW recept FAC-). Include species noted (*) as showing imphological adaptations to wetlands. "T" indicates to marks (Describe disturbances, relevant local variative greater than 50% of the dominant plants are hydrograph of the dominant plants are hydrograph. Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available	V, or FAC race.	75 nal effects, wetland ve	etc.): egetation Hydrolog iry Indicat S V D S	criteria is me gy Indicatora tors: nundated saturated in L Vater Marks brift Lines sediment Dep	Jpper 1. Jpper 1. Jpper 1. Jpper 1.	2 inche 3 inche Wetlan	s s
recent of Dominant Species that are OBL, FACW recept FAC-). Include species noted (*) as showing imphological adaptations to wetlands. "T" indicates to marks (Describe disturbances, relevant local variative greater than 50% of the dominant plants are hydrograph of the dominant plants are hydrograph. Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available Id Observations: Depth of Surface Water: Depth to Free Water in Pit: None (in.)	V, or FAC race.	75 nal effects, wetland ve	etc.): #ydrolog In process S V D S D Andary Indian	gy Indicators tors: nundated saturated in L saturated in L vater Marks brift Lines lediment Deprainage Patt	Des (Des 1) Upper 1:	2 inche 8 inche Wetlan	s s ds
recent of Dominant Species that are OBL, FACW (cept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates to marks (Describe disturbances, relevant local variance greater than 50% of the dominant plants are hydrograph of the Company o	V, or FAC race.	75 nal effects, wetland ve	etc.): egetation Hydrolog Iry Indicat S V D S D Andary Indicat	gy Indicators tors: nundated saturated in L saturated in L vater Marks brift Lines lediment Deprainage Patt	Descripper 1:	2 inche 3 inche Wetlan equired els in L	s s
recent of Dominant Species that are OBL, FACW (cept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates to smarks (Describe disturbances, relevant local variance greater than 50% of the dominant plants are hydrograph of the Company of the Gage Aerial Photograph Other No Recorded Data Available and Observations: Depth of Surface Water: None (in.) Depth to Free Water in Pit: >15 (in.)	V, or FAC race.	75 nal effects, wetland ve	etc.): #ydrolog In Indicat S S O D Andary Indicat O V	gy Indicators tors: nundated Saturated in U Vater Marks Pritt Lines Sediment Dep Prainage Patt dicators (2 or Oxidized Roof Vater-Stained	Upper 1: Upp	2 inche 8 inche Wetlan equired els in U	s s ds
ercent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates to emarks (Describe disturbances, relevant local variance greater than 50% of the dominant plants are hydrograph of the Common of the Gage Aerial Photograph Other No Recorded Data Available and Observations: Depth of Surface Water: Depth to Free Water in Pit: >15 (in.)	V, or FAC race.	75 nal effects, wetland ve	etc.): egetation Hydrologing Indicat S V D S D dary Ind C V L	criteria is me gy Indicatori tors: nundated Saturated in U Vater Marks Prift Lines Sediment Dep Prainage Patt	Upper 1: Upp	2 inche 3 inche Wetlan equired els in U s la	s s ds
excent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates to emarks (Describe disturbances, relevant local variance greater than 50% of the dominant plants are hydrograph of the dominant plants are hydrograph of the April Photograph of the No Recorded Data Available Post No Recorded Data Available Post No Recorded Data Available	V, or FAC	75 nal effects, wetland ve	etc.): egetation Hydrolog iry Indicat S S V D D D D D D D D D D D D D D D D	gy Indicators tors: nundated saturated in L vater Marks brift Lines sediment Deprainage Patt dicators (2 or oxidized Rooi vater-Stained ocal Soil Sur other (Explain	Jpper 1: Jpp	2 inche 3 inche Wetlan equired els in U s la	s s ds

								Data Pi	ot #:	39:A1
								Wetlan	id:	39
Project/Site	: Seattle Ta	acoma Airport - Mast	er-Pia	n Upd	ate	Date:	8/26/99)		
SOILS Soil Surve	y Data:					_				
Map Unit N	lame: Unm	napped					Drainage	e Class:		
						·	Field Ob	servations Confi	rm Map	ped Type?
Гахопоту	(Subgroup):						Yes _	No	NA	x
Profile Des	cription:								-	
Depth Inches)	Horizon Designation	Matrix Color (Munsell Moist)			e Color sell Mois	t)	Mottle Abundan	nce/Contrast		ure, Concretions ospheres, etc.
-6	<u>A</u>	10YR 2/1		10YR	3/3		Few. Fine,	Distinct	Loam)
-15	В	2.5Y 5/2		10YR	3/3		Common, A	Medium, Distinct	Grave	lly Loam
lydric Soil	Indicators:									
Hist	osol					Listed	on Local	Hydric Soils List		
Hist	ic Epipedon							Hydric Soils List		
	idic Odor				_			al Hydric Soils L		
		Moisture Regime				Aquic	Moisture f	Regime		
	ucing Condi					Organ	c Streakir	ng in Sandy Soils	s	
		Chroma Colors				X Mottle:	5			
High	Organic Co	ontent in Surface Laye	er			Other	(Explain in	Remarks)		
emarks (D	escribe soil	disturbances, local v	ariati	ons, et	C.):					
		ic soil indicators mee				na.				
/ETLANI	D DETER	MINATION								
drophytic	Vegetation	Present?	Yes	X	No		Ŀ	s this Sampling	Point 1	Within a Wetter
py	-						-			
dric Soils			Yes	X	No					

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): The presence of all three parameters indicate this area is a wetland.

Data Piot #:	39:A2
Wetland:	39

WETLAND DETERMINATION (Modified from: 1987 COE Wetlands Delineation Manual) Project/Site: Seattle Tacoma Airport - Master Plan Update Applicant/Cowner: Port of Seattle County: King Norwestigator: William Kleindi, Linda Ellis 2 1987 Method	4						Data Plot #: 39:A2
Modified from: 1987 COE Wetlands Delineation Manual)	L*	\AIET	LAND	DETE	=RMIN	1 T 14	
Project/Site: Seattle Tacoma Arport - Master Plan Update							
Applicant/Owner: Port of Seattle County: King Investigator: William Kleindi, Linda Ellis State: WA Community ID: PFO Do Normal Circumstances xists on the site? Yes		•			_		
Investigator: William Klendi, Linda Ellis 1987 Method 1989 Method 1989 Method Community ID: PFO 200 Normal Circumstances exist on the site? Yes X No Field Plot ID: 39:A2			Gate		_		
1987 Method					•	_	
So Normal Circumstances exist on the site? No Sime area a potential Problem Area? Yes No X No Netwin divisor of note of note of note of note of note of Parcel 390. No Recorded Data Note of Note		· · · · · · · · · · · · · · · · · · ·			State.	-	
s the site significantly disturbed (Atypical Situation)? Yes No X s the area a potential Problem Area? Yes No X temarks (Explain sample location, disturbances, problem areas): The area was historically a pasture and forest. Plot located in a forested portion of Parcel 390. TEGETATION I/Dominant species are checked) Plant Species 9, Cover Stratum Indicator 1 Athynum flix-temma 1 Herb FAC+ 2 Eduseum temana 1 Herb FACU 3 Rubus discolor 100 Shrub FACU 4 Anus rubra 55 Tree FAC ercent of Dominant Species that are OBL, FACW, or FAC excent FAC-). Include species noted (*) as showing 50 ercent of Dominant Species that are OBL, FACW, or FAC excent FAC-). Include species noted (*) as showing 50 ercent of Dominant species that are OBL, FACW, or FAC excent FAC-). Include species noted (*) as showing 50 ercent of Dominant species that are OBL, FACW, or FAC excent FAC-). Include species noted (*) as showing 50 ercent of Dominant species that are OBL, FACW, or FAC excent FAC-). Include species noted (*) as showing 50 ercent of Dominant species that are OBL, FACW, or FAC excent FAC-). Include species noted (*) as showing 50 ercent of Dominant Species that are OBL, FACW, or FAC excent FAC-). Include species noted (*) as showing 50 ercent of Dominant Species that are OBL, FACW, or FAC excent FAC-). Include species noted (*) as showing 50 ercent of Dominant Species that are OBL, FACW, or FAC excent FAC-). Include species noted (*) as showing 50 ercent of Dominant Species that are OBL, FACW, or FAC excent FAC-). Include species noted (*) as showing 50 ercent of Dominant Species that are OBL, FACW, or FAC excent FAC-). Include species noted (*) as showing 50 ercent of Dominant Species that are OBL, FACW, or FAC excent FAC-). Include species noted (*) as showing 50 ercent of Dominant Species that are OBL, FACW, or FAC excent FAC-). Include species that are OBL, FACW, or FAC	-	_		.,			Community ID: PFO
temarks (Explain sample location, disturbances, problem areas): he area was historically a pasture and forest. Plot located in a forested portion of Parcel 390. Plant Species	_		Yes				- Field Plot ID: 39:A2
Tegerarks (Explain sample location, disturbances, problem areas): the area was historically a pasture and forest. Plot located in a forested portion of Parcel 390. ### Cover Stratum Indicator Athynum flic-lemina	-		Yes		No .	<u> </u>	_
## Be area was historically a pasture and forest. Plot located in a forested portion of Parcel 390. ### EGETATION ("Dominant species are checked) Plant Species % Cover Stratum Indicator	the area a potential Problem	Area?	Yes		No .	X	_
Plant Species	emarks (Explain sample loca	ation, disturbances, prot	olem are:	as):			
2 Edursetum telmateia 1 Herb FACW 3 Rubus discolor 100 Shrub FACU 4 Alnus rubra 65 Tree FAC 5 Tree FAC 5 Tree FAC 6 FACW		nt species are checked)	ı	% Cove	er Stratu	m	Indicator
Rubus discolor Alnus rubra Brace Recent of Dominant Species that are OBL. FACW, or FAC except FAC-). Include species noted (*) as showing oppological adaptations to wetlands. "T' indicates trace." Remarks (Describe disturbances, relevant local variations, seasonal effects, etc.): Rince only 50% of the dominant plants are hydrophytic, the wetland vegetation criteria is not met. Wetland hydrology is present or 26/99 Rubus discolor is found in disturbed wetlands with prolonged saturation. Also satisfies vegetation criteria stated in the Dianual 34.b.(1) (page 16-17) and ACOE manual 35. b (1) (page 23). YDROLOGY Rubus discolor is found in disturbed wetlands with prolonged saturation. Also satisfies vegetation criteria stated in the Dianual 34.b.(1) (page 16-17) and ACOE manual 35. b (1) (page 23). YDROLOGY Robus discolor is found in disturbed wetlands with prolonged saturation. Also satisfies vegetation criteria stated in the Dianual 34.b.(1) (page 16-17) and ACOE manual 35. b (1) (page 23). YDROLOGY Robus discolor is found in disturbed wetlands with prolonged saturation. Also satisfies vegetation criteria is not met. Wetland hydrology is present or met. Dianual 34.b.(1) (page 23). YDROLOGY Britian Hydrology Indicators (Describe in Remarks): Wetland Hydrology Indicators (Describe in Rem	' · · · · · · · · · · · · · · · · · · ·						
ercent of Dominant Species that are OBL. FACW, or FAC except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T indicates trace." Ince only 50% of the dominant plants are hydrophytic, the wetland vegetation criteria is not met. Wetland hydrology is present or (26/99 Rubus discolor is found in disturbed wetlands with prolonged saturation. Also satisfies vegetation criteria stated in the Dianual 34.b.(1) (page 16-17) and ACOE manual 35. b.(1) (page 23). **YDROLOGY** Broam. Lake. or Tide Gage** Aerial Photograph** Other** No Recorded Data Available** No Recorded Data Available** Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Water Staurated on Upper 12 inches Sediment Deposits Drainage Patterns in Wetlands Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)	Dubin diseases						
ercent of Dominant Species that are OBL, FACW, or FAC xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T' indicates trace. emarks (Describe disturbances, relevant local variations, seasonal effects, etc.): ince only 50% of the dominant plants are hydrophytic, the wetland vegetation criteria is not met. Wetland hydrology is present or 26/99. Rubus discolor is found in disturbed wetlands with prolonged saturation. Also satisfies vegetation criteria stated in the Dianual 34.b.(1) (page 16-17) and ACOE manual 35.b (1) (page 23). YDROLOGY Proportion (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other No Recorded Data Available Wetland Hydrology Indicators (Describe in Remarks): Primary Indicators: A saturated in Upper 12 inches Saturated in Upper 12 inches Water Marks Drift Lines Sediment Deposits X Drainage Patterns in Wetlands Primary Indicators (2 or more required): Wetland Hydrology Indicators (2 or more required): X Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)	·						
Stream, Lake, or Tide Gage Primary Indicators Saturated in Upper 12 inches No Recorded Data Available No Recorded Data Available Saturated in Upper 18 inches Saturated in Upper 18 inches Saturated in Upper 18 inches Saturated Soit: Oxidized Root Channels in Upper 12 inches Stream Lake Saturated Soit: Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks) Other	ercent of Dominant Species	that are OBL_FACW	or FAC				
PDROLOGY Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available Primary Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Depth of Surface Water: Depth to Free Water in Pit: Depth to Saturated Soit: Wetland Hydrology Indicators (Describe in Remarks): Primary Indicators: Inundated Saturated in Upper 12 inches Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): X Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)	ince only 50% of the dominant /26/99. Rubus discolor is foun	plants are hydrophytic, d in disturbed wetlands	the wetl	and veg	getation o	nten	ria is not met. Wetland hydrology is present or Uso satisfies vegetation critena stated in the D
Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available Primary Indicators: Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits X Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Wetland Hydrology Indicators (Describe in Remarks): Primary Indicators: Saturated in Upper 12 inches Sediment Deposits X Drainage Patterns in Wetlands Secondary Indicators (2 or more required): X Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)		TIO ACOL Manual 33, b	(1) (page	<i>E 23)</i> .			
Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available Saturated in Upper 12 inches Water Marks Drift Lines Sediment Deposits X Drainage Patterns in Wetlands Peth of Surface Water: Surface Depth of Surface Water in Pit: Depth to Free Water in Pit: Depth to Saturated Soit: No Secondary Indicators (2 or more required): X Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)		Remarks):		Wa	etiand Hy	/dro	plany Indicators (Describe in Remarks)
Aerial Photograph Other Other No Recorded Data Available No Recorded Data Available Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits X Drainage Patterns in Wetlands Peld Observations: Depth of Surface Water: Depth to Free Water in Pit: Depth to Saturated Soil: Secondary Indicators (2 or more required): X Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)	_	_					
Other No Recorded Data Available No Recorded Data Available No Recorded Data Available Saturated in Upper 12 inches Water Marks Drift Lines Sediment Deposits X Drainage Patterns in Wetlands Poepth of Surface Water: Depth of Surface Water in Pit: Depth to Free Water in Pit: Depth to Saturated Soil: Depth to Saturated Soil: X Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)		-			•		
No Recorded Data Available Saturated in Upper 18 inches Water Marks					×		• _
Drift Lines Sediment Deposits X Drainage Patterns in Wetlands Poepth of Surface Water: Depth to Free Water in Pit: Depth to Saturated Soil: Other (Explain in Remarks)	No Recorded Date	ta Available					-
Sediment Deposits X Drainage Patterns in Wetlands Depth of Surface Water: Surface (in.) Depth to Free Water in Pit: 0 (in.) Depth to Saturated Soil: 0 (in.) X Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)						_	Water Marks
Ald Observations: Depth of Surface Water: Depth to Free Water in Pit: Depth to Saturated Soil: Depth to Saturated Soil: X Drainage Patterns in Wetlands Secondary Indicators (2 or more required): X Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)							Drift Lines
Pld Observations: Depth of Surface Water: Depth to Free Water in Pit: Depth to Saturated Soil: Depth to Saturated Soil: Secondary Indicators (2 or more required): X Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)							•
Depth of Surface Water: Surface (in.) Depth to Free Water in Pit: 0 (in.) Depth to Saturated Soil: 0 (in.) Secondary Indicators (2 or more required): X Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)	eld Observations:						Drainage Patterns in Wetlands
Depth to Free Water in Pit: 0 (in.) Depth to Saturated Soil: 0 (in.) Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)		Surface (in.)			Second	arv i	Indicators (2 or more required):
Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)	Depth to Free Water in Pit:	0 (in.)					
Local Soil Survey Data Other (Explain in Remarks)	Depth to Saturated Soil:	0 (in.)			<u></u> -	_	T
Other (Explain in Remarks)							•
					-	—	-
3marks (As relevant describe recent executive burdets							• • • • • • • • • • • • • • • • • • • •
marks (Ac relevant decembe recent accountables to decide							• • • • • • • • • • • • • • • • • • • •
	ne wetland hydrology criteria is	met by the presence of	soil satu	ıration (during the	gro	owing season.

4						Data Piot	#:	39:A2
-						Wetland:	:	39
roject/S	ite: Seattle 1	acoma Airport - Master F	lan Update	Date	8/26/99			
OILS oil Sur	vey Data:							
lap Unii	t Name: Unr	mapped			Drainage Cla	1 5 S:		
					Field Observ	ations Confirm	Map	ped Type?
「axonom	y (Subgroup)	:			Yes	No	NA	×
rofile D	escription:							
epth inches)	Horizon Designation	Matrix Color (Munsell Moist)	Mottle Cold (Munsell M		Mottle Abundance/C	Contrast	_	re, Concretions
-10	Α	10YR 4/1	10YR 3/3		Few, Medium, D	istinct	Loam	
0-15		10YR 4/1	10YR 5/4		Common, Coars	e. Distinct	Clay L	.oam
5-18+	<u>c</u>	2.5Y 6/3	2.5Y 5/6		Common, Mediu	m. Distinct	Clay	
ydric So	oil Indicators	:						
—	istosol			Listed	on Local Hydr	ric Soils List		
	istic Epipedor	1		Listed	on State Hydr	ric Soils List		
	ulfidic Odor			Listed	on National H	ydric Soils List	t	
		Moisture Regime			Moisture Regii			
	educing Cond				ic Streaking in	Sandy Soils		
		Chroma Colors ontent in Surface Layer		X Mottle	-			
				Other	(Explain in Rer	marks)		
		l disturbances, local varia						
	and other riyal	ric soil indicators meet the	hydne soil er	teria.				
ETLA	ND DETER	MINATION						
drophyt	tic Vegetation	n Present? Yes	X No		le thi	a Camalia - D	!	A4144
	ils Present?	Yes			is thi	s Sampling P	oint V	Vithin a Wetlar
		res	X No			Yes X	No	

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): The presence of all three parameters indicate this area is a wetland.



Data Plot #:	39:A3
Wetland:	39

	TI AND DE		
(Modified from: 19	I LAND DE	TERMINA	ATION Wetland: 39
	987 COE W	etiands l	Delineation Manual)
oject/Site: Seattle Tacoma Airport - Master Plan Up	pdate	Date:	8/27/99
plicant/Owner: Port of Seattle		County:	King
restigator: William Kleindl		State:	WA
1987 Method 1989 Method			
Normal Circumstances exist on the site?	Yes X	No	Community ID: PSS
he site significantly disturbed (Atypical Situation)?			Field Plot ID: 39:A3
	Yes	_ No -	X
he area a potential Problem Area?	Yes	_ ^{No} -	<u>X</u>
marks (Explain sample location, disturbances, protest sampling plot is located on undeveloped land on P		etland 39 is	located on Parcels 334, 328, 389, and 390.
GETATION (Dominant species are checked))		
Plant Species	% Co	ver Stratur	n Indicator
1 Equisetum telmateia	25	Herb	FACW
2 Ranunculus repens	15	Herb	FACW
3 Rumex obtusifolius 4 Rubus discolor	2	Herb	FAC
5 Ainus rubra	<u>90</u> 20	Shrub Tree	FAC FAC
cent of Dominant Species that are OBL, FACW, lept FAC-). Include species noted (*) as showing		66	
phological adaptations to wetlands. "T" indicates tra	ace.		
phological adaptations to wetlands. "T" indicates tra	ice.		· 1·
phological adaptations to wetlands. "T" indicates trainarks (Describe disturbances, relevant local variati	ace. Ions, seasona	effects, etc	;.): tation criteria is met
phological adaptations to wetlands. "T" indicates tra	ace. Ions, seasona	effects, etc	tation criteria is met.
phological adaptations to wetlands. "T" indicates trainarks (Describe disturbances, relevant local variation of the dominant plants are hydropology	ace. ions, seasona ophytic, the w	i effects, etc	tation criteria is met.
phological adaptations to wetlands. "T" indicates transitions (Describe disturbances, relevant local variation of the dominant plants are hydroproded Data (Describe in Remarks):	ace. ions, seasona ophytic, the w	effects, etc	drology Indicators (Describe in Remarks):
phological adaptations to wetlands. "T" indicates transitions (Describe disturbances, relevant local variation of the dominant plants are hydroproduced Data (Describe in Remarks): Stream, Lake, or Tide Gage	ace. ions, seasona ophytic, the w	effects, etc	drology Indicators (Describe in Remarks):
phological adaptations to wetlands. "T" indicates trainarks (Describe disturbances, relevant local variative greater than 50% of the dominant plants are hydroproduced Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	ace. ions, seasona ophytic, the w	effects, etc	drology Indicators (Describe in Remarks): ndicators: Inundated
phological adaptations to wetlands. "T" indicates trainers (Describe disturbances, relevant local variative greater than 50% of the dominant plants are hydrodocology orded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	ace. ions, seasona ophytic, the w	effects, etc	drology Indicators (Describe in Remarks): ndicators: Inundated Saturated in Upper 12 inches
phological adaptations to wetlands. "T" indicates trainers (Describe disturbances, relevant local variative greater than 50% of the dominant plants are hydrodocomology orded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	ace. ions, seasona ophytic, the w	effects, etc	drology Indicators (Describe in Remarks): ndicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches
phological adaptations to wetlands. "T" indicates trainarks (Describe disturbances, relevant local variative greater than 50% of the dominant plants are hydrodocology orded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	ace. ions, seasona ophytic, the w	effects, etc	drology Indicators (Describe in Remarks): ndicators: Inundated Saturated in Upper 12 inches
phological adaptations to wetlands. "T" indicates trainarks (Describe disturbances, relevant local variative greater than 50% of the dominant plants are hydrodocology orded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	ace. ions, seasona ophytic, the w	effects, etc	drology Indicators (Describe in Remarks): ndicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks
phological adaptations to wetlands. "T indicates trainers (Describe disturbances, relevant local variation of the dominant plants are hydroperated than 50% of the dominant plants are h	ace. ions, seasona ophytic, the w	effects, etc	drology Indicators (Describe in Remarks): ndicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
phological adaptations to wetlands. "T indicates trainers (Describe disturbances, relevant local variative greater than 50% of the dominant plants are hydrodocomology orded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Observations:	ace. ions, seasona ophytic, the w	l effects, etc etland vegei Vetland Hyc Primary I	drology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
phological adaptations to wetlands. "T indicates trainers (Describe disturbances, relevant local variation of the dominant plants are hydrody process." DROLOGY (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Observations: epth of Surface Water: None (in.)	ace. ions, seasona ophytic, the w	l effects, etc etland vegei Vetland Hyc Primary I	drology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
phological adaptations to wetlands. "T' indicates trainers (Describe disturbances, relevant local variative greater than 50% of the dominant plants are hydrodocome greater than 50% of the dominant p	ace. ions, seasona ophytic, the w	l effects, etc etland vegei Vetland Hyc Primary I	drology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
phological adaptations to wetlands. "T indicates trainers (Describe disturbances, relevant local variation of the dominant plants are hydrody process." DROLOGY (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Observations: epth of Surface Water: None (in.)	ace. ions, seasona ophytic, the w	Vetland Hyde Primary I	drology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
phological adaptations to wetlands. "T' indicates trainers (Describe disturbances, relevant local variative greater than 50% of the dominant plants are hydrodocome greater than 50% of the dominant p	ace. ions, seasona ophytic, the w	Vetland Hyde Primary I	drology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands y Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches
phological adaptations to wetlands. "T' indicates trainers (Describe disturbances, relevant local variative greater than 50% of the dominant plants are hydrodocome greater than 50% of the dominant p	ace. ions, seasona ophytic, the w	Vetland Hyde Primary I	drology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands y Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches
phological adaptations to wetlands. "T' indicates trainers (Describe disturbances, relevant local variative greater than 50% of the dominant plants are hydrodocome greater than 50% of the dominant p	ace. ions, seasona ophytic, the w	Vetland Hyde Primary I	drology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands y Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches Water-Stained Leaves

					Data Pic		39:A3
					Wetian	d:	39
Project/Site	Seattle Ta	acoma Airport - Master	Plan Lindate	Date	e: 8/27/99		
SOILS Soil Surve							
Map Unit N	vame: Unm	apped			Drainage Class:		
			· · · · · · · · · · · · · · · · · · ·		Field Observations Confi	m Map	ped Type?
Taxonomy	(Subgroup):				Yes No	NA	X
Profile Des						•	
Depth (Inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colo (Munsell M		Mottie Abundance/Contrast		ure, Concretions ospheres, etc.
0-6	Α	10YR 3/1	•		•	Loan	1
5-15	В	10YR 3/1	10YR 5/1		Common, Medium, Distinct	Loam	1
15-18+	С	2.5Y 5/3	2.5Y 4/4		Common, Medium, Distinct	Sand	y Loem
lydric Soi	I Indicators:						
His	itosol			Liste	ed on Local Hydric Soils List		
His	tic Epipedon			Liste	ed on State Hydric Soils List		
	ffidic Odor			Liste	ed on National Hydric Soils L	ist	
		Moisture Regime			ic Moisture Regime		
	ducing Condi				anic Streaking in Sandy Soils	5	
	•	Chroma Colors ontent in Surface Layer		X Mott			
	•	•		OUNE	er (Explain in Remarks)		
temante (i		disturbances, local var ic soil indicators meet t					

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): The presence of all three parameters indicate this area is a wetland.



$oldsymbol{\Lambda}$				Data Plot #: 39:A4
WE	TLAND	DETE	RMINAT	ION Wetland: 39
	-		*	elineation Manual)
roject/Site: Seattle Tacoma Airport - Master Plan Up	odate	1	Date: 3/	1/00
oplicant/Owner: Port of Seattle				King
vestigator: William Kleindl and Marti Louther			•	WA
1987 Method 1989 Method		_ `		
Normal Circumstances exist on the site?	Yes	x	No	Community ID: PEM
the site significantly disturbed (Atypical Situation)?			. —	Field Plot ID: 39:A4
	Yes		No X	
the area a potential Problem Area? marks (Explain sample location, disturbances, prof	Yes	_	No _X	<u></u>
GETATION (Dominant species are checked))			
Plant Species		% Cover	Stratum	Indicator
1 Equisetum telmateia		20	Herb	FACW
		<u>t</u>	Herb	FACW+
2 Galium trifidum			Herb	FACU
3 Polystichum munitum		20		
Polystichum munitum 4 Ranunculus repens recent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing imphological adaptations to wetlands. "T" indicates tra	ace.	80 66	Herb	FACW
Polystichum munitum Anunculus repens recent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing imphological adaptations to wetlands. "T" indicates training in the second of the dominant plants are hydrocegreater than 50% of the dominant plants are hydrocegreater.	ace. ions, sea	66 asonal effe	Herb	FACW
Polystichum munitum Ranunculus repens recent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing riphological adaptations to wetlands. "T" indicates training in the species of the dominant plants are hydroproperations.	ace. ions, sea	66 asonal effe	Herb ects, etc.): nd vegetal	FACW.
Polystichum munitum Ranunculus repens recent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing rphological adaptations to wetlands. To indicates training the species of the dominant plants are hydrocorded Data (Describe in Remarks):	ace. ions, sea	66 asonal effethe wetlan	ects, etc.):	FACW tion criteria is met. clogy Indicators (Describe in Remarks):
Polystichum munitum Ranunculus repens recent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing riphological adaptations to wetlands. "T" indicates training in the second se	ace. ions, sea	66 asonal effethe wetlan	ects, etc.): nd vegetal and Hydro	FACW tion criteria is met. clogy Indicators (Describe in Remarks): dicators:
Polystichum munitum A Ranunculus repens recent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing rphological adaptations to wetlands. "T" indicates trainmarks (Describe disturbances, relevant local variations are hydrocorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	ace. ions, sea	66 asonal effethe wetlan	ects, etc.): nd vegetal and Hydro	FACW tion criteria is met. ology Indicators (Describe in Remarks): dicators: Inundated
A Polystichum munitum Ranunculus repens Tecent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing riphological adaptations to wetlands. "T" indicates trainmarks (Describe disturbances, relevant local variations of the dominant plants are hydrotropy corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	ace. ions, sea	66 asonal effethe wetlan	ects, etc.): nd vegetal and Hydro	FACW tion criteria is met. clogy Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches
A Polystichum munitum Ranunculus repens Tecent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing riphological adaptations to wetlands. "T" indicates trainmarks (Describe disturbances, relevant local variations of the dominant plants are hydrocorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	ace. ions, sea	66 asonal effethe wetlan	ects, etc.): and vegetal and Hydro	FACW ition criteria is met. clogy Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches
Polystichum munitum A Ranunculus repens recent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing riphological adaptations to wetlands. Tr indicates trainmarks (Describe disturbances, relevant local variative greater than 50% of the dominant plants are hydrocorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	ace. ions, sea	66 asonal effethe wetlan	ects, etc.): and vegetal and Hydro	FACW tion criteria is met. clogy Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches
A Polystichum munitum Ranunculus repens Tecent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing riphological adaptations to wetlands. "T" indicates trainmarks (Describe disturbances, relevant local variations of the dominant plants are hydrotropy corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	ace. ions, sea	66 asonal effethe wetlan	ects, etc.): and vegetal and Hydro	FACW ition criteria is met. clogy Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks
Polystichum munitum Anunculus repens recent of Dominant Species that are OBL, FACW. Recept FAC-). Include species noted (*) as showing imphological adaptations to wetlands. To indicates training the species relevant local variations are relevant local variations are relevant local variations are relevant plants are hydrocorded Data. (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	ace. ions, sea	66 asonal effethe wetlan	ects, etc.): nd vegetal and Hydro rimary Ind X X	FACW clion criteria is met. cliogy indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
Polystichum munitum Ranunculus repens recent of Dominant Species that are OBL, FACW. cept FAC-). Include species noted (*) as showing rphological adaptations to wetlands. "T" indicates training in the second of the dominant plants are hydrocorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available d Observations:	ace. ions, sea	66 asonal effethe wetlat Wette	ects, etc.): nd vegetal and Hydro rimary ind X X X	factors: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
A Polystichum munitum A Ranunculus repens Tocent of Dominant Species that are OBL, FACW. Cept FAC-). Include species noted (*) as showing riphological adaptations to wetlands. "T" indicates training the species of the dominant plants are hydrocegreater than 50% of the dominant plants are hydrocegreater than 5	ace. ions, sea	66 asonal effethe wetlat Wette	ects, etc.): nd vegetal and Hydro rimary ind X X X	ition criteria is met. cology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
Polystichum munitum Ranunculus repens Tecent of Dominant Species that are OBL, FACW. Cept FAC-). Include species noted (*) as showing riphological adaptations to wetlands. Thindicates training the species in the species relevant local variations are species of the dominant plants are hydrotograph of the dominant plants are hydrotograph. Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available d Observations: Depth of Surface Water: Depth to Free Water in Pit: O (in.)	ace. ions, sea	66 asonal effethe wetlat Wette	ects, etc.): nd vegetal and Hydro rimary ind X X X	factors: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
Polystichum munitum A Ranunculus repens recent of Dominant Species that are OBL, FACW. Recept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. To indicates training and in	ace. ions, sea	66 asonal effethe wetlat Wette	ects, etc.): nd vegetal and Hydro rimary ind X X X	ition criteria is met. cology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required):
Polystichum munitum Anunculus repens arcent of Dominant Species that are OBL, FACW. Recept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. The indicates training are species in the second of the dominant plants are hydrotograph of the control of the second of the dominant plants are hydrotograph. Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available and Observations: Depth of Surface Water: Depth to Free Water in Pit: O (in.)	ace. ions, sea	66 asonal effethe wetlat Wette	ects, etc.): and vegetal and Hydro rimary ind X X X	FACW clion criteria is met. clicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches

4					_		Data Pio	t #:	39:A4
							Wetland	:	39
Project/S	ite: Seattle T	acoma Airport - Master	Plan Upda	ite	Date:	3/1/00			
SOILS Soil Sur	vey Data:								
	•	apped				Drainage Cla	955:		
·						•	rations Confirm	п Мар	ped Type?
Taxonor	ny (Subgroup):					Yes	No	NA	×
Profile D	escription:						******		
Depth (Inches)	Horizon Designation	Matrix Color (Munsell Moist)		Color sell Moist)	Mottle Abundance/0	Contrast		ure, Concretions ospheres, etc.
3-10	A	10YR 3/2	10YR :	3/4		Common. Coan	se. Distinct	Fine	sandy loam
0-18+	B	2.5YR 4/2				-		Loam	y Sand
lydric S	oil Indicators:								
н	listosol				Listed	on Local Hyd	ric Soils List		
н	listic Epipedon			_		on State Hyd			
s	ulfidic Odor				Listed	on National H	lydric Soils Lis	st	
P	robable Aquic	Moisture Regime			X Aquic	Moisture Reg	me		
	educing Condi				Organ	ic Streaking ir	Sandy Soils		
	leyed or Low-(X Mottle	5			
—	igh Organic Co	ontent in Surface Layer			Other	(Explain in Re	marks)		
emarks	(Describe soil	disturbances, local var	iations, et	c.):					
oil color	and other hydr	ic soil indicators meet t	he hydric :	soil criten	ia.				
						-		-	
VETLA	ND DETER	MINATION							
ydrophy	tic Vegetation	Present? Y	es <u>x</u>	No		ls th	is Sampling !	Point '	Within a Wetla
ydric So	ils Present?	Y	es X	No					
-							Yes X	No	

The presence of all three parameters indicate this area is a wetland.



Data Plot #:

39:B1

		LAND DET				
((Modified from: 19	87 COE We	tlands [Delineatio	on Manual)
roject/Site: Seattle Tacoma /	Airport - Master Plan Up	date	Date:	8/26/99		
licant/Owner: Port of Seattle			County:	King		
vestigator: William Kleindl, I	Linda Ellis		State:	WA		
1987 Method 🔲 1989 I	Method				Community ID): Upland
o Normal Circumstances exist	t on the site?	Yes X	No _		ield Plot ID:	39:B1
the site significantly disturbed	d (Atypical Situation)?	Yes	No	<u>x</u> .		
the area a potential Problem.	Area?	Yes	No	x		
marks (Explain sample loca	ation, disturbances, prob	lem areas):	_			
storically, the area was pasturickberry.	nt species are checked)	•				
Plant Species		% Cove	r Stratum	n indicat	or	
1 Rubus discolor		99	Shrub	FACU		
ccept FAC-). Include species orphological adaptations to we marks (Describe disturbance)	noted (*) as showing etlands. "T" indicates tra	ce. 0				
rcent of Dominant Species (cept FAC-). Include species orphological adaptations to we marks (Describe disturbancing none of the dominant plan	noted (*) as showing etlands. "T" indicates tra	or FAC ce. ons, seasonal e	ffects, etc	:.):		
rcent of Dominant Species coept FAC-). Include species orphological adaptations to we marks (Describe disturbance none of the dominant plant/DROLOGY	noted (*) as showing etlands. "T" indicates traces, relevant local variations are hydrophytic, the v	or FAC 0 ce. ons, seasonal evetland vegetati	ffects, etc	:.): is not met.		
recent of Dominant Species (cept FAC-). Include species orphological adaptations to we marks (Describe disturbance none of the dominant plan PDROLOGY corded Data (Describe in R	noted (*) as showing etlands. "T" indicates traces, relevant local variations are hydrophytic, the variations are hydrophytic.	or FAC 0 ce. ons, seasonal evetland vegetati	ffects, etc	i.): is not met. drology ind		escribe in Remarks):
rcent of Dominant Species cept FAC-). Include species include	noted (*) as showing etlands. "T" indicates traces, relevant local variations are hydrophytic, the variations are hydrophytic. Tide Gage	or FAC 0 ce. ons, seasonal evetland vegetati	ffects, etc	c.): is not met. drology ind ndicators:	licators (De	escribe in Remarks):
recent of Dominant Species (cept FAC-). Include species or phological adaptations to we marks (Describe disturbance none of the dominant plan CPROLOGY corded Data (Describe in Raman, Lake, or Aerial Photograph	noted (*) as showing etlands. "T" indicates traces, relevant local variations are hydrophytic, the variations are hydrophytic. Tide Gage	or FAC 0 ce. ons, seasonal evetland vegetati	ffects, etc	c.): is not met. drology ind ndicators: Inunda	licators (De	
rcent of Dominant Species (cept FAC-). Include species orphological adaptations to we marks (Describe disturbance for none of the dominant plan /DROLOGY corded Data (Describe in R Stream, Lake, or Aerial Photograph Other	noted (*) as showing strands. "T" indicates traces, relevant local variations are hydrophytic, the value are hydrophytic, the value are hydrophytic. Tide Gage	or FAC 0 ce. ons, seasonal evetland vegetati	ffects, etc	drology Indicators: Inunda	licators (De	12 inches
rcent of Dominant Species (cept FAC-). Include species orphological adaptations to we marks (Describe disturbance (ce none of the dominant plant /DROLOGY corded Data (Describe in R Stream, Lake, or Aerial Photograph	noted (*) as showing strands. "T" indicates traces, relevant local variations are hydrophytic, the value are hydrophytic, the value are hydrophytic. Tide Gage	or FAC 0 ce. ons, seasonal evetland vegetati	ffects, etc	drology Indicators: Inunda	licators (De ted ted in Upper 1	12 inches
recent of Dominant Species (cept FAC-). Include species orphological adaptations to we marks (Describe disturbance none of the dominant plan YDROLOGY corded Data (Describe in R Stream, Lake, or Aerial Photograph Other	noted (*) as showing strands. "T" indicates traces, relevant local variations are hydrophytic, the value are hydrophytic, the value are hydrophytic. Tide Gage	or FAC 0 ce. ons, seasonal evetland vegetati	ffects, etc	drology Indicators: Inunda Satural	ted in Upper of the ted in	12 inches
recent of Dominant Species (cept FAC-). Include species orphological adaptations to we marks (Describe disturbance none of the dominant plan YDROLOGY corded Data (Describe in R Stream, Lake, or Aerial Photograph Other	noted (*) as showing strands. "T" indicates traces, relevant local variations are hydrophytic, the value are hydrophytic, the value are hydrophytic. Tide Gage	or FAC 0 ce. ons, seasonal evetland vegetati	ffects, etc	drology Indindicators: Inunda Satural Satural Water I	ted in Upper of the ted in	12 inches
ercent of Dominant Species except FAC-). Include species prophological adaptations to we emarks (Describe disturbance face none of the dominant plan YDROLOGY ecorded Data (Describe in R Stream, Lake, or Aerial Photograph Other No Recorded Data	noted (*) as showing strands. "T" indicates traces, relevant local variations are hydrophytic, the value are hydrophytic, the value are hydrophytic. Tide Gage	or FAC 0 ce. ons, seasonal evetland vegetati	ffects, etc	drology Indindicators: Inunda Satural Satural Water I Drift Lir	ted in Upper of Marks	12 inches 18 inches
recent of Dominant Species (cept FAC-). Include species or phological adaptations to we marks (Describe disturbance none of the dominant plan (DROLOGY corded Data (Describe in Ratial Photograph Other No Recorded Data (Describe Describe Data (Describe Describe Desc	noted (*) as showing stands. "T" indicates traces, relevant local variations are hydrophytic, the value are hydrophytic, the value are hydrophytic. The same hydrophytic are hydrophytic are are hydrophytic. Tide Gage hydrophytic are	or FAC 0 ce. ons, seasonal evetland vegetati	ffects, etc ion criteria tland Hyd Primary II	drology Indindicators: Inunda Satural Satural Water I Drift Lir Sedime	ted ted in Upper fed in Upper f Marks nes ent Deposits ge Patterns in	12 inches 18 inches • Wetlands
rcent of Dominant Species coept FAC-). Include species prohological adaptations to we marks (Describe disturbance ace none of the dominant plan /DROLOGY corded Data (Describe in R Stream, Lake, or Aerial Photograph Other No Recorded Data dd Observations: Depth of Surface Water:	noted (*) as showing strands. "T" indicates traces, relevant local variations are hydrophytic, the value are hydrophytic, the value are hydrophytic. Tide Gage	or FAC 0 ce. ons, seasonal evetland vegetati	ffects, etc ion criteria tland Hyd Primary II	drology Indicators: Inunda Satural Satural Water I Drift Lir Sedime Drainag	ted ted in Upper feed in Upper	12 inches 18 inches • Wetlands required):
ircent of Dominant Species (cept FAC-). Include species (orphological adaptations to we (marks) (Describe disturbance (ore none of the dominant plant (orded Data) (Describe in R (orded Data) (Descri	noted (*) as showing stands. "T" indicates traces, relevant local variations are hydrophytic, the value (*). Remarks): Tide Gage h a Available None (in.)	or FAC 0 ce. ons, seasonal evetland vegetati	ffects, etc ion criteria tland Hyd Primary II	drology Indicators: Inunda Satural Water I Drift Lir Sedime Drainagy Indicators Oxidize	ted ted in Upper feed feed in Upper feed feed feed feed feed feed feed fe	12 inches 18 inches i Wetlands required): nels in Upper 12 inches
ercent of Dominant Species (Cept FAC-). Include species orphological adaptations to we emarks (Describe disturbance none of the dominant plan (PROLOGY) corded Data (Describe in Roman Lake, or Aerial Photograph Other No Recorded Data (Describe in Roman Photograph Photograph Other No Recorded Data (Describe in Roman Photograph	noted (*) as showing stands. "T" indicates traces, relevant local variations are hydrophytic, the value are hydrophytic, the value are hydrophytic. Tide Gage in the local variation and the local variation are hydrophytic. Tide Gage in the local variable are local variable. None	or FAC 0 ce. ons, seasonal evetland vegetati	ffects, etc ion criteria tland Hyd Primary II	drology indicators: Inunda Satural Satural Water I Drift Lir Sedime Drainag y Indicators Oxidize Water-S	ted ted in Upper fed fed in Upper fed fed fed in Upper fed fed fed fed in Upper fed fed fed fed in Upper fed	12 inches 18 inches 5 Wetlands required): nels in Upper 12 inches es
ercent of Dominant Species xcept FAC-). Include species orphological adaptations to we emarks. (Describe disturbance nace none of the dominant plan YDROLOGY ecorded Data. (Describe in R Stream, Lake, or Aerial Photograph Other	noted (*) as showing stands. "T" indicates traces, relevant local variations are hydrophytic, the value are hydrophytic, the value are hydrophytic. Tide Gage in the local variation and the local variation are hydrophytic. Tide Gage in the local variable are local variable. None	or FAC 0 ce. ons, seasonal evetland vegetati	ffects, etc ion criteria tland Hyd Primary II	drology indicators: Inunda Satural Satural Water I Drift Lir Sedime Drainag y Indicator Oxidize Water-S Local S	ted ted in Upper feed feed in Upper feed feed feed feed feed feed feed fe	12 inches 18 inches i Wetlands required): nels in Upper 12 inches es

								Data F	Plot #:	39:B1
								Wetia	nd:	39 Upland Plot
Project/Site	e: Seattle Ta	acoma Airport - M	aster Pla	in Update	<u> </u>	. Date:	8/26/99	-		
SOILS										
Soil Surv	ey Data:									
Map Unit I	Name: Unit	napped					Drainage	Class:		
							Field Obs	ervations Con	firm Map	pped Type?
Taxonomy	(Subgroup):						Yes	No	NA	x
Profile De				· · · · · ·				- '''	_ '*	
Depth	Horizon	Matrix Color		Mottle (Color		Mottle		Tave	ure, Concretions,
(Inches)	Designation	(Munsell Moist)		(Munse)		e/Contrast		ospheres, etc.
0-9	Α	10YR 3/2		-			-		Sand	y Loam
0-18	В	10YR 3/2		•			-		Loam	1
dudric Sci	I Indicators:									
-	tosol					1:				
	tic Epipedon				_			ydric Soils Lis ydric Soils Lis		
	fidic Odor							ydric Soils Lis I Hydric Soils		
Pro	bable Aquic	Moisture Regime					Moisture R		List	
	ducing Condi							in Sandy Soi	Is	
		Chroma Colors				Mottle	s	-		
Hig	h Organic Co	ontent in Surface L	ayer			Other	(Explain in	Remarks)		
		disturbances, loca	al variati	ons, etc.) :					
lo indicator	rs of hydric so	oil are present.								
A/ET! AN	D DETER	MINATION								
-	C Vegetation	Present?	Yes		No	<u> </u>	Is	this Samplin	g Point	Within a Wetland
	Present?		Yes		No	X		Yes	No	X
etiand Hy-	drology Pres	sent?	Yes		No	X				

No wetland indicators are present.



							Data Piot #	39:B2
				- CALLA			Wetland:	39 Upland Pic
			DETE					
1	(Modified from: 19	87 CC	E Wet	lands	De	lineation	Manual)	
Project/Site: Seattle Tacoma	Airport - Master Plan Up	date		Date:	8/2	27/99		
Applicant/Owner: Port of Se	attle			County	: 1	King		
nvestigator: William Kleindi				State:	į	WA		
2 1987 Method 1989 I	Method				•	Соп	nmunity ID:	Upland Forest
o Normal Circumstances exis	t on the site?	Yes	_X_	No			d Plot ID: 3	
s the site significantly disturbed	d (Atypical Situation)?	Yes		No	×		3 F IOI ID. 3.	7.02
s the area a potential Problem	•	Yes		No	×	_		
emarks (Explain sample loca				140	<u>~</u>			
ne sampling plot was located of	• •			tiond 20	,			
re sampling plot was located t	on aproci ozo in apronac		10 110		•			
ECETATION (Demin					-			
EGETATION (Dominal Plant Species	nt species are checked)		% Cove	Strati	ien	Indicator		
E-data and an addation			20	Herb		FACU+		
2 Equisetum arvense			45	Herb		FAC	-	
3 Corylus comuta			20	Shrub		FACU	-	
4 Rubus discolor			15	Shrub		FACU	_	
5 Acer macrophylium			20	Tree		FACU	_	
6 Alnus rubra			20	Tree		FAC	_	
ercent of Dominant Species	that are OBL, FACW,	or FAC						
wood EAC \ ladida accida	noted (*) as showing		40					
	selection with indicating the							
norphological adaptations to we								
orphological adaptations to we emarks (Describe disturbance	es, relevant local variati	ons, se						
orphological adaptations to we emarks (Describe disturbance	es, relevant local variati	ons, se					ot met.	
emarks (Describe disturbancince less than 50% of the domi	es, relevant local variati	ons, se					ot met.	
corphological adaptations to we emarks (Describe disturbancince less than 50% of the domi	es, relevant local variati inant plants are hydroph	ons, se	wetland	vegeta	tion	criteria is no	7.071	ribe in Remarks):
corphological adaptations to we emarks (Describe disturbancince less than 50% of the domi	ces, relevant local variati inant plants are hydroph Remarks):	ons, se	wetland	vegeta	tion yara	criteria is no	7.071	ribe in Remarks):
corphological adaptations to we emarks (Describe disturbance ince less than 50% of the domination of t	ces, relevant local variati inant plants are hydroph Remarks): Tide Gage	ons, se	wetland	vegeta	tion yara	criteria is no	itors (Desc	ribe in Remarks):
emarks (Describe disturbance less than 50% of the domination of th	ces, relevant local variati inant plants are hydroph Remarks): Tide Gage	ons, se	wetland	vegeta	tion yara	ology Indicaticators:	itors (Desc	
emarks (Describe disturbance less than 50% of the dominate less th	ces, relevant local variati inant plants are hydroph Remarks): Tide Gage h	ons, se	wetland	vegeta	tion yara	ology Indicaticators: Inundated Saturated	itors (Desc	inches
emarks (Describe disturbance less than 50% of the dominate less than 50% of the dominate less than 50%	ces, relevant local variati inant plants are hydroph Remarks): Tide Gage h	ons, se	wetland	vegeta	tion yara	ology Indicaticators: Inundated Saturated Saturated Water Ma	itors (Desc in Upper 12 in Upper 18 rks	inches
emarks (Describe disturbance less than 50% of the dominate less than 50% of the dominate less than 50%	ces, relevant local variati inant plants are hydroph Remarks): Tide Gage h	ons, se	wetland	vegeta	tion yara	ology Indica dicators: Inundated Saturated Saturated Water Ma Drift Lines	itors (Desc in Upper 12 in Upper 18 rks	inches
emarks (Describe disturbance less than 50% of the dominate less than 50% of the dominate less	ces, relevant local variati inant plants are hydroph Remarks): Tide Gage h	ons, se	wetland	vegeta	tion yara	ology Indicaticators: Inundated Saturated Water Ma Drift Lines Sediment	in Upper 12 in Upper 18 inks in Upper 18	inches inches
inorphological adaptations to we temarks (Describe disturbance less than 50% of the dominate les	ces, relevant local variati inant plants are hydroph Remarks): Tide Gage h	ons, se	wetland	vegeta	tion yara	ology Indicaticators: Inundated Saturated Water Ma Drift Lines Sediment	itors (Desc in Upper 12 in Upper 18 rks	inches inches
emarks (Describe disturbance less than 50% of the domining less th	ces, relevant local variati inant plants are hydroph Remarks): Tide Gage h	ons, se	wetiand	tland H	ydro Ind	ology Indicaticators: Inundated Saturated Water Ma Drift Lines Sediment Drainage	in Upper 12 in Upper 18 in Upper 18 rks Deposits Patterns in W	inches inches l'etlands
orphological adaptations to we emarks (Describe disturbance ince less than 50% of the dome YDROLOGY ecorded Data (Describe in R Stream, Lake, or Aerial Photograph Other X No Recorded Data	ces, relevant local variati inant plants are hydroph Remarks): Tide Gage h ta Available	ons, se	wetiand	tland H	ydro Ind	ology Indicators: Inundated Saturated Water Ma Drift Lines Sediment Drainage	in Upper 12 in Upper 18 rks Deposits Patterns in W	inches inches (etlands uired):
eld Observations: Describe disturbance ince less than 50% of the dominate less than 50% of the dominate less	ces, relevant local variation in antiplants are hydropher Remarks): Tide Gage th ta Available	ons, se	wetiand	tland H	ydro Ind	ology Indicators: Inundated Saturated Water Ma Drift Lines Sediment Drainage	itors (Desc in Upper 12 in Upper 18 rks Deposits Patterns in W 2 or more req Root Channe	inches inches (etlands uired):
eld Observations: Depth to Free Water in Pit:	ees, relevant local variation in ant plants are hydropher Remarks): Tide Gage th ta Available None (in.) >15 (in.)	ons, se	wetiand	tland H	ydro Ind	ology Indicators: Inundated Saturated Saturated Water Ma Drift Lines Sediment Drainage Indicators (Oxidized I Water-Sta	in Upper 12 in Upper 18 rks Deposits Patterns in W 2 or more req Root Channe	inches inches /etlands uired): is in Upper 12 inche
inorphological adaptations to we temarks (Describe disturbance less than 50% of the dominate les	ees, relevant local variation in ant plants are hydropher Remarks): Tide Gage th ta Available None (in.) >15 (in.)	ons, se	wetiand	tland H	ydro Ind	ology Indicators: Inundated Saturated Water Ma Drift Lines Sediment Drainage Indicators (Oxidized I Water-Sta Local Soil	in Upper 12 in Upper 18 ifks Deposits Patterns in W 2 or more req Root Channe ined Leaves Survey Data	inches inches l'etlands uired): is in Upper 12 inche
Aerial Photograph Other X No Recorded Date ield Observations: Depth of Surface Water: Depth to Free Water in Pit:	ees, relevant local variation in ant plants are hydropher Remarks): Tide Gage th ta Available None (in.) >15 (in.) >15 (in.)	ons, se	wetianc	tland H	ydre	ology Indicators: Inundated Saturated Water Ma Drift Lines Sediment Drainage Indicators (Indicators (I	in Upper 12 in Upper 18 rks Deposits Patterns in W 2 or more requested the content of the conten	inches inches l'etlands uired): is in Upper 12 inche

41						Data Plot #:	39:B2
						Wetland:	39 Upland Plo
roject/S	ite: Seattle T	acoma Airport - Master P	ian Uodate	Date	: 8/27/99		
OILS	vey Data:						
vlap Uni	Name: Unn	napped			Drainage Class:		
	-			***	•	ons Confirm Map	ped Type?
laxonom	ıv (Subgroup):				Yes No	NA	· •
	escription:				165	\^_	<u>x</u>
Depth Inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Mo		Mottle Abundance/Con	Texti trast Rhizi	ure, Concretions, ospheres, etc.
4	Α	5Y 3/2			•	Clay	
-15+	<u>c</u>	5Y 4/3	5Y5/4		Few. Medium, Faint	Clay	
ydric S	oil Indicators	:					
н	istosol			Liste	d on Local Hydric	Soils List	
	istic Epipedon	ı			on State Hydric !		
	ulfidic Odor			Liste	d on National Hydr	ic Soils List	
		Moisture Regime		Aquid	: Moisture Regime		
	educing Condi			Orga	nic Streaking in Sa	ndy Soils	
	-	Chroma Colors		X Mottie	es		
—— ^H	igh Organic Co	ontent in Surface Layer		Other	(Explain in Rema	rks)	
marks		i disturbances, local varia			the critena for hyd		

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): No wetland indicators are present.

Hydrophytic Vegetation Present?

Hydric Soils Present?

Wetland Hydrology Present?

is this Sampling Point Within a Wetland?

Yes ____ No __X

Parametri:	x, Inc	
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Data Plot #:	40-A	
Wetland:	40	

					Wetia	nd:	40
▶ WE	TLAND	DETE	RMINA	TION	***************************************		
(Modified from: 1	987 CC	E Wetl	ands [)eline a ti	on Manu	ai)	
Project/Site: Seattle Tacoma Airport - Master Plan U	pdate		Date:	10/20/98			
Applicant/Owner: Port of Seattle	·		County:	King			
nvestigator: Louther and Grialou			State:	WA			·
1987 Method 1989 Method		_			Community	ID: PS	<u> </u>
o Normal Circumstances exist on the site?	Yes	x	No		•		3
the site significantly disturbed (Atypical Situation)?	Yes		No -	×	Field Plot ID). 00-A	
the area a potential Problem Area?	Yes		_	×			
emarks (Explain sample location, disturbances, pro ample established on Parcel 378. This wetland is a d e southern portion of the wetland.	epressio	•	eives sto	rmwater fr	om 12th Av	e. South.	A culvert is local
EGETATION (Dominant species are checked Plant Species	i)	% Cover	Stratum				
1 Ins pseudacorus		35	Herb		itor		
			Shrub	OBL FACU			
2 Rubus discolor		15					
Sainx lucida ssp. Lasiandra recent of Dominant Species that are OBL, FACW (cept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trimarks (Describe disturbances, relevant local variations)	race. tions, sea		Shrub	FACW	-		
Sainx lucida ssp. Lasiandra arcent of Dominant Species that are OBL, FACW (cept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trimarks (Describe disturbances, relevant local variations)	race. tions, sea	20 100 asonal eff	Shrub	FACW	-		
Sairx lucida ssp. Lasiandra arcent of Dominant Species that are OBL, FACW (cept FAC-). Include species noted (*) as showing prohological adaptations to wetlands. "T" indicates to marks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydrogeneous properties."	race. tions, sea	20 100 asonal eff	Shrub	FACW	-		
Saix iucida ssp. Lasiandra recent of Dominant Species that are OBL, FACW recept FAC-). Include species noted (*) as showing rephological adaptations to wetlands. "T" indicates to marks (Describe disturbances, relevant local variat rice greater than 50% of the dominant plants are hydr	race. tions, sea	100 asonal eff	Shrub ects, etc	FACW	ria is met.	Describe	in Remarks)
Salix lucida ssp. Lasiandra recent of Dominant Species that are OBL, FACW cept FAC-). Include species noted (") as showing rphological adaptations to wetlands. "T" indicates to marks (Describe disturbances, relevant local variat ce greater than 50% of the dominant plants are hydi	race. tions, sea	20 100 asonal eff the wetla	Shrub ects, etc nd veget	FACW	ria is met.	Describe	in Remarks):
Salix lucida ssp. Lasiandra recent of Dominant Species that are OBL, FACW cept FAC-). Include species noted (*) as showing rphological adaptations to wetlands. "T" indicates tr marks (Describe disturbances, relevant local variat ce greater than 50% of the dominant plants are hydr DROLOGY corded Data (Describe in Remarks):	race. tions, sea	20 100 asonal eff the wetla	Shrub ects, etc nd veget	FACW .): ation criter trology inc	nia is met.	Describe	in Remarks):
Salix lucida ssp. Lasiandra recent of Dominant Species that are OBL, FACW cept FAC-). Include species noted (*) as showing rephological adaptations to wetlands. "T" indicates tr marks (Describe disturbances, relevant local variations ce greater than 50% of the dominant plants are hydi DROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage	race. tions, sea	20 100 asonal eff the wetla	Shrub ects, etc nd veget	FACW .): dation criter drology Indicators: Inunda	nia is met.		
Salix lucida ssp. Lasiandra recent of Dominant Species that are OBL, FACW cept FAC-). Include species noted (*) as showing rephological adaptations to wetlands. "T" indicates to marks (Describe disturbances, relevant local variations of the dominant plants are hydrograph (DROLOGY) COROLOGY Corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	race. tions, sea	20 100 asonal eff the wetla	Shrub ects, etc nd veget	FACW in ation criter irology Indicators: Inundators Satura	dicators (er 12 inch	es
Salix lucida ssp. Lasiandra recent of Dominant Species that are OBL, FACW cept FAC-). Include species noted (") as showing rephological adaptations to wetlands. "T" indicates to marks (Describe disturbances, relevant local variat ce greater than 50% of the dominant plants are hydi "DROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	race. tions, sea	20 100 asonal eff the wetla	Shrub ects, etc nd veget	FACW Arology Indicators: Inunda Satura Satura Water	dicators (i	er 12 inch	es
Salix lucida ssp. Lasiandra recent of Dominant Species that are OBL, FACW cept FAC-). Include species noted (*) as showing rephological adaptations to wetlands. T* indicates to marks (Describe disturbances, relevant local variat ace greater than 50% of the dominant plants are hydr //DROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	race. tions, sea	20 100 asonal eff the wetla	ects, etc. nd veget and Hyc	FACW Arology Indicators: Inunda Satura Satura Water Drift Li	dicators (factors) (factor	er 12 inch er 18 inch	es
Salix lucida ssp. Lasiandra recent of Dominant Species that are OBL, FACW cept FAC-). Include species noted (") as showing rephological adaptations to wetlands. "T" indicates to marks (Describe disturbances, relevant local variat ce greater than 50% of the dominant plants are hydi "DROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	race. tions, sea	20 100 asonal eff the wetla	ects, etc. nd veget and Hyc	FACW Arology Indicators: Inund: Satura Water Drift Li Sedim	dicators (i ated ated in Uppe ated in Uppe Marks ines ent Depositi	er 12 inch er 18 inch s	e s es
3 Sairx lucida ssp. Lasiandra recent of Dominant Species that are OBL, FACW recept FAC-). Include species noted (*) as showing imphological adaptations to wetlands. "T" indicates to marks (Describe disturbances, relevant local variat rice greater than 50% of the dominant plants are hydrograph OROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	race. tions, sea	20 100 asonal eff the wetla	ects, etc. nd veget and Hyc	FACW Arology Indicators: Inund: Satura Water Drift Li Sedim	dicators (factors) (factor	er 12 inch er 18 inch s	e s es
Salix lucida ssp. Lasiandra recent of Dominant Species that are OBL, FACW cept FAC-). Include species noted (*) as showing rphological adaptations to wetlands. "T" indicates to marks (Describe disturbances, relevant local variat ce greater than 50% of the dominant plants are hydi DROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	race. tions, sea	100 assonal eff the wetla Weti	ects, etc. nd veget and Hyc	FACW Arology Inc Indicators: Inunda Satura Satura Water Drift Li Sedim Draina	dicators (interpretation of the distribution o	er 12 inch er 18 inch s in Wetla	es es nds
Sainx lucida ssp. Lasiandra recent of Dominant Species that are OBL, FACW recept FAC-). Include species noted (*) as showing imphological adaptations to wetlands. "T" indicates to marks (Describe disturbances, relevant local variat rice greater than 50% of the dominant plants are hydrograph CDROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available dd Observations: Depth of Surface Water: None (in.)	race. tions, sea	100 assonal eff the wetla Weti	ects, etc. nd veget and Hyc	FACW ation criter trology Indicators: Inunda Satura Satura Water Drift Li Sedim Draina y Indicato	dicators (in a ted ated ated in Upper Marks in the period in Upper Marks in the period	er 12 inch er 18 inch s in Wetla e require	es es nds d):
3. Sainx lucida ssp. Lasiandra recent of Dominant Species that are OBL, FACW recept FAC-). Include species noted (*) as showing imphological adaptations to wetlands. "T" indicates to marks (Describe disturbances, relevant local variat rice greater than 50% of the dominant plants are hydrograph OROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X. No Recorded Data Available d Observations: Depth of Surface Water: Depth to Free Water in Pit: None (in.)	race. tions, sea	100 assonal eff the wetla Weti	ects, etc. nd veget and Hyc	irology Indicators: Inunda Satura Satura Water Drift Ling Sedim Draina y Indicato	dicators (i ated ated in Uppe ated in Uppe Marks ines ent Depositi ge Patterns rs (2 or moned Root Cha	er 12 inch er 18 inch s in Wetla e require	es es nds
Saix lucida ssp. Lasiandra Procent of Dominant Species that are OBL, FACW Recept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates to remarks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydrograph of the Company of the Gage Aerial Photograph Other X No Recorded Data Available Id Observations: Depth of Surface Water: None (in.) Depth to Free Water in Pit: >18 (in.)	race. tions, sea	100 assonal eff the wetla Weti	ects, etc. nd veget and Hyc	rology Indicators: Inunda Satura Water Drift Li Sedim Draina y Indicato Oxidiz Water-	dicators (i ated ated in Uppe Marks ines ent Depositi ge Patterns rs (2 or moned Root Cha Stained Lea	er 12 inch er 18 inch s in Wetta e require annels in aves	es es nds d):
Sainx fucida ssp. Lasiandra excent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing prephological adaptations to wetlands. "T" indicates to exmarks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydrograph Corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Id Observations: Depth of Surface Water: Depth to Free Water in Pit: None (in.)	race. tions, sea	100 assonal eff the wetla Weti	ects, etc. nd veget and Hyc	rology Indicators: Inunda Satura Water Drift Li Sedim Draina y Indicato Oxidiz Water-	dicators (i ated ated in Uppe ated in Uppe Marks ines ent Depositi ge Patterns rs (2 or moned Root Cha	er 12 inch er 18 inch s in Wetta e require annels in aves	es es nds d):

observation of primary and secondary wetland hydrologic indicators.

						ita Piot #: letiand:	40-A 40
Project/S	Site: Seattle Ta	acoma Airport - Master	Plan Update	Date	10/20/98	·	
OILS	vey Data:						
/lap Uni	t Name: Unm	apped			Drainage Class:		
					Field Observations	Confirm Mar	oped Type?
ſaxonon	ny (Subgroup):				Yes No	NA	×
	Description:			<u></u>			
epth nches)	Horizon	Matrix Color (Munsell Moist)	Mottle Cold (Munsell M		Mottle Abundance/Contras	-	ture, Concretions
-3	o	•	·		•	Root	s and shoots
-10+	A/B	10YR 3/2	7.5Y 5/6		Many, Medium, Distinct	Sano	dy loam
F F F F F F F F F F F F F F F F F F F	Reducing Condi Sleyed or Low-(ligh Organic Co (Describe soil	Moisture Regime tions	nations, etc.):	Lister Lister Aquic Organ X Mottle	d on Local Hydric Soil d on State Hydric Soil d on National Hydric S : Moisture Regime nic Streaking in Sand es (Explain in Remarks	s List Soils List y Soils	
VETLA	ND DETER	MINATION		, , , , , , , , , , , , , , , , , , ,			
ydrophy	tic Vegetation	Present?	es <u>x</u> No	·	Is this San	npling Point	Within a Wetlar
-	oils Present?		es <u>X</u> No	·	Yes	X No	0
etiand b	Hydrology Pre	sent? Y	es X No)	. 33		

The presence of all three parameters indicate this area is a wetland.

Para	metri	x, Inc.



Data Plot #:

L	MET	LAND DET	EDMINATI	Wetland:	41a
(Modified from: 19	87 COE We	tlands Del	ineation Manual)	
Project/Site: Seattle Tacoma A	irport - Master Plan Up	date	Date: 10/	20/98	
Applicant/Owner: Port of Sea	ittie		County: K	ling	
Investigator: Louther, Kleindl,	Grialou		State: V	VA	
✓ 1987 Method	lethod		-	Community ID:	PEM
Do Normal Circumstances exist	on the site?	Yes X	No		
Is the site significantly disturbed	(Atypical Situation)?	Yes	No X	- Field Plot ID: 67	-A
is the area a potential Problem A					
Remarks (Explain sample local		Yes	No <u>X</u>	_	
This data plot is located in an em				an open water pond on i	-arcer 3/3.
Plant Species	epodes are checked,	% Cove	er Stratum	Indicator	
1 Festuca arundinacea		5	Herb	FAC	
2 Matricana matricarioides		5	Herb	FACW	
3 Plantago major		5	Herb	FAC+	
✓ 4. Poa sp		70	Herb	FAC	
5. Trifolium sp.			Herb	FAC	
 ✓ 6 Salix lucida ssp. Lasiandra ✓ 7 Alnus rubra 		20	Shrub	FACW+	
✓ 8 Populus tnchocarpa		$\frac{20}{20}$	Tree	FAC FAC	
Remarks (Describe disturbance: Since greater than 50% of the dor	s, relevant local variation ininant plants are hydro	ons, seasonal e	effects, etc.): land vegetation	on criteria is met	
HYDROLOGY					
Recorded Data (Describe in Re	marks):	We	tiand Hydrol	logy Indicators (Descri	i- D / /
Stream, Lake, or T			Primary India		be in Remarks):
Aerial Photograph	3-		,	Inundated	
Other				Saturated in Upper 12 in	ches
X No Recorded Data	Available			Saturated in Upper 18 in	
				Water Marks	
				Drift Lines	
				Sediment Deposits	
field Observations:			<u> </u>	Drainage Patterns in We	tlands
Depth of Surface Water:	None (in.)		Secondary I	ndiantom (2 == ====	
Depth to Free Water in Pit:	>13 (in.)		occordary in	ndicators (2 or more requ	
Depth to Saturated Soil:	>13 (in.)			Oxidized Root Channels	in Upper 12 inches
				Water-Stained Leaves	
				Local Soil Survey Data	
Ammanta (As as				Other (Explain in Remark	(S)
Remarks (As relevant, describe	recent precipitation, hy	arologic modifi	cations, local	variations, etc.):	
Vetland hydrology is frequently ab lydric soil the wetland hydrology c vetland	sent from wetlands dur riteria is assumed to be	ang the dry sun present. Add	nmer months. itionally, an o	Based on the presence pen water pond is present	of wetland vegetation ar within the center of the

AR 047728

4								Data Plot	#:	41a-A
								Wetland:		41a
roject/Site	e: Seattle Ta	acoma Airport - Mast	ter Plan	Update		Date:	10/20/98			
SOILS								-		
Soil Surve	ey Data:									
Map Unit i	Name: Unm	apped					Drainage Clas	is:		
							Field Observa	tions Confirm	Mapp	ed Type?
Faxonomy	(Subgroup):						Yes I	No	NA	x
•	scription:									
Depth	Horizon	Matrix Color		Mottle C	color		Mottle		Textu	re, Concretions
Inches)	Designation	(Munsell Moist)		(Munsel			Abundance/Co	ontrast		spheres, etc.
-13	A	10YR 3/2		7.5YR 5/6	j		Common, Medium	n, Distinct	Loam	
His His Sul	ducing Condi	Moisture Regime tions Chroma Colors				Listed Listed Aquic Organ Mottle		c Soils List dric Soils List ne Sandy Soils	ł	
	h Organic Co	ontent in Surface Lay	er			Other	(Explain in Rem	narks)		
Hig										
Hig emarks (Describe soil	disturbances, local values of the disturbances of the hydrical values of the hydrical value				orizon con	pacted due to a	nctive cattle gi	razing	
Hig emarks (oil color ai	Describe soil	cators meet the hydri				orizon con	pacted due to a	active cattle g	razing	
Hig emarks (oil color al	Describe soil of other indic	MINATION				orizon con	pacted due to a	active cattle g	razing	
Hig emarks (oil color al VETLAN ydrophyti	Describe soil and other indice DETER C Vegetation	MINATION				orizon com				
Hig emarks (oil color al VETLAN ydrophytic ydric Soil:	Describe soil of other indic	MINATION Present?	c soil c	riteria. L	Jpper ho	orizon con				Vithin a Wetia

The presence of all three parameters indicate this area is a wetland.

P	ar	a	m	e	tr	į	X	,	I	n	C	



					Data Pict #.	41D-A	
L	WET	LAND DE	TERMIN	ATION	Wetland:	41b	
	(Modified from: 19				n Manual)		
Present/Since SeeMin Tonne			_				
Project/Site: Seattle Tacoma		date	Date:	10/21/98			
Applicant/Owner: Port of S	eattle		County				
Investigator: Marti Louther			State:	WA			
⊻ 1987 Method ☐ 1989	Method			Co	ommunity ID:	PEM	
Do Normal Circumstances exis	it on the site?	Yes _>	No No	Fi	eld Plot ID: 68	-A	
Is the site significantly disturbe	d (Atypical Situation)?	Yes	No	<u>x</u>			
is the area a potential Problem	Area?	Yes	No	X			
Remarks (Explain sample loc Sampled established on Parcel			re and has o	compacted soil	l and disturbed (vegetation.	
VEGETATION Pomina	nt species are checked)						_
Plant Species		% C	over Stratu	ım İndicato	r		
✓ 1 Agrostis gigantea		30	Herb	FAC			
2. Hypochaeris radicata		3	Herb	FACU	_		
3 Juncus effusus		Ť	Herb	FACW			
4 Plantago major		5	Herb	FAC+			
✓ 5 Poa sp.		60	Herb	NL			
6 Ranunculus repens		<u>T</u>	Herb	FACW			
7 Rumex chspus			Herb	FAC			
8 Tritolium repens 9 Populus balsamifera		<u>T</u>	Herb	FACU+			
Percent of Dominant Species			Tree	FAC			
(except FAC-). Include species morphological adaptations to we Remarks (Describe disturbance Two black cottonwoods are root compacted soils and disturbed to the compacted soils are the compacted soils and disturbed to the compacted soils and disturbed to the compacted soils and the compacted soils are the comp	etlands. "T" indicates tra les, relevant local variation and in the center of the ware	ce. ons, season: etland, but o	lo not make	un a forested	class. The well	and is a cow pastu	re with
compacted soils and disturbed v dominant hydrophytic species pi	regetation. However, if tr	ie unknown .	Poa species	S IS FAC OF WA	tter then amoto	than 50% of the	
HYDROLOGY							_
Recorded Data (Describe in R	temarks):		Wetland Hy	drology India	ators (Descri	be in Remarks):	
Stream, Lake, or	Tide Gage			Indicators:	ALLOID (DESCII	De in Remarks):	
Aerial Photograph	<u>-</u>		•	Inundate	ud.		
Other					d in Upper 12 in	rhee	
X No Recorded Dat	a Available				d in Upper 18 in		
			x			G103	
				Drift Line			
				Sedimen	t Deposits		
Field Observations:			X	Drainage	Patterns in We	tlands	
Depth of Surface Water:	None (in)						
Depth to Free Water in Pit:	None (in.)		Seconda	ry indicators	(2 or more requ	red):	
Depth to Saturated Soil:	>18 (in.)			Oxidized	Root Channels	in Upper 12 inches	
	(111.)				ained Leaves		
					il Survey Data		
					oplain in Remark	(S)	
Remarks (As relevant, describe	e recent precipitation by	drologia ===				•	
This wetland is in a topographical hydrology is present.	depression. Evidence	of standing w	unications, li water by the	ocal variations presence of a	i, etc.): lussocks, shallo	WIV rooted trees th	,,,e
y arongy is present.				_		, rooted trees, tr	U3

nches) Designation (Munsell Moist) (Munsell Moist) Abundance/Contrast Rhizospheres, etc.	Λ								Data Plot	#:	41b-A
OILS oil Survey Data: ap Unit Name: Unmapped	•								Wetland:		41b
ap Unit Name: Unmapped	oject/Site	e: Seattle Ta	acoma Airport - Maste	r Pla	n Upda	te	Date:	10/21/98			
Field Observations Confirm Mapped Type? Yes No NA X offile Description: appth Honzon Matrix Color (Munsell Moist) (Munsell Moist) Abundance/Contrast Rhizospheres, etc. Designation (Munsell Moist) (Munsell Moist) Abundance/Contrast Rhizospheres, etc. Designation (Munsell Moist) (Munsell Moist) (Munsell Moist) Abundance/Contrast Rhizospheres, etc. Designation (Munsell Moist) (Munsell Moist) (Munsell Moist) Abundance/Contrast Rhizospheres, etc. Designation (Munsell Moist) (Munsell Mois		ey Data:									
Asonomy (Subgroup): Per No NA X Repth Honzon Matrix Color (Munsell Moist) (Munsell Moist) Abundance/Contrast Rhizospheres, etc. Repth Honzon Matrix Color (Munsell Moist) (Munsell Moist) Abundance/Contrast Rhizospheres, etc. Repth Honzon Matrix Color (Munsell Moist) (Munsell Moist) Abundance/Contrast Rhizospheres, etc. Repth Honzon Matrix Color (Munsell Moist) (Munsell Moist) Abundance/Contrast Rhizospheres, etc. Repth Honzon Matrix Color (Munsell Moist) (Munsell Moist) Abundance/Contrast Rhizospheres, etc. Repth Honzon Matrix Color Silt loam Per Silt Ioam Reductors: Histosol Listed on Local Hydric Soils List Listed on State Hydric Soils List Listed on National Hydric Soils List Listed on National Hydric Soils List Aquic Moisture Regime Aquic Moisture Regime Aquic Moisture Regime Organic Streaking in Sandy Soils X Gleyed or Low-Chroma Colors X Mottles High Organic Content in Surface Layer Other (Explain in Remarks)	lap Unit N	name: Unm	apped					Drainage Class	:		
pofile Description: apth Honzon Matrix Color (Munsell Moist) Mottle Color Abundance/Contrast Rhizospheres, etc. 10 A 10YR 3/2 10YR 4/6 Few. Fine. Distinct Silt loam 12 B 2.5Y 3/2 10YR4/6 Few. Fine. Distinct Silt loam 13 Evitable Silt loam 14 Ioyr Silt loam 15 Evitable Silt loam 16 Evitable Silt loam 17 Evitable Silt loam 18 Evitable Silt loam 18 Evitable Silt loam 18 Evitable Silt loam 19 Evitable Silt loam 10 Evitable Silt loam 11 Evitable Silt loam 12 Evitable Silt loam 13 Evitable Silt loam 14 Evitable Silt loam 15 Evitable Silt loam 16 Evitable Silt loam 17 Evitable Silt loam 18 Evitable Silt loam 19 Evitable Silt loam 10 Evitable S								Field Observati	ons Confirm	Мар	ped Type?
Honzon Matrix Color (Munsell Moist) Mottle Color (Munsell Moist) Abundance/Contrast Rhizospheres, etc. Mottle Color (Munsell Moist) Abundance/Contrast Rhizospheres, etc. Mottle Texture, Concretions Rhizospheres, etc. Mo	axonomy	(Subgroup):	·····					Yes N	°	NA	<u>x</u>
rdric Soil Indicators: Histosol Histic Epipedon Sulfidic Odor Sulfidic Odor Probable Aquic Moisture Regime Reducing Conditions X Gleyed or Low-Chroma Colors High Organic Content in Surface Layer Marks (Describe soil disturbances, local variations, etc.): Histosol Listed on Local Hydric Soils List Listed on National Hydric Soils List Aquic Moisture Regime Organic Streaking in Sandy Soils X Mottles Other (Explain in Remarks)	rofile De: epth nches)	Honzon							ntrast		
Histosol Histic Epipedon Sulfidic Odor Probable Aquic Moisture Regime Reducing Conditions X Gleyed or Low-Chroma Colors High Organic Content in Surface Layer Marks (Describe soil disturbances, local variations, etc.): Listed on Local Hydric Soils List Listed on National Hydric Soils List Aquic Moisture Regime Organic Streaking in Sandy Soils X Mottles Other (Explain in Remarks)	10	A	10YR 3/2		10YR 4	/6		Few. Fine, Distinct		Silt lo	am
Histosol Listed on Local Hydric Soils List Listed on State Hydric Soils List Sulfidic Odor Listed on National Hydric Soils List Probable Aquic Moisture Regime Aquic Moisture Regime Organic Streaking in Sandy Soils X Gleyed or Low-Chroma Colors High Organic Content in Surface Layer Mottles Other (Explain in Remarks)	-12	В	2.5Y 3/2		10YR4/	6		Few. Fine. Distinct		Silt lo	em
indicators of rivoric soil are present	His His Sul Pro Rec X Gle Hig	stosol stic Epipedon lifidic Odor obable Aquic ducing Condi eyed or Low-C th Organic Co Describe soil	Moisture Regime tions Chroma Colors ontent in Surface Layo disturbances, local v		ons. etc		Listed Listed Aquic Organ Mottle	on State Hydric on National Hyd Moisture Regime ic Streaking in Si s	Soils List ric Soils List e andy Soils		
	ETLAN	D DETER	MINATION								
ETLAND DETERMINATION	drophyti	c Vegetation	Present?	Yes	X	No		Is this	Sampling P	oint	Within a Wetlar
described in Manageria and Review Box 1997	dric Soil:	s Present?		Y e s	_x	No		•	Yes X	No	
drophytic Vegetation Present? Yes X No Is this Sampling Point Within a Wetlanderic Soils Present? Yes X No			sent?			_			160 V	No	,

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): The presence of all three parameters indicate this area is a wetland.



Data Plot #:

41b-B

WET	LAN	DETE	RMINA	ATIO	Wetland: ON	41b Upland Plot
(Modified from: 19						
Project/Site: Seattle Tacoma Airport - Master Plan Up	date		Date:	10/2	21/98	
Applicant/Owner: Port of Seattle			County:	К	ing	
Investigator: Marti Louther			State:	w	/A	
▼ 1987 Method					Community ID:	Upland
Do Normal Circumstances exist on the site?	Yes	_x_	No		Field Plot ID:	
Is the site significantly disturbed (Atypical Situation)?	Yes		No	х		
Is the area a potential Problem Area?	Yes		No .	×	-	
Remarks (Explain sample location, disturbances, prob		•			-	
This data plot is located east of Wetland 41b. Data plot 41b and 40. Sampled established on Parcel 379.	41-B a	iso repres	sents up	iand	conditions present are	ound Loop 41a (duck pon
VEGETATION (✓Dominant species are checked)			_			
Plant Species		% Cover	Stratus	m	Indicator	
1 Agrostis gigantea 2 Hypochaeris radicata		10	Herb		FAC	
3 Trifolium repens		20	Herb		FACU+	
temarks (Describe disturbances, relevant local variation in the wetland vegetation criteria are not met since the are IYDROLOGY					nd plants.	
Recorded Data (Describe in Remarks):		Weti	and Hy	drok	ogy Indicators (Des	cribe in Remarks):
Stream, Lake, or Tide Gage			rimary			and minimum.
Aerial Photograph					inundated	
Other					Saturated in Upper 12	2 inches
X No Recorded Data Available				_	Saturated in Upper 18	3 inches
					Water Marks	
				_	Drift Lines	
				_	Sediment Deposits	(A) = 41 =
eld Observations:				_	Drainage Patterns in \	/vetiands
Depth of Surface Water: None (in.)		S	Seconda	r∨ ir	ndicators (2 or more re	equired):
Depth to Free Water in Pit: >18 (in.)						
Depth to Saturated Soil: >18 (in.)					Water-Stained Leaves	els in Upper 12 inches
					Local Soil Survey Date	=
				_	Other (Explain in Rem	
emarks (Ac relevant describ						ains)
this data plot is leasted as a second recent precipitation, by	drologi	c modifica	ations, lo	cal	variations, etc.):	
emarks (As relevant, describe recent precipitation, hy his data plot is located on a topographic bench at a high	drologi er elev	c modifica ation than	itions, lo	cal v	variations, etc.): I and no evidence of h	ydrology is pre:

							Data P	ot#:	41b-B
							Wetian	nd:	41b Upland Plo
Project/Si	te: Seattle Ta	acoma Airport - Master	Plan Upo	tate	Date:	10/21/98	l		
SOILS Soil Sun	vey Data:								
Map Unit	Name: Unm	apped				Drainage	Class:		
						Field Obs	ervations Conf	irm Map	ped Type?
Taxonom	y (Subgroup):					Yes	No	NA	X
Profile De	escription:						_	-	
Depth (Inches)	Horizon Designation	Matrix Color (Munsell Moist)		le Color nsell Moist)		Mottle Abundano	e/Contrast		ure, Concretions, ospheres, etc.
0-12	A	10YR 3/3	10YR	4/6		Few. Fine, D	istinct	Sano	ly loa m
12-16+	В	10YR 3/4						Sand	ly loar n
Hydric Sc	oil Indicators:								
-	istosol				Listed	on Local F	lydric Soils List	1	
Hi	istic Epipedon						lydric Soils List		
St	ulfidic Odor						l Hydric Soils L		
Pr	robable Aquic	Moisture Regime			_	Moisture R			
R	educing Condi	tions			Organ	ic Streaking	in Sandy Soil	s	
	•	Chroma Colors			Mottle	5			
Hi	gh Organic Co	ontent in Surface Layer			Other	(Explain in	Remarks)		
		disturbances, local va	nations, e	tc.):					
lo indicato	ors of hydric s	oil are present.							
NETLAI	ND DETER	MINATION							
	tic Vegetation		es	No	Ü		Abia Camatia	- 0-:	Address I am
	ils Present?				<u>×</u>	ıs	this Sampling	Point	Within a Wetland
,		Y	es	_ No _	X		Yes	No	x

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): This area is an upland since all wetland parameters are absent.

Param	etrix,	inc.
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/Modified from: 10	LAND DETE		
(MODILLEG HOIL, 13	87 COE Wet	lands De	elineation Manual)
roject/Site: Seattle Tacoma Airport - Master Plan Upo	date	Date: 7/	7/98
pplicant/Owner: Port of Seattle		County:	King
vestigator: William Kleindl		State:	WA
1987 Method			Community ID: PFO
Normal Circumstances exist on the site?	Yes X	No	
the site significantly disturbed (Atypical Situation)?	Yes	No X	— Field Plot ID: 20-A
the area a potential Problem Area?	Yes	No X	
marks (Explain sample location, disturbances, prob			
e wetland sample plot is located in a ravine with steep		lat is lacete	id on Pomel 406
	o oropou. The p	or 12 tocate	U ON Parcer 490.
GETATION (Dominant species are checked)			
Plant Species	% Cover	Stratum	Indicator
1. Athyrium felix-femina	40	Herb	FAC
2 Equisetum telmateia	75	Herb	FACW
3 Glycena elata	20	Herb	OBL
4 Acer circinatum	20	Shrub	FAC-
5. Rubus discolor	75	Shrub	FACU
6 Rubus spectabilis 7 Acer macrophyllum	25 25	Shrub	FAC+
8 Ainus rubra	75	Tree	<u>FACU</u>
cent of Dominant Species that are OBL, FACW, of		1166	FAC
cept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T" indicates trace trace (Describe disturbances, relevant local vanations.	ns, seasonal ef	ects, etc.):	
phological adaptations to wetlands. "T" indicates trac	ce. ons. seasonal eff	fects, etc.):	ion criteria is met.
phological adaptations to wetlands. "T" indicates trace in the indicates in the indicate in the indicates in the indicate in the in	ce. ons. seasonal eff	fects, etc.): and vegetat	ion criteria is met.
rphological adaptations to wetlands. "T" indicates trac narks (Describe disturbances, relevant local vanation are greater than 50% of the dominant plants are hydro-	ce. ons. seasonal eff phytic, the wetla	ind vegetat	ion criteria is met.
rphological adaptations to wetlands. "T" indicates trac narks (Describe disturbances, relevant local vanation for greater than 50% of the dominant plants are hydro, DROLOGY	ce. ons. seasonal eff phytic, the wetla	and vegetat	ology Indicators (Describe in Remarks):
rphological adaptations to wetlands. "T" indicates tracinarks (Describe disturbances, relevant local variations of the dominant plants are hydrology proceeding the proceeding of the dominant plants are hydrology corded Data (Describe in Remarks):	ce. ons. seasonal eff phytic, the wetla	ind vegetat	ology Indicators (Describe in Remarks):
rphological adaptations to wetlands. "T" indicates tracinarks (Describe disturbances, relevant local variations of the dominant plants are hydrology corded Data (Describe in Remarks): Stream, Lake, or Tide Gage	ce. ons. seasonal eff phytic, the wetla	and vegetat	ology Indicators (Describe in Remarks): Inundated
phological adaptations to wetlands. "T" indicates trac narks (Describe disturbances, relevant local variation of greater than 50% of the dominant plants are hydrol DROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	ce. ons. seasonal eff phytic, the wetla	ind vegetat	ology Indicators (Describe in Remarks): icators: Inundated Saturated in Upper 12 inches
phological adaptations to wetlands. "T" indicates trace narks (Describe disturbances, relevant local variations of greater than 50% of the dominant plants are hydrogen processes of the dominant plants are hydrogen processes. Stream, Lake, or Tide Gage Aerial Photograph Other	ce. ons. seasonal eff phytic, the wetla	ind vegetat	ology Indicators (Describe in Remarks): Inundated
phological adaptations to wetlands. "T" indicates trace narks (Describe disturbances, relevant local variations of greater than 50% of the dominant plants are hydrogen processes of the dominant plants are hydrogen processes. Stream, Lake, or Tide Gage Aerial Photograph Other	ce. ons. seasonal eff phytic, the wetla	ind vegetat	ology Indicators (Describe in Remarks): Icators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches
phological adaptations to wetlands. "T" indicates trace narks (Describe disturbances, relevant local variations of greater than 50% of the dominant plants are hydrogen processes of the dominant plants are hydrogen processes. Stream, Lake, or Tide Gage Aerial Photograph Other	ce. ons. seasonal eff phytic, the wetla	and vegetat	ion criteria is met. Diogy Indicators (Describe in Remarks): Icators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
phological adaptations to wetlands. "T" indicates trace marks (Describe disturbances, relevant local variations of greater than 50% of the dominant plants are hydrology corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	ce. ons. seasonal eff phytic, the wetla	ind vegetat	ion criteria is met. Diogy Indicators (Describe in Remarks): Icators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
phological adaptations to wetlands. T indicates trace narks (Describe disturbances, relevant local variations of greater than 50% of the dominant plants are hydrogen processed of the dominant plants are hydrogen processed of the dominant plants are hydrogen plants. DROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	ce. ons. seasonal efficiency of the wetla Wet	and vegetat	ion criteria is met. Diogy Indicators (Describe in Remarks): Icators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
phological adaptations to wetlands. "T" indicates trace marks (Describe disturbances, relevant local variations of greater than 50% of the dominant plants are hydrology corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available	ce. ons. seasonal efficiency of the wetla Wet	and vegetat	plogy Indicators (Describe in Remarks): icators: inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required):
phological adaptations to wetlands. T indicates trace marks (Describe disturbances, relevant local variations of greater than 50% of the dominant plants are hydrogen processes of the dominant plants are hydrogen processes. DROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Depth of Surface Water: None (in.)	ce. ons. seasonal efficiency of the wetla Wet	and vegetat	ion criteria is met. Diogy Indicators (Describe in Remarks): Icators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
phological adaptations to wetlands. T indicates trace narks (Describe disturbances, relevant local variations of greater than 50% of the dominant plants are hydrogen greater than 50% of the d	ce. ons. seasonal efficiency of the wetla Wet	and vegetat	ion criteria is met. plogy Indicators (Describe in Remarks): icators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inche Water-Stained Leaves
phological adaptations to wetlands. T indicates trace narks (Describe disturbances, relevant local variations of greater than 50% of the dominant plants are hydrogen greater than 50% of the d	ce. ons. seasonal efficiency of the wetla Wet	and vegetat	ion criteria is met. plogy Indicators (Describe in Remarks): icators: inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inche Water-Stained Leaves Local Soil Survey Data
phological adaptations to wetlands. T indicates trace narks (Describe disturbances, relevant local variations of greater than 50% of the dominant plants are hydrogen greater than 50% of the d	ce. ons. seasonal efficiency of the wetla Wet	and vegetat	ion criteria is met. plogy Indicators (Describe in Remarks): icators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inche Water-Stained Leaves
phological adaptations to wetlands. T indicates trace narks (Describe disturbances, relevant local variations of greater than 50% of the dominant plants are hydrogen greater than 50% of the d	wet. Wet	and vegetated and Hydro	ion criteria is met. Diogy Indicators (Describe in Remarks): Icators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inche Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)

SOILS Soil Survey Data:	le Tacoma Airport - Master	Plan Update	Date:	7/7/98	Wetland	:	44
SOILS Soil Survey Data:	le Tacoma Airport - Master	Plan Update	Date:	:7/7/98			
SOILS soil Survey Data:	le Tacoma Airport - Master	Plan Update	Date:	7/7/98			···
OILS oil Survey Data:							···
Soil Survey Data:							
-							
	Unmapped			Drainage	Class:		
				-	ervations Confirm	n Mapo	ed Type?
T						• •	•
Taxonomy (Subgro		 		Yes	_ No	NA	<u>x</u>
Profile Description Depth Horizon		Maria Cala	_	Name -		T	
	Matrix Color Ition (Munsell Moist)	Mottle Color (Munsell Mo		Mottle Abundand	ce/Contrast		re, Concretions spheres, etc.
-5 A	10YR 2'1	-		•		Loam	
⊱7 Cg	5BG 5/1	-				Coarse	e sand
7 Ob	10YR 2/1	-		-		Peat fr	bnc
lydric Soil Indicat	ors:						
Histosol			Listed	on Local F	lydric Soils List		
Histic Epipe	don				lydric Soils List		
X Sulfidic Odd	or		Listed	on Nationa	al Hydric Soils Lis	st	
	uic Moisture Regime		X Aquic	Moisture R	egime		
X Reducing C	onditions		Organ	ic Streakin	g in Sandy Soils		
	ow-Chroma Colors		Mottle	-			
High Organi	c Content in Surface Layer		Other	(Explain in	Remarks)		
emarks (Describe	soil disturbances, local va-	riations, etc.):					

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): All three parameters indicate the area is a wetland.

				Data Plot #:	44-A2
WETL	AND DETE	DMINATI	ON	Wetland:	44
(Modified from: 1987			-	Manual)	 -
roject/Site: Seattle Tacoma Airport - Master Plan Updat			6/98	Walloul,	
Applicant/Owner: Port of Seattle					***
vestigator: William Kleindl		· ·	(ing VA		
1987 Method 1989 Method		- June -	<u> </u>	······································	
	V V	A	Cor	nmunity ID: P	SS
	Yes X	No		d Plot ID: 44-A	\
	Yes	No X	_		
the area a potential Problem Area? emarks (Explain sample location, disturbances, problem	Yes	No X	_		
Plant Species	% Cover	Stratum	Indicator		
·					
,	% Cover 60 5	Stratum Herb	FAC FAC	_	
1 Equisetum arvense	60	Herb	FAC	<u>-</u>	
Equisetum arvense Holcus lanatus Cvtisus scopenius Rubus discolor	60 5	Herb Herb	FAC FAC	- - -	
1 Equisetum arvense 2 Holcus lanatus 3 Cvtisus scopanius 4 Rubus discolor 5 Rubus spectabilis	60 5 T 80 20	Herb Herb Shrub Shrub Shrub	FAC UPL FACU FAC+	- - - -	
1 Equisetum arvense 2 Holcus lanatus 3 Cytisus scoparius 4 Rubus discolor 5 Rubus spectabilis 6 Alnus rubra	60 5 T 80 20 10	Herb Herb Shrub	FAC UPL FACU	- - - -	
1 Equisetum arvense 2 Holcus lanatus 3 Cvtrisus scopanius 4 Rubus discolor 5 Rubus spectabilis 6 Alnus rubra recent of Dominant Species that are OBL, FACW, or	5 T 80 20 10	Herb Herb Shrub Shrub Shrub	FAC UPL FACU FAC+	- 	
1 Equisetum arvense 2 Holcus lanatus 3 Cytisus scoparius 4 Rubus discolor 5 Rubus spectabilis 6 Alnus rubra recent of Dominant Species that are OBL, FACW, or locept FAC-). Include species noted (*) as showing	5 T 80 20 10 FAC 66	Herb Herb Shrub Shrub Shrub	FAC UPL FACU FAC+	- - - -	
1. Equisetum arvense 2. Holicus lanatus 3. Cytisus scoparius 4. Rubus discolor 5. Rubus spectabilis 6. Alnus rubra recent of Dominant Species that are OBL, FACW, or I coept FAC-). Include species noted (*) as showing prohological adaptations to wetlands. "T" indicates trace. marks (Describe disturbances, relevant local vanations	5 T 80 20 10 FAC 66	Herb Herb Shrub Shrub Shrub Tree	FAC UPL FACU FAC+ FAC	- - - - -	
1. Equisetum arvense 2. Holcus lanatus 3. Cytisus scoparius 4. Rubus discolor 5. Rubus spectabilis 6. Alnus rubra recent of Dominant Species that are OBL, FACW, or I coept FAC-). Include species noted (*) as showing imphological adaptations to wetlands. "T" indicates trace. marks (Describe disturbances, relevant local variations are area is dominated by blackberry. The wetland at base	60 5 T 80 20 10 FAC 66	Herb Herb Shrub Shrub Shrub Tree	FAC FAC UPL FACU FAC FAC FAC	 r vegetation inci	uded Scirpus
1. Equisetum arvense 2. Holcus lanatus 3. Cvtisus scoperius 4. Rubus discolor 5. Rubus spectabilis 6. Alnus rubra recent of Dominant Species that are OBL, FACW, or licept FAC-). Include species noted (*) as showing riphological adaptations to wetlands. "T" indicates trace. marks (Describe disturbances, relevant local variations area is dominated by blackberry. The wetland at base	60 5 T 80 20 10 FAC 66	Herb Herb Shrub Shrub Shrub Tree	FAC FAC UPL FACU FAC FAC FAC	r vegetation inci	uded Scirpus getation cnter
1. Equisetum arvense 2. Holcus lanatus 3. Cytisus scopanus 4. Rubus discolor 5. Rubus spectabilis 6. Alnus rubra recent of Dominant Species that are OBL, FACW, or licept FAC-). Include species noted (*) as showing imphological adaptations to wetlands. "T" indicates trace. marks (Describe disturbances, relevant local variations are area is dominated by blackberry. The wetland at base crocarpa. Juncus and Carex. Since greater than 50% of	60 5 T 80 20 10 FAC 66	Herb Herb Shrub Shrub Shrub Tree	FAC FAC UPL FACU FAC FAC FAC	r vegetation incl the welland veg	uded Scirpus getation criter
1. Equisetum arvense 2. Holcus lanatus 3. Cvtisus scoperius 4. Rubus discolor 5. Rubus spectabilis 6. Alnus rubra recent of Dominant Species that are OBL, FACW, or I cept FAC-). Include species noted (*) as showing riphological adaptations to wetlands. "T" indicates trace. marks (Describe disturbances, relevant local variations area is dominated by blackberry. The wetland at base crocarpa. Juncus and Carex. Since greater than 50% of	5 T 80 20 10 FAC 66 . seasonal efficient of fill contains the dominant	Herb Herb Shrub Shrub Shrub Tree ects, etc.): a small chi.	FAC FAC UPL FACU FAC+ FAC FAC Bannel Other	the wetland veg	getation criter
1. Equisetum arvense 2. Holcus lanatus 3. Cvtisus scoperius 4. Rubus discolor 5. Rubus spectabilis 6. Alnus rubra recent of Dominant Species that are OBL, FACW, or I cept FAC-). Include species noted (*) as showing riphological adaptations to wetlands. "T" indicates trace. marks (Describe disturbances, relevant local variations area is dominated by blackberry. The wetland at base crocarpa. Juncus and Carex. Since greater than 50% of	5 T 80 20 10 FAC 66 . seasonal effort contains the dominant.	Herb Herb Shrub Shrub Shrub Tree ects, etc.): a small chi.	FAC FAC UPL FACU FAC+ FAC FAC annel. Other hydrophytic.	r vegetation incl the wetland veg	getation criter
1. Equisetum arvense 2. Holicus lanatus 3. Cytisus scopanius 4. Rubus discolor 5. Rubus spectabilis 6. Alnus rubra precent of Dominant Species that are OBL, FACW, or lacept FAC-). Include species noted (*) as showing prophological adaptations to wetlands. "T" indicates trace. Imarks (Describe disturbances, relevant local variations are area is dominated by blackberry. The wetland at base increarpa. Juncus and Carex. Since greater than 50% of CDROLOGY corded Data (Describe in Remarks):	5 T 80 20 10 FAC 66 . seasonal effort contains the dominant.	Herb Herb Shrub Shrub Shrub Tree ects, etc.): a small chapiants are in	FAC FAC UPL FACU FAC+ FAC FAC annel. Other hydrophytic.	the welland veg	getation criter
1. Equisetum arvense 2. Holicus lanatus 3. Cytisus scoparius 4. Rubus discolor 5. Rubus spectabilis 6. Alnus rubra ercent of Dominant Species that are OBL, FACW, or lacept FAC-). Include species noted (*) as showing prophological adaptations to wetlands. "T" indicates trace. In a stomarks (Describe disturbances, relevant local variations are area is dominated by blackberry. The wetland at base acrocarpa. Juncus and Carex. Since greater than 50% of COROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	5 T 80 20 10 FAC 66 . seasonal effort contains the dominant.	Herb Herb Shrub Shrub Shrub Tree ects, etc.): a small chaplants are h	FAC UPL FACU FACU FACH FACH FACH FACH FACH FACH FACH FACH	the welland veg	e in Remarks)
1 Equisetum arvense 2 Holcus lanatus 3 Cvtisus scopanus 4 Rubus discolor 5 Rubus spectabilis 6 Alnus rubra ercent of Dominant Species that are OBL, FACW, or lead to the species and the species and the species and the species are showing prophological adaptations to wetlands. "T" indicates trace are as dominated by blackberry. The wetland at base acrocarpa. Juncus and Carex. Since greater than 50% of the species of the spec	5 T 80 20 10 FAC 66 . seasonal effort contains the dominant.	Herb Herb Shrub Shrub Tree ects, etc.): a small chaplants are herb and Hydroid	FAC UPL FACU FACU FACO FACO FACO FACO FACO FACO FACO FACO	the welland veg itors (Describe in Upper 12 incl in Upper 18 incl	e in Remarks

HTDROLOGY							
Recorded Data (Describe in Re	emarks):	Wetland Hydrology Indicators (Describe in Remarks):					
Stream, Lake, or Tide Gage		Primary Indicators:					
Aerial Photograph		inundated					
Other		X Saturated in Upper 12 inches					
X No Recorded Data	Available	X Saturated in Upper 18 inches					
		Water Marks					
		Drift Lines					
		Sediment Deposits					
Field Observations:		Drainage Patterns in Wetlands					
Depth of Surface Water: Depth to Free Water in Pit:	None (in.) >16 (in.)	Secondary Indicators (2 or more required):					
Depth to Saturated Soil:	12 (in.)	X Oxidized Root Channels in Upper 12 inches Water-Stained Leaves					
		Local Soil Survey Data					
		Other (Explain in Remarks)					
Remarks (As relevant, describe Based of the presence primary hyd	recent precipitation, hydrologic m drologic indictors the wetland hydi	nodifications, local variations, etc.): rology criteria is present					

									Data Piot	# :	44-A2
								•	Wetland:		44
_							•		r *		
²roject/Si	te: Seattle T	acoma Airport - Mast	er Pla	n Updat	e)ate:	7/16/98			
SOILS											
Soil Sun	vey Data:										
Map Unit	Name: Unm	napped						Drainage Clas	ss:		
								Field Observa	tions Confirm	Map	ped Type?
Taxonom	y (Subgroup):							Yes	No	NA	<u>x</u>
Profile D	escription:										
Depth (Inches)	Horizon Designation	Matrix Color (Munsell Moist)		Mottle (Munse		ıst)		Mottle Abundance/Co	ontrast		ure, Concretions, espheres, etc.
0-2	Al	10YR 2/2		-				•		Sandy	v loam
2-6	All	10YR 2/2		10YR 5	'2			Few. Fine. Distinc		Sandy	y loam
5-1 6+	С	10YR 5/2		·				•		Coars	e sandy loam
Hydric Sc	oil Indicators:	:									
н	istosol					L	isted	on Local Hydri	c Soils List		
н	istic Epipedon				_	L	isted	on State Hydri	c Soils List		
S	ulfidic Odor				_		isted	on National Hy	dric Soils List		
P	robable Aquic	Moisture Regime				A	quic	Moisture Regin	ne		
R	educing Condi	itions				o	rgan	ic Streaking in	Sandy Soils		
XG	leyed or Low-(Chroma Colors				X	lottie	5			
X Hi	gh Organic Co	ontent in Surface Lay	er			o	ther i	(Explain in Rem	narks)		
lemarks	(Describe soil	I disturbances, local v	/ariati	ons, etc	.):						
		ric soil indicators mee				eria.					
				-							
WETLA	ND DETER	MINATION									
lydrophy	tic Vegetation	Present?	Yes	<u> </u>	No			is this	s Sampling P	oint '	Within a Wetlar
lydric Soi	ils Present?		Yes	_X	No				Vaa V	A1-	
	ydrology Pre								Yes X	No	

The presence of all three parameters indicate this area is a wetland Delineation determined on changes in three parameters related to the base of fill for SR 509



Data Plot #:	44-A3
Wetland:	44

				Data Plot #: 44-A3 Wetland: 44
J '	WET	LAND DET	ERMINA	TION Wetland: 44
A)	Modified from: 19	87 COE We	tlands [Delineation Manual)
roject/Site: Seattle Tacoma Ai	rport - Master Pian Un	date	Date:	9/23/98
pplicant/Owner: Port of Sea			County:	King
vestigator: K. Dunkin, S. Roz			State:	WA
1987 Method 1989 M			State.	***
				Community ID: PSS
o Normal Circumstances exist o	on the site?	Yes X	. ^{No} -	Field Plot ID: 59-A
the site significantly disturbed ((Atypical Situation)?	Yes	. No _	x
the area a potential Problem A	rea?	Yes	No _	<u>x</u>
marks (Explain sample locati	on, disturbances, prob	iem areas):		
mpled established on southeas	stem comer of Parcel #	495 .		
CETATION				
EGETATION (Dominant Plant Species	species are checked)	% Cov	er Stratun	m Andiasa.
.		A COV		
Equisetum telmateia Phalans arundinacea		4	— Herb	FACW
3 Solanum dulcamara		—— 33 15	Herb Herb	FAC+
4 Urtica dioica		 3	Herb	FAC+
5 Rubus discolor		15	Shrub	FACU
6 Salix lucida ssp. Lasiandra		20	Shrub	FACW+
7 Salix sitchensis recent of Dominant Species (cept FAC-). Include species no prohological adaptations to wetta	oted (*) as showing ands. "T" indicates tra	20 or FAC 	Tree	FACW
7 Sainx sitchensis From tof Dominant Species (cept FAC-). Include species no imphological adaptations to wette marks (Describe disturbances	oted (*) as showing ands. "T" indicates tra s, relevant local variation	or FAC 10 ce.	Tree	FACW
7 Salix sitchensis recent of Dominant Species (cept FAC-). Include species no prohological adaptations to wetla marks. (Describe disturbances nee greater than 50% of the doi	oted (*) as showing ands. "T" indicates tra s, relevant local variation	or FAC 10 ce.	Tree	FACW
7 Salix sitchensis recent of Dominant Species cept FAC-). Include species no rphological adaptations to wetla marks (Describe disturbances nice greater than 50% of the doi //DROLOGY	oted (*) as showing ands. To indicates trains, relevant local variation minant plants are hydrometric trains.	20 or FAC 10 ce. ons, seasonal (Tree 0 effects, etc	FACW i.): etation criteria is met.
7 Salix sitchensis recent of Dominant Species cept FAC-). Include species no riphological adaptations to wetter marks (Describe disturbances are greater than 50% of the dollars).	oted (*) as showing ands. "T" indicates tra s, relevant local variation minant plants are hydromarks):	20 or FAC 10 ce. ons, seasonal (Tree	FACW
7 Salix sitchensis recent of Dominant Species cept FAC-). Include species no rephological adaptations to wette marks (Describe disturbances are greater than 50% of the doi TOROLOGY corded Data (Describe in Rei	oted (*) as showing ands. "T" indicates tra s, relevant local variation minant plants are hydromarks):	20 or FAC 10 ce. ons, seasonal (Tree	EACW c.): etation criteria is met. drology Indicators (Describe in Remarks):
7. Salix sitchensis recent of Dominant Species cept FAC-). Include species no rephological adaptations to wette marks (Describe disturbances nice greater than 50% of the doi DROLOGY corded Data (Describe in Rei Stream, Lake, or Ti	oted (*) as showing ands. "T" indicates tra s, relevant local variation minant plants are hydromarks):	20 or FAC 10 ce. ons, seasonal (Tree	c.): etation criteria is met. drology Indicators (Describe in Remarks): indicators: Inundated
7. Salix sitchensis recent of Dominant Species cept FAC-). Include species no rephological adaptations to wette marks (Describe disturbances ace greater than 50% of the doi DROLOGY corded Data (Describe in Rei Stream, Lake, or Ti Aerial Photograph	oted (*) as showing ands. To indicates traits, relevant local variation minant plants are hydromarks): marks): de Gage	20 or FAC 10 ce. ons, seasonal (Tree 10 effects, etc. etland vege etland Hyce. Primary III	tation criteria is met. drology Indicators (Describe in Remarks): ndicators:
7 Salix sitchensis recent of Dominant Species cept FAC-). Include species no rphological adaptations to wetta marks. (Describe disturbances note greater than 50% of the doi //DROLOGY corded Data. (Describe in Rei Stream, Lake, or Ti Aerial Photograph Other	oted (*) as showing ands. To indicates traits, relevant local variation minant plants are hydromarks): marks): de Gage	20 or FAC 10 ce. ons, seasonal (Tree 10 effects, etc. etland vege etland Hyce. Primary III	c.): etation criteria is met. drology Indicators (Describe in Remarks): indicators: Inundated Saturated in Upper 12 inches
7 Salix sitchensis recent of Dominant Species cept FAC-). Include species no rphological adaptations to wetla marks (Describe disturbances nice greater than 50% of the doi //DROLOGY corded Data (Describe in Rei Stream, Lake, or Ti Aerial Photograph Other	oted (*) as showing ands. To indicates traits, relevant local variation minant plants are hydromarks): marks): de Gage	20 or FAC 10 ce. ons, seasonal (Tree 10 effects, etc. etland vege etland Hyce. Primary III	c.): etation criteria is met. drology Indicators (Describe in Remarks): indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
7 Salix sitchensis recent of Dominant Species recent FAC-). Include species no rephological adaptations to wetla marks (Describe disturbances nice greater than 50% of the doi /DROLOGY corded Data (Describe in Rei Stream, Lake, or Ti Aerial Photograph Other	oted (*) as showing ands. To indicates traits, relevant local variation minant plants are hydromarks): marks): de Gage	20 or FAC 10 ce. ons, seasonal (Tree 10 effects, etc. etland vege etland Hyce. Primary III	c.): etation criteria is met. drology Indicators (Describe in Remarks): indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
7. Salix sitchensis recent of Dominant Species recept FAC-). Include species no imphological adaptations to wette marks (Describe disturbances ince greater than 50% of the doi //DROLOGY corded Data (Describe in Rei Stream, Lake, or Ti Aerial Photograph Other X. No Recorded Data	oted (*) as showing ands. To indicates traits, relevant local variation minant plants are hydromarks): marks): de Gage	20 or FAC 10 ce. ons, seasonal (Tree 10 effects, etc. etland vege etland Hyce. Primary III	c.): etation criteria is met. drology Indicators (Describe in Remarks): indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
7 Salix sitchensis recent of Dominant Species cept FAC-). Include species no rephological adaptations to wette marks (Describe disturbances note greater than 50% of the dol DROLOGY corded Data (Describe in Rei Stream, Lake, or Ti Aerial Photograph Other X No Recorded Data d Observations:	oted (*) as showing ands. "T" indicates tra is, relevant local variation minant plants are hydromarks): ide Gage Available	20 or FAC 10 ce. ons, seasonal (Tree 10 effects, etc etland vege etland Hyc Primary II	c.): etation criteria is met. drology Indicators (Describe in Remarks): indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
7. Salix sitchensis recent of Dominant Species cept FAC-). Include species no rephological adaptations to wette marks (Describe disturbances nice greater than 50% of the doi // DROLOGY corded Data (Describe in Rei Stream, Lake, or Ti Aerial Photograph Other X No Recorded Data d Observations: Depth of Surface Water:	oted (*) as showing ands. "T" indicates tra is, relevant local variation minant plants are hydromarks): ide Gage Available	20 or FAC 10 ce. ons, seasonal (Tree 10 effects, etc etland vege etland Hyc Primary II	c.): ctation criteria is met. drology Indicators (Describe in Remarks): indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands ry Indicators (2 or more required):
7 Salix sitchensis recent of Dominant Species cept FAC-). Include species no rephological adaptations to wette marks (Describe disturbances nice greater than 50% of the doi // DROLOGY corded Data (Describe in Rei Stream, Lake, or Ti Aerial Photograph Other X No Recorded Data d Observations: Depth of Surface Water: Depth to Free Water in Pit:	oted (*) as showing ands. To indicates traits, relevant local variation minant plants are hydromarks): Ide Gage Available None (in.)	20 or FAC 10 ce. ons, seasonal (Tree 10 effects, etc etland vege etland Hyc Primary II	c.): etation criteria is met. drology Indicators (Describe in Remarks): indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
7. Salix sitchensis recent of Dominant Species recept FAC-). Include species no imphological adaptations to wette marks (Describe disturbances ince greater than 50% of the doi //DROLOGY corded Data (Describe in Rei Stream, Lake, or Ti Aerial Photograph Other X. No Recorded Data Id Observations: Depth of Surface Water: Depth to Free Water in Pit:	oted (*) as showing ands. To indicates traits, relevant local variation minant plants are hydromarks): de Gage Available None (in.) 8 (in.)	20 or FAC 10 ce. ons, seasonal (Tree 10 effects, etc etland vege etland Hyc Primary II	characteria is met. drology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands ry Indicators (2 or more required): Oxidized Root Channels in Upper 12 inche Water-Stained Leaves
7. Saix sitchensis ercent of Dominant Species except FAC-). Include species no orphological adaptations to wette emarks (Describe disturbances ince greater than 50% of the doi YDROLOGY corded Data (Describe in Rei Stream, Lake, or Ti Aerial Photograph Other X No Recorded Data Id Observations: Depth of Surface Water: Depth to Free Water in Pit:	oted (*) as showing ands. To indicates traits, relevant local variation minant plants are hydromarks): de Gage Available None (in.) 8 (in.)	20 or FAC 10 ce. ons, seasonal (Tree 10 effects, etc etland vege etland Hyc Primary II	c.): etation criteria is met. drology Indicators (Describe in Remarks): indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands y Indicators (2 or more required): Oxidized Root Channels in Upper 12 inche Water-Stained Leaves Local Soil Survey Data
7. Saix sitchensis ercent of Dominant Species except FAC-). Include species no orphological adaptations to wette emarks (Describe disturbances ince greater than 50% of the doi YDROLOGY corded Data (Describe in Rei Stream, Lake, or Ti Aerial Photograph Other X No Recorded Data Id Observations: Depth of Surface Water: Depth to Free Water in Pit:	oted (*) as showing ands. To indicates traits, relevant local variation minant plants are hydromarks): de Gage Available None (in.) 8 (in.)	20 or FAC 10 ce. ons, seasonal (Tree 10 effects, etc etland vege etland Hyc Primary II	characteria is met. drology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands ry Indicators (2 or more required): Oxidized Root Channels in Upper 12 inche Water-Stained Leaves
7. Sainx sitchensis except FAC-). Include species incorphological adaptations to wetter marks. (Describe disturbances ince greater than 50% of the doi YDROLOGY Coorded Data. (Describe in Reiseram, Lake, or Time Aerial Photograph Other X. No Recorded Data. Id Observations: Depth of Surface Water: Depth to Free Water in Pit: Depth to Saturated Soil:	oted (*) as showing ands. To indicates traits, relevant local variation minant plants are hydromarks): Inde Gage None	or FAC ce. ons, seasonal ophytic, the we	Tree 10 effects, etc. etland vege etland Hyc Primary II X Secondar	c.): citation criteria is met. drology Indicators (Describe in Remarks): indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands ry Indicators (2 or more required): Oxidized Root Channels in Upper 12 inche Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)

								Data Pi	ot #:	44-A3
								Wetian	ıd:	44
roject/S	ite: Seattle T	acoma Airport - Masi	ter Pla	ın Upda	ite	Date:	9/23/98			
OILS ioil Sur	vey Data:									
Map Uni	t Name: <u>Unr</u>	napped					Drainage	Class:		
							Field Obs	ervations Conf	irm Map	ped Type?
Taxonon	ny (Subgroup)	:					Yes	No	NA	x
Profile D	escription:							,	-	
Depth Inches)	Horizon Designation	Matrix Color n (Munsell Moist)			Color sell Moist	:)	Mottle Abundanc	e/Contrast		ure, Concretions ospheres, etc.
)-2	Oi	7.5YR 3/2		•			-		Fibric	matenal
?-8	Oa	7.5YR 2.5/2							Sapne	c matenal
-12+	<u>c</u>	N 4/1 & N 3/1		7.5YR	3/4		Fine, Mediun	n. Prominent	Grave	Hly silt loam
lydric S	oil Indicators	:								
<u> </u>	istosol					Listed	on Local H	lydric Soils List	t	
	listic Epipedor	1			_	Listed	on State H	ydric Soils List		
	ulfidic Odor							l Hydric Soils L	_ist	
	•	: Moisture Regime					Moisture R	•		
	Reducing Cond	Chroma Colors			_			in Sandy Soil	S	
		ontent in Surface Lay	er			X Mottle	s (Explain in	Damaeke\		
		il disturbances, local					(Explain III	(Cirains)		
		ric soil indicators med				ia				
				,						
NETLA	ND DETER	RMINATION								
ydrophy	tic Vegetatio	n Present?	Yes	<u> x</u>	No		is	this Sampling	g Point	Within a Wetla
udria Ca	ils Present?		Yes	X	No					
yuric 30								Yes X	No	

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): The presence of all three parameters indicate this area is a wetland.

Param	etrix,	Inc.



Data Plot #:	44-A4
Wetland:	44

	1.0.0000				Wetland:	44
	WE	TLAND DET	ERMINA	ATION		
1	(Modified from: 19	987 COE W	tlands	Delineation	n Manual)	
Project/Site: Seattle Tacoma	Airport - Master Plan U	odate	Date:	8/19/98		
Applicant/Owner: Port of Se			County:	King		
vestigator: Kristie Dunkin			State:	WA	···	
1987 Method 1989	Method				ommunity ID: PI	FO
o Normal Circumstances exis	st on the site?	Yes X	No			
the site significantly disturbed	d (Atypical Situation)?	Yes	- No	<u> </u>	eld Plot ID: 44B	
the area a potential Problem		Yes	- No	<u>x</u>		
emarks (Explain sample loca			_ '10 .	^		
ot is located south of home w						
EGETATION (Domina	nt species are checked)				
Plant Species		% Cov	er Stratu	m Indicato	r	
1 Equisetum telmateia		20	Herb	FACW		
2 Givcena elata		20	Herb	FACW+		
3 Lysichiton americanum		20	Herb	OBL		
4 Polystichum munitum Pubus discolor		10	Herb	FACU		
5 Rubus discolor 6 Prunus emarginata		60	Shrub Tree	FACU FACU		
7 Salix spp.		10	Tree	FACW		
' · · · · · · · · · · · · · · · · · · ·				FACV		
ercent of Dominant Species		or FAC		FACW		
, ·	noted (*) as showing	or FAC		FACW		
ercent of Dominant Species xcept FAC-). Include species orphological adaptations to we	noted (*) as showing etlands. "T" indicates tr	or FAC	<u> </u>			
ercent of Dominant Species xcept FAC-). Include species orphological adaptations to we emarks (Describe disturbance	noted (*) as showing etlands. "T" indicates traces, relevant local variates.	or FAC 60 ace.	effects, et	c.):	a is met.	
ercent of Dominant Species except FAC-). Include species orphological adaptations to we emarks (Describe disturbancince greater than 50% of the content of	noted (*) as showing etlands. "T" indicates traces, relevant local variates.	or FAC 60 ace.	effects, et	c.):	a is met.	
ercent of Dominant Species except FAC-). Include species orphological adaptations to we emarks (Describe disturbancince greater than 50% of the company of t	noted (*) as showing etlands. "T" indicates tribes, relevant local variated minant plants are hydrominant	or FAC 60 ace. ions, seasonal rophytic, the w	effects, et	c.): etation criteria		
ercent of Dominant Species except FAC-). Include species perphological adaptations to we emarks. (Describe disturbancince greater than 50% of the company of	noted (*) as showing etlands. "T" indicates tribes, relevant local variatedominant plants are hyde. Remarks):	or FAC 60 ace. ions, seasonal rophytic, the w	effects, et etland veg	c.): etation criteria drology Indi	a is met.	e in Remarks):
ercent of Dominant Species (cept FAC-). Include species orphological adaptations to we smarks (Describe disturbancince greater than 50% of the company of th	noted (*) as showing etlands. "T" indicates tribes, relevant local variatedominant plants are hyde. Remarks): Tide Gage	or FAC 60 ace. ions, seasonal rophytic, the w	effects, et etland veg	c.): etation criteria drology Indi Indicators:	cators (Describe	e in Remarks):
ercent of Dominant Species (cept FAC-). Include species orphological adaptations to we smarks (Describe disturbance ince greater than 50% of the company of	noted (*) as showing etlands. "T" indicates tribes, relevant local variatedominant plants are hyde. Remarks): Tide Gage	or FAC 60 ace. ions, seasonal rophytic, the w	effects, et etland veg	c.): etation criterio drology Indi Indicators: Inundate	cators (Describe	
ercent of Dominant Species (cept FAC-). Include species orphological adaptations to we emarks (Describe disturbance ince greater than 50% of the company of	noted (*) as showing etlands. "T" indicates to bes, relevant local variated dominant plants are hyderemarks): Tide Gage	or FAC 60 ace. ions, seasonal rophytic, the w	effects, et etland veg	c.): etation criteria drology Indi Indicators: Inundate Saturate	cators (Describe	hes
ercent of Dominant Species except FAC-). Include species prophological adaptations to we emarks (Describe disturbance ince greater than 50% of the company o	noted (*) as showing etlands. "T" indicates to bes, relevant local variated dominant plants are hyderemarks): Tide Gage	or FAC 60 ace. ions, seasonal rophytic, the w	effects, et etland veg	c.): etation criteria drology Indi Indicators: Inundate Saturate	cators (Describe ed ed in Upper 12 inc ed in Upper 18 inc	hes
ercent of Dominant Species except FAC-). Include species exphological adaptations to we emarks (Describe disturbance ince greater than 50% of the co YDROLOGY ecorded Data (Describe in R Stream, Lake, or Aerial Photograph Other	noted (*) as showing etlands. "T" indicates to bes, relevant local variated dominant plants are hyderemarks): Tide Gage	or FAC 60 ace. ions, seasonal rophytic, the w	effects, et etland veg	c.): etation criteria drology Indi Indicators: Inundate Saturate Saturate	cators (Describe ed ed in Upper 12 inc ed in Upper 18 inc larks	hes
ercent of Dominant Species except FAC-). Include species exphological adaptations to we emarks (Describe disturbance ince greater than 50% of the co YDROLOGY ecorded Data (Describe in R Stream, Lake, or Aerial Photograph Other	noted (*) as showing etlands. "T" indicates to bes, relevant local variated dominant plants are hyderemarks): Tide Gage	or FAC 60 ace. ions, seasonal rophytic, the w	effects, et etland veg etland Hy Pnmary	drology Indialidators: Inundate Saturate Water M Drift Line	cators (Describe ed ed in Upper 12 inc ed in Upper 18 inc larks	hes
ercent of Dominant Species except FAC-). Include species corphological adaptations to we emarks (Describe disturbance ince greater than 50% of the corp YDROLOGY ecorded Data (Describe in R Stream, Lake, or Aerial Photograpi Other X No Recorded Data	noted (*) as showing etlands. "T" indicates to bes, relevant local variated dominant plants are hyderemarks): Tide Gage	or FAC 60 ace. ions, seasonal rophytic, the w	effects, et etland veg	drology Indialidators: Inundate Saturate Water M Drift Line Sedimer	cators (Describe ed ed in Upper 12 inc ed in Upper 18 inc larks es	hes h e s
ercent of Dominant Species (cept FAC-). Include species prophological adaptations to we smarks (Describe disturbance ince greater than 50% of the company of	noted (*) as showing etlands. "T" indicates to bes, relevant local variated dominant plants are hyderemarks): Tide Gage ta Available	or FAC 60 ace. ions, seasonal rophytic, the w	effects, et etland veg etland Hy Pnmary	c.): etation criteria drology Indi Indicators: Inundate Saturate Water M Drift Line Sedimer Drainage	cators (Described in Upper 12 included in Upper 18	thes thes ands
ercent of Dominant Species (cept FAC-). Include species prophological adaptations to we smarks (Describe disturbance ince greater than 50% of the company of	noted (*) as showing etlands. "T" indicates to bes, relevant local variated dominant plants are hydramarks): Tide Gage that Available None (in.)	or FAC 60 ace. ions, seasonal rophytic, the w	effects, et etland veg etland Hy Pnmary	c.): etation criteria drology Indi Indicators: Inundate Saturate Water M Drift Line Sedimer Drainage	cators (Described of In Upper 12 included in Upper 18 included in Upper	thes thes ands
ercent of Dominant Species except FAC-). Include species perphological adaptations to we be marks (Describe disturbance ince greater than 50% of the company	noted (*) as showing etlands. "T" indicates to bes, relevant local variated dominant plants are hydrominant plants	or FAC 60 ace. ions, seasonal rophytic, the w	effects, et etland veg etland Hy Pnmary	c.): etation criteria drology Indi- Indicators: Inundate Saturate Vater M Drift Line Sedimer Drainage	cators (Described of in Upper 12 included in Upper 18 included in Upper 18 includes on the Upper 18 includes on the Upper 18 in Upper 18 i	hes hes ands ed):
ercent of Dominant Species except FAC-). Include species perphological adaptations to we be marks (Describe disturbance ince greater than 50% of the company	noted (*) as showing etlands. "T" indicates to be relevant local variated dominant plants are hydrominant plants a	or FAC 60 ace. ions, seasonal rophytic, the w	effects, et etland veg etland Hy Pnmary	c.): etation criteria drology Indi- Indicators: Inundate Saturate Water M Drift Line Sedimer Drainage ary Indicators Oxidized Water-S	cators (Described of in Upper 12 included in Upper 18 included in Upper 18 includes of the Upper 18 includes of the Upper 18 in Upper 18 in Upper 19 i	hes hes ands ed):
ercent of Dominant Species except FAC-). Include species perphological adaptations to we be marks (Describe disturbance ince greater than 50% of the company	noted (*) as showing etlands. "T" indicates to bes, relevant local variated dominant plants are hydrominant plants	or FAC 60 ace. ions, seasonal rophytic, the w	effects, et etland veg etland Hy Pnmary	drology Indicators: Inundate Saturate Water M Drift Line Sedimer Drainage Oxidized Water-S Local Sc	cators (Described of in Upper 12 included in Upper 18 included included in Upper 18 included	thes thes ands ed): n Upper 12 inches
ercent of Dominant Species except FAC-). Include species perphological adaptations to we be marks (Describe disturbance ince greater than 50% of the company	noted (*) as showing etlands. "T" indicates to bes, relevant local variated dominant plants are hydrominant plants	or FAC 60 ace. ions, seasonal rophytic, the w	effects, et etland veg etland Hy Pnmary	drology Indicators: Inundate Saturate Water M Drift Line Sedimer Drainage Oxidized Water-S Local Sc	cators (Described of in Upper 12 included in Upper 18 included in Upper 18 includes of the Upper 18 includes of the Upper 18 in Upper 18 in Upper 19 i	thes thes ands ed): n Upper 12 inche:

ing the dry summer months. Hydrology is assumed based on the presence of wetland vegetation and hydric soil.

						Data F	Plot*:	44-A4
						Wetia	nd:	44
roject/Si	te: Seattle Ta	acoma Airport - Master I	Plan Update	Date:	8/19/98			
OILS oil Sur	vey Data:							
/ap Unit	Name: Unm	napped	_		Drainage	Class:		
						servations Con	firm Map	ped Type?
axonom	y (Subgroup):				Yes	No	NA	x
rofile De	escription:						_	
epth nches)	Horizon Designation	Matrix Color (Munsell Moist)	Mottle Color (Munsell Mo	ist)	Mottle Abundan	ce/Contrast		ure, Concretion: ospheres, etc.
-16	A	10YR 2/2	10YR 4/3		Common, N	fedium, Faint	Sand	ly loam
Hi Hi Su Pr Re	educing Condit eyed or Low-C	Moisture Regime tions Chroma Colors	- - - -	Listed Listed Aquic	on State I on Nation Moisture F ic Streakin	Hydric Soils Lis Hydric Soils Lis al Hydric Soils Regime g in Sandy Soil	t List	
Hi Hi Su Pr Re Gle	stosol stic Epipedon ulfidic Odor obable Aquic I educing Condit eyed or Low-C	Moisture Regime tions	- - - - -	Listed Listed Aquic Organ X Mottle	on State I on Nation Moisture F ic Streakin s	Hydric Soils Lis al Hydric Soils Regime	t List	
Hi Hi Su Pr Re Re X Hig	stosol stic Epipedon ulfidic Odor obable Aquic (educing Condit eyed or Low-C gh Organic Co (Describe soil	Moisture Regime tions Chroma Colors		Listed Listed Aquic Organ X Mottle Other	on State I on Nation Moisture F ic Streakin s	Hydric Soils Lis al Hydric Soils Regime g in Sandy Soil	t List	
Hi Hi SL Pr Re Gli X Hiç	stosol stic Epipedon ulfidic Odor obable Aquic (educing Condit eyed or Low-C gh Organic Co (Describe soil	Moisture Regime tions Chroma Colors intent in Surface Layer disturbances, local vana ic soil indicators meet th		Listed Listed Aquic Organ X Mottle Other	on State I on Nation Moisture F ic Streakin s	Hydric Soils Lis al Hydric Soils Regime g in Sandy Soil	t List	
Hi Hi St Pr Re GM X Hig emarks pill color a	stosol stic Epipedon ulfidic Odor obable Aquic (educing Condit eyed or Low-O gh Organic Co (Describe soil and other hydn	Moisture Regime tions Chroma Colors Intent in Surface Layer disturbances, local vani ic soil indicators meet th	e hydric soil cnte	Listed Listed Aquic Organ X Mottle Other	on State I on Nation Moisture F ic Streakin s (Explain in	Hydric Soils Lis al Hydric Soils Regime g in Sandy Soil Remarks)	t List is	Within a West-
Hi Hi St St Pr Re Gli X Hig emarks poil color a	stosol stic Epipedon ulfidic Odor obable Aquic I educing Condit eyed or Low-C gh Organic Co (Describe soil and other hydn	Moisture Regime tions Chroma Colors Intent in Surface Layer disturbances, local vani ic soil indicators meet th	e hydric soil cnte	Listed Listed Aquic Organ X Mottle Other	on State I on Nation Moisture F ic Streakin s (Explain in	Hydric Soils Lis al Hydric Soils Regime g in Sandy Soil Remarks)	t List is	Within a Wetla

Hydrology assumed due to late in summer and no recent precipitation events. However, wetland vegetation and hydric soils are present and therefore, the area is a wetland.



WETLAND DETERMINATION (Modified from: 1987 COE Wetlands Delineation Manual) Project/Site: Seattle Tacoma Airport - Master Plan Update Applicant/Owner: Port of Seattle County: King Community ID: Upland						Mintendi	44 Unional Di
Project/Site Seatile Tacoma Airport - Master Plan Update Applicant/Owner: Port of Seattle County: King State: WA 2 1987 Method		WET	LAND DETE	RMINATI	ON	Wetland:	44 Upland Pid
Applicant/Owner: Port of Seattle County: King William Kleindi State: WA 1987 Method	(Modified from: 19	87 COE Wet	tiands Del	ineation	Manual)	
Applicant/Owner: Port of Seattle County: King William Kleindi State: WA 1987 Method	Project/Site: Seattle Tacoma A	Airport - Master Plan Upi	date	Date: 7/1	7/98	•	
Investigator William Klend! If 1987 Method							
1987 Method		atue		· · · -			
Do Normal Circumstances exist on the site? Yes X No Field Plot ID 20-B s the site significantly disturbed (Atypical Situation)? Yes No X Stemarks (Explain sample location, disturbances, problem areas). Remarks (Explain sample location, disturbances are checked) Plant Species V. Cover Stratum Indicator No Part Polystichum munitum 20 Herb FACU FACU FACU FACU Shrub FAC Shrub FAC Shrub FAC Shrub FAC Shrub FAC Shrub FACU FAC	_	Aethod		State.			
s the site significantly disturbed (Atypical Situation)? Yes No X s the area a potential Problem Area? Yes No X termarks (Explain sample location, disturbances, problem areas). sample plot was established near wetland edge on Parcel # 491. ###################################	_				Cor	nmunity ID: U	pland
temarks (Explain sample location, disturbances, problem areas):	Do Normal Circumstances exist	on the site?	Yes X	No	Fiel	d Plot ID 20-8	3
emarks (Explain sample location, disturbances, problem areas): ample plot was established near wetland edge on Parcel # 491. EGETATION I✓Dominant species are checked) Plant Species	s the site significantly disturbed	(Atypical Situation)?	Yes	No X	_	•	
EGETATION I✓Dominant species are checked) Plant Species 1 Polvstichum munitum 20 Herb FACU 2 Acer curcinatum 30 Shrub FAC 3 Anus rubra (s) 4 Hecera heinx 90 Shrub FAC 5 Ilex acuroficum 10 Shrub FAC 6 Cemena cerasiformis 40 Shrub FACU 7 Rubus speciabilis 8 Acer macrophyllum 8 Norrecent of Dominant Species that are OBL, FACW, or FAC (xcept FAC). Include species noted (*) as showing prohological adoptations to wetlands. T'indicates trace. Imarks (Describe disturbances, relevant local variations, seasonal effects, etc.): In ewetland vegetation criteria are not met since the area is dominated by non-wetland plants. YPROLOGY Corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Wetland Hydrology Indicators (Describe in Remarks): Primary Indicators: Depth of Surface Water: Depth of Surface Water: Depth to Facu Saturated in Upper 12 inches Saturated in Upper 12 inches Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drianage Patterns in Wetlands Depth of Surface Water in Pit: Depth to Saturated Soil: 14 (in.) Depth to Saturated Soil: 4 (in.) Depth of Surface Water in Pit: 10 (in.) Depth of Surface Water in Pit: 11 (in.) Depth of Surface Water in Pit:	the area a potential Problem A	Area?	Yes	No X	-		
Plant Species Pl	lemarks (Explain sample local	tion, disturbances, prob	lem areas):				
Plant Species	ample biot was established hea	ar welland edge on Parc	ter# 491.				
1 Polystichum munitum 20 Herb FACU 2 Acer curcinatum 30 Shrub FAC- 3 Alnus rubra (s) 20 Shrub FAC 4 Heodera heixx 90 Shrub UPL 6 Cemiena cerasiformis 40 Shrub FAC- 7 Rubus speciabilis 10 Shrub FAC- 8 Acer macrophyllum 80 Tree FACU Precent of Dominant Species that are OBL. FACW, or FAC Scept FAC-). Include species noted (*) as showing 20 prohological adaptations to wetlands. "T indicates trace. It is wetland vegetation criteria are not met since the area is dominated by non-wetland plants. PYDROLOGY Corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Primary indicators: Aerial Photograph Other X No Recorded Data Available Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Depth to Surface Water: None (in.) Depth to Fac Saturated Soil: 14 (in.) Popul to Saturated Soil: 14 (in.) Depth to Saturated Soil: 14 (in.) Sirvan Photograph Oxidizators (2 or more required): Oxidized Root Channels in Upper 12 inche Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)	EGETATION (Dominan	t species are checked)			· · · · · · · · · · · · · · · · · · ·		
Acer carcinatum Acer carcinatum Almus rubra (s) Almus rubra (s) Almus rubra (s) Beautoribum Acer macrophylium Acer macrophylium Acer macrophylium Beautoribum Acer macrophylium Beautoribum Acer macrophylium Beautoribum Beautor	Plant Species		% Cove	r Stratum	Indicator		
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Heoera helix SC Shrub NL							
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Rubus speciabilis 1C Shrub FAC+							
Acer macrophyllum Router for Dominant Species that are OBL. FACW, or FAC (cept FAC-). Include species noted (*) as showing prohological adaptations to wetlands. "T" indicates trace. Imarks (Describe disturbances, relevant local variations, seasonal effects, etc.): Re wetland vegetation criteria are not met since the area is dominated by non-wetland plants. Wetland Hydrology Indicators (Describe in Remarks):						_	
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1						Data Piot	#:	44-B1
						Wetland:		44 Upland Plo
Project/Site:	Seattle T	acoma Airport - Master P	lan Update	Date:	7/17/98			
SOILS Soil Survey								
Map Unit Na	ame: Unit	napped			Drainage Cia	SS:		
	<u> </u>				Field Observa	ations Confirm	Mapi	ped Type?
Taxonomy (Subgroup):				Yes	No	NA	x
Profile Desc	cription:		· · · · · · · · · · · · · · · · · · ·					
	Horizon Designation	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)		Mottle Abundance/C	ontrast	_	ire, Concretions,
)-10	Oi .	10YR 3/3			•		Hemic	
>10	<u> </u>	10YR 2/1			-		Loam	
				Listed	on Local Hydri on State Hydri on National Hy	ic Soils List	:	
		Moisture Regime		Aquic	Moisture Regir	пе		
	ucing Condi ed or Low-C	tions Chroma Colors		_	ic Streaking in	Sandy Soils		
		ontent in Surface Layer		_ Mottle:	s (Explain in Ren	nade)		
temarks (D	escribe soil	disturbances, local varia			(Explain in 1961)	iidiks)		

Yes

Hydrophytic Vegetation Present?

Wetland Hydrology Present?

Hydric Soils Present?

Although hydric soils are present, the area is not a wetland. The sample was taken very close to the wetland edge and wetland vegetation and hydrology was absent.

X No

Is this Sampling Point Within a Wetland?

Yes ____ No __X



WETLA	AND DETE	RMINA	TION	Wetland:	44 Upland Pil
(Modified from: 1987				ion Manual)	
		uanus L	Jenneau	ion manual)	
Project/Site: Seattle Tacoma Airport - Master Plan Update	<u> </u>	Date:	B/19/98		
Applicant/Owner: Port of Seattle		County:	King		
Investigator: Kristie Dunkin		State:	WA		
✓ 1987 Method			,	Community ID: U	Jolano
Do Normal Circumstances exist on the site?	Yes X	No		· •	<u> </u>
is the site significantly disturbed (Atypical Situation)?	res	No -	×	Field Plot ID. 44-	R
Is the area a potential Problem Area?	/es	_	×		
Remarks (Explain sample location, disturbances, problem		-	^		
Upland plot on SR509.					
VEGETATION (✓Dominant species are checked)					
Plant Species	% Cover	Stratum	Indica	itor	
1 Equisetum telmateia	5	Herb	FACW		
2 Alnus rubra	80	Tree	FAC		
3 Corylus comuta	<u>T</u>	Tree	FACU		
Populus trichocarpa	40	Tree	FAC		
5. Salix scoulenana	10	Tree	FAC		
except FAC-). Include species noted (*) as showing inorphological adaptations to wetlands. "T" indicates trace. emarks (Describe disturbances, relevant local variations, electation is from a location on the edge of the wetland, and	seasonal ef			landscaped vards	Dominant vecesses
except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates trace. semarks (Describe disturbances, relevant local variations, segetation is from a location on the edge of the wetland, sincultative. According to the Washington State Delineation Machinetics.	seasonal ef	as are roa	dways or I	landscaped yards. Bas that are domini	Dominant vegetati ated by FAC plant:
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except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates trace, temarks (Describe disturbances, relevant local variations, regetation is from a location on the edge of the wetland, sincultative. According to the Washington State Delineation Mick wetland hydrology and hydric soils do not satisfy the well-YDROLOGY recorded Data (Describe in Remarks):	seasonal ef ce other are lanual (Page tland vegeta	as are roa 68, Step tion criteri	dways or i 13 (a)) an ia. rology Inc	landscaped yards. Bas that are dominional dicators (Describ	sted by FAC plants
except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates trace. Itemarks (Describe disturbances, relevant local variations, regetation is from a location on the edge of the wetland, sincultative. According to the Washington State Delineation Mick wetland hydrology and hydric soils do not satisfy the well YDROLOGY recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage	seasonal ef ce other are lanual (Page tland vegeta	as are roa 68, Step tion criteri	dways or i 13 (a)) and ia. rology Inc dicators:	dicators (Describ	sted by FAC plants
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except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates trace. Itemarks (Describe disturbances, relevant local variations, regetation is from a location on the edge of the wetland, sincultative. According to the Washington State Delineation Mick wetland hydrology and hydric soils do not satisfy the wetland hydrology and hydric soils do not satisfy the wetland Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available X No Recorded Data Available No Recorded Data Available Peld Observations: Depth of Surface Water: None (in.)	seasonal ef ce other area lanual (Page tland vegeta Wet	as are roa 68, Step tion criteri land Hydi	rology Incidicators: Inunda Satural Satural Water I Drift Lir Sedime	dicators (Describited In Upper 12 Included In Upper 18 Included Inclu	e in Remarks): thes thes
except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates trace. Itemarks (Describe disturbances, relevant local variations, regetation is from a location on the edge of the wetland, sincultative. According to the Washington State Delineation Mick wetland hydrology and hydric soils do not satisfy the well type of the wetland hydrology and hydric soils do not satisfy the well type of the well and th	seasonal ef ce other area lanual (Page tland vegeta Wet	as are roa 68, Step tion criteri land Hydi	rology Incidicators: Inunda Saturai Saturai Water I Drift Lir Sedime Drainag	dicators (Describited in Upper 12 including Upper 18 including Upper 1	e in Remarks): thes hes ands
except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates trace. Itemarks (Describe disturbances, relevant local variations, regetation is from a location on the edge of the wetland, sincultative. According to the Washington State Delineation Mick wetland hydrology and hydric soils do not satisfy the wetland hydrology and hydric soils do not satisfy the wetland hydrology and hydric soils do not satisfy the wetland hydrology. YDROLOGY	seasonal ef ce other area lanual (Page tland vegeta Wet	as are roa 68, Step tion criteri land Hydi	dways or i 13 (a)) and ia. rology Inc dicators: Inunda Satura: Satura: Water I Drift Lir Sedime Drainag Indicators: Oxidize	dicators (Describilited in Upper 12 included in Upper 18 included in Upp	e in Remarks): thes hes ands
Aerial Photograph Other X No Recorded Data Available X No Recorded Data Available Beld Observations: Depth of Surface Water: Depth to Free Water in Pit: Depth to Saturated S	seasonal ef ce other area lanual (Page tland vegeta Wet	as are roa 68, Step tion criteri land Hydi	rology Inc dicators: Inunda Saturai Saturai Vater I Drift Lir Sedime Drainag Indicators Undicators Water Sedime Water Sedime Water Sedime Water Sedime	dicators (Describilited in Upper 12 included in Upper 18 included in Upp	e in Remarks): thes hes ands
except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates trace. Remarks (Describe disturbances, relevant local variations, regetation is from a location on the edge of the wetland, sind activative. According to the Washington State Delineation Mack wetland hydrology and hydric soils do not satisfy the wetland hydrology and hydric soils do not satisfy the wetland hydrology and hydric soils do not satisfy the wetland hydrology. Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available No Recorded Data Available eld Observations: Depth of Surface Water: Depth to Free Water in Pit: None	seasonal ef ce other area lanual (Page tland vegeta Wet	as are roa 68, Step tion criteri land Hydi	rology Inc dicators: Inunda Satura: Satura: Vater I Drainag Indicators: Undicators Vater Sedime Drainag Undicators Local S	dicators (Describited Ited in Upper 12 included In Upper 18 included In Upper 18 included In Upper 18 included Ited In Upper 18 included Ited In Upper 18 included Ited Ited Ited Ited Ited Ited Ited I	e in Remarks): thes hes ands ed): the Upper 12 inches
except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates trace. Remarks (Describe disturbances, relevant local variations, regetation is from a location on the edge of the wetland, sind active. According to the Washington State Delineation Mack wetland hydrology and hydric soils do not satisfy the wetland hydrology and hydric soils do not satisfy the wetland hydrology and hydric soils do not satisfy the wetland hydrology. Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available X No Recorded Data Available X No Recorded Data Available No Recorded Data Avail	seasonal ef ce other area lanual (Page tland vegeta Wet	as are roa 68, Step tion criteri land Hydi Primary in	rology Inc dicators: Inunda Satura: Satura: Water I Drift Lir Sedime Drainag Indicator: Water-S Local S Other (E	dicators (Describilited Ited in Upper 12 included in Upper 18 included i	e in Remarks): thes hes ands ed): the Upper 12 inches
except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates trace. Remarks (Describe disturbances, relevant local variations, regetation is from a location on the edge of the wetland, sind activative. According to the Washington State Delineation Mack wetland hydrology and hydric soils do not satisfy the wetland hydrology and hydric soils do not satisfy the wetland hydrology and hydric soils do not satisfy the wetland hydrology. Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available No Recorded Data Available eld Observations: Depth of Surface Water: Depth to Free Water in Pit: None	seasonal ef ce other area lanual (Page tland vegeta Wet	as are roa 68, Step tion criteri land Hydi Primary in	rology Inc dicators: Inunda Satura: Satura: Water I Drift Lir Sedime Drainag Indicator: Water-S Local S Other (E	dicators (Describilited Ited in Upper 12 included in Upper 18 included i	e in Remarks): thes hes ands ed): the Upper 12 inches

						Data P	ot#:	44-B2
•						Wetlar	nd:	44 Upland Plo
roject/Sit	e Seattle Ta	acoma Airport - Master	Plan Update	Date:	8/19/98			
OILS oil Surv	ey Data:							
tap Unit	Name: Unm	apped			Dramage (Class:		
	-				Field Obse	ervations Conf	irm Map	ped Type?
axonomy	(Subgroup):				Yes	No	NA	x
rofile De	scription:						-	
epth nches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)		Mottle Abundance	e/Contrast		ure, Concretions, ospheres, etc.
-12	Fill	7 5YR 2/1	•		•		Loam	ov sand
His His Su Pro Re Gie	ducing Condi	Moisture Regime tions Chroma Colors		Listed Listed Aquic Organ Mottle	on State Hon National Moisture Relic Streaking	in Sandy Soi	t List	
مرزاسا	h Organic Co	ontent in Surface Layer		_ Other	(Explain in	Remarks)		
	Describe soil	disturbances, local va-	riations, etc.):					

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): All three wetland parameters are absent, therefore, the area is not a wetland.

Yes

Hydric Soils Present?

Wetland Hydrology Present?



WETLAND DETERMINATION (Modified from: 1987 COE Wetlands Delineation No. 1988 COE Wetlands Delineation No. 1989 COE Wetlands Delineation No.	Metland: 44 Upland Pi
Project/Site Seattle Tacoma Airport - Master Plan Update Date: 8/19/98	nunity ID: Upland
Project/Site: Seattle Tacoma Airport - Master Plan Update Applicant/Owner: Port of Seattle County: King Investigator: William Kleind! 1987 Method 1989 Method Common Normal Circumstances exist on the site? State: WA Common Normal Circumstances exist on the site? State:	nunity ID: Upland
Applicant/Owner: Port of Seattle County: King Investigator: William Kleindl 1989 Method 1989 Method Common Normal Circumstances exist on the site? State: WA Common Normal Circumstances exist on the site? State: WA Common Normal Circumstances exist on the site? Yes X No X State: WA Common Normal Circumstances exist on the site? Yes No X Remarks (Explain sample location, disturbances, problem areas):	
nvestigator: William Kleindl State: WA ✓ 1987 Method 1989 Method Common Normal Circumstances exist on the site? Yes X No Field sthe site significantly disturbed (Atypical Situation)? Yes No X sthe area a potential Problem Area? Yes No X Remarks (Explain sample location, disturbances, problem areas):	
✓ 1987 Method 1989 Method Comr Do Normal Circumstances exist on the site? Yes X No Field s the site significantly disturbed (Atypical Situation)? Yes No X s the area a potential Problem Area? Yes No X Remarks (Explain sample location, disturbances, problem areas):	
Do Normal Circumstances exist on the site? Yes X No Field s the site significantly disturbed (Atypical Situation)? Yes No X Stemarks (Explain sample location, disturbances, problem areas):	
s the site significantly disturbed (Atypical Situation)? Yes No X s the area a potential Problem Area? Yes No X temarks (Explain sample location, disturbances, problem areas):	Plot ID: 44-B3
s the area a potential Problem Area? Yes No X Remarks (Explain sample location, disturbances, problem areas):	
emarks (Explain sample location, disturbances, problem areas):	
EGETATION (Dominant species are checked)	
Plant Species % Cover Stratum Indicator	
1 Oemleria cerasiformis 30 Shrub FACU	
2 Rubus discolor 50 Shrub FACU 3 Acer macrophylium 40 Tree FACU	
3 Acer macrophyllum 40 Tree FACU	
YDROLOGY	
YDROLOGY corded Data (Describe in Remarks): Wetland Hydrology Indicate	ors (Describe in Remarks):
YDROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage April Photograph	ors (Describe in Remarks):
YDROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Wetland Hydrology Indicators: Primary Indicators: Inundated	
YDROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in	Upper 12 inches
YDROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in	Upper 12 inches Upper 18 inches
YDROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in	Upper 12 inches Upper 18 inches
YDROLOGY accorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available Wetland Hydrology Indicators: Primary Indicators: Inundated Saturated in Water Marks Drift Lines Sediment De	Upper 12 inches Upper 18 inches Seposits
YDROLOGY accorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available Water Marks Drift Lines Sediment De	Upper 12 inches Upper 18 inches
YDROLOGY accorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available Mater Marks Drift Lines Sediment De Denth of Surface Water.	Upper 12 inches Upper 18 inches s eposits Items in Wetlands
YDROLOGY accorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available No Recorded Data Available Water Marks Drift Lines Sediment De Drainage Pa Ald Observations: Depth of Surface Water: None Depth to Free Water in Pit: >16 (in.) Wetland Hydrology Indicator Primary Indicators: Nonundated Primary Indicators: Saturated in Water Marks Drainage Pa Secondary Indicators (2 co	Upper 12 inches Upper 18 inches s eposits Items in Wetlands or more required):
YDROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available No Recorded Data Available No Recorded Data Available Water Marks Drift Lines Sediment Depth of Surface Water: Depth to Free Water in Pit: Depth to Saturated Soil: Vetland Hydrology Indicators: Primary Indicators: Saturated in Water Marks Drift Lines Sediment Depth of Surface Water: Depth to Saturated Soil: None (in.) Secondary Indicators (2 of Oxidized Ro	Upper 12 inches Upper 18 inches s eposits Ittems in Wetlands or more required): ot Channels in Upper 12 inches
Primary Indicators: Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available No Recorded Data Available Primary Indicators: Inundated Saturated in Water Marks Drift Lines Sediment De Drainage Pa Primary Indicators: Saturated in Water Marks Drift Lines Sediment De Drainage Pa Paid Observations: Depth of Surface Water: Depth to Free Water in Pit: Depth to Saturated Soil: Depth to Saturated Soil	Upper 12 inches Upper 18 inches s eposits Ittems in Wetlands or more required): ot Channels in Upper 12 inches ed Leaves
Stream, Lake, or Tide Gage	Upper 12 inches Upper 18 inches s eposits Ittems in Wetlands or more required): ot Channels in Upper 12 inches ed Leaves

4 1							Data P	ot#:	44-B3
							Wetlar	id:	44 Upland Pio
							-		
roject/Sit	e: Seattle Ta	acoma Airport - Maste	r Plan Upd	ate	Date	8/19/98	- 		
SOILS Soil Surv	ey Data:								
Map Unit	Name: <u>Unm</u>	apped				Drainage (Class:		
						Field Obse	ervations Conf	ım Map	pped Type?
Taxonomy	(Subgroup):					Yes	No	NA	x
Profile De	scription:		****					-	
Depth (Inches)	Horizon Designation	Matrix Color (Munsell Moist)	-	e Color Isell Moist)	Mottle Abundanc	e/Contrast		ure, Concretions, ospheres, etc.
):	A	10YR 2'2				-		Sand	ly loam
1-16+	В	10YR 4/4				•		Sand	v Loam
His Su Pri Re Gle Hig	educing Condi eyed or Low-C gh Organic Co (Describe soil	Moisture Regime		tc.):	Listed Listed Aquid Organ Mottle	on State H on Nationa Moisture Re nic Streaking	in Sandy Soil	_ist	
VETLAN	ND DETER	MINATION							
	ic Vegetation	Present?	Yes	No	<u>×</u>	Is	this Samplin	g Point	Within a Wetlan
_	s Present?		res	_ No	<u> </u>		Yes	No	x
etland Hy			res .	No					

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): This area is an upland since all wetland parameters are absent.



Data Plot #:	44-B4
Watiand:	Liniana

	WET	LAND	DETE	RMINA	ATION	Wetiand	Upland
_	(Modified from: 19					tion Manual)
							,
	Airport - Master Plan Upo	aate	_		6.'2/00	····	
Applicant/Owner: Port of Se	·			County:			
westigator: William Kleindl.				State:	WA		
	Method				_	Community I): Upland
o Normal Circumstances exis		Yes		No .	λ	Field Plot ID:	44-B4
the site significantly disturbed	d (Atypical Situation)?	Yes	<u> </u>	No .			_
the area a potential Problem	Area?	Yes	<u> </u>	No _			
emarks (Explain sample loca	•			imatelii	30 foot o	act of confirmo	l adda of Motional 44
nta plot 7 is approximately 19	reet north of rock linea s	waie ar	та арргох	imately	30 feet ea	ast of confirmed	reage of vvetland 44.
EGETATION - Domina	nt species are checked)						
Plant Species			% Cover	Stratu	m Indi	cator	
1 Equisetum arvense			30	Herb	FAC	<u> </u>	
2 Festuca arundinacea	· · · · · · · · · · · · · · · · · · ·		20	Herb	FAC		
			100	Shrub	FAC	U	
ccept FAC-). Include species orphological adaptations to we marks (Describe disturbance)	noted (*) as showing etlands. "T" indicates traces, relevant local variation	ce. ons, sea	33 asonal eff			e is not mot	
recent of Dominant Species (cept FAC-). Include species orphological adaptations to we marks (Describe disturbancies than 50% of the dominant of the species	noted (*) as showing etlands. "T" indicates traces, relevant local variation	ce. ons, sea	33 asonal eff			a is not met.	
recent of Dominant Species (cept FAC-). Include species orphological adaptations to we marks (Describe disturbance less than 50% of the dominate less than 5	noted (*) as showing etlands. "T" indicates traces, relevant local variation in the plants are hydrophical variation."	ce. ons, sea	33 asonal eff	vegetati	ion criteri		progino in Romanico).
recent of Dominant Species (cept FAC-). Include species orphological adaptations to we marks (Describe disturbance less than 50% of the dominate less than 5	noted (*) as showing etlands. "T" indicates tra ces, relevant local variation in antiplants are hydrophical semarks):	ce. ons, sea	33 asonal eff	vegetati	drology	Indicators (D	escribe in Remarks):
rcent of Dominant Species rephological adaptations to we marks (Describe disturbancice less than 50% of the domination o	noted (*) as showing etlands. "T" indicates traces, relevant local variation in an etland plants are hydrophic Remarks): Tide Gage	ce. ons, sea	33 asonal eff	vegetati	drology	Indicators (D	escribe in Remarks):
recent of Dominant Species (cept FAC-). Include species orphological adaptations to we marks (Describe disturbance less than 50% of the dominate less than 5	noted (*) as showing etlands. "T" indicates traces, relevant local variation in an etland plants are hydrophic Remarks): Tide Gage	ce. ons, sea	33 asonal eff	vegetati	rdrology (Indicators	Indicators (Designations)	
recent of Dominant Species (cept FAC-). Include species orphological adaptations to we marks (Describe disturbance less than 50% of the dominate less than 5	noted (*) as showing etlands. "T" indicates tra ces, relevant local variation in an etland plants are hydrophical etlands. "The center of the	ce. ons, sea	33 asonal eff	vegetati	drology Indicators Inum Satu	Indicators (Description of the Control of the Contr	12 inches
rcent of Dominant Species (cept FAC-). Include species orphological adaptations to we marks (Describe disturbance less than 50% of the dominate less than 50% of the dominate less than 50%. Stream, Lake, or Aerial Photograph Other	noted (*) as showing etlands. "T" indicates tra ces, relevant local variation in an etland plants are hydrophical etlands. "The center of the	ce. ons, sea	33 asonal eff	vegetati	drology Indicators Inum Satu	Indicators (Designations)	12 inches
recent of Dominant Species (cept FAC-). Include species orphological adaptations to we marks (Describe disturbance less than 50% of the dominate less than 5	noted (*) as showing etlands. "T" indicates tra ces, relevant local variation in an etland plants are hydrophical etlands. "The center of the	ce. ons, sea	33 asonal eff	vegetati	drology Indicators Inum Satu Satu Wate	Indicators (Di i: idated irated in Upper irated in Upper	12 inches
ercent of Dominant Species except FAC-). Include species prophological adaptations to we emarks (Describe disturbance face less than 50% of the dom YDROLOGY facorded Data (Describe in Facorded Data) Stream, Lake, or Aenal Photograph Other	noted (*) as showing etlands. "T" indicates tra ces, relevant local variation in an etland plants are hydrophical etlands. "The center of the	ce. ons, sea	33 asonal eff	vegetati	rdrology Indicators Inun Satu Satu Drift Sedi	Indicators (Di indicators) Indated Indated in Upper Indated in Upper	12 inches 18 inches
ercent of Dominant Species (cept FAC-). Include species orphological adaptations to we emarks. (Describe disturbance less than 50% of the dom YDROLOGY (Corded Data (Describe in Face) Stream, Lake, or Aenal Photograph Other X No Recorded Data	noted (*) as showing etlands. "T" indicates tra ces, relevant local variation in an etland plants are hydrophical etlands. "The center of the	ce. ons, sea	33 asonal eff	vegetati	rdrology Indicators Inun Satu Satu Drift Sedi	Indicators (Di is: Indated Irrated in Upper Irrated in Upper er Marks Lines	12 inches 18 inches
recent of Dominant Species (cept FAC-). Include species orphological adaptations to we sharks (Describe disturbance less than 50% of the dom YDROLOGY corded Data (Describe in Face and Photograph Other X No Recorded Data (Id Observations:	noted (*) as showing etlands. "T" indicates tra ces, relevant local variation in an etland plants are hydrophical etlands. "The center of the	ce. ons, sea	asonal effective wetland Wett	land Hy	rdrology Indicators Inun Satu Satu Drift Sedi	Indicators (Discount of the control	12 inches 18 inches n Wetlands
rcent of Dominant Species (cept FAC-). Include species (phological adaptations to we marks (Describe disturbance less than 50% of the dom CDROLOGY (Corded Data (Describe in Facility Stream, Lake, or Aerial Photograph Other X No Recorded Data (Described D	noted (*) as showing etlands. "T" indicates tra ces, relevant local variation in antipolar plants are hydrophical plants. Tide Gage that a Available	ce. ons, sea	asonal effective wetland Wett	land Hy	drology Indicators Inum Satu Satu Vate Drift Sedi Draii	Indicators (Discontinuo) idated in Upper irrated in Upper er Marks Lines in Deposits in Deposits in Deposits in Upper externs in tors (2 or more	12 inches 18 inches n Wetlands required):
recent of Dominant Species (cept FAC-). Include species orphological adaptations to we species orphological adaptations to we smarks (Describe disturbance less than 50% of the dom YDROLOGY corded Data (Describe in Face and Photograph Other X No Recorded Data (Describe Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as showing etlands. "T" indicates tra ces, relevant local variation in ant plants are hydrophy. Remarks): Tide Gage h ta Available None (in.)	ce. ons, sea	asonal effective wetland Wett	land Hy	drology Indicators Inum Satu Satu Drift Sedi Drail ary Indica	Indicators (Doi: idated irrated in Upper irrated in Upper er Marks Lines ment Deposits nage Patterns in tors (2 or more	12 inches 18 inches n Wetlands required): nnels in Upper 12 inche
ercent of Dominant Species except FAC-). Include species prophological adaptations to we emarks. (Describe disturbance force less than 50% of the dom YDROLOGY ecorded Data. (Describe in Figure 1) Stream, Lake, or Aenal Photograpi Other X. No Recorded Data.	noted (*) as showing etlands. "T" indicates tra ces, relevant local variation in ant plants are hydrophysical seemarks): Tide Gage h ta Available None (in.) >18 (in.)	ce. ons, sea	asonal effective wetland Wett	land Hy	rdrology Indicators Inum Satu Satu Wate Drift Sedi Drain Iny Indica Wate Wate Wate Wate Wate Wate Wate Wat	Indicators (Doi: idated irrated in Upper irrated in Upper er Marks Lines ment Deposits nage Patterns in itors (2 or more lized Root Char er-Stained Leav	12 inches 18 inches N Wetlands required): nnels in Upper 12 inche es
ercent of Dominant Species except FAC-). Include species forphological adaptations to we emarks (Describe disturbancince less than 50% of the dominate less	noted (*) as showing etlands. "T" indicates tra ces, relevant local variation in ant plants are hydrophysical seemarks): Tide Gage h ta Available None (in.) >18 (in.)	ce. ons, sea	asonal effective wetland Wett	land Hy	rdrology Indicators Inum Satu Satu Wate Drift Sedi Drail ary Indica Oxid Wate Loca	Indicators (Doi: idated irrated in Upper irrated in Upper er Marks Lines ment Deposits nage Patterns in tors (2 or more	12 inches 18 inches Nettlands required): nnels in Upper 12 inche res ata

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): This area is an upland since all wetland parameters are absent.

Hydric Soils Present?

Wetland Hydrology Present?

Is this Sampling Point Within a Wetland?

Yes No X



Data	Piot	#

					,	Data Plot #:	A1-A1
•	WE	ΤΙ ΔΝΕ	DETE	RMINA	TION	Wetland:	<u>A1</u>
_ (WE: Modified from: 19					lanual)	
roject/Site: Seattle Tacoma A					3/9/98	,	
pplicant/Owner: Port of Se		Nate		County:			
vestigator: William Kleindi	atue			State:	King WA		
1987 Method 1989 A	Method			State.			
o Normal Circumstances exist		Vaa	x	N-	Сотп	nunity ID: PE	EM
		Yes	<u>^</u>	No _		Plot ID: 1-A	
the site significantly disturbed		Yes		No	<u>x</u>		
the area a potential Problem Amarks (Explain sample loca		Yes		No _	<u>×</u>		
GETATION (~Dominan	nt species are checked))	% Cover	Stratum	Indicator		
1. Phalans arundinacea			90	Herb	FACW		
2 Rubus discolor			10	Shrub	FACU		
3 Salix sp			10	Shrub	FACW		
ccept FAC-). Include species reproduced adaptations to well emarks (Describe disturbance	noted (*) as showing tlands. "T" indicates tra es, relevant local variati	ace. ions, sea	80 asonal ef	fects, etc.) :		
cept FAC-). Include species rephological adaptations to wet marks (Describe disturbance tland plant criteria satisfied site	noted (*) as showing tlands. "T" indicates tra es, relevant local variati	ace. ions, sea	80 asonal ef	fects, etc.): drophytic.		
cept FAC-). Include species rephological adaptations to wet marks (Describe disturbance than plant criteria satisfied sin DROLOGY	noted (*) as showing tlands. "T" indicates traces, relevant local variationed dominant species g	ace. ions, sea	80 asonal efi	ercent hyd	drophytic.		
cept FAC-). Include species reprological adaptations to well marks (Describe disturbance tland plant criteria satisfied sire and criteri	noted (*) as showing tlands. "T" indicates traces, relevant local variations dominant species generals):	ace. ions, sea	80 asonal efi han 50 pe	ercent hyd	rology Indicate	ns (Describe	n Remarks):
cept FAC-). Include species rephological adaptations to well marks. (Describe disturbance than plant criteria satisfied sin TDROLOGY corded Data. (Describe in Research, Lake, or 1	noted (*) as showing tlands. "T" indicates traces, relevant local variationce dominant species greenarks): Tide Gage	ace. ions, sea	80 asonal efi han 50 pe	ercent hyd	rology Indicate	rs (Describe	in Remarks):
cept FAC-). Include species reprological adaptations to well marks (Describe disturbance tland plant criteria satisfied sire and criteri	noted (*) as showing tlands. "T" indicates traces, relevant local variationce dominant species greenarks): Tide Gage	ace. ions, sea	80 asonal efi han 50 pe	ercent hyd land Hydi Primary In	rology Indicato		
cept FAC-). Include species rephological adaptations to well marks. (Describe disturbance atland plant criteria satisfied sin a second plant criteria satisfied sin a second plant. (Describe in Research Lake, or 1 Aerial Photograph Other	noted (*) as showing tlands. "T" indicates traces, relevant local variationee dominant species germarks): Tide Gage	ace. ions, sea	80 asonal efi han 50 pe	ercent hyd	rology Indicato dicators: Inundated Saturated in	Upper 12 inch	nes
cept FAC-). Include species rephological adaptations to well marks. (Describe disturbance atland plant criteria satisfied sin a second plant criteria satisfied sin a second plant. (Describe in Research Lake, or 1 Aerial Photograph Other	noted (*) as showing tlands. "T" indicates traces, relevant local variationee dominant species germarks): Tide Gage	ace. ions, sea	80 asonal efi han 50 pe	land Hydri Primary In	rology Indicato dicators: Inundated Saturated in	Upper 12 incl Upper 18 incl	nes
rept FAC-). Include species reprological adaptations to well marks. (Describe disturbance atland plant criteria satisfied sin a corded Data. (Describe in Research, Lake, or 1 Aerial Photograph Other.	noted (*) as showing tlands. "T" indicates traces, relevant local variationee dominant species germarks): Tide Gage	ace. ions, sea	80 asonal efi han 50 pe	land Hydri Primary In	rology Indicato dicators: Inundated Saturated in Saturated in	Upper 12 incl Upper 18 incl	nes
ccept FAC-). Include species reprological adaptations to well marks. (Describe disturbance atland plant criteria satisfied side of DROLOGY corded Data. (Describe in Research, Lake, or 1 Aerial Photograph Other.	noted (*) as showing tlands. "T" indicates traces, relevant local variationee dominant species germarks): Tide Gage	ace. ions, sea	80 asonal efi han 50 pe	land Hydri Primary In	rology Indicator dicators: Inundated Saturated in Saturated in Water Marks Drift Lines Sediment De	Upper 12 incl Upper 18 incl	nes nes
recept FAC-). Include species represented adaptations to well amarks. (Describe disturbance etland plant criteria satisfied side of the corded Data. (Describe in Research Lake, or 1 Aerial Photograph. X No Recorded Data.	noted (*) as showing tlands. "T" indicates traces, relevant local variationee dominant species germarks): Tide Gage	ace. ions, sea	80 asonal efi han 50 pe	land Hydri Primary In	rology Indicator dicators: Inundated Saturated in Saturated in Water Marks Drift Lines Sediment De	Upper 12 incr Upper 18 incr	nes nes
rept FAC-). Include species reprototogical adaptations to well marks. (Describe disturbance atland plant criteria satisfied sire and plant criteria satisfied sire and plant criteria satisfied sire and plant criteria. (Describe in Research Lake, or 1 Aerial Photograph Other X No Recorded Data and Observations: Depth of Surface Water:	noted (*) as showing tlands. "T" indicates traces, relevant local variation de dominant species gremarks): Tide Gage Available None (in.)	ace. ions, sea	80 asonal efi han 50 pe Wet	land Hydi Primary In X X	rology Indicator dicators: Inundated Saturated in Saturated in Water Marks Drift Lines Sediment De Drainage Pa	Upper 12 inch Upper 18 inch eposits Items in Wetla	nes nes
rept FAC-). Include species reprological adaptations to well marks. (Describe disturbance atland plant criteria satisfied sin a stream, Lake, or 1 Aerial Photograph Other X No Recorded Data d Observations: Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as showing tlands. "T" indicates traces, relevant local variationce dominant species grands: Emarks): Tide Gage Available None (in.)	ace. ions, sea	80 asonal efi han 50 pe Wet	land Hydi Primary In X X	rology Indicators: Inundated Saturated in Saturated in Water Marks Drift Lines Sediment De Drainage Pa	Upper 12 inch Upper 18 inch eposits Iterns in Wetta	nes nes ands
rept FAC-). Include species reprological adaptations to well marks. (Describe disturbance atland plant criteria satisfied sin a stream, Lake, or 1 Aerial Photograph Other X No Recorded Data d Observations: Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as showing tlands. "T" indicates traces, relevant local variationce dominant species germarks): Tide Gage Available None (in.)	ace. ions, sea	80 asonal efi han 50 pe Wet	land Hydi Primary In X X	rology Indicators: Inundated Saturated in Saturated in Water Marks Drift Lines Sediment De Drainage Pa	Upper 12 inch Upper 18 inch eposits tterns in Wetta r more require of Channels in	nes nes
recept FAC-). Include species repropositions to well adaptations to well amarks. (Describe disturbance atland plant criteria satisfied sin a stream, Lake, or 1 Aerial Photograph Other X No Recorded Data Id Observations: Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as showing tlands. "T" indicates traces, relevant local variationce dominant species gremarks): Tide Gage Available None (in.)	ace. ions, sea	80 asonal efi han 50 pe Wet	land Hydi Primary In X X	rology Indicators: Inundated Saturated in Saturated in Water Marks Drift Lines Sediment De Drainage Pa Indicators (2 of Oxidized Row Water-Stainer)	Upper 12 inch Upper 18 inch eposits Itterns in Wetta or more require of Channels in It Leaves	nes nes ands
compt FAC-). Include species reprehological adaptations to well emarks. (Describe disturbance etland plant criteria satisfied site YDROLOGY ecorded Data. (Describe in Research Lake, or 1 Aerial Photograph Other. X No Recorded Data. (Describe in Research Lake, or 1 Aerial Photograph Other.) X No Recorded Data. (Describe in Research Lake, or 1 Aerial Photograph Other.) X No Recorded Data. (Describe in Research Lake, or 1 Aerial Photograph Other.)	noted (*) as showing tlands. "T" indicates traces, relevant local variationce dominant species gremarks): Tide Gage Available None (in.)	ace. ions, sea	80 asonal efi han 50 pe Wet	land Hydi Primary In X X	rology Indicator dicators: Inundated Saturated in Saturated in Water Marks Drift Lines Sediment De Drainage Pa Indicators (2 o Oxidized Roo Water-Staine Local Soil Sc	Upper 12 inch Upper 18 inch eposits Itterns in Wetta or more require of Channels in It Leaves invey Data	nes inds ed): Upper 12 inches
Aerial Photograph Other X No Recorded Data Id Observations: Depth of Surface Water: Depth to Free Water in Pit: Depth to Saturated Soil:	noted (*) as showing tlands. "T" indicates traces, relevant local variationce dominant species gremarks): Tide Gage None (in.) (in.) (in.)	ace. ions, sei greater t	asonal efi han 50 pe Wet	land Hydinary In X X Secondary	rology Indicator dicators: Inundated Saturated in Saturated in Water Marks Drift Lines Sediment De Drainage Pa Indicators (2 o Oxidized Roo Water-Staine Local Soil St Other (Expla	Upper 12 inch Upper 18 inch sposits terns in Wetla or more require of Channels in ad Leaves invey Data in in Remarks	nes inds ed): Upper 12 inches
compt FAC-). Include species reprehological adaptations to well emarks. (Describe disturbance etland plant criteria satisfied site YDROLOGY ecorded Data. (Describe in Research Lake, or 1 Aerial Photograph Other. X No Recorded Data. (Describe in Research Lake, or 1 Aerial Photograph Other.) X No Recorded Data. (Describe in Research Lake, or 1 Aerial Photograph Other.) X No Recorded Data. (Describe in Research Lake, or 1 Aerial Photograph Other.)	noted (*) as showing tlands. "T" indicates traces, relevant local variations dominant species grands. Emarks): Tide Gage None (in.) (in.) (in.)	ace. ions, sei greater t	80 asonal efi	iand Hydrice in the image in th	rology Indicator dicators: Inundated Saturated in Saturated in Water Marks Drift Lines Sediment De Drainage Pa Indicators (2 o Oxidized Roi Water-Staine Local Soil St Other (Expla	Upper 12 inch Upper 18 inch sposits terms in Wetla or more require to Channels in ded Leaves invey Data in in Remarks	nes nes inds ed): Upper 12 inches

11						Data P Wetlar		A1-A1
²roject/Sit	e: <u>Seattle T</u>	acoma Airport - Master Pl	an Update	Date:	4/9/98			
SOILS Soil Surv	ey Data:							
Map Unit	Name: <u>Unn</u>	napped			Drainage (Class:		
					Field Obse	rvations Conf	irm Map	ped Type?
Taxonomy	(Subgroup):				Yes	No	_ NA	_x_
Profile De	scription:						-	
Depth (Inches)	Horizon Designation	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)		Mottle Abundance	e/Contrast	_	ure, Concretions ospheres, etc.
0-13	Α	10YR 2/1	-		-		Silt lo	anvorganic
>14	В	10YR 2/1	10YR 4/3 & 10YR 4/4		Common, Me	dium, Distinct	Silt to	em
lydric So	il Indicators:	:						
His	stosol			Listed	on Local Hy	dric Soils List	t	
His	stic Epipedon			Listed	on State Hy	dric Soils List		
	Ifidic Odor			Listed	on National	Hydric Soils L	_ist	
		Moisture Regime		_	Moisture Re	-		
	ducing Condi					in Sandy Soil	S	
		Chroma Colors Ontent in Surface Layer	<u>X</u>	_ Mottle	-			
		•		_ Other	(Explain in F	(emarks		
		disturbances, local variation of the disturbances of the disturban						
			my one son cineria.					

Yes <u>X</u> No Yes <u>X</u> No

Hydric Soils Present?

Wetland Hydrology Present?

The presence of all three parameters indicate this area is a wetland. Wetland edge delineated between vegetation and tilled area.

Yes X No



Data Plot #:	A1-A2
Wetland:	A1

11						Data Piot	#:	A1-A2
-	WET	LANE	DETE	RMINA	TION	Wetland:		A1
(Mo	dified from: 19		-			Manual)		
Project/Site: Seattle Tacoma Airpor					1/9/98			
Applicant/Owner: Port of Seattle				County:	King			
ivestigator: William Kleindl	···			State:	WA			
2 1987 Method 1989 Metho	xd		 `	Julie.				
o Normal Circumstances exist on the	ne site?	Yes	×	No	Со	mmunity ID:	PSS	
the site significantly disturbed (Aty		Yes	^	_		id Piot ID:	2-A	
the area a potential Problem Area?				_	<u>x</u>			
emarks (Explain sample location,		Yes		No _	<u>x</u>			
EGETATION (✓Dominant spe Plant Species 1. Solanum dulcamara	cies are checked)		% Cover	Stratum	Indicator FAC+			
TOTAL			20	Herb	FAC+			
2 Urtica dioica					FACT			
2 Urtica dioica 3 Rubus discolor			40		FACU			
Rubus discolor Alnus rubra ercent of Dominant Species that except FAC-). Include species noted orphological adaptations to wetlands	(*) as showing i. "T" indicates trac	ce.	40 20 75	Shrub Tree	FACU FAC			
Rubus discolor Alnus rubra Percent of Dominant Species that except FAC-). Include species noted orphological adaptations to wetlands marks (Describe disturbances, rel	(*) as showing 5. "T" indicates trac levant local variatio	ce. ons, sea	75 20 20 20	Shrub Tree	FAC	s met.		
Rubus discolor Alnus rubra ercent of Dominant Species that except FAC-). Include species noted orphological adaptations to wetlands emarks (Describe disturbances, referce greater than 50% of the dominal	(*) as showing 5. "T" indicates trac levant local variatio	ce. ons, sea	75 20 20 20	Shrub Tree	FAC	s met.		
Rubus discolor Alnus rubra Procent of Dominant Species that except FAC-). Include species noted prohological adaptations to wetlands armarks (Describe disturbances, refere greater than 50% of the dominator of DROLOGY	(*) as showing i. T indicates trac levant local variatio int plants are hydro	ce. ons, sea	75 asonal effe	Shrub Tree ects, etc.	FAC): ttion criteria i.		Tibe in	Remarkel
Rubus discolor 4 Alnus rubra recent of Dominant Species that (cept FAC-). Include species noted prohological adaptations to wetlands marks (Describe disturbances, relace greater than 50% of the dominal (DROLOGY)	(*) as showing . T indicates trac levant local variatio nt plants are hydro (ss):	ce. ons, sea	75 asonal effe	Shrub Tree ects, etc.	FAC ition criteria i		cribe in	Remarks):
Rubus discolor 4 Alnus rubra recent of Dominant Species that (cept FAC-). Include species noted prohological adaptations to wetlands marks (Describe disturbances, relace greater than 50% of the dominal (DROLOGY corded Data (Describe in Remarks)	(*) as showing . T indicates trac levant local variatio nt plants are hydro (ss):	ce. ons, sea	75 asonal effe	Shrub Tree ccts, etc.) and vegeta	FAC ition criteria i	ators (Desc		Remarks):
Rubus discolor Alnus rubra recent of Dominant Species that coept FAC-). Include species noted orphological adaptations to wetlands marks (Describe disturbances, relace greater than 50% of the dominal CPROLOGY corded Data (Describe in Remark Stream, Lake, or Tide CAerial Photograph Other	(*) as showing . "T" indicates trac levant local variatio int plants are hydro (s): Gage	ce. ons, sea	75 asonal effe	Shrub Tree ccts, etc.) and vegeta	FAC ition criteria i. rology Indicators: Inundated	ators (Desc		
Rubus discolor 4 Alnus rubra recent of Dominant Species that coept FAC-). Include species noted orphological adaptations to wetlands marks (Describe disturbances, relace greater than 50% of the dominal CPROLOGY corded Data (Describe in Remark Stream, Lake, or Tide Carriel Photograph	(*) as showing . "T" indicates trac levant local variatio int plants are hydro (s): Gage	ce. ons, sea	75 asonal effe	Snrub Tree ects, etc.; ad vegeta and Hydrimary Ini	FAC ition criteria i rology Indica dicators: Inundated Saturated Saturated	in Upper 12	inches	
Rubus discolor Alnus rubra arcent of Dominant Species that ccept FAC-). Include species noted orphological adaptations to wetlands amarks (Describe disturbances, reference greater than 50% of the dominant DROLOGY Corded Data (Describe in Remark Stream, Lake, or Tide Caerial Photograph Other	(*) as showing . "T" indicates trac levant local variatio int plants are hydro (s): Gage	ce. ons, sea	75 asonal effe	Snrub Tree ects, etc., etc., et vegeta and Hydrimary Ini X	rology Indicators: Inundated Saturated Water Ma	in Upper 12 in Upper 18 rks	inches	
Rubus discolor Alnus rubra ercent of Dominant Species that except FAC-). Include species noted orphological adaptations to wetlands emarks (Describe disturbances, refere greater than 50% of the dominant PROLOGY corded Data (Describe in Remark Stream, Lake, or Tide Caerial Photograph Other	(*) as showing . "T" indicates trac levant local variatio int plants are hydro (s): Gage	ce. ons, sea	75 asonal effe	Snrub Tree ects, etc., etc., et vegeta and Hydrimary Ini X	rology Indicadicators: Inundated Saturated Water Ma Drift Lines	in Upper 12 in Upper 18 rks	inches	
Alnus rubra arcent of Dominant Species that except FAC-). Include species noted orphological adaptations to wetlands emarks. (Describe disturbances, refere greater than 50% of the dominal YDROLOGY. arcorded Data. (Describe in Remark Stream, Lake, or Tide CAerial Photograph Other X. No Recorded Data Available.	(*) as showing . "T" indicates trac levant local variatio int plants are hydro (s): Gage	ce. ons, sea	75 asonal effe	Snrub Tree ects, etc., etc., et vegeta and Hydrimary Ini X	rology Indicadicators: Inundated Saturated Water Ma Drift Lines Sediment	in Upper 12 in Upper 18 rks Deposits	inches	
Rubus discolor Alnus rubra ercent of Dominant Species that except FAC-). Include species noted orphological adaptations to wetlands emarks (Describe disturbances, related by the dominant of	(*) as showing "T" indicates trac levant local variatio int plants are hydro its): Gage	ce. ons, sea	75 asonal effe	Snrub Tree ects, etc., etc., et vegeta and Hydrimary Ini X	rology Indicadicators: Inundated Saturated Water Ma Drift Lines Sediment	in Upper 12 in Upper 18 rks	inches	
Rubus discolor 4 Alnus rubra Procent of Dominant Species that (coept FAC-). Include species noted prophological adaptations to wetlands marks (Describe disturbances, relace greater than 50% of the dominal (DROLOGY corded Data (Describe in Remark Stream, Lake, or Tide (Aerial Photograph Other X No Recorded Data Avail (Describe Depth of Surface Water: Non	(*) as showing "T" indicates trac levant local variatio int plants are hydro ics): Gage diable e (in.)	ce. ons, sea	75 asonal effethe wetlar Wetla	Snrub Tree ects, etc.; ed vegeta and Hydr rimary Ini X X	rology Indicadicators: Inundated Saturated Water Ma Drift Lines Sediment Drainage	in Upper 12 in Upper 18 rks Deposits Patterns in W	inches inches	s
Alnus rubra Alnus	(*) as showing . "T" indicates trac levant local variatio int plants are hydro iss): Gage liable e (in.) (in.)	ce. ons, sea	75 asonal effethe wetlar Wetla	Snrub Tree ects, etc.; ed vegeta and Hydr rimary Ini X X	rology Indicators: Inundated Saturated Water Ma Drift Lines Sediment Drainage	in Upper 12 in Upper 18 rks Deposits Patterns in W	inches inches Vetland	s
Alnus rubra ercent of Dominant Species that except FAC-). Include species noted orphological adaptations to wetlands emarks. (Describe disturbances, refere greater than 50% of the dominant PDROLOGY. Corded Data. (Describe in Remarks.) Stream, Lake, or Tide (Control Photograph) Other. X. No Recorded Data Available of Surface Water: Depth of Surface Water: Non Depth to Free Water in Pit:	(*) as showing "T" indicates trac levant local variatio int plants are hydro ics): Gage diable e (in.)	ce. ons, sea	75 asonal effethe wetlar Wetla	Snrub Tree ects, etc.; ed vegeta and Hydr rimary Ini X X	rology Indicators: Inundated Saturated Water Ma Drift Lines Sediment Drainage Indicators (2 Oxidized F	in Upper 12 in Upper 18 rks Deposits Patterns in W 2 or more rec	inches inches Vetland	s
Rubus discolor Alnus rubra ercent of Dominant Species that except FAC-). Include species noted orphological adaptations to wetlands emarks (Describe disturbances, relative greater than 50% of the dominal YDROLOGY ecorded Data (Describe in Remark Stream, Lake, or Tide (Aerial Photograph Other X No Recorded Data Available (Aerial Photograph Other Surface Water: Non Depth of Surface Water: Non Depth to Free Water in Pit: 10	(*) as showing . "T" indicates trac levant local variatio int plants are hydro iss): Gage liable e (in.) (in.)	ce. ons, sea	75 asonal effethe wetlar Wetla	Snrub Tree ects, etc.; ed vegeta and Hydr rimary Ini X X	rology Indicators: Inundated Saturated Water Ma Drift Lines Sediment Drainage Indicators (2 Oxidized F Water-Sta	in Upper 12 in Upper 18 rks Deposits Patterns in W	inches inches Vetland quired):	s

P								Data Piot Wetland:	#:	A1-A2 A1
Project/Site	e: Seattle Ta	acoma Airport - Master	Plai	n Updal	te	Date:	4/9/98	- <u>-</u>		
SOILS Soil Surve	ey Data:									
Map Unit I	Name: Unm	napped					Drainage Class	s:		<u>.</u>
							Field Observati	ons Confirm	Мар	ped Type?
Taxonomy	(Subgroup):						Yes N	ю	NA	<u>x</u>
Profile De	scription:									
Depth Inches)	Horizon Designation	Matrix Color (Munsell Moist)		Mottle (Munse	Color ell Moist)		Mottle Abundance/Cor			ure, Concretions ospheres, etc.
)-9	O1	10YR 2/1					-		Muck	
9	O 2	10YR 4/4					-		Peat	
lvdric So	il Indicators:	:								
-	stosol					Listed	on Local Hydric	Soils List		
His	stic Epipedon	1				Listed	on State Hydric	Soils List		
Su	lfidic Odor					Listed	on National Hyd	Inc Soils List	l	
X Pro	obable Aquic	Moisture Regime				Aquic	Moisture Regime	e		
	ducing Condi						ic Streaking in S	andy Soils		
	•	Chroma Colors				— Mottie	-			
X Hig	n Organic Co	ontent in Surface Laye	r			_ Other	(Explain in Rema	arks)		
		i disturbances, local va			:.) :					
ioii color a	nd other indic	cators meet the hydric	soil	cntena						
VETLAN	ID DETER	MINATION								
lydrophyti	ic Vegetation	n Present?	Y e s	x	No		ls this	Sampling P	Point	Within a Wetla
_	-				_					
ydric Soil	s Present?	`	res -	X	No					

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): The presence of all three parameters indicate this area is a wetland.



Data	Piot	#:

A1-A3

WETLA	ND DETE	RMINA	TION	Wetland: A1
(Modified from: 1987 (
Project/Site: Seattle Tacoma Airport - Master Plan Update		_	7/4/98	,
Applicant/Owner: Port of Seattle		County:	King	1
Investigator: William Kleindl		State:	WA	
✓ 1987 Method				Community ID: DEM
	es X	No		Community ID: PEM
	es	•	×	Field Plot ID: 21-A
1- 1	es —	-	X	
Remarks (Explain sample location, disturbances, problem Sample taken in a disturbed are between a residence and M	areas):	-		
	- Crook.			
VEGETATION (Dominant species are checked) Plant Species	% Cover	Stratur		ndicator
Ranunculus repens	25	Herb		ACW
				- 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Plants are predominately cultivated fruit trees and shrubs. S vegetation criteria is met. HYDROLOGY		than 50	% Of th	e dominant plants are nydrophytic, the wetland
Recorded Data (Describe in Remarks):	Mas	laad bloo		us to attack and a second
Stream, Lake, or Tide Gage		onmary i		y Indicators (Describe in Remarks):
Aenal Photograph	•			
Other		x	_	oundated aturated in Upper 12 inches
X No Recorded Data Available				aturated in Upper 18 inches
				ater Marks
			_ D	rift Lines
				ediment Deposits
Field Observations:			D	rainage Patterns in Wetlands
Depth of Surface Water: None (in.)	,	Seconda	n, indi	icatore (2 or more required):
Depth to Free Water in Pit: >20 (in.)	•			icators (2 or more required):
Depth to Saturated Soil: >20 (in.)				xidized Root Channels in Upper 12 inches
				later-Stained Leaves
			_	ocal Soil Survey Data ther (Explain in Remarks)
Demostre (As relevant days)				"" (Explain in Nemarks)
Remarks (As relevant, describe recent precipitation, hydrolo				
Soils were very moist in July. Wetland hydrology is frequently presence of wetland vegetation and hydrology is the wetland by	ogic modific	ations, ic	ocal va	nations, etc.):

L.					Data Wetis	Plot #: ind:	A1-A3
^o roject/S	ite: Seattle Ta	acoma Airport - Maste	r Plan Update	Date	7/4/98		
OILS ioil Sur	vey Data:						
Map Unit	Name: Unm	napped			Drainage Class:		
					Field Observations Cor	nfirm Map	ped Type?
Taxonom	y (Subgroup):				Yes No	NA	_x_
rofile D	escription:					_	
epth nches)	Horizon Designation	Matrix Color (Munsell Moist)	Mottle Color (Munsell Mo	st)	Mottle Abundance/Contrast		ure, Concretions ospheres, etc.
-20	Filt	10YR 2/1	7.5YR 3/4		Few, Medium, Distinct	Loam	·
	oil Indicators: listosol			• • •			
Si Pi	educing Condi leyed or Low-C igh Organic Co	Moisture Regime tions Chroma Colors ontent in Surface Laye	-	Listed Listed Aquic Organ X Mottle	on Local Hydric Soils Lit on State Hydric Soils Lit on National Hydric Soils Moisture Regime lic Streaking in Sandy So s (Explain in Remarks)	st List	
Si Pi	ulfidic Odor robable Aquic educing Condi leyed or Low-C igh Organic Co (Describe soil	Moisture Regime tions Chroma Colors ontent in Surface Laye disturbances, local va	iriations, etc.):	Listed Listed Aquic Organ X Mottle Other	on State Hydric Soils Li on National Hydric Soils Moisture Regime iic Streaking in Sandy So s (Explain in Remarks)	st List	
Si Pi	ulfidic Odor robable Aquic educing Condi leyed or Low-C igh Organic Co (Describe soil	Moisture Regime tions Chroma Colors ontent in Surface Laye	iriations, etc.):	Listed Listed Aquic Organ X Mottle Other	on State Hydric Soils Li on National Hydric Soils Moisture Regime iic Streaking in Sandy So s (Explain in Remarks)	st List	
Si Pi Ri X G Hi emarks	ulfidic Odor robable Aquic educing Condi leyed or Low-C igh Organic Co (Describe soil	Moisture Regime tions Chroma Colors ontent in Surface Laye disturbances, local va	iriations, etc.):	Listed Listed Aquic Organ X Mottle Other	on State Hydric Soils Li on National Hydric Soils Moisture Regime iic Streaking in Sandy So s (Explain in Remarks)	st List	
Si S	ulfidic Odor robable Aquic educing Condi leyed or Low-Cigh Organic Co (Describe soil soil horizons.	Moisture Regime tions Chroma Colors ontent in Surface Laye disturbances, local va Soil color and other hy	iriations, etc.):	Listed Listed Aquic Organ X Mottle Other	on State Hydric Soils List on National Hydric Soils Moisture Regime lic Streaking in Sandy So s (Explain in Remarks)	st List hils	Within a Wetla
Rowards Scientific Sci	ulfidic Odor robable Aquic educing Condi leyed or Low-Cigh Organic Co (Describe soil soil honzons.	Moisture Regime titions Chroma Colors Intent in Surface Laye disturbances, local va Soil color and other hy MINATION Present?	ariations, etc.): rdnc soil indicators	Listed Listed Aquic Organ X Mottle Other	on State Hydric Soils List on National Hydric Soils Moisture Regime in Streaking in Sandy Sois (Explain in Remarks) Inc soil critena.	st List hils	Within a Wetla

The presence of all three parameters indicate this area is a wetland.

α		-		Data Plot #:	A1-A4
WETLA	AND DETEI	DMINATI	ON	Wetland:	A1
_				** · · - f\	
(Modified from: 1987	COE Weti	ands Dei	ineation	manuai)	
oject/Site: Seattle Tacoma Airport - Master Plan Updat	e i	Date: 9/1	4/98		
oplicant/Owner: Port of Seattle		County: K	(ing		
vestigator: William Kleindi and Marti Louther		State: V	VA		
1987 Method			Con	nmunity ID: P	PEM
Normal Circumstances exist on the site?	Yes X	No		d Plot ID: 1-A	
the site significantly disturbed (Atypical Situation)?	Yes	No X			
the area a material Darblem Area	Yes	No X	_		
marks (Explain sample location, disturbances, problem		···	_		
GETATION Plant Species are checked)	% Cover	Stratum	Indicator		
· · · · · · · · · · · · · · · · · · ·	% Cover 70	Stratum Herb	Indicator FACW		
Plant Species					
Plant Species 1 Agrostrs gigantea	70 70 60	Herb	FACW		
Plant Species Agrostis gigantea Holcus lanatus Lotus comiculatus Plantago maior	70 70 60 5	Herb Herb	FACW FAC		
Plant Species Agrostis gigantea Holcus lanatus Lotus comiculatus Plantago maior Prunella vulgans	70 70 60 5 15	Herb Herb Herb Herb	FACW FAC FAC+ FACU+		
Plant Species Agrostis gigantea Holcus lanatus Lotus comiculatus Plantago maior Prunella vulgans Ranunculus repens	70 70 60 5 15 80	Herb Herb Herb Herb Herb	FACW FAC FAC+ FACU+ FACW		
Plant Species Agrostis gigantea Holcus lanatus Lotus comiculatus Plantago maior Prunella vuigans Ranunculus repens Scirpus microcarpus	70 70 60 5 15 80 50	Herb Herb Herb Herb	FACW FAC FAC+ FACU+		
Plant Species Agrostis gigantea Holcus lanatus Lotus comiculatus Plantago maior Prunella vulgans Ranunculus repens Scirpus microcarpus Cent of Dominant Species that are OBL, FACW, or land	70 70 60 5 15 80 50	Herb Herb Herb Herb Herb	FACW FAC FAC+ FACU+ FACW	- - - - -	
Plant Species 1 Agrostis gigantea 2 Holcus lanatus 3 Lotus comiculatus 4 Plantago maior 5 Prunella vuigans 6 Ranunculus repens	70 70 60 5 15 80 50 FAC	Herb Herb Herb Herb Herb	FACW FAC FAC+ FACU+ FACW		
Plant Species 1	70 70 60 5 15 80 50 FAC	Herb Herb Herb Herb Herb Herb	FACW FAC FAC+ FACU+ FACW		
Plant Species 1 Agrostis gigantea 2 Holcus lanatus 3 Lotus comiculatus 4 Plantago maior 5 Prunella vuigans 6 Ranunculus repens 7 Scirpus microcarpus recent of Dominant Species that are OBL. FACW, or licept FAC-). Include species noted (*) as snowing imphological adaptations to wetlands. "T" indicates trace. marks (Describe disturbances, relevant local variations	70 70 60 5 15 80 50 FAC 100	Herb Herb Herb Herb Herb Herb Herb Herb	FACW FAC FAC+ FACU+ FACW OBL		
Plant Species 1	70 70 60 5 15 80 50 FAC 100	Herb Herb Herb Herb Herb Herb Herb Herb	FACW FAC FAC+ FACU+ FACW OBL	s met.	
Plant Species 1 Agrostis gigantea 2 Holcus lanatus 3 Lotus comiculatus 4 Plantago maior 5 Prunella vulgans 6 Ranunculus repens 7 Scirpus microcarpus recent of Dominant Species that are OBL, FACW, or least FAC-). Include species noted (*) as snowing riphological adaptations to wetlands. "T" indicates trace, marks (Describe disturbances, relevant local variations ce greater than 50% of the dominant plants are hydrophysical adaptations."	70 70 60 5 15 80 50 FAC 100 5, seasonal eff	Herb Herb Herb Herb Herb Herb Herb Herb	FACW FAC FAC+ FACU+ FACW OBL		
Plant Species Agrostis gigantea Holcus lanatus Lotus comiculatus Plantago maior Prunella vulgans Ranunculus repens Scirpus microcarpus cent of Dominant Species that are OBL, FACW, or locely FAC-). Include species noted (*) as showing rephological adaptations to wetlands. "T" indicates trace, marks (Describe disturbances, relevant local variations or greater than 50% of the dominant plants are hydrophydrorded Data (Describe in Remarks):	70 70 60 5 15 80 50 FAC 100 s, seasonal eff	Herb Herb Herb Herb Herb Herb Herb Herb	FACW FAC FAC+ FACU+ FACW OBL	s met.	pe in Remark
Plant Species Agrosts gigantea Holcus lanatus Lotus comiculatus Plantago maior Prunella vulgans Ranunculus repens Scirpus microcarpus reent of Dominant Species that are OBL, FACW, or leget FAC-). Include species noted (*) as showing riphological adaptations to wetlands. "T" indicates trace, marks (Describe disturbances, relevant local variations or greater than 50% of the dominant plants are hydrophic torded Data (Describe in Remarks): Stream, Lake, or Tide Gage	70 70 60 5 15 80 50 FAC 100 s, seasonal eff	Herb Herb Herb Herb Herb Herb Herb Herb	FACW FAC FAC+ FACU+ FACW OBL on criteria is	itors (Describ	pe in Remark
Plant Species 1	70 70 60 5 15 80 50 FAC 100 s, seasonal eff	Herb Herb Herb Herb Herb Herb Herb Herb	FACW FAC FAC+ FACU+ FACW OBL Slogy Indicators: Inundated	itors (Describ	
Plant Species Agrostis gigantea Holcus lanatus Lotus comiculatus Plantago maior Prunella vulgans Ranunculus repens Scripus microcarpus recent of Dominant Species that are OBL, FACW, or least the common service of the common service of the common service of the common service of the common service greater than 50% of the dominant plants are hydrophy corded Data (Describe in Remarks): Stream, Lake, or Tide Gage	70 70 60 5 15 80 50 FAC 100 s, seasonal eff	Herb Herb Herb Herb Herb Herb Herb Herb	FACW FAC FAC+ FACU+ FACW OBL on criteria is logy Indica cators: Inundated Saturated	itors (Describ	ches

Drift Lines Sediment Deposits Drainage Patterns in Wetlands Field Observations: Depth of Surface Water None (in.) Secondary Indicators (2 or more required): Depth to Free Water in Pit. >18 (in.) Oxidized Root Channels in Upper 12 inches Depth to Saturated Soil: (in.) Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks) Remarks (As relevant, describe recent precipitation, hydrologic modifications, local variations, etc.):

Wetland hydrology is frequently absent from wetlands during the dry summer months. Based of the presence of wetland vegetation and

hydric soil the wetland hydrology criteria is assumed to be present.

P					Data Wetia	Plot #: and:	A1-A4 A1
Project/S	site: Seattle Ta	acoma Airport - Master Pl	an Update	Date:	9/14/98		
SOILS Soil Sur	vey Data:						
Map Unit	t Name: Unm	apped			Drainage Class:		
	\ <u>-</u>				Field Observations Cor	nfirm Map	ped Type?
Taxonom	ny (Subgroup):				Yes No	NA	x
	escription:						
Depth (Inches)	Horizon Designation	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moi	st)	Mottle Abundance/Contrast		ure, Concretions, ospheres, etc.
)-8	A1	10YR 2/1			-	Muck	y sanov loam
8-18	A2	7.5YR 3/1	2.5Y 4/1		Many, Coarse, Distinct	Clay	Loam
X P X R X G H Remarks	educing Condi ileyed or Low-C igh Organic Co (Describe soil organic matter	Moisture Regime tions		Listed Listed Aquic Organ X Mottle Other	(Explain in Remarks)	st List bils	Soil color and othe
WETLA	ND DETER	MINATION					
	tic Vegetation					_	
	ils Present?	Present? Yes Yes	X No		is this Sampli	ng Point	Within a Wetland

Wetland vegetation and hydric soils are present, hydrology is assumed due to dry season sampling. Wetland delineated in this area at the edge of fill



Dat	Piot	#:	

46				Data Plot #: A1-A5
WET	LAND	DETE	RMINA	ATION Wetland: A1
(Modified from: 19	87 CC	E Wet	lands l	Delineation Manual)
Project/Site: Seattle Tacoma Airport - Master Plan Up	date		Date:	11/1/00
Applicant/Owner: Port of Seattle			County:	King
Investigator: William Kleindi			State:	WA
✓ 1987 Method 1989 Method				Community ID: PEM
Do Normal Circumstances exist on the site?	Yes	x	No	
s the site significantly disturbed (Atypical Situation)?	Yes		No.	X Field Plot ID: A1-A5
s the area a potential Problem Area?	Yes		•	
Remarks (Explain sample location, disturbances, prob			No .	<u> </u>
/EGETATION (✓Dominant species are checked)				
Plant Species		% Cover	Stratu	m Indicator
1 Mowed Lawn		80	Herb	<u>NL</u>
2 Ranunculus repens		20	Herb_	FACW
y 3 Veronica americana		20	Herb	OBL
temarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydro				
IYDROLOGY				
ecorded Data (Describe in Remarks):				drology Indicators (Describe in Remarks):
Stream, Lake, or Tide Gage			Primary	Indicators:
Aerial Photograph				inundated
X No Recorded Data Available			<u>_</u>	
X No Recorded Data Available				Saturated in Upper 18 inches Water Marks
				Drift Lines
				Sediment Deposits
				Drainage Patterns in Wetlands
eld Observations: Depth of Surface Water: None (in.)			_	
Depth of Surface Water: None (in.) Depth to Free Water in Pit: 12 (in.)			Seconda	ary Indicators (2 or more required):
				Oxidized Root Channels in Upper 12 inches
Depth to Saturated Soil: 14 (in.)			X	Switch Hoor Charmers III Opper 12 Inches
Depth to Saturated Soil: 14 (in.)			<u>×</u>	Water-Stained Leaves
Depth to Saturated Soil: 14 (in.)				
Depth to Saturated Soil: 14 (in.)				Water-Stained Leaves
Depth to Saturated Soil: 14 (in.) emarks (As relevant, describe recent precipitation, hy	droloou	c modifir		Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)

							Data Plot #:	A1-A5
L							Wetland:	A1
mact/Sit	te: Seattle Tr	acoma Airport - Master	Dian i in	data	Date:	11/1/00		
•	ic. Seather is	acona Andore imaster	· ian op	Uale_	-	1111100		
OILS ioil Surv	rey Data:							
Map Unit	Name: Unm	napped				Drainage Class:		
				·		Field Observation	ns Confirm M	apped Type?
axonomy	y (Subgroup):					Yes No	N	4 <u>X</u>
rofile De	escription:							
epth nches)	Horizon Designation	Matrix Color (Munsell Moist)		Mottle Color (Munsell Moist)		Mottle Abundance/Cont	Texture, Concretion Rhizospheres, etc.	
-5	Α	10YR 3/2				-	Sa	indy Loam
18+	В	10YR 4/1				-	Fir	ne Sand w/ ORZ
ydric So	oil Indicators:	:						
Hi	stosol				Listed	on Local Hydric S	ioils List	
	stic Epipedon	ı			Listed	on State Hydric S	oils List	
—— Hi					Listed	on National Hydri	c Soils List	
	ulfidic Odor					•		
Su		Moisture Regime				Moisture Regime		
Sı Pr Re	robable Aquic educing Condi	itions			X Aquic	•	ndy Soils	
St Pr Re X Gl	obable Aquic educing Condi eyed or Low-(itions Chroma Colors			X Aquic	Moisture Regime ic Streaking in Sar	ndy Soils	
St Pr Re X Gl	obable Aquic educing Condi eyed or Low-(itions			X Aquic Organ Mottle	Moisture Regime ic Streaking in Sar	·	
St. Pr. Re X Gl	obable Aquic educing Condi eyed or Low-(gh Organic Co (Describe soil	itions Chroma Colors ontent in Surface Layer I disturbances, local va	nations,		X Aquic Organ Mottle	Moisture Regime ic Streaking in Sar s	·	
St. Pr Re X Gil Hit	obable Aquic educing Condi eyed or Low-(gh Organic Co (Describe soil and other indic	itions Chroma Colors content in Surface Layer I disturbances, local va	nations,		X Aquic Organ Mottle	Moisture Regime ic Streaking in Sar s	·	
SIL Pr Re X Gil Hit Semarks toil color a	obable Aquic educing Condi eyed or Low-(gh Organic Co (Describe soil and other indication)	itions Chroma Colors Chroma Colors Ontent in Surface Layer I disturbances, local va cators meet the hydric s MINATION	riations, soil criter	ria.	X Aquic Organ Mottle	Moisture Regime iic Streaking in Sai s (Explain in Remari	ks)	Milde in a succession
St. Pr Re X Gl Higherts Soil color a	obable Aquic educing Condi eyed or Low-(gh Organic Co (Describe soil and other indic	itions Chroma Colors Chroma Ch	nations,	ria.	X Aquic Organ Mottle	Moisture Regime iic Streaking in Sai s (Explain in Remari	ks)	nt Within a Wetlar

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): The presence of all three parameters indicate this area is a wetland.



Data Plot #:

A1-B1

				ATION		
	(Modified from: 19	87 COE W	etlands	Deline	ation Manual)
Project/Site: Seattle Tacoma	Airport - Master Plan Up	date	Date:	4/9/98		
Applicant/Owner: Port of S	eattie		County:	King		
nvestigator: William Kleindi			State:	WA		
✓ 1987 Method ☐ 1989	Method				Community ID): PC Wetland
Do Normal Circumstances exis	st on the site?	Yes X	_ No .		Field Plot ID:	1-B
s the site significantly disturbe	ed (Atypical Situation)?	Yes	No	<u> </u>		
s the area a potential Problem	Area?	Yes	No	X		
emarks (Explain sample loc lot is located in an area that w		•	farmland p	prior to 12	2/2 3/ 85. Area is	actively farmed.
Plant Species None		% Cov	er Stratu	m ind	dicator	
Percent of Dominant Species except FAC-). Include species norphological adaptations to with Remarks (Describe disturbant trea has been recently disked in	s noted (*) as showing retlands. "T" indicates tra ces, relevant local variati	ons, seasonal			no hydrophytic ys	tnesent zaw noits1808
except FAC-). Include species corphological adaptations to we emarks (Describe disturbance has been recently disked in YDROLOGY	s noted (*) as showing etlands. "T" indicates traces, relevant local variation and tilled. No vegetation	ons, seasonal was identified	in this are	a, thus r		
except FAC-). Include species to prohotogical adaptations to we semarks (Describe disturbance has been recently disked in YDROLOGY	s noted (*) as showing etlands. "T" indicates traces, relevant local variation and tilled. No vegetation	ons, seasonal was identified	in this are	ea, thus r	Indicators (De	egetation was present.
except FAC-). Include species orphological adaptations to we smarks (Describe disturbance a has been recently disked in YDROLOGY ecorded Data (Describe in Factorial Stream, Lake, or	s noted (*) as showing etlands. "T" indicates traces, relevant local variation and tilled. No vegetation Remarks):	ons, seasonal was identified	in this are	ea, thus r	Indicators (De	
except FAC-). Include species orphological adaptations to we were a has been recently disked in YDROLOGY ecorded Data (Describe in Stream, Lake, or Aerial Photograp	s noted (*) as showing etlands. "T" indicates traces, relevant local variation and tilled. No vegetation Remarks):	ons, seasonal was identified	l in this are letland Hy Primary	ea, thus r rdrology Indicator	Indicators (Ders:	escribe in Remarks):
except FAC-). Include species orphological adaptations to we were a has been recently disked a YDROLOGY ecorded Data (Describe in Face of Stream, Lake, or Aerial Photograp Other	s noted (*) as showing etlands. "T" indicates traces, relevant local variation and tilled. No vegetation Remarks): r Tide Gage	ons, seasonal was identified	in this are	rdrology Indicator Inu Sat	Indicators (Ders: indated turated in Upper	escribe in Remarks): 12 inches
except FAC-). Include species orphological adaptations to we were a has been recently disked in YDROLOGY ecorded Data (Describe in Stream, Lake, or Aerial Photograp	s noted (*) as showing etlands. "T" indicates traces, relevant local variation and tilled. No vegetation Remarks): r Tide Gage	ons, seasonal was identified	l in this are letland Hy Primary	rdrology Indicator Sat	Indicators (Ders: indated turated in Upper	escribe in Remarks): 12 inches
except FAC-). Include species orphological adaptations to we were a has been recently disked a YDROLOGY ecorded Data (Describe in Face of Stream, Lake, or Aerial Photograp Other	s noted (*) as showing etlands. "T" indicates traces, relevant local variation and tilled. No vegetation Remarks): r Tide Gage	ons, seasonal was identified	l in this are letland Hy Primary	rdrology Indicator Inu Sat Sat Wa	Indicators (Ders: indated turated in Upper	escribe in Remarks): 12 inches
except FAC-). Include species for phological adaptations to we marks (Describe disturbance a has been recently disked a YDROLOGY ecorded Data (Describe in Face and Stream, Lake, or Aerial Photograp Other	s noted (*) as showing etlands. "T" indicates traces, relevant local variation and tilled. No vegetation Remarks): r Tide Gage	ons, seasonal was identified	l in this are letland Hy Primary	rdrology Indicator Sat Sat Wa	Indicators (Ders: indated turated in Upper turated in Upper	escribe in Remarks): 12 inches
except FAC-). Include species forphological adaptations to we marks. (Describe disturbance has been recently disked a second disked a second disked a second disked	s noted (*) as showing etlands. "T" indicates traces, relevant local variation and tilled. No vegetation Remarks): r Tide Gage	ons, seasonal was identified	l in this are letland Hy Primary	rdrology Indicator Sat Sat Wa Drift	Indicators (Ders: indated turated in Upper turated in Upper ster Marks ft Lines	escribe in Remarks): 12 inches 18 inches
except FAC-). Include species orphological adaptations to we were a has been recently disked a YDROLOGY ecorded Data (Describe in Factorial Photograp Other No Recorded Data eld Observations:	s noted (*) as showing etlands. "T" indicates traces, relevant local variation and tilled. No vegetation Remarks): r Tide Gage oh	ons, seasonal was identified	Vetland Hy Primary	rdrology Indicator Inu Sal Sal Va Drif Sec	Indicators (Ders: indated turated in Upper turated in Upper ter Marks It Lines diment Deposits inage Patterns in	escribe in Remarks): 12 inches 18 inches
xcept FAC-). Include species orphological adaptations to we marks (Describe disturbance a has been recently disked a YDROLOGY ecorded Data (Describe in Face). X Aerial Photograp Other No Recorded Data (Describe in Face). No Recorded Data (Describe in Face). You will be a seld Observations: Depth of Surface Water:	s noted (*) as showing etlands. To indicates traces, relevant local variationand tilled. No vegetation Remarks): r Tide Gage oh Ita Available	ons, seasonal was identified	Vetland Hy Primary	rdrology Indicator Inu Sal Sal Va Drif Sec	Indicators (Ders: indated turated in Upper turated in Upper ster Marks It Lines diment Deposits	escribe in Remarks): 12 inches 18 inches
except FAC-). Include species orphological adaptations to we were a has been recently disked a YDROLOGY ecorded Data (Describe in Factorial Photograp Other No Recorded Data eld Observations:	s noted (*) as showing etlands. "T" indicates traces, relevant local variation and tilled. No vegetation Remarks): r Tide Gage oh Ita Available	ons, seasonal was identified	Vetland Hy Primary	drology Indicator Sat Sat Wa Drift Sec Dra	Indicators (Ders: Indated turated in Upper turated in Upper tter Marks It Lines diment Deposits linage Patterns in	escribe in Remarks): 12 inches 18 inches
except FAC-). Include species norphological adaptations to with the second process of th	s noted (*) as showing etlands. "T" indicates traces, relevant local variational dilled. No vegetation remarks): r Tide Gage on trace Available None (in.) 18 (in.)	ons, seasonal was identified	Vetland Hy Primary	drology Indicator Sat Wat Drift Dra Oxi Wa	Indicators (Ders: Indated Iturated in Upper Iturated in Upper Iter Marks It Lines Idiment Deposits Image Patterns in Iter (2 or more in Iter (2 or more in Iter) Iter Stained Leave	escribe in Remarks): 12 inches 18 inches 1 Wetlands required): inels in Upper 12 inches
except FAC-). Include species norphological adaptations to with the complete species of the complete s	s noted (*) as showing etlands. "T" indicates traces, relevant local variational dilled. No vegetation remarks): r Tide Gage on trace Available None (in.) 18 (in.)	ons, seasonal was identified	Vetland Hy Primary	rdrology Indicator Inu Sal Sal Wa Drif Sec Dra Oxi Wa Loc	Indicators (Ders: Indated Iturated in Upper Iturated in Upper Iter Marks It Lines It	escribe in Remarks): 12 inches 18 inches n Wetlands required): inels in Upper 12 inches es



Data Plot #:

A1-B1

							,	Wetland:	A1 Upland Plot
Project/Si	ite: Seattle T	acoma Airport - Ma	ster Pla	an Upda	ite	Date	: 4/9/98		
SOILS Soil Sur	vey Data:								
Map Unit	-	napped					Drainage Class: _		
							Field Observation	s Confirm Ma	pped Type?
Taxonom	y (Subgroup):						Yes No	NA	<u>x</u>
Profile De	escription:						•		
Depth (Inches)	Horizon Designation	Matrix Color (Munsell Moist)			Color ell Moi	st)	Mottle Abundance/Contra		ture, Concretions, zospheres, etc.
)-16	Ap	10YR 2/1		-			-	Sitt	oam
16	В	10YR 6/1		10YR 2	2/2		Common, Medium, Dis	stinct Silt i	oam
łydric Sc	oil Indicators:	:							
•	istosol					Liste	d on Local Hydric Sc	vile l jet	
н	istic Epipedon				-		d on State Hydric So		
Sı	ulfidic Odor				_		on National Hydric		
		Moisture Regime			_		: Moisture Regime		
X Re	educing Condi	itions				Orgai	nic Streaking in Sand	dy Soils	
	-	Chroma Colors			_	X Mottie	es		
—— Hi	gh Organic Co	ontent in Surface La	yer		_	Other	(Explain in Remarks	s)	
		disturbances, local ric soil indicators me				eria.			
	ND DETER								
vdrophyt	ic Vegetation	Present?	Yes		No	X	is this Sa	mplina Point	: Within a Wetland?
,, -, .									A A A A A A A A A A A A A A A A A A A
	is Present?		Yes	X	No				

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results):

This area is not a jurisdictional wetland because it meets "pnor converted" status.

Parametri	ix, l	inc.
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Data Plot #:	A1-B2	
Wetland:	A1	

11					Data Plot #:	A1-82
WET	LAND	DETE	RMINA	TION	Wetland:	A1
(Modified from: 198					Manuai)	
Project/Site: Seattle Tacoma Airport - Master Plan Upo				4/9/98		
Applicant/Owner: Port of Seattle			County:	King	·	
Investigator: William Kleindl			State:	WA		
✓ 1987 Method ☐ 1989 Method				Com	munity ID: PO	* Wettand
Do Normal Circumstances exist on the site?	Yes	x	No		-	y vveuario
s the site significantly disturbed (Atypical Situation)?	Yes		-	X	Plot ID: 2-B	
s the area a potential Problem Area?	Yes		-	×		
Remarks (Explain sample location, disturbances, problem			NO -	^		
/EGETATION (✓Dominant species are checked) Plant Species		% Cover	Stratu	n Indicator		
1. Epilobium ciliatum		10	Herb	FACW-		
2 Equisetum arvense		20	Herb	FAC	-	
3 Unknown grass		10	Herb	NL	_	
Remarks (Describe disturbances, relevant local variation Since greater than 50% of the dominant plants are hydro					met.	
IYDROLOGY						
ecorded Data (Describe in Remarks):		Wet	tland Hy	drology Indica	tors (Describe	in Remarks):
Stream, Lake, or Tide Gage				ndicators:		
X Aerial Photograph				Inundated		
Other					n Upper 12 inch	
No Recorded Data Available			x		n Upper 18 inch	nes
				Water Mark Drift Lines	KS	
				Sediment [Denneite	
ald Observations					-	inds
Dark at D. C. and D. and D. C. and D					atterns in Wetla	inds
Depth of Surface Water: None (in.)		;	Seconda	Drainage P	-	
Depth of Surface Water: Depth to Free Water in Pit: None (in.) 18 (in.)		;	Seconda	Drainage P y Indicators (2	atterns in Wetla	ed):
Depth of Surface Water: None (in.)			Seconda	Drainage P y Indicators (2 Oxidized R	atterns in Wetla	ed):
Depth of Surface Water: Depth to Free Water in Pit: None (in.) 18 (in.)		;	Seconda	Drainage P y Indicators (2 Oxidized R Water-Stan	or more require	ed):
Depth to Free Water in Pit: 18 (in.)			Seconda	Drainage P y Indicators (2 Oxidized R Water-Stail	or more require oot Channels in ned Leaves	ed): I Upper 12 inches
Depth of Surface Water: Depth to Free Water in Pit: None (in.) 18	droloni			Drainage P y Indicators (2 Oxidized R Water-Stail Local Soil S Other (Expl	or more require oot Channels in ned Leaves Survey Data lain in Remarks	ed): I Upper 12 inches

$\overline{\Lambda}$						Data Plot #	t:	A1-B2
L						Wetland:		A1
						-		
roject/Site:	Seattle Ta	acoma Airport - Master Pl	an Update	_ Date:	4/9/98			
SOILS Soil Survey	/ Data:							
Map Unit Na	ame: <u>Unr</u>	napped			Drainage Class	::		
					Field Observati	ons Confirm	Марр	ed Type?
Taxonomy (Subgroup):				Yes N	o	NA	<u>x</u>
Profile Desc	cription:							
	Horizon Designation	Matrix Color (Munsell Moist)	Mottle Color (Munsell Mois	st)	Mottle Abundance/Cor			re, Concretions, spheres, etc.
)-6 /	Ap	10YR 2/1	-				Silt loa	m
i-11 A	4	10YR 2/1	10YR 5/6		Common, Medium,	Distinct S	Silt loa	m
11 (<u> </u>	10YR 4/2			-	F	eat	
lydric Soil I	Indicators:	:						
Histo	osol		_	Listed	on Local Hydric	Soils List		
	c Epipedon			Listed	on State Hydric	Soils List		
	dic Odor		_	Listed	on National Hyd	ric Soils List		
		Moisture Regime	_		Moisture Regime			
	ucing Condi				ic Streaking in S	andy Soils		
		Chroma Colors ontent in Surface Layer	_	X Mottle				
		-	_	Otner	(Explain in Rema	arks)		
		disturbances, local variat						
oli color and	otner inaid	cators meet the hydric soil	cntena.					
VETLAND	DETER	MINATION						
vdrophytic	Vegetation	Present? Yes	X No		ls this	Sampling Pr	nint W	/ithin a Wetlar
VOIOPIIVIIC							V	a vva(1211)
ydric Soils	-	Yes	X No					

This area is not a junsdictional wetland because it meets "pnor converted" status.



WE	TI AND	DETER	AMIMS	TIO	J	Wetland	d :	A1 Upland I
(Modified from: 1						Manua	1)	
roject/Site: Seattle Tacoma Airport - Master Plan U			_	7/9/98			,	
· · · · · · · · · · · · · · · · · · ·	puate		County:	King				
upplicant/Owner: Port of Seattle sestingator: William Kleindl			State:	WA		· · · · · · · · · · · · · · · · · · ·		
1 1987 Method 1989 Method		`	runce.	<u> </u>				
o Normal Circumstances exist on the site?	Yes	X	No			nmunity ![_	land
			•		Fie	d Plot ID:	21-B	
the site significantly disturbed (Atypical Situation)?	Yes		No -	<u> </u>				
the area a potential Problem Area? emarks (Explain sample location, disturbances, pro	Yes	_	No -	<u> </u>				
EGETATION (Dominant species are checked	l)	% Cover	Stratus	m .	ndicator			
		80	Herb		FAC			
1. Agrostis capillaris 2. Holcus lanatus		20	Herb		FAC	_		
ercent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates to the marks (Describe disturbances, relevant local variable expectation is predominantly cultivated fruit and orname appropriate recognition and satisfies the buffer behavior.	race. itions, se	66 asonal eff			ralized h	erbaceous	s layer	is greater than
xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates to emarks (Describe disturbances, relevant local varia	race. itions, se	66 asonal eff			ralized h	erbaceou:	s layer	is greater than
except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates to semarks (Describe disturbances, relevant local varial agetation is predominantly cultivated fruit and ornamed drophytic vegetation and satisfies the hydrophytic we	race. itions, se	66 asonal eff is and shri iteria.	ubs. The	e natu	·		_ ==	
except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates to semarks (Describe disturbances, relevant local varial agetation is predominantly cultivated fruit and ornamedrophytic vegetation and satisfies the hydrophytic wetypropers.	race. itions, se	66 asonal eff is and shri iteria.	ubs. The	e natu	y Indic		_ ==	is greater than
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content FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates to remarks (Describe disturbances, relevant local varial agetation is predominantly cultivated fruit and orname adrophytic vegetation and satisfies the hydrophytic wetled to remark (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	race. itions, se	66 asonal eff is and shri iteria.	ubs. The	drolog	gy Indic tors: nundate Saturated	ators (D	escribe	in Remarks):
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comparison of the control of the con	race. itions, se	asonal eff is and shri itena.	and Hy	drolog Indica	gy Indictors: nundate: Saturate: Saturate: Vater Ma Orift Line Sedimen: Orainage	ators (D d d in Upper d in Upper erks s t Deposits Patterns i	escribe 12 incl 18 incl n Wetla	in Remarks): nes nes
emarks (Describe disturbances, relevant local varial egetation is predominantly cultivated fruit and orname adrophytic vegetation and satisfies the hydrophytic well expected. Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available and Observations: Depth of Surface Water: Depth to Free Water in Pit: None (in.)	race. itions, se	asonal eff is and shri itena.	and Hy	drolog Indica	gy Indictors: nundate: Saturate: Saturate: Saturate: Water Ma Prift Line Sediment Orainage	ators (D	escribe 12 incl 18 incl n Wetta	e in Remarks): nes nes ands
comparison of the control of the con	race. itions, se	asonal eff is and shri itena.	and Hy	drologi Indica	gy Indictors: nundate: Saturate: Sat	ators (D	escribe 12 incl 18 incl n Wetla require	in Remarks): nes nes
emarks (Describe disturbances, relevant local varial egetation is predominantly cultivated fruit and orname adrophytic vegetation and satisfies the hydrophytic well expected. Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available and Observations: Depth of Surface Water: Depth to Free Water in Pit: None (in.)	race. itions, se	asonal eff is and shri itena.	and Hy	droloj Indica	gy Indicators: nundate: Saturate: Sa	ators (D d d in Upper d in Upper arks s t Deposits Patterns i	12 incl 18 incl n Wetta require nnels ir	e in Remarks): nes nes ands
emarks (Describe disturbances, relevant local varial egetation is predominantly cultivated fruit and orname adrophytic vegetation and satisfies the hydrophytic well expected. Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available and Observations: Depth of Surface Water: Depth to Free Water in Pit: None (in.)	race. itions, se	asonal eff is and shri itena.	and Hy	drological state of the state o	gy Indicators: nundate: Saturater Saturater Vater Ma Prift Line Sedimen Prainage Dixidized Vater-St Ocal Soi	ators (D d d in Upper d in Upper arks s t Deposits Patterns i (2 or more Root Cha	escribe 12 incl 18 incl n Wetta require nnels inves pata	e in Remarks): nes nes ands ed): 1 Upper 12 incl
emarks (Describe disturbances, relevant local varial egetation is predominantly cultivated fruit and orname adrophytic vegetation and satisfies the hydrophytic well expected. Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available and Observations: Depth of Surface Water: Depth to Free Water in Pit: None (in.)	race. tions, se ental tree etland cn	asonal eff is and shritena. Wett	and Hy	drological state of the state o	gy Indictors: nundate: Saturated Saturated Vater Ma Orift Line Sediment Oralinage Oxidized Vater-St ocal Soi Other (Ex	ators (D d d in Upper d in Upper arks s t Deposits Patterns i (2 or more Root Cha ained Lear I Survey E	escribe 12 incl 18 incl n Wetta require nnels inves pata	e in Remarks): nes nes ands ed): 1 Upper 12 incl

							Data P	lot#:	A1-B3
							Wetia	nd:	A1 Upland Pio
Project/S	ite: Seattle T	acoma Airport - Master	Plan I	Indate	Date:	7/9/98			
SOILS	vey Data:	Seema Parison Wildele	Figir	Dodie	Date.	75/30			
		apped				Drainage	e Class:		
						-	servations Conf	irm Map	pped Type?
Taxonom	y (Subgroup):					Yes	No	NA	×
rofile D	escription:						···		
epth inches)	Horizon Designation	Matrix Color (Munsell Moist)		ottle Color lunsell Moist)		Mottle Abundan	ce/Contrast		ure, Concretions, ospheres, etc.
-20	Fill	10YR 2/2	-					Loam	1
H Si Pi Ri Gl Hi	educing Condit leyed or Low-C gh Organic Co (Describe soil	chroma Colors Intent in Surface Layer disturbances, local val	iations.		Listed Listed Aquic Organi Mottles Other (on State I on Nation Moisture F c Streakin	Hydric Soils List Hydric Soils List al Hydric Soils I Regime ig in Sandy Soil Remarks)	_ist	
sturbed .	soil horizons, a	and soil color does not	meet ti	ne hydric soil ci	ntena.				
VETLAI	ND DETERI	MINATION							
/drophyl	ic Vegetation	Present? Y	es)	K No		1:	s this Sampline	Point	Within a Wetland
			_						
ydric Soi	is Present?	Y	es	No >	Κ		Yes	No	

Area delineated around change of vegetation and soil color. Wetland vegetation is present, however, both wetland hydrology and hydrocology are absent. Therefore, the area is not a wetland.

Parame	etrix,	Inc.
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4						Data Plot		
L'	WET	LAND	DETER	MINAT	ION	Wetland:	A1 Upi	and Plot
	(Modified from: 19					Manual)		
Project/Site: Seattle Tacoma	` Airport - Master Plan Up	odate	C	Date: 11	/1/00			
pplicant/Owner: Port of Se				County:	King			
vestigator: William Kleindl	- State				WA			
	Method		_	•		ID:	Liptord Emp	
Normal Circumstances exis		Yes	x	No		mmunity ID:		igent
the site significantly disturbed		Yes		No X		eld Plot ID:	A1-B4	
the area a potential Problem					_			
marks (Explain sample loca		Yes		No X				
land plot located above rocke ove the rock retaining wall.								
Plant Species	,,	•	% Cover	Stratum	Indicator			
1 Agrostis capillaris (tenuis)	•		20	Herb	FAC			
2 Equisetum arvense			20	Herb	FAC	_		
			20	Herb	FACU			
3 Hypochaeris radicata								
Plantago lanceolata recent of Dominant Species cept FAC-). Include species rphological adaptations to we marks (Describe disturbance	noted (*) as showing etlands. "T" indicates traces, relevant local variati	ace. ions, sea						
Piantago ianceolata recent of Dominant Species (cept FAC-). Include species rephological adaptations to we marks (Describe disturbanc tice 50% of the dominant plan	noted (*) as showing etlands. "T" indicates traces, relevant local variati	ace. ions, sea	50 asonal effe	ects, etc.):				
Plantago lanceolata recent of Dominant Species cept FAC-). Include species rphological adaptations to we marks (Describe disturbanc ce 50% of the dominant plan //DROLOGY	noted (*) as showing etlands. "T" indicates traces, relevant local variations are hydrophytic, the	ace. ions, sea	50 asonal effe	ects, etc.): n criteria i.	: s not met.			
Plantago lanceolata cent of Dominant Species cept FAC-). Include species phological adaptations to we marks (Describe disturbanc ce 50% of the dominant plant DROLOGY corded Data (Describe in F	noted (*) as showing etlands. "T" indicates traces, relevant local variations are hydrophytic, the Remarks):	ace. ions, sea	50 asonal effe vegetation Wetla	ects, etc.): o <i>criteria i</i>	: s not met. ology India	cators (De	scribe in Rema	rks):
Piantago lanceolata cent of Dominant Species cept FAC-). Include species phological adaptations to we marks (Describe disturbanc ce 50% of the dominant plan	noted (*) as showing etlands. "T" indicates traces, relevant local variations are hydrophytic, the Remarks):	ace. ions, sea	50 asonal effe vegetation Wetla	ects, etc.): n criteria i.	: s not met. ology India	cators (De	scribe in Rema	rks):
Plantago lanceolata cent of Dominant Species cept FAC-). Include species phological adaptations to we marks (Describe disturbanc ce 50% of the dominant plant DROLOGY corded Data (Describe in F	noted (*) as showing atlands. "T" indicates traces, relevant local variations are hydrophytic, the Remarks): Tide Gage	ace. ions, sea	50 asonal effe vegetation Wetla	ects, etc.): o <i>criteria i</i>	: s not met. ology India		scribe in Rema	rks):
Plantago lanceolata cent of Dominant Species cept FAC-). Include species commarks (Describe disturbance cept FAC-). Include species commarks (Describe disturbance cept FAC-). Include species commarks (Describe disturbance) commarks (Describe in FAC-) corded Data (Describe in FAC-) Stream, Lake, or Aerial Photograpi Other	noted (*) as showing etlands. "T" indicates traces, relevant local variations are hydrophytic, the Remarks): Tide Gage	ace. ions, sea	50 asonal effe vegetation Wetla	ects, etc.): o <i>criteria i</i>	: s not met. ology Indic dicators: Inundate Saturate	ed d in Upper 1	2 inches	rks):
Plantago lanceolata cent of Dominant Species cept FAC-). Include species comparison of the dominant plant cept FAC-). Include species comparison of the dominant plant cept FAC-). Include species cep	noted (*) as showing etlands. "T" indicates traces, relevant local variations are hydrophytic, the Remarks): Tide Gage	ace. ions, sea	50 asonal effe vegetation Wetla	ects, etc.): o <i>criteria i</i>	s not met. ology Indicators: Inundate Saturate Saturate	ed d in Upper 1 d in Upper 1	2 inches	rks):
Plantago lanceolata cent of Dominant Species cept FAC-). Include species commarks (Describe disturbance cept FAC-). Include species commarks (Describe disturbance cept FAC-). Include species commarks (Describe disturbance) commarks (Describe in FAC-) corded Data (Describe in FAC-) Stream, Lake, or Aerial Photograpi Other	noted (*) as showing etlands. "T" indicates traces, relevant local variations are hydrophytic, the Remarks): Tide Gage	ace. ions, sea	50 asonal effe vegetation Wetla	ects, etc.): o <i>criteria i</i>	s not met. ology Indic dicators:	ed d in Upper 1 d in Upper 1 arks	2 inches	rks):
Pantago lanceolata cent of Dominant Species cept FAC-). Include species rphological adaptations to we marks (Describe disturbanc ce 50% of the dominant plan DROLOGY corded Data (Describe in F Stream, Lake, or Aenal Photograpi Other	noted (*) as showing etlands. "T" indicates traces, relevant local variations are hydrophytic, the Remarks): Tide Gage	ace. ions, sea	50 asonal effe vegetation Wetla	ects, etc.): n <i>criteria i</i> .	ology Indicators: Inundate Saturate Saturate Water M Drift Line	ed d in Upper 1 d in Upper 1 arks es	2 inches	rks):
Pantago lanceolata cent of Dominant Species cept FAC-). Include species rphological adaptations to we marks (Describe disturbanc ce 50% of the dominant plan DROLOGY corded Data (Describe in F Stream, Lake, or Aenal Photograpi Other	noted (*) as showing etlands. "T" indicates traces, relevant local variations are hydrophytic, the Remarks): Tide Gage	ace. ions, sea	50 asonal effe vegetation Wetla	ects, etc.): n <i>criteria i</i> .	ology Indicators: Inundate Saturate Saturate Water M Drift Line Sedimen	ed d in Upper 1 d in Upper 1 arks	2 inches 8 inches	rks):
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Pantago lanceolata cent of Dominant Species cept FAC-). Include species rphological adaptations to we marks (Describe disturbanc ce 50% of the dominant plan (DROLOGY corded Data (Describe in F Stream, Lake, or Aenal Photograpi Other X No Recorded Data d Observations: Depth of Surface Water:	noted (*) as showing etlands. "T" indicates traces, relevant local variations are hydrophytic, the Remarks): Tide Gage h ta Available None (in.)	ace. ions, sea	50 asonal effe vegetation Wetti	and Hydrorimary Inc	ology Indicators: Inundate Saturate Saturate Water M Drift Line Sedimen Drainage	ed d in Upper 1 d in Upper 1 arks es t Deposits	2 inches 8 inches Wetlands	rks):
Piantago lanceolata cent of Dominant Species cept FAC-). Include species phological adaptations to we marks (Describe disturbanc ce 50% of the dominant plan DROLOGY corded Data (Describe in F Stream, Lake, or Aenal Photograpi Other X No Recorded Data d Observations: Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as showing etlands. To indicates traces, relevant local variations are hydrophytic, the Remarks): Tide Gage h None (in.) >15 (in.)	ace. ions, sea	50 asonal effe vegetation Wetti	and Hydrorimary Inc	ology Indicators: Inundate Saturate Saturate Water M Drift Line Sedimen Drainage	d d in Upper 1 d in Upper 1 d arks es t Deposits e Patterns in (2 or more r	2 inches 8 inches Wetlands	
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Piantago lanceolata recent of Dominant Species cept FAC-). Include species rphological adaptations to we marks (Describe disturbanc ce 50% of the dominant plan /DROLOGY corded Data (Describe in F Stream, Lake, or Aerial Photograpi Other	noted (*) as showing etlands. To indicates traces, relevant local variations are hydrophytic, the Remarks): Tide Gage h None (in.) >15 (in.)	ace. ions, sea	50 asonal effe vegetation Wetti	and Hydrorimary Inc	ology Indicators: Inundate Saturate Saturate Water M Drift Line Sedimen Drainage Indicators Oxidized Water-Si	d d in Upper 1 d in Upper 1 arks es t Deposits e Patterns in (2 or more r	2 inches 8 inches Wetlands equired): nets in Upper 1:	

L			_	-	Data Wetia	Plot #: ind:	A1-B4 A1 Upland Piot
Project/Site: Seatt	le Tacoma Airport - Maste	r Plan Lindon	Date:	: 11/1 /0 0			
SOILS Soil Survey Data:	Tacoma Angor - Waste	Fian Opoate	Date.	. 11/1/00			
	Jnmapped			Drainage (Class:		
_				Field Obse	rvations Cor	nfirm Map	ped Type?
Taxonomy (Subgro	up):			Yes	No	NA	X
Profile Description	:					_	
Depth Horizon (Inches) Designa	Matrix Color ition (Munsell Moist)	Mottle Color (Munsell Moist)		Mottle Abundance	/Contrast		ure, Concretions, ospheres, etc.
)-14 A	10YR 3/2			•		Loan)
4-16 B	10YR 3/2	10YR 4/6		Few. Fine, Fa	nt	Sand	Loam
6-18+ C	10YR 3/2	10YR 4/6		Common, Coa	rse, Faint	Clay	
Reducing Co	don r uic Moisture Regime		Listed Listed Aquic Organ Mottle	d on Local Hy I on State Hy I on National Moisture Re lic Streaking is (Explain in R	dric Soils Lis Hydric Soils gime in Sandy So	st List	

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): This area is an upland since all wetland parameters are absent.

Hydric Soils Present?

Wetland Hydrology Present?

Yes ____ No __X



Data Plot #:	A2-A
Wetland:	A 2

Project/Site: Seattle Tacoma	Airport - Master Plan Up	odate		Date:	4/9/	98	
Applicant/Owner: Port of S	eattle			County	r: K i	ing	
nvestigator: William Kleindi				State:	w	A	
✓ 1987 Method ☐ 1989	Method				_	Community ID: PS	55
o Normal Circumstances exis	st on the site?	Yes	X	No			50
the site significantly disturbe	ed (Atypical Situation)?	Yes		No	X	- Field Plot ID: 3-A	
the area a potential Problem		Yes		No	X	-	
emarks (Explain sample loc aplowed area within Vaca Fai				the eas	t by fa	armiand and to the west by	road fill.
EGETATION (Domina	ant species are checked)						
Plant Species			% Cover	r Strati	um	Indicator	
1. Rubus discolor			100	Shrub)	FACU	
ccept FAC-). Include species rphological adaptations to w marks (Describe disturbance)	s noted (*) as showing etlands. "T" indicates traces traces, relevant local variations.	ace. ions, sea				r is acting hydrophytic.	
cept FAC-). Include species orphological adaptations to we marks (Describe disturbance presence of wetland hydrological and hydr	s noted (*) as showing etlands. "T" indicates traces traces, relevant local variations.	ace. ions, sea	isonal el			r is acting hydrophytic.	
xcept FAC-). Include species orphological adaptations to we marks (Describe disturbance presence of wetland hydrology	s noted (*) as showing etlands. "T" indicates traces, relevant local variations surely and wetland soils surely and wetlands.	ace. ions, sea	sonal el	Rubus di	scolo		2
ccept FAC-). Include species or phological adaptations to we marks (Describe disturbance presence of wetland hydrol YDROLOGY corded Data (Describe in Foundations)	s noted (*) as showing etlands. "T" indicates traces, relevant local variation logy and wetland soils sufficiently. Remarks):	ace. ions, sea	isonal el at the R	Rubus di	scoloi ydrol	ogy Indicators (Describe	e in Remarks):
ccept FAC-). Include species or phological adaptations to we marks (Describe disturbance presence of wetland hydrol YDROLOGY corded Data (Describe in Face Stream, Lake, or	s noted (*) as showing etlands. "T" indicates traces, relevant local variations and wetland soils suremarks): r Tide Gage	ace. ions, sea	isonal el at the R	Rubus di	scoloi ydrol	ogy Indicators (Describe	e in Remarks):
ccept FAC-). Include species or phological adaptations to we marks (Describe disturbance presence of wetland hydrol YDROLOGY corded Data (Describe in Face Stream, Lake, or	s noted (*) as showing etlands. "T" indicates traces, relevant local variations sold wetland soils sure sold wetland soils sure relevant local variations and wetland soils sure relevant local variations." Tide Gage	ace. ions, sea	isonal el at the R	Rubus di	ydrol Indic	ogy Indicators (Describe ators: Inundated	
ccept FAC-). Include species or phological adaptations to wormarks. (Describe disturbance presence of wetland hydrole/DROLOGY corded Data. (Describe in Face Stream, Lake, or Aenal Photograp	s noted (*) as showing etlands. "T" indicates traces, relevant local variations sold wetland soils sure sold wetland soils sure relevant local variations and wetland soils sure relevant local variations." Tide Gage	ace. ions, sea	isonal el at the R	tland H	ydrol Indic	ogy Indicators (Describe lators: Inundated Saturated in Upper 12 indi	hes
emarks (Describe disturbance presence of wetland hydrology becomes the presence of the p	s noted (*) as showing etlands. "T" indicates traces, relevant local variations subleggy and wetland soils subleggy and wetlands soils subleggy and soils sub	ace. ions, sea	isonal el at the R	tland H	ydrol Indic	ogy Indicators (Describe ators: Inundated	hes
xcept FAC-). Include species orphological adaptations to we marks. (Describe disturbance presence of wetland hydrology experience of wetland hydrology experie	s noted (*) as showing etlands. "T" indicates traces, relevant local variations subleggy and wetland soils subleggy and wetlands soils subleggy and soils sub	ace. ions, sea	isonal el at the R	tland H	ydrol Indic	ogy Indicators (Describe lators: Inundated Saturated in Upper 12 incl Saturated in Upper 18 incl	hes
xcept FAC-). Include species orphological adaptations to we marks. (Describe disturbance presence of wetland hydrology corded Data. (Describe in Factor Lake, or X. Aenal Photograp X. Other	s noted (*) as showing etlands. "T" indicates traces, relevant local variations subleggy and wetland soils subleggy and wetlands soils subleggy and soils sub	ace. ions, sea	isonal el at the R	tland H	ydrol Indic	ogy Indicators (Describe lators: Inundated Saturated in Upper 12 incl Saturated in Upper 18 incl Water Marks Drift Lines Sediment Deposits	hes hes
corded Data (Describe in Face) Stream, Lake, or Aenal Photograp X Aenal Photograp X Other No Recorded Da	s noted (*) as showing etlands. "T" indicates traces, relevant local variations subleggy and wetland soils subleggy and wetlands soils subleggy and soils sub	ace. ions, sea	isonal el at the R	tland H	ydrol Indic	ogy Indicators (Describe lators: Inundated Saturated in Upper 12 incl Saturated in Upper 18 incl Water Marks Drift Lines	hes hes
ccept FAC-). Include species or phological adaptations to we marks (Describe disturbance presence of wetland hydrol YDROLOGY corded Data (Describe in Stream, Lake, or Aenal Photograp X Aenal Photograp Other No Recorded Data (Id Observations:	s noted (*) as showing etlands. "T" indicates traces, relevant local variations sold sold sold sold sold sold sold sol	ace. ions, sea	wei	tland H	ydrol	ogy Indicators (Describe lators: Inundated Saturated in Upper 12 incl Saturated in Upper 18 incl Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetla	hes hes ands
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xcept FAC-). Include species orphological adaptations to we marks. (Describe disturbance presence of wetland hydrology ecorded Data. (Describe in Face and Photograp. X. Aerial Photograp. X. Aerial Photograp. X. Other. No Recorded Data. It Observations: Depth of Surface Water: Depth to Free Water in Pit:	s noted (*) as showing etlands. "T" indicates traces, relevant local variations and wetland soils sufficiently and wetland soils sufficiently and sufficiently an	ace. ions, sea	wei	tland H	ydrol r Indic	ogy Indicators (Describe ators: Inundated Saturated in Upper 12 ind Saturated in Upper 18 ind Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlandicators (2 or more require Oxidized Root Channels in	hes hes ands ed):
except FAC-). Include species orphological adaptations to we marks (Describe disturbance of wetland hydrology ecorded Data (Describe in Face of Aenal Photograp X Aenal Photograp X Other No Recorded Data eld Observations:	s noted (*) as showing etlands. "T" indicates traces, relevant local variations sold sold sold sold sold sold sold sol	ace. ions, sea	wei	tland H	ydrol	ogy Indicators (Describe ators: Inundated Saturated in Upper 12 incl Saturated in Upper 18 incl Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wettandicators (2 or more require Oxidized Root Channels in Water-Stained Leaves	hes hes ands ed):
X Aenal Photograp X Aenal Photograp X Other No Recorded Da eld Observations: Depth of Surface Water: Depth to Free Water in Pit:	s noted (*) as showing etlands. "T" indicates traces, relevant local variations sold sold sold sold sold sold sold sol	ace. ions, sea	wei	tland H	ydrol	ogy Indicators (Describe ators: Inundated Saturated in Upper 12 ind Saturated in Upper 18 ind Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlandicators (2 or more require Oxidized Root Channels in	hes hes ands ed): n Upper 12 inche:

Saturated soil at 4 inch depth and a water table at 12 inches satisfies the wetland hydrology criteria. Area is part of a mapped floodplain.

4 6								Data Piot	#:	A2-A
L								Wetland:		A2
oject/S	ite: Seattle T	acoma Airport - Master	Plan	Update	<u> </u>	Date:	4/9/98			
OILS oil Sur	vey Data:									
lap Uni	t Name: Unn	napped					Drainage Clas	s:		
							Field Observa	tions Confirm	Мар	ped Type?
axonon	ny (Subgroup):						Yes 1	No	NA	<u>x</u>
rofile D	escription:									
epth nches)	Horizon Designation	Matrix Color (Munsell Moist)		lottle (Munse	Color Il Moist)		Mottle Abundance/Co			ure, Concretions ospheres, etc.
12	0	10YR 2/1					•		Sand	y loam
2	Cg	10B 5/1					•		Sand	v loam
/dric S	oil Indicators:	:								
F	fistosol					Listed	on Local Hydric	: Soils List		
⊦	listic Epipedon	ı					on State Hydric			
<u> </u>	ulfidic Odor						on National Hyd			
P	robable Aquic	Moisture Regime					Moisture Regim			
R	educing Condi	itions				Organ	ic Streaking in S	Sandy Soils		
<u> </u>	leyed or Low-(Chroma Colors				_ Mottle:	S			
<u>х</u> н	igh Organic Co	ontent in Surface Layer				Other :	(Explain in Rem	arks)		
marks	(Describe soil	l disturbances, local var	iations	s, etc.)):					
il color	and other hydi	ric soil indicators meet t	he hyd	dric so	il criteria.					
ETLA	ND DETER	MINATION								
dronhy	tic Vegetation	Present? Ye	es _	X	No		ls this	Sampling Po	oint '	Within a Wetlar
di Opily			_			_				
	ils Present?	Ye	es	X	No			Yes X		

The presence of all three parameters indicate this area is a wetland.

Param	etrix,	Inc.
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A2-B Data Piot #:

					Mad	land:	40	
	WET	TLAND D	ETERMIN	OITA		ianu.	A2	
(Modified from: 19	987 COE	Wetlands	Delir	neation Man	ual)		
roject/Site: Seattle Tacoma A	Airport - Master Plan Up	odate	Date:	4/9/9	8			
pplicant/Owner: Port of Se	attle		Count				- ` 	
vestigator: William Kleindl	· · · · · · · · · · · · · · · · · · ·		State:	WA				
1987 Method	Method		-		Communit	h/ ID:	PC Wetland	
Normal Circumstances exist	on the site?	Yes	No	x		•		
the site significantly disturbed		Yes -	X No		Field Plot	10: 3	-B	
the area a potential Problem A		Yes	No	×				
marks (Explain sample loca		_	_	<u> </u>				
GETATION (Dominan Plant Species	it species are checked)		Cover Strat	um	Indicator			
1 Epilobium ciliatum								
1.		20	Herb		FACW-			
unknown grass procent of Dominant Species (cept FAC-). Include species or prohological adaptations to well marks (Describe disturbance	noted (*) as showing tlands. "T" indicates tra es, relevant local variati	or FAC	100		NL			
2. Unknown grass reent of Dominant Species cept FAC-). Include species in riphological adaptations to well marks. (Describe disturbance tively farmed area that is diske	noted (*) as showing tlands. "T" indicates tra es, relevant local variati	or FAC	100					·
2. Unknown grass recent of Dominant Species cept FAC-). Include species in rphological adaptations to well marks (Describe disturbance lively farmed area that is disken TOROLOGY	noted (*) as showing tlands. "T" indicates traces, relevant local variation and tilled. Meets "pro-	or FAC	100 onal effects, e	etc.):	NL .			
unknown grass cent of Dominant Species cept FAC-). Include species rephological adaptations to well marks (Describe disturbance lively farmed area that is diske	noted (*) as showing tlands. "T" indicates traces, relevant local variation and tilled. Meets "pro-	or FAC	100 onal effects, e	etc.):		(Desc	ribe in Remari	ks):
unknown grass cent of Dominant Species cept FAC-). Include species rephological adaptations to well marks (Describe disturbance ively farmed area that is diskended to be a species of the second of t	noted (*) as showing tlands. "T" indicates traces, relevant local variation and tilled. Meets "proceedings" and tilled. Meets "proceedings" and tilled. The semants is the semants of the	or FAC	100 onal effects, e	etc.):	gy Indicators	(Desc	ribe in Remark	ks):
cent of Dominant Species cept FAC-). Include species rephological adaptations to well marks (Describe disturbance lively farmed area that is disker DROLOGY corded Data (Describe in Research Lake, or Table Aerial Photograph	noted (*) as showing tlands. "T" indicates traces, relevant local variation and tilled. Meets "proceedings" and tilled. Meets "proceedings" and tilled. The semants is the semants of the	or FAC	100 onal effects, eed' status. Wetland H	etc.): ydrolo y indica	gy Indicators	(Desc	ribe in Remari	ks):
cent of Dominant Species cept FAC-). Include species rephological adaptations to well marks (Describe disturbance ively farmed area that is disker DROLOGY corded Data (Describe in Research Lake, or X Aerial Photograph Other	noted (*) as showing tlands. "T" indicates traces, relevant local variation and tilled. Meets "proceed and tilled. Meets "proceed and tilled. Meets "proceed and tilled. The semants is the semants of th	or FAC	nal effects, eed status. Wetland H	ydrolo y Indica	gy Indicators itors: nundated Saturated in Upi	per 12	inches	ks):
cent of Dominant Species cept FAC-). Include species rephological adaptations to well marks (Describe disturbance lively farmed area that is disker DROLOGY corded Data (Describe in Research Lake, or Table Aerial Photograph	noted (*) as showing tlands. "T" indicates traces, relevant local variation and tilled. Meets "proceed and tilled. Meets "proceed and tilled. Meets "proceed and tilled. The semants is the semants of th	or FAC	nal effects, eed status. Wetland H	ydrolo y indica	gy Indicators Itors: nundated Saturated in Upp	per 12	inches	ks):
cent of Dominant Species cept FAC-). Include species rephological adaptations to well marks (Describe disturbance lively farmed area that is disker DROLOGY corded Data (Describe in Research Lake, or X Aerial Photograph Other	noted (*) as showing tlands. "T" indicates traces, relevant local variation and tilled. Meets "proceed and tilled. Meets "proceed and tilled. Meets "proceed and tilled. The semants is the semants of th	or FAC	nal effects, eed status. Wetland H	etc.): ydrolo y indica	gy Indicators Itors: nundated Saturated in Upp Saturated in Upp Water Marks	per 12	inches	ks):
rcent of Dominant Species cept FAC-). Include species rphological adaptations to well marks (Describe disturbance lively farmed area that is disker (DROLOGY) corded Data (Describe in Rouse Stream, Lake, or Aerial Photograph Other	noted (*) as showing tlands. "T" indicates traces, relevant local variation and tilled. Meets "proceed and tilled. Meets "proceed and tilled. Meets "proceed and tilled. The semants is the semants of th	or FAC	nal effects, eed status. Wetland H	ydrolo y Indica	gy Indicators itors: nundated Saturated in Upp Saturated in Upp Water Marks Orift Lines	per 12 per 18	inches	ks):
2. Unknown grass recent of Dominant Species cept FAC-). Include species rephological adaptations to well marks (Describe disturbance cively farmed area that is disket /DROLOGY corded Data (Describe in Reserved Data) X Aerial Photograph X Other No Recorded Data	noted (*) as showing tlands. "T" indicates traces, relevant local variation and tilled. Meets "proceed and tilled. Meets "proceed and tilled. Meets "proceed and tilled. The semants is the semants of th	or FAC	nal effects, eed status. Wetland H	ydrolo y indica	gy Indicators Itors: nundated Saturated in Upp Saturated in Upp Water Marks	per 12 per 18 sits	inches inches	ks):
recent of Dominant Species cept FAC-). Include species rephological adaptations to well marks (Describe disturbance lively farmed area that is disker TOROLOGY corded Data (Describe in Research Photograph X Other No Recorded Data described Data de	noted (*) as showing tlands. "T" indicates traces, relevant local variation and tilled. Meets "proceed and tilled. Meets "proceed and tilled an	or FAC	nerb 100 onal effects, eed' status. Wetland H Primary	ydrolo y indica	gy Indicators Itors: nundated Saturated in Upp Saturated in Upp Water Marks Drift Lines Sediment Depos Drainage Pattern	per 12 per 18 sits ns in V	inches inches /etlands	ks):
cent of Dominant Species cept FAC-). Include species rephological adaptations to well marks (Describe disturbance lively farmed area that is disked TOROLOGY corded Data (Describe in Research Photograph X Other No Recorded Data do Observations: Depth of Surface Water:	noted (*) as showing tlands. "T" indicates traces, relevant local variation and tilled. Meets "proceed	or FAC	nerb 100 onal effects, eed' status. Wetland H Primary	ydrolo y indica	gy Indicators tors: nundated Saturated in Upp Saturated in Upp Water Marks Orift Lines Sediment Depos	per 12 per 18 sits ns in V	inches inches /etlands	ks):
cent of Dominant Species cept FAC-). Include species rephological adaptations to well marks (Describe disturbance lively farmed area that is disked TOROLOGY corded Data (Describe in Research Lake, or Aerial Photograph X Other No Recorded Data do Observations: Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as showing tlands. "T" indicates traces, relevant local variation and tilled. Meets "professional states and tilled. Meets "p	or FAC	nerb 100 onal effects, eed' status. Wetland H Primary	ydrolo y indica i C S C S	gy Indicators Itors: nundated Saturated in Upp Saturated in Upp Water Marks Drift Lines Sediment Depos Drainage Pattern	per 12 per 18 sits ns in V	inches inches /etlands quired):	
cent of Dominant Species cept FAC-). Include species rephological adaptations to well marks (Describe disturbance lively farmed area that is disked TOROLOGY corded Data (Describe in Research Lake, or Aerial Photograph X Other No Recorded Data do Observations: Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as showing tlands. "T" indicates traces, relevant local variation and tilled. Meets "proceed	or FAC	nerb 100 onal effects, eed' status. Wetland H Primary	ydrolo y indica i i i i i i i i i i i i i i i i i i	gy Indicators stors: nundated Saturated in Upp Saturated in Upp Water Marks Drift Lines Sediment Depos Drainage Pattern dicators (2 or mo Dxidized Root C Water-Stained L	per 12 per 18 sits ns in W ore rec hanne eaves	inches inches /etlands nuired): Is in Upper 12	
unknown grass precent of Dominant Species (cept FAC-). Include species or prophological adaptations to well marks (Describe disturbance tively farmed area that is disked (DROLOGY corded Data (Describe in Recorded Data) Stream, Lake, or 3 Aerial Photograph Other	noted (*) as showing tlands. "T" indicates traces, relevant local variation and tilled. Meets "professional states and tilled. Meets "p	or FAC	nerb 100 onal effects, eed' status. Wetland H Primary	ydrolo y indica i i i i i i i i i i i i i i i i i i	gy Indicators stors: nundated Saturated in Upp Saturated in Upp Water Marks Drift Lines Sediment Depos Drainage Pattern dicators (2 or me Dxidized Root C	per 12 per 18 sits ns in W ore rec hanne eaves	inches inches /etlands nuired): Is in Upper 12	

1							Data F	Piot #:	A2-B
L'							Wetia	nd:	A2
	6w -								
roject/Site:	Seame 1	acoma Airport - Master F	rian Upd	ate	Date:	4/9/98	· · · · · · · · · · · · · · · · · · ·		
SOILS Soil Survey	Data:								
Aap Unit Na		nanned				Designa	Class		
HUD CHILING	e. <u>01111</u>	-uppeu				Drainage		Sem Man	ned Tues?
						Freid ODS	servations Con	mm map	υσα type :
axonomy (Subgroup):					Yes	No	_ NA	<u>x</u>
rofile Desc	•								
	dorizon Designation	Matrix Color (Munsell Moist)	-	e Color sell Moist)		Mottle Abundan	ce/Contrast		ire. Concretions spheres, etc.
6 A	νp	10YR 2/1	-			-		Organ	ic/ Loam
12 C)/C	10YR 3/4	-					Peat	
12 C		10YR 4/1	-					Sand	
ydric Soil I	ndicators:								
Histo	sol				Listed	on Local I	Hydric Soils Lis	ıt.	
Histic	Epipedon			-			lydric Soils Lis		
Sulfic	dic Odor						al Hydric Soils		
Proba	able Aquic	Moisture Regime				Moisture F			
Redu	cing Condi	tions			Organ	ic Streakin	g in Sandy Soi	Is	
		Chroma Colors			Mottle				
X High	Organic Co	ontent in Surface Layer			Other	(Explain in	Remarks)		
		disturbances, local varia							
ii color and	otner nydr	ic soil indicators meet th	e hydnc	soil cnteria					
ETLAND	DETER	MINATION							
drophytic \	Vegetation	Present? Yes	s x	No		łs	this Samplin	a Point V	Within a Wetlar
	Present?	Ye		No -				v	
dric Soils I	103611(1	163							

This area is not a jurisdictional wetland because it meets 'pnor converted' status according to the Federal Food Security Act.



WETLAND DETERMINATION (Modified from: 1987 COE Wetlands Delinea	Wetland: A3
(Modified from: 1987 COE Wetlands Delinea	Ai B8
	tion manuai)
Project/Site: Seattle Tacoma Airport - Master Plan Update Date: 4/9/98	,
pplicant/Owner: Port of Seattle County: King	
vestigator: William Kleindl State: WA	
1987 Method	Community ID: PSS
o Normal Circumstances exist on the site? Yes X No	Field Plot ID: 4-A
the site significantly disturbed (Atypical Situation)? Yes NoX	·
the area a potential Problem Area? Yes No _X	
etland area within Vaca Farm on Parcel 61. Majority of Vaca Farm has been converted a med.	to farmland pnor to 12/23/85 and is act
GETATION (✓Dominant species are checked)	
Plant Species % Cover Stratum Indi	icator
Plant Species % Cover Stratum India 1 Ranunculus repens 20 Herb FAC	
1. Ranunculus repens 20 Herb FAC 2. Rubus discolor 100 Shrub FAC except FAC-). Include species that are OBL, FACW, or FAC except FAC-). Include species noted (*) as showing 50 exphological adaptations to wetlands. "T" indicates trace. emarks (Describe disturbances, relevant local variations, seasonal effects, etc.):	cw cu
Rubus discolor s accepted and and and and and and and and and an	cw cu
Rubus discolor s action of the presence of wetland hydrology and wetland soils suggest that the Rubus discolor is action of the presence of wetland hydrology and wetland soils suggest that the Rubus discolor is action of the presence of wetland hydrology and wetland soils suggest that the Rubus discolor is action of the presence of wetland hydrology and wetland soils suggest that the Rubus discolor is action of the presence of wetland hydrology and wetland soils suggest that the Rubus discolor is action.	cting hydrophytic.
Rubus discolor s au Rubus discolor is	cting hydrophytic. Indicators (Describe in Remarks):
Rubus discolor s accepted to the Rubu	cting hydrophytic. Indicators (Describe in Remarks):
Ranunculus repens Rubus discolor is accepted to the Rubus discolor i	cting hydrophytic. Indicators (Describe in Remarks): s: indated
Ranunculus repens Rubus discolor is accepted to the Rubus discolor i	cting hydrophytic. Indicators (Describe in Remarks):
Ranunculus repens Rubus discolor is accepted adaptations to wetlands. "T" indicates trace. Rubus discolor is accepted adaptations discolor is accepted adaptation in Rubus discolor is accepted and in Rubus discolor is accepted bata (Describe in Rubus discolor	cting hydrophytic. Indicators (Describe in Remarks): s: indated urated in Upper 12 inches
Ranunculus repens Rubus discolor is accepted adaptations to wetlands. "T" indicates trace. Rubus discolor is accepted adaptations disturbances, relevant local variations, seasonal effects, etc.): Rubus discolor is accepted adaptation disturbances, relevant local variations, seasonal effects, etc.): Rubus discolor is accepted bata (Describe in Remarks): Rubus discolor is accepted bata (Describe in Remarks): Rubus discolor is accepted bata (Describe in Remarks): Rubus discolor Rubus	cting hydrophytic. Indicators (Describe in Remarks): s: indated urated in Upper 12 inches urated in Upper 18 inches
Ranunculus repens Rubus discolor is accepted to the Rubus discolor i	cting hydrophytic. Indicators (Describe in Remarks): s: indicated urated in Upper 12 inches urated in Upper 18 inches iter Marks t Lines iment Deposits
1 Ranunculus repens 20 Herb FAC 2 Rubus discolor 100 Shrub FAC recent of Dominant Species that are OBL, FACW, or FAC recept FAC-). Include species noted (*) as showing 50 rephological adaptations to wetlands. "T" indicates trace. rmarks (Describe disturbances, relevant local variations, seasonal effects, etc.): re presence of wetland hydrology and wetland soils suggest that the Rubus discolor is accorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph X Other X Satu X No Recorded Data Available Water Sedi Drail	cting hydrophytic. Indicators (Describe in Remarks): s: indicated urated in Upper 12 inches urated in Upper 18 inches iter Marks it Lines
Ranunculus repens Rubus discolor is as showing Rubus discolor Rubus	Indicators (Describe in Remarks): s: indated urated in Upper 12 inches urated in Upper 18 inches iter Marks It Lines iment Deposits inage Patterns in Wetlands
Ranunculus repens Rubus discolor Recept FAC-). Include species that are OBL, FACW, or FAC cept FAC-). Include species noted (*) as showing Rubus discolor is as showing Rubus discolor	citing hydrophytic. Indicators (Describe in Remarks): s: indated urated in Upper 12 inches urated in Upper 18 inches ier Marks it Lines imment Deposits image Patterns in Wetlands ators (2 or more required):
Ranunculus repens Rubus discolor s as showing Rubus discolor is as suggest that the Rubus discolor is as suggest that the Rubus discolor is as showing Rubus discolor Setal Hydrology linum X Other X Satu No Recorded Data Available Rubus discolor Rubus discolor Rubus discolor Rubus discolor Setal Hydrology linum X Other X Satu Rubus discolor Rubus discol	cting hydrophytic. Indicators (Describe in Remarks): s: indated urated in Upper 12 inches urated in Upper 18 inches iter Marks it Lines iment Deposits inage Patterns in Wetlands ators (2 or more required): dized Root Channels in Upper 12 inche
1. Ranunculus repens 2. Rubus discolor 2. Rubus discolor 3. Rubus discolor 4. Rubus discolor 5. Rubus discolor 5. Rubus discolor 6. Rubus discolor is accepted feets. 7. Rubus discolor is accepted feets. 7. Rubus discolor is accepted feets. 8. Rubus discolor is accepted feets	citing hydrophytic. Indicators (Describe in Remarks): s: indated urated in Upper 12 inches urated in Upper 18 inches ier Marks it Lines imment Deposits image Patterns in Wetlands ators (2 or more required):

Рага	metr	ix, Inc.								
4								Data P	lot#:	A3-A
								Wetlar	nd:	A3
Project/Site	: Seattle Ta	acoma Airport - Maste	er Pla	ın Upda	ıte	Date:	4/9/98			
SOILS										
Soil Surve	y Data:									
Map Unit N	lame: <u>Unrr</u>	napped					Drainage	Class:		
							Field Ob	servations Conf	im Mar	oped Type?
Taxonomy	(Subgroup):						Yes _	No	_ NA	<u>x</u>
Profile Des	cription:									
•	Horizon Designation	Matrix Color (Munsell Moist)			Color sell Moist)		Mottle Abundan	ce/Contrast		ture, Concretions, cospheres, etc.
0-4	A	10YR 2/1					-		Sift to	pam
>4	<u>o</u>	10YR 2/1					•		Peat	
Hydric Soil	Indicators:									
Hist	tosol					Listed	on Local i	Hydric Soils List	,	
Hist	tic Epipedon					_		Hydric Soils List		
Sulf	fidic Odor							al Hydric Soils L		
X Prof	bable Aquic	Moisture Regime				_	Moisture F	,		
Red	lucing Condi	tions				Organ	ic Streakin	g in Sandy Soil	s	
	•	Chroma Colors				_ Mottle:	s			
X High	o Organic Co	ontent in Surface Laye	er			_ Other	(Explain in	Remarks)		
		disturbances, local vice soil indicators mee								
		MINATION		., 0.10 3	on cineria.				· · · · · · · · · · · · · · · · · · ·	
	Vegetation	Present?	Yes	<u>x</u>	No		i:	s this Sampling	g Point	Within a Wetland?
lydric Soils	Present?		Yes	Х	No					

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): The presence of all three parameters indicate this area is a wetland.

Wetland Hydrology Present?

Yes X No



45				Data Plot #: A3/4-B Wetland: A3/4
WETLA	ND DE	TERMIN	ITA	
(Modified from: 1987	COE W	etlands	Del	iineation Manual)
Project/Site: Seattle Tacoma Airport - Master Plan Update	.	Date:	4/9/	/98
Applicant/Owner: Port of Seattle		County	K	King
Investigator: William Kleindl		State:	Ñ	VA
✓ 1987 Method				Community ID: PC Wetland
.Do Normal Circumstances exist on the site?	res	_ No	X	- Field Plot ID: 4/5-B
Is the site significantly disturbed (Atypical Situation)?	res X	No		
Is the area a potential Problem Area?	res	- No	×	_
Remarks (Explain sample location, disturbances, problem		-		-
VEGETATION (✓Dominant species are checked)		·		
Plant Species	% Co	ver Stratu	m	Indicator
✓ 1. Epilobium ciliatum	20	Herb		FACW-
✓ 2 Unknown grass	80	Herb		NL
Remarks (Describe disturbances, relevant local variations, Area was recently disked and tilled and only small patches of				
HYDROLOGY				
Recorded Data (Describe in Remarks):	٧			logy Indicators (Describe in Remarks):
X Aerial Photograph		Primary	mos	
X Aerial Photograph X Other		x		Inundated Saturated in Upper 12 inches
No Recorded Data Available				Saturated in Upper 12 inches
No Necolded Data Available				Water Marks
				Drift Lines
				Sediment Deposits
				Drainage Patterns in Wetlands
Field Observations:		***************************************		
Field Observations: Depth of Surface Water: None (in.)		Second	arv I	Indicators (2 or more required):
		Seconda	ary	Indicators (2 or more required):
Depth of Surface Water: None (in.)		Seconda	ary	Oxidized Root Channels in Upper 12 inches
Depth to Free Water in Pit: 18 (in.)		Seconda	ary	Oxidized Root Channels in Upper 12 inches Water-Stained Leaves
Depth of Surface Water: None (in.) Depth to Free Water in Pit: 18 (in.)		Seconda	ary I	Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data
Depth of Surface Water: None (in.) Depth to Free Water in Pit: 18 (in.)				Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)

							Data Plot	#:	A3/4-B
							Wetland:		A3/4
			-		_				
ojecvoite:	Seame 1	acoma Airport - Maste	r Plan (Jpdate	_ Date:	4/9/98			
OILS oil Survey	y Data:								
lap Unit Na	ame: <u>Unm</u>	apped				Drainage Class:			
						Field Observation	ns Confirm	Марр	ed Type?
axonomy (Subgroup):	<u> </u>				Yes No		NA	<u>x</u>
ofile Des	cription:								
	Horizon Designation	Matrix Color (Munsell Moist)		lottle Color Junsell Moist	t)	Mottle Abundance/Cont			e, Concretions pheres, etc.
5	A p	10YR 2/1				-		Silt loar	n
	<u> </u>	10YR 3/2				•		Peat	
dric Soil	Indicators:								
X Histo	osol				Listed	on Local Hydric S	Soils List		
Histi	c Epipedon					on State Hydric S			
Sulfi	dic Odor			_		on National Hydri			
	able Aquic	Moisture Regime			Aquic	Moisture Regime			
X Redu	ucing Condi			_	Organ	ic Streaking in Sa	ndy Soils		
X Redu	ed or Low-C	Chroma Colors		=	Mottie	s			
X Redu Gley X High	ed or Low-C Organic Co	Chroma Colors Intent in Surface Laye		_	Mottie				
X Redu Gley X High emarks (D	ed or Low-C Organic Co escribe soil	Chroma Colors intent in Surface Layer disturbances, local va	riations		Mottle Other	s			
X Redu Gley X High emarks (D	ed or Low-C Organic Co escribe soil	Chroma Colors Intent in Surface Laye	riations		Mottle Other	s			
X Redu Gley X High emarks (D	ed or Low-C Organic Co escribe soil d other hydri	Chroma Colors intent in Surface Layer disturbances, local va	riations		Mottle Other	s			
X Redu Gley X High marks (D	ed or Low-C Organic Co escribe soil d other hydri	Chroma Colors Intent in Surface Layer disturbances, local valic soil indicators meet MINATION	riations		Mottle Other	s (Explain in Remar	ks)	nist W	lithin a West-
X Redu Gley X High marks (D	ed or Low-C Organic Co escribe soil of other hydri DETERI Vegetation	Chroma Colors Intent in Surface Layer disturbances, local valic soil indicators meet MINATION Present?	the hyd	dric soil criter	Mottle Other	s (Explain in Remar	ks)	oint W	ithin a Wetlar

This area is not a junsdictional wetland because it meets 'prior converted' status according to the Federal Food Security Act.

Pa	ara	m	etr	'nχ,	inc.



	Wetland: A4	
	WETLAND DETERMINATION	
(Modified fron	n: 1987 COE Wetlands Delineation Manual)	
Project/Site: Seattle Tacoma Airport - Master Pla	an Update Date: 4/9/98	
Applicant/Owner: Port of Seattle	County: King	
nvestigator: William Kleindl	State: WA	
✓ 1987 Method	Community ID: PSS	
Do Normal Circumstances exist on the site?	Yes X No Field Plot ID: 5-A	· · · · · · · · · · · · · · · · · · ·
s the site significantly disturbed (Atypical Situatio		
s the area a potential Problem Area?	Yes No X	
temarks (Explain sample location, disturbances		
EGETATION (Dominant species are che Plant Species	cked) % Cover Stratum Indicator	
except FAC-). Include species noted (*) as show norphological adaptations to wetlands. "T" indical emarks (Describe disturbances, relevant local	tes trace. variations, seasonal effects, etc.):	
ercent of Dominant Species that are OBL, Frexcept FAC-). Include species noted (*) as show torphological adaptations to wetlands. "T" indical emarks (Describe disturbances, relevant local the presence of wetland hydrology and wetland so	ACW, or FAC 100 tes trace.	
ercent of Dominant Species that are OBL, Frexcept FAC-). Include species noted (*) as show torphological adaptations to wetlands. "T" indicatemarks (Describe disturbances, relevant local the presence of wetland hydrology and wetland selections."	ACW, or FAC Ing 100 tes trace. variations, seasonal effects, etc.): oils suggest that the Rubus discolor is acting hydrophytic.	marke):
ercent of Dominant Species that are OBL, Frincept FAC-). Include species noted (*) as show orphological adaptations to wetlands. "T" indical emarks (Describe disturbances, relevant local the presence of wetland hydrology and wetland so YDROLOGY ecorded Data (Describe in Remarks):	ACW, or FAC Ing 100 tes trace. variations, seasonal effects, etc.): oils suggest that the Rubus discolor is acting hydrophytic. Wetland Hydrology Indicators (Describe in Re	marks):
ercent of Dominant Species that are OBL, Frixcept FAC-). Include species noted (*) as show orphological adaptations to wetlands. "T" indical emarks (Describe disturbances, relevant local the presence of wetland hydrology and wetland set YDROLOGY	ACW, or FAC Ing 100 tes trace. variations, seasonal effects, etc.): oils suggest that the Rubus discolor is acting hydrophytic.	marks):
ercent of Dominant Species that are OBL, Frexcept FAC-). Include species noted (*) as show torphological adaptations to wetlands. "T" indical emarks (Describe disturbances, relevant local the presence of wetland hydrology and wetland solyDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage	ACW, or FAC ring 100 tes trace. variations, seasonal effects, etc.): oils suggest that the Rubus discolor is acting hydrophytic. Wetland Hydrology Indicators (Describe in Re Primary Indicators:	marks):
ercent of Dominant Species that are OBL, Frickcept FAC-). Include species noted (*) as show orphological adaptations to wetlands. "T" indical emarks (Describe disturbances, relevant local the presence of wetland hydrology and wetland so YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	ACW, or FAC ing 100 tes trace. variations, seasonal effects, etc.): oils suggest that the Rubus discolor is acting hydrophytic. Wetland Hydrology Indicators (Describe in Re Primary Indicators:	marks):
ercent of Dominant Species that are OBL, Frixcept FAC-). Include species noted (*) as show orphological adaptations to wetlands. "T" indical emarks (Describe disturbances, relevant local the presence of wetland hydrology and wetland so YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	ACW, or FAC ing 100 tes trace. variations, seasonal effects, etc.): oils suggest that the Rubus discolor is acting hydrophytic. Wetland Hydrology Indicators (Describe in Re Primary Indicators: X Inundated X Saturated in Upper 12 inches X Saturated in Upper 18 inches Water Marks	marks):
ercent of Dominant Species that are OBL, Frexcept FAC-). Include species noted (*) as show torphological adaptations to wetlands. "T" indical emarks (Describe disturbances, relevant local the presence of wetland hydrology and wetland statement of the presence of wetland hydrology and hydrology an	ACW, or FAC ing 100 tes trace. variations, seasonal effects, etc.): oils suggest that the Rubus discolor is acting hydrophytic. Wetland Hydrology Indicators (Describe in Re Primary Indicators: X Inundated X Saturated in Upper 12 inches X Saturated in Upper 18 inches Water Marks Drift Lines	marks):
rercent of Dominant Species that are OBL, Frexcept FAC-). Include species noted (*) as show torphological adaptations to wetlands. "T" indical temarks (Describe disturbances, relevant local the presence of wetland hydrology and wetland strictly DROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	ACW, or FAC ing 100 tes trace. variations, seasonal effects, etc.): oils suggest that the Rubus discolor is acting hydrophytic. Wetland Hydrology Indicators (Describe in Re Primary Indicators: X Inundated X Saturated in Upper 12 inches X Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits	marks):
ercent of Dominant Species that are OBL, Frexcept FAC-). Include species noted (*) as show corphological adaptations to wetlands. The indicatemarks (Describe disturbances, relevant local the presence of wetland hydrology and wetland statemarks (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available	ACW, or FAC ing 100 tes trace. variations, seasonal effects, etc.): oils suggest that the Rubus discolor is acting hydrophytic. Wetland Hydrology Indicators (Describe in Re Primary Indicators: X Inundated X Saturated in Upper 12 inches X Saturated in Upper 18 inches Water Marks Drift Lines	marks):
ercent of Dominant Species that are OBL, Frixcept FAC-). Include species noted (*) as show orphological adaptations to wetlands. "Thindical emarks (Describe disturbances, relevant local the presence of wetland hydrology and wetland site presence of wetland hydrology and hydrology and hydrology and hydrology and	ACW, or FAC Ing 100 Ites trace. variations, seasonal effects, etc.): oils suggest that the Rubus discolor is acting hydrophytic. Wetland Hydrology Indicators (Describe in Re Primary Indicators: X Inundated X Saturated in Upper 12 inches X Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required):	marks):
ercent of Dominant Species that are OBL, Frincept FAC-). Include species noted (*) as show orphological adaptations to wetlands. "T" indical emarks (Describe disturbances, relevant local the presence of wetland hydrology and wetland structured by the presence of wetland hydrology and wetland h	ACW, or FAC ing 100 tes trace. variations, seasonal effects, etc.): oils suggest that the Rubus discolor is acting hydrophytic. Wetland Hydrology Indicators (Describe in Re Primary Indicators: X Inundated X Saturated in Upper 12 inches X Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits X Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Lines	
ercent of Dominant Species that are OBL, Frexcept FAC-). Include species noted (*) as show corphological adaptations to wetlands. "T" indicatemarks (Describe disturbances, relevant local the presence of wetland hydrology and wetland solved by the presence of wetland hydrology and hydrology a	ACW, or FAC ing 100 tes trace. variations, seasonal effects, etc.): oils suggest that the Rubus discolor is acting hydrophytic. Wetland Hydrology Indicators (Describe in Re Primary Indicators: X Inundated X Saturated in Upper 12 inches X Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits X Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Lines	
Percent of Dominant Species that are OBL, Frexcept FAC-). Include species noted (*) as shown or phological adaptations to wetlands. "T" indical temarks (Describe disturbances, relevant local the presence of wetland hydrology and wetland strictly become a stream, Lake, or Tide Gage X	ACW, or FAC ing 100 ites trace. variations, seasonal effects, etc.): oils suggest that the Rubus discolor is acting hydrophytic. Wetland Hydrology Indicators (Describe in Re Primary Indicators: X Inundated X Saturated in Upper 12 inches X Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper	

								Data P	iot#:	A4-A
								Wetiar	nd:	M
roject/Site	e: Seattle Ta	acoma Airport - Maste	er Pla	n Upda	ite	Date:	4/9/98			
SOILS Soil Surve	y Data:									
Map Unit N	lame: <u>Unm</u>	apped					Drainage	Class:		
							Field Ob	servations Conf	ım Mar	ped Type?
Taxonomy	(Subgroup):						Yes	No	NA	x
Profile Des									\	
Depth Inches)	Horizon Designation	Matrix Color (Munsell Moist)			Color sell Moist)		Mottle Abundan	ce/Contrast		ure, Concretions ospheres, etc.
4	O/A	10YR 2/2		-			-		Orga	nic- sitt
•4	0	10YR 2/2					-		Peat	
ivdric Soi	Indicators:									
-	tosoi					Listed	on Local i	Hydric Soils List	,	
His	tic Epipedon				-			Hydric Soils List		
Sut	fidic Odor							al Hydric Soils L		
Pro	bable Aquic	Moisture Regime				_	Moisture F			
Rec	tucing Condi	tions				Organ	ic Streakin	g in Sandy Soil	s	
X Gie	yed or Low-C	Chroma Colors				Mottle:		-		
_XHigh	h Organic Co	intent in Surface Laye	er			Other	(Explain in	Remarks)		
lemarks (i	Describe soil	disturbances, local v	ariatio	ons, etc	c.):					
		c soil indicators mee								
							 			
VETLAN	D DETER	MINATION								
ydrophytic	: Vegetation	Present?	Yes	_x_	No		J:	s this Sampling	g Point	Within a Wetlan
ydric Soils	Present?		Yes	×	No -					
								Yes X	No	

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): The presence of all three parameters indicate this area is a wetland.

P	aı	a	m	e	tr	ΊX	, i	n	C.	,

1	
	7

Project/Site: Seattle Tacoma Airport - Master Plan Update Applicant/Owner: Port of Seattle Investigator: William Kleindl, Marti Louther ✓ 1987 Method ☐ 1989 Method Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)?	Yes X Yes Yes	Date: 1 County: State: No No No	Community ID: PEM Field Plot ID: 74-A
Modified from: 1987 Project/Site: Seattle Tacoma Airport - Master Plan Update Applicant/Owner: Port of Seattle Investigator: William Kleindl, Marti Louther 1987 Method ☐ 1989 Method Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? Remarks (Explain sample location, disturbances, problem The wetland is a mowed lawn on Parcel 161. Fill pads are adjacent to the wetland to the south. VEGETATION (✓Dominant species are checked) Plant Species	Yes X Yes areas):	Date: 1 County: State: No No No	Community ID: PEM Field Plot ID: 74-A
Applicant/Owner: Port of Seattle Investigator: William Kleindl, Marti Louther 1987 Method 1989 Method Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? Remarks (Explain sample location, disturbances, problem The wetland is a mowed lawn on Parcel 161. Fill pads are adjacent to the wetland to the south. VEGETATION (>Dominant species are checked) Plant Species	Yes X Yes Yes	County: State: No	King WA Community ID: PEM Field Plot ID: 74-A X
Applicant/Owner: Port of Seattle Investigator: William Kleindl, Marti Louther 1987 Method 1989 Method Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? Remarks (Explain sample location, disturbances, problem The wetland is a mowed lawn on Parcel 161. Fill pads are adjacent to the wetland to the south. VEGETATION (>Dominant species are checked) Plant Species	Yes X Yes Yes	No	Community ID: PEM Field Plot ID: 74-A X
Investigator: William Kleindl, Marti Louther 1987 Method ☐ 1989 Method Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? Remarks (Explain sample location, disturbances, problem The wetland is a mowed lawn on Parcel 161. Fill pads are adjacent to the wetland to the south. VEGETATION ✓ Dominant species are checked) Plant Species	Yes	No	Community ID: PEM Field Plot ID: 74-A X
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? Remarks (Explain sample location, disturbances, problem The wetland is a mowed lawn on Parcel 161. Fill pads are adjacent to the wetland to the south. VEGETATION (Dominant species are checked) Plant Species	Yes	No 3	Field Plot ID: 74-A X
Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? Remarks (Explain sample location, disturbances, problem The wetland is a mowed lawn on Parcel 161. Fill pads are adjacent to the wetland to the south. VEGETATION (>Dominant species are checked) Plant Species	Yes	No 3	Field Plot ID: 74-A X
Is the area a potential Problem Area? Remarks (Explain sample location, disturbances, problem The wetland is a mowed lawn on Parcel 161. Fill pads are adjacent to the wetland to the south. VEGETATION INDOMINANT Species are checked) Plant Species	Yes	No 3	<u>x</u> <u>x</u>
Is the area a potential Problem Area? Remarks (Explain sample location, disturbances, problem The wetland is a mowed lawn on Parcel 161. Fill pads are adjacent to the wetland to the south. VEGETATION (*Dominant species are checked) Plant Species	Yes	No _	x
Remarks (Explain sample location, disturbances, problem The wetland is a mowed lawn on Parcel 161. Fill pads are adjacent to the wetland to the south. VEGETATION (>Dominant species are checked) Plant Species	areas):		
The wetland is a mowed lawn on Parcel 161. Fill pads are adjacent to the wetland to the south. VEGETATION (>Dominant species are checked) Plant Species	,	e north an	d east. A road is located to the west and a building i
Plant Species			
✓ 1 Agrostis sp	% Cover	Stratum	Indicator
Athura an filia famora	40	Herb	NL NL
2 Athynum filix-femina ✓ 3 Festuca sp.	- 5 40	Herb Herb	— FAC NL
→ 4 Holcus lanatus	- 40	Herb	FAC
✓ 5 Poa sp	40	Herb	NL NL
✓ 6 Ranunculus repens	25	Herb	FACW
7 Taraxacum officinale	10	Herb	FACU
Remarks (Describe disturbances, relevant local variations, Because the site is largely a mowed lawn planted with non-represent on the site.			
HYDROLOGY			
Recorded Data (Describe in Remarks):	Wet	land Hydr	rology Indicators (Describe in Remarks):
Stream, Lake, or Tide Gage		Primary In	
Aerial Photograph		· · · · · · · · · · · · · · · · · · ·	
Other			Inundated Saturated in Upper 12 inches
X No Recorded Data Available			Saturated in Upper 18 inches
			Water Marks
			Drift Lines
			Sediment Deposits
Field Observations:		X	Drainage Patterns in Wetlands
Depth of Surface Water: None (in.)		C	. N= 4
Depth to Free Water in Pit: >14 (in.)	•	Secondary	Indicators (2 or more required):
Depth to Saturated Soil: >14 (in.)		X	Oxidized Root Channels in Upper 12 inches
			Water-Stained Leaves
			Local Soil Survey Data
			Other (Explain in Remarks)
Remarks (As relevant, describe recent precipitation, hydro	logic modific	ations, loc	al variations, etc.):
			pproximately 0.5 inches deep.

								Data Plot #:	A5-A
L								Wetland:	A 5
_									
roject/Si	ite: Seattle T	acoma Airport - Mas	ter Pla	in Upda	ate	Date:	10/30/98		
OILS									
ioil Sur	vey Data:								
Aap Unit	Name: Unn	napped				<u>.</u>	Drainage Class	:	
							Field Observation	ons Confirm M	apped Type?
`axonom	y (Subgroup):						Yes N	o N	A X
	escription:		-						
epth nches)	Horizon	Matrix Color (Munsell Moist)			e Color sell Moist)		Mottle Abundance/Cor		exture, Concretions, nizospheres, etc.
-10	Α	10YR 3/2		10YR	4/6		Many, Coarse, Dist	unct Sa	indy loam
0-14	В	10YR 2/1		10YR :	5/8		Many, Medium, Dis	tinct Lo	am .
H Si Pi Ri X Gi Hi	educing Cond leyed or Low-l igh Organic Co (Describe soi	Moisture Regime	vanati			Listed Listed X Aquic Organ X Mottle	on Local Hydric on State Hydric on National Hyd Moisture Regime iic Streaking in Si s (Explain in Rema	Soils List ric Soils List e andy Soils	
	· · ·								
VETLA	ND DETER	MINATION							
· -	tic Vegetation	n Present?	Yes	<u> </u>	No		Is this	Sampling Poi	nt Within a Wetlan
ydric Soi	ils Present?		Yes	X	No		,	Yes X	No

Wetland was delineated on changes in hydrology, soils and vegetation related to fill surrounding the wetland. The presence of all three parameters indicate the area is a wetland.

				Data Plot #:	A6-A
WETLAN	n nete	DMINA.	TION	Wetland:	A6
				Manual\	
(Modified from: 1987 C	OE WEI	ianus D	BIIIIBALIOII	mallual)	
Project/Site: Seattle Tacoma Airport - Master Plan Update		Date: 7	/1/98		
Applicant/Owner: Port of Seattle		County:	King		
nvestigator. William Kleindl		State:	WA		
✓ 1987 Method	=		Con	nmunity ID: PF	0
Do Normal Circumstances exist on the site? Yes	s X	No		d Plot ID: 11-A	
s the site significantly disturbed (Atypical Situation)? Yes		No .		B FIOLID: 11-A	
s the area a potential Problem Area?		_	 x		
ternarks (Explain sample location, disturbances, problem ar	P26).				
Plant Species	% Cove				
1 Agrostis gigantea	5	Herb	FACW	_	
Agrostis gigantea Equisetum telmateia	5	Herb Herb	FACW FACW	<u>-</u>	
Agrostis gigantea Equisetum telmateia	5	Herb Herb	FACW FACW OBL	- - -	
Agrostis gigantea Equisetum telmateia Ins pseudacorus	5 10 30	Herb Herb	FACW FACW	_ _ _ _	
1 Agrostis gigantea 2 Equisetum telmateia 3 Ins pseudacorus 4 Ranunculus repens	5 10 30 10	Herb Herb Herb	FACW OBL FACW	- - - -	
1 Agrostis gigantea 2 Equisetum telmateia 3 Ins pseudacorus 4 Ranunculus repens 5 Rubus laciniatus 6 Stachys cooleyae	5 10 30 10	Herb Herb Herb Herb	FACW OBL FACW FACU+		
1 Agrostis gigantea 2 Equisetum telmateia 3 Ins pseudacorus 4 Ranunculus repens 5 Rubus laciniatus 6 Stachys cooleyae	5 10 30 10 10	Herb Herb Herb Herb Herb	FACW OBL FACW FACW FACW	- - - - - -	
1 Agrostis gigantea 2 Equisetum telmateia 3 Ins pseudacorus 4 Ranunculus repens 5 Rubus laciniatus 6 Stachys coolevae 7 Rubus discolor 8 Alnus rubra ercent of Dominant Species that are OBL, FACW, or FACexcept FAC-). Include species noted (*) as showing	5 10 30 10 10 10 75 80	Herb Herb Herb Herb Herb Shrub	FACW OBL FACW FACU+ FACW FACW	 	
Agrostis gigantea Equisetum telmateia Ins pseudacorus Ranunculus repens Rubus laciniatus Stachys cooleyae Rubus discolor	5 10 30 10 10 10 75 80	Herb Herb Herb Herb Herb Tree	FACW FACW OBL FACW FACU+ FACW FACU FACU FAC	s met. Forested	area but no tr ee s il
1. Agrostis gigantea 2. Equisetum telmateia 3. Ins pseudacorus 4. Ranunculus repens 5. Rubus laciniatus 6. Stachys coolevae 7. Rubus discolor 8. Alnus rubra ercent of Dominant Species that are OBL, FACW, or FAC except FAC-). Include species noted (*) as showing corphological adaptations to wetlands. "T" indicates trace. emarks (Describe disturbances, relevant local variations, se since greater than 50% of the dominant plants are hydrophyticata plot.	5 10 30 10 10 10 75 80	Herb Herb Herb Herb Herb Tree	FACW FACW OBL FACW FACU+ FACW FACU FACU FAC	s met. Forested	area but no trees il
1. Agrostis gigantea 2. Equisetum telmateia 3. Ins pseudacorus 4. Ranunculus repens 5. Rubus laciniatus 6. Stachys coolevae 7. Rubus discolor 8. Alnus rubra ercent of Dominant Species that are OBL, FACW, or FAC except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace. emarks (Describe disturbances, relevant local variations, seince greater than 50% of the dominant plants are hydrophyticata plot. YDROLOGY	5 10 30 10 10 10 75 80 66	Herb Herb Herb Herb Herb Shrub Tree	FACW FACW OBL FACW FACU+ FACW FACU FACC		
1. Agrostis gigantea 2. Equisetum telmateia 2. Ins pseudacorus 4. Ranunculus repens 5. Rubus laciniatus 6. Stachys coolevae 7. Rubus discolor 8. Alnus rubra ercent of Dominant Species that are OBL, FACW, or FAC except FAC-). Include species noted (*) as showing inorphological adaptations to wetlands. "T" indicates trace. emarks (Describe disturbances, relevant local variations, serince greater than 50% of the dominant plants are hydrophyticata plot. YPROLOGY ecorded Data (Describe in Remarks):	5 10 30 10 10 10 75 80 66 easonal et	Herb Herb Herb Herb Herb Tree ffects, etc.	FACW FACW OBL FACW FACU+ FACW FACU FACC FACC Tation criteria is	s met. Forested	
1. Agrostis gigantea 2. Equisetum telmateia 3. Ins pseudacorus 4. Ranunculus repens 5. Rubus laciniatus 6. Stachys coolevae 7. Rubus discolor 8. Alnus rubra ercent of Dominant Species that are OBL, FACW, or FAC except FAC-). Include species noted (*) as showing lorphological adaptations to wetlands. "T" indicates trace. emarks (Describe disturbances, relevant local variations, se ince greater than 50% of the dominant plants are hydrophytic	5 10 30 10 10 10 75 80 66 easonal et	Herb Herb Herb Herb Herb Shrub Tree	FACW FACW OBL FACW FACU+ FACW FACU FACC FACC Tation criteria is	ators (Describe	

HYDROLOGY	
Recorded Data (Describe in Remarks):	Wetland Hydrology Indicators (Describe in Remarks):
Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	Primary Indicators:
Field Observations:	X Sediment Deposits X Drainage Patterns in Wetlands
Depth of Surface Water: Depth to Free Water in Pit: Depth to Saturated Soil: None (in.) >18 (in.)	Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches
	Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)
Remarks (As relevant, describe recent precipitation Soils were very moist to the surface. Wetland hydro	n, hydrologic modifications, local variations, etc.): ology is present based on the observed wetland hydrology indicators.

							ita Piot #: etiand:	A6-A
roject/S	ite: Seattle T	acoma Airport - Master	Plan L	pdate	Date:	7/1/98	,	
SOILS Soil Sur	vey Data:							
Map Unit	Name: Unm	napped				Drainage Class:		
					····	Field Observations	Confirm Map	ped Type?
Taxonom	y (Subgroup):					Yes No	NA	x
Profile D	escription:							
Depth inches)	Horizon Designation	Matrix Color (Munsell Moist)		ottle Colo lunsell M		Mottle Abundance/Contrast		ure, Concretions ospheres, etc.
-13	Α	10YR 2/1				-	Orga	nic/Loam
3+	В	10YR 5/3				•	Silt to	æm
lydric Sc	oil Indicators:	:						
н	istosol				Listed	on Local Hydric Soils	s List	
н	istic Epipedon					on State Hydric Soils		
s	ulfidic Odor				Listed	on National Hydric S	oils List	
		Moisture Regime			Aquic	Moisture Regime		
	educing Condi				Organ	ic Streaking in Sandy	Soils	
	•	Chroma Colors			Mottle	-		
		ontent in Surface Layer			Other	(Explain in Remarks)		
		disturbances, local va						
	nce of high or	ganic matter in the soil	surtace	and the	low chroma so	il color meet the hydri	ic soil criteria	1.
							*	
he prese		MINATION						
NETLA	ND DETER		es '	r Ne		le thie S	nlina Dai-t	18/10him - 181
NETLA		Present? Y	_	X No		is this Sam	pling Point	Within a Wetlar

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): The presence of all three parameters indicate this area is a wetland.

Param	etrix,	inc.
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1					Data Pic	ot #:	A6-B
_*	WET	LAND DET	FRMINA'	TION	Wetland	1:	A6 Upland Pic
-	 (Modified from: 19		_		n Manual)	
roject/Site: Seattle Tacoma A	•		_	7/1/98	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	•	
pplicant/Owner: Port of Se		- Cele	·				
ivestigator: William Kleindi	alue		County: State:	King WA			
	Method		State.	***			
				C	Community ID): Upi	land
o Normal Circumstances exist		Yes X	_ ^{No} _	<u> </u>	ield Plot ID:	11-B	
the site significantly disturbed	d (Atypical Situation)?	Yes	_ No _	<u> </u>			
the area a potential Problem	Area?	Y e s	_ No _	<u> </u>			
alder dominated forest with a	nt species are checked)		-				
Plant Species	it species are checked)	% Cov	er Stratum	Indicat	or		
1 Rubus discolor		80	Shrub	FACU			
1 Rubus discolor			Shrub	FACU+			
2 Rubus laciniatus							
Rubus laciniatus 3 Alnus rubra ercent of Dominant Species copphological adaptations to we amarks (Describe disturbance e wetland vegetation is not me	noted (*) as showing tlands. "T" indicates traes, relevant local variati	or FAC 3 ace. ons, seasonal	Tree 3 effects, etc.		ands and les	s than	50% of the plant
Rubus laciniatus Alnus rubra recent of Dominant Species coept FAC-). Include species imphological adaptations to we marks (Describe disturbance wetland vegetation is not medirophytic.	noted (*) as showing tlands. "T" indicates traes, relevant local variati	or FAC 3 ace. ons, seasonal	Tree 3 effects, etc.	.):	ands and les	s than	50% of the plant
Rubus laciniatus 3 Alnus rubra recent of Dominant Species cept FAC-). Include species imphological adaptations to we marks (Describe disturbance wetland vegetation is not metrophytic.	noted (*) as showing tlands. "T" indicates trailes, relevant local variation because the predomination of the control of the c	or FAC ace. ons, seasonal nant vegetatio	Tree 3 effects, etc. n is not adap	.): oted to weti			
Rubus laciniatus 3 Ainus rubra recent of Dominant Species (cept FAC-). Include species (riphological adaptations to we rmarks (Describe disturbance (e wetland vegetation is not me drophytic. /DROLOGY corded Data (Describe in Ri	noted (*) as showing tlands. "T" indicates traces, relevant local variation because the predomination of the control of the co	or FAC ace. ons, seasonal nant vegetatio	Tree 3 effects, etc. n is not adap	.): pted to weti			50% of the plant in Remarks):
Rubus laciniatus 3 Alnus rubra recent of Dominant Species cept FAC-). Include species imphological adaptations to we marks (Describe disturbance wetland vegetation is not metrophytic.	noted (*) as showing tlands. "T" indicates traces, relevant local variation because the predomination of the predo	or FAC ace. ons, seasonal nant vegetatio	Tree 3 effects, etc. n is not adapted with the standard of t	.): pted to weti irology ind indicators:	icators (De		
Rubus laciniatus 3 Ainus rubra recent of Dominant Species recept FAC-). Include species rephological adaptations to we rmarks (Describe disturbance e wetland vegetation is not me drophytic. /DROLOGY corded Data (Describe in Reserved)	noted (*) as showing tlands. "T" indicates traces, relevant local variation because the predomination of the predo	or FAC ace. ons, seasonal nant vegetatio	Tree 3 effects, etc. n is not adapted with the standard of t	.): pted to weti irology ind ndicators: inundai	icators (De	escribe	in Remarks):
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Rubus laciniatus 3 Alnus rubra recent of Dominant Species recept FAC-). Include species rephological adaptations to we rmarks (Describe disturbance wetland vegetation is not me drophytic. /DROLOGY corded Data (Describe in R Stream, Lake, or Aerial Photograph Other X No Recorded Data	noted (*) as showing tlands. "T" indicates trailes, relevant local variation because the predominate b	or FAC ace. ons, seasonal nant vegetatio	Tree 3 effects, etc. n is not adapted with the standard of t	irology ind indicators: Inunda Saturat Saturat Water I	icators (De ted ed in Upper : ed in Upper : Marks ies	escribe	in Remarks): es
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Rubus laciniatus 3. Ainus rubra arcent of Dominant Species coept FAC-). Include species corphological adaptations to we amarks (Describe disturbance e wetland vegetation is not me drophytic. /DROLOGY corded Data (Describe in R Stream, Lake, or Aerial Photograph Other X No Recorded Data	noted (*) as showing tlands. "T" indicates trailes, relevant local variation because the predominate b	or FAC ace. ons, seasonal nant vegetatio	Tree 3 effects, etc. n is not adapted with the standard of t	irology ind indicators: Inundar Saturat Water I Drift Lin Sedime	icators (De ted ed in Upper : ed in Upper : Marks ies	escribe 12 inch 18 inch	in Remarks): es es
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Rubus laciniatus 3 Ainus rubra precent of Dominant Species (cept FAC-). Include species (priphological adaptations to we primarks (Describe disturbance (price wetland vegetation is not me (drophytic.) // DROLOGY corded Data (Describe in Response) Stream, Lake, or Aerial Photograph Other X No Recorded Data X No Recorded Data Id Observations: Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as showing tlands. "T" indicates traites, relevant local variation because the predominate b	or FAC ace. ons, seasonal nant vegetatio	affects, etc., n is not adaptetland Hyd	rology Indicators: Inundal Saturat Saturat Water I Drift Lir Sedime Drainag y Indicators Oxidize Water-S	icators (De ted ted in Upper of darks tes tes tes tes tes tes tes tes tes te	12 inchi 18 inchi 18 wettai required inels in	in Remarks): es es inds
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1							Data Plot #:	A6-B
							Wetland:	A6 Upland Pio
Project/Si	te: Seattle Ta	acoma Airport - Mas	ter Pla	n Update	Date:	7/1/98		
SOILS Soil Sur	vey Data:							
Map Unit	Name: Unm	apped				Drainage Class:		
						Field Observation	ons Confirm Ma	pped Type?
Taxonom	y (Subgroup):					Yes No	NA	<u>x</u>
Profile D	escription:							
Depth Inches)	Horizon Designation	Matrix Color (Munsell Moist)		Mottle Color (Munsell Moist)		Mottle Abundance/Con		cture, Concretions, zospheres, etc.
-9	Α	10YR 3/3		•			Loa	m
•9	В	10YR 4/6		-		•	Loa	m
ivdric S	oil Indicators	:						
•	istosol				Listed	on Local Hydric	Soils List	
Н	istic Epipedon	ı				on State Hydric !		
s	ulfidic Odor				Listed	on National Hydr	ric Soils List	
Р	robable Aquic	Moisture Regime			Aquic	Moisture Regime		
R	educing Cond	itions			Organ	ic Streaking in Sa	andy Soils	
G	leyed or Low-	Chroma Colors			Mottle	s		
н	igh Organic Co	ontent in Surface La	yer		Other	(Explain in Rema	rks)	
	-	disturbances, local oil are present.	vanati	ons, etc.):				
io iriuicai		MINATION						
	ND DETER							
VETLA	ND DETER		Yes	No	X	ls this :	Sampling Poin	it Within a Wetlan
VETLA ydrophy			Yes Yes	No	x x			it Within a Wetlan lo X

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): This area is an upland since all wetland parameters are absent.

Param	etrix,	Inc.
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Data Plot #:	A7-A
Wetland:	Α7

	WET	LAND DETE	RMINATI	Wetland: ION	<u>A7</u>
	(Modified from: 19	87 COE Wet	ands De	lineation Manual)	
Project/Site: Seattle Tacom	a Airport - Master Plan Up	date	Date: 6/3	10/98	
Applicant/Owner: Port of			County: H	King	· ·
vestigator: William Kleind	l .		_ ' •	VA	
1987 Method 198	9 Method		-		-
o Normal Circumstances ex	ist on the site?	Yes X	No	Community ID: PFO	
s the site significantly disturb				- Field Plot ID: 9-A	
		Yes	No X	_	
the area a potential Probler		Yes	No X	_	
emarks (Explain sample lo istorically farmed and grazes		lem areas):			
storioury farmed and grazet	u .				
GETATION PODOmin	ant species are checked)				
Plant Species		% Cover	Stratum	Indicator	
1 Agrostis gigantea		20	Herb	FACW	
2. Carex stipata		10	Herb	OBL	
3 Convolvulus arvensis		10	Herb	NI	
4 Juneus effusus		10	Herb	FACW	
5 Ranunculus repens 6 Rubus discolor		20	Herb	FACW	
7 Rubus spectabilis		40	Shrub	FACU	
,		2 0	Shrub	FAC+	
(cept FAC-). Include species	s noted (*) as showing	80	Tree	FAC	
rcent of Dominant Specie cept FAC-). Include specie rphological adaptations to w marks (Describe disturban	s noted (*) as showing retlands. "T" indicates trac ices, relevant local variatio	or FAC 80 ce.	Tree	FAC	
rcent of Dominant Specie cept FAC-). Include species rphological adaptations to w marks (Describe disturban- ce greater than 50% of the o	s noted (*) as showing retlands. "T" indicates trac ices, relevant local variatio	or FAC 80 ce.	Tree	FAC	
recent of Dominant Species (cept FAC-). Include species orphological adaptations to with marks (Describe disturbance greater than 50% of the MOROLOGY	s noted (*) as showing retiands. "T" indicates trac ices, relevant local variation dominant plants are hydrol	or FAC 80 ce. ns, seasonal effe	Tree ects, etc.): and vegetation	PAC on criteria is met.	
recent of Dominant Species cept FAC-). Include species rphological adaptations to warks (Describe disturbance greater than 50% of the COROLOGY corded Data (Describe in	s noted (*) as showing vettands. "T" indicates tracices, relevant local variatio dominant plants are hydrogenarks):	or FAC e. ns, seasonal efforbytic, the wetlan Weth	Tree ects, etc.): nd vegetation	on criteria is met.	Remarks);
rcent of Dominant Species cept FAC-). Include species rephological adaptations to warmarks (Describe disturbance greater than 50% of the of COROLOGY corded Data (Describe in Stream, Lake, o	s noted (*) as showing retiands. "T" indicates tracices, relevant local variation dominant plants are hydrological retirements." Remarks): r Tide Gage	or FAC e. ns, seasonal efforbytic, the wetlan Weth	Tree ects, etc.): and vegetation	on criteria is met. logy Indicators (Describe in cators:	Remarks):
rcent of Dominant Species cept FAC-). Include species rphological adaptations to warmarks (Describe disturbance greater than 50% of the company of the corded Data (Describe in Stream, Lake, o Aerial Photograp	s noted (*) as showing retiands. "T" indicates tracices, relevant local variation dominant plants are hydrological retirements." Remarks): r Tide Gage	or FAC e. ns, seasonal efforbytic, the wetlan Weth	Tree ects, etc.): nd vegetation	on criteria is met. logy Indicators (Describe in cators:	
rcent of Dominant Species (cept FAC-). Include species (rphological adaptations to with marks (Describe disturbantice greater than 50% of the company of the control of the	s noted (*) as showing retiands. "T" indicates tracices, relevant local variation dominant plants are hydrogenemarks): r Tide Gage	or FAC e. ns, seasonal efforbytic, the wetlan Weth	Tree ects, etc.): nd vegetation	on criteria is met. logy Indicators (Describe in cators: Inundated Saturated in Upper 12 inches	
rcent of Dominant Species cept FAC-). Include species rphological adaptations to warmarks (Describe disturbance greater than 50% of the company of the compa	s noted (*) as showing retiands. "T" indicates tracices, relevant local variation dominant plants are hydrogenemarks): r Tide Gage	or FAC e. ns, seasonal efforbytic, the wetlan Weth	Tree ects, etc.): nd vegetation	on criteria is met. logy Indicators (Describe in cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches	
rcent of Dominant Species (cept FAC-). Include species (rphological adaptations to with marks (Describe disturbantice greater than 50% of the company of the control of the	s noted (*) as showing retiands. "T" indicates tracices, relevant local variation dominant plants are hydrogenemarks): r Tide Gage	or FAC e. ns, seasonal efforbytic, the wetlan Weth	Tree ects, etc.): nd vegetation	on criteria is met. logy Indicators (Describe in cators: Inundated Saturated in Upper 12 inches	
ercent of Dominant Species (Cept FAC-). Include species or phological adaptations to we smarks (Describe disturbanace greater than 50% of the company of the	s noted (*) as showing retiands. "T" indicates tracices, relevant local variation dominant plants are hydrogenemarks): r Tide Gage	or FAC e. ns, seasonal efforbytic, the wetlan Weth	Tree ects, etc.): nd vegetation	on criteria is met. logy Indicators (Describe in cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks	
ercent of Dominant Species (cept FAC-). Include species prophological adaptations to with the commarks (Describe disturbantiate greater than 50% of the commarks (Describe in Stream, Lake, o Aenal Photogram, Other X No Recorded Data	s noted (*) as showing retiands. "T" indicates tracices, relevant local variation dominant plants are hydrogenemarks): r Tide Gage	or FAC e. ns, seasonal efforbytic, the wetlan Weth	Tree ects, etc.): nd vegetation and Hydrol rimary Indic	on criteria is met. logy Indicators (Describe in cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits	
recent of Dominant Species (Cept FAC-). Include species (Cept FAC-). Inclu	s noted (*) as showing retiands. "T" indicates tracices, relevant local variation dominant plants are hydrogen Remarks): Tride Gage on the state Available	or FAC te. ns. seasonal effective, the wetlan Wette	ects, etc.): nd vegetation and Hydrol nimary Indic	on criteria is met. logy Indicators (Describe in cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetland	
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rcent of Dominant Species coept FAC-). Include species rephological adaptations to wormarks (Describe disturbance greater than 50% of the company of the com	s noted (*) as showing retlands. To indicates traces, relevant local variation dominant plants are hydrogen rates. Remarks): Tride Gage on the state Available None (in.) 18 (in.)	or FAC te. ns. seasonal effective, the wetlan Wette	ects, etc.): and vegetation rimary Indicates econdary In	on criteria is met. logy Indicators (Describe in cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetland:	s
rcent of Dominant Species (cept FAC-). Include species (rephological adaptations to with the cept of the control of the cept o	s noted (*) as showing retiands. "T" indicates tracices, relevant local variation dominant plants are hydrogen Remarks): r Tide Gage on the state Available None (in.)	or FAC te. ns. seasonal effective, the wetlan Wette	ects, etc.): and vegetation rimary Indicates econdary In	on criteria is met. logy Indicators (Describe in cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetland: Indicators (2 or more required): Oxidized Root Channels in Up	s
creent of Dominant Species (Copt FAC-). Include species (Copt FAC-). Inclu	s noted (*) as showing retlands. To indicates traces, relevant local variation dominant plants are hydrogen rates. Remarks): Tride Gage on the state Available None (in.) 18 (in.)	or FAC te. ns. seasonal effective, the wetlan Wette	ects, etc.): and vegetation rimary Indicates econdary in	on criteria is met. logy Indicators (Describe in cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetland: Indicators (2 or more required): Oxidized Root Channels in Up	s
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ercent of Dominant Species (Cept FAC-). Include species (Cept FAC-). Inclu	s noted (*) as showing retiands. To indicates traces relevant local variation dominant plants are hydrogen rates. Remarks): Tride Gage on the star Available None (in.) 18 (in.) 18 (in.)	or FAC te. 10. 10. 10. 10. 10. 10. 10. 1	ects, etc.): and vegetation inmary Indicates econdary In	on criteria is met. logy Indicators (Describe in cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetland: Indicators (2 or more required): Oxidized Root Channels in Up Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)	s
ercent of Dominant Species (Acept FAC-). Include species prophological adaptations to we smarks (Describe disturbanance greater than 50% of the composition of the co	s noted (*) as showing retlands. "T" indicates tracices, relevant local variation dominant plants are hydrogen relevant local variation dominant plants are hydrogen relevant local variation. "Tide Gage on the local variation of the local variation in t	or FAC te. 10. 10. 10. 10. 10. 10. 10. 1	ects, etc.): and vegetation and Hydrol rimary Indic	on criteria is met. logy Indicators (Describe in cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetland: Indicators (2 or more required): Oxidized Root Channels in Up Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)	s oper 12 inches

			· · · · · · · · · · · · · · · · · · ·			Data Plo	t #:	A7-A
						Wetland	:	A7
Project/Sit	e: Seattle Ta	acoma Airport - Master	Plan Update	Date:	6/30/98			
SOILS								
Soil Surv	ey Data:							
Map Unit	Name: Unm	napped			Drainage	Class:		
					Field Obs	ervations Confin	n Map	ped Type?
Taxonomy	(Subgroup):				Yes	_ No	NA	<u> </u>
Profile De	scription:							
Depth (inches)	Honzon Designation	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)		Mottle Abundano	e/Contrast		ure, Concretions, ospheres, etc.
0-7	Α	10YR 2/1	<u>-</u>		-		Sand	y loam with high organic matte
7-18	В	10YR 4/1	5YR 4/6		Common, M	edium. Distinct	Loan	nv sand
-	oil Indicators stosol	:		Liste	d on Local H	lydric Soils List		
	stic Epipedor	1		_		tydric Soils List		
	ulfidic Odor	Maintan Danima		_		al Hydric Soils Li	st	
	obable Aquic educing Cond	: Moisture Regime			: Moisture R	egime g in Sandy Soils		
	•	Chroma Colors	x			g in Cancy Cons		
X GI	· .	ontent in Surface Layer			(Explain in	Remarks)		
	gri Organic C							
X Hi Remarks	(Describe so	il disturbances, local va Iric soil indicators meet	•					
X Hi Remarks Soil color a	(Describe so		•	· - · · ·	*	· · · · · · · · · · · · · · · · · · ·		
X Hi Remarks Soil color a	(Describe soil and other hyd	ric soil indicators meet	the hydric soil criteria			s this Sampling	Point	Within a Wetland?
X Hi Remarks Soil color a WETLA	(Describe so	RMINATION on Present?	the hydric soil criteria	· <u> </u>	l:	s this Sampling	Point	: Within a Wetland?

The presence of all three parameters indicate this area is a wetland.



1419	LAND DE	TEDMIN	Wetland: A7 Upland Pi
	_		
(Modified from: 19	387 COE W	vetiands i	Delineation Manual)
Project/Site: Seattle Tacoma Airport - Master Plan Up	odate	Date:	6/30/98
Applicant/Owner: Port of Seattle		County:	King
nvestigator: William Kleindl		State:	WA
✓ 1987 Method			Community ID: Upland
Oo Normal Circumstances exist on the site?	Yes X	No	Field Plot ID: 9-B
s the site significantly disturbed (Atypical Situation)?	Yes	No	x
s the area a potential Problem Area?	Yes	No	×
istorically the area was farmed and grazed. Currently		Drested with	approximately 15 year old alders.
EGETATION (Dominant species are checked)			
Plant Species	% Cc		
1 Ilex aguifolium 2 Rubus discolor	40	Shrub	UPL
2 Rubus discolor 3 Alnus rubra	20 40	Shrub Tree	FAC FAC
emarks (Describe disturbances, relevant local variations)	ace. ions, seasona		
except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variations wetland vegetation criteria are not met since the analysis.	ace. ions, seasona	al effects, et	
xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracernarks (Describe disturbances, relevant local variative wetland vegetation criteria are not met since the anadrophytic. YDROLOGY	ace. ions, seasona ea is dominat	al effects, et	retland plants and less than 50% of the plants a
except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variation wetland vegetation criteria are not met since the analytic. YDROLOGY ecorded Data (Describe in Remarks):	ace. ions, seasona ea is dominat	al effects, etcled by non-w	retland plants and less than 50% of the plants a
xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variations wetland vegetation criteria are not met since the anadrophytic. YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage	ace. ions, seasona ea is dominat	al effects, etcled by non-w	drology Indicators (Describe in Remarks): Indicators:
xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variations wetland vegetation criteria are not met since the analytrophytic. YDROLOGY ecorded Data (Describe in Remarks):	ace. ions, seasona ea is dominat	al effects, etcled by non-w	drology Indicators (Describe in Remarks): Indicators:
xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variative wetland vegetation criteria are not met since the anadrophytic. YDROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	ace. ions, seasona ea is dominat	al effects, etcled by non-w	drology Indicators (Describe in Remarks): Indicators:
xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variations wetland vegetation criteria are not met since the anadrophytic. YDROLOGY coorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	ace. ions, seasona ea is dominat	al effects, etcled by non-w	drology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches
xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variative wetland vegetation criteria are not met since the anadrophytic. YDROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	ace. ions, seasona ea is dominat	al effects, etcled by non-w	drology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches
except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variation wetland vegetation criteria are not met since the analytrophytic. YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	ace. ions, seasona ea is dominat	al effects, etcled by non-w	drology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
Aerial Photograph Other X No Recorded Data Available	ace. ions, seasona ea is dominat	al effects, etcled by non-w	drology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variations wetland vegetation criteria are not met since the analytic. YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available	ace. ions, seasona ea is dominat	Wetland Hy	drology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
emarks (Describe disturbances, relevant local variations wetlands, "T" indicates training wetland vegetation criteria are not met since the analytic. YDROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	ace. ions, seasona ea is dominat	Wetland Hy	drology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Inv Indicators (2 or more required):
except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variation wetland vegetation criteria are not met since the analytrophytic. YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available eld Observations: Depth of Surface Water: None (in.)	ace. ions, seasona ea is dominat	Wetland Hy	drology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands iny Indicators (2 or more required): Oxidized Root Channels in Upper 12 inche
except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T' indicates training incorphological adaptations to wetlands." Indicates training incorphological adaptation to wetlands. "T' indicates training incorphological variation wetland vegetation criteria are not met since the analytic was also wetland vegetation criteria are not met since the analytic was are not	ace. ions, seasona ea is dominat	Wetland Hy	drology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands iny Indicators (2 or more required): Oxidized Root Channels in Upper 12 inche Water-Stained Leaves
except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T' indicates training incorphological adaptations to wetlands." Indicates training incorphological adaptation to wetlands. "T' indicates training incorphological variation wetland vegetation criteria are not met since the analytic was also wetland vegetation criteria are not met since the analytic was are not	ace. ions, seasona ea is dominat	Wetland Hy	drology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands iny Indicators (2 or more required): Oxidized Root Channels in Upper 12 inche Water-Stained Leaves Local Soil Survey Data
except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T' indicates training the wetland vegetation criteria are not met since the analydrophytic. YPROLOGY	ace.	Wetland Hy Primary Seconda	drology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands iny Indicators (2 or more required): Oxidized Root Channels in Upper 12 inche Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)
except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T' indicates training incorphological adaptations to wetlands." Indicates training incorphological adaptation to wetlands. "T' indicates training incorphological variation wetland vegetation criteria are not met since the analytic was also wetland vegetation criteria are not met since the analytic was are not	ace.	Wetland Hy Primary Seconda	drology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands iny Indicators (2 or more required): Oxidized Root Channels in Upper 12 inche Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)

					E	ata Piot #:	A7-B
					`	Wetland:	A7 Upland Plot
Project/S	ite: Seattle T	acoma Airport - Mastei	Pian Undate	Date:	6/30/98		
SOILS	vey Data:		Tion open		400,00		
Map Unit		napped			Drainage Class:		
				· ***	Field Observations	Confirm Map	ped Type?
Taxonom	ny (Subgroup):				Yes No	NA	X
Profile D	escription:		···				
Depth (Inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Mo	st)	Mottle Abundance/Contra	_	ure, Concretions, ospheres, etc.
)-5	Α	10YR 2/1			-	Sitt io	am
5 - 15	В	10YR 4/4	10YR 5/3		Few. Medium, Distinct	Loam	y sand
15	<u> </u>	2.5Y 5/2			-	Loam	y sand
lydric Sc	oil indicators	:					
	istosol		_	Listed	on Local Hydric So	ils List	
	istic Epipedon	ı	_	Listed	on State Hydric Soi	ils List	
	ulfidic Odor		_		on National Hydric	Soils List	
		Moisture Regime	_		Moisture Regime		
	educing Cond	Chroma Colors	-		ic Streaking in Sand	ly Soils	
		ontent in Surface Layer	-	X Mottle			
		-	_	Oulei	(Explain in Remarks	i)	
		disturbances, local va	nations, etc.):				
	7						
VETLA	ND DETER	MINATION					
ydrophyl	tic Vegetation	Present? Y	es No	×	is this Sar	onling Point	Within a Wetland
						G. O.III	a stanging
ydric Soi	ils Present?	Y	es No	X			

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): This area is an upland since all wetland parameters are absent.

Param	etrix,	ì	n	c.
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Data Plot #:	A8-A1
Wetland:	A8

WET	LAND DETE	DMINA	TION	Wetland	:	A8
				- A41\		
(Modified from: 19	87 COE Wet	iands L	reiineatio	n Manuai)		
Project/Site: Seattle Tacoma Airport - Master Plan Up	date	Date:	6/30/98			
Applicant/Owner: Port of Seattle		County:	King			
Investigator: William Kleindi		State:	WA			
✓ 1987 Method			C	ommunity ID	PFC)
Do Normal Circumstances exist on the site?	Yes X	No _		eld Plot ID:	10-A	· · · · · · · · · · · · · · · · · · ·
Is the site significantly disturbed (Atypical Situation)?	Yes	No	 X			
is the area a potential Problem Area?	Yes	No -	×			
Remarks (Explain sample location, disturbances, prob		_				
Sample taken on Parcel # 177. Area was farmed/graze understory of Himalayan blackberry and is not used by t is amongst the wettest area.						
VEGETATION (✓Dominant species are checked) Plant Species	% Cover	Stratum	n Indicate	v.		
***	10	Herb	FAC	~		
1 Athynum teix-remina ✓ 2 Carex sp.	40	Herb	FACW			
3 Equisetum arvense	10	Herb	FAC			
Juncus effusus	40	Herb	FACW			
5 Hex aquifolium	25	Shrub	UPL			
6 Rubus discolor	50	Shrub	FACU			
7 Rubus laciniatus	20	Shrub	FACU+			
8 Ainus rubra	<u>75</u>	Tree	FAC			
g Thuja piicata	2 0	Tree	FAC			
except FAC-). Include species noted (*) as showing	or FAC 57					
except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates tra temarks (Describe disturbances, relevant local variations.	or FAC 57 ce.	fects, etc):	is met.		
except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates tra Remarks (Describe disturbances, relevant local variations from the property of the dominant plants are hydrogen	or FAC 57 ce.	fects, etc):	is met.		
except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates traitemarks (Describe disturbances, relevant local variations of the dominant plants are hydrostypped (*) Type of the dominant pl	or FAC 57 ce. ons, seasonal ef	fects, etc): tation criteria			- Parada N
except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates transferences (Describe disturbances, relevant local variations) are hydrogeness of the dominant plants are hydrogeness. "YDROLOGY" descorded Data (Describe in Remarks):	or FAC ce. ons, seasonal ef ophytic, the wetta	fects, etc and vegel	:.): tation criteria drology indi	cators (De	scribe i	n Remarks):
except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates traitemarks (Describe disturbances, relevant local variation since greater than 50% of the dominant plants are hydrology ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage	or FAC ce. ons, seasonal ef ophytic, the wetta	fects, etc and vegel): lation criteria drology Indi ndicators:	cators (De	scribe i	n Remarks):
except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates traitemarks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydrology secorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph	or FAC ce. ons, seasonal ef ophytic, the wetta	fects, etc and vegel): lation criteria drology Indi ndicators: Inundat	cators (De		
except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates traitemarks (Describe disturbances, relevant local variationing greater than 50% of the dominant plants are hydrostype (PDROLOGY). EXPORDED (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other	or FAC ce. ons, seasonal ef ophytic, the wetta	fects, etc and vegel): Itation criteria drology Indi ndicators: Inundat Saturate	cators (De ed ed in Upper 1	2 inche	es
except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates traitemarks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydrostype (PDROLOGY) (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph	or FAC ce. ons, seasonal ef ophytic, the wetta	fects, etc and vegel): Itation criteria drology Indi ndicators: Inundat Saturate	cators (De ed ed in Upper 1 ed in Upper 1	2 inche	es
except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates traitemarks (Describe disturbances, relevant local variation incegreater than 50% of the dominant plants are hydrostype (Pacorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other	or FAC ce. ons, seasonal ef ophytic, the wetta	fects, etc and vegel	i.): Itation criteria Idrology Indi Indicators: Inundat Saturate Saturate	cators (De ed ed in Upper 1 ed in Upper 1 larks	2 inche	es
except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates tra Remarks (Describe disturbances, relevant local variatic Since greater than 50% of the dominant plants are hydrody Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other	or FAC ce. ons, seasonal ef ophytic, the wetta	fects, etc and vegel	drology Indicators: Inundat Saturate Water N	cators (De ed ed in Upper 1 ed in Upper 1 larks	2 inche	es
except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates tra Remarks (Describe disturbances, relevant local variations included and species of the dominant plants are hydrodyced plants. (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available	or FAC ce. ons, seasonal ef ophytic, the wetta	fects, etc and vegel	drology Indicators: Inundat Saturate Water M Drift Lin Sedime	cators (De ed in Upper 1 ed in Upper 1 larks	2 inche 8 inche	ss s
except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates tra Remarks (Describe disturbances, relevant local variations ince greater than 50% of the dominant plants are hydrodycellectric process." Stream, Lake, or Tide Gage	or FAC 57 ce. ons, seasonal ef ophytic, the wette Wet	fects, etc and vegel	drology Indicators: Inundat Saturate Water N Drift Lin Sedime Drainag	cators (De ed in Upper 1 larks es nt Deposits e Patterns in	2 inche 8 inche Wetlan	es es
except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates traitemarks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydrostype (Pacorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available ield Observations: Depth of Surface Water: None (in.)	or FAC 57 ce. ons, seasonal ef ophytic, the wette Wet	fects, etc and vegel	drology Indicators: Inundat Saturate Water N Drift Lin Sedime Drainag	cators (De ed in Upper 1 larks es nt Deposits	2 inche 8 inche Wetlan	es es
except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. T indicates training incomplete the species of the dominant plants are hydrostype incomplete than 50% of the dominant plants are hydrostype in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other X No Recorded Data Available ield Observations: Depth to Free Water in Pit: >18 (in.)	or FAC 57 ce. ons, seasonal ef ophytic, the wette Wet	fects, etc and vegel	drology Indicators: Inundat Saturate Water M Drift Lin Sedime Drainag	cators (De ed in Upper 1 ed in Upper 1 flarks es nt Deposits e Patterns in	2 inche 8 inche Wetlan	es es
except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T" indicates tra Remarks (Describe disturbances, relevant local variations from the species of the dominant plants are hydrodyperated than 50% of the dominant plants are hydrodyperated Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other X No Recorded Data Available Sield Observations: Depth of Surface Water: None (in.)	or FAC 57 ce. ons, seasonal ef ophytic, the wette Wet	fects, etc and vegel	drology Indicators: Inundat Saturate Water M Drift Lin Sedime Drainag	cators (De ed in Upper 1 ed in Upper 1 flarks es nt Deposits e Patterns in	2 inche 8 inche Wetlan equired	es es ds
Recorded Pata (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other X No Recorded Data Available Sield Observations: Depth to Free Water in Pit: No Recorded Variance (in.) Depth to Free Water in Pit: No Recorded Pata (in.)	or FAC 57 ce. ons, seasonal ef ophytic, the wette Wet	fects, etc and vegel	drology Indicators: Inundat Saturate Saturate Water M Drift Lin Sedime Drainag	cators (De ed in Upper 1 larks es nt Deposits e Patterns in if (2 or more r	2 inche 8 inche Wetlan equired nels in t	es es ds
Aenal Photograph Other X No Recorded Data Available Field Observations: Depth of Surface Water: None (in.) Depth to Free Water in Pit: >18 (in.)	or FAC 57 ce. ons, seasonal ef ophytic, the wette Wet	fects, etc and vegel	drology Indicators: Inundat Saturate Water M Drift Lin Sedime Drainag Ty Indicators Oxidizet Water-S Local Sci	cators (De ed in Upper 1 larks es nt Deposits e Patterns in if (2 or more r d Root Chani tained Leave	2 inche 8 inche Wetlan equired nels in l	es es ds
Remarks (Describe disturbances, relevant local variations) Remarks (Describe disturbances, relevant local variations) Since greater than 50% of the dominant plants are hydrody Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other X No Recorded Data Available Field Observations: Depth of Surface Water: Depth to Free Water in Pit: Depth to Saturated Soil: None	or FAC 57 ce. ons, seasonal efophytic, the wetter Wet	fects, etc and veget tland Hyd Primary I	drology Indicators: Inundat Saturate Water M Drift Lin Sedime Drainag y Indicators Oxidize Water-S Local Si Other (E	cators (De ed in Upper 1 ed in Upper 1 flarks es int Deposits e Patterns in if (2 or more r if Root Chani tained Leave sixplain in Rei	2 inche 8 inche Wetlan equired nels in l	es es ds
Recorded Pata (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other X No Recorded Data Available Field Observations: Depth of Surface Water: Depth to Free Water in Pit: Depth to Saturated Soil: Tindicates trained (*) as showing morphological adaptations to wetlands. Ti indicates trained (*) as showing morphological adaptations are hydrostrated by the dominant plants are hydrostrated hydrostrated (*) as showing morphological variations. Stream, Lake, or Tide Gage Aenal Photograph Other X No Recorded Data Available	or FAC 57 ce. ons, seasonal ef ophytic, the wette Wet	fects, etc and veget tland Hyd Primary I	drology Indicators: Inundat Saturate Saturate Water M Drift Lin Sedime Drainag y Indicators Oxidize Water-S Local Si Other (E	cators (De ed in Upper 1 ed in Upper 1 flarks es int Deposits e Patterns in if (2 or more r if Root Chani tained Leave sixplain in Rei s, etc.)	2 inche 8 inche Wetlan equired nels in t es sta marks)	es es ids i): Upper 12 inche

					_				Data f	Plot #:	A8-A1
-									Wetia	ind:	A8
roject/Si	ite: Seattle T	acoma Airport - Maste	r Pla	n Upda	te	_	Date:	6/30/98			
SOILS	vey Data:										
		napped						Drainage	Class:		
								Field Obs	ervations Con	ıfırm Map	ped Type?
Taxonom	y (Subgroup):							Yes	No	NA	x
rofile De	escription:							-		_	
Depth Inches)	Horizon Designation	Matrix Color (Munsell Moist)		Mottle (Muns	Color ell Mo			Mottle Abundano	ce/Contrast	_	ure, Concretions ospheres, etc.
-8	A	10YR 3/1						-		Orga	nic/Loam
8	8	10YR 5/2		7.5YR	5/8			Few. Mediur	n, Distinct	Sand	y loam
vdric So	oil Indicators:	:									
-	istosol						Listed	on Local F	lydric Soils Lis	et .	
— н	istic Epipedon				-				lydric Soils Lis		
Sı	ulfidic Odor				_				Hydric Soils		
Pr	robable Aquic	Moisture Regime			_	Х		Moisture R			
	educing Condi				_		Organi	ic Streaking	g in Sandy Soi	ils	
		Chroma Colors			_	Х	_ Mottle:	\$			
X Hi	gh Organic Co	ontent in Surface Laye	r		_		Other	(Explain in	Remarks)		
		disturbances, local va			:.):						
oil color a	and other indic	ators meet the hydric	soil (criteria							
										-	
	ND DETER										
	ic Vegetation	Present?	es/	<u> x</u>	No	_	_	ls	this Samplin	g Point	Within a Wetlar
dric Soi	is Present?	•	'es	x	No		- -				
	ydrology Pre:		'es	×	No	-	_		Yes >	< No)

All three parameters indicate this is a wetland. Wetland edge within parcel 177 delineated by changes in understory vegetation and sharp changes in soil color combined with a gradual break in topography.



Data Plot #:	A8-A2
Wetland:	A8

					Wetland:	:	A8
	WETL	AND DETE	RMINATI	ON	***************************************	•	
	(Modified from: 198	7 COE Wet	ands De	lineatior	Manual)		
Project/Site: Seattle Tacoma A	Airport - Master Plan Upda	ate	Date: 8/2	7/98			
Applicant/Owner: Port of Se	attie		County: F	King			
Investigator: M. Louther			State: V	VA			
☑ 1987 Method ☐ 1989 N	Method		-		mmunity ID:	PSS	
Do Normal Circumstances exist	on the site?	Yes X	No		•		
Is the site significantly disturbed	(Atypical Situation)?	Yes	No X		eld Plot ID:	19/-A	
is the area a potential Problem /		Yes	No X				
Remarks (Explain sample loca	ition disturbances proble			_			
Sampled on Parcel 197. This da without access. It is currently ur debns.	ata plot is located betweel ndeveloped with a dense (n flags 4 and 5 cover of Himal	Parcel 19 ayan blackb	7 appears erry. Unde	to be locked er the blackb	in by the enry and	ne surrounding parc e piles of fill and urb
VEGETATION (Dominan	it species are checked)						
Plant Species		% Cover	Stratum	Indicator			
✓ 1 Equisetum arvense		20	Herb	FAC	_		
2 Juneus effusus		20	Herb	FACW	_		
Rubus discolor Alnus rubra			Shrub	FACU			
4 Alnus rubra 5 Populus trichocarpa		<u>5</u>	Tree	FAC			
Percent of Dominant Species except FAC-). Include species r	noted (*) as showing	FAC 67	1166	FAC	_		
Percent of Dominant Species except FAC-). Include species reprophological adaptations to wet Remarks (Describe disturbance)	noted (*) as showing tlands. "T" indicates trace es, relevant local variation	FAC 67	ects, etc.):		is met		
Percent of Dominant Species except FAC-). Include species roorphological adaptations to wet Remarks (Describe disturbance greater than 50% of the do	noted (*) as showing tlands. "T" indicates trace es, relevant local variation	FAC 67	ects, etc.):		is met.		
Percent of Dominant Species except FAC-). Include species report for increase and applications to well applications to well applications (Describe disturbance Since greater than 50% of the domination of the dom	noted (*) as showing traces traces traces, relevant local variation or inhant plants are hydropical variation.	FAC 67 e. s, seasonal eff hytic, the wetla	ects, etc.): nd vegetation	on criteria i	<u> </u>		
Percent of Dominant Species except FAC-). Include species reprophological adaptations to wet demarks. (Describe disturbance lince greater than 50% of the dollyDROLOGY ecorded Data. (Describe in Research 1998)	noted (*) as showing tlands. "T indicates trace is, relevant local variation in interest are hydropic in interest."	FAC 67 e. s, seasonal eff hytic, the wetla	ects, etc.): nd vegetation	on criteria i	is met.	scribe in	Remarks):
Percent of Dominant Species except FAC-). Include species reproposed adaptations to wet the semants (Describe disturbance since greater than 50% of the dominant of the semants (Describe in Research Lake, or 1 Stream, Lake, or 1	noted (*) as showing traces traces, relevant local variation imminant plants are hydropic emarks): Tide Gage	FAC 67 e. s, seasonal eff hytic, the wetla	ects, etc.): nd vegetation	on criteria i	ators (Des	scribe in	Remarks):
Percent of Dominant Species except FAC-). Include species reproposed adaptations to wet the semants. (Describe disturbance since greater than 50% of the dominant of the semants.) INDROLOGY Seconded Data (Describe in Reserved)	noted (*) as showing traces traces, relevant local variation imminant plants are hydropic emarks): Tide Gage	FAC 67 e. s, seasonal eff hytic, the wetla	ects, etc.): nd vegetation	on criteria i logy Indic cators: Inundated	ators (Des		
Percent of Dominant Species except FAC-). Include species repropriet adaptations to wet Remarks (Describe disturbance lince greater than 50% of the do HYDROLOGY Recorded Data (Describe in Resource) Stream, Lake, or 1 Aerial Photograph Other	noted (*) as showing traces traces. To indicates traces, relevant local variation iminant plants are hydropidemarks): Tide Gage	FAC 67 e. s, seasonal eff hytic, the wetla	ects, etc.): nd vegetation	on criteria i logy Indic cators: Inundated Saturated	ators (Des	2 inches	i
Percent of Dominant Species except FAC-). Include species in norphological adaptations to wet itemarks. (Describe disturbance Since greater than 50% of the dominance of the dom	noted (*) as showing traces traces. To indicates traces, relevant local variation iminant plants are hydropidemarks): Tide Gage	FAC 67 e. s, seasonal eff hytic, the wetla	ects, etc.): nd vegetation	on criteria i logy Indic cators: Inundated Saturated	ators (Des d I in Upper 12 d in Upper 18	2 inches	i
Percent of Dominant Species except FAC-). Include species recept FAC-). Include species recept FAC-). Include species recept face and adaptations to wet Remarks (Describe disturbance since greater than 50% of the do HYDROLOGY Recorded Data (Describe in Research Lake, or 1 Aerial Photograph Other	noted (*) as showing traces traces. To indicates traces, relevant local variation iminant plants are hydropidemarks): Tide Gage	FAC 67 e. s, seasonal eff hytic, the wetla	ects, etc.): nd vegetation	on criteria i logy Indic cators: Inundated Saturated Saturated	ators (Des d d in Upper 12 d in Upper 18 inks	2 inches	i
Percent of Dominant Species except FAC-). Include species reorphological adaptations to wet emarks (Describe disturbance lince greater than 50% of the do IYDROLOGY ecorded Data (Describe in Re Stream, Lake, or 1 Aerial Photograph Other	noted (*) as showing traces traces. To indicates traces, relevant local variation iminant plants are hydropidemarks): Tide Gage	FAC 67 e. s, seasonal eff hytic, the wetla	ects, etc.): nd vegetation	logy Indicators: Inundated Saturated Saturated Water Ma	ators (Des 1 1 in Upper 12 1 in Upper 18 1 inks	2 inches	i
Percent of Dominant Species except FAC-). Include species recept FAC-). Include species reproposed adaptations to wet Remarks (Describe disturbance Since greater than 50% of the do HYDROLOGY Recorded Data (Describe in Reserved Data) Stream, Lake, or 1 Aerial Photograph Other X No Recorded Data	noted (*) as showing traces traces. To indicates traces, relevant local variation iminant plants are hydropidemarks): Tide Gage	FAC 67 e. s, seasonal eff hytic, the wetla	ects, etc.): nd vegetation	logy Indicators: Inundated Saturated Saturated Water Ma Drift Lines Sediment	ators (Des 1 1 in Upper 12 1 in Upper 18 1 inks	2 inches 3 inches	; ;
Percent of Dominant Species except FAC-). Include species recept FAC-). Include species reproportions to wet Remarks (Describe disturbance Since greater than 50% of the do HYDROLOGY Recorded Data (Describe in Research Lake, or 1 Aerial Photograph Other X No Recorded Data eld Observations:	noted (*) as showing traces traces. To indicates traces, relevant local variation iminant plants are hydropidemarks): Fide Gage	FAC 67 s, seasonal eff hytic, the wetla Wetl	ects, etc.): nd vegetation and Hydrol Primary India	logy Indicators: Inundated Saturated Water Ma Drift Lines Sediment Drainage	ators (Des	2 inches 3 inches Wetland	is Is
Percent of Dominant Species except FAC-). Include species recept FAC-). Include species reproprior of the describe disturbance since greater than 50% of the dominance of the describe of the	noted (*) as showing traces traces. To indicates traces, relevant local variation iminant plants are hydropidemarks): Tide Gage	FAC 67 s, seasonal eff hytic, the wetla Wetl	ects, etc.): nd vegetation and Hydrol Primary India	logy Indicators: Inundated Saturated Saturated Water Ma Drift Lines Sediment Drainage	ators (Des	2 inches 3 inches Wetland	is is
Percent of Dominant Species except FAC-). Include species recept FAC-). Include species reproportions to wet Remarks (Describe disturbance Since greater than 50% of the do HYDROLOGY Recorded Data (Describe in Research Lake, or 1 Aerial Photograph Other X No Recorded Data eld Observations: Depth of Surface Water:	noted (*) as showing traces traces. To indicates traces is, relevant local variation infinant plants are hydropidemarks): Fide Gage None (in.)	FAC 67 s, seasonal eff hytic, the wetla Wetl	ects, etc.): nd vegetation and Hydrol Primary India	logy Indicators: Inundated Saturated Water Ma Drift Lines Sediment Drainage	ators (Des	2 inches 3 inches Wetland quired) els in U	is Is
Percent of Dominant Species except FAC-). Include species renorphological adaptations to wet Remarks (Describe disturbance Since greater than 50% of the do HYDROLOGY Recorded Data (Describe in Research Lake, or 1 Aenal Photograph Other X No Recorded Data (Describe Data Stream, Lake, or 1 Aenal Photograph Other X No Recorded Data Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as showing traces traces. To indicates traces is, relevant local variation iminant plants are hydropidemarks): Fide Gage Available None (in.)	FAC 67 s, seasonal eff hytic, the wetla Wetl	ects, etc.): nd vegetation and Hydro Primary India X econdary in	logy Indicators: Inundated Saturated Water Ma Drift Lines Sediment Drainage Indicators (Oxidized Water-Sta	ators (Des d in Upper 12 d in Upper 18 d in	2 inches 3 inches Wetland quired) els in U	is is
Percent of Dominant Species except FAC-). Include species renorphological adaptations to wet Remarks (Describe disturbance Since greater than 50% of the do HYDROLOGY Recorded Data (Describe in Research Lake, or 1 Aenal Photograph Other X No Recorded Data ield Observations: Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as showing traces traces. To indicates traces is, relevant local variation iminant plants are hydropidemarks): Fide Gage Available None (in.)	FAC 67 s, seasonal eff hytic, the wetla Wetl	ects, etc.): nd vegetation and Hydro Primary India X econdary in	logy Indicators: Inundated Saturated Water Ma Drift Lines Sediment Drainage Indicators (Oxidized Water-Stational Soil	ators (Des	2 inches 3 inches Wetland equired) els in U	is is
Percent of Dominant Species (except FAC-). Include species remorphological adaptations to wet Remarks (Describe disturbance Since greater than 50% of the domegrater than 50% of the do	noted (*) as showing traces traces. To indicates traces is, relevant local variation iminant plants are hydropidemarks): Fide Gage Available None (in.)	FAC 67 s, seasonal eff hytic, the wetla Wetl	ects, etc.): nd vegetation and Hydro Primary India X econdary in	logy Indicators: Inundated Saturated Water Ma Drift Lines Sediment Drainage Indicators (Oxidized Water-Stational Soil	ators (Des d in Upper 12 d in Upper 18 d in	2 inches 3 inches Wetland equired) els in U	is Is
Percent of Dominant Species (except FAC-). Include species reproposed adaptations to wet Remarks. (Describe disturbance Since greater than 50% of the domegreater than 50%	noted (*) as showing traces traces. To indicates traces as, relevant local variation aminant plants are hydropidemarks): Fide Gage None (in.) 18 (in.) 18 (in.)	FAC 67 8. s. seasonal efficiency tric. the wetland Wett	ects, etc.): nd vegetation and Hydrol Primary India X econdary in	logy Indicators: Inundated Saturated Water Ma Drift Lines Sediment Drainage Indicators (Oxidized Water-Stational Soil Other (Expense)	ators (Des d in Upper 12 d in Upper 18 d in	2 inches 3 inches Wetland quired) els in U s a parks)	is pper 12 inches

41					Data F	lot#:	A8-A2
L					Wetla	nd:	A8
Project/Sit	e: Seattle Ta	acoma Airport - Master	Plan Update	Date:	8/27/98		
SOILS Soil Surv	ey Data:						
Map Unit I	Name: Unm	napped			Drainage Class:		
			,		Field Observations Con	firm Map	ped Type? /
「axonomy	(Subgroup):				Yes No	_ NA	<u>x</u>
Profile De Depth Inches)	scription: Horizon Designation	Matrix Color (Munsell Moist)	Mottie Col (Munsell N		Mottle Abundance/Contrast	_	ure, Concretions, ospheres, etc.
-8	Α	10YR 2/1			•	Sand	lv loa m
-18	A2	10YR 2/1	10YR 4/6		Few. Fine, Distinct	Sand	ly loa m
His His Su Pro Re X Gk	educing Condi eyed or Low-(gh Organic Co (Describe soil	Moisture Regime itions Chroma Colors ontent in Surface Layer I disturbances, local var		Listec Listec Aquic Organ X Mottle Other	I on Local Hydric Soils List on State Hydric Soils List on National Hydric Soils Moisture Regime nic Streaking in Sandy Soils (Explain in Remarks)	it List ils	neet the hydric soi
VETLAN	ND DETER	MINATION					
ydrophyt	ic Vegetation	Present? Ye	es <u>x</u> N	lo	Is this Samplin	ng Point	Within a Wetland
ydric Soil	is Present?	Ye	s X N	•	Yes	V 1	_
		sent? Ye			162	X No	,

No strong indicators of hydrology due to late in the dry season. Hydric soil and hydrophytic vegetation indicate this area is a wetland. The portion of wetland A-8 on parcel 197 was delineated on a sharp distinction of hydric soil and non-hydric fill.



Data Plot #:	A8-A3	
Wetland:	A8	_

(Modified from: 1987 Copect/Site: Seattle Tacoma Airport - Master Plan Update opticant/Owner: Port of Seattle vestigator: William Kleindl and Marti Louther 1987 Method 1989 Method				
poject/Site: Seattle Tacoma Airport - Master Plan Update policant/Owner: Port of Seattle restigator: William Kleindl and Marti Louther 1987 Method		ands De		
policant/Owner: Port of Seattle vestigator: William Kleindl and Marti Louther 1987 Method			ineation Manual)	
vestigator: William Kleindl and Marti Louther 1987 Method 1989 Method		Date: 8/2	27/98	
1987 Method		County:	King	
_		State:	WA	
Normal Circumstances exist on the site?		•	Community ID: F	rss
	es X	No		
the site significantly disturbed (Atypical Situation)?		No X	Field Plot ID: 196	<u> </u>
the area a potential Problem Area?				
marks (Explain sample location, disturbances, problem a		No _X		
			406	:
mpled on parcel 196. Some parts of wetland disturbed by wed grass, gravel fill. and Himalayan blackberry.	niing. Area	a on parcei	190 where the wetland lies	is a combination of
, =====,				
GETATION (Dominant species are checked)				
Plant Species	% Cover	Stratum	Indicator	
Bare ground and wood chips	50	Oli aldiii	mandator	
2 Agrostis capillans (tenuis)	- 50	Herb	FAC	
3 Echinocloa crusgalli	3	Herb	FACW	
4 Equisetum arvense	12	Herb	FAC	
5 Holcus lanatus	5	Herb	FAC	
6 Ranunculus repens	20	Herb	FACW	
7 Rubus discolor	10	Shrub	FACU	
narks (Describe disturbances, relevant local variations, s ches of wood chips and fill. Large amounts of fill excluded hydrophytic, the wetland vegetation criteria is met.				n 50% of dominant plar
DROLOGY	····			
orded Data (Describe in Remarks):	Wet	land Hydr	plogy indicators (Descrit	(- D)
Stream, Lake, or Tide Gage	_	Primary Inc		e in Remarks):
Aerial Photograph	•	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
		X	Inundated Saturated in Upper 12 in	-has
Other			Saturated in Upper 12 in	
Other X No Recorded Data Available			Water Marks	A163
Other X No Recorded Data Available				
			Drift Lines	
			Drift Lines Sediment Deposits	
X No Recorded Data Available		x	• .	lands
X No Recorded Data Available d Observations:			Sediment Deposits Drainage Patterns in Wel	
X No Recorded Data Available d Observations: Depth of Surface Water: None (in.)	s		Sediment Deposits	
No Recorded Data Available d Observations: Depth of Surface Water: Depth to Free Water in Pit: None	S		Sediment Deposits Drainage Patterns in Well Indicators (2 or more requi	red):
X No Recorded Data Available d Observations: Depth of Surface Water: None (in.)	S	Secondary	Sediment Deposits Drainage Patterns in Wel	red):
No Recorded Data Available d Observations: Depth of Surface Water: Depth to Free Water in Pit: None	\$	Secondary	Sediment Deposits Drainage Patterns in Wel Indicators (2 or more requi Oxidized Root Channels	red):
No Recorded Data Available d Observations: Depth of Surface Water: Depth to Free Water in Pit: None	\$	Secondary	Sediment Deposits Drainage Patterns in Wel Indicators (2 or more requi Oxidized Root Channels Water-Stained Leaves Local Soit Survey Data	red): in Upper 12 inches
No Recorded Data Available d Observations: Depth of Surface Water: Depth to Free Water in Pit: None		Secondary X	Sediment Deposits Drainage Patterns in Wel Indicators (2 or more requi Oxidized Root Channels Water-Stained Leaves Local Soil Survey Data Other (Explain in Remark	red): in Upper 12 inches

AR 047792

Profile Description: Depth Horizon Designation (Munsell Moist) Mottle Color (Munsell Moist) Abundance/Contrast Rhizospheres, etc. Depth Horizon Designation (Munsell Moist) (Munsell Moist) Abundance/Contrast Rhizospheres, etc. Designation (Munsell Moist) Abundance/Contrast Rhizospheres, etc. Designation (Munsell Moist) Abundance/Contrast Rhizospheres, etc. Fibnc Designation Contrast Rhizospheres, etc. Fibnc Designation Contrast Rhizospheres, etc. Fibnc Designation Contrast Profile Designation Contrast Rhizospheres, etc. Fibnc Designation Contrast Profile Designation Contrast Rhizospheres, etc. Fibnc Designation Contrast Profile Designatio	L				Data Pi Wetian		A8-A3 A8
Soil Survey Data: Map Unit Name: Unmapped	Project/Site: Seattle Ta	acoma Airport - Master P	lan Update	Date	: 8/27/98		
Field Observations Confirm Mapped Type? Taxonomy (Subgroup): Yes No NA X Profile Description: Depth Horizon Designation (Munsell Moist) Mottle Color (Munsell Moist) Abundance/Contrast Rhizospheres, etc. 0-1 Wood chips Fibric 1-6 A 10YR 2/2 Loam 5-10 C 10YR 2/2 10YR 4/6 Common, Fine, Distinct Sandy loam 10-18 C 10YR 2/1 10YR 4/6 Many, Medium, Distinct Sandy loam Hydric Soil Indicators: Histosol Listed on Local Hydric Soils List Histic Epipedon Listed on State Hydric Soils List Sulfidic Odor Listed on National Hydric Soils List Probable Aquic Moisture Regime Aquic Moisture Regime Reducing Conditions X Gleyed or Low-Chroma Colors X Mottles High Organic Content in Surface Layer Remarks (Describe soil disturbances, local variations, etc.):							
Field Observations Confirm Mapped Type? Taxonomy (Subgroup): Yes No NA X Profile Description: Depth (Inches) Horizon Designation (Munsell Moist) (Munsell Moist) (Munsell Moist) Wood chips Fibnc 1-6 A 10YR 2/2 Loam 5-10 C 10YR 2/2 10YR 4/6 Common, Fine, Distinct Sandy loam 10-18 C 10YR 2/1 10YR 4/6 Many, Medium, Distinct Sandy loam Hydric Soil Indicators: Histosol Listed on Local Hydric Soils List Histic Epipedon Listed on National Hydric Soils List Sulfidic Odor Listed on National Hydric Soils List Probable Aquic Moisture Regime Aquic Moisture Regime Reducing Conditions Organic Streaking in Sandy Soils X Gleyed or Low-Chroma Colors X Mottles High Organic Content in Surface Layer Remarks (Describe soil disturbances, local variations, etc.):	Map Unit Name: Unm	apped			Drainage Class:		
Profile Description: Depth Horizon Matrix Color (Munsell Moist) Mottle Color (Munsell Moist) Abundance/Contrast Rhizospheres, etc. 0-1 Wood chips Fibnc 1-6 A 10YR 2/2 Loam 5-10 C 10YR 2/2 10YR 4/6 Common, Fine, Distinct Sandy loam 10-18 C 10YR 2/1 10YR 4/6 Many, Medium, Distinct Sandy loam Hydric Soil Indicators: Histosol Listed on Local Hydric Soils List Histic Epipedon Listed on State Hydric Soils List Sulfidic Odor Listed on National Hydric Soils List Probable Aquic Moisture Regime Aquic Moisture Regime Organic Streaking in Sandy Soils X Gleyed or Low-Chroma Colors X Mottles High Organic Content in Surface Layer Other (Explain in Remarks)						m Map	ped Type?
Profile Description: Depth Horizon Designation (Munsell Moist) Mottle Color (Munsell Moist) Abundance/Contrast Rhizospheres, etc. 0-1 Wood chips Fibnc 1-6 A 10YR 2/2 Loam 5-10 C 10YR 2/2 10YR 4/6 Common, Fine, Distinct Sandy loam 10-18 C 10YR 2/1 10YR 4/6 Many, Medium, Distinct Sandy loam Hydric Soil Indicators: Histosol Listed on Local Hydric Soils List Listed on State Hydric Soils List Listed on National Hydric Soils List Listed on National Hydric Soils List Aquic Moisture Regime Reducing Conditions Organic Streaking in Sandy Soils X Gleyed or Low-Chroma Colors X Mottles High Organic Content in Surface Layer Other (Explain in Remarks)	Taxonomy (Subgroup):				Yes No	NA	Y
Depth Horizon Designation (Munsell Moist) (Munsell Moist) Abundance/Contrast Rhizospheres, etc. 0-1 Wood chips Fibnc 1-6 A 10YR 2/2 Loarn 5-10 C 10YR 2/2 10YR 4/6 Common, Fine, Distinct Sandy loarn 10-18 C 10YR 2/1 10YR 4/6 Many, Medium, Distinct Sandy loarn Hydric Soil Indicators: Histosol Listed on Local Hydric Soils List Histic Epipedon Listed on State Hydric Soils List Sulfidic Odor Listed on National Hydric Soils List Probable Aquic Moisture Regime Aquic Moisture Regime Reducing Conditions Organic Streaking in Sandy Soils X Gleyed or Low-Chroma Colors X Mottles							^
1-6 A 10YR 2/2 Loam 5-10 C 10YR 2/2 10YR 4/6 Common, Fine, Distinct Sandy loam 10-18 C 10YR 2/1 10YR 4/6 Many, Medium, Distinct Sandy loam Hydric Soil Indicators: Histosol Histic Epipedon Sulfidic Odor Listed on Local Hydric Soils List Listed on State Hydric Soils List Sulfidic Odor Listed on National Hydric Soils List Aquic Moisture Regime Reducing Conditions Organic Streaking in Sandy Soils X Gleyed or Low-Chroma Colors High Organic Content in Surface Layer Remarks (Describe soil disturbances, local variations, etc.):	Depth Horizon						
5-10 C 10YR 2/2 10YR 4/6 Common, Fine, Distinct Sandy loam 10-18 C 10YR 2/1 10YR 4/6 Many, Medium, Distinct Sandy loam Hydric Soil Indicators: Histosol Histic Epipedon Listed on Local Hydric Soils List Sulfidic Odor Listed on National Hydric Soils List Probable Aquic Moisture Regime Aquic Moisture Regime Reducing Conditions Organic Streaking in Sandy Soils X Gleyed or Low-Chroma Colors High Organic Content in Surface Layer Remarks (Describe soil disturbances, local variations, etc.):	0-1 Wood chips		-		•	Fibno	
Hydric Soil Indicators: Histosol Histic Epipedon Sulfidic Odor Probable Aquic Moisture Regime Reducing Conditions X Gleyed or Low-Chroma Colors High Organic Content in Surface Layer Remarks (Describe soil disturbances, local variations, etc.): Hand Many, Medium, Distinct Sandy loam Listed on Local Hydric Soils List Listed on National Hydric Soils List Aquic Moisture Regime Aquic Moisture Regime Organic Streaking in Sandy Soils Adottles Other (Explain in Remarks)	1-6 A	10YR 2/2	_		-	Loam	
Hydric Soil Indicators: Histosol Histic Epipedon Sulfidic Odor Sulfidic Odor Probable Aquic Moisture Regime Reducing Conditions X Gleyed or Low-Chroma Colors High Organic Content in Surface Layer Remarks (Describe soil disturbances, local variations, etc.): Listed on Local Hydric Soils List Listed on National Hydric Soils List Aquic Moisture Regime Organic Streaking in Sandy Soils X Mottles Other (Explain in Remarks)	5-10 C	10YR 2 /2	10YR 4/6		Common, Fine, Distinct	Sand	/ loam
Histosol Listed on Local Hydric Soils List Listed on State Hydric Soils List Sulfidic Odor Listed on National Hydric Soils List Probable Aquic Moisture Regime Aquic Moisture Regime Reducing Conditions Organic Streaking in Sandy Soils X Gleyed or Low-Chroma Colors High Organic Content in Surface Layer Other (Explain in Remarks)	10-18 C	10YR 2/1	10YR 4/6		Many, Medium, Distinct	Sandy	/ loam
	Histosol Histic Epipedon Sulfidic Odor Probable Aquic I Reducing Condit X Gleyed or Low-C High Organic Co	tions Chroma Colors Intent in Surface Layer		Listed Listed Aquic Organ Mottle	d on State Hydric Soils List d on National Hydric Soils Li Moisture Regime nic Streaking in Sandy Soils		
				et the hyd	dric soil criteria.		

Hydric Soils Present?

Wetland Hydrology Present?

No strong indicators of hydrology are present due to late in the summer. The portion of wetland A-8 on parcel 196 was delineated on a sharp distinction of hydric soil and non-hydric fill and changes in the vegetation community.

Yes X No

Para	met	rix.	Inc.
raia	HICH	IIA,	1110



A8-A4

WE.	LAND DE	TERMINA'	TION Wetland: A8
(Modified from: 1s	187 COE W	etiands D	elineation Manual)
Project/Site: Seattle Tacoma Airport - Master Plan Un	date	Date: 9	9/24/98
Applicant/Owner: Port of Seattle		County:	King
nvestigator: K. Dunkin, S. Rozenbaum		State:	WA
2 1987 Method 1989 Method			Community ID: PFO
Oo Normal Circumstances exist on the site?	Yes X	No	
s the site significantly disturbed (Atypical Situation)?	Yes		X Field Plot ID: 60-A
s the area a potential Problem Area?	Yes	_ ^{No} _	<u>x</u>
lemarks (Explain sample location, disturbances, prolearmed on parcel 200. Like parcel 196, parcel 200 do ottonwoods with an understory of Himalayan blackben	es not appea		
EGETATION (Dominant species are checked))	·	
Plant Species	% Co	ver Stratum	Indicator
1 Athyrium filix-femina	5	Herb	FAC
2 Convolvulus arvensis	10	Herb	NL
3 Equisetum telmateia	35	Herb	FACW
4 Givcena elata	15	Herb	FACW+
5 Lysichiton americanum	20	Herb Herb	OBL
6 Ranunculus repens	<u>20</u>	Herb	FACW
7 Rubus discolor 8 Sambucus racemosa	65 3	Shrub	FACU
		Shrub	FACU FACU
	40	Tree	FAC
		Tree Tree	FAC FAC
Populus trichocarda arcent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variations."	or FAC	Tree	FAC):
Populus trichocarpa ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variations to plants present. Since greater than 50% of the	or FAC	Tree	FAC):
Populus inchocarba ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates training includes the property of the control of the series of the ser	or FAC ace. ions, seasona	Tree 33 Il effects, etc	FAC .): phytic, the wetland vegetation critena is met.
Populus trichocarba ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variations to present. Since greater than 50% of the YDROLOGY	or FAC ace. ions, seasona	Tree 33 Il effects, etc	FAC):
Populus trichocarpa ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing prophological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variate plants present. Since greater than 50% of the YDROLOGY	or FAC ace. ions, seasona	Tree 33 Il effects, etc	FAC .): phytic, the wetland vegetation criteria is met. Irology Indicators (Describe in Remarks):
Populus trichocarpa ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing priphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variate plants present. Since greater than 50% of the YDROLOGY ecorded Data (Describe in Remarks):	or FAC ace. ions, seasona	Tree 33 Il effects, etc. nts are hydro Wetland Hydro	FAC .): phytic, the wetland vegetation criteria is met. Irology Indicators (Describe in Remarks):
Populus trichocarpa ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing porphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variate bligate plants present. Since greater than 50% of the YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage	or FAC ace. ions, seasona	Tree 33 Il effects, etc. nts are hydro Wetland Hydro	FAC .): phytic, the wetland vegetation criteria is met. drology Indicators (Describe in Remarks): ndicators:
Populus trichocarpa ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variate bligate plants present. Since greater than 50% of the YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	or FAC ace. ions, seasona	Tree 33 Il effects, etc. nts are hydro Wetland Hydro	FAC Include the wetland vegetation criteria is met. Include the wetland vegetation criteria is met. Include the wetland vegetation criteria is met. Included the wetland vegetation criteria is met.
Populus trichocarpa ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates transmers (Describe disturbances, relevant local variate bligate plants present. Since greater than 50% of the YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	or FAC ace. ions, seasona	Tree 33 Il effects, etc. nts are hydro Wetland Hydro	FAC Inclogy Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks
Populus trichocarpa ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variate biligate plants present. Since greater than 50% of the YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	or FAC ace. ions, seasona	Tree 33 Il effects, etc. nts are hydro Wetland Hydro	FAC Inclogy Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
Populus trichocarpa ercent of Dominant Species that are OBL, FACW, xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates transmarks (Describe disturbances, relevant local variate bligate plants present. Since greater than 50% of the YDROLOGY accorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	or FAC ace. ions, seasona	Tree 33 Il effects, etc. nts are hydro Wetland Hydro	FAC Inclogy Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
Populus trichocarba ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variations to the species of the species	or FAC ace. ions, seasona	Tree 33 Il effects, etc. nts are hydro Wetland Hydro	FAC Inclogy Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
Populus trichocarpa ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates training the plants present. Since greater than 50% of the Pydrology Proceeded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Peld Observations: Depth of Surface Water: None (in.)	or FAC ace. ions, seasona	Tree 33 Il effects, etc. nts are hydro Netland Hydro Primary II	inclogy Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
Populus trichocarpa Procent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates transmarks (Describe disturbances, relevant local variate bligate plants present. Since greater than 50% of the YDROLOGY Proceeded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Peld Observations: Depth of Surface Water: None (in.) Depth to Free Water in Pit: >18 (in.)	or FAC ace. ions, seasona	Tree 33 Il effects, etc. nts are hydro Netland Hydro Primary II	FAC Phytic, the wetland vegetation critena is met. Prology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands y Indicators (2 or more required):
Populus Inchocarpa ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates transmarks (Describe disturbances, relevant local variations biligate plants present. Since greater than 50% of the YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	or FAC ace. ions, seasona	Tree 33 Il effects, etc. nts are hydro Netland Hydro Primary II	FAC Irology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands y Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches
ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T' indicates transmirks (Describe disturbances, relevant local variations bligate plants present. Since greater than 50% of the YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available eld Observations: Depth of Surface Water: None (in.) Depth to Free Water in Pit: >18 (in.)	or FAC ace. ions, seasona	Tree 33 Il effects, etc. nts are hydro Netland Hydro Primary II	phytic, the wetland vegetation criteria is met. Irology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands y Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches Water-Stained Leaves
ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T' indicates transmirks (Describe disturbances, relevant local variations bligate plants present. Since greater than 50% of the YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available eld Observations: Depth of Surface Water: None (in.) Depth to Free Water in Pit: >18 (in.)	or FAC ace. ions, seasona	Tree 33 Il effects, etc. nts are hydro Netland Hydro Primary II	phytic, the wetland vegetation criteria is met. Irology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands y Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data
ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T' indicates transmirks (Describe disturbances, relevant local variations bligate plants present. Since greater than 50% of the YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available eld Observations: Depth of Surface Water: None (in.) Depth to Free Water in Pit: >18 (in.)	or FAC ace. dominant pla.	Tree 33 Il effects, etc. Ints are hydro Wetland Hydro Primary Is	FAC Inclogy Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands y Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)

								Data Piot #:	A8-A4
								Wetland:	A8
'roject/S	ite: <u>Seattle T</u>	acoma Airport - Mas	ter Pia	n Upda	ate	Date:	9/24/98		
SOILS Soil Sur	vey Data:								
Map Unit	Name: Unm	napped					Drainage Clas	s :	
							Field Observat	tions Confirm M	apped Type?
Taxonom	y (Subgroup):						Yes M	No NA	A X
	escription:								`
Depth Inches)	Horizon	Matrix Color (Munsell Moist)			Color cell Moist)	Mottle Abundance/Co		xture, Concretions izospheres, etc.
-6	A	10YR 2/1		-		· · · · · · · · · · · · · · · · · · ·	•	Los	
-18	В	10YR 4/2		10YR :	5/4 & 2.5Y	5/4	Common, Medium	. Distinct Fin	e loamy sand
H H Si Pi Ri X Gi Hi	educing Condi leyed or Low-C gh Organic Co (Describe soil	Moisture Regime	variati	ons, eti criteria.		Listed Listed Aquic X Organ X Mottle	on Local Hydric on State Hydric on National Hyd Moisture Regim ic Streaking in S s (Explain in Rem	Soils List dnc Soils List e Sandy Soils	
METI AI	ND DETER	MINATION					······································		
VEILA									
.dea.b.	ne Aederation	Present?	Yes	_x_	No		is this	Sampling Poin	nt Within a Wetlan
ydrophyl ydric Soi	Is Present?		Yes	×	No				

Soils and vegetation present; hydrology assumed. The soils near the edge of the wetland were marginal, therefore, the wetland was delineated on the presence of obligate plants.

	TERMINA Wetlands		Wetland: ion Manual)	A8 Upland Plot
COEV	Wetlands	Delineat	ion Manual)	
	_		ion Manual)	
te	Date:	6/30/98		
	_		····	· · · · · · · · · · · · · · · · · · ·
	County:			
	State	WA		
			Community ID: Ut	pland
Yes X	No .		Field Plot ID: 10-B	
Yes	No .	<u> </u>		
Yes	No.	X		
	over Stratu	m indic	ator	
<u> </u>		NL NL		
95	Tree	FAC		
	33			
of the dr	ominant plan	ts are hydr	ophytic, the wetland	vegetation criteria i
****		rdrology Ir	ndicators (Describe	in Remarks)
****	Wetland Hy		ndicators (Describe	in Remarks):
****	Wetland Hy	rdrology ir Indicators: Inunc		e in Remarks):
****	Wetland Hy	Indicators:		
	Yes	Yes _X No Yes No Yes No No n areas): **Cover Stratu 20 Herb 25 Shrub 75 Shrub 95 Tree FAC 33	Yes X No Yes No X Yes No X Yes No X Yes No X Yes No X Herb NL 25 Shrub UPL 75 Shrub FACL 95 Tree FAC	Community ID: Up Field Plot ID: 10-B Yes

HYDROLOGY		
Recorded Data (Describe in Re	emarks):	Wetland Hydrology Indicators (Describe in Remarks):
Stream, Lake, or 1	Tide Gage	Primary Indicators:
Aerial Photograph		Inundated
Other		Saturated in Upper 12 inches
X No Recorded Data	Available	Saturated in Upper 18 inches
		Water Marks
		Drift Lines
		Sediment Deposits
_		Drainage Patterns in Wetlands
Field Observations:		
Depth of Surface Water:	None (in.)	Secondary Indicators (2 or more required):
Depth to Free Water in Pit:	>18 (in.)	
Depth to Saturated Soil:	<u>>18</u> (in.)	Oxidized Root Channels in Upper 12 inches
		Water-Stained Leaves
		Local Soil Survey Data
		Other (Explain in Remarks)
Remarks (As relevant, describe	recent precipitation, hydrologic m	nodifications, local variations, etc.):
No indicators of wetland hydrology	y are present	iodinoations, iodai variations, etc.):

Project/Site: Seattle Tacoma Airport - Master Plan Update Date: 6/30/98 SOILS Soil Survey Data: Map Unit Name: Unmapped								Data Plot	#:	A8-B1
SOILS Soil Survey Data: Map Unit Name: Unmapped							•	Wetland:		A8 Upland Pio
SOILS Soil Survey Data: Map Unit Name: Unmapped										
SOILS Soil Survey Data: Map Unit Name: Unmapped	Project/Si	te: Seattle T	acoma Airport - Master P	lan Update	Date:	6/30/98	3			
Soil Survey Data: Map Unit Name: Unmapped			-			-				
Map Unit Name: Unmapped		vey Data:								
Taxonomy (Subgroup): Profile Description: Depth Horizon Matrix Color (Munsell Moist) Mottle Color (Munsell Moist) Abundance/Contrast Rhizospheres, etc. 0-4 A1 10YR 2/2 - Sandy loam 4-10 A2 10YR 3/2 - Sandy loam >10 B 10YR 4/4 - Sandy loam Hydric Soil Indicators: Histosol Listed on Local Hydric Soils List Histic Epipedon Listed on State Hydric Soils List Sulfidic Odor Listed on National Hydric Soils List Probable Aquic Moisture Regime Aquic Moisture Regime Reducing Conditions Organic Streaking in Sandy Soils Gleyed or Low-Chroma Colors Mottles			паррес			Drainage	e Class.			
Profile Description: Depth Honzon Matrix Color (Munsell Moist) (Munsell Moist) Abundance/Contrast Rhizospheres, etc. 0-4 A1 10YR 2/2 Sandy loam 4-10 A2 10YR 3/2 - Sandy loam >10 B 10YR 4/4 - Sand loam Hydric Soil Indicators: Histosol Listed on Local Hydric Soils List Histic Epipedon Listed on State Hydric Soils List Sulfidic Odor Listed on National Hydric Soils List Probable Aquic Moisture Regime Aquic Moisture Regime Reducing Conditions Organic Streaking in Sandy Soils Gleyed or Low-Chroma Colors Mottles						Field Ob	servations	s Confirm	Марр	ed Type?
(Inches) Designation (Munsell Moist) (Munsell Moist) Abundance/Contrast Rhizospheres, etc. 0-4 A1 10YR 2/2 Sandy loam 4-10 A2 10YR 3/2 - Sandy loam >10 B 10YR 4/4 - Sand loam Hydric Soil Indicators: Histosol Listed on Local Hydric Soils List Histic Epipedon Listed on State Hydric Soils List Sulfidic Odor Listed on National Hydric Soils List Probable Aquic Moisture Regime Aquic Moisture Regime Reducing Conditions Organic Streaking in Sandy Soils Gleyed or Low-Chroma Colors Mottles	Taxonom	y (Subgroup):				Yes	No		NA	x
Depth (Inches) Designation (Munsell Moist) (Munsell Moist) Mottle Color (Munsell Moist) Abundance/Contrast Rhizospheres, etc. 0-4 A1 10YR 2/2 Sandy loam 4-10 A2 10YR 3/2 - Sandy loam >10 B 10YR 4/4 - Sandy loam Hydric Soil Indicators: Histosol Listed on Local Hydric Soils List Histic Epipedon Listed on State Hydric Soils List Sulfidic Odor Listed on National Hydric Soils List Probable Aquic Moisture Regime Aquic Moisture Regime Reducing Conditions Organic Streaking in Sandy Soils Gleyed or Low-Chroma Colors Mottles	Profile De	escription:				_		_		
4-10 A2 10YR 3/2 - Sandy loam >10 B 10YR 4/4 - Sand loam Hydric Soil Indicators: Histosol Listed on Local Hydric Soils List Histic Epipedon Listed on State Hydric Soils List Sulfidic Odor Listed on National Hydric Soils List Probable Aquic Moisture Regime Aquic Moisture Regime Reducing Conditions Organic Streaking in Sandy Soils Gleyed or Low-Chroma Colors Mottles	Depth	Horizon					nce/Contra			
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Hydric Soil Indicators: Histosol Listed on Local Hydric Soils List Listed on State Hydric Soils List Sulfidic Odor Listed on National Hydric Soils List Probable Aquic Moisture Regime Reducing Conditions Gleyed or Low-Chroma Colors Mottles	4-10	A2	10YR 3/2	-		-			Sandy	ioam
Histosol Listed on Local Hydric Soils List Listed on State Hydric Soils List Sulfidic Odor Listed on National Hydric Soils List Probable Aquic Moisture Regime Aquic Moisture Regime Reducing Conditions Organic Streaking in Sandy Soils Mottles	>10	В	10YR 4/4	<u> </u>					Sand k	oam
Histic Epipedon Listed on State Hydric Soils List Sulfidic Odor Listed on National Hydric Soils List Probable Aquic Moisture Regime Aquic Moisture Regime Reducing Conditions Organic Streaking in Sandy Soils Gleyed or Low-Chroma Colors Mottles	Hydric Sc	il Indicators:								
Sulfidic Odor Listed on National Hydric Soils List Probable Aquic Moisture Regime Aquic Moisture Regime Organic Streaking in Sandy Soils Gleyed or Low-Chroma Colors Mottles	Hi	stosol			Listed	on Local	Hydric So	ils List		
Probable Aquic Moisture Regime Aquic Moisture Regime Reducing Conditions Organic Streaking in Sandy Soils Gleyed or Low-Chroma Colors Mottles					Listed	on State	Hydric So	ils List		
Reducing Conditions Organic Streaking in Sandy Soils Gleyed or Low-Chroma Colors Mottles					Listed	on Nation	nal Hydric	Soils List		
Gleyed or Low-Chroma Colors Mottles		•			Aquic	Moisture I	Regime			
Nich Command Co. A. A. A. C. C.		_			Organ	ic Streakir	ng in Sand	ty Soils		
High Organic Content in Surface Layer Other (Explain in Remarks)		=			Mottle	S				
	Hi	gh Organic Co	ontent in Surface Layer		_ Other	(Explain ir	Remarks	5)		
			oil are present.							

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): This area is an upland since all wetland parameters are absent.

Hydrophytic Vegetation Present?

Wetland Hydrology Present?

Hydric Soils Present?

Is this Sampling Point Within a Wetland?

Yes ____ No _X

P	ar	am	etrix,	Inc.
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A8-B2

	MET	LAND	DETE	RMINA	TION	Wetland	A8 Upland Plot
						an Manual	
(1	Modified from: 19	87 CC	E Weti	iands D	enneati	on Manuai,	
roject/Site: Seattle Tacoma A	Airport - Master Plan Up	date		Date: 8	/27/98		
pplicant/Owner: Port of Sea	attle			County:	King		
vestigator: W. Kieindi and M	l. Louther			State:	WA		
1987 Method 1989 M	Method					Community ID	: Upland
Normal Circumstances exist	on the site?	Yes	×	No		Field Plot ID:	196-B
the site significantly disturbed	(Atypical Situation)?	Yes		No .	<u>×</u>	-1610 F 101 10.	130-0
the area a potential Problem A	•	Yes			×		
marks (Explain sample locat			36).				
mpled on Parcel 196	don. distorbances, prob	iciii ai c	.uu,.				
Inpied Off Bicer 190							
GETATION (Dominan	t energies are checked)						
Plant Species	n speares are criecked,		% Cover	Stratum	Indica	tor	
1 Bare ground			5				
2 Convolvulus arvensis			10	Herb	NL NL		
3 Echinocioa crusgalii			10	Herb	FACW		
4 Festuca rubra			30	Herb	FAC+		
5 Taraxacum officinale			5	Herb	FACU		
 Entolium pratense 			15	Herb	FACU		
reent of Dominant Species cept FAC-). Include species rephological adaptations to wet	noted (*) as showing tlands. "T" indicates tra	ice.	100		*		
rcent of Dominant Species cept FAC-). Include species riphological adaptations to wet marks (Describe disturbance cording to the Washington State	noted (*) as showing tlands. "T" indicates tra es, relevant local variation te Delineation Manual (ice. ons, sea (Page 6	100 asonal ef 8. Step 1	fects, etc.	.):	o dominated by	/ FAC plants but lack we
recent of Dominant Species cept FAC-). Include species of riphological adaptations to wet marks (Describe disturbance cording to the Washington Staterology and hydric soils do not	noted (*) as showing tlands. "T" indicates tra es, relevant local variation te Delineation Manual (ice. ons, sea (Page 6	100 asonal ef 8. Step 1	fects, etc.	.):	e dominated by	/ FAC plants but lack we
cent of Dominant Species cept FAC-). Include species of phological adaptations to wet marks (Describe disturbance cording to the Washington State rology and hydric soils do not DROLOGY	noted (*) as showing tlands. "T" indicates traces, relevant local variation to Delineation Manual (t satisfy the wetland veg	ice. ons, sea (Page 6	100 asonal ef 8, Step 1 criteria	fects, etc. 3 (a)) are): as that are		
cent of Dominant Species cept FAC-). Include species rephological adaptations to wet marks (Describe disturbance fording to the Washington State rology and hydne soils do not DROLOGY corded Data (Describe in Reserved.)	noted (*) as showing tlands. "T" indicates traces, relevant local variation to Delineation Manual (to satisfy the wetland vegorithms):	ice. ons, sea (Page 6	asonal ef 8, Step 1 criteria.	fects, etc. 3 (a)) are	.): as that are		FAC plants but lack we escribe in Remarks):
cent of Dominant Species cept FAC-). Include species rephological adaptations to wet marks (Describe disturbance ording to the Washington Starology and hydne soils do not DROLOGY corded Data (Describe in Restream, Lake, or 1	noted (*) as showing tlands. "T" indicates traces, relevant local variation to Delineation Manual (to satisfy the wetland vegorials): Tide Gage	ice. ons, sea (Page 6	asonal ef 8, Step 1 criteria.	fects, etc. 3 (a)) are	irology indicators:	dicators (De	
cent of Dominant Species cept FAC-). Include species rephological adaptations to wet marks (Describe disturbance ording to the Washington Starrology and hydne soils do not DROLOGY	noted (*) as showing tlands. "T" indicates traces, relevant local variation to Delineation Manual (to satisfy the wetland vegorials): Tide Gage	ice. ons, sea (Page 6	asonal ef 8, Step 1 criteria.	fects, etc. 3 (a)) are	as that are irology indicators:	dicators (De	scribe in Remarks):
cent of Dominant Species cept FAC-). Include species of phological adaptations to wet narks (Describe disturbance ording to the Washington Stairology and hydric soils do not DROLOGY corded Data (Describe in Research Lake, or 1 Aerial Photograph	noted (*) as showing tlands. "T" indicates traces, relevant local variationed Delineation Manual (t satisfy the wetland vegoremarks): Tide Gage	ice. ons, sea (Page 6	asonal ef 8, Step 1 criteria.	fects, etc. 3 (a)) are	irology indicators: Inunda	dicators (De	scribe in Remarks):
cent of Dominant Species cept FAC-). Include species of phological adaptations to wet marks (Describe disturbance fording to the Washington Stationary and hydric soils do not DROLOGY corded Data (Describe in Research Lake, or Talenth Describe in Cother	noted (*) as showing tlands. "T" indicates traces, relevant local variationed Delineation Manual (t satisfy the wetland vegoremarks): Tide Gage	ice. ons, sea (Page 6	asonal ef 8, Step 1 criteria.	fects, etc. 3 (a)) are	irology indicators: inunda Satura Satura	dicators (De	scribe in Remarks):
cent of Dominant Species cept FAC-). Include species of rephological adaptations to wet marks (Describe disturbance cording to the Washington State trology and hydric soils do not DROLOGY corded Data (Describe in Research Lake, or Tale Aerial Photograph Other	noted (*) as showing tlands. "T" indicates traces, relevant local variationed Delineation Manual (t satisfy the wetland vegoriermarks): Tide Gage	ice. ons, sea (Page 6	asonal ef 8, Step 1 criteria.	fects, etc. 3 (a)) are	irology indicators: inunda Satura Satura	dicators (De ated ated in Upper of ated in Upper of Marks	scribe in Remarks):
cent of Dominant Species cept FAC-). Include species of rephological adaptations to wet marks (Describe disturbance cording to the Washington State trology and hydric soils do not DROLOGY corded Data (Describe in Research Lake, or Tale Aerial Photograph Other	noted (*) as showing tlands. "T" indicates traces, relevant local variationed Delineation Manual (t satisfy the wetland vegoriermarks): Tide Gage	ice. ons, sea (Page 6	asonal ef 8, Step 1 criteria.	fects, etc. 3 (a)) are	irology indicators: Inunda Satura Satura Water Drift Li Sedim	dicators (De ated ated in Upper s ated in Upper s Marks anes ent Deposits	scribe in Remarks): 12 inches 18 inches
cent of Dominant Species cept FAC-). Include species rephological adaptations to wet marks (Describe disturbance cording to the Washington Statiology and hydric soils do not DROLOGY corded Data (Describe in Restream, Lake, or Aerial Photograph Other X No Recorded Data	noted (*) as showing tlands. "T" indicates traces, relevant local variationed Delineation Manual (t satisfy the wetland vegoriermarks): Tide Gage	ice. ons, sea (Page 6	asonal ef 8, Step 1 criteria.	fects, etc. 3 (a)) are	irology indicators: Inunda Satura Satura Water Drift Li Sedim	dicators (De ated ated in Upper of ated in Upper of Marks anes	scribe in Remarks): 12 inches 18 inches
cent of Dominant Species cept FAC-). Include species rephological adaptations to wet marks (Describe disturbance cording to the Washington Statisticology and hydric soils do not DROLOGY corded Data (Describe in Restream, Lake, or Aerial Photograph Other X No Recorded Data do Observations:	noted (*) as showing tlands. "T" indicates traces, relevant local variationed Delineation Manual (t satisfy the wetland vegoremarks): Tide Gage a Available	ice. ons, sea (Page 6	100 asonal ef 8, Step 1 criteria.	fects, etc. 3 (a)) are.	irology Indicators: Inunda Satura Satura Water Drift Le Sedim Draina	dicators (De ated ated in Upper of ated in Upper of Marks anes ent Deposits age Patterns in	scribe in Remarks): 12 inches 18 inches Wetlands
cent of Dominant Species cept FAC-). Include species rephological adaptations to wet marks (Describe disturbance cording to the Washington State and Including and hydric soils do not DROLOGY corded Data (Describe in Research Lake, or 1) Aerial Photograph Other X No Recorded Data d Observations: Depth of Surface Water:	noted (*) as showing tlands. "T" indicates trailes, relevant local variativate Delineation Manual (t satisfy the wetland vegorithms): Tide Gage a Available	ice. ons, sea (Page 6	100 asonal ef 8, Step 1 criteria.	fects, etc. 3 (a)) are.	rology Indicators: Inunda Satura Satura Water Drift Li Sedim Draina	dicators (De ated ated in Upper a tited in Upper a Marks ines ent Deposits age Patterns in	escribe in Remarks): 12 inches 18 inches Wetlands
cent of Dominant Species cept FAC-). Include species rephological adaptations to wet marks (Describe disturbance cording to the Washington Statemology and hydric soils do not DROLOGY corded Data (Describe in Research Lake, or 1) Aerial Photograph Other X No Recorded Data d Observations: Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as showing tlands. "T" indicates traces, relevant local variations Delineation Manual (t satisfy the wetland vegorithm of the Company of the Compa	ice. ons, sea (Page 6	100 asonal ef 8, Step 1 criteria.	fects, etc. 3 (a)) are.	rology Indicators: Inunda Satura Satura Water Drift Li Sedim Draina y Indicato Oxidiz	dicators (De ated ated in Upper a ted in Upper a Marks ines ent Deposits age Patterns in ars (2 or more a ed Root Chan	iscribe in Remarks): 12 inches 18 inches Wetlands required): nels in Upper 12 inches
recent of Dominant Species cept FAC-). Include species rephological adaptations to wet marks (Describe disturbance cording to the Washington Staterology and hydric soils do not PROLOGY corded Data (Describe in Restream, Lake, or Aerial Photograph Other X No Recorded Data	noted (*) as showing tlands. "T" indicates traces, relevant local variations de Delineation Manual (t satisfy the wetland vegoremarks): Tide Gage A Available None (in.)	ice. ons, sea (Page 6	100 asonal ef 8, Step 1 criteria.	fects, etc. 3 (a)) are.	rology Indicators: Inunda Satura Satura Water Drift Li Sedim Draina y Indicato Oxidiz Water	dicators (De ated ated in Upper a ated in Upper a Marks ines ent Deposits age Patterns in ars (2 or more a ed Root Chan Stained Leave	iscribe in Remarks): 12 inches 18 inches Wetlands required): nels in Upper 12 inches es
recent of Dominant Species (cept FAC-). Include species reprophological adaptations to wether the second adaptation to the Washington Standardoogy and hydroc soils do not add the second adaptation of the se	noted (*) as showing tlands. "T" indicates traces, relevant local variations de Delineation Manual (t satisfy the wetland vegoremarks): Tide Gage A Available None (in.)	ice. ons, sea (Page 6	100 asonal ef 8, Step 1 criteria.	fects, etc. 3 (a)) are.	rology indicators: Inunda Satura Satura Water Drift Li Sedim Draina y Indicato Oxidiz Water Local	dicators (De ated ated in Upper of ated in Upper of Marks anes ent Deposits age Patterns in ars (2 or more of ed Root Chan ostained Leavi Soil Survey Da	iscribe in Remarks): 12 inches 18 inches Wetlands required): nels in Upper 12 inches es
recent of Dominant Species (cept FAC-). Include species in prophological adaptations to well armarks (Describe disturbance cording to the Washington Standrology and hydric soils do not YDROLOGY corded Data (Describe in Research Lake, or Take, or	noted (*) as showing tlands. "T" indicates traites, relevant local variation to Delineation Manual (traites traited Delineation Manual (traited Delineation Manual (traite	ons, sea	100 asonal ef 8. Step 1 criteria. Wet	fects, etc. 3 (a)) are. Iland Hyd Primary in	irology indicators: Inunda Satura Water Drift Li Sedim Draina y Indicato Oxidiz Water Local: Other	dicators (De ated ated in Upper of ated in Upper of Marks and Deposits age Patterns in ars (2 or more of ded Root Chan arstained Leave Soil Survey Da (Explain in Re	iscribe in Remarks): 12 inches 18 inches Wetlands required): nels in Upper 12 inches es
recent of Dominant Species (cept FAC-). Include species in prophological adaptations to well amarks (Describe disturbance cording to the Washington State drology and hydric soils do not properly to the Washington State drology and hydric soils do not properly to Stream, Lake, or a serial Photograph Other X No Recorded Data Id Observations: Depth of Surface Water: Depth to Saturated Soil:	noted (*) as showing tlands. "T" indicates traces, relevant local variations de Delineation Manual (t satisfy the wetland vegoremarks): Tide Gage A Available None (in.)	ons, sea	100 asonal ef 8. Step 1 criteria. Wet	fects, etc. 3 (a)) are. Iland Hyd Primary in	irology indicators: Inunda Satura Water Drift Li Sedim Draina y Indicato Oxidiz Water Local: Other	dicators (De ated ated in Upper of ated in Upper of Marks and Deposits age Patterns in ars (2 or more of ded Root Chan arstained Leave Soil Survey Da (Explain in Re	iscribe in Remarks): 12 inches 18 inches Wetlands required): nels in Upper 12 inches es

					Data Piot	#: A8-	B 2
				ye vy	Wetland:	A8	Upland Plo
roject/Site: Seattle Tacoma Airport	- Master Pl	an Update	Date:	8/27/98			
SOILS Soil Survey Data:							
Map Unit Name: Unmapped				Drainage Cla	ISS:		
				=	ations Confirm	Mapped T	vne?
Faxonomy (Subgroup):				Yes		NA X	•
Profile Description:							
Depth Horizon Matrix Color Inches) Designation (Munsell Mois	st)	Mottle Color (Munsell Moist)		Mottle Abundance/C		Texture, C Rhizosphe	oncretions, res. etc.
one		-		-		Compacted	
ydric Soil Indicators: Histosol			Listed	on Local Hydr	ic Soils List		
Histic Epipedon Sulfidic Odor Probable Aquic Moisture Regim Reducing Conditions Gleyed or Low-Chroma Colors High Organic Content in Surface	e Layer ocal variati	ons, etc.):	Listed Listed Aquic Organi Mottles Other (on State Hydri on National Hy Moisture Regir ic Streaking in	ic Soils List ydnc Soils List ne Sandy Soils		
Histic Epipedon Sulfidic Odor Probable Aquic Moisture Regin Reducing Conditions Gleyed or Low-Chroma Colors High Organic Content in Surface emarks (Describe soil disturbances, it	e Layer ocal variati	ons, etc.): at surface. Comp	Listed Listed Aquic Organi Mottles Other (on State Hydri on National Hy Moisture Regir ic Streaking in s	ic Soils List ydnc Soils List ne Sandy Soils		
Histic Epipedon Sulfidic Odor Probable Aquic Moisture Regim Reducing Conditions Gleyed or Low-Chroma Colors High Organic Content in Surface emarks (Describe soil disturbances, I bil too compacted to dig past 2 inches.	e Layer ocal variati	ons, etc.): tt surface. Comp	Listed Listed Aquic Organi Mottles Other (on State Hydri on National Hy Moisture Regir ic Streaking in s	ic Soils List ydnc Soils List ne Sandy Soils	-	
Histic Epipedon Sulfidic Odor Probable Aquic Moisture Regim Reducing Conditions Gleyed or Low-Chroma Colors High Organic Content in Surface emarks (Describe soil disturbances, I oil too compacted to dig past 2 inches. ETLAND DETERMINATION drophytic Vegetation Present?	e Layer ocal variati	ons, etc.): It surface. Comp	Listed Listed Aquic Organi Mottles Other (on State Hydri on National Hy Moisture Regir ic Streaking in s (Explain in Ren	ic Soils List ydnc Soils List ne Sandy Soils narks)	oint Within	a Wetland
Histic Epipedon Sulfidic Odor Probable Aquic Moisture Regim Reducing Conditions Gleyed or Low-Chroma Colors	e Layer ocal variati . Soils dry a	t surface. Comp	Listed Listed Aquic Organi Mottles Other (on State Hydri on National Hy Moisture Regir ic Streaking in s (Explain in Ren	ic Soils List ydnc Soils List ne Sandy Soils	int Within	

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): No wetland indicators are present.

PALARIELLA. III.	Pa	ram	etrix,	Inc
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	WET	LAND	DETE	RMINA	TION	Wetland	: A8 Upland Pic
_	(Modified from: 19	87 CO	E Wet	ands D	elineatio	n Manual))
	•						,
roject/Site: Seattle Tacoma		gate		•	//24/98		
pplicant/Owner: Port of So			_	County:	King		
vestigator: Kristie Dunkin (_	State:	WA		
_	Method				C	ommunity ID	Upland
Normal Circumstances exis	it on the site?	Yes	<u> </u>	No _	Fi	eid Piot ID	60-B
the site significantly disturbe	d (Atypical Situation)?	Yes		No _	<u>X</u>		
the area a potential Problem	Area?	Yes		No _	<u>x</u>		
marks (Explain sample loc	ation, disturbances, prob	iem are	as):				
GETATION (Domina	nt species are checked)						
Plant Species			% Cover	Stratum	Indicato	ог	
1. Ilex aquifolium			15	Shrub	UPL		
Oemiena cerasiformis			20	Shrub	FACU		
3 Prunus laurocerasus			15	Shrub	UPL		
4 Rubus discolor			Trace 100	Shrub Tree	FACU		
E FEBRIOUS CO			100	1166	NL NL		
cept FAC-). Include species	noted (*) as showing		0	Tree	FACU		
Thuia heterophylia recent of Dominant Species cept FAC-). Include species rphological adaptations to we marks (Describe disturbanc herb layer - closed canopy.	noted (*) as showing etlands. "T" indicates tractes, relevant local variation only a few small seedling.	ice. ons, sea	0 asonal ef	fects, etc.):	etation crite	ria are not met since th
Thuia heterophylia recent of Dominant Species cept FAC-). Include species rphological adaptations to we marks (Describe disturband herb layer - closed canopy. dominated by non-wetland play	noted (*) as showing etlands. "T" indicates tractes, relevant local variation only a few small seedling.	ice. ons, sea	0 asonal ef	fects, etc.):	etation criter	ria are not met since th
Thuia neterophylia cent of Dominant Species cept FAC-). Include species rphological adaptations to we marks (Describe disturbanc herb layer - closed canopy. ominated by non-wetland pla DROLOGY	noted (*) as showing etlands. "T" indicates traces, relevant local variation only a few small seedling ants.	ice. ons, sea	0 asonal ef ex and la	fects, etc.): wetland veg		
Thuia heterophylia cent of Dominant Species cept FAC-). Include species phological adaptations to we marks (Describe disturbanc herb layer - closed canopy, cominated by non-wetland pla DROLOGY	noted (*) as showing etlands. "T" indicates traces, relevant local variation only a few small seedling ants. Remarks):	ice. ons, sea	0 ex and la Wet	fects, etc.): wetland veg		ria are not met since th
Thuia heterophylia cent of Dominant Species cept FAC-). Include species phological adaptations to we marks (Describe disturbance herb layer - closed canopy. cominated by non-wetland pla DROLOGY orded Data (Describe in F	noted (*) as showing etlands. "T" indicates traces, relevant local variation only a few small seedling ants. Remarks): Tide Gage	ice. ons, sea	0 ex and la Wet	fects. etc. urel. The): wetland veg	cators (De	
Thuia heterophylia cent of Dominant Species cept FAC-). Include species phological adaptations to we marks (Describe disturbance herb layer - closed canopy, cominated by non-wetland pla DROLOGY orded Data (Describe in F Stream, Lake, or	noted (*) as showing etlands. "T" indicates traces, relevant local variation only a few small seedling ants. Remarks): Tide Gage	ice. ons, sea	0 ex and la Wet	fects. etc. urel. The): wetland veg rology Indi ndicators: Inundate	cators (De	escribe in Remarks):
Thuia heterophylia cent of Dominant Species cept FAC-). Include species phological adaptations to we herb layer - closed canopy. cominated by non-wetland pla DROLOGY orded Data (Describe in F Stream, Lake, or Aerial Photograp	noted (*) as showing etlands. "T" indicates traces, relevant local variation only a few small seedling ants. Remarks): Tide Gage	ice. ons, sea	0 ex and la Wet	fects. etc. urel. The): wetland veg rology Indi ndicators: Inundate Saturate Saturate	cators (De	escribe in Remarks): 12 inches
Thuia heterophylia cent of Dominant Species cept FAC-). Include species phological adaptations to we marks (Describe disturbance therb layer - closed canopy. cominated by non-wetland pla DROLOGY corded Data (Describe in F Stream, Lake, or Aerial Photograp Other	noted (*) as showing etlands. "T" indicates traces, relevant local variation only a few small seedling ants. Remarks): Tide Gage	ice. ons, sea	0 ex and la Wet	fects. etc. urel. The): wetland veg rology Indi ndicators: Inundate Saturate Saturate Water M	cators (De ed in Upper of ed in Upper of tarks	escribe in Remarks): 12 inches
Thuia heterophylia cont of Dominant Species copt FAC-). Include species copt FAC-). I	noted (*) as showing etlands. "T" indicates traces, relevant local variation only a few small seedling ants. Remarks): Tide Gage	ice. ons, sea	0 ex and la Wet	fects. etc. urel. The): wetland veg rology Indi ndicators: Inundate Saturate Saturate Water M Drift Line	cators (De ed in Upper of darks	escribe in Remarks): 12 inches
Thuia heterophylia cont of Dominant Species copt FAC-). Include species copt FAC-). I	noted (*) as showing etlands. "T" indicates traces, relevant local variation only a few small seedling ants. Remarks): Tide Gage	ice. ons, sea	0 ex and la Wet	fects. etc. urel. The	rology Indi adicators: Inundate Saturate Water M Drift Line Sedimei	ed in Upper darks	escribe in Remarks): 12 inches 18 inches
Thuis neterophylis recent of Dominant Species recept FAC-). Include species rephological adaptations to we marks (Describe disturbance herb layer - closed canopy. Idominated by non-wetland pla TOROLOGY Corded Data (Describe in F Stream, Lake, or Aerial Photograp Other X No Recorded Da d Observations:	noted (*) as showing etlands. "T" indicates traces, relevant local variation only a few small seedling ants. Remarks): Tide Gage	ice. ons, sea	0 ex and la Wet	fects. etc. urel. The	rology Indi adicators: Inundate Saturate Water M Drift Line Sedimei	cators (De ed in Upper of darks	escribe in Remarks): 12 inches 18 inches
Thuia neterophylia cent of Dominant Species cept FAC-). Include species rephological adaptations to we marks (Describe disturbance therb layer - closed canopy. cominated by non-wetland pla DROLOGY corded Data (Describe in F Stream, Lake, or Aerial Photograp Other X No Recorded Da d Observations: Depth of Surface Water:	noted (*) as showing etlands. "T" indicates tra ces, relevant local variation only a few small seedling ants. Remarks): Tide Gage h None (in.)	ice. ons, sea	0 ex and la Wet	fects, etc. urel. The land Hyd Primary ir): wetland veg rology Indi ndicators: Inundate Saturate Water M Drift Line Sedimel Drainage	ed in Upper darks	escribe in Remarks): 12 inches 18 inches
Thuia neterophylia Incent of Dominant Species Coept FAC-). Include species Coept Gescribe disturbance Coept Gesc	noted (*) as showing etlands. "T" indicates tra ces, relevant local variation only a few small seedling ants. Remarks): Tide Gage h None (in.) >18 (in.)	ice. ons, sea	0 ex and la Wet	fects, etc. urel. The land Hyd Primary ir	rology Indiadicators: Inundate Saturate Saturate Water N Drift Line Sedimer Drainage	cators (De ed in Upper f ed in Upper f darks es nt Deposits e Patterns in	escribe in Remarks): 12 inches 18 inches Wetlands
Thuis neterophylis recent of Dominant Species recept FAC-). Include species rephological adaptations to we marks (Describe disturbance herb layer - closed canopy. Idominated by non-wetland pla TOROLOGY Corded Data (Describe in F Stream, Lake, or Aerial Photograp Other X No Recorded Da d Observations: Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as showing etlands. "T" indicates tra ces, relevant local variation only a few small seedling ants. Remarks): Tide Gage h None (in.)	ice. ons, sea	0 ex and la Wet	fects, etc. urel. The land Hyd Primary ir	rology Indi dicators: Inundate Saturate Water M Drift Line Sedimer Drainage y Indicators Oxidized	cators (De ed in Upper f ed in Upper f darks es nt Deposits e Patterns in	escribe in Remarks): 12 inches 18 inches Wetlands required): nels in Upper 12 inches
Thus heterophylis recent of Dominant Species cept FAC-). Include species rephological adaptations to we marks (Describe disturbanc herb layer - closed canopy. dominated by non-wetland pla 'DROLOGY corded Data (Describe in F Stream, Lake, or Aerial Photograp Other	noted (*) as showing etlands. "T" indicates tra ces, relevant local variation only a few small seedling ants. Remarks): Tide Gage h None (in.) >18 (in.)	ice. ons, sea	0 ex and la Wet	fects, etc. urel. The land Hyd Primary ir	irology Indiadicators: Inundate Saturate Saturate Vater M Drift Line Sedimen Drainage y Indicators Oxidized Water-S	cators (De ed in Upper d tarks es int Deposits e Patterns in id Root Chan	escribe in Remarks): 12 inches 18 inches Wetlands required): nels in Upper 12 incheses

Para	ametr	ix, Inc.							
1							Data Pi	ot #:	A8-B3
							Wetlan	d:	A8 Upland Plot
Project/Sit	e Seattle Ta	acoma Airport - Maste	r Plan	Update	Date:	9/24/98			
SOILS Soil Surv	ey Data:								
Map Unit	Name: <u>Unm</u>	apped				Drainage	Class:		
						Field Obs	servations Confi	rm Map	pped Type?
Taxonomy	(Subgroup):					Yes	No	NA	×
Profile De	scription:				-			•	
Depth (Inches)	Horizon Designation	Matrix Color (Munsell Moist)		fottle Color Munsell Mois	st)	Mottle Abundan	ce/Contrast		ure, Concretions, ospheres, etc.
0-5	Α	10YR 3/3				-		Loan	1
5-18	В	10YR 5/4	10	DYR 6/6		Few. Coars	e. Distinct	Sand	v loam
His His Su Pro Re Hig Remarks (ducing Condi eyed or Low-C ih Organic Co Describe soil	Moisture Regime			Listed Listed Aquic Organ Mottle	on State h on Nation Moisture F ic Streakin s	Hydric Soils List Hydric Soils List al Hydric Soils L Regime g in Sandy Soils Remarks)	ist	
WETLAN	D DETER	MINATION							
łydrophyti	c Vegetation	Present?	es _	No	_x_	łs	this Sampling	Point	Within a Wetland?
•	s Present? drology Pre		es _	No No	×		Yes	No	

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): This area is an upland since all wetland parameters are absent.

Parametrix, Inc



Data Plot #:	A9-A
Wetland:	A9

	WET	LAND DETE	RMINATI	ON	Wetland	l: /	\ 9
	ا We ا Modified from: 19)	-			n Manual	`	
	(Modified from: 19	B/ COE Well	ands Del	iiileatio	ii Mailuai	,	
Project/Site: Seattle Tacoma	Airport - Master Plan Upo	date	Date: 9/1	8/98			
Applicant/Owner: Port of Se	eattle		County: K	King			
nvestigator: W. Kleindl and S	6. Rozenbaum		State: V	VA			
1987 Method	Method	····	_	С	ommunity ID): PSS	
o Normal Circumstances exis	t on the site?	Yes X	No		eld Plot ID:		
the site significantly disturbed	d (Atypical Situation)?	Yes	No X			30-1	
the area a potential Problem		Yes	No X				
emarks (Explain sample loca			<u></u>	_			
ractor access trail (compacted ydrological connection to npar	•	iand. Water flow	vs down-slo	pe in ditc	h - dissipate:	s at botto	m of slope.
EGETATION (Dominal Plant Species	nt species are checked)	% Cover	Stratum	Indicate	or		
1 Agrostis sp		8	Herb	NL			
2 Athynum filix-femina		3	Herb	FAC			
3 Convolvulus arvensis		20	Herb	NL			
4 Equisetum teimateia		40	Herb	FACW			
r Chicago amadic		10	Herb	OBL			
5 Glycena grandis			Herb	FACW			
6 Ranunculus repens		30					
Ranunculus repens Rubus discolor		80	Shrub	FACU			
6 Ranunculus repens 7 Rubus discolor 8 Corylus comuta		80 15	Shrub Tree	FACU FACU			
6 Ranunculus repens 7 Rubus discolor 8 Corylus comuta 9 Thuja plicata ercent of Dominant Species except FAC-). Include species	noted (*) as showing	80 15 25 or FAC 60	Shrub	FACU			
6 Ranunculus repens 7 Rubus discolor 8 Corylus comuta 9 Thuja plicata ercent of Dominant Species except FAC-). Include species orphological adaptations to we emarks (Describe disturbance fince greater than 50% of the di	noted (*) as showing etlands. "T" indicates tra- es, relevant local variation	80 15 25 or FAC ce. 60 ce.	Shrub Tree Tree	FACU FACU FAC	a is met.		
6 Ranunculus repens 7 Rubus discolor 8 Corylus comuta 9 Thuja plicata ercent of Dominant Species except FAC-). Include species orphological adaptations to we emarks (Describe disturbance ance greater than 50% of the de	noted (*) as showing etlands. "T" indicates tra- les, relevant local variation or indicates tra- cominant plants are hydro	or FAC 60 ce. ons, seasonal efforthytic, the wetland	Shrub Tree Tree Gects, etc.): and vegetation	FACU FACU FAC			
6 Ranunculus repens 7 Rubus discolor 8 Corylus comuta 9 Thuja plicata ercent of Dominant Species except FAC-). Include species orphological adaptations to we emarks (Describe disturbance ance greater than 50% of the de	noted (*) as showing etlands. "T" indicates tra- les, relevant local variation or indicates tra- cominant plants are hydro	or FAC 60 ce. ons, seasonal efforthytic, the wetland	Shrub Tree Tree Gects, etc.): and vegetation	FACU FACU FAC	a is met.	escribe in	Remarks):
Ranunculus repens Rubus discolor Rubus discolor Rubus comuta Thuja plicata Percent of Dominant Species Except FAC-). Include species Except FAC-). Include species Except FAC-) adaptations to we Example of the discovery concerning the property of th	noted (*) as showing etlands. "T" indicates tra- les, relevant local variation ominant plants are hydro temarks):	or FAC 60 ce. ons, seasonal efforphytic, the wetla	Shrub Tree Tree Gects, etc.): and vegetation	FACU FACU FAC		escribe in	Remarks):
Ranunculus repens Rubus discolor Rubus discolor Corylus comuta Thuja plicata Precent of Dominant Species Except FAC-). Include species Porphological adaptations to we Preceded Describe disturbance Proceded Data (Describe in Recorded Data (Describe in Recorded Data)	noted (*) as showing etlands. "T" indicates tra- tes, relevant local variation or indicates tra- tes, relevant local variation or indicates tra- tes, relevant local variation or indicates tra- tes, relevant local variation. Remarks): Tide Gage	or FAC 60 ce. ons, seasonal efforphytic, the wetla	Tree Tree cects, etc.): and vegetational Hydro	FACU FACU FAC	icators (De	escribe in	Remarks):
6 Ranunculus repens 7 Rubus discolor 8 Corylus comuta 9 Thuja plicata ercent of Dominant Species except FAC-). Include species priphological adaptations to we emarks (Describe disturbance froe greater than 50% of the de	noted (*) as showing etlands. "T" indicates tra- tes, relevant local variation or indicates tra- tes, relevant local variation or indicates tra- tes, relevant local variation or indicates tra- tes, relevant local variation. Remarks): Tide Gage	or FAC 60 ce. ons, seasonal efforphytic, the wetla	Tree Tree cects, etc.): and vegetational Hydro	FACU FACU FACU FACU FACU FACU FACU FACU	icators (De		
6 Ranunculus repens 7 Rubus discolor 8 Corylus comuta 9 Thuja plicata ercent of Dominant Species except FAC-). Include species prophological adaptations to we emarks (Describe disturbance ance greater than 50% of the de YDROLOGY ecorded Data (Describe in R Stream, Lake, or Aerial Photograph	noted (*) as showing stands. "T" indicates traces, relevant local variation or indicates traces, relevant local variation or indicates are hydrodecominant plants are hydrodecominant. Remarks): Tide Gage	or FAC 60 ce. ons, seasonal efforphytic, the wetla	Tree Tree cects, etc.): and vegetation remary Indi	FACU FACU FACU FACU FACU FACU FACU FACU	icators (De ed ed in Upper ed in Upper	12 inches	
6. Ranunculus repens 7 Rubus discolor 8 Corylus comuta 9 Thuja plicata ercent of Dominant Species except FAC-). Include species orphological adaptations to we emarks (Describe disturbance ance greater than 50% of the de YDROLOGY ecorded Data (Describe in R Stream, Lake, or Aerial Photograph Other	noted (*) as showing stands. "T" indicates traces, relevant local variation or indicates traces, relevant local variation or indicates are hydrodecominant plants are hydrodecominant. Remarks): Tide Gage	or FAC 60 ce. ons, seasonal efforphytic, the wetla	Tree Tree cects, etc.): and vegetation remary Indi	FACU FACU FACU FACU FACU FACU FACU FACU	ed ed in Upper ed in Upper Marks	12 inches	
6. Ranunculus repens 7 Rubus discolor 8 Corylus comuta 9 Thuja plicata ercent of Dominant Species except FAC-). Include species prophological adaptations to we emarks (Describe disturbance fince greater than 50% of the de YDROLOGY ecorded Data (Describe in R Stream, Lake, or Aerial Photograph Other	noted (*) as showing stands. "T" indicates traces, relevant local variation or indicates traces, relevant local variation or indicates are hydrodecominant plants are hydrodecominant. Remarks): Tide Gage	or FAC 60 ce. ons, seasonal efforphytic, the wetla	Tree Tree cects, etc.): and vegetation remary Indi	FACU FACU FAC FACU FAC FACU FAC FACU FAC FACU FACU	ed ed in Upper ed in Upper Marks	12 inches	
6 Ranunculus repens 7 Rubus discolor 8 Corylus comuta 9 Thuja plicata ercent of Dominant Species except FAC-). Include species prophological adaptations to we emarks (Describe disturbance ance greater than 50% of the de YDROLOGY ecorded Data (Describe in R Stream, Lake, or Aerial Photograph Other	noted (*) as showing stands. "T" indicates traces, relevant local variation or indicates traces, relevant local variation or indicates are hydrodecominant plants are hydrodecominant. Remarks): Tide Gage	or FAC 60 ce. ons, seasonal efforphytic, the wetla	Tree Tree cects, etc.): and vegetation remary Indi	FACU FACU FAC FACU FAC FAC FAC FAC	ed ed in Upper ed in Upper Marks es nt Deposits	12 inches 18 inches	
6 Ranunculus repens 7 Rubus discolor 8 Corylus comuta 9 Thuja plicata ercent of Dominant Species except FAC-). Include species prophological adaptations to we emarks (Describe disturbance ince greater than 50% of the dis- YDROLOGY ecorded Data (Describe in R Stream, Lake, or Aerial Photograph Other X No Recorded Data	noted (*) as showing stands. "T" indicates traces, relevant local variation or indicates traces, relevant local variation or indicates are hydrodecominant plants are hydrodecominant. Remarks): Tide Gage	or FAC 60 ce. ons, seasonal efforphytic, the wetla	Tree Tree cects, etc.): and vegetation remary Indi	FACU FACU FAC FACU FAC FAC FAC FAC	ed ed in Upper ed in Upper Marks	12 inches 18 inches	
Ranunculus repens Rubus discolor Rubus discolor Rubus comuta Thuja plicata Precent of Dominant Species Recept FAC-). Include species Prophological adaptations to we Remarks (Describe disturbance Recepted Data (Describe in Rubus Corded Data (Describ	noted (*) as showing stands. "T" indicates traces, relevant local variation or indicates traces, relevant local variation or indicates are hydrodecominant plants are hydrodecominant. Remarks): Tide Gage	80 15 25 or FAC ce. 60 ons, seasonal eff	Shrub Tree Tree dects, etc.): and vegetation and Hydro primary Indi	FACU FACU FACU FACU FACU FACU FACU FACU	ed ed in Upper ed in Upper Alarks es nt Deposits e Patterns in	12 inches 18 inches	is
Ranunculus repens Rubus discolor Rubus discolor Rubus comuta Thuja plicata Precent of Dominant Species Except FAC-). Include species Porphological adaptations to we Remarks (Describe disturbance Preceded Data (Describe in Rubus Stream, Lake, or Aerial Photograph Other X No Recorded Data Ridd Observations: Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as showing stands. "T" indicates traces, relevant local variation or indicates traces, relevant local variation or indicates traces, relevant local variation or indicates are hydrodecomments.): Tide Gage h ta Available	80 15 25 or FAC ce. 60 ons, seasonal eff	Shrub Tree Tree dects, etc.): and vegetation and Hydro Primary indi X Secondary	FACU FACU FACU FACU FACU FACU FACU FACU	ed ed in Upper ded in Upper Alarks es nt Deposits ie Patterns in s (2 or more	12 inches 18 inches n Wetland required)	ds
6 Ranunculus repens 7 Rubus discolor 8 Corylus comuta 9 Thuja plicata ercent of Dominant Species except FAC-). Include species orphological adaptations to we emarks (Describe disturbance ance greater than 50% of the dis- YDROLOGY ecorded Data (Describe in R Stream, Lake, or Aerial Photograph Other X No Recorded Data	noted (*) as showing stands. "T" indicates traces, relevant local variation or indicates traces, relevant local variation or indicates traces, relevant local variation or indicates traces. Tide Gage has a Available None (in.)	80 15 25 or FAC ce. 60 ons, seasonal eff	Shrub Tree Tree dects, etc.): and vegetation and Hydro primary Indi	FACU FACU FACU FACU FACU FACU FACU FACU	ed ed in Upper darks es nt Deposits e Patterns ir 6 (2 or more d Root Chan	12 inches 18 inches n Wetland required) inels in U	ds
6 Ranunculus repens 7 Rubus discolor 8 Corylus comuta 9 Thuja plicata ercent of Dominant Species xcept FAC-). Include species orphological adaptations to we emarks (Describe disturbance ance greater than 50% of the dis- YDROLOGY ecorded Data (Describe in R Stream, Lake, or Aerial Photograph Other X No Recorded Data eld Observations: Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as showing stands. "T" indicates traces, relevant local variation ominant plants are hydrodemarks): Tide Gage h Available None (in.)	80 15 25 or FAC ce. 60 ons, seasonal eff	Shrub Tree Tree dects, etc.): and vegetation and Hydro Primary indi X Secondary	FACU FACU FACU FACU FACU FACU FACU FACU	ed ed in Upper darks es nt Deposits e Patterns ir 6 (2 or more d Root Chan Stained Leav	12 inches 18 inches n Wetland required) inels in U	ds
Ranunculus repens Rubus discolor Rub	noted (*) as showing stands. "T" indicates traces, relevant local variation ominant plants are hydrodemarks): Tide Gage h Available None (in.)	80 15 25 or FAC ce. 60 ons, seasonal eff	Shrub Tree Tree dects, etc.): and vegetation and Hydro Primary indi X Secondary	FACU FACU FACU FACU FACU FACU FACU FACU	ed ed in Upper darks es nt Deposits e Patterns ir 6 (2 or more d Root Chan	12 inches 18 inches n Wetland required) inels in U es ata	is

						Data Pio Wetland	-	A9-A A9
Project/Si	te: Seattle T	acoma Airport - Master P	lan Update	Date:	9/18/98			
SOILS Soil Surv	ey Data:							
Map Unit	Name: Unm	napped			Drainage	Class:		
					Field Obs	servations Confin	п Марі	ped Type?
Taxonom	y (Subgroup):				Yes	No	NA	x
Profile De	scription:							
Depth (inches)	Horizon Designation	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)		Mottle Abundan	ce/Contrast	_	ire, Concretions ospheres, etc.
0-9	A	10YR 3/1	-		<u>.</u>		Silt loa	am
9-15	В	10YR 3/1	10YR 4/3 & 10YR 5/1		Common, M	edium, Prominent	Loam	
>15	С	10YR 5/1	10YR4/4		Common, M	edium, Prominent	Loamy	y sand
Hydric So	il Indicators:							
	stosol			Listed	on Local H	lydric Soils List		
	stic Epipedon			Listed	on State F	lydric Soils List		
	Iffidic Odor	*4		Listed	on Nationa	al Hydric Soils Lis	st .	
		Moisture Regime		-	Moisture R	_		
	ducing Condi			_		g in Sandy Soils		
		Chroma Colors ontent in Surface Layer	<u>X</u>	Mottle	_			
				Other	(Explain in	Remarks)		
Remarks (Describe soil	disturbances, local variat	tions, etc.):					

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results):

Hydrophytic Vegetation Present?

Hydric Soils Present?

Wetland Hydrology Present?

Wetland was delineated based on changes in hydrology and soil conditions. Borders correspond to various constructed features such as roads sidewalks and ditches. The presence of all three parameters indicate this area is a wetland.

Is this Sampling Point Within a Wetland?

Yes X No

Param	etrix,	Inc.
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Field Observations: Depth of Surface Water:

Depth to Free Water in Pit:

Depth to Saturated Soil:

Data Plot #:

Drainage Patterns in Wetlands

Oxidized Root Channels in Upper 12 inches

Secondary Indicators (2 or more required):

Water-Stained Leaves Local Soil Survey Data A10-A

WET	LAND DETE	RMINAT	ION Wetland: A10
(Modified from: 19			
Project/Site: Seattle Tacoma Airport - Master Plan Up			, 17/98
	oate	_	
Applicant/Owner: Port of Seattle		/	King
vestigator: William Kleindl		State: \	WA
1987 Method			Community ID: PSS
o Normal Circumstances exist on the site?	Yes X	No	- Field Plot ID: 55-A
the site significantly disturbed (Atypical Situation)?	Yes	No X	
the area a potential Problem Area?	Yes	No X	
EGETATION (Dominant species are checked)	· · · · · · · · · · · · · · · · · · ·		
Plant Species	% Cover	Stratum	Indicator
1. Athyrium filix-femina	20	Herb	FAC
2 Convolvulus arvensis	2	Herb	NL
3 Equisetum telmateia	25	Herb	FACW
4 Lythrum salicana	7	Herb	FACW+
5 Phalans arundinacea	1	Herb	FACW
6 Scirpus microcarpus	3	Herb	OBL
7 Veronica americana	2	Herb	OBL
8 Rubus discolor	99	Shrub	FACU
ercent of Dominant Species that are OBL, FACW, xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variations greater than 50% of dominant plants are hydrophy	ice. 66 ons, seasonal ef		
YDROLOGY			
ecorded Data (Describe in Remarks):	Wet	land Hydro	ology Indicators (Describe in Remarks):
Stream, Lake, or Tide Gage		Primary ind	
Aerial Photograph			
Other			Inundated Saturated in Upper 12 inches
X No Recorded Data Available			Saturated in Opper 12 inches Saturated in Upper 18 inches
No Necolded Data Available			Water Marks
			Drift Lines
			Sediment Deposits

Other (Explain in Remarks) Remarks (As relevant, describe recent precipitation, hydrologic modifications, local variations, etc.):

(In.)

(in.)

(in.)

None

>16

>16

Soils were very moist. Wetland hydrology is frequently absent from wetlands during the dry summer months. Based on the presence of wetland vegetation and hydric soil the wetland hydrology criteria is assumed to be present.

								Data P	ot#:	A10-A
L								Wetlar	ıd:	A10
Project/S	Site: Seattle T	acoma Airport - Master	Pla	n Upda	te	_ Date:	9/17/98			
SOILS Soil Su	rvey Data:									
Map Un	it Name: <u>Unn</u>	napped					Drainage C	lass:		
							Field Obse	rvations Conf	im Ma	pped Type?
Taxonor	my (Subgroup):						Yes	No	_ NA	<u>x</u>
Profile (Description:									
Depth (Inches)	Horizon Designation	Matrix Color (Munsell Moist)		Mottle (Muns	Color ell Mois	t)	Mottle Abundance	/Contrast		ture, Concretions, cospheres, etc.
0-9	Α	10YR 2/1		10YR 5	/6 & 5YR	6/6	Many, Large, I	Prominent	Sand	dv loam
)+	Bg Bg	10G 6/1		7.5YR 6	3/6		Many, Large, I	Prominent	Sand	dy clav loam
dvdric S	ioil Indicators	:								
-	Histosol					Listed	on Local Hy	dric Soils List	,	
	Histic Epipedon	ı			_			dric Soils List		
	Sulfidic Odor				_			Hydric Soils I		
F	Probable Aquic	Moisture Regime				Aquic	Moisture Re	gime		
	Reducing Cond					Organ	ic Streaking	in Sandy Soil	s	
		Chroma Colors			_	X Mottle	s			
+	ligh Organic Co	ontent in Surface Layer	•			Other	(Explain in R	emarks)		
		l disturbances, local va ed. Soil color and indica				s soil antoni				
	,,	. Com Color Billo Wildica	10/3	777001 17	ie riyun	c son chiena	/.			
	ND DETER	MINATION								
WETLA					Nic		1- 4	hi- 0 11		
	ytic Vegetation	n Present?	'es	_ <u>X</u> _	No		15 1	uis Sambiiui	g Point	: Within a Wetian
ydroph	ytic Vegetation oils Present?		es es	<u>x</u>	No		IS t	nis Samplini Yes X		: Within a Wetlan

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): The presence of all three parameters indicate this area is a wetland.

WET	AND DET	TERMINA	TION	Data Piot #: Wetland:
(Modified from: 198	7 COE W	etiands [elineat	ion Manual)
de Tacoma Airport - Master Plan Upd	ate	Date: 9	9/16/98	
Port of Seattle		County:	King	
am Kleindl		State:	WA	
1989 Method				Community ID: PS
tances exist on the site?	Yes X	No		
	(Modified from: 198 tle Tacoma Airport - Master Plan Upd Port of Seattle am Kleindl 1989 Method	WETLAND DET (Modified from: 1987 COE W the Tacoma Airport - Master Plan Update Port of Seattle am Kleindi 1989 Method	WETLAND DETERMINA (Modified from: 1987 COE Wetlands Date: 9 the Tacoma Airport - Master Plan Update Date: 9 Port of Seattle County: State: 9 1989 Method	WETLAND DETERMINATION (Modified from: 1987 COE Wetlands Delineation the Tacoma Airport - Master Plan Update Date: 9/16/98 Port of Seattle County: King am Kleindi State: WA

Applicant/Owner: Port of Seattle			County:	King
investigator: William Kleindl			State: \	WA
✓ 1987 Method				Community ID: PSS
Do Normal Circumstances exist on the site	e? Ye	es X	No	- Field Plot ID: 54-A
s the site significantly disturbed (Atypical	Situation)? Ye	es	No X	
s the area a potential Problem Area?	Ye		No X	
Remarks (Explain sample location, distur				-
Sample is located on Parcel 313 about 20 Inveway, and agricultural disturbances.	feet of Miller Creel	k. Vegetatio	on in the ar	ea is unmaintained and surrounded by law
/EGETATION / Dominant species :	are checked)			
Plant Species		% Cover	Stratum	Indicator
1 Athyrium filix-femina		5	Herb	FAC
2 Equisetum telmateia		60	Herb	FACW
3 ins pseudacorus		25	Herb	OBL
4 Phalans arundinacea		10	Herb	FACW
5 Scirpus microcarpus		20	Herb	OBL
6 Rubus discolor		100	Shrub	FACU FACU
except FAC-). Include species noted (*) a norphological adaptations to wetlands. "T temarks" (Describe disturbances, relevan	s showing " indicates trace. It local variations, s	75 seasonal ef		
except FAC-). Include species noted (*) a norphological adaptations to wetlands. "The temarks (Describe disturbances, relevant since greater than 50% of dominant plants."	s showing " indicates trace. It local variations, s	75 seasonal ef		
except FAC-). Include species noted (*) a norphological adaptations to wetlands. "The temarks (Describe disturbances, relevant since greater than 50% of dominant plants IYDROLOGY	s showing " indicates trace. It local variations, s	75 seasonal eff the wetland	vegetation	criteria is met.
except FAC-). Include species noted (*) a norphological adaptations to wetlands. "The marks (Describe disturbances, relevant ince greater than 50% of dominant plants IYDROLOGY ecorded Data (Describe in Remarks):	s showing "indicates trace. It local variations, s are hydrophytic, ti	75 seasonal efi he wetland Wet	vegetation	criteria is met. ology Indicators (Describe in Remarks):
except FAC-). Include species noted (*) a corphological adaptations to wetlands. The marks (Describe disturbances, relevant ince greater than 50% of dominant plants YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage	s showing "indicates trace. It local variations, s are hydrophytic, ti	75 seasonal efi he wetland Wet	vegetation	ology Indicators (Describe in Remarks):
except FAC-). Include species noted (*) a lorphological adaptations to wetlands. The marks (Describe disturbances, relevant ince greater than 50% of dominant plants IYDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	s showing "indicates trace. It local variations, s are hydrophytic, ti	75 seasonal efi he wetland Wet	vegetation	ology Indicators (Describe in Remarks): Inundated
except FAC-). Include species noted (*) a norphological adaptations to wetlands. The marks (Describe disturbances, relevant ince greater than 50% of dominant plants IYDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other	s showing indicates trace. It local variations, s are hydrophytic, ti	75 seasonal efi he wetland Wet	vegetation	ology Indicators (Describe in Remarks): Inundated Saturated in Upper 12 inches
except FAC-). Include species noted (*) a norphological adaptations to wetlands. The temarks (Describe disturbances, relevant ince greater than 50% of dominant plants IYDROLOGY ecorded Data (Describe in Remarks):	s showing indicates trace. It local variations, s are hydrophytic, ti	75 seasonal efi he wetland Wet	vegetation	criteria is met. cology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches
except FAC-). Include species noted (*) anorphological adaptations to wetlands. The demarks (Describe disturbances, relevant since greater than 50% of dominant plants IYDROLOGY Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other	s showing indicates trace. It local variations, s are hydrophytic, ti	75 seasonal efi he wetland Wet	vegetation	ology Indicators (Describe in Remarks): Inundated Saturated in Upper 12 inches
except FAC-). Include species noted (*) anorphological adaptations to wetlands. The demarks (Describe disturbances, relevant since greater than 50% of dominant plants IYDROLOGY Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other	s showing indicates trace. It local variations, s are hydrophytic, ti	75 seasonal efi he wetland Wet	vegetation	criteria is met. cology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks
except FAC-). Include species noted (*) a norphological adaptations to wetlands. The temarks (Describe disturbances, relevantance greater than 50% of dominant plants IYDROLOGY Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available	s showing indicates trace. It local variations, s are hydrophytic, ti	75 seasonal efi he wetland Wet	vegetation	criteria is met. clicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
except FAC-). Include species noted (*) a norphological adaptations to wetlands. The temarks (Describe disturbances, relevant since greater than 50% of dominant plants IYDROLOGY Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available ield Observations:	s showing indicates trace. It local variations, s are hydrophytic, to	75 seasonal eff the wetland Wet	iand Hydri Primary Inc	criteria is met. cology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
except FAC-). Include species noted (*) a norphological adaptations to wetlands. The Remarks (Describe disturbances, relevant Since greater than 50% of dominant plants HYDROLOGY Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other X No Recorded Data Available ield Observations: Depth of Surface Water: None	s showing indicates trace. It local variations, sare hydrophytic, to	75 seasonal eff the wetland Wet	iand Hydri Primary Inc	criteria is met. cology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
except FAC-). Include species noted (*) a norphological adaptations to wetlands. The temarks (Describe disturbances, relevant since greater than 50% of dominant plants. EXPOROLOGY Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available ield Observations: Depth of Surface Water: Depth to Free Water in Pit: No No Recorded Data None	s showing indicates trace. It local variations, s are hydrophytic, to (in.)	75 seasonal eff the wetland Wet	iand Hydri Primary Inc	criteria is met. cology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
except FAC-). Include species noted (*) a norphological adaptations to wetlands. The temarks (Describe disturbances, relevant since greater than 50% of dominant plants HYDROLOGY Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available ield Observations: Depth of Surface Water: None	s showing indicates trace. It local variations, sare hydrophytic, to	75 seasonal eff the wetland Wet	iand Hydri Primary Inc	criteria is met. cology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required):
Aerial Photograph Other X No Recorded Data Available ield Observations: Depth of Surface Water: Depth to Free Water in Pit: >16	s showing indicates trace. It local variations, s are hydrophytic, to (in.)	75 seasonal eff the wetland Wet	iand Hydri Primary Inc	criteria is met. cology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inc

levant, describe recent precipitation, hydrologic modifications, local variations, etc.);

Wetland soils very moist to within 3 inches of the surface. Wetland hydrology is frequently absent from wetlands during the dry summer months. Based of the presence of wetland vegetation and hydrology called its assumed to be present.

A11-A A11

1						Data Pie Wetland		A11-A A11
Project/Si	te: Seattle 7	「acoma Airport - Master	Plan Update	Date:	9/16/98			
SOILS Soil Surv	rey Data:							
Map Unit	Name: Unr	napped			Drainage Cla	ss:		
					Field Observa	ations Confi	m Map	ped Type?
Taxonomy	y (Subgroup)	:			Yes	No	NA	x
Profile De	escription:					_	•	
Depth (inches)	Horizon Designation	Matrix Color n (Munsell Moist)	Mottle Color (Munsell Moist)		Mottle Abundance/C	ontrast		ure, Concretions, ospheres, etc.
0-3	A	10YR 2/2	•		-		Loan)
3-11	Ap	10YR 3/1&4/1	10YR 5/4, 7.5YR 5/8		Common, Medius	m, Distinct	Grave	elly loam
3-11	<u>B</u>	10YR 4/2	10YR 4/4		Common. Mediur	n, Distinct	Grave	elly loam
Hi His Su X Pri X Re Glo X Hig	educing Cond eyed or Low- gh Organic C	n Moisture Regime		Listed Listed Aquic Organ Mottle	d on Local Hydro I on State Hydro I on National Hy Moisture Regin iic Streaking in is (Explain in Ren	c Soils List /dric Soils Li ne Sandy Soils		
ew iron-de	epleted pocke	ets (10Y6/) in color in A ric soil criteria.		c betwee	en A and Ap ho	rizons. Soil	color al	nd other hydnc sc

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results):

Hydric Soils Present?

Wetland Hydrology Present?

The presence of all three parameters indicate this area is a wetland. Wetland delineation was based on topography and soils.

X No

Is this Sampling Point Within a Wetland?

Yes X No



Data Piot #:

A11-B

WE	TLAND DE	TERMINA	ATION	Wetland:	A11 Upland Plot
(Modified from: 19				tion Manual)	
Project/Site: Seattle Tacoma Airport - Master Plan U		Date:	9/19/98		
Applicant/Owner: Port of Seattle	-	County:			· · · · · · · · · · · · · · · · · · ·
Investigator: Scott Rozenbaum and Kristie Dunkin		State:	WA		
№ 1987 Method 1989 Method				Community ID:	Upland
Do Normal Circumstances exist on the site?	Yes	No	x	•	
ts the site significantly disturbed (Atypical Situation)?	Yes X	- No		Field Plot ID:	
Is the area a potential Problem Area?		_ No	×		
Remarks (Explain sample location, disturbances, pro	Yes	_ '''	^		
This sample plot is in a nursery bed on Parcel 314. Mi compnsed of Pacific ninebark, Douglas spiraea, and O	iller Creek is 70	0 feet from	piot cente	r. Vegetation is r	nursery stock (2-6 feet tall)
VEGETATION ← Dominant species are checked		ver Stratu	m Indi	cator	
1 Nursery Stock					
Because the area is dominated by planted nursery storused to evaluate wetland conditions.	ck, vegetation	does not re	flect envii	onmental conditi	ions at the site and cannot be
HYDROLOGY					
Recorded Data (Describe in Remarks):	•	Wetland Hy	ydrology	Indicators (De	scribe in Remarks):
Stream, Lake, or Tide Gage		Primary	Indicator	S:	
Aerial Photograph			Inui	ndated	
Other				urated in Upper 1	
X No Recorded Data Available				urated in Upper 1 er Marks	18 inches
				Lines	
				ment Deposits	
			Dra	nage Patterns in	Wetlands
Field Observations:					
Depth of Surface Water: None (in.) Depth to Free Water in Pit: >16 (in.)		Second	ary Indica	itors (2 or more i	required):
Depth to Saturated Soit: >16 (in.)			Oxi	dized Root Chan	nels in Upper 12 inches
(III.)			Was	er-Stained Leave	es
			Loc	al Soil Survey Da	ata
			Oth	er (Explain in Re	marks)
Remarks (As relevant, describe recent precipitation,	hydrologic moi	difications	local vans	itions etc.):	
Wetland hydrology is absent	. •				

							Data Plot #:	A11-B
							Wetland:	A11 Upland Plo
Project/Si	ite: Seattle T	acoma Airport - Master	Pian Update	•	Date:	9/19/98		
SOILS Soil Surv	vey Data:							
Map Unit	Name: Unr	napped				Drainage Class	:	
	· · · · · ·			•		-	ons Confirm Ma	oped Type?
l axonom:	y (Subgroup):					Yes N		
	escription:	-				"		<u>x</u>
epth nches)	Horizon	Matrix Color (Munsell Moist)	Mottle ((Munse	Color Il Moist)		Mottle Abundance/Cor		ture, Concretions,
-10	A1	10YR 4/3	•			•	Loar	n
D-16	A2	10YR 5/4				-	San	o loam
Hi Hi Su Pr Re Gle Hig	educing Condi eyed or Low-C gh Organic Co (Describe soil	Moisture Regime tions Chroma Colors Intent in Surface Layer disturbances, local val	nations, etc.)		Listed Listed Aquic I Organi Mottles Other (Explain in Rema	Soils List ric Soils List andy Soils rks)	
oil is dry t	o 16 inches. S	Soil is not wetland soil i	and is possib	ly fill D	oes not me	et hydric soil cri	teria.	
/ETLAN	ID DETER	MINATION						
drophyti	ic Vegetation		es	No _	<u>x</u>	ls this S	Sampling Point	Within a Wetland?
auc 2011	is Present? /drology Pres		es	No _	<u> </u>		'es No	, x

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): All three wetland parameters are absent.



Data Plot #: A12-A

WETL	AND DETE	RMINAT	ION Wetland:	A12
(Modified from: 1987	COF Wet	lands De	lineation Manual)	
(Modified from: 130)	OUL HE			
Project/Site: Seattle Tacoma Airport - Master Plan Upda	te	Date: 9/1	17/98	
Applicant/Owner: Port of Seattle		County:	King	
vestigator: Scott Rozenbaum and Kristie Dunkin		State: \	WA	
1987 Method			Community ID:	PSS
o Normal Circumstances exist on the site?	Yes X	No	Field Plot ID:	52-A
the site significantly disturbed (Atypical Situation)?	Yes	No X		
the area a potential Problem Area?	Yes	No X		
emarks (Explain sample location, disturbances, problet	m areas):			
Plant Species Athyrium filix-femina Lvsichiton amencanum Oemiena cerasiformis Ribes spp Rubus discolor Rubus spectabilis	10 10 15 20 30 20	Herb Herb Shrub Shrub Shrub Shrub Shrub	FACU FACU FACU FACU FACU FACU	
ercent of Dominant Species that are OBL. FACW, or except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. To indicates tracemarks (Describe disturbances, relevant local variation	FAC 66	effects, etc.):		welland is sharled by
ercent of Dominant Species that are OBL, FACW, or except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. To indicates trace emarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydropical maple rooted outside of the wetland.	FAC 66	effects, etc.):		wetland is shaded by a
ercent of Dominant Species that are OBL, FACW, or xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace	FAC 66 e. is, seasonal e hytic, the wet	ffects, etc.):	tion criteria is met. The	
ercent of Dominant Species that are OBL. FACW, or except FAC-). Include species noted (*) as showing perphological adaptations to wetlands. "T" indicates trace emarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydropial maple rooted outside of the wetland. YDROLOGY	FAC 66 e. is, seasonal e hytic, the wet	ffects, etc.):	tion criteria is met. The	
ercent of Dominant Species that are OBL, FACW, or except FAC-). Include species noted (*) as showing perphological adaptations to wetlands. "T" indicates trace emarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrople at maple rooted outside of the wetland. YDROLOGY ecorded Data (Describe in Remarks):	FAC 66 e. is, seasonal e hytic, the wet	ffects, etc.): land vegetal	tion criteria is met. The	
ercent of Dominant Species that are OBL, FACW, or keept FAC-). Include species noted (*) as showing prephological adaptations to wetlands. "T" indicates trace emarks (Describe disturbances, relevant local variation incegreater than 50% of the dominant plants are hydrople of maple rooted outside of the wetland. YDROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage	FAC 66 e. is, seasonal e hytic, the wet	ffects, etc.): land vegetal	tion criteria is met. The ology Indicators (Des	cribe in Remarks):
ercent of Dominant Species that are OBL. FACW, or except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace emarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrople of maple rooted outside of the wetland. YDROLOGY scorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	FAC 66 e. is, seasonal e hytic, the wet	ffects, etc.): land vegetat etland Hydro Primary Ind	tion criteria is met. The ology Indicators (Des dicators: Inundated	cribe in Remarks): 2 inches
ercent of Dominant Species that are OBL. FACW, or except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace emarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydropis of maple rooted outside of the wetland. YDROLOGY scorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	FAC 66 e. is, seasonal e hytic, the wet	ffects, etc.): land vegetat etland Hydro Primary Ind	ology Indicators (Des dicators: Inundated Saturated in Upper 18 Saturated in Upper 18 Water Marks	cribe in Remarks): 2 inches
ercent of Dominant Species that are OBL. FACW, or except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace emarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydropial maple rooted outside of the wetland. YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	FAC 66 e. is, seasonal e hytic, the wet	ffects, etc.): land vegetat etland Hydro Primary Ind	ology Indicators (Des dicators: Inundated Saturated in Upper 18 Water Marks Drift Lines	cribe in Remarks): 2 inches
ercent of Dominant Species that are OBL. FACW, or except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace emarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydropial maple rooted outside of the wetland. YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	FAC 66 e. is, seasonal e hytic, the wet	offects, etc.): And vegetate And Hydro Primary Ind X	ology Indicators (Des dicators: Inundated Saturated in Upper 18 Water Marks Drift Lines Sediment Deposits	cribe in Remarks): 2 inches 3 inches
recent of Dominant Species that are OBL. FACW, or recept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace smarks (Describe disturbances, relevant local variation are greater than 50% of the dominant plants are hydrople of maple rooted outside of the wetland. **TOROLOGY** Corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	FAC 66 a. s, seasonal e	ffects, etc.): land vegetat etland Hydro Primary Ind	ology Indicators (Des dicators: Inundated Saturated in Upper 18 Water Marks Drift Lines	cribe in Remarks): 2 inches 3 inches
ercent of Dominant Species that are OBL, FACW, or except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace emarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrople at maple rooted outside of the wetland. YDROLOGY Coorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	FAC 66 a. s, seasonal e	offects, etc.): Idand vegetate Idand Hydro Primary Ind X X	ology Indicators (Des dicators: Inundated Saturated in Upper 18 Water Marks Drift Lines Sediment Deposits	cribe in Remarks): 2 inches 3 inches
recent of Dominant Species that are OBL. FACW, or recept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace smarks (Describe disturbances, relevant local variation incegreater than 50% of the dominant plants are hydrople of maple rooted outside of the wetland. **TOROLOGY** Corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available **Id Observations: Depth of Surface Water: Depth to Free Water in Pit: **3 **Include Species that are OBL. FACW, or received (*) as showing the second of the wetland. **Torontocal variation of the wetland.** FAC 66 a. s, seasonal e	offects, etc.): Idand vegetate Idand Hydro Primary Ind X X	ology Indicators (Des dicators: Inundated Saturated in Upper 18 Water Marks Drift Lines Sediment Deposits Drainage Patterns in Marks	cribe in Remarks): 2 inches 3 inches Wetlands	
ercent of Dominant Species that are OBL. FACW, or xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T indicates trace emarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydropled maple rooted outside of the wetland. YDROLOGY Pecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available	FAC 66 a. s, seasonal e	offects, etc.): Idand vegetate Idand Hydro Primary Ind X X	ology Indicators (Des dicators: Inundated Saturated in Upper 18 Water Marks Drift Lines Sediment Deposits Drainage Patterns in Marks	cribe in Remarks): 2 inches 3 inches Wetlands equired): els in Upper 12 inches
ercent of Dominant Species that are OBL. FACW, or xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T indicates trace emarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydropled maple rooted outside of the wetland. YDROLOGY Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Peld Observations: Depth of Surface Water: None (in.) Depth to Free Water in Pit: 3 (in.)	FAC 66 a. s, seasonal e	offects, etc.): Idand vegetate Idand Hydro Primary Ind X X	ology Indicators (Des dicators: Inundated Saturated in Upper 18 Water Marks Drift Lines Sediment Deposits Drainage Patterns in the Indicators (2 or more re Oxidized Root Chann	cribe in Remarks): 2 inches 3 inches Wetlands equired): els in Upper 12 inches
ercent of Dominant Species that are OBL. FACW, or xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T indicates trace emarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydropled maple rooted outside of the wetland. YDROLOGY Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Peld Observations: Depth of Surface Water: None (in.) Depth to Free Water in Pit: 3 (in.)	FAC 66 a. s, seasonal e	offects, etc.): Idand vegetate Idand Hydro Primary Ind X X	clion criteria is met. The cology Indicators (Desdicators: Inundated Saturated in Upper 18 Water Marks Drift Lines Sediment Deposits Drainage Patterns in the color of the col	cribe in Remarks): 2 inches 3 inches Wetlands equired): els in Upper 12 inches s
ercent of Dominant Species that are OBL. FACW, or except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace emarks (Describe disturbances, relevant local variation incegreater than 50% of the dominant plants are hydropidal maple rooted outside of the wetland. YDROLOGY Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Peld Observations: Depth of Surface Water: Depth to Free Water in Pit: Depth to Saturated Soil: O (in.)	FAC 66 is, seasonal entryic, the wet. We	offects, etc.): Idand vegetat Interest of the secondary X Secondary	ology Indicators (Desdicators: Inundated Saturated in Upper 18 Water Marks Drift Lines Sediment Deposits Drainage Patterns in 19 Indicators (2 or more recoxidized Root Channel Water-Stained Leaves Local Soil Survey Date	cribe in Remarks): 2 inches 3 inches Wetlands equired): els in Upper 12 inches s
ercent of Dominant Species that are OBL. FACW, or xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T indicates trace emarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydropled maple rooted outside of the wetland. YDROLOGY Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Peld Observations: Depth of Surface Water: None (in.) Depth to Free Water in Pit: 3 (in.)	FAC 66 is, seasonal entry ic, the wet. We	offects, etc.): Idand vegetat Intland Hydro Primary Ind X Secondary X Cations, loca	ology Indicators (Desdicators: Inundated Saturated in Upper 18 Water Marks Drift Lines Sediment Deposits Drainage Patterns in 19 Indicators (2 or more recoxidized Root Channel Water-Stained Leaves Local Soil Survey Data Other (Explain in Remark variations, etc.):	cribe in Remarks): 2 inches 3 inches Wetlands equired): els in Upper 12 inches s a narks)

4							Data Pi	ot#:	A12-A
							Wetian	ıd:	A12
				•					
Project/S	Site: Seattle T	acoma Airport - Master	Plan U	pdate	_ Date:	9/17/98			····
SOILS Soil Su	rvey Data:								
Map Uni	it Name: <u>Unn</u>	napped				Drainage	: Class:		
						Field Obs	servations Confi	rm Map	ped Type?
Taxonon	ny (Subgroup):					Yes	No	NA	X
	Description:							- '*'	
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	-	ottie Color unsell Moisi	t)	Mottle Abundan	ce/Contrast		ure, Concretions, ospheres, etc.
)-5	A1	10YR 2/1				-		Muck	v loam
5-16	A2	2.5Y 4/1	5Y	3/1		Common, F	ine, Faint	Sand	y loam
16+	С	5Y 3/1				•		Grave	elly sandy loam
tydric S	oil Indicators:								
<u> </u>	Histosol				Listed	on Local I	Hydric Soils List		
+	tistic Epipedon			_			Hydric Soils List		
s	Sulfidic Odor			_			al Hydric Soils L		
P	Probable Aquic	Moisture Regime			X Aquic	Moisture F	Regime		
	Reducing Condi				Organ	ic Streakin	g in Sandy Soils	s	
	Sieyed or Low-(_	X Mottle	s			
<u>-х</u> -н	ligh Organic Co	ontent in Surface Layer			Other	(Explain in	Remarks)		
lemarks	(Describe soil	disturbances, local vari	ations.	etc.):					
		ons of sands and organi			yered. Soil	color and c	other hydric soil	indicato	rs meet the hydric
		· · · · · · · · · · · · · · · · · · ·							
VETLA	ND DETER	MINATION							
ydrophy	rtic Vegetation	Present? Ye	es _x	No		is	this Sampling	Point 1	Within a Wetland
							-		
ydric So	ils Present?	Υe	s X	No			Yes X		

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results):

The presence of all three parameters indicate this area is a wetland. The wetland is well defined by topographic and soils conditions.



Data Plot #:

A12/13-B

WETL	AND DETE	RMINATI	ON	Wetland:	A12/13 Upland
(Modified from: 1987				Manual)	
Project/Site: Seattle Tacoma Airport - Master Plan Upda	te	Date: 9/1	0/98		
Applicant/Owner: Port of Seattle		County:	King		
nvestigator: William Kleindi and Kristie Dunkin			VA.		
1987 Method 1989 Method		-	Com	munity ID:	Upland
o Normal Circumstances exist on the site?	Yes X	No		-	
the site significantly disturbed (Atypical Situation)?				Plot ID:	52/53-B
•	Yes		_		
the area a potential Problem Area?	Yes	No X	_		
emarks (Explain sample location, disturbances, problet the plot is in forested upland area on Parcel 317 adjacent	•	13.			
5 p. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.					
EGETATION (Dominant species are checked)					
Plant Species	% Cover	Stratum	Indicator		
1 Oemleria cerasiformis	80	Shrub	FACU	_	
2 Prunus laurocerasus	<u>T</u>	Shrub	NL		
3 Rubus discolor	10	Shrub	FACU	_	
4 Acer macrophyllum	70	Tree	FACU	_	
5 Ainus rubra	5	Tree	FAC	_	
6 Corylus comuta	5	Tree	FACU		
ccept FAC-). Include species noted (*) as showing	FAC 0			-	
cept FAC-). Include species noted (*) as showing prophological adaptations to wetlands. "T" indicates trace emarks (Describe disturbances, relevant local variation	FAC 0	•		_	
except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T' indicates trace emarks (Describe disturbances, relevant local variation in wetland vegetation criteria are not met since the area	FAC 0	•			
ccept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace imarks (Describe disturbances, relevant local variation in wetland vegetation criteria are not met since the area YDROLOGY	FAC 0 e. is, seasonal ef	y non-weti	and plants.	tors (De	scribe in Remarks):
ccept FAC-). Include species noted (*) as showing imphological adaptations to wetlands. To indicates trace marks. (Describe disturbances, relevant local variation is wetland vegetation criteria are not met since the area	FAC 0 e. es, seasonal ef is dominated to	y non-weti	and plants. Plogy Indica	tors (De	scribe in Remarks):
compt FAC-). Include species noted (*) as showing prophological adaptations to wetlands. "T" indicates trace imarks (Describe disturbances, relevant local variation in wetland vegetation criteria are not met since the area YDROLOGY (Describe in Remarks):	FAC 0 e. es, seasonal ef is dominated to	oy non-weth	and plants. Plogy Indica	tors (De	scribe in Remarks):
compt FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace imarks (Describe disturbances, relevant local variation in wetland vegetation criteria are not met since the area YDROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage	FAC 0 e. es, seasonal ef is dominated to	oy non-weth	and plants. plogy Indica licators: Inundated		
cocept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace traces traces (Describe disturbances, relevant local variation is wetland vegetation criteria are not met since the area (YDROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	FAC 0 e. es, seasonal ef is dominated to	oy non-weth	and plants. Dlogy Indica	in Upper 1	2 inches
cordet FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace traces traces (Describe disturbances, relevant local variation in wetland vegetation criteria are not met since the area of traces (Describe in Remarks):	FAC 0 e. es, seasonal ef is dominated to	oy non-weth	and plants. plogy Indica licators: Inundated Saturated	in Upper 1 in Upper 1	2 inches
cocept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace traces traces (Describe disturbances, relevant local variation is wetland vegetation criteria are not met since the area (YDROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	FAC 0 e. es, seasonal ef is dominated to	oy non-weth	and plants. plogy Indica licators: Inundated Saturated Saturated	in Upper 1 in Upper 1	2 inches
except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T' indicates trace emarks (Describe disturbances, relevant local variation in wetland vegetation criteria are not met since the area expected Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	FAC 0 e. es, seasonal ef is dominated to	oy non-weth	and plants. plogy Indica licators: Inundated Saturated Saturated Water Mai	in Upper 1 in Upper 1 ks	2 inches
emarks (Describe disturbances, relevant local variation in wetland vegetation criteria are not met since the area YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available	FAC 0 e. es, seasonal ef is dominated to	oy non-weth	and plants. plogy Indica licators: Inundated Saturated Saturated Water Mai	in Upper 1 in Upper 1 ks Deposits	2 inches 8 inches
except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. To indicates trace emarks (Describe disturbances, relevant local variation the wetland vegetation criteria are not met since the area expected Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	FAC 0 is, seasonal efficient dominated to the seasonal efficiency of the s	iand Hydro	and plants. plogy Indica licators: Inundated Saturated Saturated Water Mai Drift Lines Sediment Drainage F	in Upper 1 in Upper 1 ks Deposits Patterns in	2 inches 8 inches Wetlands
Accept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. To indicates trace temarks (Describe disturbances, relevant local variation to wetland vegetation criteria are not met since the area at a variation of the wetland vegetation criteria are not met since the area at a variation of the area at a variation of the control of the co	FAC 0 is, seasonal efficient dominated to the seasonal efficiency of the s	iand Hydro	and plants. plogy Indica licators: Inundated Saturated Saturated Water Mai Drift Lines Sediment	in Upper 1 in Upper 1 ks Deposits Patterns in	2 inches 8 inches Wetlands
recept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. To indicates trace or marks (Describe disturbances, relevant local variation to wetland vegetation criteria are not met since the area of the wetland vegetation criteria are not met since the area of the wetland vegetation criteria are not met since the area of the wetland vegetation criteria are not met since the area of the wetland vegetation criteria are not met since the area of the wetland vegetation criteria are not met since the area of the wetland vegetation criteria are not met since the area of the wetland vegetation criteria are not met since the area of the wetland vegetation criteria are not met since the area of the wetland vegetation criteria are not met since the area of the wetland vegetation criteria are not met since the area of the area of the wetland vegetation criteria are not met since the area of the area	FAC 0 is, seasonal efficient dominated to the seasonal efficiency of the s	iand Hydro	and plants. plogy Indications: Inundated Saturated Saturated Water Mail Drift Lines Sediment Drainage I	in Upper 1 in Upper 1 ks Deposits Patterns in	2 inches 8 inches Wetlands required):
except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. To indicates trace emarks (Describe disturbances, relevant local variation in wetland vegetation criteria are not met since the area expected Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	FAC 0 is, seasonal efficient dominated to the seasonal efficiency of the s	iand Hydro	and plants. Diogy Indications: Inundated Saturated Water Mar Drift Lines Sediment Drainage I	in Upper 1	2 inches 8 inches Wetlands required): nels in Upper 12 inches
xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace emarks (Describe disturbances, relevant local variation ne wetland vegetation criteria are not met since the area YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available aid Observations: Depth to Free Water in Pit: >18 (in.)	FAC 0 is, seasonal efficient dominated to the seasonal efficiency of the s	iand Hydro	and plants. Diogy Indica licators: Inundated Saturated Water Mai Drift Lines Sediment Drainage F Indicators (2 Oxidized F Water-Sta	in Upper 1 in Upper 1 iks Deposits Patterns in 2 or more r Root Chanined Leave	2 inches 8 inches Wetlands required): nels in Upper 12 inches
except FAC-). Include species noted (*) as showing torphological adaptations to wetlands. "T' indicates trace temarks (Describe disturbances, relevant local variation the wetland vegetation criteria are not met since the area second Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available eld Observations: Depth to Free Water in Pit: >18 (in.)	FAC 0 is, seasonal efficient dominated to the seasonal efficiency of the s	iand Hydro	and plants. plogy Indications: Inundated Saturated Water Mar Drift Lines Sediment Drainage Fundicators (2 Oxidized F Water-Sta Local Soil	in Upper 1 in Upper 1 iks Deposits Patterns in 2 or more r Root Chanined Leave Survey Da	2 inches 8 inches Wetlands equired): nels in Upper 12 incheses
except FAC-). Include species noted (*) as showing torphological adaptations to wetlands. To indicates trace temarks (Describe disturbances, relevant local variation the wetland vegetation criteria are not met since the area second Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available eld Observations: Depth of Surface Water: Depth to Free Water in Pit: Depth to Saturated Soil: None	FAC 0 is, seasonal efficient dominated to the seasonal efficient dominated to the seasonal efficiency dominated to the season dominated to the	iand Hydro	and plants. plogy Indications: Inundated Saturated Water Mail Drift Lines Sediment Drainage Indicators (2 Oxidized F Water-Stal Local Soil Other (Exp.	in Upper 1	2 inches 8 inches Wetlands equired): nels in Upper 12 incheses
Aerial Photograph Other X No Recorded Data Available eld Observations: Depth of Surface Water: None (in.) Depth to Free Water in Pit: >18 (in.)	FAC 0 is, seasonal efficient dominated to the seasonal efficient dominated to the seasonal efficiency dominated to the season dominated to the	iand Hydro	and plants. plogy Indications: Inundated Saturated Water Mail Drift Lines Sediment Drainage Indicators (2 Oxidized F Water-Stal Local Soil Other (Exp.	in Upper 1	2 inches 8 inches Wetlands equired): nels in Upper 12 incheses

						Data Pi	ot #:	A12/13-B
						Wetlan	ıd:	A12/13 Upland P
Project/Si	te: Seattle T	acoma Airport - Master P	ian Update	Date:	9/10/98			
SOILS Soil Surv	<u> </u>			00.0				
Map Unit	-	napped			Drainage Ci	ass:		
					_	vations Confi	ım Map	ped Type?
Taxonom	y (Subgroup):				Yes	No	NA	_ X
Profile De	escription:		, , , , <u>, , , , , , , , , , , , , , , </u>					
Depth (inches)	Horizon Designation	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)		Mottle Abundance/	Contrast		ure, Concretions, ospheres, etc.
0-3	0	10YR 2/2	-		•		Fibrio	:
3-7	A	10YR 3/2	-		-		Sand	
7-11	В	10YR 5/3	_				Sand	
>11	С	10YR 5/4	-				Sand	
Hydric So	il Indicators:							
Hi:	stosol			Listed	on Local Hyd	ric Soils List		
	stic Epipedon			_	on State Hyd			
	Ifidic Odor			Listed	on National H	tydric Soils L	ist	
		Moisture Regime		Aquic	Moisture Reg	ime		
	ducing Condi			Organi	c Streaking in	Sandy Soils	5	
		Chroma Colors		Mottles				
		ontent in Surface Layer		Other (Explain in Re	marks)		
		disturbances, local varia oil are present.	tions, etc.):					

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): This area is an upland since all wetland parameters are absent.

Yes

Yes

Hydrophytic Vegetation Present?

Wetland Hydrology Present?

Hydric Soils Present?

Is this Sampling Point Within a Wetland?

Yes ____ No _X__

4				Data Plot #	r: A13-A
L. METI	AND DEED	- CALINI A	TION	Wetland:	A13
	AND DETE			- MN	<u> </u>
(Modified from: 198	/ COE Wet	isnos i	Jenneation	i Manuai)	
roject/Site: Seattle Tacoma Airport - Master Plan Upda	ate	Date:	9/17/98		
pplicant/Owner: Port of Seattle		County:	King		
vestigator: Scott Rozenbaum and Kristie Dunkin		State:	WA		
1987 Method			C	ommunity ID:	PFO
o Normal Circumstances exist on the site?	Yes X	No .	Fi	eld Plot ID: 5	53-A
the site significantly disturbed (Atypical Situation)?	Yes	No .	X		
the area a potential Problem Area?	Yes	No	X		
1. Athynum filix-femina	25	Herb	FAC	_	
2 Convolvulus arvensis 3 Equisetum telmateia	25 25 85 15	Herb Herb	NL FACW	_	
2 Convolvulus arvensis	25 85	Herb	NL		
2 Convolvulus arvensis 3 Equisetum telmateia 4 Prunus Laurolata 5 Rubus discolor 6 Alnus rubra	25 85 15 65 80	Herb Herb Shrub	NL FACW NL		
Equisetum termateia Frunus Laurolata Rubus discolor Alnus rubra ercent of Dominant Species that are OBL, FACW, or except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variation be vegetation in the wetland is disturbed by fill. Since gri	25 85 15 65 80 r FAC e. 60 e. 60	Herb Herb Shrub Shrub Tree	NL FACW NL FACU FAC	nts are hydrop	hytic, the wetland
2 Convolvulus arvensis 3 Equisetum teimateia 4 Prunus Laurolata 5 Rubus discolor 6 Alnus rubra ercent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variation be vegetation in the wetland is disturbed by fill. Since grittena is met.	25 85 15 65 80 r FAC e. 60 e. 60	Herb Herb Shrub Shrub Tree	NL FACW NL FACU FAC	nts are hydrop	hytic, the wetland
2 Convolvuius arvensis 3 Equisetum teimateia 4 Prunus Laurolata 5 Rubus discolor 6 Alnus rubra ercent of Dominant Species that are OBL, FACW, or xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T indicates tracemarks (Describe disturbances, relevant local variation be vegetation in the wetland is disturbed by fill. Since gritteria is met. YDROLOGY	25 85 15 65 80 r FAC e. 60 e. 60 e. s. seasonal e	Herb Herb Shrub Shrub Tree	NL FACW NL FACU FAC C.):		
2 Convolvulus arvensis 3 Equisetum termateia 4 Prunus Laurolata 5 Rubus discolor 6 Alnus rubra ercent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variation are vegetation in the wetland is disturbed by fill. Since grateria is met. YDROLOGY ecorded Data (Describe in Remarks):	25 85 15 65 80 r FAC e. 60 e. 60 e. s. seasonal e	Herb Herb Shrub Shrub Tree ffects, etc. % of the contained Hy	NL FACW NL FACU FAC C.):		hytic, the wetland
2 Convolvulus arvensis 3 Equisetum termateia 4 Prunus Laurolata 5 Rubus discolor 6 Alnus rubra ercent of Dominant Species that are OBL, FACW, or except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variation in every example of the wetland is disturbed by fill. Since grateria is met. YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage	25 85 15 65 80 r FAC e. 60 e. 60 e. s. seasonal e	Herb Herb Shrub Shrub Tree ffects, etc. % of the contained Hy	NL FACW NL FACU FAC c.): dominant plaindicators:	cators (Des	
2 Convolvulus arvensis 3 Equisetum telmateia 4 Prunus Laurolata 5 Rubus discolor 6 Alnus rubra ercent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing porphological adaptations to wetlands. "T" indicates trace emarks (Describe disturbances, relevant local variation in the wetland is disturbed by fill. Since grateria is met. YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	25 85 15 65 80 r FAC e. 60 e. 60 e. s. seasonal e	Herb Herb Shrub Shrub Tree offects, etc. of the december of t	NL FACW NL FACU FAC c.): dominant plai drology indicators: Inundat	cators (Des	cribe in Remarks
2. Convolvulus arvensis 3. Equisetum teimateia 4. Prunus Laurolata 5. Rubus discolor 6. Alnus rubra ercent of Dominant Species that are OBL, FACW, or except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace emarks (Describe disturbances, relevant local variation in every equation in the wetland is disturbed by fill. Since grateria is met. YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage	25 85 15 65 80 r FAC e. 60 e. 60 e. s. seasonal e	Herb Herb Shrub Shrub Tree ffects, etc. % of the contained Hy	NL FACW NL FACU FAC c.): dominant plai drology indicators: Inundat Saturate	cators (Des	cribe in Remarks

Recorded Data (Describe in I	Remarks):	W	etland Hydro	logy Indicators	(Describe in Remarks):
Stream, Lake, or	Tide Gage		Primary Indi		
Aerial Photograp	oh .			Inundated	
X Other			X	Saturated in Up	per 12 inches
No Recorded Da	ta Available			Saturated in Up	per 18 inches
				Water Marks	
				Drift Lines	
				Sediment Depo:	sits
				Drainage Patter	ns in Wetlands
Field Observations:				, -	
Depth of Surface Water:	None	in)	Secondary	indicators (2 or m	nore required):
Depth to Free Water in Pit:	9	ın.)	-		
Depth to Saturated Soil:	0	ın.)		•	Channels in Upper 12 inches
				Water-Stained L	
				Local Soil Surve	ey Data
				Other (Explain is	n Remarks)
Remarks (As relevant, descri	De recent precip	ation, hydrologic modi	fications, loca	•	•

4 6							Data F	Plot #:	A13-A
							Wetiz	nd:	A13
	-								
roject/Sit	e: Seattle 1	acoma Airport - Master	Plan Upd	ate	Date:	9/17/98			
SOILS Soil Surv	ey Data:								
Map Unit I	Name: Unn	napped				Drainage C	lass:		
						Field Obser	vations Con	firm Map	ped Type?
axonomy	(Subgroup):					Yes	No	_ NA	<u>x</u>
rofile De	scription:								
epth nches)	Horizon Designation	Matrix Color (Munsell Moist)		e Color sell Moist)		Mottle Abundance	Contrast	_	ure, Concretions ospheres, etc.
9	A	10YR 2/1				-	_	Muck	v sandy loam
16	С	N5 4/1	2.5Y 6	V3		Many, Large, F	rominent	Cobb	ly sand
ydric Soi	I Indicators:	:							
His	itosol				Listed	on Local Hy	dric Soils Lis	t	
His	tic Epipedon					on State Hy			
X Sul	fidic Odor					on National			
		Moisture Regime			XAquic	Moisture Reg	ime		
	ducing Condi				Organ	ic Streaking i	n Sandy Soil	s	
		Chroma Colors			Mottle	_			
		ontent in Surface Layer			Other	(Explain in R	emarks)		
marks (Describe soil	disturbances, local var	iations, et	c.):					
iil color ar	nd other hydr	ic soil indicators meet t	he hydric	soil criteria) .				
/ETI AN	n neten	MINATION							
		·							
	Vegetation	Present? You	es <u>x</u>	No -		is ti	nis Samplin	g Point	Within a Wetlar
uric 2011	Present?	Y	es X	No					
	drology Pre		~ ~	• ••• -			Yes X	No	

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): The presence of all three parameters indicate this area is a wetland.



		_		Wetland	d: A	14a
WE	TLAND DE	TERMINA	ATION			
(Modified from: 1	987 COE W	etiands	Delineat	ion Manual	l)	
Project/Site Seattle Tacoma Airport - Master Plan Ui	pdate	Date:	9/21/99			
Applicant/Owner: Port of Seattle		County:				
investigator: William Kleindl, Pat Tougher		State:	WA			
✓ 1987 Method				Community II	D: PFO	
Do Normal Circumstances exist on the site?	Yes X	No		Community II		
is the site significantly disturbed (Atypical Situation)?	Yes	No No	X	Field Plot ID:	A14a:A	
is the area a potential Problem Area?		-				
Remarks (Explain sample location, disturbances, pro	Yes	No .	<u> </u>			
Netland A14 is bisected by a driveway between 326 ar		and A14a is	located on	Parcel 326.		
VEGETATION (Dominant species are checked	`	<u> </u>				
Plant Species	″ % Co	ver Stratu	m Indic	ator		
Athynum filix-femina	20	Herb	FAC+			
2 Carex obnupta	5	Herb	OBL			
3 Equisetum telmateia	60	Herb	FACV	v		
4 Lvsichiton americanum	5	Herb	OBL			
		Herb	FACL	<u></u>		
	20	Charle .	546			
7 Rubus spectabilis	60	Shrub	FACL			
Rubus discolor Rubus spectabilis Alnus rubra ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing	60 30 100 or FAC	Shrub Shrub Tree	FACL FAC+ FAC			
Rubus discolor Rubus spectabilis Rubus spectabilis Rubus rubra ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing inorphological adaptations to wetlands. "T" indicates tra	60 30 100 or FAC ace.	Shrub Tree 66	FAC+ FAC			
Rubus discolor Rubus spectabilis Alnus rubra ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing forphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local vanations greater than 50% of the dominant plants are hydrogeneous processes."	60 30 100 or FAC ace.	Shrub Tree 66	FAC+ FAC			
Rubus discolor Rubus spectabilis Rubus spectabilis Rubus rubra ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing corphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variations are hydromorphical plants "	or FAC ace. 60 30 100 cor FAC ace. 6 ace. fons, seasona cophytic, the w	Shrub Tree 66 I effects, etc	FAC+ FAC	na is met.		
Rubus discolor Rubus speciabilis Alnus rubra ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates training emarks (Describe disturbances, relevant local variations are greater than 50% of the dominant plants are hydromydroded Data (Describe in Remarks):	or FAC ace. 60 30 100 cor FAC ace. 6 ace. fons, seasona cophytic, the w	Shrub Tree 66 I effects, etcetland vege Vetland Hy	FAC+ FAC c.): ttation crite		escribe in F	Remarks);
Rubus discolor Rubus speciabilis Alnus rubra ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variations are greater than 50% of the dominant plants are hydromythis proceeded Data (Describe in Remarks): Stream, Lake, or Tide Gage	or FAC ace. 60 30 100 cor FAC ace. 6 ace. fons, seasona cophytic, the w	Shrub Tree 66 I effects, etcetland vege Vetland Hy	FAC+ FAC c.): Intation crite drology in Indicators:	na is met.	escribe in F	Remarks):
Rubus discolor Rubus speciabilis Alnus rubra Percent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variations are greater than 50% of the dominant plants are hydromydrodd Data (Describe in Remarks):	or FAC ace. 60 30 100 cor FAC ace. 6 ace. fons, seasona cophytic, the w	Shrub Tree 66 I effects, etcetland vege Vetland Hy	FAC+ FAC c.): tation crite drology in Indicators: Inund	na is met. dicators (De		Remarks):
Rubus discolor Rubus speciabilis Alnus rubra ercent of Dominant Species that are OBL, FACW, xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates training greater than 50% of the dominant plants are hydromythic plants. The corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph	or FAC ace. 60 30 100 cor FAC ace. 6 ace. fons, seasona cophytic, the w	Shrub Tree 66 I effects, etcetland vege Vetland Hy Primary	FAC+ FAC c.): tetation crite drology in Indicators: Inund Satura	na is met. dicators (De	12 inches	Remarks);
Rubus discolor Rubus spectabilis Rubus rubra errecent of Dominant Species that are OBL. FACW. except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydrocythypecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other	or FAC ace. 60 30 100 cor FAC ace. 6 ace. fons, seasona cophytic, the w	Shrub Tree 66 I effects, etcetland vege Vetland Hy Primary	c.): station crite drology in indicators: Inund Satura	na is met. dicators (De	12 inches	Remarks):
Rubus discolor Rubus spectabilis Rubus spectabilis Rubus rubra ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing corphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydromorphological plants are hydromorphological (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other	or FAC ace. 60 30 100 cor FAC ace. 6 ace. fons, seasona cophytic, the w	Shrub Tree 66 I effects, etcetland vege Vetland Hy Primary	c.): tation crite drology in Indicators: Inund Satura Water Drift L	na is met. dicators (Defended in Upper 1 december 1 december 2 de	12 inches	Remarks):
Rubus discolor Rubus spectabilis Rubus spectabilis Rubus rubra ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing corphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydromorphological plants are hydromorphological (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other	or FAC ace. 60 30 100 cor FAC ace. 6 ace. fons, seasona cophytic, the w	Shrub Tree 66 I effects, etc etland vege Vetland Hy Primary	drology In Indicators: Inund Satura Satura Water Drift L Sedim	na is met. dicators (Definition of the content of	12 inches 18 inches	
Rubus discolor Rubus speciabilis Rubus speciabilis Rubus rubra ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing forphological adaptations to wetlands. "T" indicates training emarks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydromatic processes of the dominant plants are hydromatic processes. Stream, Lake, or Tide Gage Aenal Photograph Other X No Recorded Data Available	or FAC ace. 60 30 100 cor FAC ace. 6 ace. fons, seasona cophytic, the w	Shrub Tree 66 I effects, etcetland vege Vetland Hy Primary	drology In Indicators: Inund Satura Satura Water Drift L Sedim	na is met. dicators (Defended in Upper 1 december 1 december 2 de	12 inches 18 inches	
Rubus discolor Rubus speciabilis Alnus rubra ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing forphological adaptations to wetlands. "T" indicates training errarks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydromythe proceeded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other X No Recorded Data Available and Observations: Depth of Surface Water: None (in.)	or FAC ace. 60 30 100 cor FAC ace. 6 ace. fons, seasona cophytic, the w	Shrub Tree 66 I effects, etcetland vege Vetland Hy Primary X	drology In Indicators: Inund Satura Water Drift L Sedim Draina	na is met. dicators (Definition of the content of	12 inches 18 inches Wetlands	
Rubus discolor Rubus speciabilis Alnus rubra ercent of Dominant Species that are OBL. FACW. except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates training greater than 50% of the dominant plants are hydromorphological excepts and the do	or FAC ace. 60 30 100 cor FAC ace. 6 ace. fons, seasona cophytic, the w	Shrub Tree 66 I effects, etcetland vege Vetland Hy Primary X X Seconda	drology in Indicators: Vater Draina Ty Indicators	na is met. dicators (Defauted in Upper diated	12 inches 18 inches i Wetlands required):	
Rubus discolor Rubus speciabilis Alnus rubra ercent of Dominant Species that are OBL. FACW. except FAC-). Include species noted (*) as showing inorphological adaptations to wetlands. "T" indicates training errarks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydrology ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available eld Observations: Depth of Surface Water: None (in.)	or FAC ace. 60 30 100 cor FAC ace. 6 ace. fons, seasona cophytic, the w	Shrub Tree 66 I effects, etcetland vege Vetland Hy Primary X	c.): tation crite drology in indicators: Inund Satura Water Drift L Sedim Draina ry Indicato Oxidiz	na is met. dicators (Dealed in Upper disted in Upper distension in Up	12 inches 18 inches i Wetlands required): nels in Upi	
Rubus discolor Rubus speciabilis Alnus rubra Percent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T' indicates traitemarks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydrology IYDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other X No Recorded Data Available eld Observations: Depth of Surface Water: Depth to Free Water in Pit: None (in.) Depth to Setward Carle	or FAC ace. 60 30 100 cor FAC ace. 6 ace. fons, seasona cophytic, the w	Shrub Tree 66 I effects, etcetland vege Vetland Hy Primary X X Seconda	c.): tation crite drology In Indicators: Inund Satura Water Drift L Sedim Draina ry Indicato Oxidiz Water	na is met. dicators (Dealed in Upper in Marks in Eastern Deposits	12 inches 18 inches i Wetlands required): nels in Uppes	
Rubus discolor Rubus speciabilis Rubus speciabilis Recept FAC-). Include species that are OBL. FACW, except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T" indicates trackers (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydrology decorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other X No Recorded Data Available Reld Observations: Depth of Surface Water: None (in.) Depth to Free Water in Pit: >15 (in.)	or FAC ace. 60 30 100 cor FAC ace. 6 ace. fons, seasona cophytic, the w	Shrub Tree 66 I effects, etcetland vege Vetland Hy Primary X X Seconda	c.): etation crite drology In Indicators: Inund Satura Water Drift L Sedim Draina ry Indicato Oxidiz Water Local	na is met. dicators (Dealed in Upper disted in Upper distension in Up	12 inches 18 inches i Wetlands required): nels in Upi es	

1 1							Data i	Piot #:	A14a:A
							Wetis	ind:	A14a
oject/Site:	Seattle Ta	acoma Airport - Master I	Plan Upd	ate	Date:	9/21/99			
OILS oil Survey	Data:								
ap Unit Na	me: <u>Unm</u>	napped				Drainage	Class:		
			***************************************			Field Ob:	servations Cor	nfirm Map	ped Type?
sxonomy (S	Subgroup):					Yes	No	NA	_x_
ofile Desc	ription:								
	lorizon esignation	Matrix Color (Munsell Moist)		ie Color isell Moist)		Mottle Abundan	ce/Contrast		ire, Concretions ospheres, etc.
0	i	10YR 4/2	-			-		Sitty L	.oam
10 A		10YR 3/1				-		Silty L	.oam
18+ B		10YR 3/1				•		Fine S	Sandy Silt
dric Soil I	ndicators	:							
Histo					Listed	on Local	Hydric Soils Li	st	
	: Epipedon						Hydric Soils Lis		
	lic Odor	Moisture Regime					al Hydric Soils	List	
	cing Condi	•				Moisture f	kegime ng in Sandy So	ile.	
	-	Chroma Colors			Mottle		ig in Sandy Sc	иіз	
		ontent in Surface Layer				_	Remarks)		
marks (De	escribe soi	l disturbances, local vari				(=:: -::::	, remarks,		
il color and	other hydi	ric soil indicators meet ti	e hydno	soil criteria					
ETLAND	DETER	MINATION							
drophytic \	Vegetation	Present? Ye	s X	No		1	s this Sampli	ng Point	Within a Wetla
dric Soils f	Present?	Ye	s X	No -					
							Yes	X No	

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): The presence of all three parameters indicate this area is a wetland.



L)	AND DETE	DAJINI A T	Wetland: A14b
_	AND DETEI		
(Modified from: 198	7 COE Weti	ands De	elineation manual)
Project/Site: Seattle Tacoma Airport - Master Plan Upda	ite	Date: 9/	21/99
Applicant/Owner: Port of Seattle		County:	King
Investigator: William Kleindl, Pat Tougher		State:	WA
✓ 1987 Method			Community ID: PFO
Do Normal Circumstances exist on the site?	Yes X	No _	— Field Plot ID: A14b:A
Is the site significantly disturbed (Atypical Situation)?	Yes	No _X	<
Is the area a potential Problem Area?	Yes	No x	<u> </u>
Remarks (Explain sample location, disturbances, proble	m areas):		
Wetland A14 is bisected by a driveway between 326 and	327. Wetland	A14b is loc	cated on Parcel 327.
, ,			
VEGETATION Prominant species are checked)			
Plant Species	% Cover	Stratum	Indicator
✓ 1. Athyrium filix-femina		Herb	FAC+
2 Carex obnupta		Herb	OBL
3 Convolvulus arvensis		Herb	NL SACUL
4 Equisetum termatera	40 20	Herb Herb	FACW+
6 Ranunculus repens	$\frac{20}{5}$	Herb	FACW
6 Ranunculus repens 7 Rubus discolor	 3 0	Shrub	FACU
✓ 8 Alnus rubra	40	Tree	FAC
Percent of Dominant Species that are OBL, FACW, or	FAC		
(except FAC-). Include species noted (*) as showing	80		
morphological adaptations to wetlands. "T" indicates trace	e		
Remarks (Describe disturbances, relevant local variation	ns, seasonal ef	fects, etc.)) :
Since greater than 50% of the dominant plants are hydrop	phytic, the wetla	and vegeta	ation criteria is met.
HYDROLOGY	*********		
Recorded Data (Describe in Remarks):	Wet	land Hydi	rology Indicators (Describe in Remarks):
Stream, Lake, or Tide Gage		Primary in	
Aerial Photograph		, , , , , , , , , , , , , , , , , , , ,	Inundated
Other		X	Saturated in Upper 12 inches
X No Recorded Data Available			Saturated in Upper 18 inches
A No Necolded Data Available			Water Marks
			Drift Lines
			Sediment Deposits
		X	Drainage Patterns in Wetlands
Field Observations:			
Depth of Surface Water: None (in.) Depth to Free Water in Pit: 10 (in.)	:	Secondary	/ Indicators (2 or more required):
Depth to Saturated Soil: 0 (in.)		X	Oxidized Root Channels in Upper 12 inches
(III.)			Water-Stained Leaves
			Local Soil Survey Data
			Other (Explain in Remarks)
Remarks (As relevant, describe recent precipitation, hyd	troionic modific	ntions is:	nal variations, etc. l
The presence of soil saturation to surface, shallow water to	able and attac	ations, loc	cal variations, etc.):
o. co. co. co. co. co. co. co. co. co. c	aule, and other	maicators	s sausiies ine welland hydrology criteria.

Project/Site: Seattle Tacoma Airport - Master Plan Update Date: 9/21/99 SOILS SOILS SOILS SOILS SOILS Description: Depth Honzon Matrix Color (Munsell Moist) Designation (Munsell Moist) A 10YR 2/1 A 10YR 2/1 B 10YR 4/1 10YR 5/6 Common, Coarse, Distinct Fine Sandy Site Fine Sand Hydric Soil Indicators: Histosol Listed on Local Hydric Soils List Listed on State Hydric Soils List X Sulfidic Odor Listed on State Hydric Soils List X Sulfidic Odor Listed on National Hydric Soils List Reducing Conditions Gleyed or Low-Chroma Colors X High Organic Content in Surface Layer Other (Explain in Remarks) Brainage Class: Field Observations Confirm Mapped Type? Texture, Concrete Rhizospheres, etc. Texture, Concrete Rhizospheres, etc. Texture, Concrete Rhizospheres, etc. Common, Coarse, Distinct Fine Sand Viction Soils List Listed on Local Hydric Soils List Listed on State Hydric Soils List Aquic Moisture Regime Reducing Conditions Gleyed or Low-Chroma Colors X Mottles Other (Explain in Remarks)							Data Plot	#:	A14b:A
SOIL S Soil Survey Data: Map Unit Name: Unmapped							Wetland:		A14b
Ap Unit Name: Unmapped	Project/Site	e: Seattle T	acoma Airport - Master P	ian Update	Date:	9/21/99			
Ap Unit Name: Unmapped Drainage Class: Field Observations Confirm Mapped Type?	SOILS								
Field Observations Confirm Mapped Type? Yes No NA X Tofile Description: Pepth Horizon Designation (Munsell Moist) (Munsell Moist) Abundance/Contrast Rhizospheres, etc. Pepth Horizon Designation (Munsell Moist) (Munsell Moist) Abundance/Contrast Rhizospheres, etc. Pepth Horizon Matrix Color (Munsell Moist) (Munsell Moist) Abundance/Contrast Rhizospheres, etc. Pepth Horizon Matrix Color (Munsell Moist) Mottle Color (Munsell Moist) Abundance/Contrast Rhizospheres, etc. Pepth Horizon Matrix Color (Munsell Moist) Color (Munsell Moist) Abundance/Contrast Rhizospheres, etc. Pepth Horizon Mottle Color (Munsell Moist) Abundance/Contrast Rhizospheres, etc. Pepth Horizon Mottle Color (Munsell Moist) Abundance/Contrast Rhizospheres, etc. Pepth Horizon Mottle Color (Munsell Moist) Abundance/Contrast Fire Sandy Silt (Pine Sandy Soils (Pine Sa	Soil Surve	y Data:							
Faxonomy (Subgroup): Profile Description: Designation Matrix Color (Munsell Moist) Mottle Color (Munsell Moist) Abundance/Contrast Rhizospheres, etc. 1-11 A 10YR 2/1 Mucky Loam 1-17 B 10YR 4/1 10YR 4/6 Common, Coarse, Distinct Fine Sandy Sitt 7-18+ C 10YR 5/1 10YR 5/6 Common, Coarse, Distinct Fine Sand 1-18- Soil Indicators: Histosol Listed on Local Hydric Soils List Histic Epipedon Listed on State Hydric Soils List X Sulfidic Odor Listed on National Hydric Soils List X Sulfidic Odor Listed on National Hydric Soils List Reducing Conditions Organic Streaking in Sandy Soils Gleyed or Low-Chroma Colors X Mottles X High Organic Content in Surface Layer Other (Explain in Remarks)	vlap Unit N	lame: <u>Unrr</u>	napped			Drainage Class	:		
Profile Description: Depth Honzon Designation (Munsell Moist) (Munsell Moist) Mottle Color (Munsell Moist) Abundance/Contrast Rhizospheres. etc. 11 A 10YR 2/1 Mucky Loam 1-17 B 10YR 4/1 10YR 4/6 Common. Coarse. Distinct Fine Sandy Sitt 7-18+ C 10YR 5/1 10YR 5/6 Common. Coarse. Distinct Fine Sand Designation (Munsell Moist) Mucky Loam 1-18- Listed on Local Hydric Soils List Histosol Listed on Local Hydric Soils List Histic Epipedon Listed on State Hydric Soils List X Sulfidic Odor Listed on National Hydric Soils List Probable Aquic Moisture Regime Aquic Moisture Regime Reducing Conditions Organic Streaking in Sandy Soils Gleyed or Low-Chroma Colors X Mottles X High Organic Content in Surface Layer Other (Explain in Remarks)						Field Observation	ons Confirm	Марр	ed Type?
Depth Horizon Designation (Munsell Moist) (Munsell Moist) Mottle Color (Munsell Moist) Abundance/Contrast Rhizospheres. etc 11	Гахопоту	(Subgroup):				Yes No	o	NA	_ x
Inches) Designation (Munsell Moist) (Munsell Moist) Abundance/Contrast Rhizospheres, etc. Inches Designation (Munsell Moist) (Munsell Moist) Abundance/Contrast Rhizospheres, etc. Inches Designation (Munsell Moist) (Munsell Moist) Abundance/Contrast Rhizospheres, etc. Inches Designation (Munsell Moist) (Munsell Moist) Abundance/Contrast Rhizospheres, etc. Inches Designation (Munsell Moist) (Munsell Moist) Abundance/Contrast Rhizospheres, etc. Inches Designation (Munsell Moisture Sandy Soils List Common, Coarse, Distinct Fine Sandy Soils Common, Coarse, Distinct Fine Sandy Soils List Common, Coarse, Distinct Fine Sandy Soils Common, Coarse, Distinct Fine Sandy Soils Common, Coarse, Distinct Fine Sandy Soils Coarse Coar	Profile Des	scription:							
1-17 B 10YR 4/1 10YR 4/6 Common. Coarse. Distinct Fine Sandy Silt 7-18+ C 10YR 5/1 10YR 5/6 Common. Coarse. Distinct Fine Sand lydric Soil Indicators: Histosol Histic Epipedon Listed on Local Hydric Soils List Listed on State Hydric Soils List X Sulfidic Odor Listed on National Hydric Soils List Probable Aquic Moisture Regime Aquic Moisture Regime Reducing Conditions Gleyed or Low-Chroma Colors X High Organic Content in Surface Layer Other (Explain in Remarks)	•	_					trast	_	
7-18+ C 10YR 5/1 10YR 5/6 Common. Coarse, Distinct Fine Sand lydric Soil Indicators: Histosol Listed on Local Hydric Soils List Histic Epipedon Listed on State Hydric Soils List X Sulfidic Odor Listed on National Hydric Soils List Probable Aquic Moisture Regime Aquic Moisture Regime Reducing Conditions Organic Streaking in Sandy Soils Gleyed or Low-Chroma Colors X Mottles X High Organic Content in Surface Layer Other (Explain in Remarks)	-11	Α	10YR 2/1	-		-		Mucky	Loam
lydric Soil Indicators: Histosol Histic Epipedon Listed on Local Hydric Soils List Listed on State Hydric Soils List Listed on National Hydric Soils List Listed on National Hydric Soils List Aquic Moisture Regime Reducing Conditions Organic Streaking in Sandy Soils Gleyed or Low-Chroma Colors X High Organic Content in Surface Layer Other (Explain in Remarks)	1-17	В	10YR 4/1	10YR 4/6		Common. Coarse. (Distinct	Fine S	andy Sitt
Histosol Listed on Local Hydric Soils List Listed on State Hydric Soils List Listed on State Hydric Soils List Listed on National Hydric Soils List Listed on National Hydric Soils List Probable Aquic Moisture Regime Aquic Moisture Regime Organic Streaking in Sandy Soils Gleyed or Low-Chroma Colors X Mottles High Organic Content in Surface Layer Other (Explain in Remarks)	7-18+	С	10YR 5/1	10YR 5/6		Common. Coarse, I	Distinct	Fine S	and
Histic Epipedon Listed on State Hydric Soils List X Sulfidic Odor Listed on National Hydric Soils List Probable Aquic Moisture Regime Aquic Moisture Regime Organic Streaking in Sandy Soils Gleyed or Low-Chroma Colors X Mottles X High Organic Content in Surface Layer Other (Explain in Remarks)					Listed	on Local Hydric	Soils List		
Probable Aquic Moisture Regime Reducing Conditions Gleyed or Low-Chroma Colors X High Organic Content in Surface Layer Aquic Moisture Regime Organic Streaking in Sandy Soils X Mottles Other (Explain in Remarks)	His	tic Epipedon				•			
Reducing Conditions Gleyed or Low-Chroma Colors X High Organic Content in Surface Layer Organic Streaking in Sandy Soils Mottles Other (Explain in Remarks)					Listed	on National Hydr	ic Soils List		
Gleyed or Low-Chroma Colors X Mottles X High Organic Content in Surface Layer Other (Explain in Remarks)				-	_				
X High Organic Content in Surface Layer Other (Explain in Remarks)		_			- .		indy Soils		
				<u>X</u>	_				
emarks (Describe soil disturbances, local variations, etc.):			-		_ Other	(Explain in Rema	rks)		
oil color and other hydric soil indicators meet the hydric soil criteria.									

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): The presence of all three parameters indicate this area is a wetland.

Hydrophytic Vegetation Present?

Wetland Hydrology Present?

Hydric Soils Present?

Is this Sampling Point Within a Wetland?

Yes X No

Parametrix, Inc



Data Plot #:

A14:B

	WETL	AND DET	ERMINATI	Wetiand ION	A14 Upland P
— (Modi				lineation Manual)
Project/Site: Seattle Tacoma Airport				21/99	
Applicant/Owner: Port of Seattle			County:	King	
nvestigator: William Kleindl, Pat To	ugher		State: V	NA .	
2 1987 Method 1989 Method	1		•	Community ID	: Upland Forested
Oo Normal Circumstances exist on the	e site?	Yes X	No	•	
s the site significantly disturbed (Atyp		Yes	No X	— Field Plot ID:	A14.B
s the area a potential Problem Area?		Yes	No X		
emarks (Explain sample location, d	listurbances erobl		. NO _ <u>^</u>		
ne plot is in area upland plot located	on raicer 520, adj				
EGETATION (✓Dominant spec Plant Species	cies are checked)	% Cove	er Stratum	Indicator	
1 Equisetum telmateia		1	Herb	FACW	
2 Moss		100	Herb	NL NL	
3 Oemlena cerasiformis		40	Shrub	FACU	
4 Ribes lacustre		t	Shrub	FAC+	
5 Rubus discolor		40	Shrub	FACU	
6. Acer macrophylium		25	Tree	FACU	
xcept FAC-). Include species noted	(*) as showing	20	Tree	FAC	
ercent of Dominant Species that a xcept FAC-). Include species noted orphological adaptations to wetlands. emarks (Describe disturbances, rele	(*) as showing . "T" indicates trac evant local variatio	or FAC 20 ce.	effects, etc.):		
ercent of Dominant Species that a except FAC-). Include species noted orphological adaptations to wetlands. emarks (Describe disturbances, release the less than 50% of the dominant pages.	(*) as showing . "T" indicates trac evant local variatio	or FAC 20 ce.	effects, etc.):		
ercent of Dominant Species that a except FAC-). Include species noted orphological adaptations to wetlands emarks (Describe disturbances, release the less than 50% of the dominant por YDROLOGY	(*) as showing . "T" indicates trac evant local variatio lants are hydrophy	or FAC 20 de. ns, seasonal of the wetlands.	effects, etc.): nd vegetation		escnbe in Remarks):
ercent of Dominant Species that a except FAC-). Include species noted orphological adaptations to wetlands emarks. (Describe disturbances, release than 50% of the dominant particles.)	(*) as showing . "T" indicates trac evant local variatio slants are hydrophy (s):	or FAC 20 de. ns, seasonal of the wetlands.	effects, etc.): nd vegetation	criteria is not met.	escribe in Remarks):
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ercent of Dominant Species that a scept FAC-). Include species noted orphological adaptations to wetlands. Emarks (Describe disturbances, release than 50% of the dominant polydrocycle (Describe in Remark Stream, Lake, or Tide General Remark).	(*) as showing . "T" indicates trac evant local variatio slants are hydrophy (s):	or FAC 20 de. ns, seasonal of the wetlands.	effects, etc.): Id vegetation etland Hydro	criteria is not met. ology Indicators (Deficators:	
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ercent of Dominant Species that a xcept FAC-). Include species noted orphological adaptations to wetlands, emarks (Describe disturbances, release than 50% of the dominant post o	(*) as showing . "T" indicates tracevant local variation in the stracevant	or FAC 20 de. ns, seasonal of the wetlands.	effects, etc.): Id vegetation etland Hydro	criteria is not met. plogy Indicators (Deficators: Inundated Saturated in Upper Saturated in Upper Water Marks Drift Lines	12 inches
ercent of Dominant Species that a xcept FAC-). Include species noted for phological adaptations to wetlands, emarks. (Describe disturbances, release than 50% of the dominant post of the dominant pos	(*) as showing . "T" indicates tracevant local variation in the stracevant	or FAC 20 de. ns, seasonal of the wetlands.	effects, etc.): Id vegetation etland Hydro	critena is not met. cology Indicators (Deficators: Inundated Saturated in Upper Saturated in Upper Water Marks	12 inches 18 inches
ercent of Dominant Species that a xcept FAC-). Include species noted orphological adaptations to wetlands, emarks. (Describe disturbances, release than 50% of the dominant post	(*) as showing . "T" indicates trac evant local variatio lants are hydrophy (s): Gage	or FAC 20 de. ns, seasonal of the wetlands.	effects, etc.): id vegetation etland Hydro Primary Ind	criteria is not met. pology Indicators (Deficators: Inundated Saturated in Upper Saturated in Upper Water Marks Drift Lines Sediment Deposits Drainage Patterns in	12 inches 18 inches n Wetlands
ercent of Dominant Species that a except FAC-). Include species noted for phological adaptations to wetlands. Semarks (Describe disturbances, release than 50% of the dominant post of the dominant po	(*) as showing . "T" indicates trac evant local variatio elants are hydrophy (s): Gage lable (in.)	or FAC 20 de. ns, seasonal of the wetlands.	effects, etc.): id vegetation etland Hydro Primary Ind	critena is not met. cology Indicators (Deficators: Inundated Saturated in Upper Saturated in Upper Water Marks Drift Lines Sediment Deposits	12 inches 18 inches n Wetlands
ercent of Dominant Species that a except FAC-). Include species noted for phological adaptations to wetlands. The except FAC-) and the except FAC-). Include species noted for phological adaptations to wetlands. The except FAC-) and the except FAC-) are e	(*) as showing . "T" indicates tracevant local variation indicates tracevant local variation indicates are hydrophy is): Sage lable (in.)	or FAC 20 de. ns, seasonal of the wetlands.	effects, etc.): id vegetation etland Hydro Primary Ind	plogy Indicators (Dedicators: Inundated Saturated in Upper Saturated in Upper Water Marks Drift Lines Sediment Deposits Drainage Patterns in	12 inches 18 inches n Wetlands
ercent of Dominant Species that a except FAC-). Include species noted forphological adaptations to wetlands, emarks. (Describe disturbances, relegince less than 50% of the dominant posterior of the dominant posterior. (Describe in Remark Stream, Lake, or Tide Garial Photograph Other X No Recorded Data Available of Surface Water: None	(*) as showing . "T" indicates tracevant local variation indicates tracevant local variation indicates are hydrophy (s.s.): Gage lable (in.) (in.)	or FAC 20 de. ns, seasonal of the wetlands.	effects, etc.): id vegetation etland Hydro Primary Ind	plogy Indicators (Dedicators: Inundated Saturated in Upper Saturated in Upper Water Marks Drift Lines Sediment Deposits Drainage Patterns in	12 inches 18 inches n Wetlands required): inels in Upper 12 inche
ercent of Dominant Species that a except FAC-). Include species noted for phological adaptations to wetlands, remarks. (Describe disturbances, relegince less than 50% of the dominant phology ecorded Data. (Describe in Remark. Stream. Lake, or Tide Government of Aerial Photograph. Other. X. No Recorded Data Available of Surface Water: Depth of Surface Water: Depth to Free Water in Pit: >15	(*) as showing . "T" indicates tracevant local variation indicates tracevant local variation indicates are hydrophy is): Sage lable (in.)	or FAC 20 de. ns, seasonal of the wetlands.	effects, etc.): id vegetation etland Hydro Primary Ind	criteria is not met. plogy Indicators (Deficators: Inundated	12 inches 18 inches n Wetlands required): inels in Upper 12 inche es ata
ercent of Dominant Species that a except FAC-). Include species noted inorphological adaptations to wetlands, semarks. (Describe disturbances, relegince less than 50% of the dominant purple less t	(*) as showing . "T" indicates tracevant local variation indicates tracevant local variation indicates are hydrophy is): Sage lable (in.)	or FAC 20 de. ns, seasonal of the wetlands.	effects, etc.): id vegetation etland Hydro Primary Ind	criteria is not met. plogy Indicators (Deficators: Inundated	12 inches 18 inches n Wetlands required): inels in Upper 12 inche es ata
ercent of Dominant Species that a except FAC-). Include species noted for phological adaptations to wetlands, remarks. (Describe disturbances, relegince less than 50% of the dominant phology ecorded Data. (Describe in Remark. Stream. Lake, or Tide Government of Aerial Photograph. Other. X. No Recorded Data Available of Surface Water: Depth of Surface Water: Depth to Free Water in Pit: >15	(*) as showing . "T" indicates tracevant local variation indicates tracevant local variation indicates are hydrophy is): Sage lable (in.) (in.)	or FAC 20 te. Ins. seasonal of the wetland w	effects, etc.): Id vegetation etland Hydro Primary Ind	criteria is not met. cology Indicators (Deficators: Inundated Saturated in Upper Saturated in Upper Water Marks Drift Lines Sediment Deposits Drainage Patterns in Indicators (2 or more Oxidized Root Chan Water-Stained Leav Local Soil Survey Do Other (Explain in Re	12 inches 18 inches n Wetlands required): inels in Upper 12 inche es ata

Λ					Data Plot #	: A14:B
L					Wetland:	A14 Upland Plo
hronost/Cita. Contillo Tonoma Aiman	Adaptes Diag 11		5			
Project/Site: Seattle Tacoma Airport -	Master Plan Up	date	Date:	9/21/99		
SOILS Soil Survey Data:						
Map Unit Name: Unmapped				Drainage Cla	ss:	
				Field Observa	ations Confirm A	Mapped Type?
Taxonomy (Subgroup):				Yes	No N	IA X
Profile Description:	·····			_		<u>~</u>
Depth Horizon Matrix Color Inches) Designation (Munsell Moisi		tle Color nsell Moist)		Mottle Abundance/C	_	exture, Concretions, hizospheres, etc.
-18+ A 2.5Y 5/2				•	L	pam
ydric Soil Indicators: Histosol Histic Epipedon Sulfidic Odor Probable Aquic Moisture Regim Reducing Conditions Gleyed or Low-Chroma Colors			Listed Listed Aquic Organi Mottles	Moisture Regir ic Streaking in	ic Soils List ydric Soils List ne Sandy Soils	
High Organic Content in Surface	-	 etc.):	_			
High Organic Content in Surface	-	 etc.):				
High Organic Content in Surface emarks (Describe soil disturbances, less indicators of hydric soil are present.	-	etc.):				
High Organic Content in Surface emarks (Describe soil disturbances, less indicators of hydric soil are present. /ETLAND DETERMINATION	-		x	ls thi	s Sampling Poi	int Within a Wetland?
	ocal variations, e		<u>x</u> x	ls thi		int Within a Wetland?

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): No wetland indicators are present.



L '	WET	LAND D	ETERMIN	ATION	Wetland	l: <u>A15</u>
_	(Modified from: 19		_		ion Manual)
Project/Site: Seattle Tacoma	Airport - Master Plan Up	date	Date:	9/17/99		
Applicant/Owner: Port of Se		-	Count			
Investigator: William Kleindi,			. State:	WA	······································	
	Method				Community ID): PEM
Do Normal Circumstances exis		Yes	X No		Community ID	
is the site significantly disturbe		Yes	No	×	Field Plot ID:	A15:A
•						
Is the area a potential Problem Remarks (Explain sample loc		Yes	No	<u> </u>		
Wetland A15 is located Parcel surface.						
/EGETATION (✓Domina Plant Species	ant species are checked)		Cover Strat	um Indica	ato r	
✓ 1 Holcus lanatus		20	Herb	FAC	•	
2 Phalans arundinacea		5	Herb	FACV	v	
2 Poa pratensis		60	Herb	FAC		
y 3 Poa pratensis						
4 Ranunculus repens		45	Herb	FACW	<u> </u>	
Ranunculus repens Trifolium repens Percent of Dominant Species except FAC-). Include species	noted (*) as showing	or FAC	Herb	FAC-		
Ranunculus repens 5 Trifolium repens Percent of Dominant Species except FAC-). Include species norphological adaptations to with	s noted (*) as showing etlands. "T" indicates traces, relevant local variations.	or FAC	100	FAC-	<u> </u>	
Ranunculus repens Trifolium repens Percent of Dominant Species except FAC-). Include species norphological adaptations to we remarks (Describe disturbance) lince 100% of the dominant plant	s noted (*) as showing etlands. "T" indicates traces, relevant local variations.	or FAC	100	FAC-	<u> </u>	
Ranunculus repens 5 Trifolium repens Percent of Dominant Species except FAC-). Include species corphological adaptations to we demarks (Describe disturbance fince 100% of the dominant pla	s noted (*) as showing etlands. "T" indicates traces, relevant local variation and are hydrophytic, the	or FAC	100 nal effects, e	FAC- etc.): eria is met.		escribe in Remarks):
A Ranunculus repens 5 Trifolium repens ercent of Dominant Species except FAC-). Include species orphological adaptations to we emarks (Describe disturbance fince 100% of the dominant plant YDROLOGY	enoted (*) as showing etlands. "T" indicates traces, relevant local variation and are hydrophytic, the Remarks):	or FAC	100 anal effects, egetation crite Wetland H	FAC- etc.): eria is met.		escribe in Remarks):
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Ranunculus repens Trifolium repens ercent of Dominant Species except FAC-). Include species exce	etlands. "T" indicates traces, relevant local variation ants are hydrophytic, the Remarks): Tide Gage that Available None (in.)	or FAC	Herb 100 nal effects, egetation crite Wetland H Priman	etc.): eria is met. lydrology in y indicators: inund Satur: Vater Drift L Sedirr Draina	idicators (Deliated alled in Upper a	12 inches 18 inches n Wetlands
Ranunculus repens Trifolium repens Fercent of Dominant Species except FAC-). Include species corphological adaptations to with semarks (Describe disturbance since 100% of the dominant plat IYDROLOGY ecorded Data (Describe in Foundation of Stream, Lake, or Aerial Photograp Other X No Recorded Data eld Observations: Depth of Surface Water: Depth to Free Water in Pit:	etlands. "T" indicates tra ces, relevant local variatic ants are hydrophytic, the Remarks): r Tide Gage th ta Available None (in.) >13 (in.)	or FAC	Herb 100 nal effects, egetation crite Wetland H Priman	etc.): eria is met. lydrology in y indicators: inund Saturi Saturi Water Drift L Seduri Draina	idicators (Delated in Upper dated in	12 inches 18 inches n Wetlands required):
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					Data	Plot#:	A15:A
L *					Wes	tland:	A15
roject/Site: S	eattle Tacoma Airport -	Master Plan	Update	Date:	9/17/99		
OILS oil Survey Da	ta:						
lap Unit Name	: Unmapped				Drainage Class:		
					Field Observations C	onfirm Map	ped Type?
axonomy (Sub	group):				Yes No _	NA	<u>x</u>
rofile Descrip	tion:						
epth Hori	zon Matrix Color gnation (Munsell Moist		Mottle Col (Munsell N	=:	Mottle Abundance/Contrast		ure, Concretions ospheres, etc.
3 A	10YR 4/4				-	Silty	Clav
13+ C	10YR 6/1		2.5Y 6/3		Many, Coarse, Prominent	Sifty	Clay
ydric Soil Indi	cators:						
Histosol				Listed	on Local Hydric Soils	List	
Histic E	pipedon				on State Hydric Soils		
Sulfidic				Listed	on National Hydric So	ils List	
	Aquic Moisture Regim	e		Aquic	Moisture Regime		
	g Conditions			Organ	ic Streaking in Sandy S	Soils	
	r Low-Chroma Colors			X Mottle			
	anic Content in Surface			Other	(Explain in Remarks)		
	ribe soil disturbances, lo						
	er hydric soil indicators	meet the h	ydric soil (riteria. The soil	s are compacted at the	depth of 1	3 inches.
il color and otl							
	FTERMINATION						
ETLAND D	ETERMINATION	V					
ETLAND D	etation Present?	Yes Yes	X N		Is this Samp	ling Point	Within a Wetlar

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results):

The presence of all three parameters indicate this area is a wetland.



				Wetland: A16
•	WETL	AND DETE	RMINATI	ION Wetland: A16
(Modified from: 198			
Project/Site: Seattle Tacoma A				21/99
Applicant/Owner: Port of Sea				King
nvestigator: William Kleindl, F				NA .
1987 Method 1989 M			-	
_				Community ID: PEM
o Normal Circumstances exist		Yes X	No	- Field Plot ID: A16:A
the site significantly disturbed	(Atypical Situation)?	Yes	No X	
the area a potential Problem A	Area?	Yes	No X	·
tends from Parcel 323 to 322. EGETATION (✓Dominan	at energies are checked)			
Plant Species	n apecies aid Gleckell)	% Cover	Stratum	Indicator
1 Carex obnupta		t	Herb	OBL
2 Juncus balticus		5	Herb	FACW+
3 Juncus effusus		80	Herb	FACW
4 Typha latifolia		t	Herb	OBL
· ·				
5 Alnus rubra ercent of Dominant Species except FAC-). Include species to orphological adaptations to well-	noted (*) as showing transcript trace	<u>100</u>		FAC
Alnus rubra Procent of Dominant Species of Copy (Species of Copy). Include species of prophological adaptations to well of the copy (Species of Copy). The copy (Species of Copy) is a copy of the co	noted (*) as showing tlands. "T" indicates trace es, relevant local variation	r FAC 100 e.	ffects, etc.):	
Alnus rubra arcent of Dominant Species (cept FAC-). Include species is prophological adaptations to well armarks (Describe disturbance fince 100% of the dominant plan	noted (*) as showing tlands. "T" indicates trace es, relevant local variation	r FAC 100 e.	ffects, etc.):	
Alnus rubra Procent of Dominant Species Rocept FAC-). Include species is Prophological adaptations to well Procents (Describe disturbance Procents (Descr	noted (*) as showing tlands. "T' indicates trace es, relevant local variation ats are hydrophytic, the w	r FAC 100 e. ns. seasonal etelland vegetat	ffects, etc.): ion criteria i	
Anus rubra recent of Dominant Species (cept FAC-). Include species is prephological adaptations to well marks (Describe disturbance fine 100% of the dominant plan /DROLOGY	noted (*) as showing tlands. "T' indicates traces, relevant local variation are hydrophytic, the weenarks):	r FAC 100 e. ns, seasonal election vegetat Wet	ffects, etc.): ion criteria i	is <i>met.</i> Diogy Indicators (Describe in Remarks):
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5 Alnus rubra recent of Dominant Species recept FAC-). Include species is prohological adaptations to wel marks (Describe disturbance rece 100% of the dominant plan /DROLOGY corded Data (Describe in Re Stream, Lake, or Aerial Photograph	noted (*) as showing tlands. "T' indicates trace is, relevant local variation into are hydrophytic, the warranks): Tide Gage	r FAC 100 e. ns, seasonal election vegetat Wet	ffects, etc.): ion criteria i tland Hydro Pnmary Ind	blogy Indicators (Describe in Remarks): licators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches
Ainus rubra recent of Dominant Species coept FAC-). Include species is prophological adaptations to well remarks (Describe disturbance are 100% of the dominant plant DROLOGY corded Data (Describe in Research Lake, or Aerial Photograph Other	noted (*) as showing tlands. "T' indicates trace is, relevant local variation into are hydrophytic, the warranks): Tide Gage	r FAC 100 e. ns, seasonal election vegetat Wet	ffects, etc.): ion criteria i tland Hydro Pnmary Ind	plogy Indicators (Describe in Remarks): licators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks
Ainus rubra From tof Dominant Species of Copy (Copy 1) Include species of prohological adaptations to well of the dominant plant (Copy 1) Include species of the dominant plant (Copy 1) Include species of the dominant plant (Copy 1) Include (Co	noted (*) as showing tlands. "T' indicates trace is, relevant local variation ints are hydrophytic, the warmarks): Tide Gage	r FAC 100 e. ns, seasonal election vegetat Wet	ffects, etc.): ion criteria i tland Hydro Pnmary Ind	blogy Indicators (Describe in Remarks): licators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
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5. Alnus rubra recent of Dominant Species recept FAC-). Include species is prophological adaptations to wel marks (Describe disturbance rice 100% of the dominant plan (DROLOGY corded Data (Describe in Reservations) Stream, Lake, or Aerial Photograph Other X No Recorded Data Id Observations: Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as showing tlands. "T' indicates trace is, relevant local variation into are hydrophytic, the water are hydrophytic, the water are hydrophytic. Tide Gage in a Available None (in.)	r FAC 100 e. ns. seasonal ef	ffects, etc.): ion criteria i tland Hydro Primary Ind	is met. Diogy Indicators (Describe in Remarks): Ilicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required):
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Alnus rubra except FAC-). Include species except FAC-). Include species is prephological adaptations to well emarks. (Describe disturbance ruce 100% of the dominant plant. YDROLOGY ecorded Data. (Describe in Research Lake, or Aerial Photograph Other X. No Recorded Data. Ald Observations: Depth of Surface Water:	noted (*) as showing tlands. "T' indicates trace is, relevant local variation ints are hydrophytic, the water are hydrophytic. Tide Gage in a Available (in.)	r FAC 100 e. ns. seasonal ef	ffects, etc.): ion criteria i tland Hydro Primary Ind	is met. plogy Indicators (Describe in Remarks): licators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inche Water-Stained Leaves
arcent of Dominant Species except FAC-). Include species is corphological adaptations to well armarks. (Describe disturbance ince 100% of the dominant plant PDROLOGY accorded Data. (Describe in Research Photograph Other. X No Recorded Data accorded Data accorded Data. No Recorded Data accorded Data. No Recorded Data accorded Data accorded Data. No Recorded Data accorded Data a	noted (*) as showing tlands. "T' indicates trace is, relevant local variation ints are hydrophytic, the water are hydrophytic. Tide Gage in a Available (in.)	r FAC 100 e. ns. seasonal ef	ffects, etc.): ion criteria i tland Hydro Primary Ind	is met. plogy Indicators (Describe in Remarks): licators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inche Water-Stained Leaves Local Soil Survey Data
arcent of Dominant Species except FAC-). Include species is corphological adaptations to well armarks. (Describe disturbance ince 100% of the dominant plant PDROLOGY accorded Data. (Describe in Research Photograph Other. X No Recorded Data accorded Data accorded Data. No Recorded Data accorded Data. No Recorded Data accorded Data accorded Data. No Recorded Data accorded Data a	noted (*) as showing tlands. "T' indicates trace is, relevant local variation ints are hydrophytic, the water are hydrophytic. Tide Gage in a Available (in.)	r FAC 100 e. ns. seasonal ef	ffects, etc.): ion criteria i tland Hydro Primary Ind	is met. plogy Indicators (Describe in Remarks): licators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inche Water-Stained Leaves
arcent of Dominant Species except FAC-). Include species is corphological adaptations to well armarks. (Describe disturbance ince 100% of the dominant plant PDROLOGY accorded Data. (Describe in Research Photograph Other. X No Recorded Data accorded Data accorded Data. No Recorded Data accorded Data. No Recorded Data accorded Data accorded Data. No Recorded Data accorded Data a	noted (*) as showing tlands. "T' indicates trace is, relevant local variation into are hydrophytic, the water are hydrophytic, the water are hydrophytic. Tide Gage in a Available (in.) None	r FAC e. 100 e. ns. seasonal ef etland vegetat Wei	ffects, etc.): ion criteria i tland Hydre Primary Ind X Secondary	blogy Indicators (Describe in Remarks): licators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inche Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)

						Data Pio	t #:	A16:A
•						Wetland	:	A16
						3° .,		
oject/Site: Seattle Tacoma Airpo	rt - Master Pla	n Update	<u> </u>	Date:	9/21/99			
OILS								
oil Survey Data:								
lap Unit Name: Unmapped					Drainage Clas	is:		
					Field Observa	tions Confirm	n Map	ped Type?
axonomy (Subgroup):					Yes	No	NA	_x_
rofile Description:			_					
epth Horizon Matrix Colo nches) Designation (Munsell M		Mottle C (Munsel			Mottle Abundance/Co	ontrast	_	ure, Concretions ospheres, etc.
6 A 10YR 4/1		10YR 5/6			Common. Coarse	. Prominent	Grave	elly Loam
C 5BG 4/1					-		Clay	
dric Soil Indicators:								
Histosol				Listed	on Local Hydri	c Soils List		
Histic Epipedon					on State Hydri			
Sulfidic Odor				Listed	on National Hy	dric Soils Lis	st	
Probable Aquic Moisture Re	gime			Aquic	Moisture Regin	ne		
X Reducing Conditions				Organ	ic Streaking in :	Sandy Soils		
X Gleyed or Low-Chroma Colo				Mottle	s			
High Organic Content in Sur	face Layer			_ Other	(Explain in Rem	narks)		
marks (Describe soil disturbance	s, local variation	ons, etc.)	:					
il color and other hydric soil indica	tors meet the I	ydric soi	il criteria.					

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): The presence of all three parameters indicate this area is a wetland.

Pa	ra	m	et	rix,	inc.



Data Plot #:

A17a:A

	WET	LAND DETE	RMINATI	ION	Wetland:	A17a
((Modified from: 198	87 COE Wet	ands De	lineation	Manual)	
Project/Site: Seattle Tacoma A			_	/13/00	,	
Applicant/Owner: Port of Ser				King		
Investigator: William Kleindl, M	Marti Louther		. ´ •	VA .		
✓ 1987 Method 1989 M			-			
Do Normal Circumstances exist		Yes X	No			PEM
Is the site significantly disturbed		Yes			Plot ID: A1	7:A
is the area a potential Problem A			No x	_		
Remarks (Explain sample local		Yes	No X			
Wetland A16a is an emergent we on Parcel 256.		rom lower section	ons of the V	Vetiand A17	by driveway i	ill. The wetland is loc
	t species are cnecked)					
Plant Species		% Cover	Stratum	Indicator		
1 Equisetum arvense		3	Herb	FACW-	_	
✓ 3 Hoicus ianatus		5 2 5	Herb	- FAC	-	
✓ 4 Ranunculus repens		70	Herb	FACW	-	
(except FAC-). Include species in morphological adaptations to wet	noted (*) as showing dands. "T" indicates trac	e. 100	ects etc.):			
Percent of Dominant Species (except FAC-). Include species in morphological adaptations to wet Remarks (Describe disturbance Since 100% of the dominant plant	noted (*) as showing dands. "T" indicates trac es, relevant local variation	e. 100 ns, seasonal eff	ects, etc.): on criteria is	s met.		
(except FAC-). Include species in morphological adaptations to wet Remarks (Describe disturbance Since 100% of the dominant plant HYDROLOGY	noted (*) as showing lands. "T" indicates trac is, relevant local variation its are hydrophytic, the w	ns, seasonal efficiently detailed vegetation	on criteria is			
(except FAC-). Include species in morphological adaptations to weth Remarks (Describe disturbance Since 100% of the dominant plant HYDROLOGY Recorded Data (Describe in Re	noted (*) as showing lands. "T" indicates traces, relevant local variation its are hydrophytic, the warmarks):	ns, seasonal efficient declared vegetation. Wetl	on criteria is	logy Indicat	ors (Descri	pe in Remarks):
(except FAC-). Include species in morphological adaptations to weth Remarks (Describe disturbance Since 100% of the dominant plant HYDROLOGY Recorded Data (Describe in ReStream, Lake, or T	noted (*) as showing lands. "T" indicates traces, relevant local variation its are hydrophytic, the warmarks):	ns, seasonal efficient declared vegetation. Wetl	on criteria is	logy Indicat	ors (Descri	pe in Remarks):
(except FAC-). Include species in morphological adaptations to wet Remarks (Describe disturbance Since 100% of the dominant plant HYDROLOGY Recorded Data (Describe in Re Stream, Lake, or T Aerial Photograph	noted (*) as showing lands. "T" indicates traces, relevant local variation its are hydrophytic, the warmarks):	ns, seasonal efficient declared vegetation. Wetl	on criteria is	logy Indicat cators: Inundated		
(except FAC-). Include species in morphological adaptations to weth Remarks (Describe disturbance Since 100% of the dominant plant HYDROLOGY Recorded Data (Describe in ReStream, Lake, or TAerial Photograph Other	noted (*) as showing lands. "T" indicates traces, relevant local variation its are hydrophytic, the warmarks): Tide Gage	ns, seasonal efficient declared vegetation. Wetl	on criteria is	logy Indicat cators: Inundated Saturated in	n Upper 12 in	ches
(except FAC-). Include species in morphological adaptations to wet Remarks (Describe disturbance Since 100% of the dominant plant HYDROLOGY Recorded Data (Describe in Re Stream, Lake, or T Aerial Photograph	noted (*) as showing lands. "T" indicates traces, relevant local variation its are hydrophytic, the warmarks): Tide Gage	ns, seasonal efficient declared vegetation. Wetl	on criteria is	logy Indicat cators: Inundated Saturated in Saturated in	n Upper 12 in 1 Upper 18 in	ches
(except FAC-). Include species in morphological adaptations to weth Remarks (Describe disturbance Since 100% of the dominant plant HYDROLOGY Recorded Data (Describe in ReStream, Lake, or TAerial Photograph Other	noted (*) as showing lands. "T" indicates traces, relevant local variation its are hydrophytic, the warmarks): Tide Gage	ns, seasonal efficient declared vegetation. Wetl	on criteria is	logy Indicat cators: Inundated Saturated in Saturated in Water Mark	n Upper 12 in 1 Upper 18 in	ches
(except FAC-). Include species in morphological adaptations to weth Remarks (Describe disturbance Since 100% of the dominant plant HYDROLOGY Recorded Data (Describe in ReStream, Lake, or TAerial Photograph Other	noted (*) as showing lands. "T" indicates traces, relevant local variation its are hydrophytic, the warmarks): Tide Gage	ns, seasonal efficient declared vegetation. Wetl	on criteria is	logy Indicat cators: Inundated Saturated in Saturated in Water Mark Drift Lines	n Upper 12 in n Upper 18 in s	ches
(except FAC-). Include species in morphological adaptations to weth Remarks (Describe disturbance Since 100% of the dominant plant HYDROLOGY Recorded Data (Describe in Re Stream, Lake, or T Aerial Photograph Other No Recorded Data	noted (*) as showing lands. "T" indicates traces, relevant local variation its are hydrophytic, the warmarks): Tide Gage	ns, seasonal efficient declared vegetation. Wetl	on criteria is	logy Indicat cators: Inundated Saturated in Saturated in Water Mark Drift Lines Sediment D	n Upper 12 in n Upper 18 in s	ches ches
(except FAC-). Include species in morphological adaptations to weth Remarks (Describe disturbance Since 100% of the dominant plant HYDROLOGY Recorded Data (Describe in Re Stream, Lake, or T Aerial Photograph Other No Recorded Data	noted (*) as showing lands. "T" indicates traces, relevant local variation its are hydrophytic, the warmarks): Tide Gage Available	e. ns, seasonal efficientland vegetatio Wetl	and Hydro	logy Indicat cators: Inundated Saturated in Saturated in Water Mark Drift Lines Sediment D Drainage Pa	n Upper 12 in n Upper 18 in is eposits attems in We	ches ches dands
(except FAC-). Include species in morphological adaptations to weth Remarks (Describe disturbance Since 100% of the dominant plant HYDROLOGY Recorded Data (Describe in Re Stream, Lake, or T Aerial Photograph Other No Recorded Data Sield Observations: Depth of Surface Water:	noted (*) as showing lands. "T" indicates traces, relevant local variation its are hydrophytic, the warmarks): Tide Gage None (in.)	e. ns, seasonal efficientland vegetatio Wetl	and Hydro	logy Indicat cators: Inundated Saturated in Saturated in Water Mark Drift Lines Sediment D Drainage Pa	n Upper 12 in n Upper 18 in is eposits	ches ches dands
(except FAC-). Include species in morphological adaptations to weth Remarks (Describe disturbance Since 100% of the dominant plant HYDROLOGY Recorded Data (Describe in Re Stream, Lake, or T Aerial Photograph Other No Recorded Data Field Observations: Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as showing lands. "T" indicates traces, relevant local variation its are hydrophytic, the warmarks): Tide Gage Available None (in.)	e. ns, seasonal efficientland vegetatio Wetl	and Hydro	logy Indicat cators: Inundated Saturated ii Saturated ii Water Mark Drift Lines Sediment D Drainage Pa	n Upper 12 in n Upper 18 in is reposits atterns in We	ches ches dlands red):
(except FAC-). Include species in morphological adaptations to weth Remarks (Describe disturbance Since 100% of the dominant plant HYDROLOGY Recorded Data (Describe in ReStream, Lake, or TAerial Photograph Other No Recorded Data Gield Observations: Depth to Free Water in Pit:	noted (*) as showing lands. "T" indicates traces, relevant local variation its are hydrophytic, the warmarks): Tide Gage None (in.)	e. ns, seasonal efficientland vegetatio Wetl	and Hydro	logy Indicat cators: Inundated Saturated ii Saturated ii Water Mark Drift Lines Sediment D Drainage Pa	n Upper 12 in n Upper 18 in s reposits atterns in We or more requi	ches ches dands
(except FAC-). Include species in morphological adaptations to weth Remarks (Describe disturbance Since 100% of the dominant plant HYDROLOGY Recorded Data (Describe in Re Stream, Lake, or T Aerial Photograph Other No Recorded Data Field Observations: Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as showing lands. "T" indicates traces, relevant local variation its are hydrophytic, the warmarks): Tide Gage Available None (in.)	e. ns, seasonal efficientland vegetatio Wetl	and Hydro	logy Indicat cators: Inundated Saturated ii Saturated ii Water Mark Drift Lines Sediment D Drainage Pandicators (2)	n Upper 12 in n Upper 18 in s reposits atterns in We or more requi oot Channels red Leaves	ches ches dlands red):
(except FAC-). Include species in morphological adaptations to well Remarks (Describe disturbance Since 100% of the dominant plant HYDROLOGY Recorded Data (Describe in ReStream, Lake, or TAerial Photograph Other No Recorded Data Tield Observations: Depth of Surface Water: Depth to Free Water in Pit: Depth to Saturated Soil:	noted (*) as showing lands. "T" indicates traces, relevant local variation its are hydrophytic, the warmarks): Tide Gage Available None (in.) >15 (in.)	wetland vegetation	and Hydro	logy Indicat cators: Inundated Saturated ii Saturated ii Water Mark Drift Lines Sediment D Drainage Pandicators (2 ii Oxidized Ro Water-Stain Local Soil S Other (Explain	n Upper 12 in n Upper 18 in s reposits atterns in We or more requi oot Channels ed Leaves survey Data ain in Remark	ches ches clands red): in Upper 12 inches
(except FAC-). Include species in morphological adaptations to weth Remarks (Describe disturbance Since 100% of the dominant plant HYDROLOGY Recorded Data (Describe in Re Stream, Lake, or T Aerial Photograph Other No Recorded Data Field Observations: Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as showing lands. "T" indicates traces, relevant local variation its are hydrophytic, the warmarks): Tide Gage None (in.) >15 (in.) recent precipitation, hydrogen lands in the lands in t	wetland vegetation Wetland S	and Hydro	logy Indicat cators: Inundated Saturated ii Saturated ii Water Mark Drift Lines Sediment D Drainage Pandicators (2 ii Oxidized Ro Water-Stain Local Soil S Other (Explandators)	n Upper 12 in n Upper 18 in s reposits atterns in We or more requi oot Channels ed Leaves urvey Data ain in Remark	ches ches clands red): in Upper 12 inches

$\overline{\Lambda}$								Data Plot	# :	A17a:A
								Wetland:		A17a
						e sin		·a, ·::		
Project/S	Site: Seattle Ti	acoma Airport - Maste	r Pla	n Update		Date.	11/13/00			
SOILS Soil Sur	rvey Data:									
Map Uni	it Name: Unm	napped					Drainage Cla	ss:		
-, -		· -			-		Field Observa	ations Confirm	Мар	ped Type?
Taxonon	my (Subgroup):						Yes	No	NA	<u>x</u>
Profile C	Description:									
Depth (Inches)	Horizon Designation	Matrix Color (Munsell Moist)		Mottle (Munse	Color II Moist)		Mottle Abundance/C			ure, Concretions, ospheres, etc.
0-6	Α	10YR 2/2					-		Sand	v Loam
6-18+	В	10YR 3/2		10YR 3/	5		Common, Coarse	e. Faint	Grave	elly Silt Loam
F F Remarks	Reducing Cond Gleyed or Low- High Organic C (Describe soi	Moisture Regime itions Chroma Colors ontent in Surface Layo d disturbances, local v	anat		•	Listed Listed Aquic Organ Mottle Other	on Local Hydr on State Hydr on National Hy Moisture Regin ic Streaking in is (Explain in Rei	ic Soils List ydric Soils List me Sandy Soils	:	
Soil color	and other hyd	ric soil indicators mee	t the	hydric st	oil criteria					
WETLA	AND DETER	MINATION								
lydroph	ytic Vegetatio	n Present?	Yes	_x_	No		is th	is Sampling F	oint	Within a Wetlan
lydric S	oils Present?		Yes	Х	No _			Yes X	No	
								162 7	140	,

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results):

The presence of all three parameters indicate this area is a wetland.



Data Plot #:

A17a:B

L	WETLAND	DETER	MINATI		vetland:	17d Upland P
_ (Modifie	ed from: 1987 CC				anual)	
•					u.,.a.,	
roject Site. Seattle Tacoma Airport - N	faster Plan Update	_	_	13/00		
Applicant/Owner: Port of Seattle			´ -	ling		
nvestigator: William Kleindi, Marti Lou	ther	s	tate: V	VA		
				Comm	unity ID	Upland
o Normal Circumstances exist on the si	ite? Yes	<u> </u>	No	- Field P	lot ID:	A17a:B
the site significantly disturbed (Atypica	Situation)? Yes		No X	_		
the area a potential Problem Area?	Yes		No X			
emarks (Explain sample location, disti	urbances, problem are	as):		_		
pland Plot located on Parcel 261, adjace	ent to Wetland A17a					
EGETATION (Dominant species	s are checked)					
Plant Species		% Cover	Stratum	Indicator		
1 Agrostis capillaris (tenuis)		70	Herb	FAC		
2 Hedera helix 3 Rubus discolor		5 3	Herb Shrub	- NL FACU		
4 Pseudotsuga menziesii		20	Tree	FACU		
Tsuga heterophylia arcent of Dominant Species that are scept FAC-). Include species noted (*) prohological adaptations to wetlands.	as showing T* indicates trace.	33	Tree	FACU+		
5. Tsuga heterophylla ercent of Dominant Species that are except FAC-). Include species noted (*) orphological adaptations to wetlands. ** emarks (Describe disturbances, releva	as showing T" indicates trace. int local variations, se	33 asonal effe	ects, etc.):			
Tsuga heterophylia arcent of Dominant Species that are except FAC-). Include species noted (*) orphological adaptations to wetlands. Temarks (Describe disturbances, relevance less than 50% of the dominant plant.	as showing T" indicates trace. int local variations, se	33 asonal effe	ects, etc.):		met.	
Tsuga heterophylia ercent of Dominant Species that are except FAC-). Include species noted (*) orphological adaptations to wetlands. emarks (Describe disturbances, relevance less than 50% of the dominant plai YDROLOGY	as showing IT indicates trace. Int local variations, se Ints are hydrophytic, th	33 asonal effe e wetland	ects, etc.): vegetation	criteria is not		
Tsuga heterophylia ercent of Dominant Species that are except FAC-). Include species noted (*) prophological adaptations to wetlands. Pararks (Describe disturbances, relevance less than 50% of the dominant plain YDROLOGY	as showing IT indicates trace. Int local variations, se Ints are hydrophytic, th	33 asonal effe	ects, etc.): vegetation	criteria is not		scribe in Remarks):
5 Tsuga heterophylia ercent of Dominant Species that are except FAC-). Include species noted (*) orphological adaptations to wetlands. emarks (Describe disturbances, relevance less than 50% of the dominant plain YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gag	as showing I* indicates trace. ant local vanations, se ints are hydrophytic, th	33 asonal effe	ects, etc.): vegetation	criteria is not		scribe in Remarks):
5 Tsuga heterophylla ercent of Dominant Species that are except FAC-). Include species noted (*) orphological adaptations to wetlands. Temarks (Describe disturbances, relevance less than 50% of the dominant plain (*) PROLOGY* ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gag Aerial Photograph	as showing I* indicates trace. ant local vanations, se ints are hydrophytic, th	33 asonal effe	ects, etc.): vegetation	criteria is not logy Indicato cators: Inundated	rs (De	
5. Tsuga heterophylla ercent of Dominant Species that are except FAC-). Include species noted (*) prophological adaptations to wetlands. Pararks (Describe disturbances, relevance less than 50% of the dominant plain Pydrology ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gag Aerial Photograph Other	as showing I* indicates trace. ant local variations, se ints are hydrophytic, th	33 asonal effe	ects, etc.): vegetation	criteria is not logy Indicato cators: Inundated Saturated in	rs (De	2 inches
5. Tsuga heterophylla ercent of Dominant Species that are keept FAC-). Include species noted (*) orphological adaptations to wetlands. The marks (Describe disturbances, relevance less than 50% of the dominant plain (PROLOGY) reorded Data (Describe in Remarks): Stream, Lake, or Tide Gag Aerial Photograph	as showing I* indicates trace. ant local variations, se ints are hydrophytic, th	33 asonal effe	ects, etc.): vegetation	criteria is not logy Indicato cators: Inundated Saturated in Saturated in	rs (De Upper 1 Upper 1	2 inches
5. Tsuga heterophylla ercent of Dominant Species that are except FAC-). Include species noted (*) prophological adaptations to wetlands. Pararks (Describe disturbances, relevance less than 50% of the dominant plain Pydrology ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gag Aerial Photograph Other	as showing I* indicates trace. ant local variations, se ints are hydrophytic, th	33 asonal effe	ects, etc.): vegetation	criteria is not logy Indicato cators: Inundated Saturated in Saturated in Water Marks	rs (De Upper 1 Upper 1	2 inches
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5 Tsuga heterophylla ercent of Dominant Species that are xcept FAC-). Include species noted (*) orphological adaptations to wetlands. emarks (Describe disturbances, relevance less than 50% of the dominant plain YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gag Aerial Photograph Other	as showing I* indicates trace. ant local variations, se ints are hydrophytic, th	33 asonal effe	ects, etc.): vegetation	criteria is not logy Indicato cators: Inundated Saturated in Saturated in Water Marks Drift Lines Sediment De	Upper 1 Upper 1	2 inches 18 inches
5 Tsuga heterophylia ercent of Dominant Species that are except FAC-). Include species noted (*) orphological adaptations to wetlands. emarks (Describe disturbances, relevance less than 50% of the dominant plain YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gag Aerial Photograph Other X No Recorded Data Availab eld Observations:	as showing I* indicates trace. ant local variations, se ints are hydrophytic, th	33 asonal effe	ects, etc.): vegetation	criteria is not logy Indicato cators: Inundated Saturated in Saturated in Water Marks Drift Lines	Upper 1 Upper 1	12 inches 18 inches
Tsuga heterophylla ercent of Dominant Species that are except FAC-). Include species noted (*) orphological adaptations to wetlands. Emarks (Describe disturbances, relevance less than 50% of the dominant plain (PROLOGY) Ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gag Aerial Photograph Other X No Recorded Data Availab Stream No Recorded Data Availab Stream No Recorded Data Availab Stream No Recorded Data Availab	as showing I* indicates trace. ant local variations, se ints are hydrophytic, the le le (in.)	asonal effe e wetland Wetl:	ects, etc.): vegetation and Hydro mmany Indi	criteria is not logy Indicato cators: Inundated Saturated in Saturated in Water Marks Drift Lines Sediment De	Upper 1 Upper 1	2 inches 8 inches Wetlands
recent of Dominant Species that are scept FAC-). Include species noted (*) orphological adaptations to wetlands. The same series of the dominant plant of the series of th	as showing I* indicates trace. ant local variations, se ints are hydrophytic, the le (in.) (in.)	asonal effe e wetland Wetl:	ects, etc.): vegetation and Hydro mmany Indi	criteria is not cators: Inundated Saturated in Saturated in Water Marks Drift Lines Sediment De Drainage Pa	Upper 1 Upper 1 Upper 1 Upper 1	2 inches 8 inches Wetlands required):
5 Tsuga heterophylia ercent of Dominant Species that are xcept FAC-). Include species noted (*) orphological adaptations to wetlands. emarks (Describe disturbances, relevance less than 50% of the dominant plain YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gag Aerial Photograph Other X No Recorded Data Availab eld Observations: Depth of Surface Water: None	as showing I* indicates trace. ant local variations, se ints are hydrophytic, the le le (in.)	asonal effe e wetland Wetl:	ects, etc.): vegetation and Hydro mmany Indi	criteria is not cators: Inundated Saturated in Saturated in Water Marks Drift Lines Sediment De Drainage Pa	Upper 1 Upper 1 Upper 1 eposits tterns in	2 inches 8 inches Wetlands equired): nels in Upper 12 inche
5. Tsuga heterophylla ercent of Dominant Species that are xcept FAC-). Include species noted (*) orphological adaptations to wetlands. ** emarks (Describe disturbances, relevance less than 50% of the dominant plain (*) ** **YDROLOGY** ** **Corded Data** ** (Describe in Remarks): ** Stream, Lake, or Tide Gag Aerial Photograph ** Other* ** No Recorded Data Availabe ** ** Availabe ** ** ** ** Availabe ** ** ** ** ** ** ** ** ** ** ** ** *	as showing I* indicates trace. ant local variations, se ints are hydrophytic, the le (in.) (in.)	asonal effe e wetland Wetl:	ects, etc.): vegetation and Hydro mmany Indi	criteria is not cators: Inundated Saturated in Saturated in Water Marks Drift Lines Sediment De Drainage Pa	Upper 1	2 inches 8 inches Wetlands equired): nels in Upper 12 inche
recent of Dominant Species that are except FAC-). Include species noted (*) norphological adaptations to wetlands. The series than 50% of the dominant plaining less than 50%	as showing I* indicates trace. ant local variations, se ints are hydrophytic, the le (in.) (in.)	asonal effe e wetland Wetl:	ects, etc.): vegetation and Hydro mmany Indi	criteria is not cators: Inundated Saturated in Saturated in Water Marks Drift Lines Sediment De Drainage Pa	Upper 1 Upper 1 Upper 1 eposits tterns in	2 inches 8 inches Wetlands equired): nels in Upper 12 inche
recent of Dominant Species that are except FAC-). Include species noted (*) norphological adaptations to wetlands. The series than 50% of the dominant plaining less than 50%	as showing I* indicates trace. ant local variations, se ints are hydrophytic, the le (in.) (in.)	asonal effe e wetland Wetl:	ects, etc.): vegetation and Hydro mmany Indi	criteria is not cators: Inundated Saturated in Saturated in Water Marks Drift Lines Sediment De Drainage Pa Indicators (2 o Oxidized Rod Water-Staine	Upper 1	2 inches 8 inches Wetlands equired): nels in Upper 12 inches

						Data Plot	#:	A17a:B
L "						Wetland:		17d Upland Plo
roject/S	ite: Seattle Ta	acoma Airport - Maste	r Plan Update	Date:	11/13/00			
OILS ioil Sur	vey Data:							
Map Uni	t Name: Unm	napped			Drainage Cla	iss:		
					Field Observ	ations Confirm	Марре	ed Type?
Faxonom	ny (Subgroup):				Yes	No	NA	_X_
Profile D	escription:							
epth inches)	Horizon Designation	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)		Mottle Abundance/C			e, Concretions, spheres, etc.
-18+	Α	10YR 4/3	•		•	(Graveli	v Loam
H S P R G	educing Condi leyed or Low-C	Moisture Regime		Listed Listed Aquic Organ Mottle	Moisture Regilic Streaking in	ric Soils List lydric Soils List me Sandy Soils		
S P R G H	listosol listic Epipedon ulfidic Odor robable Aquic educing Condi lleyed or Low-C igh Organic Co (Describe soil	Moisture Regime tions Chroma Colors		Listed Listed Aquic Organ Mottle	on State Hydr on National H Moisture Regil ic Streaking in s	ric Soils List lydric Soils List me Sandy Soils		
H H S P R G H emarks to indicate	listosol listic Epipedon ulfidic Odor robable Aquic educing Condi lleyed or Low-C igh Organic Co (Describe soil	Moisture Regime tions Chroma Colors ontent in Surface Laye disturbances, local vaoil are present.		Listed Listed Aquic Organ Mottle	on State Hydr on National H Moisture Regil ic Streaking in s	ric Soils List lydric Soils List me Sandy Soils		
S P R G H emarks to indicate	listosol listic Epipedon ulfidic Odor robable Aquic educing Condi leyed or Low-C igh Organic Co (Describe soil lors of hydric so	Moisture Regime tions Chroma Colors ontent in Surface Laye disturbances, local va oil are present. MINATION		Listed Listed Aquic Organ Mottle	on State Hydr on National H Moisture Regi ic Streaking in s (Explain in Rei	ric Soils List lydric Soils List me Sandy Soils marks)		lithin a Wetland
S P R G H Hermarks to indicate	listosol listic Epipedon ulfidic Odor robable Aquic educing Condi lleyed or Low-C igh Organic Co (Describe soil lors of hydric so	Moisture Regime tions Chroma Colors Ontent in Surface Laye disturbances, local vaoil are present. MINATION Present?	riations, etc.):	Listed Listed Aquic Organ Mottle	on State Hydr on National H Moisture Regi ic Streaking in s (Explain in Rei	ric Soils List lydric Soils List me Sandy Soils marks)		lithin a Wetland

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): This area is an upland since all wetland parameters are absent.

Parametrix,	inc	
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Data Plot #: A17b:A

L*	WET	IAND	DETER	RMINA	TION Wetland: A17b
					Delineation Manual)
'	(modified from: 13	<i>01</i>			
Project/Site: Seattle Tacoma	Airport - Master Plan Up	date	`	Date:	10/8/99
Applicant/Owner: Port of Se	eattle		(County:	King
Investigator: W. Kleindl, M. L.	utner		\$	State:	WA
✓ 1987 Method 1989	Method				Community ID: PFO
Do Normal Circumstances exis	t on the site?	Yes	<u> </u>	No .	Field Plot ID. A17b:A
is the site significantly disturbed	d (Atypical Situation)?	Yes		No _	x
is the area a potential Problem	Area?	Yes		No	X
Remarks (Explain sample loca Wetland A17 borders an unnam Des Moines Memorial Drive and	ned tributary to Miller Cre	ek. Th	e wetland		s from South 160th Street to Miller Creek and betw ss the wetland.
VEGETATION (Domina	nt species are checked)		% Cover	Stratur	n Indicator
			30	Herb	FACW
			80	Shrub	FAC+
→ 2 RUDUS SDECIADHS					
except FAC-). Include species morphological adaptations to we	noted (*) as showing etlands. "T" indicates tra	ice.	100	Tree	FAC):
Alnus rubra Percent of Dominant Species except FAC-). Include species morphological adaptations to we remarks (Describe disturbances 100% of the dominant plants)	noted (*) as showing etlands. "T" indicates traces, relevant local variations.	ice. ons, se	100 asonal eff	ects, etc	2.):
Alnus rubra Percent of Dominant Species except FAC-). Include species morphological adaptations to we Remarks (Describe disturbance Since 100% of the dominant pla HYDROLOGY	noted (*) as showing etlands. "T" indicates traces, relevant local variations are hydrophytic, the	ice. ons, se	100 asonal eff	ects, etc	c.): ia is met.
Alnus rubra Percent of Dominant Species except FAC-). Include species morphological adaptations to we Remarks (Describe disturbance Since 100% of the dominant plath HYDROLOGY Recorded Data (Describe in F	noted (*) as showing etlands. "T" indicates traces, relevant local variations are hydrophytic, the Remarks):	ice. ons, se	100 asonal eff d vegetation	ects, etc	c.): ia is met. drology Indicators (Describe in Remarks):
Alnus rubra Percent of Dominant Species except FAC-). Include species norphological adaptations to we Remarks (Describe disturbanc Since 100% of the dominant pla HYDROLOGY Recorded Data (Describe in F Stream, Lake, or	noted (*) as showing etlands. "T" indicates traces, relevant local variations are hydrophytic, the Remarks):	ice. ons, se	100 asonal eff d vegetation	ects, etc	drology Indicators (Describe in Remarks):
Percent of Dominant Species except FAC-). Include species morphological adaptations to we Remarks (Describe disturbanc Since 100% of the dominant pla HYDROLOGY Recorded Data (Describe in F Stream, Lake, or Aerial Photograp	noted (*) as showing etlands. "T" indicates traces, relevant local variations are hydrophytic, the Remarks):	ice. ons, se	100 asonal eff d vegetation	ects, etcon criter	c.): ia is met. drology Indicators (Describe in Remarks): Indicators: Inundated
Percent of Dominant Species except FAC-). Include species morphological adaptations to we Remarks (Describe disturbance) Since 100% of the dominant plate HYDROLOGY Recorded Data (Describe in F Stream, Lake, or Aerial Photograp Other	noted (*) as showing etlands. "T" indicates traces, relevant local variations are hydrophytic, the Remarks): Tide Gage	ice. ons, se	100 asonal eff d vegetation	ects, etc	drology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches
Percent of Dominant Species except FAC-). Include species norphological adaptations to we Remarks (Describe disturbanc Since 100% of the dominant pla HYDROLOGY Recorded Data (Describe in F Stream, Lake, or Aerial Photograp	noted (*) as showing etlands. "T" indicates traces, relevant local variations are hydrophytic, the Remarks): Tide Gage	ice. ons, se	100 asonal eff d vegetation	ects, etcon criter	drology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches
Percent of Dominant Species except FAC-). Include species morphological adaptations to we Remarks (Describe disturbance) Since 100% of the dominant plate HYDROLOGY Recorded Data (Describe in F Stream, Lake, or Aerial Photograp Other	noted (*) as showing etlands. "T" indicates traces, relevant local variations are hydrophytic, the Remarks): Tide Gage	ice. ons, se	100 asonal eff d vegetation	ects, etcon criter	drology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks
Percent of Dominant Species except FAC-). Include species morphological adaptations to we Remarks (Describe disturbance) Since 100% of the dominant pla HYDROLOGY Recorded Data (Describe in F Stream, Lake, or Aerial Photograp Other	noted (*) as showing etlands. "T" indicates traces, relevant local variations are hydrophytic, the Remarks): Tide Gage	ice. ons, se	100 asonal eff d vegetation	ects, etcon criter	drology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
Percent of Dominant Species except FAC-). Include species morphological adaptations to we Remarks (Describe disturbance) Since 100% of the dominant pla HYDROLOGY Recorded Data (Describe in F Stream, Lake, or Aerial Photograp Other	noted (*) as showing etlands. "T" indicates traces, relevant local variations are hydrophytic, the Remarks): Tide Gage	ice. ons, se	100 asonal eff d vegetation	lects, etcon criter	drology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
Percent of Dominant Species except FAC-). Include species morphological adaptations to we Remarks (Describe disturbance 100% of the dominant plathy Proceedings of the April Photograp Other X No Recorded Data (Describe Data Included Data In	noted (*) as showing etlands. "T" indicates traces, relevant local variations are hydrophytic, the Remarks): Tide Gage h ta Available	ice. ons, se	100 asonal eff d vegetation	lects, etcon criter	drology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
Percent of Dominant Species except FAC-). Include species morphological adaptations to we Remarks (Describe disturbance 100% of the dominant plathy Processing Proces	noted (*) as showing etlands. "T" indicates traces, relevant local variations are hydrophytic, the Remarks): Tide Gage th None (in.)	ice. ons, se	asonal eff	tand HyPrimary	drology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
Percent of Dominant Species except FAC-). Include species morphological adaptations to we Remarks (Describe disturbance 100% of the dominant plath HYDROLOGY Recorded Data (Describe in Factorial Photograp Other X No Recorded Data (Describe in Factorial Photograp Other Stream, Lake, or Aerial Photograp Other Stream S	noted (*) as showing etlands. "T" indicates traces, relevant local variations are hydrophytic, the Remarks): Tide Gage hta Available None (in.) (in.)	ice. ons, se	asonal eff	tand HyPrimary	drology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands ry Indicators (2 or more required):
Percent of Dominant Species except FAC-). Include species morphological adaptations to we Remarks (Describe disturbance 100% of the dominant plathy Processing Proces	noted (*) as showing etlands. "T" indicates traces, relevant local variations are hydrophytic, the Remarks): Tide Gage th None (in.)	ice. ons, se	asonal eff	land Hy Primary X X Seconda	drology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands ry Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches
Percent of Dominant Species except FAC-). Include species morphological adaptations to we Remarks (Describe disturbance 100% of the dominant plath HYDROLOGY Recorded Data (Describe in Factorial Photograp Other X No Recorded Data (Describe in Factorial Photograp Other Stream, Lake, or Aerial Photograp Other Stream S	noted (*) as showing etlands. "T" indicates traces, relevant local variations are hydrophytic, the Remarks): Tide Gage hta Available None (in.) (in.)	ice. ons, se	asonal eff	land Hy Primary X X Seconda	drology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands ry Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches Water-Stained Leaves
Percent of Dominant Species except FAC-). Include species morphological adaptations to we Remarks (Describe disturbance 100% of the dominant plath HYDROLOGY Recorded Data (Describe in Factorial Photograp Other X No Recorded Data (Describe in Factorial Photograp Other Stream, Lake, or Aerial Photograp Other Stream S	noted (*) as showing etlands. "T" indicates traces, relevant local variations are hydrophytic, the Remarks): Tide Gage hta Available None (in.) (in.)	ice. ons, se	asonal eff	land Hy Primary X X Seconda	drology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands ry Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches

Project/Site Seattle Tacoma Airport - SOILS Soil Survey Data: Map Unit Name: Unmapped Taxonomy (Subgroup):	Master Plan Update	Date: 10/8/99 Drainage Class:	nd: A17b
SOILS Soil Survey Data: Map Unit Name: <u>Unmapped</u>	Master Plan Update	_	
SOILS Soil Survey Data: Ifap Unit Name: <u>Unmapped</u>	Master Plan Update	_	
doil Survey Data: dap Unit Name: Unmapped		Drainage Class:	
		Drainage Class:	
faxonomy (Subgroup):			
axonomy (Subgroup):		Field Observations Con	firm Mapped Type?
		Yes No	NA X
Profile Description:			
Depth Horizon Matrix Color Inches) Designation (Munsell Moist	Mottle Color (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretion Rhizospheres, etc.
-10 A 10YR 2/1	10YR 3/4	Few, Fine, Distinct	Sandy Loam with HOC
0-18 B 10YR 3/1	10YR 3/3	Common, Coarse, Distinct	Sandy Loam with HOC
8+ C 10YR 3/1	10YR 3/3	Common, Coarse, Distinct	Fine Sand
ydric Soil Indicators:			
Histosol		Listed on Local Hydric Soils Lis	
Histic Epipedon Sulfidic Odor		Listed on State Hydric Soils Lis	
Probable Aquic Moisture Regim		Listed on National Hydric Soils X Aquic Moisture Regime	List
X Reducing Conditions		Aquic Moisture Regime Organic Streaking in Sandy Soil	in.
X Gleyed or Low-Chroma Colors	- >	Mottles	15
High Organic Content in Surface	Layer	Other (Explain in Remarks)	
emarks (Describe soil disturbances, lo	ocal variations, etc.):		
	meet the hydric soil criteria		

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): The presence of all three parameters indicate this area is a wetland.

Param	etrix,	inc.
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4 1				Date Fiot w.	
L* WETI	AND DE	TERMIN	ΔΤΙΩ	Wetland:	A17c
(Modified from: 198	· · · ·				
Project/Site Seattle Tacoma Airport - Master Plan Upda	te	Date:	4/11/	00	
Applicant/Owner: Port of Seattle		County	: Kir	ng	
Investigator: W. Kleindi		State:	W		
✓ 1987 Method 1989 Method				Community ID: F	PFO
Do Normal Circumstances exist on the site?	Yes X	No		-	7c:A1
Is the site significantly disturbed (Atypical Situation)?	Yes	No	Х		
is the area a potential Problem Area?	Yes —	— No	×	•	
Remarks (Explain sample location, disturbances, proble Wetland A17 borders an unnamed tributary to Miller Creel Des Moines Memorial Drive and 9th Avenue. Several driv	k. The wel				Miller Creek and betwee
VEGETATION ✓ Dominant species are checked) Plant Species	% C	over Strat	um	Indicator	
✓ 1 Equisetum telmateia	20	Herb		FACW	
✓ 2. Poa pratensis ——————————————————————————————————	100	Herb		FAC	
✓ 3 Ranunculus repens	35	Herb		FACW	
Percent of Dominant Species that are OBL, FACW, or (except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T" indicates trace Remarks (Describe disturbances, relevant local variation Since 100% of the dominant plants are hydrophytic, the w	e. is, season		•	met.	
HYDROLOGY					
Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other		Primar		Inundated Saturated in Upper 12 in	nches
X No Recorded Data Available				Saturated in Upper 18 in Water Marks Drift Lines Sediment Deposits Drainage Patterns in We	
Field Observations: Depth of Surface Water: None (in.)		_			
Depth of Surface Water: None (in.) Depth to Free Water in Pit: 12 (in.)		Second	tary it	ndicators (2 or more requ	iired):
Depth to Saturated Soil: 10 (in.)				Oxidized Root Channels	in Upper 12 inches
(***)				Water-Stained Leaves	
				Local Soil Suprey Data	

Remarks (As relevant, describe recent precipitation, hydrologic modifications, local variations, etc.): The presence of soil saturation to surface and shallow water table satisfies the wetland hydrology criteria.

Other (Explain in Remarks)

1							Data P	lot#:	A17c:A1
L							Wetiar	nd:	A17c
Project/S	iite. Seattle Ti	acoma Airport - Master i	Plan U	pdate	Date	4/11/00			
OILS	vey Data:								
vlap Uni	t Name: Unm	napped				Drainage	Ciass.		
						Field Ob:	servations Conf	ırm Ma;	ped Type?
Гахопоп	ny (Subgroup)					Yes	No	_ NA	<u>x</u>
Profile D Depth Inches)	escription: Horizon Designation	Matrix Color (Munsell Moist)		ottle Color unsell Moist)		Mottle Abundan	ce/Contrast	_	ture, Concretions,
-15	A	10YR 3/1				•		Loan	n
5-18+	В	10YR 3/1	10	/R 3/3		Common, C	oarse. Distinct	Sand	dv Loam
H H S P R G H	educing Condi leyed or Low-C igh Organic Co (Describe soil	Moisture Regime			Listed Listed Aquic Organ Mottle Other	I on State I I on Nation Moisture F iic Streakin	Hydric Soils List Hydric Soils List al Hydric Soils I Regime ng in Sandy Soil	List	
VETLA	ND DETER	MINATION							
ydrophy	tic Vegetation	Present? Ye	s _>	<u> No _</u>		t:	s this Samplin	g Point	Within a Wetlan
udric Sa	ils Present?	Ye	s >	(No	_				
	lydrology Pre		" <u> </u>				Yes X	No	•

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): The presence of all three parameters indicate this area is a wetland.



Data Plot #:

A17c:A2

	WET	LAND DE	TERMIN	NOITA			
	(Modified from: 19	87 COE W	etlands	Delinea	ation Manua	i)	
Project/Site: Seattle Tacoma	Airport - Master Plan Up	date	Date:	4/11/00			
Applicant/Owner: Port of S	eattle		County	King			
Investigator: W. Kleindl			State:	WA			
✓ 1987 Method 1989	Method				Community I	D: PEM	
Do Normal Circumstances exis	st on the site?	Yes X	_ No		Field Plot ID:		
s the site significantly disturbe	ed (Atypical Situation)?	Yes	 No	<u> </u>	Tield Flot ID.	A176.A2	
s the area a potential Problem	Area?	Yes	— No	×			
Remarks (Explain sample loc	ation disturbances prob			~~			
Vetland A17 borders an unnantes Moines Memorial Drive an	d 9th Avenue. Several o	riveways and	streets cro	ss the w	etland.	er to wine, creek	and betw
Plant Species	,	% Co	ver Stratu	m Ind	licator		
1 Equisetum telmateia		20	Herb	FA	cw		
. Des		10	Herb	FA	c		
2 Poa pratensis							
Ranunculus repens Percent of Dominant Species except FAC-). Include species norphological adaptations to w temarks (Describe disturbant	s noted (*) as showing etlands. "T" indicates traces traces, relevant local variati	ice. ons, seasona					
Ranunculus repens Percent of Dominant Species except FAC-). Include species norphological adaptations to w emarks (Describe disturbant ince 100% of the dominant pla	s noted (*) as showing etlands. "T" indicates traces traces, relevant local variati	or FAC	l effects, et	(c.):			
Ranunculus repens recent of Dominant Species except FAC-). Include species corphological adaptations to w emarks (Describe disturbance ince 100% of the dominant place) [YDROLOGY]	s noted (*) as showing etlands. "T" indicates traces, relevant local variations are hydrophytic, the	or FAC ice. ons, seasona wetland vege	effects, et	ic.): na is met	:		
Ranunculus repens recent of Dominant Species except FAC-). Include species corphological adaptations to w emarks (Describe disturbance ince 100% of the dominant plat IYDROLOGY ecorded Data (Describe in I	s noted (*) as showing etiands. "T" indicates traces, relevant local variations are hydrophytic, the Remarks):	or FAC ice. ons, seasona wetland vege	l effects, et	ic.): na is met	Indicators (D	escribe in Remar	rks):
Ranunculus repens ercent of Dominant Specie except FAC-). Include species orphological adaptations to w emarks (Describe disturbance ince 100% of the dominant pla YDROLOGY ecorded Data (Describe in I Stream, Lake, or	s noted (*) as showing etlands. "T" indicates traces, relevant local variations are hydrophytic, the Remarks): r Tide Gage	or FAC ice. ons, seasona wetland vege	l effects, et	ic.): na is met vdrology Indicator	Indicators (D	escribe in Remar	rks):
Ranunculus repens ercent of Dominant Species except FAC-). Include	s noted (*) as showing etlands. "T" indicates traces, relevant local variations are hydrophytic, the Remarks): r Tide Gage	or FAC ice. ons, seasona wetland vege	l effects, et tation crite. Vetland Hy Primary	rdrology Indicator	Indicators (D s:		rks):
Ranunculus repens ercent of Dominant Specie except FAC-). Include species corphological adaptations to w emarks (Describe disturbance ince 100% of the dominant pla YDROLOGY ecorded Data (Describe in I Stream, Lake, or Aerial Photograp Other	s noted (*) as showing etlands. "T" indicates traces, relevant local variation ants are hydrophytic, the Remarks): Tide Gage	or FAC ice. ons, seasona wetland vege	l effects, et	rdrology Indicator Inui	Indicators (D 's: ndated urated in Upper	12 inches	rks):
Ranunculus repens ercent of Dominant Species except FAC-). Include species orphological adaptations to w emarks (Describe disturbant ince 100% of the dominant pla YDROLOGY ecorded Data (Describe in I Stream, Lake, or Aerial Photograp Other	s noted (*) as showing etlands. "T" indicates traces, relevant local variation ants are hydrophytic, the Remarks): Tide Gage	or FAC ice. ons, seasona wetland vege	l effects, et tation crite. Vetland Hy Primary	rdrology Indicator Inui	Indicators (D s:	12 inches	rks):
ercent of Dominant Species except FAC-). Include species except FAC-). Include species corphological adaptations to whemarks (Describe disturbancince 100% of the dominant plaining stream, Lake, or Aerial Photograp Other	s noted (*) as showing etlands. "T" indicates traces, relevant local variation ants are hydrophytic, the Remarks): Tide Gage	or FAC ice. ons, seasona wetland vege	l effects, et tation crite. Vetland Hy Primary	rdrology Indicator Inui Sat Wa	Indicators (Dis: ndated urated in Upper urated in Upper	12 inches	rks):
ercent of Dominant Species except FAC-). Include species except FAC-). Include species corphological adaptations to whemarks (Describe disturbancince 100% of the dominant plaining stream, Lake, or Aerial Photograp Other	s noted (*) as showing etlands. "T" indicates traces, relevant local variation ants are hydrophytic, the Remarks): Tide Gage	or FAC ice. ons, seasona wetland vege	l effects, et tation crite. Vetland Hy Primary	rdrology Indicator Sat Va Drif	Indicators (Disc.) Indicators (Disc.) Indicated in Upper urated in Upper ter Marks it Lines diment Deposits	12 inches 18 inches	rks):
Ranunculus repens ercent of Dominant Specie except FAC-). Include species except FAC-). Include	s noted (*) as showing etlands. "T" indicates traces, relevant local variation ants are hydrophytic, the Remarks): Tide Gage	or FAC ice. ons, seasona wetland vege	l effects, et tation crite. Vetland Hy Primary	rdrology Indicator Sat Va Drif	Indicators (Dis: ndated urated in Upper urated in Upper ter Marks t Lines	12 inches 18 inches	rks):
Ranunculus repens ercent of Dominant Specie except FAC-). Include species orphological adaptations to w emarks (Describe disturbance ince 100% of the dominant pla YDROLOGY ecorded Data (Describe in I Stream, Lake, or Aerial Photograp Other X No Recorded Data eld Observations: Depth of Surface Water:	s noted (*) as showing etlands. "T" indicates traces, relevant local variations are hydrophytic, the Remarks): r Tide Gage on the Available	or FAC ice. ons, seasona wetland vege	l effects, et tation crite.	rdrology Indicator Inui Sat Wa' Drif Sec	Indicators (Disc.) Indicators (Disc.) Indicated in Upper urated in Upper ter Marks it Lines diment Deposits inage Patterns in	12 inches 18 inches in Wetlands	rks):
Ranunculus repens ercent of Dominant Specie except FAC-). Include species corphological adaptations to w emarks (Describe disturbance ince 100% of the dominant pla YDROLOGY ecorded Data (Describe in I Stream, Lake, or Aerial Photogram Other X No Recorded Data eld Observations: Depth of Surface Water: Depth to Free Water in Pit:	s noted (*) as showing etlands. "T" indicates traces, relevant local variations are hydrophytic, the Remarks): r Tide Gage oh ata Available None (in.) 15 (in.)	or FAC ice. ons, seasona wetland vege	l effects, et tation crite.	rdrology Indicator Sat Sat Wa Drif Sec Dra	Indicators (Discount of the control	12 inches 18 inches in Wetlands required):	
Ranunculus repens ercent of Dominant Species except FAC-). Include	s noted (*) as showing etlands. "T" indicates traces, relevant local variations are hydrophytic, the Remarks): r Tide Gage on the Available	or FAC ice. ons, seasona wetland vege	l effects, et tation crite.	rdrology Indicator Sat Sat Wa Drif Sec Dra ary Indica	Indicators (Discount of the control	12 inches 18 inches in Wetlands required): nnels in Upper 12	
Ranunculus repens ercent of Dominant Specie except FAC-). Include species except FAC-). Include	s noted (*) as showing etlands. "T" indicates traces, relevant local variations are hydrophytic, the Remarks): r Tide Gage oh ata Available None (in.) 15 (in.)	or FAC ice. ons, seasona wetland vege	l effects, et tation crite.	rdrology Indicator Sat Wa Drif Sec Dra ary Indica Wat	Indicators (Disc.) s: Indated Indicated in Upper Iter Marks Iteries Indicated Patterns Iteries Indicated Patterns Iteries Indicated Root Chair	12 inches 18 inches in Wetlands required): nnels in Upper 12 ves	

		x, Inc.								
								Data Pic		A17c:A2
L								Wetland	3:	A17c
Project/Site:	Seattle Ta	acoma Airport - Mas	ter Pla	n Upda	te	Date:	4/11/00			
SOILS Soil Survey	Data:									
Map Unit Na	me: Unm	apped					Drainage	Class:		
							Field Ob:	servations Confir	т Мар	ped Type?
Taxonomy (S	Subgroup):						Yes	No	NA	_x_
Profile Desc	ription:	-								
	iorizon Pesignation	Matrix Color (Munsell Moist)		Mottle (Muns	Color ell Moist)	Mottle Abundan	ce/Contrast		ure, Concretions ospheres, etc.
)-9 A		10YR 3/1					-		Loam	1
9-15 B		10YR 3/1		10YR 4	.14		Few. Fine.	Faint	Loam	1
5-18+ A	b	10YR 2/1		10YR 5	/3		Many, Coar	se. Distinct	Loam	with HOC
lydric Soll l										
Histo	soi Epipedon							Hydric Soils List Hydric Soils List		
	ic Odor				-			al Hydric Soils List	ist	
Proba	able Aquic	Moisture Regime					Moisture F	_		
Redu	cing Condi	itions			_	Organ	ic Streakir	ng in Sandy Soils	5	
X Gleye	ed or Low-(Chroma Colors				X Mottle	s			
High (Organic Co	ontent in Surface La	yer			Other	(Explain in	Remarks)		
		disturbances, loca			•	ia. Buned i	A laver witi	h high organic co	ntent a	it 15 inches
							,			. 70 11101100
VETLAND	DETER	MINATION								
ydrophytic \	Vegetation	Present?	Yes	X	No		ı	s this Sampling	Point	Within a Wetla
ydric Soils f	Present?		Yes	X	No			V V		_
	ology Pre			_				Yes X	No)

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): All three wetland parameters are present.

Parametrix, In	C.
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Data Plot #:

A17c:A3

	WET	LAND DE	TERMIN.	ATION	Wetland	d: <u>A17c</u>
	(Modified from: 19	87 COE V	vetlands	Delinea	tion Manual	I)
Project/Site. Seattle Tacoma	Airport - Master Plan Up		Date [.]	3/14/00		•
Applicant/Owner: Port of S		-	County			
Investigator: W. Kleindi	Cathe		State:	WA		
	Method					
Do Normal Circumstances exis		Yes X	No		Community IC	
Is the site significantly disturbe		Yes	_ No	X	Field Plot ID:	A17c:A3
Is the area a potential Problem		Yes	— No	<u>^</u>		
Remarks (Explain sample loc	ation disturbances prob		'''	^		
Wetland A17 borders an unnan Des Moines Memorial Drive an	d 9th Avenue. Several di	riveways an	streets cro	oss the we	itiana	t to miner creek and betw
VEGETATION (✓ Domina Plant Species	int species are checked)	% C	over Stratu	ladi	cator	
✓ 1 Carex obnupta		20	Herb	rm mai OBL		
• 1			Herb	OBL		
✓ 2 Ins pseudacorus		20				
Ranunculus repens Percent of Dominant Species (except FAC-). Include species morphological adaptations to wi Remarks (Describe disturbance)	noted (*) as showing etlands. "T" indicates traces, relevant local variations.	or FAC	Herb	FAC	w	
Ranunculus repens Percent of Dominant Species (except FAC-). Include species morphological adaptations to wi Remarks (Describe disturbant Since 100% of the dominant place	noted (*) as showing etlands. "T" indicates traces, relevant local variations.	or FAC	Herb	FAC	w	
Ranunculus repens Percent of Dominant Species (except FAC-). Include species morphological adaptations to we Remarks (Describe disturbant Since 100% of the dominant pla HYDROLOGY	enoted (*) as showing etlands. "T indicates trained indicates trained in the same hydrophytic, the same hydrop	or FAC ce. ons, seasons wetland vege	Herb 100 al effects, el etation crite	FAC tc.): ria is met.		
Ranunculus repens Percent of Dominant Specie: (except FAC-). Include species morphological adaptations to wi Remarks (Describe disturbance Since 100% of the dominant plat HYDROLOGY Recorded Data (Describe in F	ented (*) as showing etlands. "T" indicates traces, relevant local variation and are hydrophytic, the second seconds."	or FAC ce. ons, seasons wetland vege	Herb 100 al effects, etetation crite	FAC tc.): ria is met.	indicators (De	escribe in Remarks):
Ranunculus repens Percent of Dominant Specie: (except FAC-). Include species morphological adaptations to wi Remarks (Describe disturbance Since 100% of the dominant plat HYDROLOGY Recorded Data (Describe in F	ented (*) as showing ettands. "T" indicates traices, relevant local variation and are hydrophytic, the series." Remarks): Tide Gage	or FAC ce. ons, seasons wetland vege	Herb 100 si effects, et etation crite. Wetland Hy Primary	FAC tc.): ria is met. /drology I	indicators (De	escribe in Remarks):
Ranunculus repens Percent of Dominant Specie: (except FAC-). Include species morphological adaptations to wi Remarks (Describe disturbance Since 100% of the dominant plat HYDROLOGY Recorded Data (Describe in F Stream, Lake, or Aerial Photograp	ented (*) as showing ettands. "T" indicates traices, relevant local variation and are hydrophytic, the series." Remarks): Tide Gage	or FAC ce. ons, seasons wetland vege	Herb 100 If effects, et etation crite Wetland Hy Primary X	tc.): ria is met. vdrology l Indicators	indicators (De :: dated	
Percent of Dominant Species (except FAC-). Include species morphological adaptations to we Remarks (Describe disturbant Since 100% of the dominant pla HYDROLOGY Recorded Data (Describe in F Stream, Lake, or Aerial Photograp Other	ented (*) as showing ettands. "T indicates traites, relevant local variation and are hydrophytic, the series." Remarks): Tide Gage	or FAC ce. ons, seasons wetland vege	Herb 100 si effects, et etation crite. Wetland Hy Primary	tc.): ria is met. vdrology l Indicators Inun Satu	Indicators (De :: dated trated in Upper	12 inches
Ranunculus repens Percent of Dominant Specie: (except FAC-). Include species morphological adaptations to wi Remarks (Describe disturbance Since 100% of the dominant plat HYDROLOGY Recorded Data (Describe in F Stream, Lake, or Aerial Photograp	ented (*) as showing ettands. "T indicates traites, relevant local variation and are hydrophytic, the series." Remarks): Tide Gage	or FAC ce. ons, seasons wetland vege	Herb 100 If effects, et etation crite Wetland Hy Primary X	rc.): ria is met. vdrology l Indicators Inun Satu	Indicators (De :: dated inated in Upper inated in Upper	12 inches
Percent of Dominant Species (except FAC-). Include species morphological adaptations to we Remarks (Describe disturbant Since 100% of the dominant pla HYDROLOGY Recorded Data (Describe in F Stream, Lake, or Aerial Photograp Other	ented (*) as showing ettands. "T indicates traites, relevant local variation and are hydrophytic, the series." Remarks): Tide Gage	or FAC ce. ons, seasons wetland vege	Herb 100 If effects, et etation crite Wetland Hy Primary X	rc.): ria is met. vdrology I Indicators Inun Satu Satu Wate	Indicators (De :: dated trated in Upper	12 inches
Percent of Dominant Species (except FAC-). Include species morphological adaptations to wi Remarks (Describe disturbant Since 100% of the dominant pla HYDROLOGY Recorded Data (Describe in F Stream, Lake, or Aerial Photograp Other	ented (*) as showing ettands. "T indicates traites, relevant local variation ants are hydrophytic, the series." Remarks): Tide Gage	or FAC ce. ons, seasons wetland vege	Herb 100 If effects, et etation crite Wetland Hy Primary X	rc.): ria is met. vdrology I Indicators Inun Satu Satu Uate Drift Sedi	indicators (Decidated in Upper parted in Upper er Marks Lines ment Deposits	12 inches 18 inches
Percent of Dominant Specie: (except FAC-). Include species morphological adaptations to wi Remarks (Describe disturbant Since 100% of the dominant plat HYDROLOGY Recorded Data (Describe in F Stream, Lake, or Aerial Photograp Other X No Recorded Da	ented (*) as showing ettands. "T indicates traites, relevant local variation ants are hydrophytic, the series." Remarks): Tide Gage	or FAC ce. ons, seasons wetland vege	Herb 100 If effects, et etation crite Wetland Hy Primary X	rc.): ria is met. vdrology I Indicators Inun Satu Satu Uate Drift Sedi	indicators (De :: dated irated in Upper irated in Upper er Marks Lines	12 inches 18 inches
Percent of Dominant Specie: (except FAC-). Include species morphological adaptations to wi Remarks (Describe disturbant Since 100% of the dominant plat HYDROLOGY Recorded Data (Describe in F Stream, Lake, or Aerial Photograp Other X No Recorded Da	ented (*) as showing etlands. "T" indicates traites, relevant local variation ants are hydrophytic, the services. Tide Gage the services and services are services. Tide Gage the services are services and services are services and services are services are services and services are services are services are services and services are services are services are services.	or FAC ce. ons, seasons wetland vege	Herb 100 If effects, et etation crite Wetland Hy Primary X X	rac.): ria is met. rdrology I Indicators Inun Satu Satu Drift Sedi Drair	indicators (Decidated in Upper particular in Upper per Marks Lines ment Deposits in the page Patterns in the page	12 inches 18 inches n Wetlands
Percent of Dominant Species (except FAC-). Include species morphological adaptations to wi Remarks (Describe disturbance Since 100% of the dominant plat HYDROLOGY Recorded Data (Describe in F Stream, Lake, or Aerial Photograp Other X No Recorded Dat Field Observations:	ented (*) as showing etlands. "T" indicates traites, relevant local variations are hydrophytic, the services. Tide Gage the traited traites are hydrophytic traited traites. Tide Gage the traited traites are hydrophytic traited tra	or FAC ce. ons, seasons wetland vege	Herb 100 al effects, etetation crite Wetland Hy Primary X X Seconda	rdrology I Indicators Inun Satu Wate Drift Sedi Drain	indicators (Decidated in Upper intended in Upper er Marks Lines ment Deposits nage Patterns in tors (2 or more	12 inches 18 inches n Wetlands required):
Percent of Dominant Species (except FAC-). Include species morphological adaptations to wi Remarks (Describe disturbance Since 100% of the dominant plat HYDROLOGY Recorded Data (Describe in F Stream, Lake, or Aerial Photograp Other X No Recorded Data Field Observations: Depth of Surface Water:	ented (*) as showing ettands. "Te indicates traites, relevant local variation ants are hydrophytic, the services." Remarks): Tide Gage his ta Available	or FAC ce. ons, seasons wetland vege	Herb 100 If effects, et etation crite Wetland Hy Primary X X	rc.): ria is met. ydrology I Indicators Inun Satu Satu Wate Drift Sedi Drain ary Indica Oxid	indicators (Decided in the control of the control o	12 inches 18 inches Nettands required): Inches in Upper 12 inches
Percent of Dominant Species (except FAC-). Include species morphological adaptations to wi Remarks (Describe disturbant Since 100% of the dominant plat HYDROLOGY Recorded Data (Describe in F Stream, Lake, or Aerial Photograp Other X No Recorded Da Field Observations: Depth of Surface Water: Depth to Free Water in Pit:	ented (*) as showing ettands. "T indicates traices, relevant local variation ants are hydrophytic, the state of the state	or FAC ce. ons, seasons wetland vege	Herb 100 al effects, etetation crite Wetland Hy Primary X X Seconda	ric.): ria is met. ydrology l Indicators Inun Satu Satu Drift Sedi Drair ary Indica Oxid Wate	Indicators (Decided in Upper parated in Upper er Marks Lines ment Deposits nage Patterns in tors (2 or more ized Root Chaner-Stained Leave	12 inches 18 inches n Wetlands required): nnels in Upper 12 inches es
Percent of Dominant Species (except FAC-). Include species morphological adaptations to wi Remarks (Describe disturbant Since 100% of the dominant plat HYDROLOGY Recorded Data (Describe in F Stream, Lake, or Aerial Photograp Other X No Recorded Da Field Observations: Depth of Surface Water: Depth to Free Water in Pit:	ented (*) as showing ettands. "T indicates traices, relevant local variation ants are hydrophytic, the state of the state	or FAC ce. ons, seasons wetland vege	Herb 100 al effects, etetation crite Wetland Hy Primary X X Seconda	ric.): ria is met. rdrology I Indicators Inun Satu Satu Drift Sedi Drair ary Indica Oxid Wate Loca	indicators (Decided in the control of the control o	12 inches 18 inches N Wetlands required): nnels in Upper 12 inches es ata

4 1						Data Plot #:	A17c:A3
						Wetland:	A17c
roject/S	ite: Seattle Ta	acoma Airport - Maste	r Plan Update	Date	3/14/00	· · · · · · · · · · · · · · · · · · ·	
OILS ioil Sur	vey Data:						
Map Unit	Name: <u>Unm</u>	apped			Drainage Class		
					Field Observation	ns Confirm Mar	oped Type?
axonom	ny (Subgroup):				Yes No	NA	<u>_x</u>
Profile D	escription:						
epth nches)	Horizon Designation	Matrix Color (Munsell Moist)	Mottle Cold (Munsell M		Mottle Abundance/Contr		ture, Concretion cospheres, etc.
-18+	A	10YR 2/1	401/5 4/6				
-10+		1071(2)	10YR 3/2		Few. Fine, Faint	Loan	n with HOC
lydric Se	oil Indicators: listosol listic Epipedon		10YR 3/2		on Local Hydric S	oils List	n with HOC
lydric So	oil Indicators:		10YR 3/2	Listed		oils List	n with HOC
Hydric So	oil Indicators: listosol listic Epipedon ulfidic Odor robable Aquic	Moisture Regime	10YR 3/2	Listed	l on Local Hydric S	oils List	n with HOC
lydric Se	oil Indicators: listosol listic Epipedon ulfidic Odor robable Aquic educing Condi	Moisture Regime tions	10YR 3/2	Listed Listed X Aquid Organ	l on Local Hydric S l on State Hydric S l on National Hydric Moisture Regime lic Streaking in Sar	oils List oils List : Soils List	n with HOC
Hydric Se	oil Indicators: listosol listic Epipedon ulfidic Odor robable Aquic educing Condi leyed or Low-C	Moisture Regime tions Chroma Colors		Listed Listed X Aquid Organ X Mottle	on Local Hydric S on State Hydric S on National Hydric Moisture Regime iic Streaking in Sar	oils List oils List : Soils List idy Soils	n with HOC
Hydric So	oil Indicators: listosol listic Epipedon ulfidic Odor robable Aquic educing Condi leyed or Low-C igh Organic Co	Moisture Regime tions Chroma Colors ontent in Surface Laye	r	Listed Listed X Aquid Organ X Mottle	l on Local Hydric S l on State Hydric S l on National Hydric Moisture Regime lic Streaking in Sar	oils List oils List : Soils List idy Soils	n with HOC
HH S P R X G X HH	oil Indicators: listosol listic Epipedon ulfidic Odor robable Aquic educing Condi leyed or Low-C igh Organic Co	Moisture Regime tions Chroma Colors ontent in Surface Laye disturbances, local va	r iniations, etc.):	Listed X Aquid Organ X Mottle Other	on Local Hydric S on State Hydric S on National Hydric Moisture Regime lic Streaking in Sar is (Explain in Reman	oils List oils List o Soils List ady Soils	
HH S P R X G X HH	oil Indicators: listosol listic Epipedon ulfidic Odor robable Aquic educing Condi leyed or Low-C igh Organic Co	Moisture Regime tions Chroma Colors ontent in Surface Laye	r iniations, etc.):	Listed X Aquid Organ X Mottle Other	on Local Hydric S on State Hydric S on National Hydric Moisture Regime lic Streaking in Sar is (Explain in Reman	oils List oils List o Soils List ady Soils	
Hydric S H H S S R X G X H emarks	oil Indicators: listosol listic Epipedon ulfidic Odor robable Aquic educing Condi leyed or Low-C igh Organic Co	Moisture Regime tions Chroma Colors ontent in Surface Laye disturbances, local va ric soil indicators meet	r iniations, etc.):	Listed X Aquid Organ X Mottle Other	on Local Hydric S on State Hydric S on National Hydric Moisture Regime lic Streaking in Sar is (Explain in Reman	oils List oils List o Soils List ady Soils	
Hydric Solution Solut	oil Indicators: listosol listic Epipedon ulfidic Odor robable Aquic educing Condi leyed or Low-C igh Organic Co (Describe soil and other hydr	Moisture Regime tions Chroma Colors ontent in Surface Laye disturbances, local vaic soil indicators meet	r iniations, etc.):	Listed X Aquid Organ X Mottle Other	d on Local Hydric S l on State Hydric S l on National Hydric Moisture Regime lic Streaking in Sar les (Explain in Remandation	oils List oils List c Soils List ady Soils cs)	d.
Hydric Some Some Society Socie	oil Indicators: listosol listic Epipedon ulfidic Odor robable Aquic educing Condi leyed or Low-C igh Organic Co (Describe soil and other hydr	Moisture Regime tions Chroma Colors Ontent in Surface Laye disturbances, local varic soil indicators meet MINATION Present?	r ariations, etc.): the hydric soil cr	Listed X Aquic Organ X Mottle Other	d on Local Hydric S l on State Hydric S l on National Hydric Moisture Regime lic Streaking in Sar les (Explain in Remandation	oils List coils List coils List dy Soils coils c	d. Within a Wetla

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results):

The presence of all three parameters indicate this area is a wetland.



A17d:A1

Project/Site: Seattle Tacoma Airpo Applicant/Owner: Port of Seattle Investigator: William Kleindl. Marti 1987 Method 1989 Metho Do Normal Circumstances exist on t Is the site significantly disturbed (Aty Is the area a potential Problem Area Remarks (Explain sample location. Wetland A17 borders an unnamed tr Des Moines Memorial Drive and 9th VEGETATION Commant species	dified from: 19 rt - Master Plan Up Louther od he site? vpical Situation)? ? disturbances, problematary to Miller Cree	Yes _ Yes _ Yes _ elem areas		Date: County: State:	Melinea 11/13/00 King WA	Community ID	
Project/Site. Seattle Tacoma Airpo Applicant/Owner: Port of Seattle Investigator: William Kieindl. Marti 1987 Method 1989 Metho Do Normal Circumstances exist on t Is the site significantly disturbed (Atylis the area a potential Problem Area Remarks (Explain sample location. Wetland A17 borders an unnamed tr. Des Moines Memoral Drive and 9th VEGETATION Port of Seattle Port of Seattle Port of Seattle 1989 Method 1	Louther od he site? rpical Situation)? disturbances, problebutary to Miller Cre	Yes _ Yes _ Yes _ elem areas	X (3):	Date: County: State: No _ No _	11/13/00 King WA	Community ID	PEM
Applicant/Owner: Port of Seattle Investigator: William Kleindl, Marti 1987 Method 1989 Method Do Normal Circumstances exist on the Is the site significantly disturbed (Atylis the area a potential Problem Area Remarks (Explain sample location, Wetland A17 borders an unnamed the Des Moines Memoral Drive and 9th VEGETATION Comments portional Seattle Investigation (Comments of the Investigation)	Louther od he site? pical Situation)? ? disturbances, prob ibutary to Miller Cre	Yes _ Yes _ Yes _ elem areas	X X 3):	County: State: No _ No _	King WA		
Investigator: William Kleindl. Marti 1987 Method 1989 Metho Do Normal Circumstances exist on t Is the site significantly disturbed (Aty Is the area a potential Problem Area Remarks (Explain sample location. Wetland A17 borders an unnamed tr Des Moines Memorial Drive and 9th VEGETATION Commant specification.	od he site? rpical Situation)? ? disturbances, probibutary to Miller Cre	Yes _ Yes _ em areas	× × ;	No _	WA		
✓ 1987 Method 1989 Method Do Normal Circumstances exist on the site significantly disturbed (Atylis the area a potential Problem Area Remarks (Explain sample location, Wetland A17 borders an unnamed tropes Moines Memorial Drive and 9th VEGETATION (✓ Dominant specific properties)	od he site? rpical Situation)? ? disturbances, probibutary to Miller Cre	Yes _ Yes _ em areas	× × ;;;	No _			
Do Normal Circumstances exist on the site significantly disturbed (Atylis the area a potential Problem Area Remarks (Explain sample location, Wetland A17 borders an unnamed to Des Moines Memonal Drive and 9th VEGETATION (VDominant specific properties)	he site? rpical Situation)? ? disturbances, probibutary to Miller Cre	Yes _ Yes _ em areas	3):	No _			
Is the site significantly disturbed (Atylis the area a potential Problem Area Remarks (Explain sample location, Wetland A17 borders an unnamed triples Moines Memorial Drive and 9th VEGETATION (VDominant sp.	rpical Situation)? ? disturbances, prob ibutary to Miller Cre	Yes _ Yes _ em areas	3):	No _		Field Plot ID	A17d:A1
Is the area a potential Problem Area Remarks (Explain sample location, Wetland A17 borders an unnamed tr. Des Moines Memorial Drive and 9th VEGETATION (Dominant sp.	? disturbances, prob ibutary to Miller Cre	Yes _ lem areas		_	v		-
Remarks (Explain sample location, Wetland A17 borders an unnamed tr. Des Moines Memorial Drive and 9th VEGETATION (Dominant sp.	disturbances, prob	lem areas			<u> </u>		
Wetland A17 borders an unnamed tr Des Moines Memonal Drive and 9th VEGETATION (Dominant sp.	butary to Miller Cre	ek. The		No _	<u> </u>		
Des Moines Memorial Drive and 9th VEGETATION (Dominant sp.				_			
Plant Species	ecies are checked)						
		%	Cover	Stratun	n indi	cator	
✓ 1 Athvrium filix-femina		2	0	Herb	FAC	<u>:</u>	
2 Convolvulus arvensis		5		Herb	NL.		
3 Equisetum arvense Ranunculus repens		10		Herb	FAC		
Solanum dulcamara		5	J	Herb Herb	— FAC		
✓ 6 Rubus discolor		30)	Shrub	FAC		
y 7 Alnus rubra		10	00	Tree	FAC	:	
Remarks (Describe disturbances, re Since greater than 50% of the domin.						teria is met.	
HYDROLOGY							
Recorded Data (Describe in Rema			_	_			escribe in Remarks):
Stream, Lake, or Tide	Gage		,	Primary I	ndicator	S :	
Aerial Photograph						dated	
Other				<u> </u>	_	rated in Upper 1	
X No Recorded Data Av	ailable					ırated in Upper 1 er Marks	io inches
					_	Lines	
						ment Deposits	
				Х	Drai	nage Patterns in	Wetlands
ield Observations: Depth of Surface Water: No							
Depth of Surface Water: No Depth to Free Water in Pit: 2	ine (in.)		5	Secondai	y Indica	tors (2 or more i	required):
Depth to Saturated Soil: 0	(in.)				Oxic	lized Root Chan	nels in Upper 12 inches
<u>-</u>						er-Stained Leave	
						al Soil Survey Da	
					Othe	er (Explain in Re	marks)
Remarks (As relevant, describe rec	ent precipitation, hi	/drologic i	modific	ations. In	cal vana	tions etc.):	

AR 047838

4						Data Pi	ot #:	A17d:A1
						Wetlan	d:	A17d
roject/Site:	Seattle Ta	acoma Airport - Master F	Plan Update	Date:	11/13/00			
OILS		······································						
ioil Survey	Data:							
Aap Unit Na	me. <u>Unm</u>	apped			Drainage (Class:		
					Field Obse	ervations Confi	rm Map	oped Type?
「axonomy (Subgroup):				Yes	No	NA	X
rofile Desc	ription:						•	
epth i	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)		Mottle Abundance	e/Contrast		ture, Concretions
-18 (Oi .	10YR 2'1					Muci	(
X Histo Histo Sulfin Prob Redu Gleye	c Epipedon dic Odor able Aquic I ucing Condit ed or Low-C	Moisture Regime tions Chroma Colors ntent in Surface Layer	x	Listed Listed Aquic Organi Mottle	on State Hy on Nationa Moisture Re ic Streaking	in Sandy Soils	ist	
	escribe soil	disturbances, local vana	ations, etc.):	_		,		
		soil layers meet the hyd						

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): The presence of all three parameters indicate this area is a wetland.

Hydrophytic Vegetation Present?

Hydric Soils Present?

Wetland Hydrology Present?

Is this Sampling Point Within a Wetland?

Yes <u>X</u> No ____



A17d:A2 Data Plot #:

(Modified from: 1	JJ. JU			
and the second s		-	anto: 3	/14/00
roject/Site: Seattle Tacoma Airport - Master Plan U	baste	_	-	
pplicant/Owner: Port of Seattle			county:	King
vestigator: William Kleindi		_	tate:	WA
1987 Method 1989 Method				Community ID: PEM
o Normal Circumstances exist on the site?	Yes	<u> </u>	No _	Field Plot ID A17d A2
the site significantly disturbed (Atypical Situation)?	Yes		No _2	x
the area a potential Problem Area?	Yes		No _2	<u>x</u>
emarks (Explain sample location, disturbances, pro	blem are	as):		
EGETATION (Dominant species are checked	1)	% Cover	Stratum	Indicator
Bhatasa an indianana		100	Herb	FACW
2 Rubus discolor		t	Shrub	FACU
orphological adaptations to wetlands. "T" indicates t emarks (Describe disturbances, relevant local varia	ations, se			
xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates the marks (Describe disturbances, relevant local variance 100% of the dominant plants are hydrophytic, the YDROLOGY	ations, se	100 asonal eff		
orphological adaptations to wetlands. Trindicates to marks (Describe disturbances, relevant local variance 100% of the dominant plants are hydrophytic, the YDROLOGY	ations, se	100 asonal eff	on criteria	
orphological adaptations to wetlands. Trindicates to emarks (Describe disturbances, relevant local variance 100% of the dominant plants are hydrophytic, the YDROLOGY	ations, se	asonal effet vegetation	on criteria and Hyd	a is met.
orphological adaptations to wetlands. T indicates to marks (Describe disturbances, relevant local variance 100% of the dominant plants are hydrophytic, the YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage	ations, se	asonal effet vegetation	on criteria and Hyd	trology Indicators (Describe in Remarks):
orphological adaptations to wetlands. "T" indicates to marks (Describe disturbances, relevant local variance 100% of the dominant plants are hydrophytic, the YDROLOGY ecorded Data (Describe in Remarks):	ations, se	asonal effet vegetation	and Hyd	drology indicators (Describe in Remarks):
orphological adaptations to wetlands. T indicates to marks (Describe disturbances, relevant local variance 100% of the dominant plants are hydrophytic, the YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	ations, se	asonal effet vegetation	and Hyd	drology indicators (Describe in Remarks): indicators: Inundated
orphological adaptations to wetlands. T indicates to marks (Describe disturbances, relevant local variance 100% of the dominant plants are hydrophytic, the YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	ations, se	asonal effet vegetation	and Hyd	trology Indicators (Describe in Remarks): indicators: Inundated Saturated in Upper 12 inches
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orphological adaptations to wetlands. T indicates to marks (Describe disturbances, relevant local variance 100% of the dominant plants are hydrophytic, the YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	ations, se	asonal effet vegetation	and Hyd	a is met. trology Indicators (Describe in Remarks): indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
orphological adaptations to wetlands. T indicates to emarks (Describe disturbances, relevant local variance 100% of the dominant plants are hydrophytic, the YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available	ations, se	asonal effet vegetation	and Hyd	trology Indicators (Describe in Remarks): indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
orphological adaptations to wetlands. T indicates to marks (Describe disturbances, relevant local variance 100% of the dominant plants are hydrophytic, the YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	ations, se	asonal eff d vegetation Wett	and Hyd Primary Ir X	drology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
prophological adaptations to wetlands. Thindicates to the marks (Describe disturbances, relevant local variance 100% of the dominant plants are hydrophytic, the the thindicates of the dominant plants are hydrophytic, the thindicates of thindicates of the thind	ations, se	asonal eff d vegetation Wett	and Hyd Primary Ir X	drology indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
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orphological adaptations to wetlands. T indicates to emarks (Describe disturbances, relevant local variance 100% of the dominant plants are hydrophytic, the YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Peld Observations: Depth of Surface Water: Depth to Free Water in Pit: O (in.)	ations, se	asonal eff d vegetation Wett	and Hyd Primary Ir X	drology indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands ry Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches

4						Data Plot	#: A17d:A2
L						Wetland:	A17d
Project/Si	ite: Seattle T	acoma Airport - Maste	r Plan Update	Date	3/14/00		
SOILS							
Soil Sun	vey Data:						
Map Unit	Name: Not	Mapped			Drainage Cia	\$ \$:	
					Field Observa	ations Confirm	Mapped Type?
Taxonom	y (Subgroup):				Yes	No X	NA
Profile De	escription:						
Depth (Inches)	Horizon Designation	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)		Mottle Abundance/C		Texture, Concretions Rhizospheres, etc.
0-10	A	10YR 3/1			•		Loam with HOC
10-18+	С	10YR 3/2	10YR 3/4		Common, Coarse	e. Distinct	Course Sand

Listed on Local Hydric Soils List

Listed on State Hydric Soils List

Organic Streaking in Sandy Soils

Aquic Moisture Regime

Other (Explain in Remarks)

Mottles

Listed on National Hydric Soils List

Remarks (Describe soil disturbances, local variations, etc.):

Probable Aquic Moisture Regime

High Organic Content in Surface Layer

Gleyed or Low-Chroma Colors

High organic content in the upper layer. Sandy deposits indicate overbank depositional events. Soil color and the presence of hydric soil indicators satisfies the hydric soil criteria.

WETLAND DETERMINATION

Histic Epipedon

Reducing Conditions

Sulfidic Odor

Hydrophytic Vegetation Present?	Yes	<u>x</u>	No	Is this Sampling Point Within a Wetland?
Hydric Soils Present?	Yes	X	No	
Wetland Hydrology Present?	Yes	<u>x</u>	No	

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): The presence of all three parameters indicate this area is a wetland.



WETLAND DETERMINATION (Modified from: 1987 COE Wetlands Delineation Manual) Project/Site: Seattle Tacoma Airport - Master Plan Update						Data Piot #:	A1/0:A3
Modified from: 1987 COE Wetlands Delineation Manual)	L	WETLAND	DETERM	INATIO	ON	Wetland:	A17d
Applicant/Owner: Port of Seattle County King Investigator: William Kleindi, Marti Louther State: WA 2 1987 Method	(Modified fo					Manual)	
State WA	Project/Site: Seattle Tacoma Airport - Maste	r Plan Update	Da	te: <u>11/1</u>	3/00		
1987 Method	Applicant/Owner: Port of Seattle		Co	unty: Ki	ing		
Do Normal Circumstances exist on the site? Yes X No Field Plot ID A17d:A3 Is the site significantly disturbed (Atypical Situation)? Yes No X Remarks (Explain sample location, disturbances, problem areas): Westland A17 borders an unnamed tributary to Miller Creek. The wetland extends from South 160th Street to Miller Creek and between the south of the situation of the situat	Investigator: William Kleindl, Marti Louther		Sta	te: W	'A		
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Alpical Situation)? Yes No X Is the area a potential Problem Area? Yes No X Remarks (Explain sample location, disturbances, problem areas): Westland A17 borders an unnamed tributary to Miller Creek. The wetland extends from South 160th Street to Miller Creek and between the street of the wetland and streets cross the wetland. Plot is located on Parcel 239. VEGETATION (**Porminant species are checked) Plant Species **Parcel Agrossis capitains (tenuis) Plots is lanatus 20 Herb FAC Herb FAC 4 Rubus discolor 4 Rubus discolor 5 Anna rubra Percent of Dominant Species that are OBL, FACW, or FAC except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. Thindicates trace. Remarks (Describe disturbances, relevant local variations, seasonal effects, etc.): Since 100% of the dominant plants are hydrophytic, the wetland vegetation criteria is met. HYDROLOGY Recorded Data (Describe in Remarks): **Primary Indicators:* **Dramape Patterns in Wetlands** **Dramape Patterns in Wetlands** **Dramape Patterns in Wetlands** **Dramape Patterns in Wetlands** **Depth to Surface Water: None (in.) Depth to Free Water in Pit: **>15 (in.) **Dramape Patterns in Upper 12 inches **Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches **Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches **Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches **Local Soil Survey Data**	✓ 1987 Method			_	Com	munity ID: PI	=O
Is the site significantly disturbed (Atypical Situation)? Yes No X Is the area a potential Problem Area? Yes No X Remarks (Explain sample location, disturbances, problem areas): Westland A17 borders an unamed tribustry to Miller Creek. The wetland extends from South 160th Street to Miller Creek and between the source of the second of	Do Normal Circumstances exist on the site?	Yes	_X_ N	o		_	d:A3
Remarks (Explain sample location, disturbances, problem areas): Wetland A17 borders an unnamed tributary to Miller Creek. The wetland extends from South 160th Street to Miller Creek and betwee Des Moines Memonal Drive and 9th Avenue. Several driveways and streets cross the wetland. Plot is located on Parcel 239. VEGETATION I Dominant species are checked) Plant Species Agrostis capilians (tenuis) Agrostis capilians	is the site significantly disturbed (Atypical Situ	ation)? Yes	N				
Wetland A17 borders an unnamed tributary to Miller Creek. The wetland extends from South 160th Street to Miller Creek and between Des Moines Memonal Drive and 9th Avenue. Several driveways and streets cross the wetland. Plot is located on Parcel 239 VEGETATION (→ Dominant species are checked) Plant Species	is the area a potential Problem Area?	Yes		- X	_		
Wetland A17 borders an unnamed tributary to Miller Creek. The wetland extends from South 160th Street to Miller Creek and between Des Moines Memonal Drive and 9th Avenue. Several driveways and streets cross the wetland. Plot is located on Parcel 239 VEGETATION I ✓ Dominant species are checked) Plant Species	Remarks (Explain sample location, disturbar				-		
Plant Species Plant Species Agrossis capillans (tenuis) 20 Herb FAC Herb FAC Herb FAC 20 Herb FAC 21 Herb FAC 22 Herb FAC 23 Hous effusus 24 Rubus discolor 25 Afnus rubra 26 Tree FAC 27 Agrossis capillans (tenuis) 28 Herb FAC 29 Herb FAC 20 Herb FAC 20 Herb FAC 20 Herb FAC 20 Herb FAC 21 Herb FAC 22 Herb FAC 23 Hous rubra 24 Rubus discolor 25 Afnus rubra 26 Tree FAC 27 Agrossis capillans (tenuis) 28 Herb FAC 29 Herb FAC 20 Herb FAC 21 Herb FAC 22 Herb FAC 23 Hous rubra 24 Rubus discolor 25 Afnus rubra 26 Tree FAC 26 Tree FAC 27 Hous rubra 28 Hous discolor 29 Herb FAC 20 H	Des Moines Memorial Drive and 9th Avenue.	Several driveway				_	
Policus lanatus 20	·	checked)	% Cover S	itratum	Indicator		
Policus lanatus 20	A (A)						
A Rubus discolor Alnus rubra Percent of Dominant Species that are OBL, FACW, or FAC except FAC-). Include species onted (*) as showing norphological adaptations to wetlands. "T indicates trace. Remarks (Describe disturbances, relevant local variations, seasonal effects, etc.): Since 100% of the dominant plants are hydrophytic, the wetland vegetation criteria is met. HYDROLOGY Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Depth to FACU Tree FAC 100 100 100 100 Metland Hydrology Indicators (Describe in Remarks): Primary Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Inundated Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Inundated Water Marks Drainage Patterns in Wetlands Inundated Water Marks Drift Lines Secondary Indicators (2 or more required): X Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data						_	
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Percent of Dominant Species that are OBL, FACW, or FAC except FAC-). Include species noted (*) as showing inorphological adaptations to wetlands. "T" indicates trace. Remarks (Describe disturbances, relevant local variations, seasonal effects, etc.): Since 100% of the dominant plants are hydrophytic, the wetland vegetation criteria is met. HYDROLOGY Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available No Recorded Data Available Wetland Hydrology Indicators (Describe in Remarks): Primary Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Dirit Lines Sediment Deposits Drainage Patterns in Wetlands Field Observations: Depth of Surface Water: Depth to Free Water in Pit: Depth to Saturated Soil: None (in.) Secondary Indicators (2 or more required): X Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data	Y 7'			hrub	FACU	-	
except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. Thindicates trace. Remarks (Describe disturbances, relevant local variations, seasonal effects, etc.): Since 100% of the dominant plants are hydrophytic, the wetland vegetation criteria is met. HYDROLOGY Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Field Observations: Depth of Surface Water: Depth to Free Water in Pit: Depth to Saturated Soil: None (in.) Depth to Saturated Soil: Aerial Photograph Saturated in Upper 12 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands X Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data	✓ 5 Ainus rubra	·····	60	ree	FAC	_	
Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available No Recorded Data Available Metland Hydrology Indicators (Describe in Remarks): Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Depth of Surface Water: None (in.) Depth to Free Water in Pit: Depth to Saturated Soil: None (in.) X Oxidized Root Channels in Upper 12 inches X Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data	Since 100% of the dominant plants are hydrop				met.		
Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): X Oxidized Root Channels in Upper 12 inches Water Marks Drainage Patterns in Wetlands Secondary Indicators (2 or more required): X Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data							
Aerial Photograph Other Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Field Observations: Depth of Surface Water: None (in.) Depth to Free Water in Pit: >15 (in.) Depth to Saturated Soil: >15 (in.) More (in.) Secondary Indicators (2 or more required): X Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data	Recorded Data (Describe in Remarks):		_			tors (Describ	e in Remarks):
Other X No Recorded Data Available Saturated in Upper 12 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Depth to Saturated Soil: Depth to Saturated Soil: X Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data			Pni	nary Indio	cators:		
X No Recorded Data Available Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Depth to Saturated Soil: Depth to Saturated Soil: X Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data					Inundated		
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Drift Lines Sediment Deposits Drainage Patterns in Wetlands Depth of Surface Water: Depth to Free Water in Pit: Depth to Saturated Soil: Depth to Saturated Soil: Depth to Saturated Soil: Depth			-		Saturated		
Sediment Deposits Drainage Patterns in Wetlands			- - -		Saturated Saturated	in Upper 18 inc	
ield Observations: Depth of Surface Water: Depth to Free Water in Pit: Depth to Saturated Soil: Depth to Saturated Soil: None (in.) Secondary Indicators (2 or more required): X Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data			- - -		Saturated Saturated Water Mai	in Upper 18 inc rks	
Depth of Surface Water: Depth to Free Water in Pit: Depth to Saturated Soil: None (in.) Secondary Indicators (2 or more required): X Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data			- - - -		Saturated Saturated Water Mai Drift Lines	in Upper 18 ind rks	
Depth to Free Water in Pit: >15 (in.) Depth to Saturated Soil: >15 (in.) X Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data	X No Recorded Data Available		- - - -		Saturated Saturated Water Mai Drift Lines Sediment	in Upper 18 inc rks Deposits	thes
Depth to Saturated Soil: >15 (in.) X Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data	X No Recorded Data Available		- - - - -		Saturated Saturated Water Mai Drift Lines Sediment	in Upper 18 inc rks Deposits	thes
Water-Stained Leaves Local Soil Survey Data	X No Recorded Data Available Field Observations: Depth of Surface Water: None	• 1. 1		condary	Saturated Saturated Water Mai Drift Lines Sediment Drainage f	in Upper 18 ind rks Deposits Patterns in Wet	ches
	X No Recorded Data Available Field Observations: Depth of Surface Water: Depth to Free Water in Pit: >15	(in.)	 Sec		Saturated Saturated Water Mai Drift Lines Sediment Drainage f	in Upper 18 incorks Deposits Patterns in Wet	ends
Other (Explain in Remarks)	X No Recorded Data Available Field Observations: Depth of Surface Water: Depth to Free Water in Pit: >15	(in.)			Saturated Saturated Water Mai Drift Lines Sediment Drainage f	in Upper 18 incorks Deposits Patterns in Wet or more require Root Channels in	ends
	X No Recorded Data Available Field Observations: Depth of Surface Water: Depth to Free Water in Pit: >15	(in.)			Saturated Saturated Water Mai Drift Lines Sediment Drainage f Indicators (2 Oxidized F Water-Sta	in Upper 18 incorks Deposits Patterns in Wet 2 or more requil Root Channels in	ends
	X No Recorded Data Available Field Observations: Depth of Surface Water: Depth to Free Water in Pit: >15	(in.) (in.)	- - -	<u>x</u>	Saturated Saturated Water Mai Drift Lines Sediment Drainage f indicators (2 Oxidized F Water-Sta Local Soil Other (Exp	in Upper 18 inc rks Deposits Patterns in Wet 2 or more requil Root Channels in ined Leaves Survey Data blain in Remark	thes lands red): n Upper 12 inches

11								Data Plot i Wetland:	V :	A17d:A3 A17d
Project/S	Site: Seattle T	acoma Airport - Maste	r Plan	Updat	e	Date:	11/13/00			
SOILS Soil Sui	rvey Data:									
Map Uni	it Name: Unm	apped					Drainage Clas	S:		
			_				Field Observat	tions Confirm	Mapp	ped Type?
Taxonor	ny (Subgroup):						Yes N	No	NA	x
Profile [Description:									
Depth Inches)	Horizon Designation	Matrix Color (Munsell Moist)		Mottle Munse	Color ell Mois	t)	Mottle Abundance/Co			re, Concretions
)-12	A	10YR 2/2	1	0YR 4/	4		Few. Coarse, Dist	inct (.oam	
2-18+	В	10YR 3/2	1	0YR 4/	4		Common, Coarse.	Distinct	Sandy	Loam
F X G	Reducing Condi Bleyed or Low-C ligh Organic Co (Describe soil	Moisture Regime tions Chroma Colors intent in Surface Laye disturbances, local va	riation			Listed Listed Aquic Organi X Mottles Other (on Local Hydric on State Hydric on National Hyd Moisture Regim c Streaking in S s Explain in Rema	: Soils List dric Soils List e Sandy Soils		
Soil color	and other hydri	ic soil indicators meet	the hy	dric so	oil criter	ia.				
VETLA	ND DETER	MINATION						-		
ydrophy	rtic Vegetation	Present?	'es	х	No		is thie	Sampling Po	sint W	Vithin a Wetlar
ydric So	ils Present?	`	es –	X	No				,,,,, v	AICHIII SI AAG(IS L
	lydrology Pres		-					Yes X	No	

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results):

The presence of all three parameters indicate this area is a wetland.



Data Plot #: A17d:B1

WE*	TLAND D	FTFR	MINAT	Wetland:	A17d Upland F
_				elineation Manual)	
(Modified from: 1s	98/ CUE	TTELIA	טע צטוי	Billiaarion marinar)	
Project/Site: Seattle Tacoma Airport - Master Plan Up	odate	_ D.	ate: 1	1/13/00	
Applicant/Owner: Port of Seattle		_	ounty:	King	
investigator: William Kleindl, Marti Louther		_ St	ate:	WA	
✓ 1987 Method				Community ID:	Upland
Do Normal Circumstances exist on the site?	Yes _	X P	No	Field Plot ID:	A17d:B1
s the site significantly disturbed (Atypical Situation)?	Yes _	١	40 <u>></u>	<u> </u>	
s the area a potential Problem Area?	Yes	r	No >	(
Remarks (Explain sample location, disturbances, pro	biem areas);			
Ipland comparison plot for Wetland A17d located on F					
,					
EGETATION Propries are checked)				
Plant Species	%	Cover	Stratum	Indicator	
1 Dactviis glomerata	20)	Herb	FACU	
2 Holcus lanatus	10)	Herb	FAC	
3 Rubus discolor	20		Shrub	FACU	
)	Tree	FAC	
4 Ainus rubra	50				
Alnus rubra 5 Populus inchocarpa ercent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing iorphological adaptations to wetlands. "T" indicates tr	or FAC	33	Tree	FAC	
Alnus rubra 5 Populus inchocarba ercent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates tremarks (Describe disturbances, relevant local varial	or FAC race.	33 onal effe	cts, etc.):	
Alnus rubra 5 Populus inchocarpa Percent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates tremarks (Describe disturbances, relevant local variations less than 50% of the dominant plants are hydrop	or FAC race.	33 onal effe	cts, etc.):	
Alnus rubra 5 Populus inchocarpa Percent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates to exemarks (Describe disturbances, relevant local variations than 50% of the dominant plants are hydrop IYDROLOGY	or FAC race.	33 onal effe	cts, etc.): n criteria is not met.	scribe in Remarks):
Alnus rubra 5 Populus tricnocarpa Percent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates triemarks (Describe disturbances, relevant local varial ince less than 50% of the dominant plants are hydrop IYDROLOGY ecorded Data (Describe in Remarks):	or FAC race.	33 onal effe retland v	cts, etc. egetatio):	scribe in Remarks):
Alnus rubra 5 Populus tricnocarpa ercent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing iorphological adaptations to wetlands. "T" indicates tr emarks (Describe disturbances, relevant local variations less than 50% of the dominant plants are hydrop IYDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage	or FAC race.	33 onal effe retland v	cts, etc. egetatio): n criteria is not met. rology Indicators (Des idicators:	scribe in Remarks):
Alnus rubra 5 Populus tricnocarpa ercent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing inorphological adaptations to wetlands. "T" indicates triemarks (Describe disturbances, relevant local varial ince less than 50% of the dominant plants are hydrop IYDROLOGY ecorded Data (Describe in Remarks):	or FAC race.	33 onal effe retland v	cts, etc. egetatio): n criteria is not met. rology Indicators (Des	
ercent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing torphological adaptations to wetlands. "T" indicates tremarks (Describe disturbances, relevant local variations team 150% of the dominant plants are hydrop IYDROLOGY ecorded Data (Describe in Remarks):	or FAC race.	33 onal effe retland v	cts, etc. egetatio): n criteria is not met. rology Indicators (Desidicators: Inundated	2 inches
Alnus rubra 5 Populus inchocarpa ercent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates to emarks (Describe disturbances, relevant local variatince less than 50% of the dominant plants are hydrop YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	or FAC race.	33 onal effe retland v	cts, etc. egetatio): n criteria is not met. rology Indicators (Desidicators: Inundated Saturated in Upper 1	2 inches
Alnus rubra 5 Populus inchocarba ercent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing inorphological adaptations to wetlands. "T" indicates to emarks (Describe disturbances, relevant local variatince less than 50% of the dominant plants are hydrop IYDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	or FAC race.	33 onal effe retland v	cts, etc. egetatio): n criteria is not met. rology Indicators (Desidicators: Inundated Saturated in Upper 1: Saturated in Upper 1:	2 inches
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Alnus rubra 5 Populus incrocarpa Percent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates tr lemarks (Describe disturbances, relevant local variations less than 50% of the dominant plants are hydrop IYDROLOGY Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Ield Observations: Depth of Surface Water: Depth to Free Water in Pit: >15 (in.)	or FAC race.	33 ponal effe vetland v Wetia	cts, etc. egetatio and Hyd anmary In	rology Indicators (Desidicators: Inundated Saturated in Upper 1: Saturated in Upper 1: Water Marks Drift Lines Sediment Deposits Drainage Patterns in V Indicators (2 or more re Oxidized Root Chann Water-Stained Leave	2 inches 8 inches Wetlands equired): nels in Upper 12 inche
Alnus rubra 5. Populus inchocarpa Percent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates to Remarks (Describe disturbances, relevant local variations less than 50% of the dominant plants are hydrop HYDROLOGY Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available ield Observations: Depth of Surface Water: Depth to Free Water in Pit: None (in.)	or FAC race.	33 ponal effe vetland v Wetia	cts, etc. egetatio and Hyd anmary In): n criteria is not met. rology Indicators (Desidicators: Inundated Saturated in Upper 1: Water Marks Drift Lines Sediment Deposits Drainage Patterns in V Indicators (2 or more re- Oxidized Root Chann	2 inches 8 inches Wetlands equired): nels in Upper 12 inches
Alnus rubra 5. Populus incrocarpa Percent of Dominant Species that are OBL, FACWexcept FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates to Remarks (Describe disturbances, relevant local variations less than 50% of the dominant plants are hydrop stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available ield Observations: Depth of Surface Water: Depth to Free Water in Pit: >15 (in.)	or FAC race.	33 ponal effe vetland v Wetia	cts, etc. egetatio and Hyd anmary In): n criteria is not met. rology Indicators (Desidicators: Inundated Saturated in Upper 1: Water Marks Drift Lines Sediment Deposits Drainage Patterns in V Indicators (2 or more re- Oxidized Root Chann	2 inches 8 inches Wetlands equired): nels in Upper 12 inche is

Project/Site: Seattle Ta SOILS Soil Survey Data: Map Unit Name: Unma	coma Airport - Master Pl	an Update	Date:	11/13/00	Wetland	:	A17d Upland Plo
SOILS Soil Survey Data:		an Update	Date:	11/13/00	4		
SOILS Soil Survey Data:		an Update	Date:	11/13/00			
Soil Survey Data:	apped						
	apped						
Map Unit Name: Unma	apped						
				Drainage Clas	s:		
				Field Observat	tions Confirm	n Mapı	ped Type?
Taxonomy (Subgroup):				Yes M	io	NA	x
Profile Description:		 					
	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)		Mottle Abundance/Co	ntrast	_	ure, Concretions, ospheres, etc.
)-12 A 1	0YR 3/2	-		•		Loam	
2-18+ B 1	0YR 3/3	10YR 4/4		Few. Coarse, Dist	nct	Loam	
Hydric Soil Indicators:							
Histosol			Listed	on Local Hydric	: Soils List		
Histic Epipedon			_	on State Hydric			
Sulfidic Odor			Listed	on National Hyd	tric Soils Lis	it	
Probable Aquic N	9		_	Moisture Regim			
Reducing Condition			_	ic Streaking in S	andy Soils		
Gleyed or Low-C			_ Mottle				
	ntent in Surface Layer		_ Other	(Explain in Rem	arks)		
	disturbances, local varial il are present. The presi ons.		e depth	of 12 inches indi	cates seasc	onal sa	turation, however it

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): This area is an upland since all wetland parameters are absent.

Hydric Soils Present?

Wetland Hydrology Present?

Is this Sampling Point Within a Wetland?

Yes ____ No __X



Data Piot #: A17d:B2

WE)	LAND DE	TERMI	MOITAN	4	Wetland:	A17a Upland Pic
(Modified from: 19					Manual)	
, =		_			,	
Project/Site: Seattle Tacoma Airport - Master Plan Up	oate	Date:				
Applicant/Owner: Port of Seattle		Coun State:	· —)		
nvestigator: William Kleindl, Marti Louther		State	***			
✓ 1987 Method 1989 Method	.,			Com	munity ID:	Upland
Do Normal Circumstances exist on the site?	Yes	No No		Field	Piot ID:	A17d:B2
s the site significantly disturbed (Atypical Situation)?	Yes	— No	<u> </u>			
s the area a potential Problem Area?	Yes	No	<u> </u>			
Remarks (Explain sample location, disturbances, prol Upland comparison plot for wetland A17a located on Pa						
/EGETATION I Dominant species are checked)			···		
Plant Species	% C	over Str	itum i	ndicator		
Agrostis capillans (tenuis)	40	Her		FAC	_	
2 Festuca arundinacea	10	Her		FAC-	-	
Festuca rubra Hypochaens radicata	20 10	Her		AC+	-	
4 Hypochaens radicata 5 Plantago lanceolata	10	Her		ACU+	-	
6 Taraxacum officinale	10	Her		ACU	-	
except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates to	ace.	100	etc.):			
except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates to temarks (Describe disturbances, relevant local variations to the DOE wetland manual section 13.a,(1)	ace. tions, seasor (page 68), th	nal effects.	e of 50%	of the do	minant fac	culative plants in areas v
except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates to temarks (Describe disturbances, relevant local variation and the DOE wetland manual section 13.a.(1) to wetland hydrology or hydric soils do not satisify the section 13.a.	ace. tions, seasor (page 68), th	nal effects.	e of 50%	of the do	minant fac	culative plants in areas v
except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T indicates tracemarks (Describe disturbances, relevant local variations to the DOE wetland manual section 13.a,(1) to wetland hydrology or hydric soils do not satisfy the variations."	ace. tions, seasor (page 68), th	nal effects, ne presenc etation crite	e of 50% ena			
except FAC-). Include species noted (*) as showing torphological adaptations to wetlands. "T' indicates tracemarks (Describe disturbances, relevant local variations to the DOE wetland manual section 13.a,(1) to wetland hydrology or hydric soils do not satisfy the VYDROLOGY	ace. tions, seasor (page 68), th	nal effects. ne presence etation crite	e of 50% ena	gy Indica		sulative plants in areas v
except FAC-). Include species noted (*) as showing perphological adaptations to wetlands. "T" indicates the emarks (Describe disturbances, relevant local variations to the DOE wetland manual section 13.a,(1) to wetland hydrology or hydric soils do not satisfy the very perpendicular (Describe in Remarks):	ace. tions, seasor (page 68), th	nal effects. ne presence etation crite	e of 50% ena. Hydrolog ry Indicar	gy Indica		
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except FAC-). Include species noted (*) as showing perphological adaptations to wetlands. "T" indicates to emarks (Describe disturbances, relevant local variations to the DOE wetland manual section 13.a.(1) to wetland hydrology or hydric soils do not satisify the example of the DOE wetland manual section 13.a.(1) to wetland hydrology or hydric soils do not satisify the example of the DOE wetland manual section 13.a.(1) to wetland hydrology or hydric soils do not satisify the example of the DOE wetland manual section 13.a.(1) to wetland hydrology or hydric soils do not satisfy the example of the DOE wetland manual section 13.a.(1) to wetland hydrology or hydric soils do not satisfy the example of the DOE wetland manual section 13.a.(1) to wetland hydrology or hydric soils do not satisfy the example of the DOE wetland manual section 13.a.(1) to wetland hydrology or hydric soils do not satisfy the example of the DOE wetland manual section 13.a.(1) to wetland hydrology or hydric soils do not satisfy the example of the DOE wetland manual section 13.a.(1) to wetland hydrology or hydric soils do not satisfy the example of the DOE wetland manual section 13.a.(1) to wetland hydrology or hydric soils do not satisfy the example of the DOE wetland manual section 13.a.(1) to wetland hydrology or hydric soils do not satisfy the example of the DOE wetland manual section 13.a.(1) to wetland hydrology or hydric soils do not satisfy the example of the DOE wetland manual section 13.a.(1) to wetland hydrology or hydric soils do not satisfy the example of the DOE wetland hydrology or hydric soils do not satisfy the example of the DOE wetland hydrology or hydric soils do not satisfy the DOE wetland hydrology or hydric soils do not satisfy the DOE wetland hydrology or hydric soils do not satisfy the DOE wetland hydrology or hydric soils do not satisfy the DOE wetland hydrology or hydric soils do not satisfy the DOE wetland hydrology or hydric soils do not satisfy the DOE wetland hydrology or hydric soils do not satisfy the DOE wetlan	ace. tions, seasor (page 68), th	nal effects. ne presence etation crite	Hydrolog ary Indicat	gy Indicators: nundated	tors (De	scribe in Remarks): 2 inches
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except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T' indicates to temarks (Describe disturbances, relevant local variations to the DOE wetland manual section 13.a,(1) to wetland hydrology or hydric soils do not satisify the extended Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available ield Observations: Depth of Surface Water: Depth to Free Water in Pit: None (in.)	ace. tions, seasor (page 68), th	wetland Prima	Hydrolog ary Indicate S V D D D D D D	gy Indicators: nundated Saturated Sa	in Upper 1 in Upper 1 ks Deposits Patterns in	scribe in Remarks): 2 inches 8 inches Wetlands equired): nels in Upper 12 inches
Aerial Photograph Other X No Recorded Data Available Sield Observations: Depth of Surface Water: Depth to Free Water in Pit: None (in.) >15 (in.)	ace. tions, seasor (page 68), th	wetland Prima	e of 50% ena. Hydrolog Iry Indicat S S V D D D D D D D D L D L D L D L D L D L	gy Indicators: nundated Saturated is aturated in Vater Man Drift Lines Sediment I Drainage Foxidized R Vater-Stailocal Soil	in Upper 1 in Upper 1 ks Deposits Patterns in For more r toot Chani ned Leave	scribe in Remarks): 2 inches 8 inches Wetlands equired): nels in Upper 12 inches es
except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T' indicates tracked (Control of the DOE wetland manual section 13.a,(1) no wetland hydrology or hydric soils do not satisfy the extended Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Field Observations: Depth of Surface Water: Depth to Free Water in Pit: No Recorded Inc.)	ace. tions, seasor (page 68), th welland vege	Wetland Prima	Hydrological Indicate Signal S	gy Indicators: nundated is Saturated is Saturated in Vater Man Orift Lines is dicators (2 Dixidized Rivater-Stail ocal Soil:	in Upper 1 in Upper 1 in Upper 1 is Deposits Patterns in cor more r toot Chani ned Leave Survey Da	scribe in Remarks): 2 inches 8 inches Wetlands equired): nels in Upper 12 inches es

							Data Plot #:	A17d:B2
L							Wetland:	A17a Upland Plo
roject/S	ite: Seattle T	acoma Airport - Master	Plan Up	date	_ Da	te: <u>11/13/00</u>		
OILS								
Soil Sur	vey Data:							
Map Unit	Name: Unr	napped				Drainage Clas	s:	
						Field Observa	tions Confirm M	apped Type?
Taxonom	y (Subgroup)	:				Yes I	No N	A X
	escription:							·
Depth	Horizon	Matrix Color	Mot	tie Color		Mottle	Te	exture, Concretions,
Inches)		(Munsell Moist)		nsell Mois	it)	Abundance/Co	_	nizospheres, etc.
-5	A	10YR 3/3	_ :			-	Lo	am
-10	В	10YR 4/3	10Y	R 3/4 (10YF	(4/4)	Many, Coarse, Di	stinct Sa	ndy Silt
0-18+	С	10YR 4/2	10Y	R 4/4		Common, Coarse,	. Distinct Sa	ndy Silt (Till)
lvdric Sc	oil Indicators	•						· · · · · · · · · · · · · · · · · · ·
•	istosol	•			Lie	ted on Local Hydric	e Caila I iat	
	istic Epipedor	1		_		led on State Hydric		
s	ulfidic Odor			_		ted on National Hy		
P	robable Aquic	Moisture Regime				uic Moisture Regim		
R	educing Cond	itions		_	Org	anic Streaking in S	Sandy Soils	
	•	Chroma Colors		_	Mo	ties		
		ontent in Surface Layer			Oth	er (Explain in Rem	arks)	
		l disturbances, local vari						
oii coior (does not mee	t the hydric soil criteria, t	herefor	e hydric so	oils are no	t present.		
/ETLAI	ND DETER	MINATION						
	tic Vegetation ils Present?		_	_ No	<u>×</u>	Is this	Sampling Poir	nt Within a Wetland?
		Ye	_	No	<u>x</u>		Yes #	No X
strenia U	ydrology Pre	sent? Ye	\$	No	X			

No wetland parameters are present.

P	ar	am	etr	ΊΧ,	In	C.



			Michigand: A48
WET	LAND DETE	RMINATIO	ON Wetland: A18
(Modified from: 19	87 COE Wet	lands Dei	ineation Manual)
Project/Site: Seattle Tacoma Airport - Master Plan Upo	date	Date: 2/5/	/00
Applicant/Owner: Port of Seattle		County: K	ling
nvestigator: W. Kleindl and Marti Louther		· -	VA.
1987 Method 1989 Method		-	Community ID: PSS
o Normal Circumstances exist on the site?	Yes X	No	
			Field Plot ID: A18-A
s the site significantly disturbed (Atypical Situation)?	Yes	No X	-
the area a potential Problem Area?	Yes	No X	_
emarks (Explain sample location, disturbances, problot located on Parcel 305.			
EGETATION (Dominant species are checked)			
Plant Species	% Cove		Indicator
1 Athynum filix-femina 2 Polystichum munitum	20 20	Herb Herb	FACU
	20 20	Herb	FACW
3 Ranunculus repens 4 Rubus discolor	20	Shrub	FACU
xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tra	60 ace.	Shrub	FAC+
ercent of Dominant Species that are OBL, FACW, xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tra emarks (Describe disturbances, relevant local variations.	or FAC 60 ace. ons, seasonal e	ffects, etc.):	
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ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates training emarks (Describe disturbances, relevant local variations greater than 50% of the plant species are hydrop	or FAC 60 ace. ons, seasonal envirc. therefore to	ffects, etc.): the vegetation than Hydro Primary India	n criteria is met. logy Indicators (Describe in Remarks): icators:
ercent of Dominant Species that are OBL, FACW, recept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates training and the species are hydrophic process. The species are hydrophic pr	or FAC 60 ace. ons, seasonal envirc. therefore to	offects, etc.): the vegetation thand Hydro Primary Indi X	n criteria is met. Plogy Indicators (Describe in Remarks): Icators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches
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ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variations greater than 50% of the plant species are hydrophydro	or FAC 60 ace. ons, seasonal envirc. therefore to	offects, etc.): the vegetation thand Hydro Primary Indi X	n criteria is met. Plogy Indicators (Describe in Remarks): Icators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
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ercent of Dominant Species that are OBL, FACW. except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates training emarks (Describe disturbances, relevant local variations are greater than 50% of the plant species are hydroph ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	or FAC 60 ace. ons, seasonal envirc. therefore to	offects, etc.): the vegetation thand Hydro Primary Indi X X	n criteria is met. Plogy Indicators (Describe in Remarks): icators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches
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4								Data Plot	¥:	A18-A
								Wetland:		A18
roject/Site:	Seattle Ta	acoma Airport - Mast	er Pla	n Upda	te	Date:	2/5/00			
SOILS Soil Surve	y Data:									
Map Unit N	ame: Not i	mapped					Drainage Clas	is:		
							Field Observa	tions Confirm	Марр	ed Type?
Faxonomy (Subgroup):						Yes i	No X	NA	
Profile Des	cription:									
Depth	Honzon	Matrix Color (Munsell Moist)		Mottle (Muns	Color ell Moist)		Mottle Abundance/Co			re, Concretions spheres, etc.
-11 ,	A	10YR 3/1					•		Mucky	sandy loam
1-18+ (<u> </u>	10YR 3/4		-			•		Loamy	. sandy gravei
vdric Soil	Indicators:							·		
Hist						Listed	on Local Hydri	c Soils List		
Histi	ic Epipedon						on State Hydric			
Sulfi	dic Odor						on National Hy			
	able Aquic	Moisture Regime				Aquic	Moisture Regim	ne		
X Red	ucing Condi	tions				Organ	ic Streaking in \$	Sandy Soils		
		Chroma Colors				Mottle:	5			
X High	Organic Co	ontent in Surface Lay	er			Other	(Explain in Rem	narks)		
		disturbances, local v								
oil color and	d other hydr	ic soil indicators mee	t the	hvdnc s	oil criteria.					
VETI AND	DETER	MINATION								
	Vegetation	Present?	Yes	X	No _		is this	Sampling Po	oint V	Vithin a Wetla
aric Soils	Present?		Yes	X	No					
	rology Pres							Yes X	No	

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): The three wetland parameters are present.



	87 COF W	etlande l	TION Delineation Ma	nual)
(Modified from: 19	6/ COL 11			
Project/Site: Seattle Tacoma Airport - Master Plan Up	date	Date:	2/5/00	
Applicant/Owner: Port of Seattle		County:	King	
nvestigator: W. Kleindl and Marti Louther		State:	WA	
			Commu	nity ID: Upland
o Normal Circumstances exist on the site?	Yes X	No .	Field Pl	ot ID: A18-B
s the site significantly disturbed (Atypical Situation)?	Yes	_ No .	<u>x</u>	
s the area a potential Problem Area?	Yes	No	x	
temarks (Explain sample location, disturbances, prob	olem areas):	•		
pland area adjacent to Wetland A18, located on Parce	el 305.			
EGETATION (✓Dominant species are checked)				
Plant Species	% Co			
1 Dactylis glomerata 2 Geum macrophyllum	tr 10	Herb Herb	FACU FAC+	
2 Geum macrophyllum 3 Polystichum munitum	10	Herb	FACU	
4 Nex aquifolium		Shrub	NL	
5 Oemlena cerasiformis	40	Shrub	FACU	
	30	Shrub	FACU	
6 Rubus discolor				
Acer macrophyllum ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates tra	or FAC	Tree	FACU	
Acer macrophyllum ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing forphological adaptations to wetlands. To indicates training more none of the dominant plants are hydrophytic, the	or FAC ace.	el effects, et	FACU	
Acer macrophyllum ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates training include the dominant plants are hydrophytic, the YDROLOGY	or FAC ace. ions, seasona wetland vege	ol effects, et	FACU c.): a is not met.	\$ (Describe in Remarks):
Acer macrophyllum ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates training include the dominant plants are hydrophytic, the YDROLOGY	or FAC ace. ions, seasona wetland vege	of effects, et tation criteri	FACU c.): a is not met.	\$ (Describe in Remarks):
Acer macrophyllum ercent of Dominant Species that are OBL, FACW, xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates training incension of the dominant plants are hydrophytic, the YDROLOGY ecorded Data (Describe in Remarks):	or FAC ace. ions, seasona wetland vege	of effects, et tation criteri	FACU c.): a is not met. drology Indicator	(Describe in Remarks):
7 Acer macrophyllum ercent of Dominant Species that are OBL, FACW, xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. 'T' indicates tracemarks (Describe disturbances, relevant local vanatince none of the dominant plants are hydrophytic, the YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage	or FAC ace. ions, seasona wetland vege	of effects, et tation criteri	FACU c.): a is not met. drology Indicator Indicators: Inundated	(Describe in Remarks): Upper 12 inches
7 Acer macrophyllum ercent of Dominant Species that are OBL, FACW, xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variations none of the dominant plants are hydrophytic, the YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	or FAC ace. ions, seasona wetland vege	of effects, et tation criteri	c.): a is not met. drology Indicator Indicators: Inundated Saturated in In	
Acer macrophyllum ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as snowing orphological adaptations to wetlands. "T" indicates training ince none of the dominant plants are hydrophytic, the YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	or FAC ace. ions, seasona wetland vege	of effects, et tation criteri	drology Indicator Indicators: Inundated Saturated in I Water Marks	Upper 12 inches
Acer macrophyllum ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as snowing orphological adaptations to wetlands. "T" indicates training ince none of the dominant plants are hydrophytic, the YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	or FAC ace. ions, seasona wetland vege	of effects, et tation criteri	drology Indicator Indicators: Inundated Saturated in Water Marks Drift Lines	Upper 12 inches Upper 18 inches
ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing horphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variations none of the dominant plants are hydrophytic, the SYDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	or FAC ace. ions, seasona wetland vege	of effects, et tation criteri	drology Indicator Indicators: Inundated Saturated in I Water Marks Drift Lines Sediment De	Upper 12 inches Upper 18 inches posits
ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing torphological adaptations to wetlands. "T" indicates training and the dominant plants are hydrophytic, the extractional training and the dominant plants are hydrophytic, the extractional training and the dominant plants are hydrophytic, the extractional training and the dominant plants are hydrophytic, the extractional training and the dominant plants are hydrophytic, the extractional training and the dominant plants are hydrophytic, the extractional training and the dominant plants are hydrophytic, the extractional training and the dominant plants are hydrophytic, the extractional training and the dominant plants are hydrophytic, the extractional training and the dominant plants are hydrophytic, the extractional training and the dominant plants are hydrophytic, the extractional training and the dominant plants are hydrophytic, the extractional training and the dominant plants are hydrophytic, the extractional training and the dominant plants are hydrophytic, the extractional training and the dominant plants are hydrophytic, the extractional training and the dominant plants are hydrophytic, the extractional training and the dominant plants are hydrophytic, the extractional training and the dominant plants are hydrophytic, the extractional training and the dominant plants are hydrophytic, the extractional training and the dominant plants are hydrophytic, the extractional training and the dominant plants are hydrophytic, the extractional training and the dominant plants are hydrophytic, the extractional training and the dominant plants are hydrophytic, the extractional training and training and training and training and training and training and traini	or FAC ace. ions, seasona wetland vege	of effects, et tation criteri	drology Indicator Indicators: Inundated Saturated in I Water Marks Drift Lines Sediment De	Upper 12 inches Upper 18 inches
acer macrophyllum ercent of Dominant Species that are OBL, FACW, except FAC-), include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local vanatifice none of the dominant plants are hydrophytic, the extraction of the e	or FAC ace. ions, seasona wetland vege	Wetland Hy	c.): a is not met. drology Indicator Indicators: Inundated Saturated in I Water Marks Drift Lines Sediment De Drainage Pat	Upper 12 inches Upper 18 inches posits tems in Wetlands
7 Acer macrophyllum ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. 'T' indicates tracemarks (Describe disturbances, relevant local vanatifice none of the dominant plants are hydrophytic, the except the second disturbances are hydrophytic, the except the second disturbances. YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	or FAC ace. ions, seasona wetland vege	Wetland Hy	c.): a is not met. drology Indicator Indicators: Inundated Saturated in Water Marks Drift Lines Sediment De Drainage Pat	Upper 12 inches Upper 18 inches posits terms in Wetlands more required):
ercent of Dominant Species that are OBL. FACW, except FAC-). Include species noted (*) as showing torphological adaptations to wetlands. "T" indicates training and the dominant plants are hydrophytic, the extra training and the extra training and the dominant plants are hydrophytic, the extra training and the extra training and training	or FAC ace. ions, seasona wetland vege	Wetland Hy	c.): a is not met. drology Indicator Indicators: Inundated Saturated in I Water Marks Drift Lines Sediment Dei Drainage Pat ary Indicators (2 or Oxidized Roc	Upper 12 inches Upper 18 inches posits terms in Wetlands more required): of Channels in Upper 12 inche
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ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing torphological adaptations to wetlands. "T" indicates training and the dominant plants are hydrophytic, the except Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available ield Observations: Depth to Free Water: None (in.) Depth to Free Water in Pit: >18 (in.)	or FAC ace. ions, seasona wetland vege	Wetland Hy	c.): a is not met. drology Indicator Indicators: Inundated Saturated in I Water Marks Drift Lines Sediment Dei Drainage Pat ary Indicators (2 or Water-Staine Local Soil Su	Upper 12 inches Upper 18 inches posits terns in Wetlands r more required): ot Channels in Upper 12 inche d Leaves rvey Data
ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing torphological adaptations to wetlands. "T" indicates training and the dominant plants are hydrophytic, the except Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available ield Observations: Depth to Free Water: None (in.) Depth to Free Water in Pit: >18 (in.)	or FAC ace. cons. seasona wetland vege.	Wetland Hy Primary Second:	c.): a is not met. drology Indicator Indicators:	Upper 12 inches Upper 18 inches posits terms in Wetlands more required): of Channels in Upper 12 inche d Leaves rvey Data n in Remarks)

						Data Pio	••	A18-B
						Wetland	:	A18
roject/S	ite: Seattle T	acoma Airport - Maste	r Plan Update	Date:	2/5/00			
OILS oil Sur	vey Data:							
Map Unit	t Name: Not	mapped			Drainage C	lass:		
					Field Obser	vations Confirm	n Map	ped Type?
axonom	ny (Subgroup):				Yes	No X	NA	
rofile D	escription:							
epth nches)	Horizon Designation	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)		Mottle Abundance/	Contrast		ure. Concretions ospheres, etc.
-11	A	10YR3/2					Silt Lo	am .
1-18+	В	10yr 3/3			•		Sandy	/ Loam
ydric S	oil indicators:	:						
н	istosol			Listed	on Local Hyd	dric Soils List		
н	istic Epipedon					fric Soils List		
s	ulfidic Odor					Hydric Soils Lis	t	
	•	Moisture Regime		Aquic	Moisture Reg	ime		
	educing Condi			Organ	ic Streaking i	n Sandy Soils		
	-	Chroma Colors	-	Mottle:	s			
		ontent in Surface Layer		Other	(Explain in Re	emarks)		
		disturbances, local va	riations, etc.):					

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): No wetland parameters are present, therefore the area is not a wetland.

Yes

Hydric Soils Present?

Wetland Hydrology Present?

Yes ____ No _X



Data Plot #:	A19-A	
Wetland:	A19	

WET! A	ND DET	TERMINA	Wetlan	d: <u>A19</u>
(Modified from: 1987				n
		_		•,
Project/Site: Seattle Tacoma Airport - Master Plan Update	e	_	11.′2/00	
Applicant/Owner: Port of Seattle		County:	King	
Investigator: W. Kleindl and J. Hawkins		State:	WA	
<u>✓</u> 1987 Method			Community I	D: PEM
Do Normal Circumstances exist on the site?	Y e s X	_ No -	Field Plot ID:	A19-A
Is the site significantly disturbed (Atypical Situation)?	Yes	_ No _	<u>X</u>	
is the area a potential Problem Area?	Yes	_ No _	X	
Remarks (Explain sample location, disturbances, problem Plot located in on the southern edge of Parcel 251 near the in this location.		siope east	of 168th Avenue South.	Groundwater enters the are
VEGETATION (Dominant species are checked) Plant Species	% Co	ver Stratus	m Indicator	
1 Carex obnupta	t	Herb	OBL	
✓ 2 Epilobium ciliatum (watsonii)	20	Herb	FACW-	
Ranunculus repens	50	Herb	FACW	
4 Rumex crispus 5 Veronica americana	<u>5</u>	Herb Herb		
5 veronica americana v 6 Polygonum persicana	— <u>`</u>	Shrub	FACW	
Remarks (Describe disturbances, relevant local variations 100% of the plant species are hydrophytic, therefore the ve			•	
HYDROLOGY				
Recorded Data (Describe in Remarks):	V	_	drology Indicators ([Describe in Remarks):
Stream, Lake, or Tide Gage		Primary	Indicators:	
Aerial Photograph			Inundated	
Other		X	Saturated in Upper	r 12 inches
			C-44	46:
X No Recorded Data Available			Saturated in Upper	18 inches
X No Recorded Data Available			Water Marks	18 inches
X No Recorded Data Available			Water Marks Drift Lines	
X No Recorded Data Available			Water Marks	s
Field Observations:			Water Marks Drift Lines Sediment Deposits	s
Field Observations: Depth of Surface Water: None (in.)		Seconda	Water Marks Drift Lines Sediment Deposits	; in Wetlands
Field Observations: Depth of Surface Water: Depth to Free Water in Pit: (in.)		Seconda	Water Marks Drift Lines Sediment Deposits Drainage Patterns ary Indicators (2 or more	; in Wetlands
Field Observations: Depth of Surface Water: None (in.)			Water Marks Drift Lines Sediment Deposits Drainage Patterns ary Indicators (2 or more	; in Wetlands e required): innels in Upper 12 inches
Field Observations: Depth of Surface Water: Depth to Free Water in Pit: (in.)			Water Marks Drift Lines Sediment Deposits Drainage Patterns ory Indicators (2 or more Oxidized Root Cha	in Wetlands e required): innels in Upper 12 inches ives
Field Observations: Depth of Surface Water: Depth to Free Water in Pit: (in.)			Water Marks Drift Lines Sediment Deposits Drainage Patterns iny Indicators (2 or more Oxidized Root Cha Water-Stained Lea	in Wetlands e required); innels in Upper 12 inches ives Data
Field Observations: Depth of Surface Water: Depth to Free Water in Pit: (in.)	ologic mos	x	Water Marks Drift Lines Sediment Deposits Drainage Patterns iry Indicators (2 or more Oxidized Root Cha Water-Stained Lea Local Soil Survey I Other (Explain in R	in Wetlands e required); innels in Upper 12 inches ives Data

						Data Pic	ot #:	A19-A
						Wetiand	t :	A19
Project/Site: S	eattle Tacon	па Airport - Master P	lan Update	Date.	11/2/00			
- SOILS Soil Survey Da								
Map Unit Name	: Not map	ped			Drainage Ci	lass:		
					Field Obser	vations Confir	m Map	ped Type?
Taxonomy (Sut	group):				Yes	No X	NA	
Profile Descrip	tion:							
Depth Hor Inches) Des		trix Color unsell Moist)	Mottle Color (Munsell Moist)		Mottle Abundance/	Contrast		ure, Concretions, ospheres, etc.
-10 A	10YF	₹ 2/2	-				Loam	n, oxidized rhizosphere
0-18+ B	10YF	₹ 2/1	10YR 3/3		Many, Coarse,	Distinct	Loam	. oxidized rhizosphere
X Gleyed of High Org	Dipedon Odor Aquic Mois Gonditions Contentions Contentions			Listed Listed Aquic Organ Mottle	Moisture Reg ic Streaking in	tric Soils List Hydric Soils Lis Iirne In Sandy Soils	st	

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): All three wetland parameters are met, therefore the area is a wetland.

Hydrophytic Vegetation Present?

Hydric Soils Present?

Wetland Hydrology Present?

is this Sampling Point Within a Wetland?

Yes X No



Data Plot #: A19-B

WET	LAND	DETE	RMINA	ATIO	Wetland: Upland	
(Modified from: 198						
(modified from: 130	5/ CC	,_ vve.	ia 1103		negation manual,	
Project/Site: Seattle Tacoma Airport - Master Plan Upo	tate		Date:	11/2	/00	-
Applicant/Owner: Port of Seattle			County:	: Kir	ng	_
Investigator: W. Kleindl and J. Hawkins			State:	W	Α	-
✓ 1987 Method					Community ID: Upland	
Do Normal Circumstances exist on the site?	Yes	<u> </u>	No		- Field Plot ID: A19-B	
Is the site significantly disturbed (Atypical Situation)?	Yes		No	х	_	
is the area a potential Problem Area?	Yes		No			
Remarks (Explain sample location, disturbances, problem	iem are	as):			-	
Site is located on parcel 250, in an upland area adjacent			9.			
One is located on parter 200, in an apiena area asjusten						
VEGETATION (✓Dominant species are checked)						
Plant Species		% Cover	Stratu	ım	Indicator	
1 Turf grass species		100	Herb		NL	
(except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T" indicates tra	ce.	0	ffects e	tc)·		
(except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T" indicates tra Remarks (Describe disturbances, relevant local variation. The site is dominated by mowed lawn grasses and the s	ice. ons, se	0 asonal e	-	•	t be determined.	
(except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T" indicates tra Remarks (Describe disturbances, relevant local variation. The site is dominated by mowed lawn grasses and the s	ice. ons, se	asonal el	tion cou	id not		
(except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T" indicates transport (Describe disturbances, relevant local variation of the site is dominated by mowed lawn grasses and the s	ice. ons, se	asonal el	tion cou	ydrol	ogy Indicators (Describe in Remarks)	· · ·
(except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T" indicates transport (Describe disturbances, relevant local variation of the site is dominated by mowed lawn grasses and the s	ice. ons, se	asonal el	tion cou	ydrol	ogy Indicators (Describe in Remarks)	:
(except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T" indicates transfer (Describe disturbances, relevant local variation of the site is dominated by mowed lawn grasses and the second of the second o	ice. ons, se	asonal el	tion cou	ydrol	ogy Indicators (Describe in Remarks)	
(except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T" indicates tra Remarks (Describe disturbances, relevant local variation. The site is dominated by mowed lawn grasses and the substitution of the site is dominated by mowed lawn grasses and the substitution of the	ice. ons, se	asonal el	tion cou	ydrol	ogy Indicators (Describe in Remarks) ators: Inundated Saturated in Upper 12 inches	:
(except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T" indicates tra Remarks (Describe disturbances, relevant local variation. "The site is dominated by mowed lawn grasses and the s	ice. ons, se	asonal el	tion cou	ydrol	ogy Indicators (Describe in Remarks) ators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches	:
(except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T" indicates tra Remarks (Describe disturbances, relevant local variation. "The site is dominated by mowed lawn grasses and the second described in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	ice. ons, se	asonal el	tion cou	ydrol	ogy Indicators (Describe in Remarks) cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks	:
(except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T" indicates tra Remarks (Describe disturbances, relevant local variation. "The site is dominated by mowed lawn grasses and the second described in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	ice. ons, se	asonal el	tion cou	ydrol	ogy Indicators (Describe in Remarks) ators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines	:
(except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T" indicates tra Remarks (Describe disturbances, relevant local variation. The site is dominated by mowed lawn grasses and the seconded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	ice. ons, se	asonal el	tion cou	ydrol	ogy Indicators (Describe in Remarks) cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits	:
(except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T" indicates tra Remarks (Describe disturbances, relevant local variation. The site is dominated by mowed lawn grasses and the second Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available	ice. ons, se	asonal el	tion cou	ydrol	ogy Indicators (Describe in Remarks) ators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines	:
(except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T" indicates tra Remarks (Describe disturbances, relevant local variation. The site is dominated by mowed lawn grasses and the second Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available	ice. ons, se	asonal et composi	tland Hy	ydroli y Indic	ogy Indicators (Describe in Remarks) cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands	;
(except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T" indicates tra Remarks (Describe disturbances, relevant local variation. The site is dominated by mowed lawn grasses and the si	ice. ons, se	asonal et composi	tland Hy	ydroli y Indic	ogy Indicators (Describe in Remarks) cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands	
(except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T" indicates tra Remarks (Describe disturbances, relevant local variation. The site is dominated by mowed lawn grasses and the si	ice. ons, se	asonal et composi	tland Hy	ydroli y Indic	ogy Indicators (Describe in Remarks) cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches	
Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other X No Recorded Data Available Field Observations: Depth of Surface Water: None (in.) Depth to Free Water in Pit: >18 (in.)	ice. ons, se	asonal et composi	tland Hy	ydroli y Indic	ogy Indicators (Describe in Remarks) cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 interesting the service of the service	
(except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T" indicates tra Remarks (Describe disturbances, relevant local variation. The site is dominated by mowed lawn grasses and the si	ice. ons, se	asonal et composi	tland Hy	ydroli y Indic	ogy Indicators (Describe in Remarks) cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data	
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(except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T" indicates tra Remarks (Describe disturbances, relevant local variation. The site is dominated by mowed lawn grasses and the second Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Field Observations: Depth of Surface Water: None (in.) Depth to Free Water in Pit: >18 (in.)	ice. ons, se: pecies	asonal et composi	tland Hy Primary	ydroli v Indic	ogy Indicators (Describe in Remarks) cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 in Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)	

						Data Piot	#:	A19-B
						Wetland	:	Upland
Project/Site	e: Seattle T	acoma Airport - Master	Plan Update	Date:	11/2/00			
SOILS Soil Surve	ey Data:							
Map Unit I	Name: Not	mapped			Drainage Clas	s :		
					Field Observa	ions Confirm	п Мар	ped Type?
Taxonomy	(Subgroup):				Yes 1	ło X	NA	
Profile De:	scription:	······································					•••	
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist))	Mottle Abundance/Co	ntrast		ure, Concretions ospheres, etc.
0-2	A	10YR 2/1	-		-		Sand	v Loam
2-18+	С	2.5Y 5/4					Grave	ely fine sand
lydric Soi	Indicators:	:						
His	itosol			Listed	on Local Hydric	Soils List		
	tic Epipedon		-	Listed	on State Hydric	Soils List		
	Ifidic Odor	Maiatora Dominio			on National Hyd		t	
	poable Aquic ducing Condi	Moisture Regime			Moisture Regim			
	-	Chroma Colors		Organ Mottle:	ic Streaking in S	andy Soils		
		ontent in Surface Layer			s (Explain in Rem	anta)		
		disturbances, local vari	ations ately		(CAPIONI III IVEIII	arna)		
		fric soil were present.	audis, etc. j.					
VETLAN	D DETER	MINATION						
ydrophytic	c Vegetation	Present? Ye	es No	x	ls this	Sampling	Point 1	Within a Wetiai
vdric Scil	Present?					B	J	

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): All three parameters are not present, therefore the area is not a wetland.

Wetland Hydrology Present?

Yes No X

WE (Modified from: 19 ct/Site: Seattle Tacoma Airport - Master Plan Up	TLAND DETI				
(Modified from: 19		FRMINAII	ON	Wetland:	W1
·				Manual)	
	odate	Date: 1/5		,	
cant/Owner: Port of Seattle		County: K	(ing		
tigator: William Kleindl		· -	VA		
987 Method 1989 Method		-			
–	Van V	No			EM
ormal Circumstances exist on the site?	Yes X	. No		Plot ID: W1-	-A
site significantly disturbed (Atypical Situation)?	Yes	No <u>X</u>	-		
area a potential Problem Area?	Yes	No <u>X</u>	_		
	1)				
ETATION (Dominant species are checked Plant Species	l) % Cov e	er Stratum	Indicator		
	•	er Stratum Herb	Indicator FAC		
Plant Species	% Cove			-	
Plant Species Agrostis capillans (tenuis)	% Cove	Herb	FAC	- -	
Plant Species Agrostis capillans (tenuis) Juncus effusus Phalans arundinacea Ranunculus repens	% Cove 30 10 20 60	Herb Herb	FACW FACW FACW	- - -	
Plant Species Agrostis capillans (tenuis) Juncus effusus Phalans arundinacea Ranunculus repens Rubus discolor	% Cove 30 10 20 60 30	Herb Herb Herb Shrub	FACW FACW FACW FACU	- - - -	
Plant Species Agrostis capillans (tenuis) Juncus effusus Phalans arundinacea Ranunculus repens Rubus discolor Populus balsamifera ssp. tnchocarpa	30 10 20 60 30 60	Herb Herb Herb	FACW FACW FACW	- - - -	
Plant Species Agrostis capillans (tenuis) Juncus effusus Phalans arundinacea Ranunculus repens Rubus discolor Populus balsamifera ssp. inchocarpa int of Dominant Species that are OBL, FACW of FAC-). Include species noted (*) as showing	% Cove 30 10 20 60 30 60 7, or FAC	Herb Herb Herb Shrub Tree	FACW FACW FACW FACU	-	
Plant Species Agrostis capillans (tenuis) Juncus effusus Phalans arundinacea Ranunculus repens Rubus discolor Populus balsamifera ssp. tinchocarpa Int of Dominant Species that are OBL, FACW of FAC-). Include species noted (*) as showing cological adaptations to wetlands. "T" indicates tr	30 10 20 60 30 60 7, or FAC	Herb Herb Herb Shrub Tree	FACW FACW FACW FACU	-	
Plant Species Agrostis capillans (tenuis) Juncus effusus Phalans arundinacea Ranunculus repens Rubus discolor Populus balsamifera ssp. inchocarpa nt of Dominant Species that are OBL, FACW	30 10 20 60 30 60 7, or FAC 83 race.	Herb Herb Herb Shrub Tree	FACW FACW FACW FACU FAC	- - - -	

HYDROLOGY	
Recorded Data (Describe in Remarks):	Wetland Hydrology Indicators (Describe in Remarks):
Stream, Lake, or Tide Gage	Primary Indicators:
Aerial Photograph	X Inundated
Other	X Saturated in Upper 12 inches
X No Recorded Data Available	Saturated in Upper 18 inches
	Water Marks
	Drift Lines
	Sediment Deposits
	Drainage Patterns in Wetlands
Field Observations:	
Depth of Surface Water: 4 (in) Secondary Indicators (2 or more required):
Depth to Free Water in Pit: 0 (in)
Depth to Saturated Soil: 0 (in	Oxidized Root Channels in Upper 12 inches
	Water-Stained Leaves
	Local Soil Survey Data
	Other (Explain in Remarks)

Inundation in pockets throughout wetland. The presence of inundation satisfies wetland hydrology criteria.

A								Data Plot #	: W	1-A
						-		Wetland:	w	1
_										
oject/Si	te: Seattle T	acoma Airport - Mas	ter Pla	n Upda	ete	Date:	1/5/99			
OILS oil Surv	ey Data:									
lap Unit	Name: Unn	napped					Drainage Class	:		
							Field Observation	ons Confirm N	Mapped	Type?
axonom	y (Subgroup):						Yes N	o N	JA)	<
rofile De	escription:								_	
epth nches)	Horizon Designation	Matrix Color (Munsell Moist)			Color cell Moist)		Mottle Abundance/Con			Concretions, eres, etc.
10	A	10YR 3/1		10YR	5/6		Common, Fine, Dis	tinct Li	oam	
-15+	В	10YR 2/1		10YR 5	5/6		Common, Medium.	Distinct Li	oam	
Hi Hi X St. Pro	educing Condi eyed or Low-(gh Organic Co	Moisture Regime		ons, et	X	Listed Listed Aquic Organ Mottle	on Local Hydric on State Hydric on National Hydr Moisture Regime ic Streaking in Sa s (Explain in Rema	Soils List ric Soils List andy Soils		
		with mottles satisfies	the h	ydric so	il criteria. A	A brick w	as found at 12 inc	ches indicating	g a distu	irbed soil hor
		MINATION								
	ic Vegetation	Present?	Yes	X	No _		is this :	Sampling Po	int With	in a Wetland
	s Present?		Yes	X	No		,	res X	No	
	drology Pre		Yes	X						

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results):

The presence of all three parameters indicate this area is a wetland. Wetland Delineated on changes in hydrology.



Data Plot #:	W2-A
Wetland:	W2

WETLAND DETERMINATION (Modified from: 1987 COE Wetlands Delineation Manual) Project/Site: Seattle Tacoma Airport - Master Plan Update Applicant/Owner: Port of Seattle County: King Investigator: William Kleindi 1989 Method 1989 Meth	(Modified from: 1987 COE Wetlands Delineation Manual) roject/Site: Seattle Tacoma Airport - Master Plan Update	(Modified from: 1987 COE Wetlands Delineation Manual) Dect/Site: Seattle Tacoma Airport - Master Plan Update Date: 1/5/99 plicant/Owner: Port of Seattle Estigator: William Kleindi 1987 Method	(Modified from: 1987 COE Wetlands Delineation Manual) ect/Site: Seatile Tacoma Airport - Master Plan Update	(Modified from: 1987 COE Wetlands Delineation Manual) precVSite: Seatite Tacoma Airport - Master Plan Update plicant/Owner: Port of Seatite State: WA 1987 Method
Project/Site: Seattle Tacoma Airport - Master Plan Update Applicant/Owner: Port of Seattle Applicant/Owner: William Kleindl State: WA Community ID: PEM Fall Initiation Community ID: Pem Comm	pplicant/Owner: Port of Seattle pplicant/Owner: Port of Seattle County: King State: WA Community ID: PEM 1987 Method	plicant/Owner: Port of Seattle plicant/Owner: Port of Seattle County: King State: WA Community ID: PEM Normal Circumstances exist on the site? Yes X No Field Plot ID: W2-A he site significantly disturbed (Applical Situation)? Yes No X marks (Explain sample location, disturbances, problem areas): Itland sampled in area east of 12th Ave S., south of temporary retention and detention pond, and east of W1. GETATION I*Dominant species are checked) Plant Species Y. Cover Stratum Indicator Phalans arundinacea B0 Herb FACW Rubus discolor Almus rubra Al	Date 1/5/99 Date 1/5/99 Date 1/5/99 Date 1/5/99 Date	plicant/Owner: Port of Seattle Date: 1/5/99
Applicant/Owner: Port of Seattle	policant/Owner: Port of Seattle	Port of Seattle Port of Se	State Stat	Port of Seattle County: King WA
Investigator: William Kleindi 1989 Method 1989 Method 1989 Method Community ID: PEM	State: WA 1987 Method	estigator: William Kleind! State: WA 1987 Method	State: WA 1987 Method	estigator: William Kleindi
To 1987 Method 1989 Method	Telegranic Nethod 1989 Method 1989 Method 1989 Method 1989 Method 1989 Method Normal Circumstances exist on the site? Yes X No Field Plot ID: W2-A the site significantly disturbed (Atypical Situation)? Yes No X the area a potential Problem Area? Yes No X the area a potential Problem Area? Yes No X the area a potential Problem Area? Yes No X the area a potential Problem Area? Yes No X the area a potential Problem Area? Yes No X the area a potential Problem Area? Yes No X the area a potential Problem Area? Yes No X the area a potential Problem Area? Yes No X the area a potential Problem Area? Yes No X the Area area a potential Problem Area? Yes No X the Area area area area area area area are	1987 Method 1989 Method	1987 Method	1987 Method
the site significantly disturbed (Atypical Situation)? Yes No X the area a potential Problem Area? Yes No X emarks (Explain sample location, disturbances, problem areas): lettand sampled in area east of 12th Ave S., south of temporary retention and detention pond, and east of W1. Plaint Species	the site significantly disturbed (Atypical Situation)? Yes No X the area a potential Problem Area? Yes No X emarks (Explain sample location, disturbances, problem areas): elitand sampled in area east of 12th Ave S., south of temporary retention and detention pond, and east of W1. EGETATION INDominant species are checked) Plant Species	Normal Circumstances exist on the site? No	Normal Circumstances exist on the site? Normal Circumstances exist on the site? Yes No X It is are a potential Problem Area? Yes No X It is are a potential Problem Area? Yes No X It is a potential Problem Area? Yes No X It is a potential Problem Area? Yes No X It is a potential Problem Area? Yes No X It is a potential Problem Area? Yes No X It is a potential Problem Area? Yes No X It is a potential Problem Area? Yes No X It is a potential Problem Area? Yes No X It is a potential Problem Area? Yes No X It is a potential Problem Area? Yes No X No X It is a potential Problem Area? Yes No X No X It is a potential Problem Area? Yes No X No X It is a potential Problem Area? Yes No X No X It is a potential Problem Area? Yes No X No X It is a potential Problem Area? Yes No X No X No X No X It is a potential Problem Area? Yes No X No X No Recorded Data Available Yes No X No Recorded Data Available Yes No X No Recorded Data Available Yes No X No Recorded Data Problem Area? Yes No X No Recorded Data Problem Area? Yes No X No Recorded Data Problem Area? Yes No X No Recorded Data Available Yes No Recorded Data Problem Area? Yes No Recorded Data Problem	Normal Circumstances exist on the site? Yes X No Field Plot ID: W2-A he site significantly disturbed (Atypical Situation)? Yes No X he area a potential Problem Area? Yes No X marks (Explain sample location, disturbances, problem areas): tland sampled in area east of 12th Ave S., south of temporary retention and detention pond, and east of W1. GETATION I Dominant species are checked) Plant Species 1 Phalans arundinacea 80 Herb FACW 2 Rubus discolor 3 Alnus rubra 4 Populus baisamifera ssp. inchocarpa 2 Propulus baisamifera ssp. inchocarpa 4 Populus baisamifera ssp. inchocarpa 50 Shrub FAC 20 Tree FAC 21 Tree FAC 22 Tree FAC 23 Tree FAC 24 Populus baisamifera ssp. inchocarpa 25 Tree FAC 26 Tree FAC 27 Tree FAC 28 Tree FAC 29 Tree FAC 20 Tree FAC 20 Tree FAC 21 Tree FAC 21 Tree FAC 22 Tree FAC 23 Tree FAC 24 Populus baisamifera ssp. inchocarpa 25 Tree FAC 26 Tree FAC 27 Tree FAC 28 Tree FAC 29 Tree FAC 20 Tree FAC 20 Tree FAC 20 Tree FAC 21 Tree FAC 22 Tree FAC 23 Tree FAC 24 Populus baisamifera ssp. inchocarpa 25 Tree FAC 26 Tree FAC 27 Tree FAC 28 Tree FAC 29 Tree FAC 20 Tree FAC 20 Tree FAC 20 Tree FAC 21 Tree FAC 22 Tree FAC 23 Tree FAC 24 Populus baisamifera ssp. inchocarpa 25 Tree FAC 26 Tree FAC 27 Tree FAC 28 Tree FAC 29 Tree FAC 20 Tree FAC 20 Tree FAC 20 Tree FAC 21 Tree FAC 22 Tree FAC 23 Tree FAC 24 Populus baisamifera ssp. inchocarpa 25 Tree FAC 26 Tree FAC 27 Tree FAC 28 Tree FAC 29 Tree FAC 20 Tree FAC 20 Tree FAC 20 Tree FAC 21 Tree FAC 22 Tree FAC 23 Tree FAC 24 Populus baisamifera ssp. inchocarpa 25 Tree FAC 26 Tree FAC 27 Tree FAC 28 Tree FAC 29 Tree FAC 20 Tree FAC 20 Tree FAC 20 Tree FAC 21 Tree FAC 22 Tree FAC 23 Tree FAC 24 Populus baisamifera ssp. inchocarpa 25 Tree FAC 26 Tree FAC 27 Tree FAC 28 Tree FAC 29 Tree FAC 20 Tree FAC 20 Tree FAC 20 Tree FAC 20 Tree FAC 21 Tree FAC 21 Tree FAC 22 Tree FAC 23 Tree FAC 24 Tree FAC 25 Tree FAC 26 Tree FAC 27 Tree FAC 28 Tree FAC 29 Tree FAC 20 Tree
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Greater than 50 % of the vegetation is hydrophytic and satisfies the wetland vegetation of the vegetation is hydrophytic and satisfies the wetland vegetation of the vegetation is hydrophytic and satisfies the wetland vegetation of the vegetation is hydrophytic and satisfies the wetland vegetation of the vegetation is hydrophytic and satisfies the wetland vegetation of the vegetation is hydrophytic and satisfies the wetland vegetation of the vegetation is hydrophytic and satisfies the wetland vegetation of the vegetation is hydrophytic and satisfies the wetland vegetation of the vegetation is hydrophytic and satisfies the wetland vegetation of the vegetation is hydrophytic and satisfies the wetland vegetation of the vegetation is hydrophytic and satisfies the wetland vegetation of the vegetation is hydrophytic and satisfies the wetland vegetation of the vegetation is hydrophytic and satisfies the wetland vegetation of the vegetation is hydrophytic and satisfies the wetland vegetation of the vegetation is hydrophytic and satisfies the wetland vegetation of the vegetation is hydrophytic and satisfies the wetland vegetation of the vegetation is hydrophytic and satisfies the wetland vegetation of the vegetation is hydrophytic and satisfies the vegetation of the vegetation is hydrophytic and satisfies the vegetation o	the site significantly disturbed (Atypical Situation)? 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Greater than 50 % of the vegetation is hydrophytic and satisfies the wetland vegetation could be recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Primary Indicators: Primary Indicators: Wetland Hydrology Indicators (Describe in Remarks): Primary Indicators: Aenal Photograph Inundated Other X Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks	the site significantly disturbed (Atypical Situation)? Yes No X the area a potential Problem Area? Yes No X marks (Explain sample location, disturbances, problem areas): tland sampled in area east of 12th Ave S., south of temporary retention and detention pond, and east of W1. GETATION (*Dominant species are checked) Plant Species	the site significantity disturbed (Atypical Situation)? Yes No X the area a potential Problem Area? Yes No X thanks (Explain sample location, disturbances, problem areas): Italiand sampled in area east of 12th Ave S., south of temporary retention and detention pond, and east of W1. 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SOILS Soil Sur	vey Data:							
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-16	A	10YR 3/1	-			•	Gr	aveliv loam
6-20+	С	10YR 5/2	10YR 5	i/6		Common, Fine, D	istinct Gr	evelly Sand
Hi Hi Si Pr Re X Gi Hi	educing Condi eyed or Low-C gh Organic Co (Describe soil	Moisture Regime	ariations, etc		Listed Listed Aquic Organi Mottles	on Local Hydricon State Hydricon National Hy Moisture Regirric Streaking in State Streaking in State Streaking in State Streaking in Rem	c Soils List dric Soils List ne Sandy Soils	
VFTI AI	ND DETERI	MINATION		· · · · · · · · · · · · · · · · · · ·			·	
			V V	.			_	
		r i wawiit r	Yes <u>x</u>	No		is this	Sampling Poir	nt Within a Wetlar
ydrophyt	Is Present?		Yes X	No				

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results):

The presence of all three parameters indicate this area is a wetland. Wetland Delineated on changes in hydrology.



4 1				Data Piot #:	W2-B
	TLAND DET	EDMINA	TION	Wetland:	W2 Upland Pic
(Modified from: 1	-			Manual)	
(modified from: 1:	987 COE WE			Wallandar/	
Project/Site: Seattle Tacoma Airport - Master Plan U	pdate		1/5/99		,
Applicant/Owner: Port of Seattle		County:	King		
Investigator: William Kleindl		State:	WA		
✓ 1987 Method			Con	nmunity ID: U	pland
Do Normal Circumstances exist on the site?	Yes X	- ^{No} -	Field	d Plot ID: W2-	b
s the site significantly disturbed (Atypical Situation)?	Yes	_ No _	X		
s the area a potential Problem Area?	Yes	No	X		
Remarks (Explain sample location, disturbances, pro Upland comparison plot adjacent to Wetland W1:A and					
/EGETATION (✓Dominant species are checked	i) % Cov	er Stratu	n Indicator		
Obstation - and - and	20	Herb	FACW		
2 Rubus discolor		Shrub	FACU	-	
	30	Tree	FAC		
Alnus rubra				_	
Populus balsamilera ssp. thchocarpa Percent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates to Remarks (Describe disturbances, relevant local varial process of the control of the	race. 75	effects, et	•	-	
Populus balsamitera ssp. trichocarpa Percent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates to Remarks (Describe disturbances, relevant local varial Since greater than 50% of the dominant plants are hydrogeness.	v, or FAC	5 effects, etc	c.):	s met.	
Populus balsamifera ssp. thichocarpa Percent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates to the common of the co	race. ations, seasonal drophytic, the we	effects, et	s.): Itation criteria i		
Populus balsamifera ssp. thichocarpa Percent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates to Remarks (Describe disturbances, relevant local varia Since greater than 50% of the dominant plants are hydrocorded Data (Describe in Remarks):	race. ations, seasonal drophytic, the we	effects, etcetland vege	c.): tation criteria i drology Indic	s met.	e in Remarks):
Populus balsamifera ssp. thchocarpa Percent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates to Remarks (Describe disturbances, relevant local varia Since greater than 50% of the dominant plants are hyd HYDROLOGY Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage	race. ations, seasonal drophytic, the we	effects, etcetland vege	c.): tation criteria i drology Indica Indicators:	ators (Describ	e in Remarks):
Populus balsamifera ssp. thchocarpa Percent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates the Remarks (Describe disturbances, relevant local varial Since greater than 50% of the dominant plants are hydrograph Typical Company (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	race. ations, seasonal drophytic, the we	effects, etcetland vege	c.): Itation criteria i drology Indica Indicators: Inundated	ators (Describ	
Populus balsamifera ssp. trichocarpa Percent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates to temarks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydrocorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	race. ations, seasonal drophytic, the we	effects, etcetland vege	c.): tation criteria i drology Indica Indicators: Inundated Saturated	ators (Describ	ches
Populus balsamitera ssp. thchocarpa Percent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates to temarks (Describe disturbances, relevant local varial since greater than 50% of the dominant plants are hyd HYDROLOGY tecorded Data (Describe in Remarks): Stream, Lake, or Tide GageAerial Photograph	race. ations, seasonal drophytic, the we	effects, etcetland vege	c.): tation criteria i drology Indica Indicators: Inundated Saturated	ators (Describ d d in Upper 12 ind d in Upper 18 ind	ches
Populus balsamitera ssp. trichocarpa Percent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates to Remarks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydrocorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	race. ations, seasonal drophytic, the we	effects, etcetland vege	drology Indicators: Inundated Saturated Water Ma Drift Lines	ators (Describ d d in Upper 12 ind d in Upper 18 ind arks	ches
Populus balsamitera ssp. trichocarpa Percent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates to Remarks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydrograph of the Gage Aerial Photograph Other	race. ations, seasonal drophytic, the we	effects, etcetland vege	drology Indicators: Inundated Saturated Water Ma Drift Lines	ators (Describ d in Upper 12 ind d in Upper 18 ind arks s : Deposits	ches ches
Percent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T indicates to Remarks (Describe disturbances, relevant local varia Since greater than 50% of the dominant plants are hydrophysical adaptations in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available	race. ations, seasonal drophytic, the we	effects, etcetland vege	drology Indicators: Inundated Saturated Water Ma Drift Lines	ators (Describ d d in Upper 12 ind d in Upper 18 ind arks	ches ches
Populus balsamitera ssp. trichocarpa Percent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates to Remarks (Describe disturbances, relevant local varia Since greater than 50% of the dominant plants are hydrocorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available	race. ations, seasonal drophytic, the we	effects, et etland vege Vetland Hy Primary	drology Indical Indicators: Inundated Saturated Water Ma Drift Lines Sediment Drainage	ators (Describ d in Upper 12 ind d in Upper 18 ind arks s Deposits Patterns in Wel	ches ches dands
Populus balsamifera ssp. trichocarpa Percent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T indicates to Remarks (Describe disturbances, relevant local varia Since greater than 50% of the dominant plants are hydrophology Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available	race. ations, seasonal drophytic, the we	effects, et etland vege Vetland Hy Primary	drology Indicators: Inundated Saturated Water Ma Drift Lines Sediment Drainage	ators (Describ	ches ches clands red):
Populus balsamitera ssp. trichocarpa Percent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates to Remarks (Describe disturbances, relevant local varia Since greater than 50% of the dominant plants are hydrocorph decorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available	race. ations, seasonal drophytic, the we	effects, et etland vege Vetland Hy Primary	drology Indicators: Inundated Saturated Water Ma Drift Lines Sediment Drainage ary Indicators (Oxidized	ators (Described in Upper 12 income in Upper 18 inc	ches ches clands red):
Populus balsamilera ssp. thchocarpa Percent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T indicates to Remarks (Describe disturbances, relevant local varia Since greater than 50% of the dominant plants are hydrograph of Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available Field Observations: Depth of Surface Water: Depth to Free Water in Pit: >18 (in.)	race. ations, seasonal drophytic, the we	effects, et etland vege Vetland Hy Primary	drology Indicators: Inundated Saturated Water Ma Drift Lines Sediment Drainage ary Indicators (Oxidized Water-Sta	ators (Describ	ches ches clands red):
Populus balsamilera ssp. trichocarpa Percent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T" indicates to Remarks (Describe disturbances, relevant local variations of the dominant plants are hydrotype species of the dominant plants are hydrotype spe	race. ations, seasonal drophytic, the we	effects, etcetland vege	drology Indicators: Inundated Saturated Water Ma Drift Lines	ators (Describ d in Upper 12 ind d in Upper 18 ind arks s : Deposits	ches ches
Populus balsamilera ssp. thchocarpa Percent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T indicates to Remarks (Describe disturbances, relevant local varia Since greater than 50% of the dominant plants are hydrograph of Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available Field Observations: Depth of Surface Water: Depth to Free Water in Pit: >18 (in.)	race. ations, seasonal drophytic, the we	effects, et etland vege Vetland Hy Primary	drology Indicators: Inundated Saturated Water Ma Drift Lines Sediment Drainage ary Indicators (Oxidized	ators (Described in Upper 12 income in Upper 18 inc	ches ches clands red):
Populus balsamilera ssp. thchocarpa Percent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T indicates to Remarks (Describe disturbances, relevant local varia Since greater than 50% of the dominant plants are hydrograph of Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available Field Observations: Depth of Surface Water: Depth to Free Water in Pit: >18 (in.)	race. ations, seasonal drophytic, the we	effects, et etland vege Vetland Hy Primary	drology Indicators: Inundated Saturated Water Ma Drift Lines Sediment Drainage ary Indicators (Oxidized Water-Sta	ators (Described in Upper 12 incomes in Upper 18 incomes in Upper	ches ches clands red):
Populus balsamilera ssp. thchocarpa Percent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T indicates to Remarks (Describe disturbances, relevant local varia Since greater than 50% of the dominant plants are hydrograph of Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available Field Observations: Depth of Surface Water: Depth to Free Water in Pit: >18 (in.)	race. ations, seasonal drophytic, the we	effects, et etland vege Vetland Hy Primary	drology Indicators: Inundated Saturated Water Ma Drift Line: Sediment Drainage ary Indicators (Oxidized Water-Sta	ators (Described in Upper 12 incomes in Upper 18 incomes in Upper	ches ches clands red): in Upper 12 inches

1						Data Pi		W2-B
						Wetlan	id:	W2 Upland Plo
roject/S	ite: Seattle T	acoma Airport - Master	Plan Update	Date	1/5/99			
SOILS Soil Sur	vey Data:							
Map Unit	t Name: Unn	napped			Drainage (Class:		
					Field Obse	ervations Confi	rm Map	ped Type?
Taxonom	ny (Subgroup):	:			Yes	No	NA	x
rofile D	escription:		7.77				• ••	
Depth Inches)	Horizon Designation	Matrix Color (Munseli Moist)	Mottle Colo (Munsell Mo		Mottle Abundance	e/Contrast		ure. Concretions, ospheres, etc.
-7	A	10YR 3/2					Silt to	oam
-14	В	10YR 4/2					Silt to	pam
4-18+	С	10YR 5/4	10YR 5/8		Few. Medium	Distinct	Sitt	
ydric S	oil Indicators	:						
н	istosol			Liste	on Local Hy	dric Soils List		
	istic Epipedon	1		Listed	on State Hy	dric Soils List		
	ulfidic Odor			Listed	on National	Hydric Soils L	ist	
		Moisture Regime			Moisture Re	-		
	educing Cond					in Sandy Soils	3	
		Chroma Colors ontent in Surface Layer	•	Mottle	-			
			•	Otner	(Explain in F	lemarks)		
		l disturbances, local var oil are present.	iations, etc.):					
	ora or riyaric s	on are present.						
/ETLA	ND DETER	MINATION						
/drophyl	tic Vegetation	Present? Ye	es x No		is t	his Sampline	. Doint	Within a Wetland
	ils Present?		es No		•••	oumpility	, r-Oirit	AAITHIII S AAGUSUC
Antic 201								

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results):

Wetland vegetation is present, however wetland hydrology and hydric soils are absent and the area is not a wetland.

Parametrix, Inc



Data Piot #:	R1-A
Wetland:	R1

				RMINA'	
	(Modified from: 19	87 CC	E Wet	lands D	elineation Manual)
Project/Site: Seattle Tacoma	a Airport - Master Plan Up	date		Date: 9	9/18/98
Applicant/Owner: Port of S	Seattle			County:	King
nvestigator: William Kleindl				State:	WA
1987 Method	9 Method				Community ID: PEM
o Normal Circumstances exi	ist on the site?	Yes		No	X Field Plot ID: 57-A
the site significantly disturb	ed (Atypical Situation)?	Yes	×	No -	— Field Flot ID. 37-A
the area a potential Problem	n Area?	Yes		No :	×
emarks (Explain sample loo ocated behind house on Parc		iem are	as):		
EGETATION (Domina	ant species are checked)				
1 Agrostis gigantea			% Cover	Stratum	
2 Ranunculus repens			20 75	Herb Herb	FAC FACW
ercent of Dominant Species scept FAC-). Include species orphological adaptations to we marks (Describe disturban	s noted (*) as showing vetlands. "T" indicates tra	ce. ons, sea	100 isonal eff	ects, etc.): ation criteria is met
ercent of Dominant Species xcept FAC-). Include species orphological adaptations to we marks (Describe disturbance greater than 50% of the analysis of the ana	s noted (*) as showing vetlands. "T" indicates tra ces, relevant local variation dominant plants are hydro	ce. ons, sea	isonal eff	nd vegeta	ation criteria is met.
ercent of Dominant Species scept FAC-). Include species prophological adaptations to warmarks (Describe disturbanance greater than 50% of the of YDROLOGY	s noted (*) as showing vetlands. "T" indicates tra ces, relevant local variation dominant plants are hydro	ce. ons, sea	isonal eff	nd vegeta): ation criteria is met. rology Indicators (Describe in Remarks):
ercent of Dominant Species occupit FAC-). Include species or phological adaptations to we marks (Describe disturbance greater than 50% of the extra of the control of the c	s noted (*) as showing vetlands. "T" indicates tra ices, relevant local variation dominant plants are hydro- Remarks): or Tide Gage	ce. ons, sea	isonal eff the wetla Weti	nd vegeta	rology Indicators (Describe in Remarks):
ercent of Dominant Species of Except FAC-). Include species or phological adaptations to we marks (Describe disturbanance greater than 50% of the extension of	s noted (*) as showing vetlands. "T" indicates tra ices, relevant local variation dominant plants are hydro- Remarks): or Tide Gage	ce. ons, sea	isonal eff the wetla Weti	nd vegeta and Hydi	rology Indicators (Describe in Remarks):
ercent of Dominant Species occupit FAC-). Include species or phological adaptations to we marks (Describe disturbance greater than 50% of the extra than 5	s noted (*) as showing vetlands. "T" indicates tra ices, relevant local variation dominant plants are hydrometric expension. Remarks): or Tide Gage	ce. ons, sea	isonal eff the wetla Weti	nd vegeta and Hydi	rology Indicators (Describe in Remarks):
ercent of Dominant Species of Except FAC-). Include species or phological adaptations to we marks (Describe disturbanance greater than 50% of the extension of	s noted (*) as showing vetlands. "T" indicates tra ices, relevant local variation dominant plants are hydrometric expension. Remarks): or Tide Gage	ce. ons, sea	isonal eff the wetla Weti	iand Hydi	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches
ercent of Dominant Species occupit FAC-). Include species or phological adaptations to we marks (Describe disturbance greater than 50% of the extra than 5	s noted (*) as showing vetlands. "T" indicates tra ices, relevant local variation dominant plants are hydrometric expension. Remarks): or Tide Gage	ce. ons, sea	isonal eff the wetla Weti	iand Hydi	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks
ercent of Dominant Species xcept FAC-). Include species orphological adaptations to we marks (Describe disturban nce greater than 50% of the or YDROLOGY ecorded Data (Describe in Stream, Lake, or Aerial Photograp Other	s noted (*) as showing vetlands. "T" indicates tra ices, relevant local variation dominant plants are hydrometric expension. Remarks): or Tide Gage	ce. ons, sea	isonal eff the wetla Weti	iand Hydi	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
ercent of Dominant Species xcept FAC-). Include species orphological adaptations to we marks (Describe disturban nce greater than 50% of the or YDROLOGY ecorded Data (Describe in Stream, Lake, o Aerial Photograp Other No Recorded Data	s noted (*) as showing vetlands. "T" indicates tra ices, relevant local variation dominant plants are hydrometric expension. Remarks): or Tide Gage	ce. ons, sea	isonal eff the wetla Weti	iand Hydi	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
ercent of Dominant Species xcept FAC-). Include species corphological adaptations to we marks (Describe disturban ance greater than 50% of the of YDROLOGY ecorded Data (Describe in Stream, Lake, o Aerial Photograp Other No Recorded Data eld Observations:	s noted (*) as showing vetlands. "T" indicates tra ices, relevant local variation dominant plants are hydrograms. (*) Remarks): or Tide Gage on ata Available	ce. ons, sea	isonal eff the wetla Weti	iand Hydi	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
ercent of Dominant Species copy FAC-). Include species or phological adaptations to we marks (Describe disturbanance greater than 50% of the copy PROLOGY corded Data (Describe in Stream, Lake, o Aerial Photogram, Other No Recorded Data (Described Data (D	s noted (*) as showing vetlands. "T" indicates tra ices, relevant local variation dominant plants are hydrotectical results. Title Gage on the state of the state	ce. ons, sea	wetia	iand Hydi	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
ercent of Dominant Species xcept FAC-). Include species perphological adaptations to we marks (Describe disturbance greater than 50% of the extra than 50%	s noted (*) as showing vetlands. "T" indicates tra ices, relevant local variation dominant plants are hydrotectical transfer indicates training to the second common of the secon	ce. ons, sea	wetia	iand Hydi	rology Indicators (Describe in Remarks): idicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
ercent of Dominant Species except FAC-). Include species orphological adaptations to we marks (Describe disturbantince greater than 50% of the described Data (Describe in Stream, Lake, o Aerial Photograph Other No Recorded Data	s noted (*) as showing vetlands. "T" indicates tra ices, relevant local variation dominant plants are hydrotectical results. Title Gage on the state of the state	ce. ons, sea	wetia	and Hydi	rology Indicators (Describe in Remarks): idicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches
ercent of Dominant Species except FAC-). Include species prophological adaptations to we marks (Describe disturbantince greater than 50% of the disturbantince greater than 50	s noted (*) as showing vetlands. "T" indicates tra ices, relevant local variation dominant plants are hydrotectical transfer indicates training to the second common of the secon	ce. ons, sea	wetia	and Hydi	rology Indicators (Describe in Remarks): idicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands

4				<u> </u>		Data P	lot#:	R1-A
-						Wetla	nd:	R1
Project/Site	e: Seattle Tac	oma Airport - Master I	Plan Updati	·	Date: 9/18/98			
SOILS								
Soil Surve	y Data:							
Map Unit N	Name: Unmar	ped			Drainage Cl	ass:		
					Field Obser	vations Con	firm Map	ped Type?
Taxonomy	(Subgroup):				Yes	No	_ NA	<u>x</u>
Profile Des	scription:							
Depth (inches)		Matrix Color Munsell Moist)	Mottle ((Munse	Color Il Moist)	Mottle Abundance/	Contrast		ure, Concretions, ospheres, etc.
1-18	A 10	YR 2/1	10YR3/2		Few. Medium.	Distinct	Sand	v loam
His	I Indicators: stosol stic Epipedon Ifidic Odor obable Aquic Mi	oisture Regime		<u></u> ;	isted on Local Hyd isted on State Hyd isted on National (Iquic Moisture Reg	lric Soils Lis Hydric Soils	it	
Red X Gle	ducing Condition eyed or Low-Chan The Organic Conf			C	Organic Streaking i Nottles Other (Explain in Re		ils	
X Gle X Hig	eyed or Low-Ch th Organic Cont Describe soil di	roma Colors		C 	organic Streaking i		its	
X Gle X Hig Remarks (I	eyed or Low-Ch th Organic Cont Describe soil di	roma Colors tent in Surface Layer isturbances, local van soil indicators meet ti		C 	organic Streaking i		its	
X Gle X Hig Remarks (I	eyed or Low-Ch th Organic Cont Describe soil di nd other hydric	troma Colors tent in Surface Layer isturbances, local van soil indicators meet ti	he hydric so	C 	Organic Streaking i Mottles Other (Explain in Ro	emarks)		Within a Wetten
Red X Gle X Hig Remarks (I Soil color al WETLAN	eyed or Low-Ch th Organic Cont Describe soil di and other hydric	troma Colors tent in Surface Layer isturbances, local van soil indicators meet ti	he hydric so	X N C Collicriteria.	Organic Streaking i Mottles Other (Explain in Ro	emarks) nis Samplin		Within a Wetlar

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results):

The presence of all three parameters indicate this area is a wetland.

Par	ame	trix,	Inc.
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/8	Modified from: 19	_	F Wet	RMIN/			Manus	-11		
·		-) <u>_ </u>	anda i	Deili	neation	manue	••,		
roject/Site: Seattle Tacoma Air	rport - Master Plan Up	date		Date:	9/18/	98				_
pplicant/Owner: Port of Seat	ttle			County:	Kir	ng				_
ivestigator: William Kleindl			:	State:	WA	١				_
1987 Method 🔲 1989 Me	ethod					Co	mmunity l	D: PE	EM	
o Normal Circumstances exist o	on the site?	Yes		No .	_X	- Fie	Id Plot ID	57-A		
the site significantly disturbed (Atypical Situation)?	Yes	<u> </u>	No .		_	_		<u></u> .	_
the area a potential Problem Ar	rea?	Yes	X	No						
emarks (Explain sample location	on, disturbances, prob	iem are	as):	•		•				
ated behind house on Parcel 1	148.									
GETATION (Dominant:	species are checked)									
Plant Species			% Cover	Stratus	m	Indicator				
1 Athyrium filix-femina			20	Herb		FAC	_			
2. Holcus lanatus			80	Herb		FAC				
3 ins pseudacorus			2 0	Herb		OBL				
Barrier de la casación										
cept FAC-). Include species no irphological adaptations to wetta	oted (*) as showing ands. "T" indicates train	ce.	100	Herb		FACW				
recent of Dominant Species (cept FAC-). Include species no rephological adaptations to wetla marks (Describe disturbances	oted (*) as showing ands. "T" indicates training trelevant local variation	ce. ons, sea	100	ects, etc	c.):		is met.			
recent of Dominant Species (cept FAC-). Include species no rephological adaptations to wetla marks (Describe disturbances are greater than 50% of the dominant species of the s	oted (*) as showing ands. "T" indicates training trelevant local variation	ce. ons, sea	100	ects, etc	c.):		s met.			
recent of Dominant Species of teept FAC-). Include species no orphological adaptations to wetta marks (Describe disturbances are greater than 50% of the dominant of the domin	oted (*) as showing ands. "T" indicates train, relevant local variation in the plants are hydro	ce. ons, sea	100 asonal effi	ects, etc	c.): etation	n criteria i		les cribe	in Remarke)	- 1
recent of Dominant Species of cept FAC-). Include species no orphological adaptations to wetta marks (Describe disturbances are greater than 50% of the dominant of the domina	oted (*) as showing ands. "T" indicates train, relevant local variation in the plants are hydromarks):	ce. ons, sea	asonal effethe wetlan	ects, etc	c.): etation	o <i>criteria i</i>		escribe	in Remarks):	
recent of Dominant Species of coept FAC-). Include species no imphological adaptations to wetta marks (Describe disturbances are greater than 50% of the domination of the dom	oted (*) as showing ands. "T" indicates train, relevant local variation in the plants are hydromarks):	ce. ons, sea	asonal effethe wetlan	ects, etc and vege	c.): etation drolo Indica	o <i>criteria i</i>	ators (D	escribe	in Remarks):	
rcent of Dominant Species of coept FAC-). Include species no orphological adaptations to wetta marks (Describe disturbances ace greater than 50% of the domination of the domi	oted (*) as showing ands. "T" indicates train, relevant local variation in the plants are hydromarks):	ce. ons, sea	asonal effethe wetlan	ects, etc and vege	c.): etation drolo Indica	o criteria i egy Indic ators: inundate	ators (D			
rcent of Dominant Species (cept FAC-). Include species no rephological adaptations to wetla marks (Describe disturbances ace greater than 50% of the dominate	oted (*) as showing ands. "T" indicates train, relevant local variation in anti-plants are hydromarks): de Gage	ce. ons, sea	asonal effethe wetlan	ects, etc and vege and Hy rimary	c.): etation drolo Indica	o criteria i gy Indic itors: inundated Saturated	ators (D	12 inct	nes	
rcent of Dominant Species of cept FAC-). Include species no orphological adaptations to wetta marks (Describe disturbances are greater than 50% of the dominant of the dominant of the described in Rendered Data (Describe in Rendered Data). (Describe in Rendered Data). (Described in Rendered Data).	oted (*) as showing ands. "T" indicates train, relevant local variation in anti-plants are hydromarks): de Gage	ce. ons, sea	asonal effethe wetlan	ects, etc and vege and Hy rimary	c.): etation drolo Indica	o criteria i gy Indic itors: inundated Saturated	ators (D	12 inct	nes	
recent of Dominant Species of Recept FAC-). Include species no prohological adaptations to wetta smarks (Describe disturbances note greater than 50% of the dominant of the Communication of the dominant of the Communication of the Communicat	oted (*) as showing ands. "T" indicates train, relevant local variation in anti-plants are hydromarks): de Gage	ce. ons, sea	asonal effethe wetlan	ects, etc and vege and Hy rimary	drolo	egy Indicators: Inundated Saturated Saturated Water Ma	ators (D d d in Upper d in Upper arks	12 inch 18 inch	nes	
rcent of Dominant Species of teept FAC-). Include species no orphological adaptations to wetta marks (Describe disturbances are greater than 50% of the dominant of the dominant of the described in Rendered Data (Describe in Rendered Data). (Describe in Rendered Photograph Other	oted (*) as showing ands. "T" indicates train, relevant local variation in anti-plants are hydromarks): de Gage	ce. ons, sea	asonal effethe wetlan	ects, etc and vege and Hy rimary	drolo	egy Indicators: inundated Saturated Saturated Water Ma Drift Lines Sediment	ators (D	12 inct 18 inct	nes nes	
recent of Dominant Species of Recept FAC-). Include species no orphological adaptations to wetta smarks (Describe disturbances note greater than 50% of the dominant Species of the dominant Stream, Lake, or Tide Aerial Photograph Other X No Recorded Data (Marcorded Data	oted (*) as showing ands. "T" indicates train, relevant local variation in anti-plants are hydromarks): de Gage	ce. ons, sea	asonal effethe wetlan	ects, etc and vege and Hy rimary	drolo	egy Indicators: inundated Saturated Saturated Water Ma Drift Lines Sediment	ators (D d d in Upper d in Upper arks	12 inct 18 inct	nes nes	
rcent of Dominant Species (cept FAC-). Include species no rephological adaptations to wetta marks (Describe disturbances ice greater than 50% of the dominant	oted (*) as showing ands. "T" indicates train, relevant local variation in anti-plants are hydromarks): de Gage Available	ce. ons, sea	100 asonal eff the wetla Wett	lects, etc and vege land Hy Primary	drolo Indica	egy Indicators: inundated Saturated Saturated Water Ma Drift Lines Sediment Drainage	ators (D d in Upper d in Upper drks s Deposits Patterns in	12 inch 18 inch	nes nes	
rcent of Dominant Species of coept FAC-). Include species no orphological adaptations to wetta marks (Describe disturbances oce greater than 50% of the dominant of the domina	oted (*) as showing ands. "T" indicates train, relevant local variation in anti-plants are hydromarks): de Gage Available	ce. ons, sea	100 asonal eff the wetla Wett	lects, etc and vege land Hy Primary	drolo drolo lndica V Comparison Compari	o criteria i negy Indica itors: Inundate: Saturated Saturated Water Ma Drift Line: Sediment Drainage	ators (D d in Upper d in Upper links s Deposits Patterns i	12 inch 18 inch in Wetla	nes nes ands ed):	
recent of Dominant Species (coept FAC-). Include species no orphological adaptations to wetta marks (Describe disturbances ince greater than 50% of the dominant Stream, Lake, or Tide Aerial Photograph Other X No Recorded Data (Market Coepts of Surface Water: Depth to Free Water in Pit: 1980).	oted (*) as showing ands. "T" indicates train, relevant local variation in anti-plants are hydromarks): de Gage Available None (in.)	ce. ons, sea	100 asonal eff the wetla Wett	lects, etc and vege land Hy Primary	drolo drolo drolo grantation grantation grantation grantation	o criteria i agy Indicators: Inundatei Saturatec Saturatec Water Ma Orift Linei Sediment Orainage dicators (Oxidized	ators (D d in Upper d in Upper drks s Deposits Patterns i 2 or more	12 inch 18 inch in Wetla require	nes nes	
ercent of Dominant Species of except FAC-). Include species no orphological adaptations to wetta emarks. (Describe disturbances note greater than 50% of the dom YDROLOGY ecorded Data _ (Describe in Ren	nted (*) as showing ands. "T" indicates trait, relevant local variation in anti-plants are hydromarks): de Gage Available None (in.)	ce. ons, sea	100 asonal eff the wetla Wett	lects, etc and vege land Hy Primary	drolo drolo drolo c.): drolo drolo co	o criteria i agy Indicators: Inundatei Saturatec Saturatec Water Ma Orift Linei Sediment Orainage dicators (Oxidized Water-Sta	ators (D d in Upper d in Upper d in Upper drks s Deposits Patterns i 2 or more Root Cha	12 inch 18 inch in Wetta require nnels in ves	nes nes ands ed):	
ercent of Dominant Species of except FAC-). Include species no orphological adaptations to wetta emarks. (Describe disturbances note greater than 50% of the dom YDROLOGY ecorded Data _ (Describe in Ren	nted (*) as showing ands. "T" indicates trait, relevant local variation in anti-plants are hydromarks): de Gage Available None (in.)	ce. ons, sea	100 asonal eff the wetla Wett	lects, etc and vege land Hy Primary	drolo drolo Indica I I I I I I I I I I I I I I I I I I	n criteria in crit	ators (D d in Upper d in Upper drks s Deposits Patterns i 2 or more	12 inch 18 inch in Wetla require nnels in ves lata	nes nes ands ad): Upper 12 inc	

Para	ametr	ix, Inc.							
7								Data Plot #:	R2-A
								Wetland:	R2
Project/Sit	te: Seattle Ta	acoma Airport - Mastel	Plan U	odate		Date:	9/18/98		
Soil Surv	ey Data:								
Map Unit	Name: Unm	napped					Drainage Class	:	
							Field Observation	ons Confirm M	apped Type?
Taxonomy	y (Subgroup):						Yes No	D N	A _X
	scription:				-				
Depth (Inches)	Horizon	Matrix Color (Munsell Moist)		ettie Colo unsell Me			Mottle Abundance/Con		exture, Concretions, nizospheres, etc.
0-5	A1	10YR 3/1					-	Sa	indy loam
5-10	A2	10YR 3/1	101	/R 3/2			Few, Medium, Faint	Sa	indy loam
10-12	С	10YR 3/1					•	Sa	ind
12-20+	C2	10YR 2/1	10Y	'R 3/2			Common, Medium,	Distinct Gr	avel loam organic
His His Su Pro	educing Condi eyed or Low-C gh Organic Co (Describe soil	Moisture Regime	riations,		X X X	Listed Listed Aquic Organ Mottle	on Local Hydric on State Hydric on National Hydric on National Hydric Moisture Regime ic Streaking in Sassian (Explain in Rema	Soils List ric Soils List andy Soils	
WFTI AL	ID DETER	MINATION							
				_					
	ic Vegetation s Present?			No	_	_	Is this S	Sampling Poi	nt Within a Wetland?
	drology Pre		es <u>×</u>	No	_	_		es X I	No

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): The presence of all three parameters indicate this area is a wetland.



R3/4-A

Project/Site: Seattle Tacoma Airport - Master Plan Upd	ate	Date: 10/	15/98
Applicant/Owner: Port of Seattle		County: F	King
Investigator: Kleindi and Louther		State: V	VA
1987 Method		-	Community ID: PEM
Do Normal Circumstances exist on the site?	Yes X	No	Field Plot ID: 64-A
Is the site significantly disturbed (Atypical Situation)?	Yes	No X	
ls the area a potential Problem Area?	Yes	No X	_
Remarks (Explain sample location, disturbances, proble			-
/EGETATION (✓Dominant species are checked)			
Plant Species	% Cover	Stratum	indicator
1 Equisetum arvense	10	Herb	FAC
2 Festuca rubra	60	Herb	FAC+
Ranunculus repens		Herb	FACW
4 Rubus discolor	15	Shrub	FACU
E Ruhus spectabilis		Sharp.	FAC
except FAC-). Include species noted (*) as showing corphological adaptations to wetlands. "T" indicates trace	100 e.	Shrub Tree ects, etc.):	FAC FAC
The second secon	r FAC 100 e.	Tree	FAC
Alnus rubra Percent of Dominant Species that are OBL, FACW, or except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates trace temarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrop	r FAC 100 e.	Tree	FAC
Alnus rubra Percent of Dominant Species that are OBL, FACW, or except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates trace temarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrop IYDROLOGY ecorded Data (Describe in Remarks):	r FAC e. 100 ins, seasonal efficiently tic, the wetland	Tree ects, etc.): nd vegetation	on criteria is met. logy Indicators (Describe in Remarks):
ercent of Dominant Species that are OBL, FACW, or except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates trace temarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrop IYDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage	r FAC e. 100 ins, seasonal efficiently tic, the wetland	Tree ects, etc.): nd vegetation	on criteria is met. logy Indicators (Describe in Remarks):
ercent of Dominant Species that are OBL, FACW, or except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates trace temarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrop IYDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	r FAC e. 100 ins, seasonal efficiently tic, the wetland	ects, etc.): and vegetation rimary India X	on criteria is met. logy Indicators (Describe in Remarks):
ercent of Dominant Species that are OBL, FACW, or except FAC-). Include species noted (*) as showing torphological adaptations to wetlands. "T" indicates trace emarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrop lyDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	r FAC e. 100 ins, seasonal efficiently tic, the wetland	ects, etc.): nd vegetation and Hydro	on criteria is met. logy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches
ercent of Dominant Species that are OBL, FACW, or except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates trace temarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrop IYDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	r FAC e. 100 ins, seasonal efficiently tic, the wetland	ects, etc.): and vegetation rimary India X	on criteria is met. logy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches
ercent of Dominant Species that are OBL, FACW, or except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates trace temarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrop IYDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	r FAC e. 100 ins, seasonal efficiently tic, the wetland	ects, etc.): and vegetation rimary India X	logy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks
ercent of Dominant Species that are OBL, FACW, or except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates trace temarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrop IYDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	r FAC e. 100 ins, seasonal efficiently tic, the wetland	ects, etc.): and vegetation rimary India X	on criteria is met. logy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches
6 Alnus rubra Percent of Dominant Species that are OBL, FACW, or except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates trace temarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrop IYDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	r FAC e. 100 ins, seasonal efficiently tic, the wetland	ects, etc.): and vegetation rimary India X	logy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
6 Ainus rubra Percent of Dominant Species that are OBL, FACW, or except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates trace temarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrop IYDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available eld Observations: Depth of Surface Water: 0.5 (in.)	r FAC 100 e	ects, etc.): and vegetation and Hydro brimary India	logy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
ercent of Dominant Species that are OBL, FACW, or except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates trace temarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrop lyDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide GageAerial PhotographOtherX No Recorded Data Available eld Observations: Depth of Surface Water: 0.5 (in.) Depth to Free Water in Pit: 18 (in.)	r FAC 100 e	ects, etc.): and vegetation and Hydro brimary India	logy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required):
6 Ainus rubra Percent of Dominant Species that are OBL, FACW, or except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates trace temarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrop IYDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available eld Observations: Depth of Surface Water: 0.5 (in.)	r FAC 100 e	ects, etc.): and vegetation and Hydro brimary India	logy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
ercent of Dominant Species that are OBL, FACW, or except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates trace temarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrop lyDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide GageAerial PhotographOtherX No Recorded Data Available eld Observations: Depth of Surface Water: 0.5 (in.) Depth to Free Water in Pit: 18 (in.)	r FAC 100 e	ects, etc.): and vegetation and Hydro brimary India	logy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches

4						Dat	a Plot #:	R3/4-A
						We	tland:	R3/R4
Project/Site	: Seattle Ta	acoma Airport - Maste	r Plar	update	Dat	10/15/98		
SOILS Soil Surve	y Data:							
Map Unit N	iame: Unm	apped				Drainage Class:		
						Field Observations C	onfirm Map	pped Type?
Taxonomy	(Subgroup):					Yes No	NA	<u>x</u>
Profile Des	cription:							
Depth (Inches)	Horizon Designation	Matrix Color (Munsell Moist)		Mottle C (Munsel		Mottle Abundance/Contrast		ture, Concretions cospheres, etc.
)-18	Α	10YR 2/1		10YR 3/6	3	Few. Coarse, Distinct	Sano	ly loam
His:	I Indicators:					ed on Local Hydric Soils		
His	tosol tic Epipedon				List	ed on State Hydric Soils	List	
His His X Sult	tosol tic Epipedon fidic Odor				List	ed on State Hydric Soils ed on National Hydric So	List	
Hiss X Sult	tosol tic Epipedon fidic Odor	Moisture R egim e			Liste X Aqu	ed on State Hydric Soils ed on National Hydric So c Moisture Regime	List oils List	
Hiss Hiss X Sult Pro X Rec	tosol tic Epipedon fidic Odor bable Aquic bucing Condi	Moisture R egim e			Liste X Aqu	ed on State Hydric Soils ed on National Hydric So c Moisture Regime anic Streaking in Sandy	List oils List	
His: X Sulf Pro X Rec X Gle	tosol tic Epipedon fidic Odor bable Aquic ducing Condi yed or Low-C	Moisture Regime tions	er.		List X Aqu X Org X Mot	ed on State Hydric Soils ed on National Hydric So ic Moisture Regime anic Streaking in Sandy	List oils List	
Hiss X Sull Pro X Rec X Glee High	tosol tic Epipedon fidic Odor bable Aquic ducing Condi yed or Low-C h Organic Co Describe soil	Moisture Regime tions Chroma Colors ontent in Surface Laye disturbances, local vi	ariatio		List X Aqu X Org X Mot Other	ed on State Hydric Soils ed on National Hydric So ic Moisture Regime anic Streaking in Sandy les er (Explain in Remarks)	List oils List	
Hiss X Sull Pro X Rec X Glee High	tosol tic Epipedon fidic Odor bable Aquic ducing Condi yed or Low-C h Organic Co Describe soil	Moisture Regime tions Chroma Colors ontent in Surface Laye	ariatio		List X Aqu X Org X Mot Other	ed on State Hydric Soils ed on National Hydric So ic Moisture Regime anic Streaking in Sandy les er (Explain in Remarks)	List oils List	
His His His X Sulfi Pro X Rec X Gle High High Remarks (I	tosol tic Epipedon fidic Odor bable Aquic ducing Condi yed or Low-C h Organic Co Describe soil h hemic orga	Moisture Regime tions Chroma Colors ontent in Surface Laye disturbances, local vi	ariatio		List X Aqu X Org X Mot Other	ed on State Hydric Soils ed on National Hydric So ic Moisture Regime anic Streaking in Sandy les er (Explain in Remarks)	List oils List	
Hiss Hiss X Sulf Pro X Rec X Glee High Remarks (I	tosol tic Epipedon fidic Odor bable Aquic ducing Condi yed or Low-C h Organic Co Describe soil h hemic orga	Moisture Regime tions Chroma Colors ontent in Surface Laye disturbances, local value content. Soil colo	ariatio		List X Aqu X Org X Mot Other	ed on State Hydric Soils ed on National Hydric So ic Moisture Regime anic Streaking in Sandy les er (Explain in Remarks)	List bils List Soils	Within a Wetlan
X Sulfi Pro X Rec X Glee High Remarks (I Soil has high lydrophytic	tosol tic Epipedon fidic Odor bable Aquic ducing Condi yed or Low-C h Organic Co Describe soil h hemic orga D DETER c Vegetation	Moisture Regime tions Chroma Colors Ontent in Surface Layer disturbances, local value content. Soil color MINATION The Present?	ariatio	other in	List X Aqu X Org X Mot Other City of the city of	ed on State Hydric Soils ed on National Hydric So ic Moisture Regime anic Streaking in Sandy les er (Explain in Remarks)	List bils List Soils	

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results):

The presence of all three parameters indicate this area is a wetland.



Data Plot #:

R3/R4-B

Wetland:

R3/R4 Upland Plot

Project/Site: Seattle Tacoma Airport - Master Plan L	poate		_	10/15/98
Applicant/Owner: Port of Seattle			County:	King
nvestigator: Louther and Kleindl			State:	WA
				Community ID: Upland
o Normal Circumstances exist on the site?	Yes	<u> x</u>	No _	Field Plot ID: 63/64-B
the site significantly disturbed (Atypical Situation)?	Yes		No _	<u>x</u>
the area a potential Problem Area?	Yes		No	x
emarks (Explain sample location, disturbances, pro pland comparison sampled on Parcel 153.	oblem are	eas):		
EGETATION (Dominant species are checked	d)			
Plant Species		% Cover	Stratum	Indicator
1 Dactylus glomerata		10	Herb	FACU
2 Hypochaens radicata		2	Herb	FACU
3 Ptendium aquilinum 4 Nex aquifolium		5	- Herb	FACU
5 Oemlena cerasiformis		2	Shrub Shrub	UPL FACU
		25	Shrub	FACU
6 Rubus discolor				
6 Rubus discolor 7 Ainus rubra		15	Tree	FAC
Anus rubra Thuja plicata Treent of Dominant Species that are OBL, FACW cept FAC-). Include species noted (*) as showing rphological adaptations to wetlands. "T" indicates tr	race.	15 60 <u>25</u>	Tree	FAC FAC
Ainus rubra Thuja plicata rcent of Dominant Species that are OBL, FACW cept FAC-). Include species noted (*) as showing rphological adaptations to wetlands. "T" indicates trimarks (Describe disturbances, relevant local variance less than 50% of the dominant plants are hydrop	race. tions, sea	15 60 25 asonal eff	Tree Tree	FAC FAC
Alnus rubra 8 Thuja plicata recent of Dominant Species that are OBL, FACW cept FAC-). Include species noted (*) as showing riphological adaptations to wetlands. "T" indicates trimarks (Describe disturbances, relevant local variations than 50% of the dominant plants are hydropy (DROLOGY)	race. tions, sea	25 asonal eff	Tree Tree	FAC FAC): n criteria is not met.
Alnus rubra Thuja plicata Thuja plicata Treent of Dominant Species that are OBL, FACW cept FAC-). Include species noted (*) as showing rphological adaptations to wetlands. "T" indicates tremarks (Describe disturbances, relevant local variation less than 50% of the dominant plants are hydrop (DROLOGY) corded Data (Describe in Remarks):	race. tions, sea	25 asonal eff	Tree Tree	FAC FAC
Alnus rubra Thuja plicata Thuja plicata Treent of Dominant Species that are OBL, FACW cept FAC-). Include species noted (*) as showing rephological adaptations to wetlands. "T" indicates tremarks (Describe disturbances, relevant local variation less than 50% of the dominant plants are hydrop (DROLOGY) Torded Data (Describe in Remarks): Stream, Lake, or Tide Gage	race. tions, sea	25 asonal eff	Tree Tree	FAC FAC in criteria is not met. rology Indicators (Describe in Remarks):
7 Alnus rubra 8 Thuja plicata recent of Dominant Species that are OBL, FACW cept FAC-). Include species noted (*) as showing rphological adaptations to wetlands. "T" indicates transition (Describe disturbances, relevant local variation less than 50% of the dominant plants are hydrop (DROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	race. tions, sea	25 asonal eff	Tree Tree fects, etc. vegetation	FAC FAC): n criteria is not met. rology Indicators (Describe in Remarks): dicators: Inundated
Alnus rubra Thuja plicata Thuja plicata Treent of Dominant Species that are OBL, FACW cept FAC-). Include species noted (*) as showing riphological adaptations to wetlands. "T" indicates tree less than 50% of the dominant plants are hydropy corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	race. tions, sea	25 asonal eff	Tree Tree fects, etc. vegetation	FAC FAC in criteria is not met. rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches
7 Alnus rubra 8 Thuja plicata recent of Dominant Species that are OBL, FACW cept FAC-). Include species noted (*) as showing rphological adaptations to wetlands. "T" indicates transition (Describe disturbances, relevant local variation less than 50% of the dominant plants are hydrop (DROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	race. tions, sea	25 asonal eff	Tree Tree fects, etc. vegetation	FAC FAC in criteria is not met. rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches
Alnus rubra 8	race. tions, sea	25 asonal eff	Tree Tree fects, etc. vegetation	FAC FAC in criteria is not met. rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches
Ainus rubra 8	race. tions, sea	25 asonal eff	Tree Tree fects, etc. vegetation	FAC FAC in criteria is not met. rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks
Alnus rubra Thuja plicata Treent of Dominant Species that are OBL, FACW (cept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates to marks (Describe disturbances, relevant local variations to the less than 50% of the dominant plants are hydropy (DROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	race. tions, sea	25 asonal eff	Tree Tree fects, etc. vegetation	FAC FAC in criteria is not met. rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
Alnus rubra Thuja plicata Trocent of Dominant Species that are OBL, FACW (cept FAC-). Include species noted (*) as showing rephological adaptations to wetlands. "T" indicates to marks (Describe disturbances, relevant local variative less than 50% of the dominant plants are hydrop (DROLOGY) Corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	race. tions, sea	25 assonal eff wetland	Tree Tree Tree fects, etc. vegetatio	FAC FAC Prology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
Alnus rubra Thuja plicata Trocent of Dominant Species that are OBL, FACW cept FAC-). Include species noted (*) as showing riphological adaptations to wetlands. "T" indicates trimarks (Describe disturbances, relevant local variations to the dominant plants are hydrop (*) PROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available d Observations: Depth of Surface Water: None (in.)	race. tions, sea	25 assonal eff wetland	Tree Tree Tree fects, etc. vegetatio	FAC FAC in criteria is not met. rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
Alnus rubra Thuja plicata Trocent of Dominant Species that are OBL, FACW cept FAC-). Include species noted (*) as showing rphological adaptations to wetlands. "T" indicates to marks (Describe disturbances, relevant local variations to the dominant plants are hydrop (*) Corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available d Observations: Depth of Surface Water: None (in.) >18 (in.)	race. tions, sea	25 assonal eff wetland	Tree Tree Tree fects, etc. vegetatio	FAC FAC Tology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches
Alnus rubra Thuja plicata Trocent of Dominant Species that are OBL, FACW Coept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates to marks (Describe disturbances, relevant local variations to see less than 50% of the dominant plants are hydropy TOROLOGY Corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available dd Observations: Depth of Surface Water: Depth to Free Water in Pit: None (in.)	race. tions, sea	25 assonal eff wetland	Tree Tree Tree fects, etc. vegetatio	FAC FAC PAC Trology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches Water-Stained Leaves
7. Alnus rubra 8. Thuja plicata procent of Dominant Species that are OBL, FACW (copt FAC-). Include species noted (*) as showing prophological adaptations to wetlands. "T" indicates to imarks (Describe disturbances, relevant local variations to less than 50% of the dominant plants are hydropy (DROLOGY) corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X. No Recorded Data Available Id Observations: Depth of Surface Water: Depth to Free Water in Pit: None (in.)	race. tions, sea	25 assonal eff wetland	Tree Tree Tree fects, etc. vegetatio	FAC FAC Tology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches

4 1							Data P	lot#:	R3/R4-B
							Wetia	nd:	R3/R4 Upland Pio
roject/Si	te: Seattle Ta	acoma Airport - Maste	r Plan U	pdate	Date:	10/15/98	3		
OILS ioil Sun	vey Data:								
Map Unit	Name: Unm	apped				Drainage	Class:		
						Field Obs	ervations Con	firm Map	ped Type?
axonom	y (Subgroup):					Yes	No	NA	<u>x</u>
rofile De	escription:								
epth nches)	Horizon Designation	Matrix Color (Munsell Moist)		ottle Color iunsell Moist	t)	Mottie Abundand	ce/Contrast	_	ure, Concretions, ospheres, etc.
-12	Α	10YR 3/4				•		Grave	elly sandy toam
- н	bil Indicators: istosol istic Epipedon			_	Listed	on State F	Hydric Soils Lis Hydric Soils Lis	:t	
	ulfidic Odor	Moisture Regime					al Hydric Soils	List	
	educing Condi	_		_		Moisture R	tegime g in Sandy Soi	ile	
Re		Chroma Colors			Mottle		g III OBIIGY OO	11.5	
			_			(Explain in	Remarks)		
G	gh Organic Co	ontent in Surface Laye	r		Other	,			
Gi Hi emarks	(Describe soil	ontent in Surface Laye disturbances, local va oil are present.		, etc.):	Other	,	·		
Gi Hi emarks o indicate	(Describe soil	disturbances, local va oil are present.		, etc.):	Other				
GI Hi emarks o indicate	(Describe soil ors of hydric s	disturbances, local va oil are present.		, etc.):			s this Samplir	na Point	Within a Wetland?
Gi Hi emarks o indicate	(Describe soil	disturbances, local va oil are present. MINATION Present?	ariations.		Other		this Samplir Yes	ng Point	Within a Wetland?

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): This area is an upland since all wetland parameters are absent.

Λ			_	D	ata Piot	#:	R4b-A
WETLA	ND DET	FRMIN	ΔΤΙΩΝ	٧	Vetland:		R4b
(Modified from: 1987				ation Ma	anual)		
roject/Site: Seattle Tacoma Airport - Master Plan Update		Date:	11/1/00		,		
Applicant/Owner: Port of Seattle		County					
nvestigator: William Kleindi, Pat Tougher		State:	WA				
1987 Method 1989 Method				Commi	unity ID:	Dec	S/PEM
o Normal Circumstances exist on the site?	res X	No			•	_	
	/es	No	×	Field P	lot ID:	K4D-A	\
the area a natical Departure Asset	es	- No	^				
TO DISCOUNT.							eet above ti
EGETATION (>Dominant species are checked) Plant Species	% Cov	er Stratu	m inc	licator			
Plant Species 1 Convolvulus arvensis	% Cov	er Stratu Herb	m inc	licator			
EGETATION (Dominant species are checked) Plant Species	% Cov 5 90	er Stratu Herb	m Inc	licator CW			
Plant Species Convolvulus arvensis Equisetum termateia	% Cov	er Stratu Herb	m inc	dicator			
Convolvulus arvensis Equisetum teimateia Ilex aquifolium	% Cov 5 90 5 60 FAC	er Stratu Herb Herb Shrub Tree	m Inc NL FA NL FA	CW			
Plant Species 1 Convolvulus arvensis 2 Equisetum telmateia 3 Ilex aquifolium 4 Alnus rubra recent of Dominant Species that are OBL, FACW, or Facept FAC-). Include species noted (*) as showing prohological adaptations to wetlands. "T" indicates trace.	% Cov 5 90 5 60 FAC	er Stratu Herb Herb Shrub Tree	m Inc NL FA NL FA	CW			
Plant Species 1 Convolvulus arvensis 2 Equisetum teimateia 3 Ilex aquifolium 4 Alnus rubra recent of Dominant Species that are OBL, FACW, or Facept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace. marks (Describe disturbances, relevant local variations, are 100% of the dominant plants are hydrophytic, the wetlands."	% Cov 5 90 5 60 AC 10 seasonal	Herb Herb Shrub Tree	m Inc. NL FA NL FA	dicator CW			
Plant Species 1 Convolvulus arvensis 2 Equisetum termateia 3 llex aquifolium 4 Alnus rubra recent of Dominant Species that are OBL, FACW, or Ficept FAC-). Include species noted (*) as showing imphological adaptations to wetlands. "T" indicates trace, marks (Describe disturbances, relevant local variations, ice 100% of the dominant plants are hydrophytic, the wetlands." (*) DROLOGY	% Cov 5 90 5 60 AC 10 seasonal	Herb Herb Shrub Tree	m Inc NL FA NL FA Cc.):	CW C			n Remarks):
Plant Species 1 Convolvulus arvensis 2 Equisetum termateia 3 llex aquifolium 4 Alnus rubra recent of Dominant Species that are OBL, FACW, or Ficept FAC-). Include species noted (*) as showing imphological adaptations to wetlands. "T" indicates trace. marks (Describe disturbances, relevant local variations, ice 100% of the dominant plants are hydrophytic, the wetlands." CDROLOGY corded Data (Describe in Remarks):	% Cov 5 90 5 60 AC	Herb Herb Shrub Tree	m Inc NL FA NL FA Cc.): drais met	CW C			
Plant Species 1. Convolvulus arvensis 2. Equisetum termateia 3. Ilex aquifolium 4. Alnus rubra recent of Dominant Species that are OBL, FACW, or Ficept FAC-). Include species noted (*) as showing imphological adaptations to wetlands. "T" indicates trace. marks (Describe disturbances, relevant local variations, ince 100% of the dominant plants are hydrophytic, the wetlands." CPROLOGY Corded Data (Describe in Remarks): Stream, Lake, or Tide Gage	% Cov 5 90 5 60 AC	Herb Herb Shrub Tree	m Inc NL FA NL FA Cc.): drais met	CW C	\$ (Des	cribe i	n Remarks):
Plant Species 1. Convolvulus arvensis 2. Equisetum termateia 3. Ilex aquifolium 4. Alnus rubra recent of Dominant Species that are OBL, FACW, or Ficept FAC-). Include species noted (*) as showing imphological adaptations to wetlands. "T" indicates trace. marks (Describe disturbances, relevant local variations, ice 100% of the dominant plants are hydrophytic, the wetletation of the dominant plants are hydrophytic, the wetletations (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	% Cov 5 90 5 60 AC	Herb Herb Shrub Tree 00 effects, etcation criter etland Hy	m Inc NL FA NL FA Cc.): drais met drology Indicator Inu Sat Sat	Indicator S: Indated urated in U	\$ (Des	cribe i	n Remarks):
Plant Species 1. Convolvulus arvensis 2. Equisetum termateia 3. Ilex aquifolium 4. Alnus rubra recent of Dominant Species that are OBL, FACW, or Ficept FAC-). Include species noted (*) as showing imphological adaptations to wetlands. "T" indicates trace. marks (Describe disturbances, relevant local variations, ice 100% of the dominant plants are hydrophytic, the wetlet to the control of the dominant plants are hydrophytic, the wetlet to the control of the dominant plants are hydrophytic, the wetlet to the control of the dominant plants are hydrophytic, the wetlet to the control of the dominant plants are hydrophytic, the wetlet to the control of the dominant plants are hydrophytic, the wetlet to the control of the dominant plants are hydrophytic, the wetlet to the control of the dominant plants are hydrophytic, the wetlet to the control of the dominant plants are hydrophytic, the wetlet to the control of the dominant plants are hydrophytic, the wetlet to the control of the dominant plants are hydrophytic, the wetlet to the control of the dominant plants are hydrophytic, the wetlet to the control of the dominant plants are hydrophytic, the wetlet to the control of the dominant plants are hydrophytic, the wetlet to the control of the dominant plants are hydrophytic, the wetlet to the control of the dominant plants are hydrophytic, the wetlet to the control of the	% Cov 5 90 5 60 AC	Herb Herb Shrub Tree 00 effects, etcation criter etland Hy	m Inc NL FA NL FA Cc.): drology Indicator Inu Sat Sat Wa	Indicator S: Indated urated in Urated in Urated in Urates	\$ (Des	cribe i	n Remarks):
Plant Species 1. Convolvulus arvensis 2. Equisetum teimateia 3. Ilex aquifolium 4. Alnus rubra recent of Dominant Species that are OBL, FACW, or Ficept FAC-). Include species noted (*) as showing prohological adaptations to wetlands. "T" indicates trace. marks (Describe disturbances, relevant local variations, nee 100% of the dominant plants are hydrophytic, the wetletted Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	% Cov 5 90 5 60 AC	Herb Herb Shrub Tree 00 effects, etcation criter etland Hy	m Inc NL FA NL FA Cc.): drology Indicator Inu Sat Sat Wa Drif	Indicator S: Indated urated in U	\$ (Des Jpper 12 Jpper 18	cribe i	n Remarks):

Field Observations:

Depth of Surface Water:
Depth to Free Water in Pit:
Depth to Saturated Soil:

Depth to Saturated Soil

						Data Plot	#:	R4b-A
						Wetland:		R4b
roject/Sit	eo Spattle Tr	acoma Airport - Master Pi	on Linday	Date:	44/4/00			
ĺ	le Seattle la	acoma Ambort - Master Fi	an Opdate	— Date.	11/1/00			
SOILS Soil Surv	ey Data:							
Map Unit	Name: Unm	паррес			Drainage Cla	ss:		
					Field Observa	ations Confirm	Mapr	ed Type?
Taxonomy	y (Subgroup):				Yes	No	NA	X
Profile De	scription:							
Depth (Inches)	Horizon Designation	Matrix Color (Munsell Moist)	Mottle Color (Munsell Mo		Mottle Abundance/C	ontrast	_	ire, Concretions espheres, etc.
0-9	А	10YR 3/1					Loam	
)-14	В	5GY 5/1	7.5YR 4/4		Common, Coarse	e. Prominent	sandy	sitt
14-18+	BII	5G 5/1	•		•		Sandy	Sitt
Hydric So	il Indicators:	:						
Hi	stosol			Listed	on Local Hydr	ic Soils List		
Hi	stic Epipedon			Listed	on State Hydri	ic Soils List		
	ılfidic Odor				on National Hy		t	
		Moisture Regime		X Aquic	Moisture Regir	ne		
	educing Condi		-		ic Streaking in	Sandy Soils		
	•	Chroma Colors	-	X Mottle	· 			
	_	ontent in Surface Layer	-	Other	(Explain in Rer	narks)		
		disturbances, local variation of the disturbances of the hydric soil.						

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): The presence of all three parameters indicate this area is a wetland.



Data Plot #: Wetland:

R4b:B

R4b Upland Plot

/Madified from							
(Modilied Iron	n: 1987 COE	Wetlan	ids De	iineat	ion Manua	II)	
Project/Site: Seattle Tacoma Airport - Master Pla	an Update	_ Da	te: <u>11</u>	/1/00			
Applicant/Owner: Port of Seattle		_ Co	unty:	King			
Investigator: William Kleindl, Pat Tougher		_ Sta	te: \	WA			
✓ 1987 Method					Community I	D: U	pland
Do Normal Circumstances exist on the site?	Yes _	X N	·		Field Plot ID:	R4b	:B
Is the site significantly disturbed (Atypical Situation	n)? Yes _	N	<u> </u>		****		
is the area a potential Problem Area?	Yes _	N	<u> </u>				
Remarks (Explain sample location, disturbances Upland Plot located on Parcel 180, adjacent to the	•		ole locat	tion is a	mowed lawn.		
VEGETATION (✓Dominant species are che		Cover S	itratum	Indic	ator		
✓ 1. Poa spp.	10		lerb	NL	101		
		0	— ha asa \				
Remarks (Describe disturbances, relevant local values of the dominant plants are hydrophytic could not be determined.	tes trace. variations, seasc	onal effec			t. Due to rec	ent mo	owing, grass space
Remarks (Describe disturbances, relevant local value of the dominant plants are hydrophytic could not be determined. HYDROLOGY	tes trace. variations, seasc	onal effec getation o	riteria is	s not me			
Remarks (Describe disturbances, relevant local value of the dominant plants are hydrophytic could not be determined. HYDROLOGY Recorded Data (Describe in Remarks):	tes trace. variations, seasc	onal effect getation of Wetlan	d Hydro	s not me			e in Remarks):
Remarks (Describe disturbances, relevant local value of the dominant plants are hydrophytic could not be determined. HYDROLOGY Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage	tes trace. variations, seasc	onal effect getation of Wetlan	d Hydro	ology in	odicators (D		
Remarks (Describe disturbances, relevant local of the dominant plants are hydrophytic could not be determined. HYDROLOGY Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	tes trace. variations, seasc	onal effect getation of Wetlan	d Hydro	ology in	dicators (D	escrib	e in Remarks);
Remarks (Describe disturbances, relevant local of since none of the dominant plants are hydrophytic could not be determined. HYDROLOGY Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	tes trace. variations, seasc	onal effect getation of Wetlan	d Hydro	ology in licators: Inund Satur	adicators (D ated ated in Upper	escrib	e in Remarks): ⊅es
Remarks (Describe disturbances, relevant local of the dominant plants are hydrophytic could not be determined. HYDROLOGY Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	tes trace. variations, seasc	onal effect getation of Wetlan	d Hydro	ology in licators: Inund Satur	dicators (D	escrib	e in Remarks): ⊅es
Remarks (Describe disturbances, relevant local of since none of the dominant plants are hydrophytic could not be determined. HYDROLOGY Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	tes trace. variations, seasc	onal effect getation of Wetlan	d Hydro	ology in licators: Inund Satur	ated in Upper ated in Upper Marks	escrib	e in Remarks): ⊅es
Remarks (Describe disturbances, relevant local of since none of the dominant plants are hydrophytic could not be determined. HYDROLOGY Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	tes trace. variations, seasc	onal effect getation of Wetlan	d Hydro	ology in licators: Inund Satur Satur Water	ated in Upper ated in Upper Marks	escrib 12 inc 18 inc	e in Remarks): ⊅es
temarks (Describe disturbances, relevant local value of the dominant plants are hydrophytic ould not be determined. IYDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available	tes trace. variations, seasc	onal effect getation of Wetlan	d Hydro	ology in licators: Inund Saturi Saturi Water Drift L Sedim	ated ated in Upper ated in Upper Marks	escrib 12 inc 18 inc	e in Remarks): thes
Remarks (Describe disturbances, relevant local of the dominant plants are hydrophytic ould not be determined. IYDROLOGY Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available Reld Observations: Depth of Surface Water: None (in.	tes trace. variations, seasc t, the wetland ve	Wetlan	d Hydro	ology in licators: Inund Satur- Satur- Water- Drift L Sedin	ated ated in Upper ated in Upper Marksines	escrib 12 inc 18 inc	e in Remarks): thes thes
Remarks (Describe disturbances, relevant local to be contact of the dominant plants are hydrophytic could not be determined. HYDROLOGY Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available Remarks: Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available	tes trace. variations, seasc t, the wetland ve	Wetlan	d Hydro	ology in licators: Inund Satur Satur Water Drains	ated ated in Upper ated in Upper Marks ines pent Deposits age Patterns incres (2 or more	escrib 12 inc 18 inc	e in Remarks): thes thes
Remarks (Describe disturbances, relevant local of since none of the dominant plants are hydrophytic could not be determined. HYDROLOGY Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available ield Observations: Depth of Surface Water: None (in.	tes trace. variations, seasc t, the wetland ve	Wetlan	d Hydro	ology in licators: Inund Satur Satur Water Draina Indicato	ated ated in Upper ated in Upper Marks ines pent Deposits age Patterns incres (2 or more	escrib 12 inc 18 inc in Wet requir	e in Remarks): thes thes lands
Remarks (Describe disturbances, relevant local of Since none of the dominant plants are hydrophytic could not be determined. HYDROLOGY Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available ield Observations: Depth of Surface Water: Depth to Free Water in Pit: None (in.	tes trace. variations, seasc t, the wetland ve	Wetlan	d Hydro	ology in licators: Inund Saturi Saturi Water Drift L Sedin Draina	ated in Upper ated in Upper Marks ines ment Deposits age Patterns items (2 or more ted Root Cha	12 inc 18 inc in Wet requires	e in Remarks): thes thes lands
Aerial Photograph Other No Recorded Data Available Field Observations: Depth of Surface Water: None (in. Depth to Free Water in Pit: >15 (in.	tes trace. variations, seasc t, the wetland ve	Wetlan	d Hydro	ology in licators: Inund Saturi Saturi Water Drift L Sedin Draina Indicato Oxidia Water Local	ated in Upper Marks ines Patterns in Opposits age Patterns income (2 or more ted Root Charstained Leavestained Leavestaine	escrib 12 ind 18 ind in Wet requirences in ves	e in Remarks): thes thes lands red): in Upper 12 inche
Remarks (Describe disturbances, relevant local of Since none of the dominant plants are hydrophytic could not be determined. HYDROLOGY Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available Field Observations: Depth of Surface Water: Depth to Free Water in Pit: None (in.	tes trace. variations, seasc the wetland ve	Wetlan Prin	d Hydronary Ind	ology Indicators: Inund Satur Satur Water Drift L Sedin Drain: Indicato Water Local Other	ated ated in Upper ated in Upper Marks	escrib 12 ind 18 ind in Wet requirences in ves	e in Remarks): thes thes lands red): in Upper 12 inche

$\overline{\Lambda}$							Data Pic	ot #:	R4b:B
•							Wetland	i:	R4b Upland Plo
roject/S	ite: Seattle Ta	acoma Airport - Maste	er Plan) Update	Date	: 11/1/00)		
SOILS Soil Sur	vey Data:				_			•	
Map Unit	t Name: Unm	apped				Drainage	e Class:		
						Field Ob	servations Confir	m Map	ped Type?
「axonom	ny (Subgroup):					Yes _	No	NA	<u>x</u>
Profile D	escription:								
Depth inches)	Honzon Designation	Matrix Color (Munsell Moist)		Mottle Color (Munsell Mois	st)	Mottie Abundar	nce/Contrast		ture, Concretions, cospheres, etc.
-5	Α	10YR 3/3		-		-		Sano	ly Loam
-18+	В	10YR 4/4	<u> </u>	-				Sano	ty Loam
•	oil Indicators:	:		_	Liste	ed on Local	Hydric Soils List		
	fistic Epipedon			_	Liste	d on State	Hydric Soils List		
	Sulfidic Odor						nal Hydric Soils L	ist	
		Moisture Regime		_		c Moisture	-		
	Reducing Cond	Chroma Colors		-	Orga Mott		ng in Sandy Soils	i	
	•	ontent in Surface Lay	er	-			n Remarks)		
		disturbances, local v	anatio	ons, etc.):			,		
WETLA	ND DETER	MINATION							
lydrophy	tic Vegetation	n Present?	Yes	No	X		Is this Sampling	Point	Within a Wetland
lydric Sc	oils Present?		Yes	No	<u>x</u>		Van		- V
	Hydrology Pre						Yes	N	o X

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): This area is an upland since all wetland parameters are absent.

P	ar	a	m	e	tri	X	, I	n	C.	•
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Data Plot #:	R5-A
Wetland:	D5

- 115	TLAND	DETE	RMINAT	TON Wetland: R5
(Modified from: 1	987 CC	E Weti	ands De	elineation Manual)
oject/Site: Seattle Tacoma Airport - Master Plan U			_)/23/98
pplicant/Owner: Port of Seattle				King
vestigator: William Kleindi			. •	WA
1987 Method 1989 Method			-	
o Normal Circumstances exist on the site?	Yes	x	No	Community ID: PEM
the site significantly disturbed (Atypical Situation)?		^		Field Plot ID: 70-A
the area a potential Problem Area?	Yes		No X	
·	Yes		No <u>X</u>	<u></u>
marks (Explain sample location, disturbances, proleamside riparian wetland between house and stream			tland in an	
The state of the s		or the we	ilario is co	imposed of mowed grass.
GETATION Propries are checked)			
Plant Species	,	% Cover	Stratum	Indicator
1 Athyrium filix-femina		20	Herb	FAC
2 ins pseudacorus		5	Herb	OBL
3 Ranunculus repens		80	Herb	FACW
4 Urtica dioica		20	Herb	FAC+
c Comus statements				
5 Comus stolonifera		10	Shrub	FACW
recent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing rephological adaptations to wetlands. "T" indicates tra	ace.	100	Shrub	UPL
recent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing rephological adaptations to wetlands. "T" indicates trainmarks (Describe disturbances, relevant local variations."	ace. ions, sea	100	Shrub	UPL
Prunus laurocerasus cent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing phological adaptations to wetlands. To indicates trainarks (Describe disturbances, relevant local variations are greater than 50% of the dominant plants are hydrogeneous control of the dominant plants.	ace. ions, sea	100	Shrub	UPL
Prunus laurocerasus cent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T" indicates trainarks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydroprocess."	ace. ions, sea	100 isonal effethe wetlan	Shrub ects, etc.):	UPL ion criteria is met.
Prunus laurocerasus cent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T" indicates trainarks (Describe disturbances, relevant local variative greater than 50% of the dominant plants are hydroprocess."	ace. ions, sea	100 isonal effi the wetlar	Shrub ects, etc.):	UPL ion criteria is met. plogy Indicators (Describe in Remarks):
Prunus laurocerasus cent of Dominant Species that are OBL, FACW, ept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T" indicates trainarks (Describe disturbances, relevant local variative greater than 50% of the dominant plants are hydroproded Data (Describe in Remarks):	ace. ions, sea	100 isonal effi the wetlar	Shrub ects, etc.): and vegetate	UPL ion criteria is met. plogy Indicators (Describe in Remarks):
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Prunus laurocerasus cent of Dominant Species that are OBL, FACW, lept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T" indicates transarks (Describe disturbances, relevant local variative greater than 50% of the dominant plants are hydroproded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	ace. ions, sea	100 isonal effi the wetlar	shrub ects, etc.); nd vegetati and Hydronimary Ind	UPL ion criteria is met. plogy Indicators (Describe in Remarks): icators: Inundated
prinus laurocerasus cent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T" indicates trainarks (Describe disturbances, relevant local variative greater than 50% of the dominant plants are hydrophology orded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	ace. ions, sea	100 isonal effi the wetlar	shrub ects, etc.); nd vegetati and Hydronimary Ind	ion criteria is met. plogy Indicators (Describe in Remarks): icators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks
Prunus laurocerasus cent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T" indicates trainarks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydromorphic plants." DROLOGY orded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	ace. ions, sea	100 isonal effi the wetlar	shrub ects, etc.); nd vegetati and Hydronimary Ind	ion criteria is met. Plogy Indicators (Describe in Remarks): icators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
Prunus laurocerasus cent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T" indicates trainarks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydromorphic plants." DROLOGY orded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	ace. ions, sea	100 isonal effi the wetlar	shrub ects, etc.); nd vegetati and Hydronimary Ind	ion criteria is met. Diogy Indicators (Describe in Remarks): icators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
recent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing rephological adaptations to wetlands. "T' indicates training the disturbances, relevant local variations are greater than 50% of the dominant plants are hydrocorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	ace. ions, sea	100 isonal effi the wetlar	shrub ects, etc.); nd vegetati and Hydronimary Ind	ion criteria is met. Plogy Indicators (Describe in Remarks): icators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
cent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T' indicates trainarks (Describe disturbances, relevant local variations are greater than 50% of the dominant plants are hydromore degree than 50% of the dominant plants are hydromore degree than 50% of the dominant plants are hydromore degree than 50% of the dominant plants are hydromore degree than 50% of the dominant plants are hydromore degree than 50% of the dominant plants are hydromore degree than 50% of the dominant plants are hydromore degree than 50% of the dominant plants are hydromore degree than 50% of the dominant plants are hydromore degree than 50% of the dominant plants are hydromore degree than 50% of the dominant plants are hydromore degree than 50% of the dominant plants are hydromore degree than 50% of the dominant plants are hydromore degree than 50% of the dominant plants are hydromore degree than 50% of the dominant plants are hydromore degree	ace. ions, sea	100 ssonal eff the wetlar Wetta P	shrub ects, etc.); and vegetation and Hydronimary ind	ion criteria is met. plogy Indicators (Describe in Remarks): icators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
cent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T" indicates trainarks (Describe disturbances, relevant local variations of the dominant plants are hydrody orded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available ### Observations: Prunus laurocerasus Pack Pack Pack Pack Pack	ace. ions, sea	100 ssonal eff the wetlar Wetta P	shrub ects, etc.); and vegetation and Hydronimary ind	Diogy Indicators (Describe in Remarks): icators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required):
cent of Dominant Species that are OBL, FACW, Dept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T" indicates trainarks (Describe disturbances, relevant local variations of the dominant plants are hydromore greater than 50% of the dominant plants are hydromore degree than 50% of the dominant plants are hydromore degree than 50% of the dominant plants are hydromore degree than 50% of the dominant plants are hydromore degree than 50% of the dominant plants are hydromore degree than 50% of the dominant plants are hydromore degree than 50% of the dominant plants are hydromore degree than 50% of the dominant plants are hydromore degree than 50% of the dominant plants are hydromore degree than 50% of the dominant plants are hydromore degree than 50% of the dominant plants are hydromore degree than 50% of the dominant plants are hydromore degree than 50% of the dominant plants are hydromore degree than 50% of the dominant plants are hydromore degree degree than 50% of the dominant plants are hydromore degree d	ace. ions, sea	100 ssonal eff the wetlar Wetta P	shrub ects, etc.); and vegetation and Hydronimary ind	ion criteria is met. Diogy Indicators (Describe in Remarks): icators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches
recent of Dominant Species that are OBL. FACW. Cept FAC-). Include species noted (*) as showing rephological adaptations to wetlands. "T indicates trainarks (Describe disturbances, relevant local variations of the dominant plants are hydrotograph are than 50% of the dominant plants are hydrotograph. Stream, Lake, or Tide Gage	ace. ions, sea	100 ssonal eff the wetlar Wetta P	shrub ects, etc.); and vegetation and Hydronimary ind	Diogy Indicators (Describe in Remarks): ilicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches Water-Stained Leaves
6. Prunus laurocerasus recent of Dominant Species that are OBL. FACW. Coept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. To indicates training in the second of the dominant plants are hydrocegreater than 50% of the dominant	ace. ions, sea	100 ssonal eff the wetlar Wetta P	shrub ects, etc.); and vegetation and Hydronimary ind	ion criteria is met. Diogy Indicators (Describe in Remarks): icators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches

					Data	Plot #:	R5-A
					Weti	and:	R5
roject/Site	: Seattle Ta	acoma Airport - Master	Plan Update	Date:	10/23/98		
OILS oil Surve	y Data:						
Map Unit N	lame: <u>Unm</u>	napped			Drainage Class:		
					Field Observations Co	nfirm Map	ped Type?
axonomy	(Subgroup):				Yes No	NA	<u>x</u>
rofile Des	scription:						
Pepth Inches)	Horizon Designation	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)		Mottle Abundance/Contrast		ure, Concretions ospheres, etc.
-18	0	10YR 2/1	-		-	Muck	
8+	С	10YR 3/2	<u>-</u>		•	Sand	
ydric Soil	I Indicators:	:		Listed	f on Local Hydric Soils L	ist	
His Sul	tic Epipedon fidic Odor			Listed	on State Hydric Soils L I on National Hydric Soil Moisture Regime		
His Sul Pro	tic Epipedon fidic Odor	Moisture Regime		Listed		s List	
His Sul Pro Rec	itic Epipedon fidic Odor bable Aquic ducing Cond	Moisture Regime		Listed	l on National Hydric Soil Moisture Regime nic Streaking in Sandy S	s List	
His Sul Pro Rec Gle	tic Epipedon fidic Odor bable Aquic ducing Cond byed or Low-	Moisture Regime		Listed Aquic Organ Mottle	l on National Hydric Soil Moisture Regime nic Streaking in Sandy S	s List	
His Sul Pro Rec Gle X Higi	tic Epipedon fidic Odor bable Aquic ducing Cond eyed or Low- th Organic Co Describe soi	Moisture Regime itions Chroma Colors	riations, etc.):	Listed Aquic Organ Mottle	l on National Hydric Soil Moisture Regime nic Streaking in Sandy S es	s List	
His Sul Pro Rec Gle X High Remarks (I	tic Epipedon fidic Odor ribable Aquic ducing Cond riyed or Low-(th Organic Co Describe soi and other hydi	Moisture Regime itions Chroma Colors ontent in Surface Layer	riations, etc.):	Listed Aquic Organ Mottle	l on National Hydric Soil Moisture Regime nic Streaking in Sandy S es	s List	
His Sul Pro Rec Gle X High Remarks (I Soil color ar	tic Epipedon ifidic Odor ibable Aquic ducing Cond iyed or Low- th Organic Co Describe soi and other hydi	Moisture Regime itions Chroma Colors ontent in Surface Layer I disturbances, local varic soil indicators meet	riations, etc.): The hydric soil criteria	Listed Aquic Organ Mottle	I on National Hydric Soil Moisture Regime nic Streaking in Sandy S es (Explain in Remarks)	s List oils	Within a West
His Sul Pro Rec Gle X High Remarks (I Coil color ar VETLAN ydrophytid	tic Epipedon fidic Odor ribable Aquic ducing Cond riyed or Low-(th Organic Co Describe soi and other hydi	Moisture Regime itions Chroma Colors ontent in Surface Layer it disturbances, local value it soil indicators meet it its soil indicators meet its	riations, etc.):	Listed Aquic Organ Mottle	I on National Hydric Soil Moisture Regime nic Streaking in Sandy S es (Explain in Remarks)	s List oils	Within a Wetla

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): The presence of all three parameters indicate this area is a wetland.

P	ar	am	etrix,	nc.



Data Plot #:	R5b-A
Wetland:	DEL

				ata Piot #:	R5b-A
WETL	AND DETE	RMINATI	ION W	etland:	R5b
(Modified from: 1987				anual)	
rolect/Site: Seattle Tacoma Airport - Master Plan Upda		_			
		_	2/00		
pplicant/Owner: Port of Seattle	·		Kıng		
vestigator. W. Kleindl and J. Hawkins		State: V	VA		
1987 Method			Commu	inity ID: PE	M
o Normal Circumstances exist on the site?	Yes X	No	- Field Pl	ot ID: R5b-	Α
tne site significantly disturbed (Atypical Situation)?	Yes	No X	_		
the area a potential Problem Area?	Yes	No X			
marks (Explain sample location, disturbances, problem	m areas):		-		
GETATION (Dominant species are checked) Plant Species	*/ Cours	S44			
•	% Cover	Stratum	Indicator		
1 Equisetum telmateia 2 Ins pseudacorus		Herb	FACW		
3 Phalans arundinacea	t 90	Herb	FACW		
4 Comus sencea	1	Shrub	FACW		*
5 Rubus discolor	10	Shrub	FACU		
cept FAC-). Include species noted (*) as showing rphological adaptations to wetlands. "T" indicates trace.	100	Тгөе	FAC		
rcent of Dominant Species that are OBL, FACW, or lacept FAC-). Include species noted (*) as showing uphological adaptations to wetlands. "T" indicates trace. marks (Describe disturbances, relevant local variations	FAC 100	Tree	FAC	ıt.	
recent of Dominant Species that are OBL, FACW, or levent FAC-). Include species noted (*) as showing imphological adaptations to wetlands. "T" indicates trace, marks (Describe disturbances, relevant local variations are greater than 50% of the dominant plants are hydrophyd (DROLOGY).	FAC 100	Tree	FAC	t.	
cent of Dominant Species that are OBL, FACW, or cept FAC-). Include species noted (*) as showing rphological adaptations to wetlands. "T" indicates trace, marks (Describe disturbances, relevant local variations or greater than 50% of the dominant plants are hydroph, DROLOGY	FAC 100 s, seasonal effectivitic, the wetland	Tree ects, etc.):	FAC on criteria is me		in Remarks):
cent of Dominant Species that are OBL, FACW, or cept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T" indicates trace, marks (Describe disturbances, relevant local variations or greater than 50% of the dominant plants are hydroph, DROLOGY	FAC 100 s. seasonal effectivitic, the wetland	Tree ects, etc.):	FAC on criteria is me		in Remarks):
cent of Dominant Species that are OBL, FACW, or sept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T" indicates trace, narks (Describe disturbances, relevant local variations be greater than 50% of the dominant plants are hydrophydroded Data (Describe in Remarks):	FAC 100 s. seasonal effectivitic, the wetland	Tree ects, etc.): nd vegetation	FAC on criteria is me		in Remarks):
cent of Dominant Species that are OBL, FACW, or cept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T" indicates trace, narks (Describe disturbances, relevant local variations be greater than 50% of the dominant plants are hydrophy DROLOGY orded Data (Describe in Remarks): Stream, Lake, or Tide Gage	FAC 100 s. seasonal effectivitic, the wetland	Tree ects, etc.): nd vegetation	on criteria is me logy Indicators cators:	(Describe	
cent of Dominant Species that are OBL, FACW, or lept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T" indicates trace, marks (Describe disturbances, relevant local variations are greater than 50% of the dominant plants are hydrophy DROLOGY orded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	FAC 100 s. seasonal effectivitic, the wetland	ects, etc.): and vegetation with the section of the	on criteria is me logy Indicators cators:	(Describe	es
cent of Dominant Species that are OBL, FACW, or cept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T" indicates trace, marks (Describe disturbances, relevant local variations or greater than 50% of the dominant plants are hydrophystored Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	FAC 100 s. seasonal effectivitic, the wetland	ects, etc.): and vegetation with the section of the	on criteria is me logy Indicators cators: Inundated Saturated in U Saturated in U Water Marks	(Describe	es
recent of Dominant Species that are OBL, FACW, or cept FAC-). Include species noted (*) as showing rephological adaptations to wetlands. "T" indicates trace, marks (Describe disturbances, relevant local variations ce greater than 50% of the dominant plants are hydrophystored Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	FAC 100 s. seasonal effectivitic, the wetland	ects, etc.): and vegetation with the section of the	on criteria is me logy Indicators cators: Inundated Saturated in U Saturated in U Water Marks Drift Lines	(Describe opper 12 inche opper 18 inche	es
rcent of Dominant Species that are OBL, FACW, or least FAC-). Include species noted (*) as showing imphological adaptations to wetlands. "T" indicates trace, marks (Describe disturbances, relevant local variations are greater than 50% of the dominant plants are hydrophystorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	FAC 100 s. seasonal effectivitic, the wetland	ects, etc.): and vegetation with the section of the	on criteria is me logy Indicators cators: Inundated Saturated in U Saturated in U Water Marks Drift Lines Sediment Dep	(Describe opper 12 inches opper 18 inches	es es
recent of Dominant Species that are OBL, FACW, or least FAC-). Include species noted (*) as showing rephological adaptations to wetlands. "T" indicates trace, marks (Describe disturbances, relevant local variations are greater than 50% of the dominant plants are hydroph, "DROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	FAC 100 s. seasonal effectivitic, the wetland	ects, etc.): and vegetation with the section of the	on criteria is me logy Indicators cators: Inundated Saturated in U Saturated in U Water Marks Drift Lines	(Describe opper 12 inches opper 18 inches	es es
recent of Dominant Species that are OBL, FACW, or cept FAC-). Include species noted (*) as showing rephological adaptations to wetlands. "T indicates trace, marks (Describe disturbances, relevant local variations are greater than 50% of the dominant plants are hydroph, corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available d Observations: Depth of Surface Water: None (in.)	FAC 100 s. seasonal effection, the wetlar Wetlin	ects, etc.): and vegetation and Hydrological and Tydrological and Tydrolog	on criteria is me logy Indicators cators: Inundated Saturated in U Saturated in U Water Marks Drift Lines Sediment Dep Drainage Patte	Describe Ipper 12 inche Ipper 18 inche Ipper 18 inche	es es nds
recent of Dominant Species that are OBL, FACW, or cept FAC-). Include species noted (*) as showing rephological adaptations to wetlands. "T indicates trace. marks (Describe disturbances, relevant local variations are greater than 50% of the dominant plants are hydrophy corded Data. (Describe in Remarks): Stream, Lake, or Tide Gage. Aerial Photograph. Other. X. No Recorded Data Available. d Observations: Depth of Surface Water: None (in.) Depth to Free Water in Pit: 17 (in.)	FAC 100 s. seasonal effection, the wetlar Wetlin	ects, etc.): and vegetation and Hydroi mary India	on criteria is me logy Indicators cators: Inundated Saturated in U Saturated in U Water Marks Drift Lines Sediment Dep Drainage Patte	(Describe apper 12 inche apper 18 inche osits arns in Wetlar	es es nds
recent of Dominant Species that are OBL, FACW, or cept FAC-). Include species noted (*) as showing rephological adaptations to wetlands. "T indicates trace. marks (Describe disturbances, relevant local variations are greater than 50% of the dominant plants are hydrophy corded Data. (Describe in Remarks): Stream, Lake, or Tide Gage. Aerial Photograph. Other. X. No Recorded Data Available. d Observations: Depth of Surface Water: None (in.) Depth to Free Water in Pit: 17 (in.)	FAC 100 s. seasonal effection, the wetlar Wetlin	ects, etc.): and vegetation and Hydrological and Tydrological and Tydrolog	on criteria is me logy Indicators cators: Inundated Saturated in U Saturated in U Water Marks Drift Lines Sediment Dep Drainage Patte	(Describe Ipper 12 inche Ipper 18 inche Osits Erns in Wetlar Thore required Channels in	es es nds
recent of Dominant Species that are OBL, FACW, or coept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace. Imarks (Describe disturbances, relevant local variations are greater than 50% of the dominant plants are hydrophysical disturbances. The companies of the dominant plants are hydrophysical disturbances. The companies of the dominant plants are hydrophysical disturbances. The companies of the dominant plants are hydrophysical disturbances. The companies of	FAC 100 s. seasonal effection, the wetlar Wetlin	ects, etc.): and vegetation and Hydroi mary India	on criteria is me logy Indicators cators: Inundated Saturated in U Saturated in U Water Marks Drift Lines Sediment Dep Drainage Patte indicators (2 or in Oxidized Root Water-Stained	Operation (Describe Ipper 12 inche Ipper 18 inche Ipper 18 inche Ipper 18 inche Ipper Ipper 18 inche Ipper I	es es nds
ercent of Dominant Species that are OBL, FACW, or Except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace. In the series of the dominant plants are hydrophy or the dominant plants are hydrophy	FAC 100 s. seasonal effection, the wetlar Wetlin	ects, etc.): and vegetation and Hydroi mary India	on criteria is me logy Indicators cators: Inundated Saturated in U Saturated in U Water Marks Drift Lines Sediment Dep Drainage Patte indicators (2 or in Oxidized Root Water-Stained Local Soil Sun	Oper 12 inches per 18 inches p	es es nds
recent of Dominant Species that are OBL, FACW, or lead to the Coept FAC-). Include species noted (*) as showing imphological adaptations to wetlands. "T" indicates trace, marks (Describe disturbances, relevant local variations are greater than 50% of the dominant plants are hydrophystorical disturbances. The coept of the dominant plants are hydrophystorical disturbances. Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available d Observations: Depth of Surface Water: Depth to Free Water in Pit: Depth to Saturated Soil: Other (in.)	FAC 100 s. seasonal effection, the wetlar Wetti	ects, etc.): and vegetation and Hydrological and Hydrolog	on criteria is me logy Indicators cators: Inundated Saturated in U Water Marks Drift Lines Sediment Dep Drainage Patte Indicators (2 or or Oxidized Root Water-Stained Local Soil Sun Other (Explain	pper 12 incher pper 18 incher pper 1	es es nds
ercent of Dominant Species that are OBL, FACW, or except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace. Finance greater than 50% of the dominant plants are hydrophy POROLOGY Corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Id Observations: Depth of Surface Water: Depth to Free Water in Pit: Depth to Free Water in Pit: Depth to Free Water of Pit.	s. seasonal effection, the wetland Wetland Program Medical Pro	ects, etc.): and vegetation and Hydrol rimary India X econdary in	on criteria is me logy Indicators cators: Inundated Saturated in U Water Marks Drift Lines Sediment Dep Drainage Patte Indicators (2 or in Oxidized Root Water-Stained Local Soil Sun Other (Explain	ipper 12 inches ipper 18 inches ipper 12 inches ipper 13 inches ipper 18 inche	es es nds I): Upper 12 inches

4								Data Plot	# :	R5b-A
L								Wetland:		R5b

Project	Site: Seattle Ti	acoma Airport - Mas	ter Pla	n Updai	e	Date:	11/2/00			
SOIL! Soil Si	S irvey Data:									
Map Ui	nit Name: Not	mapped					Drainage Class			
	·						Field Observation	ons Confirm	Мар	ped Type?
Taxono	my (Subgroup):						Yes No	<u> </u>	NA	
Profile	Description:									
Depth (Inches	Horizon) Designation	Matrix Color (Munsell Moist)		Mottle (Muns	Color ell Moist)	Mottle Abundance/Con	trast		ure. Concretions, ospheres, etc.
3-0	A	10YR 2/2					-		Loam	. Oxidized rhizosphere
3-12	В	10YR 4/1					-		Sand	y toa m
12-18+	С	5N 2/1		10YR 4	4		Common, Medium.	Prominent	Cobbi	ly gravely sand
Hydric	Soil Indicators:	:								
	Histosol					Listed	on Local Hydric	Soils List		
	Histic Epipedon	ı			_	Listed	on State Hydric	Soils List		
	Sulfidic Odor						on National Hydi		l	
		Moisture Regime					Moisture Regime			
	Reducing Cond Gleyed or Low-						ic Streaking in Sa	andy Soils		
<u> </u>	·	ontent in Surface La	ver.			X Mottle				
			,		_	— Oulei	(Explain in Rema	irks)		
		l disturbances, local ric soil indicators me				-in				
	- dila dirici riya	TO GOT THOSE GOTS THE	et the	nyunc s	or ciner	1a.				
WETL	AND DETER	MINATION								
lydropi	rytic Vegetation	n Present?	Yes	X	No		Is this	Sampling P	Point	Within a Wetland
tydric S	ioils Present?		Yes	X	No		,	/ V	.	
	Hydrology Pre	sent?	Yes		No		,	res X	- No	

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): All three wetland parameters are met.



Data Plot #:

R5b-B

	(Modified from: 19		ノニ・リニス	MINA	TION			Upland
	1	87 COE	Wetla	nds D	elineati	ion Manua	1)	
roject/Site: Seattle Tacoma					11/2/00		•	
pplicant/Owner: Port of Se			-	ounty:	King			
vestigator. W. Kleindi and	·····			tate:	WA			
	Method	···	-			Community II	<u> </u>	-1
o Normal Circumstances exis		Yes	x i	No		Community II		pland
the site significantly disturbe		Yes		_		Field Plot ID:	R5b	-B
•		_	_	_	<u>X</u>			
the area a potential Problem marks (Explain sample loc		Yes _		No _	<u>x</u>			
e is immediately west and up EGETATION +✓Domina		112.						
Plant Species	,	%	Cover	Stratum	Indica	etor		
1 Mowed lawn grass		10	0	Herb	NL			
Thuja plicata recent of Dominant Species coept FAC-). Include species rephological adaptations to we marks (Describe disturbance e site was covered by moved	noted (*) as showing etlands. "T" indicates tra- ces, relevant local variation d lawn grass and plant sp	ce. Ons, seaso				nce less than	50% o	f the dominant p
Thuja plicata recent of Dominant Species coept FAC-). Include species rephological adaptations to we marks (Describe disturbance e site was covered by moved	noted (*) as showing etlands. "T" indicates tra- ces, relevant local variation d lawn grass and plant sp	or FAC ce.	onal effe	cts, etc.	.):	nce less than	50% o	f the dominant p
Thuja plicata recent of Dominant Species cept FAC-). Include species rphological adaptations to we marks (Describe disturbance e site was covered by mowed drophytic, the wetland vegeta	noted (*) as showing etlands. "T" indicates tra- ces, relevant local variation d lawn grass and plant sp	or FAC ce.	onal effe	cts, etc.	.):	nce less than	50% o	f the dominant p
Thuja plicata recent of Dominant Species coept FAC-). Include species rphological adaptations to we marks (Describe disturbance esite was covered by mowed drophytic, the wetland vegeta /DROLOGY	noted (*) as showing etlands. "T" indicates traces, relevant local variation diawn grass and plant spation criteria is not met.	or FAC ce.	onal effe	cts, etc.	.): nined. Sir			
Thuja plicata recent of Dominant Species cept FAC-). Include species rphological adaptations to we marks (Describe disturbance esite was covered by moved drophytic, the wetland vegeta 'DROLOGY	noted (*) as showing etlands. "T" indicates tra- ces, relevant local variation of lawn grass and plant specified in criteria is not met. Remarks):	or FAC ce.	onal effe	cts, etc.	.): nined. Sir			f the dominant p
Thuja plicata recent of Dominant Species cept FAC-). Include species rphological adaptations to we marks (Describe disturbanc e site was covered by mowed irrophytic, the wetland vegeta DROLOGY corded Data (Describe in F	noted (*) as showing etlands. "T" indicates traces, relevant local variation diawn grass and plant spation criteria is not met. Remarks): Tide Gage	or FAC ce.	onal effe	cts, etc.	.): nined. Sir	dicators (D		
Thuja plicata recent of Dominant Species cept FAC-). Include species irphological adaptations to we marks (Describe disturbance e site was covered by mowed drophytic, the wetland vegeta 'DROLOGY corded Data (Describe in F	noted (*) as showing etlands. "T" indicates traces, relevant local variation diawn grass and plant spation criteria is not met. Remarks): Tide Gage	or FAC ce.	onal effe	cts, etc.	rology in	dicators (D	escribe	e in Remarks):
Thuja plicata recent of Dominant Species recept FAC-). Include species rephological adaptations to we marks (Describe disturbance site was covered by mowed drophytic, the wetland vegeta 'DROLOGY corded Data (Describe in F Stream, Lake, or Aerial Photograp	noted (*) as showing etlands. *T* indicates traces, relevant local variation of lawn grass and plant spation criteria is not met. Remarks): Tide Gage	or FAC ce.	onal effe	cts, etc.	rology in ndicators: Inund: Satura	dicators (D ated ated in Upper ated in Upper	escribe	e in Remarks):
Thuja plicata recent of Dominant Species coept FAC-). Include species rephological adaptations to we marks (Describe disturbance esite was covered by mowed drophytic, the wetland vegeta /DROLOGY corded Data (Describe in F Stream, Lake, or Aerial Photograp Other	noted (*) as showing etlands. *T* indicates traces, relevant local variation of lawn grass and plant spation criteria is not met. Remarks): Tide Gage	or FAC ce.	onal effe	cts, etc.	rology in ndicators: Inund: Satura Satura Water	dicators (D ated ated in Upper ated in Upper Marks	escribe	e in Remarks):
Thuja plicata recent of Dominant Species (cept FAC-). Include species orphological adaptations to we marks (Describe disturbance e site was covered by moved drophytic, the wetland vegeta /DROLOGY corded Data (Describe in F Stream, Lake, or Aerial Photograpi Other	noted (*) as showing etlands. *T* indicates traces, relevant local variation of lawn grass and plant spation criteria is not met. Remarks): Tide Gage	or FAC ce.	onal effe	cts, etc.	rology in ndicators: Inund: Satura Satura Water Drift L	dicators (D ated ated in Upper ated in Upper Marks ines	escribe	e in Remarks):
Thuja plicata recent of Dominant Species coept FAC-). Include species rephological adaptations to we marks (Describe disturbance esite was covered by mowed drophytic, the wetland vegeta 'DROLOGY corded Data (Describe in F Stream, Lake, or Aerial Photograp Other	noted (*) as showing etlands. *T* indicates traces, relevant local variation of lawn grass and plant spation criteria is not met. Remarks): Tide Gage	or FAC ce.	onal effe	cts, etc.	rology in adicators: Inund: Satura Satura Water Drift L Sedim	dicators (D ated ated in Upper ated in Upper Marks ines eent Deposits	escribe 12 inc 18 inc	e in Remarks): hes hes
recent of Dominant Species (cept FAC-). Include species prohological adaptations to we marks (Describe disturbance site was covered by mowed drophytic, the wetland vegeta (DROLOGY corded Data (Describe in Faciliary Photography Other X No Recorded Data	noted (*) as showing etlands. *T* indicates traces, relevant local variation of lawn grass and plant spation criteria is not met. Remarks): Tide Gage	or FAC ce.	onal effe	cts, etc.	rology in adicators: Inund: Satura Satura Water Drift L Sedim	dicators (D ated ated in Upper ated in Upper Marks ines	escribe 12 inc 18 inc	e in Remarks): hes hes
Thuja plicata recent of Dominant Species cept FAC-). Include species rphological adaptations to we marks (Describe disturbance site was covered by mowed inciphytic, the wetland vegeta (DROLOGY corded Data (Describe in Facilia Photographytic No Recorded Data (Describe in Facilia Photographytic No	noted (*) as showing etlands. "T" indicates tractes, relevant local variation di lawn grass and plant spation criteria is not met. Remarks): Tide Gage h ta Available None (in.)	or FAC ce.	Wetia	nd Hyd	rology In Indicators: Inund: Satura Satura Water Drift L Sedim	dicators (Di ated ated in Upper ated in Upper Marks ines ines peposits age Patterns in	escribe 12 inci 18 inci	e in Remarks): hes hes
Thuja plicata recent of Dominant Species (cept FAC-). Include species (rphological adaptations to we marks (Describe disturbance site was covered by mowed (rophytic, the wetland vegetal Photographytic, the wetland vegetal Photographytic, the wetland vegetal Photographytic (Describe in Facilia Photographytic). No Recorded Data (Describe in Facilia Photographytic). No Recorded Data (Describe in Facilia Photographytic). No Recorded Data (Describe in Facilia Photographytic). Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as showing etlands. *T* indicates tractes, relevant local variation di lawn grass and plant spation criteria is not met. Remarks): Tide Gage h None None	or FAC ce.	Wetia	nd Hyd	irology in indicators: Inund: Satura Satura Water Drift L Draina	dicators (Di ated in Upper ated in Upper Marks ines eent Deposits age Patterns in	12 inci 18 inci n Wetti	e in Remarks): thes thes ands
recent of Dominant Species (cept FAC-). Include species prohological adaptations to we marks (Describe disturbance site was covered by mowed drophytic, the wetland vegetal (DROLOGY) COROLOGY COR	noted (*) as showing etlands. "T" indicates tractes, relevant local variation di lawn grass and plant spation criteria is not met. Remarks): Tide Gage h ta Available None (in.)	or FAC ce.	Wetia	nd Hyd	irology in ndicators: Inund: Satura Satura Water Drift L Sedim Draina V Indicato	dicators (Dated in Upper Marks ines pent Deposits age Patterns in the Control of	12 inci 18 inci n Wetti require	e in Remarks): hes hes
Thuja plicata arcent of Dominant Species (cept FAC-). Include species orphological adaptations to we marks (Describe disturbance e site was covered by moved drophytic, the wetland vegeta **TOROLOGY** corded Data (Describe in F Stream, Lake, or Aerial Photograpi Other	noted (*) as showing etlands. *T* indicates traces, relevant local variation diawn grass and plant spation criteria is not met. Remarks): Tide Gage h None (in.) >18 (in.)	or FAC ce.	Wetia	nd Hyd	irology in ndicators: Inund: Satura Satura Water Drift L Sedim Draina y Indicato	dicators (Di ated in Upper ated in Upper Marks ines eent Deposits age Patterns in	12 inci 18 inci n Wett: require	e in Remarks): thes thes ands

$\overline{\Lambda}$,					Data Plot #:	R5b-B
L								Wetland:	Upland
Project/Si	te: Seattle Ta	acoma Airport - Mast	er Plai	n Update		Date:	11/2/00		
SOILS Soil Surv	vey Data:								
Map Unit	Name: Not i	mapped					Drainage Class		
							Field Observation	ons Confirm M	Mapped Type?
Taxonom	y (Subgroup):						Yes N	o <u>x</u> N	IA
Profile De	escription:					_			
Depth (inches)	Horizon Designation	Matrix Color (Munsell Moist)		Mottle C (Munsel			Mottie Abundance/Cor		exture, Concretions hizospheres, etc.
0-8	Α	10YR 3/2						L	oam
8-18+	В	10YR 3/2					•	G	iravely loam
Hvdric Sc	oil Indicators:	:							
•	listosol					Listed	on Local Hydric	Soils List	
——	listic Epipedon					Listed	on State Hydric	Soils List	
s	ulfidic Odor					 Listed	on National Hyd	lric Soils List	
P	robable Aquic	Moisture Regime				Aquic	Moisture Regime	•	
R	educing Cond	itions				Organ	ic Streaking in S	andy Soils	
G	leyed or Low-	Chroma Colors				Mottle	s		
	igh Organic Co	ontent in Surface Lay	yer			Other	(Explain in Rema	arks)	
	(Describe soi	I disturbances, local of met.	vanatı	ons, etc.)) :				
WETLA	ND DETER	MINATION							-
	rtic Vegetatio		Yes		No :	x	le this	Sampling Po	oint Within a Wetla
						-		piiiig i t	
	ils Present?		Yes		No 2	K .			

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): All three wetland parameters are absent, therefore the area is not a wetland.

Parametrix, In	IC.
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R6-A

	a Airport - Master Plan Up	date	Date: 10/	15/98
Applicant/Owner: Port of	Seattle		County: K	(ing
nvestigator: Kleindl and Gr	rialou			VA
1987 Method 1989	9 Method		-	Community ID: REC
o Normal Circumstances ex	ist on the site?	Yes X	No	Community ID: PFO
the site significantly disturb				- Field Plot ID: 62-A
-		Yes	No X	_
the area a potential Probler		Yes	No X	_
emarks (Explain sample lo				
ot located on Parcel 215. To	ne npanan wetiand is adja	ecent to Miller Ci	reek.	
GETATION (Domin	nant species are checked)		*	
Plant Species	ion species are checked)	% Cover	Stratum	Indiana
				Indicator
1 Agrostis sp. 2 Epilobium ciliatum		======================================	Herb Herb	NL FACINI
3 Equisetum telmateia		30	Herb Herb	FACW-FACW
4 Hedera helix		40	Herb	NL NL
5. Ranunculus repens		40	Herb	FACW
6 Solanum dulcamara		25	Herb	FAC+
7 Cornus stolonitera		25	Shrub	FACW
8 Rubus discolor		25	Shrub	FACU
a Dubus sanatabilia		40	Shrub	·
9 Rubus spectabilis			STITUD	FAC+
Alnus rubra cent of Dominant Specie cept FAC-). Include species	s noted (*) as showing	or FAC	Tree	FAC FAC
and the second s	s noted (*) as showing retlands. "T" indicates tra- ices, relevant local variation	or FAC 88 ce.	Tree	FAC
Alnus rubra recent of Dominant Species cept FAC-). Include species rphological adaptations to w marks (Describe disturban- ce greater than 50% of the of TDROLOGY	s noted (*) as showing retlands. "T" indicates trai ces, relevant local variation dominant plants are hydro	or FAC 88 ce.	Tree	FAC
Alnus rubra recent of Dominant Species cept FAC-). Include species rphological adaptations to w marks (Describe disturban- ce greater than 50% of the of TDROLOGY	s noted (*) as showing retlands. "T" indicates trai ces, relevant local variation dominant plants are hydro	or FAC 88 ce. ons, seasonal eff	Tree fects, etc.): and vegetatio	FAC n criteria is met.
Alnus rubra cent of Dominant Species cept FAC-). Include species rphological adaptations to w marks (Describe disturban- ce greater than 50% of the co DROLOGY	s noted (*) as showing retlands. "T" indicates training to the case of the cas	or FAC BB ce. ons, seasonal efinity the wetta	Tree fects, etc.): and vegetatio	n criteria is met. Ogy Indicators (Describe in Remarks):
Alnus rubra recent of Dominant Species cept FAC-). Include species rphological adaptations to w marks (Describe disturban- ce greater than 50% of the of DROLOGY corded Data (Describe in I	s noted (*) as showing retlands. "T" indicates training to the case of the cas	or FAC BB ce. ons, seasonal efinity the wetta	Tree fects, etc.): and vegetatio	n criteria is met. Ogy Indicators (Describe in Remarks):
and the stream of the stream o	s noted (*) as showing retlands. "T" indicates training to the case of the cas	or FAC BB ce. ons, seasonal efinity the wetta	Tree fects, etc.): and vegetatio	n criteria is met. ogy Indicators (Describe in Remarks): ators: Inundated
10. Alnus rubra recent of Dominant Speciescept FAC-). Include speciescept FAC-). Include speciescept phological adaptations to with marks (Describe disturbance greater than 50% of the compact of the co	s noted (*) as showing retlands. "T" indicates trai ces, relevant local variation dominant plants are hydro Remarks): r Tide Gage	or FAC BB ce. ons, seasonal efinity the wetta	Tree fects, etc.): and vegetatio land Hydrole rimary Indic	n criteria is met. ogy Indicators (Describe in Remarks): ators:
rcent of Dominant Species cept FAC-). Include species rephological adaptations to w marks (Describe disturbance greater than 50% of the company of the compa	s noted (*) as showing retlands. "T" indicates trai ces, relevant local variation dominant plants are hydro Remarks): r Tide Gage	or FAC BB ce. ons, seasonal efinity the wetta	fects, etc.): ind vegetatio land Hydrole	n criteria is met. pgy Indicators (Describe in Remarks): ators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks
no. Alnus rubra recent of Dominant Species recept FAC-). Include species rephological adaptations to w marks (Describe disturban- ce greater than 50% of the c //DROLOGY corded Data (Describe in I Stream, Lake, of Aerial Photograp Other	s noted (*) as showing retlands. "T" indicates trai ces, relevant local variation dominant plants are hydro Remarks): r Tide Gage	or FAC BB ce. ons, seasonal efinity the wetta	fects, etc.): and vegetatio	n criteria is met. Describe in Remarks): ators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
rcent of Dominant Species cept FAC-). Include species rephological adaptations to w marks (Describe disturbance greater than 50% of the company of the compa	s noted (*) as showing retlands. "T" indicates trai ces, relevant local variation dominant plants are hydro Remarks): r Tide Gage	or FAC BB ce. ons, seasonal efinity the wetta	fects, etc.): ind vegetatio land Hydrole rimary Indic	n criteria is met. pgy Indicators (Describe in Remarks): ators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
and the second of the control of the	s noted (*) as showing retlands. "T" indicates trai ces, relevant local variation dominant plants are hydro Remarks): r Tide Gage	or FAC BB ce. ons, seasonal efinity the wetta	fects, etc.): ind vegetatio land Hydrole rimary Indic	n criteria is met. Describe in Remarks): ators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
cent of Dominant Species cept FAC-). Include species phological adaptations to wharks (Describe disturbance greater than 50% of the CODROLOGY corded Data (Describe in Stream, Lake, or Aerial Photograp Other X No Recorded Data (Doservations: epth of Surface Water:	s noted (*) as showing retlands. "T" indicates trai ces, relevant local variation dominant plants are hydro Remarks): r Tide Gage	or FAC B8 ce. ons, seasonal efficiently tic. the wetland	fects, etc.): and vegetatio land Hydrole mary Indic	n criteria is met. pgy Indicators (Describe in Remarks): ators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
and the second of the control of the	s noted (*) as showing retlands. "T" indicates trai ces, relevant local variation dominant plants are hydro Remarks): r Tide Gage on ata Available	or FAC B8 ce. ons, seasonal efficiently tic. the wetland	fects, etc.): and vegetatio land Hydrole Primary Indic	n criteria is met. Describe in Remarks): ators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands idicators (2 or more required):
and the second of the control of the	s noted (*) as showing retlands. "T" indicates trai ices, relevant local variation dominant plants are hydro Remarks): r Tide Gage on ata Available None (in.)	or FAC B8 ce. ons, seasonal efficiently tic. the wetland	fects, etc.): and vegetatio land Hydrolic mary Indic	n criteria is met. Describe in Remarks): ators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands idicators (2 or more required): Oxidized Root Channels in Upper 12 inches
and Alnus rubra recent of Dominant Species cept FAC-). Include species rephological adaptations to w marks (Describe disturbance greater than 50% of the of COROLOGY corded Data (Describe in I Stream, Lake, of Aerial Photograp Other X No Recorded Data d Observations: Depth of Surface Water: Depth to Free Water in Pit:	s noted (*) as showing retlands. "T" indicates trai ices, relevant local variation dominant plants are hydro Remarks): r Tide Gage on ata Available None (in.) 18 (in.)	or FAC B8 ce. ons, seasonal efficiently tic. the wetland	fects, etc.): and vegetatio land Hydrolic mary Indic	n criteria is met. Describe in Remarks): ators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands idicators (2 or more required): Oxidized Root Channels in Upper 12 inches Water-Stained Leaves
10. Alnus rubra recent of Dominant Species recent FAC-). Include species rephological adaptations to w marks (Describe disturban- rice greater than 50% of the of /DROLOGY corded Data (Describe in I Stream, Lake, of Aerial Photograp Other	s noted (*) as showing retlands. "T" indicates trai ices, relevant local variation dominant plants are hydro Remarks): r Tide Gage on ata Available None (in.) 18 (in.)	or FAC B8 ce. ons, seasonal efficiently tic. the wetland	fects, etc.): Ind vegetatio Iand Hydrole Primary Indic	n criteria is met. Describe in Remarks): ators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands idicators (2 or more required): Oxidized Root Channels in Upper 12 inches

							Data Plot	# :	R6-A
L							Wetland:		R6
Project/S	ite: Seattle T	acoma Airport - Master	Dian Linda		Date:	10/15/98			
	nc. Destile 1	Scomb Allbort - Waster	ian Opua	ile	Date.	10/13/36			
SOILS Soil Sur	vey Data:								
Map Unit	t Name: Unm	apped				Drainage Clas	is:		
						Field Observa	tions Confirm	Мар	ped Type?
Taxonom	ny (Subgroup):					Yes I	No	NA	x
rofile D	escription:								
Depth Inches)	Horizon Designation	Matrix Color (Munsell Moist)		Color ell Moist)		Mottle Abundance/Co			ure, Concretions ospheres, etc.
1-7	A	10YR 2'2				-		sandy	r loam
'->15	В	7.5YR 3/2	7.5YR4	1/4		Common, Medium	n. Distinct	Sand	/ loam
H H S P R X G Hi	educing Condi leyed or Low-C igh Organic Co (Describe soil	Moisture Regime tions			Listed Listed Aquic Organ Mottle Other	on Local Hydric on State Hydric on National Hyd Moisture Regim ic Streaking in S s (Explain in Rem	c Soils List dric Soils List ne Sandy Soils		
0,, 00,01	and other nyur	ic soil indicators meet ti	e nyanc s	soii chtena	l. ————————————————————————————————————				
VETLA	ND DETER	MINATION							
	tic Vegetation	Present? Ye	s <u>X</u>	No		ls this	Sampling P	oint '	Within a Wetlar
-	ils Present?	Υe	s <u>X</u>	No			Yes X		
atland H	lydrology Pre:	sent? Ye	~ V	No			. 69	. No	

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): The presence of all three parameters indicate this area is a wetland.

L *			Data Plot #: R6-B Wetland: R6
Project/Site: Seattle Tacoma Airport - Master Plan U Applicant/Owner: Port of Seattle	pdate	County:	7/15/98 King WA
nvestigator: Kleindi and Grialou 1987 Method		State.	
	Var Y	No	Community ID: Upland yard
to Normal Circumstances exist on the site?	Yes X	_ No	— Field Plot ID: 62-B
the site significantly disturbed (Atypical Situation)?	Yes	_	<u> </u>
the area a potential Problem Area? emarks (Explain sample location, disturbances, pro	Yes	_ No _X	
ot located on Parcel 211. Paired upland plot.			
EGETATION (Dominant species are checked	1)		
Plant Species	% Co	ver Stratum	Indicator
1 Agrostis gigantea		Herb Herb	FACW
2. Mowed lawn and moss	90	Herb	NL NL
3 Ranunculus repens 4 Ilex aquifolium		Herb	FACW
5 Prunus laurocerasus	5 25	Shrub Shrub	UPL UPL
T		311100	
xcept FAC-). Include species noted (*) as showing	0	Tree	<u>FACU</u>
ercent of Dominant Species that are OBL, FACW, keept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates to marks (Describe disturbances, relevant local varial.	or FAC 0 ace.	effects, etc.):	
ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates to marks (Describe disturbances, relevant local variable hydrophytic plants are present thus not satisfying the	or FAC 0 ace.	effects, etc.):	
ercent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing perphological adaptations to wetlands. "T" indicates to improve the community of the community o	or FAC 0 race. tions, seasonal	effects, etc.): station criteria	
ercent of Dominant Species that are OBL, FACW recept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates to imarks (Describe disturbances, relevant local varial or hydrophytic plants are present thus not satisfying the YDROLOGY	or FAC 0 race. tions, seasonal	effects, etc.): station criteria	ology Indicators (Describe in Remarks):
recent of Dominant Species that are OBL, FACW (cept FAC-). Include species noted (*) as showing prophological adaptations to wetlands. "T" indicates to marks (Describe disturbances, relevant local varia hydrophytic plants are present thus not satisfying the CDROLOGY corded Data (Describe in Remarks):	or FAC 0 race. tions, seasonal	effects, etc.): etation criteria Vetland Hydro	ology Indicators (Describe in Remarks):
recent of Dominant Species that are OBL, FACW (cept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates to marks (Describe disturbances, relevant local varia in hydrophytic plants are present thus not satisfying the MOROLOGY (Describe in Remarks): Stream, Lake, or Tide Gage	or FAC 0 race. tions, seasonal	effects, etc.): etation criteria Vetland Hydro	ology Indicators (Describe in Remarks); licators:
recent of Dominant Species that are OBL, FACW (cept FAC-). Include species noted (*) as showing prophological adaptations to wetlands. "T" indicates to marks (Describe disturbances, relevant local varial inhydrophytic plants are present thus not satisfying the Application (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	or FAC 0 race. tions, seasonal	effects, etc.): etation criteria Vetland Hydro	ology Indicators (Describe in Remarks); licators: Inundated
ercent of Dominant Species that are OBL, FACW (xcept FAC-). Include species noted (*) as showing prophological adaptations to wetlands. "T" indicates to emarks (Describe disturbances, relevant local varia to hydrophytic plants are present thus not satisfying the YDROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	or FAC 0 race. tions, seasonal	effects, etc.): etation criteria Vetland Hydro	ology Indicators (Describe in Remarks): licators: Inundated Saturated in Upper 12 inches
ercent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates to imarks (Describe disturbances, relevant local varia to hydrophytic plants are present thus not satisfying the PYDROLOGY (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	or FAC 0 race. tions, seasonal	effects, etc.): etation criteria Vetland Hydro	ology Indicators (Describe in Remarks): licators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
ercent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing perphological adaptations to wetlands. "T" indicates to emarks (Describe disturbances, relevant local varia to hydrophytic plants are present thus not satisfying the PyDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	or FAC 0 race. tions, seasonal	effects, etc.): etation criteria Vetland Hydro	plogy Indicators (Describe in Remarks): licators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
ercent of Dominant Species that are OBL, FACW Except FAC-). Include species noted (*) as showing prephological adaptations to wetlands. "T" indicates to marks (Describe disturbances, relevant local varia in hydrophytic plants are present thus not satisfying the hydrophytic plants are p	or FAC 0 race. tions, seasonal	effects, etc.): etation criteria Vetland Hydro	ology Indicators (Describe in Remarks): licators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
ercent of Dominant Species that are OBL, FACW (cept FAC-). Include species noted (*) as showing prophological adaptations to wetlands. "T" indicates to marks (Describe disturbances, relevant local varia in hydrophytic plants are present thus not satisfying the hydrophytic plants are pr	or FAC 0 race. tions, seasonal	effects, etc.): etation criteria fetland Hydro Primary Ind	plogy Indicators (Describe in Remarks): licators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Pattems in Wetlands
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ercent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing perphological adaptations to wetlands. "T" indicates to emarks (Describe disturbances, relevant local varia to hydrophytic plants are present thus not satisfying the state of the property o	or FAC 0 race. tions, seasonal	effects, etc.): etation criteria fetland Hydro Primary Ind	plogy Indicators (Describe in Remarks): licators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches
ercent of Dominant Species that are OBL, FACW xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates to smarks (Describe disturbances, relevant local varia to hydrophytic plants are present thus not satisfying the stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available seld Observations: Depth of Surface Water: None (in.) Depth to Free Water in Pit: >18 (in.)	or FAC 0 race. tions, seasonal	effects, etc.): etation criteria fetland Hydro Primary Ind	plogy Indicators (Describe in Remarks): licators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches Water-Stained Leaves
ercent of Dominant Species that are OBL, FACW xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates to smarks (Describe disturbances, relevant local varia to hydrophytic plants are present thus not satisfying the stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available seld Observations: Depth of Surface Water: None (in.) Depth to Free Water in Pit: >18 (in.)	or FAC 0 race. tions, seasonal	effects, etc.): etation criteria fetland Hydro Primary Ind	plogy Indicators (Describe in Remarks): licators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data
ercent of Dominant Species that are OBL, FACW xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates to smarks (Describe disturbances, relevant local varia to hydrophytic plants are present thus not satisfying the stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available seld Observations: Depth of Surface Water: None (in.) Depth to Free Water in Pit: >18 (in.)	or FAC 0 Trace. 0 tions, seasonal or wetland vege	effects, etc.): etation criteria fetland Hydro Primary Ind	pology Indicators (Describe in Remarks): licators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)

P	a	ra	m	e	tr	ix	,	ŀ	ľ	1	C	•



					Data Pio			R6-B	
L			WE	TLAND D	ETERMIN	IATION	Wetian	d:	R6
_		(Modified					ation Manua	ıł)	
Project/Sit	te: Seattle Ta	acoma Airport - Mas			Date:	10/15/98			
SOILS Soil Surv	rey Data:								
Map Unit	Name: Unm	napped				Drainage	Class:		
							servations Conf	irm Map	ped Type?
Tavonom	y (Subgroup):					Yes	No	NA	x
	escription:						_ `` _	_	
Depth (Inches)	Horizon	Matrix Color (Munsell Moist)		lottle Color Munsell Moist	t)	Mottle Abundan	ce/Contrast	_	ure, Concretions, ospheres, etc.
0-5	Α	10YR 3/3						Loam	
5-13	B1	10YR 3/4						Loam	
>13	B2	10YR 4/3	10	YR 4/6		Many, Medi	um Distinct	Loam	
Hydric Sc	oil Indicators	;							
н	istosol				Listed	on Local i	Hydric Soils Lis	t	
н	istic Epipedon	1			Listed	on State I	Hydric Soils Lis	t	
	ulfidic Odor						al Hydric Soils	List	
		Moisture Regime				Moisture F	•		
	educing Cond	itions Chroma Colors			Organ Mottle		ig in Sandy Soi	IS	
	•	ontent in Surface La	ver			-	Remarks)		
Remarks	(Describe soi	I disturbances, local	•	s, etc.):		(Enploin III	tomeinoj		
		on or prodein.							
WETLA	ND DETER	MINATION							
Hydrophy	tic Vegetatio	n Present?	Yes	No	<u> x</u>	1	s this Samplin	g Point	Within a Wetland?
lydric So	ils Present?		Yes	No	X		Yes	A 1-	
	ydrology Pre		Yes	No.			162	No) <u>X</u>

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results):

This area is an upland since all wetland parameters are absent.

11				Data Pic	t#: R6b-A	
L				Wetiano	: R6b	
oject/Site: Seattle Tacoma Airport - Master Plan Upda	te	Date:	11/2/00	•		
plicant/Owner: Port of Seattle		County				
restigator: W. Kleindl and J. Hawkins		State:	/: King WA			
1987 Method 1989 Method		State.	***			
				Community ID	: PEM	
	Yes X	No		Field Plot ID:	R6b-A	
he site significantly disturbed (Atypical Situation)?	Yes	No	<u> </u>			_
he area a potential Problem Area?	Yes	No	X			
sampling plot is located in the riparian area of Miller C located on Parcel 215. GETATION Dominant species are checked)	reek. Wa	ter sources	to the we	land include hill	slope seeps and	d Miler
Plant Species	% Ca	over . Strati	am indi	cator		
1 Athyrium filix-femina	t	Herb	FAC			
2. Carex obnupta	— <u>;</u>	Herb	CBL			
3. Epilobium ciliatum	20	Herb	FAC			
4 Festuca arundinacea		Herb	FAC	•		
5. Holcus lanatus	70	Herb	FAC			
6 Junicus effusus	10	Herb	FAC	w		
7 Ranunculus repens	50	Herb	FAC	W		
8 Rumex sp.	t	Herb	NL			
9 Alnus rubra cent of Dominant Species that are OBL, FACW, or F	_ <u> </u>	Tree	FAC			
		.00				
phological adaptations to wetlands. "T" indicates trace, arks (Describe disturbances, relevant local variations.	, seasona	l effects, et	c.): ria is met.			
phological adaptations to wetlands. "T" indicates trace, larks (Describe disturbances, relevant local variations to 100% of the dominant plants are hydrophytic, the wet	, seasona	effects, et	c.): ria is met.			<u> </u>
phological adaptations to wetlands. "T" indicates trace, arks (Describe disturbances, relevant local variations is 100% of the dominant plants are hydrophytic, the wet DROLOGY	s, seasona	l effects, et tation critei	ria is met.	ndicators (Des	scribe in Remark	re).
phological adaptations to wetlands. "T" indicates trace, arks (Describe disturbances, relevant local variations at 100% of the dominant plants are hydrophytic, the wet DROLOGY	s, seasona	l effects, et tation critei	ria is met.	ndicators (Des	scribe in Remark	ks):
phological adaptations to wetlands. "T" indicates trace, arks (Describe disturbances, relevant local variations in 100% of the dominant plants are hydrophytic, the wet DROLOGY (Describe in Remarks):	s, seasona	l effects, et tation critei	ria is met. rdrology li		scribe in Remark	ks):
phological adaptations to wetlands. "T" indicates trace. arks (Describe disturbances, relevant local variations in 100% of the dominant plants are hydrophytic, the wetler DROLOGY orded Data (Describe in Remarks): Stream, Lake, or Tide Gage	s, seasona	l effects, et tation critei	rdrology li Indicators:	iated		ks):
arks (Describe disturbances, relevant local variations of 100% of the dominant plants are hydrophytic, the wet DROLOGY reded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	s, seasona	l effects, et tation criter Vetland Hy Primary	rdrology li Indicators: Inunc	lated ated in Upper 1:	2 inches	ks):
arks (Describe disturbances, relevant local variations of 100% of the dominant plants are hydrophytic, the wet DROLOGY reded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	s, seasona	l effects, et tation criter Vetland Hy Primary	rdrology li Indicators: Inunc Satui	iated	2 inches	ks):
arks (Describe disturbances, relevant local variations of 100% of the dominant plants are hydrophytic, the wet DROLOGY reded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	s, seasona	l effects, et tation criter Vetland Hy Primary	rdrology li Indicators: Inunc Satui	lated ated in Upper 1: ated in Upper 1: r Marks	2 inches	ks):
phological adaptations to wetlands. "T" indicates trace. arks (Describe disturbances, relevant local variations in 100% of the dominant plants are hydrophytic, the wetler of the dominant plants are hydrophytic.	s, seasona	l effects, et tation criter Vetland Hy Primary	rdrology li Indicators: Inunc Satur Satur Wate Drift I	lated ated in Upper 1; ated in Upper 1; r Marks Lines nent Deposits	2 inches 8 inches	ks):
phological adaptations to wetlands. "T" indicates trace. arks (Describe disturbances, relevant local variations in 100% of the dominant plants are hydrophytic, the wetler of the dominant plants are hydrophytic	s, seasona	l effects, et tation criter Vetland Hy Primary	rdrology li Indicators: Inunc Satur Satur Wate Drift I	lated ated in Upper 1: ated in Upper 1: r Marks .ines	2 inches 8 inches	ks):
arks (Describe disturbances, relevant local variations in 100% of the dominant plants are hydrophytic, the wet DROLOGY orded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Observations:	s, seasona	Vetland Hy Primary	rdrology li Indicators: Inunc Satur Satur Wate Drift I Sedin	lated ated in Upper 1; ated in Upper 1; r Marks Lines nent Deposits age Patterns in 1	2 inches 8 inches Wetlands	ks):
phological adaptations to wetlands. "I" indicates trace. parks (Describe disturbances, relevant local variations to 100% of the dominant plants are hydrophytic, the wetletong of the w	s, seasona	Vetland Hy Primary	rdrology li Indicators: Inunc Satur Satur Wate Drift I Sedin	lated ated in Upper 1; ated in Upper 1; r Marks Lines nent Deposits	2 inches 8 inches Wetlands	Ks):
phological adaptations to wetlands. "T" indicates trace. arks (Describe disturbances, relevant local variations in 100% of the dominant plants are hydrophytic, the wetletong in the phology of the dominant plants are hydrophytic, the wetletong in the phology of the dominant plants are hydrophytic, the wetletong in the phology of	s, seasona	Vetland Hy Primary	drology li Indicators: Inunc Satur Satur Wate Drift I Sedin Drain	dated ated in Upper 1: ated in Upper 1: r Marks Lines nent Deposits age Pattems in 1 ors (2 or more re	2 inches 8 inches Wetlands equired):	
phological adaptations to wetlands. "T" indicates trace. parks (Describe disturbances, relevant local variations to 100% of the dominant plants are hydrophytic, the wetletong of the w	s, seasona	Vetland Hy Primary	drology li Indicators: Inunc Satur Wate Drift I Sedin Drain Ty Indicate Oxidia	dated rated in Upper 1: rated in Upper 1: r Marks Lines nent Deposits age Patterns in 1 ors (2 or more re	2 inches 8 inches Wetlands equired): els in Upper 12	
phological adaptations to wetlands. "I" indicates trace. parks (Describe disturbances, relevant local variations to 100% of the dominant plants are hydrophytic, the wetletong of the w	s, seasona	Vetland Hy Primary	rdrology li Indicators: Inunc Satur Satur Wate Drift I Sedin Drain ry Indicator Wate Wate Wate	dated rated in Upper 1: rated in Upper 1: r Marks Lines nent Deposits age Patterns in 1 ors (2 or more re red Root Chann- Stained Leaves	2 inches 8 inches Wetlands equired): els in Upper 12	
Aerial Photograph Other X No Recorded Data Available Observations: epth of Surface Water: epth to Free Water in Pit: None (in.) epth to Saturated Sails	s, seasona	Vetland Hy Primary	rdrology li Indicators: Inunc Satur Satur Wate Drift I Sedin Drain ry Indicate Wate Local	dated rated in Upper 1: rated in Upper 1: r Marks Lines nent Deposits age Patterns in 1 ors (2 or more re	2 inches 8 inches Wetlands equired): els in Upper 12 s a	



4 6						Data Plot #:	KAD-W
L'			WETLAND	DETERMIN	NATION	Wetland:	R6b
		(Modified fror				Manual)	
roject/Sit	e: <u>Seattie T</u> a	acoma Airport - Master Pi	an Update	Date:	11/2/00		
SOILS Soil Surv	ey Data:						
Map Unit I	Name: Not i	mapped			Drainage Class	s:	
	<u></u>				Field Observat	ions Confirm Mar	oped Type?
Taxonomy	(Subgroup):				Yes N	lo <u>X</u> NA	
rofile De	scription:						
Depth Inches)	Horizon Designation	Matrix Color (Munsell Moist)	Mottle Color (Munsell Mo	ist)	Mottle Abundance/Co		ture, Concretions, cospheres, etc.
-2	0	10YR 3/1	•		•	Sand	dy Loam
-3	С	10YR 3/1			-	Fine	sand
-5	Ab	10YR 3/2	-		•	Loan	n
+	С	-	-		-	Cobi	bly gravely sand
lydric So	il Indicators:						
His	stosol		-	Listed	on Local Hydric	Soils List	
His	stic Epipedon		-	Listed	on State Hydric	: Soils List	
	lfidic Odor		_	Listed	on National Hyd	dric Soils List	
		Moisture Regime	-	X Aquic	Moisture Regim	e	
	ducing Condi		_	Organ	ic Streaking in S	Sandy Soils	
	•	Chroma Colors	-	Mottle			
Hiç	gh Organic Co	ontent in Surface Layer	_	Other	(Explain in Rem	arks)	
		l disturbances, local varia					
oil color a	nd other hydr	ric soil indicators meet the	hydric soil crit	tena.			
VET. 44							
VEILAN	ND DETER	MINATION					
ydrophyt	ic Vegetation	Present? Yes	X No		Is this	Sampling Point	t Within a Wetland?
edeia Call	ls Present?	Yes	X No				
yuric Soil						Yes X N	^

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): All three wetland parameters are present.

Λ						Data Plot #:	R7-A
L						Wetland:	R7
Project/Site: Seattle Tacoma	Airport - Master Plan Upr	date		Date:	10/2	8/98	
Applicant/Owner: Port of S	eattie		_	County:	Ki	ng	
Investigator: William Kleindl			_	State:	W	A	
✓ 1987 Method ☐ 1989	Method		_			Community ID: PF	:0
Do Normal Circumstances exis	st on the site?	Yes	Χ	No		- Field Plot ID: 73-A	
s the site significantly disturbe	ed (Atypical Situation)?	Yes		No -	X	- FIEIG FIOLID. 73-A	
s the area a potential Problem	Area?	Yes		No -	х	-	
emarks (Explain sample loc	ation disturbances amb	lem areas	:).	-		-	
Plant Species 1. Rubus discolor		80	Cover	Stratur Shrub	71	Indicator FACU	
•					••		
2. Alnus rubra		9:	5	Tree		FAC	
ercent of Dominant Specie: except FAC-). Include species orphological adaptations to w emarks (Describe disturbanc ince only 50% of the dominant	noted (*) as showing etlands. "T" indicates traces, relevant local variation	ce. ons, seas				· in not — ·	
YDROLOGY	pranto dro riyaropriyuc. t	ne wedan	o vege	reauOri Cr	iteria	is not met.	
ecorded Data (Describe in F	Remarks):		Wet	land Hyd	droid	ogy Indicators (Describe	in Remarks)
	Tide Gage			Primary I			
Stream, Lake, or							
	h			·		Inundated	
Stream, Lake, or	h			x	_		nes
Stream, Lake, or Aerial Photograp					_	Inundated Saturated in Upper 12 inch Saturated in Upper 18 inch	
Stream, Lake, or Aerial Photograp Other						Saturated in Upper 12 inch Saturated in Upper 18 inch Water Marks	
Stream, Lake, or Aerial Photograp Other					_	Saturated in Upper 12 inch Saturated in Upper 18 inch Water Marks Drift Lines	
Stream, Lake, or Aerial Photograp Other					_	Saturated in Upper 12 inch Saturated in Upper 18 inch Water Marks Drift Lines Sediment Deposits	nes
Stream, Lake, or Aerial Photograp Other X No Recorded Da					_	Saturated in Upper 12 inch Saturated in Upper 18 inch Water Marks Drift Lines	nes
Stream, Lake, or Aerial Photograp Other X No Recorded Da	ta Available		ė		_	Saturated in Upper 12 inch Saturated in Upper 18 inch Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetla	nes
Stream, Lake, or Aerial Photograp Other X No Recorded Da	ta Available		S		ry In	Saturated in Upper 12 inch Saturated in Upper 18 inch Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetla dicators (2 or more require	nes ands ad):
Stream, Lake, or Aerial Photograp Other X No Recorded Da eld Observations: Depth of Surface Water:	ta Available None (in.)		\$		ry In	Saturated in Upper 12 inch Saturated in Upper 18 inch Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetta dicators (2 or more require Oxidized Root Channels in	nes ands ad):
Stream, Lake, or Aerial Photograp Other X No Recorded Da ield Observations: Depth of Surface Water: Depth to Free Water in Pit:	None (in.)		\$		ry In	Saturated in Upper 12 inch Saturated in Upper 18 inch Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetla dicators (2 or more require	nes ands ad):

Remarks (As relevant, describe recent precipitation, hydrologic modifications, local variations, etc.):

There is free water within 12 inches of surface, satisfying wetland hydrology criteria.

Other (Explain in Remarks)



Data Plot #:

R7-A

			WETLAND D	ETERMIN	NATION Wetts	and: R7
_		(Modified f			Delineation Manu	ıal)
Project/Si	te: Seattle Ta	acoma Airport - Maste	r Plan Update	Date:	10/28/98	
SOILS Soil Surv	/ey Data:					
Map Unit	Name: Unm	apped			Drainage Class:	
					Field Observations Co	nfirm Mapped Type?
Taxonom:	y (Subgroup):				Yes No	NAX
rofile De	escription:					
Depth Inches)	Horizon Designation	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist	t)	Mottle Abundance/Contrast	Texture, Concretions, Rhizospheres, etc.
-18+	С	10YR 5/1	•		•	Sand
H Si	•	Moisture Regime		Listed	l on Local Hydric Soils L I on State Hydric Soils L I on National Hydric Soil Moisture Regime	ist
	educing Condi		_		ic Streaking in Sandy S	oils
	•	Chroma Colors ontent in Surface Laye	er	Mottle	s (Explain in Remarks)	
		l disturbances, local v	variations, etc.):		e hydric soil criteria.	
		rea. Soil color and oth	Her Tryunc son Indicat	IOIS IIIAGE III	,	
Point bar,	depositional a	MINATION	ner nyanc son maica.	iors meet th		
Point bar,	depositional a	MINATION	Yes No	X		ing Point Within a Wetland?
WETLA	nd DETER	MINATION		X	Is this Sampl	ing Point Within a Wetland?

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results):

Point bar of Miller Creek. Dominant vegetation is not hydrophytic; however, the wetland is located on a point depositional bar and has hydrology and soils.

						-		Data Pic Wetland		R7-B	
								WELLET IC		K/ Upi	and Pio
	r vene	٠		•							
Project/Site: Seattle Tacoma	Airport - Master Plan Up	date		Date:	10/28	8/98					
Applicant/Owner: Port of S	eattie			County:	Kir	ng					
nvestigator: William Kleindl			:	State:	WA	۹					
✓ 1987 Method ☐ 1989	Method					-	Comr	nunity ID): Up	land	
Do Normal Circumstances exis	st on the site?	Yes	<u> x</u>	No _			Field	Plot ID:	73-B		
s the site significantly disturbe	ed (Atypical Situation)?	Yes		No	х						
s the area a potential Problem	Area?	Yes		No -	Х	•					
Remarks (Explain sample loo											
/EGETATION (Domina Plant Species	ant species are checked)		% Cover	Stratum	n	Indica	itor				
·											
1 Hypochaeris radicata			10	Herb		FACU					
ercent of Dominant Species except FAC-). Include species iorphological adaptations to w	s noted (*) as showing etlands. "T" indicates tra	ice.	75 <u>0</u>	Herb		FACU NL					
Poasp Percent of Dominant Species except FAC-). Include species norphological adaptations to w temarks (Describe disturbance	s noted (*) as showing etlands. "T" indicates traces, relevant local variations.	ons, sea	75 <u>0</u>	Herb):						
ercent of Dominant Species except FAC-). Include species corphological adaptations to we remarks (Describe disturbance apland plant community, no hyperical plant community, no hyperical plant community.	s noted (*) as showing etlands. "T" indicates traces, relevant local variations.	ons, sea	75 <u>0</u>	Herb							
Poasp Percent of Dominant Species except FAC-). Include species forphological adaptations to we emarks (Describe disturbance pland plant community, no hydely IYDROLOGY	enoted (*) as showing etlands. "T" indicates traces, relevant local variation of the properties of the	ons, sea	0 asonal eff	Herb		NL NL		ors (De	escribe	in Rema	rke).
Poasp Percent of Dominant Species except FAC-). Include species forphological adaptations to we emarks (Describe disturbance pland plant community, no hydely IYDROLOGY	enoted (*) as showing etlands. "T" indicates traces, relevant local variation of the properties of the	ons, sea	0 asonal eff	Herb	drolo	NL PORT IN		ors (De	escribe	in Rema	rks):
ercent of Dominant Species except FAC-). Include species torphological adaptations to we marks (Describe disturbant plant plant community, no hydrophology ecorded Data (Describe in Face).	e noted (*) as showing etlands. "T" indicates tra ces, relevant local variation of the complete vegetation is proceed to the certain of the c	ons, sea	0 asonal eff	ects, etc	drolo	NL PORT IN	dicate	ors (De	escribe	in Rema	rks):
ercent of Dominant Species except FAC-). Include species forphological adaptations to we emarks (Describe disturbance pland plant community, no hydrogen plant (Describe in Factoria plant). Stream, Lake, or	e noted (*) as showing etlands. "T" indicates tra ces, relevant local variation of the complete vegetation is proceed to the certain of the c	ons, sea	0 asonal eff	ects, etc	drolo Indica	ogy Inators:	dicate	ors (De			rks):
ercent of Dominant Species except FAC-). Include species torphological adaptations to we emarks (Describe disturbance pland plant community, no hyd YDROLOGY ecorded Data (Describe in F Stream, Lake, or Aerial Photograp	enoted (*) as showing etlands. "T" indicates traces, relevant local variation of the control of	ons, sea	0 asonal eff	ects, etc	drolo	NL ogy inda ators: inunda Satura Satura	dicated atted in atted in	Upper 1	12 inch	ies	rks):
Poa sp Percent of Dominant Species except FAC-). Include species norphological adaptations to we remarks (Describe disturbance application of the property of	enoted (*) as showing etlands. "T" indicates traces, relevant local variation of the control of	ons, sea	0 asonal eff	ects, etc	drolo	NL ogy in ators: inunda Satura Satura Water	dicated ated in the direct in Mark:	Upper 1	12 inch	ies	rks):
Poa sp Percent of Dominant Species except FAC-). Include species norphological adaptations to we remarks (Describe disturbance alphand plant community, no hydrology recorded Data (Describe in F Stream, Lake, or Aerial Photograp Other	enoted (*) as showing etlands. "T" indicates traces, relevant local variation of the control of	ons, sea	0 asonal eff	ects, etc	drolo	NL ogy In- ators: Inunda Satura Satura Water Drift L	dicated ated in ted in Mark:	Upper 1 Upper 1	12 inch	ies	rks):
Percent of Dominant Species except FAC-). Include species norphological adaptations to we temarks (Describe disturbance dipland plant community, no hyd excorded Data (Describe in F Stream, Lake, or Aerial Photograp Other	enoted (*) as showing etlands. "T" indicates traces, relevant local variation of the control of	ons, sea	0 asonal eff	ects, etc	drolo	ogy In- ators: Inunda Satura Satura Water Drift Li Sedim	dicated atted in the direct Dickets	Upper 1 Upper 1	12 inch 18 inch	es es	rks):
Percent of Dominant Species except FAC-). Include species norphological adaptations to w temarks (Describe disturbance upland plant community, no hyd IYDROLOGY secorded Data (Describe in F Stream, Lake, or Aerial Photograp Other X No Recorded Data eld Observations:	enoted (*) as showing etlands. "T" indicates traces, relevant local variation of the control of	ons, sea	0 asonal eff	ects, etc	drolo	ogy In- ators: Inunda Satura Satura Water Drift Li Sedim	dicated atted in the direct Dickets	Upper 1 Upper 1	12 inch 18 inch	es es	rks):
Poa sp Percent of Dominant Species except FAC-). Include species norphological adaptations to w temarks (Describe disturbance lipland plant community, no hyd IYDROLOGY ecorded Data (Describe in F Stream, Lake, or Aerial Photograp Other X No Recorded Data eld Observations: Depth of Surface Water:	enoted (*) as showing etlands. "T" indicates traces, relevant local variation of the properties of the	ons, sea	0 asonal eff	ects, etc	drolo	NL NIL NIL NIL NIL NIL NIL NIL NIL NIL N	dicated ated in the state of th	Upper 1 Upper 1 s s sposits itterns in	12 inch 18 inch Wetla	nes nes	rks):
Poa sp Percent of Dominant Species except FAC-). Include species norphological adaptations to witemarks (Describe disturbant plant plant community, no hydrogram (Describe in Face). Stream, Lake, or Aerial Photogram Other X No Recorded Data eld Observations: Depth of Surface Water: Depth to Free Water in Pit:	enoted (*) as showing etlands. "T" indicates traces, relevant local variation of the properties of the	ons, sea	0 asonal eff	ects, etc	drolo indica 	NL N	dicated atted in Mark ines ent Dige Pa	Upper 1 Upper 1 S S S S S S S S S S S S S S S S S S S	12 inch 18 inch Wetta	nes nes nnds	
Percent of Dominant Species except FAC-). Include species norphological adaptations to w temarks (Describe disturbance upland plant community, no hyd IYDROLOGY secorded Data (Describe in F Stream, Lake, or Aerial Photograp Other X No Recorded Data eld Observations: Depth of Surface Water:	enoted (*) as showing etlands. "T" indicates traces, relevant local variation of the properties of the	ons, sea	0 asonal eff	ects, etc	dirolo Indica I I I I I I I I I I I I I I I I I I I	NL NL NS	dicated atted in Mark ines ent Doge Pa	Upper 1 Upper 1 s s s s s s s s s s s s s s s s s s s	12 inch 18 inch Wetla require	nes nes	
Percent of Dominant Species except FAC-). Include species norphological adaptations to w temarks (Describe disturbance upland plant community, no hyd IYDROLOGY secorded Data (Describe in F Stream, Lake, or Aerial Photograp Other X No Recorded Data eld Observations: Depth of Surface Water: Depth to Free Water in Pit:	enoted (*) as showing etlands. "T" indicates traces, relevant local variation of the properties of the	ons, sea	0 asonal eff	ects, etc	drolo ndica	NL NL Orall dicate ated inted inted in Marks inted in Marks ent D ge Pa rs (2 c ed Ro Stains	Upper 1 Upper 1 S S S S S S S S S S S S S S S S S S S	12 inch 18 inch Wetla require nels in	nes nes nnds		



4							Data Pio	t#:	R7-B
Ľ			WETI	AND DE	TERMIN	IATION	Wetland	t:	R7 Upland Plot
_		(Modified f					ion Manual)	
Project/Sit	e: Seattle Ta	coma Airport - Maste	er Plan Upd	ate	Date:	10/28/98			
SOILS Soil Surv	ev Data:								
Map Unit	•	apped				Drainage C	Class:		
						_	rvations Confir	m Map	ped Type?
Tauaaa	. (Cubaraun):					Yes	No	NA	X
·	(Subgroup):		-			Tes	- 140	110	
Profile De Depth	escription: Horizon	Matrix Color	Mott	le Color		Mottie	e/Contrast		ture, Concretions,
(Inches)		(Munsell Moist)	(Mur	nsell Moist)		Abundance	3/ OO 114 B 31		
0-10+ Hydric So	Designation Fill oil Indicators:		(Mur 	nsell Moist)	Listed	•			iv loam - gravel
Hydric So Hi Hi Su Pr Re Gi Hi	Designation Fill Dil Indicators: stosol stic Epipedon ulfidic Odor robable Aquic educing Condi eyed or Low-C gh Organic Co (Describe soil	Moisture Regime tions Chroma Colors ontent in Surface Lay disturbances, local vi	er		Listed Listed Aquic Organ Mottle	on Local Hy on State Hy on National Moisture Re	ydric Soils List ydric Soils List I Hydric Soils L egime I in Sandy Soils	ist	iv loam - gravel
Hydric So Hi Hi Su Pr Re GH Hi Remarks	Designation Fill bil Indicators: stosol stic Epipedon ulfidic Odor robable Aquic educing Condi eyed or Low-C gh Organic Cc (Describe soil ors of hydric si	Moisture Regime tions Chroma Colors Intent in Surface Lay disturbances, local voil are present.	er		Listed Listed Aquic Organ Mottle	on Local Hy on State Hy on National Moisture Re sic Streaking	ydric Soils List ydric Soils List I Hydric Soils L egime I in Sandy Soils	ist	iy loam - gravel
Hydric So Hi Hi St Pr Re GH Hi Remarks	Designation Fill Dil Indicators: Instosol Institute Epipedon Indicators: Instosol Institute Epipedon Indicators: Instosol Institute Epipedon Ins	Moisture Regime tions Chroma Colors ontent in Surface Lay disturbances, local v oil are present.	er variations, e	etc.):	Listed Listed Aquic Organ Mottle	on Local Hy on State Hy on National Moisture Re iic Streaking is (Explain in F	ydric Soils List ydric Soils List I Hydric Soils L egime I in Sandy Soils Remarks)	ist	
Hi Hi St St Pr Re GI Hi Remarks No indicate WETLAI	Designation Fill bil Indicators: stosol stic Epipedon ulfidic Odor robable Aquic educing Condi eyed or Low-C gh Organic Cc (Describe soil ors of hydric si	Moisture Regime tions Chroma Colors ontent in Surface Lay disturbances, local v oil are present.	er		Listed Listed Aquic Organ Mottle	on Local Hy on State Hy on National Moisture Re iic Streaking is (Explain in F	ydric Soils List ydric Soils List I Hydric Soils L egime I in Sandy Soils Remarks)	ist	tv loam - gravel

This area is an upland since all wetland parameters are absent.

1						Data P		R7a:A
•						Wetia	na:	R6.5
					*• 1	e j Albania		
roject/Site: Seattle Tacoma	Airport - Master Plan Upo	date	_ D	ate: 9	9/17/99			
pplicant/Owner: Port of S	Seattle		C	ounty:	King			
vestigator: William Kleindi.	, Pat Tougher		- St	tate:	WA			
1987 Method	Method		-			Community	ID: PE	М
o Normal Circumstances exi	st on the site?	Yes _	X P	Vo.		Field Plot ID		
the site significantly disturbe	ed (Atypical Situation)?	Yes		 No	×		. K/a.	<u> </u>
the area a potential Problem	n Area?	Yes		_	X			
marks (Explain sample loc	cation disturbances probl			`` -	<u>^</u>			
1 Holcus lanatus		95		Herb	FAC			
EGETATION (Domina Plant Species	ant species are checked)	%	Cover	Stratum	Indic			
1 Holcus lanatus		95		Herb	FAC			
2 Juncus effusus				Herb	FAC	w		
2 Juncus effusus 3 Ranunculus repens 4 Trifolium repens		20 35 20		Herb Herb Herb		W		
Ranunculus repens Trifolium repens recent of Dominant Species cept FAC-). Include species rphological adaptations to w	s noted (*) as showing retlands. "T" indicates trac	35 20 or FAC ce.	75	Herb Herb	FACT FACT	W		
Ranunculus repens Trifolium repens recent of Dominant Species (cept FAC-). Include species (rphological adaptations to with marks. (Describe disturbance greater than 50% of the control o	s noted (*) as showing retlands. "T" indicates tracces, relevant local variatio	or FAC ce. ons, seaso	75	Herb Herb	FAC	<u> </u>		
Ranunculus repens 4 Trifolium repens recent of Dominant Species (cept FAC-). Include species orphological adaptations to w rmarks (Describe disturbanc foce greater than 50% of the or fDROLOGY	s noted (*) as showing retiands. "T" indicates tracces, relevant local variation dominant plants are hydrological variation."	or FAC ce. ons, seaso	75 nal effec	Herb Herb cts, etc.	FAC: FAC: FAC:):	N eria is met.		
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Ranunculus repens 4 Trifolium repens recent of Dominant Species (cept FAC-). Include species rephological adaptations to w marks (Describe disturbanc (ce greater than 50% of the ce /DROLOGY corded Data (Describe in F Stream, Lake, or Aerial Photograp Other	s noted (*) as showing retiands. "T" indicates tracces, relevant local variation dominant plants are hydrogenearies): Remarks): r Tide Gage	or FAC ce. ons, seaso	75 nal effect wetland	Herb Herb cts, etc.	FAC FAC FAC): rology li idicators: Inunc Satur Wate Drift I	enia is met. Indicators (E Idated Idated in Upper Idated in	12 inch 18 inch	es
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3. Ranunculus repens 4. Trifolium repens ercent of Dominant Species except FAC-). Include species orphological adaptations to we emarks (Describe disturbance greater than 50% of the co YDROLOGY ecorded Data (Describe in F Stream, Lake, or Aerial Photograp Other	s noted (*) as showing retiands. "T" indicates tracces, relevant local variation dominant plants are hydroperate (*) as a continuous plants are hydroperate (*) as a continuous plants are hydroperate (*) as a continuous plants are hydroperate (*) are hydroperate (*) as a continuous plants are hydroperate (*) are hydroperate (*) as a continuous plants are hydroperate (or FAC ce. ons, seaso	75 nal effect wetland Wetlar	Herb Herb cts, etc. d vegeta mary In	FAC FAC FAC FAC FAC FAC FAC FAC F	aria is met. Indicators (Electricated in Upper Marks Lines Inent Deposits age Patterns ors (2 or more zed Root Cha	12 inch 18 inch in Wetla require nnels in ves	es es nds



Data Plot #:

R7a:A

			١	VETL/	AND DET	ERMIN	NATION	Wetiar	nd: R6.5
		(Modified f	rom	: 1987	COE W	etlands	s Delinea	ation Manua	al)
Project/S	ite: Seattle Ta	acoma Airport - Maste	r Pia	n Updat	e	Date:	9/17/99		
SOILS									
Soil Sur	vey Data:								
Map Unit	t Name: Unm	apped					Drainage	Class:	
							Field Obs	servations Conf	firm Mapped Type?
Taxonom	ny (Subgroup):						Yes	No	NAX
Profile D	escription:								
Depth (inches)	Horizon	Matrix Color (Munsell Moist)		Mottle (Munse	Color ell Moist)		Mottle Abundan	ce/Contrast	Texture, Concretions, Rhizospheres, etc.
0-6	Α	10YR 3/2							Sandy Loam
6-18+	В	10YR 3/1		10YR 4/	6		Common, Fr	ine. Distinct	Graveliy Sandy Loam
-	oil Indicators:	:				Lintan		-hudrin Calla d in	
	listosoi listic Epipedon					_		Hydric Soils Lis Hydric Soils Lis	
	ulfidic Odor					_		al Hydric Soils	
P	robable Aquic	Moisture Regime				_	Moisture F		
XR	Reducing Condi	itions				Organ	ic Streakin	ig in Sandy Soi	ls
	•	Chroma Colors			<u>X</u>	_ Mottle	:S		
——н	ligh Organic Co	ontent in Surface Laye	er			_ Other	(Explain in	Remarks)	
		I disturbances, local v							
Soil Color	ana otner nyai	ric soil indicators mee	t the	hydric s	oil cnteria.				1
WETLA	ND DETER	MINATION							
iydrophy	rtic Vegetation	n Present?	Yes	x	No		j:	s this Samplin	ng Point Within a Wetland?
lydric So	oils Present?		Yes	×	No —			·	
.,								Yes >	K No

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results):

The presence of all three parameters indicate this area is a wetland.

l'					Data Plot #: Wetland:	R8-A
Project/Site: Seattle Tacoma Airport - Master Plan Up	date	Date:	10/30/9	8		
Applicant/Owner: Port of Seattle		- Count	y: King			
nvestigator: William Kleindl		- State:	WA		******	
1987 Method 1989 Method		-		^		
o Normal Circumstances exist on the site?	Yes	X No			· -	EM
the site significantly disturbed (Atypical Situation)?	-		~	Field I	Plot ID: 72-4	4
	Yes _	No	<u>×</u>			
the area a potential Problem Area? emarks (Explain sample location, disturbances, prob	Yes _	No	<u> </u>			
Plant Species 1. Athyrium filix-femina 2. Equiperum telmatein			FA			
2 Equisetum teimateia	10			cw		
3 Impatiens sp	10	Herb	NL			
4 Ins pseudacorus	10	Herb	OE	IL.		
5 Phalans arundinacea	20	Herb		<u>cw</u>		
Rubus discolor recent of Dominant Species that are OBL, FACW, (cept FAC-). Include species noted (*) as showing	or FAC	Shrul		CU		
Rubus discolor recent of Dominant Species that are OBL, FACW, (cept FAC-). Include species noted (*) as showing uphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variations of the dominant plants are hydronical variations."	or FAC ce.	Shrul	FA	CU	pet.	
Rubus discolor recent of Dominant Species that are OBL, FACW, (cept FAC-). Include species noted (*) as showing prohological adaptations to wetlands. "T" indicates training in the discolor of the dominant plants are hydrofology." **TOTAL COMPANY OF THE COMPAN	or FAC ce.	Shrul	FA	CU	et.	
Rubus discolor recent of Dominant Species that are OBL, FACW, (cept FAC-). Include species noted (*) as showing uphological adaptations to wetlands. "T" indicates training in the discolor of the dominant plants are hydrofology." (DROLOGY)	or FAC ce.	Shrul 66 nal effects. e	p FA etc.): petation cr	CU iteria is m		e in Remarks):
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		100 - 1161 and Se					
		(Modified fi	rom: 1987 COE We	Buands	Defineation Ma	anuai)	
oroject/\$	Site: Seattle Ta	coma Airport - Maste	r Plan Update	Date:	10/30/98		
SOILS	;						
Soil Su	rvey Data:						
Map Un	it Name: Unm	apped			Drainage Class:		
					Field Observations	Confirm Ma	pped Type?
Taxono	my (Subgroup):				Yes No	NA	X
Profile I	Description:						
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)		Mottle Abundance/Contra		ture, Concretions zospheres, etc.
0-15	0	10YR 2/1	-		•	Muc	ky loam
0-15							
Hydric S	Soil Indicators:						
<u> </u>	Histosol			Listed	on Local Hydric So	ils List	
	Histic Epipedon			_	on State Hydric So		
	Sulfidic Odor				on National Hydric	Soils List	
	•	Moisture Regime	X	_	Moisture Regime		
	Reducing Condi			Organ	nic Streaking in Sand	ty Soils	
	Gleved or Low-(Chroma Colors		Mottle	:S		

Other (Explain in Remarks)

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results):

Sand lenses interbedded. Soil color and other hydric soil indicators meet the hydric soil criteria.

The presence of all three parameters indicate this area is a wetland.

X High Organic Content in Surface Layer

WETLAND DETERMINATION
Hydrophytic Vegetation Present?

Hydric Soils Present?

Wetland Hydrology Present?

Remarks (Describe soil disturbances, local variations, etc.):

Is this Sampling Point Within a Wetland?

Yes X No

P	ar	am	etrix,	inc.
۲	ar	am	etrix,	INC.



Data Plot #:	R8-A2
Wetland:	R8

Normal Circumstances exist on the site? Yes
plicant/Owner: Port of Seattle County: King State: WA 1987 Method
plicant/Owner: Port of Seattle County: King estigator: William Kleindl, Pat Tougher State: WA 1987 Method
restigator: William Kleindl, Pat Tougher 1987 Method
1987 Method
community ID: PEM No Normal Circumstances exist on the site? Yes X No Field Plot ID: R8-A2 The site significantly disturbed (Atypical Situation)? Yes No X The area a potential Problem Area? Yes No X The area a potential Problem Area? Yes No X The area a potential Problem Area? Yes No X The area a potential Problem Area? Yes No X The area a potential Problem Area? Yes No X The area was delineated per the ACOE request to decrease the area previously deline. The area was delineated per the ACOE request to decrease the area previously deline. The area a potential Problem Area? Yes No X The area a potential Problem Area? Yes No X The area a potential Problem Area? Yes No X The area a potential Problem Area? Yes No X The area a potential Problem Area? Yes No X The area a potential Problem Area? Yes No X The area a potential Problem Area? Yes No X The area a potential Problem Area? Yes No X The area a potential Problem Area? Yes No X The area a potential Problem Area? Yes No X The area a potential Problem Area? Yes No X The area a potential Problem Area? The area a potential Problem Area? Yes No X The area area problem
the site significantly disturbed (Atypical Situation)? Yes No X the area a potential Problem Area? Yes No X emarks (Explain sample location, disturbances, problem areas): parian wetland located on Parcel 276. This area was delineated per the ACOE request to decrease the area previously deline. EGETATION (>Dominant species are checked) Plant Species '% Cover Stratum Indicator 1. Phalaris arundinacea 20 Herb FACW 2. Polygonum persicana 20 Herb FACW 3. Unica dioica 40 Herb FAC+ 4. Alnus rubra 50 Tree FAC recent of Dominant Species that are OBL, FACW, or FAC coept FAC-). Include species noted (*) as showing 100 imphological adaptations to wetlands. "T" indicates trace. marks (Describe disturbances, relevant local variations, seasonal effects, etc.):
the area a potential Problem Area? Permarks (Explain sample location, disturbances, problem areas): Parian wetland located on Parcel 276. This area was delineated per the ACOE request to decrease the area previously deline. EGETATION (*Dominant species are checked) Plant Species
EGETATION (Dominant species are checked) Plants arundinacea 20 Herb FACW Polygonum persicana 20 Herb FACW Unica dioica 40 Herb FACW Linica dioica 40 Herb FACW Alnus rubra 500 Tree FAC Treent of Dominant Species that are OBL, FACW, or FAC (cept FAC-). Include species noted (*) as showing prohological adaptations to wetlands. "T" indicates trace.
EGETATION (✓Dominant species are checked) Plant Species
Plant Species % Cover Stratum Indicator 1 Phalans arundinacea 20 Herb FACW 2 Polygonum persicana 20 Herb FACW 3 Urrica dioica 40 Herb FAC+ 4 Alnus rubra 50 Tree FAC cent of Dominant Species that are OBL, FACW, or FAC cept FAC-). Include species noted (*) as showing rphological adaptations to wetlands. "T" indicates trace. marks (Describe disturbances, relevant local variations, seasonal effects, etc.):
Polygonum persicana 20 Herb FACW Urrica diorica 40 Herb FAC+ Alnus rubra 50 Tree FAC
3. Unica dioica 4. Ainus rubra 4. Ainus rubra 4. Dominant Species that are OBL, FACW, or FAC except FAC-). Include species noted (*) as showing prophological adaptations to wetlands. "T" indicates trace. The species of the spec
Annus rubra 50 Tree FAC Procent of Dominant Species that are OBL, FACW, or FAC (cept FAC-). Include species noted (*) as showing 100 (prophological adaptations to wetlands. "T" indicates trace.
ercent of Dominant Species that are OBL, FACW, or FAC
coept FAC-). Include species noted (*) as showing 100 prohological adaptations to wetlands. "T" indicates trace. marks: (Describe disturbances, relevant local variations, seasonal effects, etc.):
/DROLOGY
(Describe in Remarks).
Aprini Photograph
Aerial Photograph Inundated
Aerial Photograph Other X Saturated in Upper 12 inches
Aerial Photograph Other X Saturated in Upper 12 inches No Recorded Data Available Saturated in Upper 18 inches
Aerial Photograph Other X Saturated in Upper 12 inches
Aerial Photograph Other X Saturated in Upper 12 inches No Recorded Data Available Saturated in Upper 18 inches Water Marks
Aerial Photograph Other X Saturated in Upper 12 inches No Recorded Data Available Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
Aerial Photograph Other Other X Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
Aerial Photograph Other X Saturated in Upper 12 inches No Recorded Data Available Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Depth of Surface Water: None (in.) Secondary Indicators (2 or more required):
Aerial Photograph Other No Recorded Data Available No Recorded Data Available No Recorded Data Available Saturated in Upper 12 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Depth of Surface Water: None (in.) Secondary Indicators (2 or more required):
Aerial Photograph Other No Recorded Data Available No Recorded Data Available No Recorded Data Available Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Depth of Surface Water: None (in.) Secondary Indicators (2 or more required):
Aerial Photograph Other No Recorded Data Available No Recorded Data Available No Recorded Data Available Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Depth of Surface Water: None Depth to Free Water in Pit: Depth to Saturated Soil: None (in.) Depth to Saturated Soil: Inundated X Saturated in Upper 12 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches
Aerial Photograph Other X Saturated in Upper 12 inches No Recorded Data Available Saturated in Upper 18 inches
Aerial Photograph Other X Saturated in Upper 12 inches No Recorded Data Available Saturated in Upper 18 inches
Aerial Photograph Other X Saturated in Upper 12 inches No Recorded Data Available Saturated in Upper 18 inches
Aerial Photograph Other No Recorded Data Available Aerial Photograph Inundated X Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks
Aerial Photograph Other X Saturated in Upper 12 inches No Recorded Data Available No Recorded Data Available Water Marks
Aerial Photograph Other X Saturated in Upper 12 inches No Recorded Data Available No Recorded Data Available Water Marks
Aerial Photograph Other X Saturated in Upper 12 inches No Recorded Data Available Saturated in Upper 18 inches Water Marks Drift Lines
Aerial Photograph Other Other X Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks
Aerial Photograph Other Other X Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks
Aerial Photograph Other Other X Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks
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Aerial Photograph Other Other X Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks
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Aerial Photograph Other X Saturated in Upper 12 inches No Recorded Data Available Saturated in Upper 18 inches
Aerial Photograph Other X Saturated in Upper 12 inches
Aerial Photograph Other X Saturated in Upper 12 inches
Aerial Photograph Other X Saturated in Upper 12 inches
Aerial Photograph Inundated
Aerial Photograph Inundated
Aerial Photograph Inundated
Aprini Photograph
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Agrial Photograph
Agrial Photograph
Subam, Lake, of tipe Gane Primary Indicators:
Stream, Lake, or Tide Gage Primary Indicators:
Stream, Lake, or Tide Gage Primary Indicators:
Stream, Lake, or Tide Gage Primary Indicators:
Stream, Lake, or Tide Gage Primary Indicators:
Stream, Lake, or Tide Gape Primary Indicators:
Stream, Lake, or Tide Gage Primary Indicators:
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Stream, Lake, or Tide Gage Primary Indicators
Stream, Lake, or Tide Gage Primary Indicators:
Stream, Lake, or Tide Gage Primary Indicators
Stream, Lake, or Tide Gage Primary Indicators:
(Describe in Remarks).
(Describe in Remarks).
corded Data (Describe in Remarks): Wetland Hydrology Indicators (Describe in Remarks):
corded Data (Describe in Remarks): Wetland Hydrology Indicators (Describe in Remarks):
(Describe in Remarks).
(Describe in Remarks).
Stream Lake or Tide Gage Primary Indicators
(Describe in Remarks).
ecorded Data (Describe in Remarks): Wetland Hydrology Indicators (Describe in Remarks):

AR 047895

						Data Piot #:	R8-A2
Ľ						Wetland:	R8
_							
roject/Site	: Seattle Ta	acoma Airport - Maste	r Plan Update	Date:	11/1/00		
OILS ioil Surve	y Data:						
Map Unit N	iame: <u>Unm</u>	apped			Drainage Class	:	
	<u> </u>				Field Observation	ons Confirm Map	ped Type?
Гахопоту	(Subgroup):				Yes N	o NA	<u>x</u>
Profile Des	scription:						
Depth Inches)	Horizon Designation	Matrix Color (Munsell Moist)	Mottle Color (Munsell Mo		Mottle Abundance/Cor	•	ure, Concretions ospheres, etc.
-16	Α	10YR 3/1	-		•	Sand	y Silt
6-18+	С	10YR 3/1	-		-	Sand	
His His Sul	ducing Condi	Moisture Regime		Listed Listed X Aquic	on Local Hydric on State Hydric on National Hyd Moisture Regime ic Streaking in S	Soils List Iric Soils List e	
	•	ontent in Surface Laye	er		- (Explain in Rema	arks)	
	Describe soil	l disturbances, local viric soil indicators mee	, ,	teria.			
	nd other hydi						
Soil color ai		MINATION					
Soil color a			Yes x No		ls this	Sampling Point	Within a Wetle
Soil color ai WETLAN lydrophyti	ID DETER	n Present?	Yes X No		Is this	Sampling Point	Within a Wetlan

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): The presence of all three parameters indicate this area is a wetland.

						Data Plot #	: R8-B
						Wetland:	R8 Upland P
Jania Militari Candilla Tananania	A' Adomin- Div. 11			40.0			
roject/Site: Seattle Tacoma		date	Date:	10/3			
opplicant/Owner: Port of S			Count		-		
nvestigator: William Kleindi			State:	<u>w</u>	Α		
1987 Method 🔲 1989	Method				Con	nmunity ID:	Upland
o Normal Circumstances exi	ist on the site?	Yes	X No		- Field	Plot ID: 72	2-B
the site significantly disturbe	ed (Atypical Situation)?	Yes	No	<u>x</u>	_	-	
the area a potential Problem	n Area?	Yes	No	X	-		
GETATION (Domini	ant species are checked)						
Plant Species		% 0	over Strat	nw	Indicator		
1 Phalans arundinacea		20	Herb		FACW	_	
2. Ranunculus repens		20	Herb		FACW	_ 	
3 Urtica dioica 4 Rubus spectabilis		<u>20</u>	Herb		FAC+	_	
4 Rubus spectabilis 5 Thuja plicata		²⁰ / ₂₀	Shrut		FAC+	_	
			Tree		FAC	_	
cept FAC-). Include species	s noted (*) as showing		100				
cept FAC-). Include species imphological adaptations to w marks (Describe disturban- sturbed soils and disturbed p	s noted (*) as showing retlands. "T" indicates tra ces, relevant local variation lant community adjacent to the communi	ce. ons, season	al effects, e	itc.): r than	50% of the	a dominant pl	ants are hydrophyt
ccept FAC-). Include species imphological adaptations to w marks (Describe disturban- sturbed soils and disturbed patland vegetation criteria is m	s noted (*) as showing retlands. "T" indicates tra ces, relevant local variation lant community adjacent to the communi	ce. ons, season	al effects, e	tc.): r than	50% of the	e dominant pl	ants are hydrophyt
reept FAC-). Include species imphological adaptations to w marks (Describe disturban- sturbed soils and disturbed patland vegetation criteria is marks.	s noted (*) as showing retlands. "T" indicates tra ces, relevant local variational transfer adjacent to the community adjacent to the cet.	ce. ons, season to a barn. S	al effects, e Since greate	r than	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	
cept FAC-). Include species rphological adaptations to w marks (Describe disturbanturbed soils and disturbed pland vegetation criteria is m/DROLOGY corded Data (Describe in I	s noted (*) as showing retlands. "T" indicates traces, relevant local variation lant community adjacent tet. Remarks):	ce. ons, season to a barn. S	al effects, e Since greate Wetland H	r than	gy Indica	· · · · · · · · · · · · · · · · · · ·	ants are hydrophyt ibe in Remarks):
rept FAC-). Include species rephological adaptations to w marks (Describe disturbanturbed soils and disturbed patand vegetation criteria is marks (DROLOGY corded Data (Describe in Instruments of the Stream, Lake, or	s noted (*) as showing retlands. "T" indicates traces, relevant local variation lant community adjacent tet. Remarks):	ce. ons, season to a barn. S	al effects, e Since greate	ydrolo	egy Indica	· · · · · · · · · · · · · · · · · · ·	
cept FAC-). Include species rephological adaptations to w marks (Describe disturbanturbed soils and disturbed palland vegetation criteria is marks (DROLOGY corded Data (Describe in I	s noted (*) as showing retlands. "T" indicates traces, relevant local variation lant community adjacent tet. Remarks):	ce. ons, season to a barn. S	al effects, e Since greate Wetland H	ydrolo Indica	gy Indica itors:	tors (Descri	ibe in Remarks):
reept FAC-). Include species rephological adaptations to w marks. (Describe disturbant sturbed soils and disturbed pitland vegetation criteria is metallic produced Data. (Describe in Instrument Stream, Lake, or Aerial Photograph Other.	s noted (*) as showing retlands. "T" indicates traces, relevant local variational variation and community adjacent let. Remarks): r Tide Gage	ce. ons, season to a barn. S	al effects, e Since greate Wetland H	ydrolo Indica	egy Indica itors: inundated Saturated	tors (Descri	ibe in Remarks):
rept FAC-). Include species rephological adaptations to w marks. (Describe disturbanturbed soils and disturbed patand vegetation criteria is me PROLOGY corded Data. (Describe in Instrument Stream, Lake, or Aerial Photograph Other.	s noted (*) as showing retlands. "T" indicates traces, relevant local variational variation and community adjacent let. Remarks): r Tide Gage	ce. ons, season to a barn. S	al effects, e Since greate Wetland H	ydrolo ydrolo y Indica	egy Indica itors: inundated Saturated	tors (Descri in Upper 12 in n Upper 18 in	ibe in Remarks):
reept FAC-). Include species rephological adaptations to w marks. (Describe disturbant sturbed soils and disturbed pitland vegetation criteria is metallic produced Data. (Describe in Instrument Stream, Lake, or Aerial Photograph Other.	s noted (*) as showing retlands. "T" indicates traces, relevant local variational variation and community adjacent let. Remarks): r Tide Gage	ce. ons, season to a barn. S	al effects, e Since greate Wetland H	ydrolo Indica	gy Indica itors: inundated Saturated Saturated	tors (Descri in Upper 12 in n Upper 18 in	ibe in Remarks):
ccept FAC-). Include species or phological adaptations to w marks (Describe disturbant sturbed soils and disturbed pitland vegetation criteria is me COROLOGY corded Data (Describe in Instrument Stream, Lake, or Aerial Photograph Other	s noted (*) as showing retlands. "T" indicates traces, relevant local variational variation and community adjacent let. Remarks): r Tide Gage	ce. ons, season to a barn. S	al effects, e Since greate Wetland H	ydrolo Indica	egy Indica itors: Inundated Saturated i Saturated i Water Mari Drift Lines Sediment [in Upper 12 in Upper 18 in Upper 18 in Upper 18 in	ibe in Remarks): niches niches
Aerial Photograp Other X No Recorded Da	s noted (*) as showing retlands. "T" indicates traces, relevant local variational variation and community adjacent let. Remarks): r Tide Gage	ce. ons, season to a barn. S	al effects, e Since greate Wetland H	ydrolo Indica	egy Indica itors: Inundated Saturated i Saturated i Water Mari Drift Lines Sediment [in Upper 12 in Upper 18 in Upper 18 in	ibe in Remarks): niches niches
rept FAC-). Include species rephological adaptations to with marks. (Describe disturbantations described soils and disturbed patand vegetation criteria is mediated by the corded Data. (Describe in Stream, Lake, or Aerial Photograp, Other. X. No Recorded Data. (Described in Stream, Lake, or Aerial Photograp, Other.) X. No Recorded Data. (Described in Stream, Lake, or Aerial Photograp, Other.) X. No Recorded Data. (Described in Stream, Lake, or Aerial Photograp, Other.)	s noted (*) as showing retlands. "T" indicates traces, relevant local variational variation and community adjacent let. Remarks): r Tide Gage oh	ce. ons, season to a barn. S	al effects, e	ydrolo ydrolo y Indica	rgy Indica itors: Inundated Saturated i Saturated i Water Mari Orift Lines Sediment [Orainage F	in Upper 12 in Upper 18 in Upper 18 in Ks Deposits Vatterns in We	ibe in Remarks): niches niches
rept FAC-). Include species rephological adaptations to w marks. (Describe disturbant turbed soils and disturbed pitland vegetation criteria is mediated by the corded Data. (Describe in Stream, Lake, or Aerial Photograp Other. X. No Recorded Data. (Describe in light protograp Other.) X. No Recorded Data. (Describe in light protograp Other.) X. No Recorded Data. (Describe in light protograp Other.)	s noted (*) as showing retlands. "T" indicates traces, relevant local variational variatio	ce. ons, season to a barn. S	al effects, e	ydrolo ydrolo y Indica	rgy Indica itors: Inundated Saturated i Saturated i Water Mari Orift Lines Sediment [Orainage F	in Upper 12 in Upper 18 in Upper 18 in Upper 18 in	ibe in Remarks): niches niches
rept FAC-). Include species rephological adaptations to water the control of the	s noted (*) as showing retlands. "T" indicates traces, relevant local variational variatio	ce. ons, season to a barn. S	al effects, e	ydrolo y Indica	ogy Indica itors: Inundated Saturated i Saturated i Water Mari Drift Lines Sediment [Drainage P	in Upper 12 in Upper 18 in Upper 18 in Upper 18 in Ks Deposits latterns in We	ibe in Remarks): niches niches
ccept FAC-). Include species or phological adaptations to wormarks (Describe disturbants and disturbed patterned soils and disturbed patterned soils and disturbed patterned soils and disturbed patterned soils and disturbed patterned is more provided Data (Describe in Including Stream, Lake, or Aerial Photograph Other X No Recorded Data (Describe in Including Photograph Other) X No Recorded Data (Describe in Including Photograph Other) X No Recorded Data (Describe in Including Photograph Other) X No Recorded Data (Describe in Including Photograph Other) X No Recorded Data (Describe in Including Photograph Other)	s noted (*) as showing retlands. "T" indicates traces, relevant local variational variatio	ce. ons, season to a barn. S	al effects, e	ydrolo y Indica y Indica y Indica y Indica	ogy Indica itors: Inundated Saturated i Saturated i Water Mari Orift Lines Sediment (Orainage P	in Upper 12 in Upper 18 in Upper 18 in Upper 18 in Ks Deposits latterns in We	ibe in Remarks): Inches Inches Petlands
ccept FAC-). Include species or phological adaptations to we marks (Describe disturbant sturbed soils and disturbed patland vegetation criteria is medically corded Data (Describe in Included Data). Stream, Lake, or Aerial Photographother.	s noted (*) as showing retlands. "T" indicates traces, relevant local variational variatio	ce. ons, season to a barn. S	al effects, e	ydrolo ydrolo yIndica i i i i i i i i i i i i i i i i i i	egy Indica ators: Inundated Saturated in Saturated in Vater Mari Orift Lines Sediment (Orainage P dicators (2 Oxidized R Vater-Stair	in Upper 12 in Upper 18 in Upper 18 in Upper 18 in Ks Deposits latterns in We or more requiont Channels	ibe in Remarks): Inches Inches Petlands

No indicators of wetland hydrology are present.



Data Piot #: R8-B

			100		ND DET	redw:	IATION	Wetlan	nd:	R8 Upland Plot
		/Modified			ND DET			tion Manua		
Project/Si	te: Seattle T	(MOGIITEG acoma Airport - Mast				Date:	10/30/98	lion manua	••,	
SOILS Soil Sun	vey Data:									
Map Unit	Name: Unm	napped					Drainage (Class:		
							Field Obse	ervations Conf	irm Mapp	ed Type?
Taxonom	y (Subgroup):						Yes	No	_ NA	<u>x</u>
Profile D	escription:									
Depth (Inches)	Horizon Designation	Matrix Color (Munsell Moist)		Mottle (Munse	Cotor II Moist)		Mottle Abundance	e/Contrast		re, Concretions, spheres, etc.
0-3	Α	10YR 3/3					-		Loam	
3-11	В	10YR 3/3	1	0YR4 /6	;		Few. Medium	. Distinct	Loam	
11+	С	10YR 4/6							sandy	loam
Hydric Sc	oil Indicators	:								
н	istosol					Listed	on Local H	ydric Soils Lis	t	
н	istic Epipedon	1				Listed	on State H	ydnic Soils List	t	
s	ulfidic Odor					Listed	on Nationa	l Hydric Soils l	List	
	•	Moisture Regime				Aquic	Moisture Re	egime		
	educing Cond					_ Organ	nic Streaking	in Sandy Soil	Is	
	-	Chroma Colors				Mottle	-	_		
	ign Organic C	ontent in Surface Lay	/er			_ Other	(Explain in	Remarks)		
		d soils next to barn.	variation	ıs, etc.):					
WETLA	ND DETER	MINATION				· · · · · · · · · · · · · · · · · · ·				
ydrophy	tic Vegetatio	n Present?	Yes	X	No		is	this Samplin	g Point V	Vithin a Wetland1
lydric So	ils Present?		Yes		No 3	<u> </u>				
	lydrology Pre		Yes		_			Yes	No	X

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): Disturbed hydrophytic plant community present; however, area lacks hydric soils and wetland hydrology.



Data Plot #:

R8:B2

Wetland:

R8 Upland Piot

Project/Site: Seattle Tacoma Airport - Master Plan Upo	date		Date: 1	1/1/00
Applicant/Owner: Port of Seattle			County:	King
Investigator: William Kleindl, Pat Tougher			State:	WA
✓ 1987 Method				Community ID: Upland
Do Normal Circumstances exist on the site?	Yes	<u> </u>	No _	Field Plot ID: R8:B2
Is the site significantly disturbed (Atypical Situation)?	Yes		No >	(
s the area a potential Problem Area?	Yes		No >	
Remarks (Explain sample location, disturbances, problems of the sample plot was located in a upland area adjacent to			Parcel 21	76 .
/EGETATION (✓Dominant species are checked)				
Plant Species		% Cover	Stratum	Indicator
Festuca arundinacea Phalans arundinacea		20	Herb	FAC-
Ranunculus repens		2 0 8 0	Herb Herb	FACW FACW
4 Urtica dioica		20	Herb	FAC+
Rubus discolor Percent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates tractionaries (Describe disturbances, relevant local variation)	or FAC ce.	60 isonal effe	Shrub	FACU :
Rubus discolor Percent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrogeness.	or FAC ce.	60 isonal effe	Shrub	FACU :
Rubus discolor Percent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates tractionaries (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrogated by the company of the dominant plants are hydrogated by the company of the dominant plants are hydrogated by the company of the dominant plants are hydrogated by the company of the dominant plants are hydrogated by the company of the dominant plants are hydrogated by the company of the dominant plants are hydrogated by the company of the dominant plants are hydrogated by the company of the company of the dominant plants are hydrogated by the company of the dominant plants are hydrogated by the company of the dominant plants are hydrogated by the company of the	or FAC ce.	60 isonal effe	Shrub ects, etc.) nd vegeta	FACU:: tion criteria is met.
Rubus discolor Percent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrogated by the company of the dominant plants are hydrogated by the company of the dominant plants are hydrogated by the company of the dominant plants are hydrogated by the company of the dominant plants are hydrogated by the company of the dominant plants are hydrogated by the company of the dominant plants are hydrogated by the company of the dominant plants are hydrogated by the company of t	or FAC ce.	60 asonal effethe wetlan	Shrub ects, etc.) nd vegeta	FACU ition criteria is met. clogy Indicators (Describe in Remarks):
Rubus discolor ercent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing torphological adaptations to wetlands. "T" indicates trace emarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrogen to the dominant plants are h	or FAC ce.	60 asonal effethe wetlan	Shrub ects, etc.) nd vegeta	FACU ition criteria is met. clogy Indicators (Describe in Remarks):
Rubus discoor Percent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrogen proceeded Data (Describe in Remarks): Stream, Lake, or Tide Gage	or FAC ce.	60 asonal effethe wetlan	Shrub ects, etc.) nd vegeta	: tion criteria is met. ology Indicators (Describe in Remarks): dicators:
Rubus discoor Percent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates trace emarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrology ecorded Data (Describe in Remarks):	or FAC ce.	60 asonal effethe wetlan	Shrub ects, etc.) nd vegeta	: tion criteria is met. ology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches
Percent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing prophological adaptations to wetlands. "T" indicates tractionaries (Describe disturbances, relevant local variation since greater than 50% of the dominant plants are hydrology ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	or FAC ce.	60 asonal effethe wetlan	Shrub ects, etc.) nd vegeta	: tion criteria is met. clogy Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks
Percent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates tractionaries (Describe disturbances, relevant local variationaries greater than 50% of the dominant plants are hydrology ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	or FAC ce.	60 asonal effethe wetlan	Shrub ects, etc.) nd vegeta	tion criteria is met. clogy Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
Percent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T" indicates trackermarks (Describe disturbances, relevant local variations incompared than 50% of the dominant plants are hydrogeneater than 50% of the d	or FAC ce.	60 asonal effethe wetlan	Shrub ects, etc.) nd vegeta	tion criteria is met. clogy Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
Rubus discolor Percent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T" indicates track temarks (Describe disturbances, relevant local variation since greater than 50% of the dominant plants are hydrolytical ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available	or FAC ce.	60 asonal effethe wetlan	Shrub ects, etc.) nd vegeta	: tion criteria is met. clogy Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
Rubus discoor Percent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates trace termarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrogical except than 50% of the d	or FAC ce.	60 ssonal effithe wetlar Wetta P	ects, etc.) nd vegeta and Hydri	tion criteria is met. clogy Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
Rubus discolor Percent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T" indicates track temarks (Describe disturbances, relevant local variation since greater than 50% of the dominant plants are hydrolytical ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available eld Observations: Depth of Surface Water: Depth to Free Water in Pit: None	or FAC ce.	60 ssonal effithe wetlar Wetta P	ects, etc.) nd vegeta and Hydri	in tion criteria is met. cology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required):
Rubus discolor Percent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T" indicates track temarks (Describe disturbances, relevant local variation since greater than 50% of the dominant plants are hydrogetecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available eld Observations: Depth of Surface Water: None (in.)	or FAC ce.	60 ssonal effithe wetlar Wetta P	ects, etc.) nd vegeta and Hydri	tion criteria is met. clogy Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
Rubus discolor Percent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing morphological adaptations to wetlands. "T" indicates track temarks (Describe disturbances, relevant local variations ince greater than 50% of the dominant plants are hydrolytecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available eld Observations: Depth of Surface Water: Depth to Free Water in Pit: None	or FAC ce.	60 ssonal effithe wetlar Wetta P	ects, etc.) nd vegeta and Hydri	ition criteria is met. cology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches

		· · · 				Data Piot	#:	R8:B2
						Wetland:		R8 Upland Plo
Project/Si	ite: Seattle T	acoma Airport - Master F	lan Update	Date:	11/1/00			
SOILS Soil Sun	vey Data:							
Map Unit	Name: Unm	apped			Drainage Clas	ss:		
	-				Field Observa		Mapi	ped Type?
Taxonom	y (Subgroup):					No	NA.	
Profile De	escription:						IVA	<u>x</u>
Depth (Inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)	•	Mottle Abundance/Co	ontrast	Textu Rhizo	ire, Concretions, spheres, etc.
0-18+	_ <u> </u>	10YR 4/3	-					ev loam
Hi. Hi: Su Pro Re Gle Hig	educing Condit eyed or Low-C gh Organic Co	throma Colors Intent in Surface Layer disturbances, local varia	tions, etc.):	Listed Listed Aquic Organi Mottles	on Local Hydri on State Hydri on National Hy Moisture Regirr c Streaking in S s Explain in Rem	c Soils List dric Soils List ne Sandy Soils		
VETLAN	ND DETERI	MINATION						
	ic Vegetation		X No		le thia	Complies D	_1_4 **	SIAA
	s Present?	Yes	No	<u></u>	is this	sampling Po	oint V	Vithin a Wetland

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results):

Wetland vegetation is present, however wetland hydrology and hydric soils are absent and the area is not a wetland.

ND DETE				R9-A
	DMINAT	Wetk	end:	R9
COE Wet		ineation Manu	ıai\	
			<i></i> ,	
<u> </u>	Date: 9/1	8/98		
	County: I	King		
	State: \	VA		
		Communit	y ID: P	EM
/es	No X	- Field Plot	D: 57-4	\
res X	No	_		
es.	No X			
				
% Cover	Stratum	Indicator		
% Cover		Indicator		
% Cover	Stratum Herb	Indicator NL NL	<u></u>	
20	Herb	NL NL		
20	Herb Herb	NL NL		
20 4 20	Herb Herb	NL NL FACW		10. <u> </u>
20 4 20 3	Herb Herb Herb	NL NL FACW FAC FACW FAC		
20 4 20 3 2 20 60	Herb Herb Herb Herb	NL NL FACW FAC FACW FACW FACW FAC		
20 4 20 3 2 20	Herb Herb Herb Herb Herb	NL NL FACW FAC FACW FAC		
	/es	Date: 9/1 County:	Date: 9/18/98	Date: 9/18/98

Recorded Data (Describe in Remarks): Wetland Hydrology Indicators (Describe in Remarks): Primary Indicators: Stream, Lake, or Tide Gage Aerial Photograph Inundated Saturated in Upper 12 inches Other Saturated in Upper 18 inches No Recorded Data Available Water Marks **Drift Lines** Sediment Deposits Drainage Patterns in Wetlands Field Observations: Depth of Surface Water: (in.) Secondary Indicators (2 or more required): Depth to Free Water in Pit: (in.)

Remarks (As relevant, describe recent precipitation, hydrologic modifications, local variations, etc.):

(in.)

Depth to Saturated Soil:

Saturated soils are within 8 inches of surface after a very dry summer when most wetlands in the Puget Sound lowlands lack hydrology. Indicators of wetland hydrology are present.

Oxidized Root Channels in Upper 12 inches

Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)

								Data Pi	ot#:	R9-A
L '								Wetlan	ıd:	R9
roject/S	Site: Seattle T	acoma Airport - Mas	ter Pla	n Upda	te	Date:	9/18/98			
OILS	rvey Data:									
Map Un	it Name: Unm	napped					Drainage	Class:		
		=					Field Obs	ervations Conf	irm Map	ped Type?
Γaxonor	my (Subgroup):						Yes	No	NA	x
	Description:								-	<u></u>
Depth Inches)	Horizon	Matrix Color (Munsell Moist)		Mottle (Muns	Color ell Moist)		Mottle Abundand	ce/Contrast		ure, Concretions
-2	Ap1	10YR 3/1					-		Sand	y loam
?-12	Ap2	10YR 3/1		7.5YR 3	VЗ		Many, Mediu	um, Distinct	Sand	y loam
2+	c	10YR 3/1, 2.5Y 5/2		7.5YR 3	3/3 & 4/4		Many, Medit	ım. Prominent	Sand	y loam and sand
ydric S	Soil Indicators:									
+	Histosol					Listed	on Local H	lydric Soils List	t	
	Histic Epipedon					Listed	on State F	lydric Soils List		
5	Sulfidic Odor				_	Listed	on Nationa	al Hydric Soils L	_ist	
		Moisture Regime				Aquic	Moisture R	egime		
	Reducing Condi					Organ	ic Streakin	g in Sandy Soil	S	
	Gleyed or Low-(Mottle	S			
	High Organic Co	ontent in Surface Lay	er .		_	Other	(Explain in	Remarks)		
		disturbances, local								
ot at iou	wer toe of the s	lope adjacent to cree	k tem	ace So	xil color a	nd other hy	vdric soil in	dicators meet ti	he hydri	c soil criteria.
VETLA	ND DETER	MINATION								
ydrophy	ytic Vegetation	Present?	Yes	X	No		is	this Sampling	p Point	Within a Wetla
	oils Present?		Yes	×	No			•		
ydric St	ons riesent!		162	^	140			Yes X		

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results):

The presence of all three parameters indicate this area is a wetland.

Pa	ram	etrix,	inc
1 (1		CUIA,	



Data Plot #:

	WETLA	AND DETE	RMINATIO	N Wetland	R9 Upland Pio
(M	odified from: 1987	COE Wetla	ands Delir	neation Manual)	
_				•	
Project/Site: Seattle Tacoma Airr			Date: <u>9/18/</u>		
Applicant/Owner: Port of Seatt			County: Kir		
Investigator: Kristie Dunkin and		`	State: WA	\	
✓ 1987 Method ☐ 1989 Met	thod			Community ID	Upland
Do Normal Circumstances exist or	n the site?	Yes X	No	Field Plot ID:	57-B
Is the site significantly disturbed (A	Atypical Situation)?	Yes	No X		
is the area a potential Problem Are	ea?	Yes	No X		
Remarks (Explain sample location	n, disturbances, problem	n areas):			
Plot located on Parcel 312, and sai	mple area is in active nu	ırsery.			
VECETATION ADDRESS					
VEGETATION (✓Dominant s Plant Species	species are checked)	% Cover	Stratum	Indicator	
Danie Consumal		80			
2 Epilobium ciliatum		1	Herb	NL FACW-	
3 Equisetum telmateia		8		FACW	
4 Ranunculus repens		5	Herb	FACW	
5 Tanacetum sp.		1	Herb	NL	
6 Rubus discolor		3	Shrub	FACU	
norphological adaptations to wetlar Remarks (Describe disturbances,	nds. "T" indicates trace. relevant local variations	i, seasonal eff			
norphological adaptations to wetlar Remarks (Describe disturbances, Planted rows of nursery stock: crab	nds. "T" indicates trace. relevant local variations papple sweet gum, Lomb	s, seasonal effo	hite ash. kat	sura, omamental bin tion criteria are not r	ches, Japanese maples net.
norphological adaptations to wetlar Remarks (Describe disturbances, Planted rows of nursery stock: crab terbs occur as weeds in between re	nds. "T" indicates trace. relevant local variations papple sweet gum, Lomb	s, seasonal effo	hite ash. kat	sura, ornamental bin tion criteria are not r	ches, Japanese maples net.
norphological adaptations to wetlar Remarks (Describe disturbances, Planted rows of nursery stock: crab perbs occur as weeds in between re- HYDROLOGY	nds. "T" indicates trace. relevant local variations papple sweet gum, Lombows of trees and ground	s, seasonal efficient popular, we cover. The we	hite ash, kat etiand vegeta	tion criteria are not r	net.
norphological adaptations to wetlar Remarks (Describe disturbances, Planted rows of nursery stock: crab perbs occur as weeds in between re- HYDROLOGY	nds. "T" indicates trace. relevant local variations papple sweet gum, Lombows of trees and ground marks):	s, seasonal efficard popular, we cover. The we	hite ash, kat etiand vegeta	gy Indicators (De	net.
norphological adaptations to wetlar Remarks (Describe disturbances, Planted rows of nursery stock: crab lerbs occur as weeds in between re HYDROLOGY Recorded Data (Describe in Rem	nds. "T" indicates trace. relevant local variations papple sweet gum, Lombows of trees and ground marks):	s, seasonal efficard popular, we cover. The we	thite ash, kat tland vegeta and Hydrolo rimary Indica	gy Indicators (De	net.
norphological adaptations to wetlar Remarks (Describe disturbances, Planted rows of nursery stock: crab erbs occur as weeds in between re IYDROLOGY Recorded Data (Describe in Rem Stream, Lake, or Tid	nds. "T" indicates trace. relevant local variations papple sweet gum, Lombows of trees and ground marks):	s, seasonal efficard popular, we cover. The we	thite ash, kat tiland vegeta and Hydrolo nmary Indica	gy Indicators (De:	net. scribe in Remarks);
norphological adaptations to wetlar Remarks (Describe disturbances, Planted rows of nursery stock: crab erbs occur as weeds in between re YDROLOGY Recorded Data (Describe in Rem Stream, Lake, or Tid Aerial Photograph	nds. "T" indicates trace. relevant local variations sapple sweet gum, Lombows of trees and ground marks): le Gage	s, seasonal efficard popular, we cover. The we	nite ash, kat. atland vegeta and Hydrolo rimary Indica	gy Indicators (De:	net. scribe in Remarks): 2 inches
norphological adaptations to wetlar Remarks (Describe disturbances, Planted rows of nursery stock: crab lerbs occur as weeds in between re HYDROLOGY Recorded Data (Describe in Rem Stream, Lake, or Tid Aerial Photograph Other	nds. "T" indicates trace. relevant local variations sapple sweet gum, Lombows of trees and ground marks): le Gage	s, seasonal efficard popular, we cover. The we	and Hydrolo	gy Indicators (De: tors: Inundated Saturated in Upper 1 Saturated in Upper 1 Nater Marks	net. scribe in Remarks): 2 inches
norphological adaptations to wetlar Remarks (Describe disturbances, Planted rows of nursery stock: crab herbs occur as weeds in between re HYDROLOGY Recorded Data (Describe in Rem Stream, Lake, or Tid Aerial Photograph Other	nds. "T" indicates trace. relevant local variations papple sweet gum, Lombows of trees and ground marks): le Gage	s, seasonal efficard popular, we cover. The we	and Hydrolo	gy Indicators (Destroys: Intores: Intor	net. scribe in Remarks): 2 inches
Remarks (Describe disturbances, Planted rows of nursery stock: crab nerbs occur as weeds in between re HYDROLOGY Recorded Data (Describe in Rem Stream, Lake, or Tid Aerial Photograph Other	nds. "T" indicates trace. relevant local variations papple sweet gum, Lombows of trees and ground marks): le Gage	s, seasonal efficard popular, we cover. The we	and Hydrolo	gy Indicators (Destroys: Intores: Intor	net. scribe in Remarks): 2 inches 8 inches
norphological adaptations to wetlar Remarks (Describe disturbances, Planted rows of nursery stock: crab nerbs occur as weeds in between re HYDROLOGY Recorded Data (Describe in Rem Stream, Lake, or Tid Aerial Photograph Other X No Recorded Data A	nds. "T" indicates trace. relevant local variations papple sweet gum, Lombows of trees and ground marks): le Gage	s, seasonal efficard popular, we cover. The we	and Hydrolo	gy Indicators (Destroys: Intores: Intor	net. scribe in Remarks): 2 inches 8 inches
norphological adaptations to wetlar Remarks (Describe disturbances, Planted rows of nursery stock: crab herbs occur as weeds in between re HYDROLOGY Recorded Data (Describe in Rem Stream, Lake, or Tid Aerial Photograph Other No Recorded Data A hield Observations: Depth of Surface Water:	nds. "T" indicates trace. relevant local variations replevant local variations reple sweet gum, Lomb ows of trees and ground marks): le Gage available	s, seasonal efficient popular, we cover. The we	and Hydrolo rimary Indica	gy Indicators (Destroys: Intores: Intor	scribe in Remarks): 2 inches 8 inches
norphological adaptations to wetlar Remarks (Describe disturbances, Planted rows of nursery stock: crab lerbs occur as weeds in between re HYDROLOGY Recorded Data (Describe in Rem Stream, Lake, or Tid Aerial Photograph Other X No Recorded Data A ield Observations: Depth of Surface Water: Depth to Free Water in Pit:	nds. "T" indicates trace. relevant local variations papple sweet gum, Lombows of trees and ground marks): le Gage Available None (in.)	s, seasonal efficient popular, we cover. The we	and Hydrolo mary Indica	gy Indicators (Destators: Inundated Saturated in Upper 1 Saturated in Upper 1 Water Marks Drift Lines Sediment Deposits Drainage Patterns in	net. scribe in Remarks): 2 inches 8 inches Wetlands
norphological adaptations to wetlar Remarks (Describe disturbances, Planted rows of nursery stock: crab herbs occur as weeds in between re HYDROLOGY Recorded Data (Describe in Rem Stream, Lake, or Tid Aerial Photograph Other X No Recorded Data A hield Observations: Depth of Surface Water: Depth to Free Water in Pit:	nds. "T" indicates trace. relevant local variations happle sweet gum, Lombows of trees and ground marks): le Gage le Gage	s, seasonal efficient popular, we cover. The we	enite ash, katand vegeta and Hydrolo mary Indica	gy Indicators (Destators: Inundated Saturated in Upper 1 Saturated in Upper 1 Water Marks Drift Lines Sediment Deposits Drainage Patterns in	net. 2 inches 8 inches Wetlands equired): nets in Upper 12 inches
Remarks (Describe disturbances, Planted rows of nursery stock: crab nerbs occur as weeds in between research to the control of	nds. "T" indicates trace. relevant local variations papple sweet gum, Lombows of trees and ground marks): le Gage Available None (in.)	s, seasonal efficient popular, we cover. The we	econdary Inc.	gy Indicators (Destroys: Inundated Saturated in Upper 1 Saturated in Upper 1 Water Marks Drift Lines Sediment Deposits Drainage Patterns in dicators (2 or more in Dxidized Root Chann Water-Stained Leave	net. 2 inches 8 inches Wetlands equired): nels in Upper 12 inches
morphological adaptations to wetlar Remarks (Describe disturbances, Planted rows of nursery stock: crab herbs occur as weeds in between re HYDROLOGY Recorded Data (Describe in Rem Stream, Lake, or Tid Aerial Photograph Other X No Recorded Data A Field Observations: Depth of Surface Water: Depth to Free Water in Pit:	nds. "T" indicates trace. relevant local variations papple sweet gum, Lombows of trees and ground marks): le Gage Available None (in.)	s, seasonal efficient popular, we cover. The we	econdary Inc.	gy Indicators (Destroys: Inundated Saturated in Upper 1 Saturated in Upper 1 Water Marks Drift Lines Sediment Deposits Drainage Patterns in Dxidized Root Chann Water-Stained Leave Local Soil Survey Da	net. 2 inches 8 inches Wetlands equired): nets in Upper 12 inches sta
Aerial Photograph Other X No Recorded Data A Field Observations: Depth of Surface Water: Depth to Free Water in Pit: Depth to Saturated Soil: 2	nds. T indicates trace. relevant local variations sapple sweet gum, Lombows of trees and ground marks): le Gage None (in.) 22 (in.)	weti	and Hydrolo rimary Indica	gy Indicators (Destators: Inundated Saturated in Upper 1 Saturated in Upper 1 Nater Marks Drift Lines Sediment Deposits Drainage Patterns in Dicators (2 or more in Dicators (2 or more in Dicators (3 or more in Dicators (4 or more in Dicators (5 or more in Dicators (6 or more in Dicators (7 or more in Dicators (8 or more in Dicators (9 or more in Dicators (9 or more in Dicators (1 or more in Dicators (1 or more in Dicators (1 or more in Dicators (2 or more in Dicators (2 or more in Dicators (3 or more in Dicators (4 or more in Dicators (6 or more in Dicators (7 or more in Dicators (8 or more in Dicators (9 or more in Dicators (9 or more in Dicators (1 or more	net. 2 inches 8 inches Wetlands equired): nets in Upper 12 inches sta
morphological adaptations to wetlar Remarks (Describe disturbances, Planted rows of nursery stock: crab herbs occur as weeds in between re HYDROLOGY Recorded Data (Describe in Rem Stream, Lake, or Tid Aerial Photograph Other X No Recorded Data A Field Observations: Depth of Surface Water: Depth to Free Water in Pit:	nds. T indicates trace. relevant local variations sapple sweet gum, Lombows of trees and ground marks): le Gage None (in.) 22 (in.)	weti	and Hydrolo rimary Indica	gy Indicators (Destators: Inundated Saturated in Upper 1 Saturated in Upper 1 Nater Marks Drift Lines Sediment Deposits Drainage Patterns in Dicators (2 or more in Dicators (2 or more in Dicators (3 or more in Dicators (4 or more in Dicators (5 or more in Dicators (6 or more in Dicators (7 or more in Dicators (8 or more in Dicators (9 or more in Dicators (9 or more in Dicators (1 or more in Dicators (1 or more in Dicators (1 or more in Dicators (2 or more in Dicators (2 or more in Dicators (3 or more in Dicators (4 or more in Dicators (6 or more in Dicators (7 or more in Dicators (8 or more in Dicators (9 or more in Dicators (9 or more in Dicators (1 or more	net. 2 inches 8 inches Wetlands equired): nets in Upper 12 inches sta

							Data Plot	#:	R9-B
							Wetland:		R9 Upland Plot
Project/S	ite: Seattle T	acoma Airport - Master	Plan Update	<u>. </u>	Date:	9/18/98			
SOILS Soil Sur	vey Data:								
Map Uni	t Name: Unn	napped				Drainage Class	5 :		
						Field Observat	ions Confirm	Марр	ed Type?
Taxonon	ny (Subgroup):					Yes N	10	NA	<u>x</u>
Profile D	escription:								
Depth Inches)	Horizon Designation	Matrix Color (Munsell Moist)	Mottle C (Munsel			Mottle Abundance/Co			re, Concretions, spheres, etc.
-16	Ap	10YR 2/2				-		Sandy	loam
6-24	С	10YR 3/2	7.5YR 4/6	5		Fine, Medium, Dis	tinct	Sandy	clay loam
łydric S	oil Indicators	:							
+	listosol				Listed	on Local Hydric	Soils List		
<u> </u>	listic Epipedon	1			_	on State Hydric			
	Sulfidic Odor			· · · · · · · · · · · · · · · · · · ·	Listed	on National Hyd	dnc Soils List		
	-	Moisture Regime			_ Aquic	Moisture Regim	e		
	leducing Cond				Organ	ic Streaking in S	Sandy Soils		
		Chroma Colors			_ Mottle	S			
<u> </u>	ligh Organic C	ontent in Surface Layer			Other	(Explain in Rem	arks)		
		l disturbances, local vai							
ower ho	rizon saturated	f. Five percent slope to	wards Miller	Creek. No	o indica	ors of hydric so	ils.		
VETLA	ND DETER	MINATION		"					
	rtic Vegetation		es	No x		le thie	Samulia - D	-:-4 10	/ithin a Wetland
ydrophy						13 11112	Jennyming P	OINL W	rmmin z watien
	ils Present?		es —	No X					TIME OF THE LIGHT

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): This area is an upland since all wetland parameters are absent.

Parametrix, Inc.



Data Plot #:

R9a-A1

, •	WET	LAND	DETER	RMINA	TION Wetland: R9
(elineation Manual)
oject/Site: Seattle Tacoma	_				1/2/00
pplicant/Owner: Port of Se		-	_ (County:	King
vestigator: W. Kleindi and J	. Hawkins			state:	WA
1987 Method 1989 I	Method				Community ID: PEM
o Normal Circumstances exist	on the site?	Yes	×	No	— Field Plot ID: R9a-A1
the site significantly disturbed		Yes		No 3	C FIEIG PIOT ID. RSJ-A1
the area a potential Problem	· -	Yes			 <
marks (Explain sample loca			as):	··• <u> </u>	```
e is located in the lawn of Pai	•		,-		
Plant Species	nt species are checked)		% Cover	Stratum	Indicator
			10	Herb	FAC
1 Agrostis capillans (tenuis)			20		EACIAL
Juncus effusus 3 Ranunculus repens recent of Dominant Species cept FAC-). Include species rphological adaptations to we marks (Describe disturbano	noted (*) as showing tlands. "T" indicates tra es, relevant local variati	ice. ons, sea			
Juncus effusus 3 Ranunculus repens recent of Dominant Species coept FAC-). Include species rephological adaptations to we marks (Describe disturbanc ace 100% of the dominant plan	noted (*) as showing tlands. "T" indicates tra es, relevant local variati	ice. ons, sea	90 100 asonal effe	Herb	FACW):
Juncus effusus 3 Ranunculus repens recent of Dominant Species crept FAC-). Include species creptological adaptations to we rmarks (Describe disturbance are 100% of the dominant plain /DROLOGY	noted (*) as showing tlands. "T" indicates traces, relevant local variations are hydrophytic, the	ice. ons, sea	90 100 asonal effet vegetation	ects, etc.	FACW): is met.
Juncus effusus 3 Ranunculus repens recent of Dominant Species recept FAC-). Include species imphological adaptations to we marks (Describe disturbance force 100% of the dominant plain DROLOGY corded Data (Describe in R	noted (*) as showing tlands. "T" indicates traces, relevant local variations are hydrophytic, the temarks):	ice. ons, sea	90 100 asonal effet vegetation	Herb ects, etc.	FACW is met. rology Indicators (Describe in Remarks):
2. Juncus effusus 3. Ranunculus repens recent of Dominant Species repet FAC-). Include species rephological adaptations to we rmarks (Describe disturbance rece 100% of the dominant plant DROLOGY corded Data (Describe in R Stream, Lake, or	noted (*) as showing tlands. "T" indicates traces, relevant local variations are hydrophytic, the temarks): Tide Gage	ice. ons, sea	90 100 asonal effet vegetation	Herb ects, etc.	rology Indicators (Describe in Remarks):
2. Juncus effusus 3. Ranunculus repens recent of Dominant Species coept FAC-). Include species rephological adaptations to we marks (Describe disturbance ace 100% of the dominant plain /DROLOGY corded Data (Describe in R Stream, Lake, or Aerial Photograph	noted (*) as showing tlands. "T" indicates traces, relevant local variations are hydrophytic, the temarks): Tide Gage	ice. ons, sea	90 100 asonal effet vegetation	Herb ects, etc. on criteria and Hyd	rology Indicators (Describe in Remarks): dicators: Inundated
2. Juncus effusus 3. Ranunculus repens recent of Dominant Species cept FAC-). Include species rphological adaptations to we marks (Describe disturbano ace 100% of the dominant plai /DROLOGY corded Data (Describe in R Stream, Lake, or Aerial Photograph Other	noted (*) as showing tlands. "T" indicates trailes, relevant local variations are hydrophytic, the demarks): Tide Gage	ice. ons, sea	90 100 asonal effet vegetation	Herb ects, etc.	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches
2. Juncus effusus 3. Ranunculus repens recent of Dominant Species cept FAC-). Include species rphological adaptations to we marks (Describe disturbanc ace 100% of the dominant plai /DROLOGY corded Data (Describe in R Stream, Lake, or Aerial Photograph	noted (*) as showing tlands. "T" indicates trailes, relevant local variations are hydrophytic, the demarks): Tide Gage	ice. ons, sea	90 100 asonal effet vegetation	Herb ects, etc. on criteria and Hyd	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches
2. Juncus effusus 3. Ranunculus repens recent of Dominant Species cept FAC-). Include species rphological adaptations to we marks (Describe disturbano nee 100% of the dominant plai /DROLOGY corded Data (Describe in R Stream, Lake, or Aerial Photograph Other	noted (*) as showing tlands. "T" indicates trailes, relevant local variations are hydrophytic, the demarks): Tide Gage	ice. ons, sea	90 100 asonal effet vegetation	Herb ects, etc. on criteria and Hyd	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks
2 Juncus effusus 3 Ranunculus repens recent of Dominant Species coept FAC-). Include species orphological adaptations to we marks (Describe disturbance nee 100% of the dominant plain YDROLOGY corded Data (Describe in R Stream, Lake, or Aerial Photograph Other	noted (*) as showing tlands. "T" indicates trailes, relevant local variations are hydrophytic, the demarks): Tide Gage	ice. ons, sea	90 100 asonal effet vegetation	Herb ects, etc. on criteria and Hyd	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches
2. Juncus effusus 3. Ranunculus repens secent of Dominant Species coept FAC-). Include species prophological adaptations to we smarks (Describe disturbance are 100% of the dominant plain YDROLOGY corded Data (Describe in R Stream, Lake, or Aerial Photograph Other X No Recorded Data	noted (*) as showing tlands. "T" indicates trailes, relevant local variations are hydrophytic, the demarks): Tide Gage	ice. ons, sea	90 100 asonal effet vegetation	Herb ects, etc. on criteria and Hyd	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
2. Juncus effusus 3. Ranunculus repens recent of Dominant Species recept FAC-). Include species rephological adaptations to we marks (Describe disturbance rece 100% of the dominant plant CDROLOGY corded Data (Describe in R Stream, Lake, or Aerial Photograph Other X No Recorded Data Id Observations:	noted (*) as showing tlands. "T" indicates traites, relevant local variations are hydrophytic, the demarks): Tide Gage Table Available	ice. ons, sea	90 100 asonal effet vegetation	Herb ects, etc. on criteria and Hyd	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
2. Juncus effusus 3. Ranunculus repens recent of Dominant Species (cept FAC-). Include species prohological adaptations to we marks (Describe disturbance (central formula for the dominant plant) (COROLOGY (Corded Data (Describe in R (Corded Data (Describ	noted (*) as showing tlands. "T" indicates traites, relevant local variations are hydrophytic, the marks): Tide Gage Tale Available None (in.)	ice. ons, sea	100 asonal effi vegetation	ects, etc. on criteria and Hyd rimary In	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
2. Juncus effusus 3. Ranunculus repens recent of Dominant Species recept FAC-). Include species rephological adaptations to we marks (Describe disturbance rece 100% of the dominant plant /DROLOGY corded Data (Describe in R Stream, Lake, or Aerial Photograph Other X. No Recorded Data Id Observations: Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as showing tlands. "T" indicates traites, relevant local variations are hydrophytic, the semarks): Tide Gage a Available None (in.) (in.)	ice. ons, sea	100 asonal effi vegetation	ects, etc. on criteria and Hyd rimary In	is met. rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required):
2. Juncus effusus 3. Ranunculus repens ercent of Dominant Species except FAC-). Include species orphological adaptations to we emarks (Describe disturbance arce 100% of the dominant plain YDROLOGY corded Data (Describe in R Stream, Lake, or Aerial Photograph Other X No Recorded Data Id Observations: Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as showing tlands. "T" indicates traites, relevant local variations are hydrophytic, the marks): Tide Gage Tale Available None (in.)	ice. ons, sea	100 asonal effi vegetation	ects, etc. on criteria and Hyd rimary in X econdary	is met. rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
2 Juncus effusus 3 Ranunculus repens ercent of Dominant Species except FAC-). Include species prophological adaptations to we emarks (Describe disturbance ance 100% of the dominant plain YDROLOGY ecorded Data (Describe in R Stream, Lake, or Aerial Photograph Other	noted (*) as showing tlands. "T" indicates traites, relevant local variations are hydrophytic, the semarks): Tide Gage a Available None (in.) (in.)	ice. ons, sea	100 asonal effi vegetation	ects, etc. on criteria and Hyd rimary in X econdary	is met. rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands / Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches

P									Data Pio Wetland		R9a-A1
Project/S	Site: Seattle Tr	acoma Airport - Maste	r Pla	n Updat	e	_	Date:	11/2/00			
SOILS Soil Su	rvey Data:										
Map Un	it Name: Not i	mapped						Drainage Class	s :		
								Field Observat	ions Confir	п Мар	pped Type?
Taxonor	ny (Subgroup):							Yes N	lo <u>x</u>	NA	
Profile I	Description:										
Depth (inches)	Horizon Designation	Matrix Color (Munsell Moist)		Mottle (Munse				Mottle Abundance/Co	ntrast		ture, Concretions, cospheres, etc.
0-5	A	10YR 2/1						•		Loan	n, oxidized rhizospheres, cond
5-18+	В	2.5Y 5/2		2.5Y 5/4				Common, Coarse,	Faint	Clay	Loam
Hydric S	ioil Indicators	:									
,	Histosol						Listed	on Local Hydric	Soils List		
	Histic Epipedon	ı					Listed	on State Hydric	Soils List		
<u> </u>	Sulfidic Odor						Listed	on National Hyd	tric Soils Li	st	
	•	Moisture Regime				Х	Aquic	Moisture Regim	e		
	Reducing Cond				-		• -	ic Streaking in S	andy Soils		
	•	Chroma Colors ontent in Surface Laye			-	<u>X</u>	Mottle	-			
					_		OBIE	(Explain in Rem	arks)		
		l disturbances, local va ric soil indicators meet				loria					
	AND DETER			.,,	-						
Hydroph	ytic Vegetatio	n Present?	Yes	<u>X</u>	No		_	is this	Sampling	Point	: Within a Wetland?
Hydric S	oils Present?	•	Yes	X	No		_		Yes X	ķ.i.	•
Wetland	Hydrology Pre	sent?	Yes	X	No		_		169	_ N	

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): All three wetland parameters are met, therefore the area is a wetland.

Parametrix, Inc.



Data Piot #:	R9a-A2
141-41	

WET	LAND DET	ERMINAT	TION Wetland: R9
(Modified from: 19	-		
Project/Site: Seattle Tacoma Airport - Master Plan Upo			1/2/00
Applicant/Owner: Port of Seattle		County:	King
nvestigator: W. Kleindl and J. Hawkins		State:	WA
✓ 1987 Method 1989 Method			
Do Normal Circumstances exist on the site?	Yes X	No	Community ID: PFO
		-	Field Plot ID: R9a-A2
s the site significantly disturbed (Atypical Situation)?	Yes	. No 🗅	<u>X</u>
s the area a potential Problem Area?	Yes	No _2	<u>×</u>
Remarks (Explain sample location, disturbances, problem in the site is located within sewer line easement on parcel		st edge of th	ne wetland is at the base of the slope.
EGETATION (✓Dominant species are checked)			
Plant Species	% Cov		Indicator
Convolvulus arvensis Epilobium ciliatum	5 10	Herb Herb	NL FACINA
3 Equisetum telmateia	20	Herb	FACW-
4 Ins pseudacorus	10	Herb	OBL
5 Mimulus spp.	10	Herb	NL NL
			
6 Rubus discolor	90	Shrub	FACU
Alnus rubra ercent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing corphological adaptations to wetlands. "T" indicates trace	50 or FAC 66 ce.	Tree	FAC
arcent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing corphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrogeneous contents.	50 or FAC 66 ce.	Tree	FAC
Alnus rubra ercent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing prophological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrogen and the prophology (YDROLOGY).	50 or FAC be. ns, seasonal cohytic, the well	Tree	FAC : tion criteria is met.
7 Alnus rubra ercent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace emarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrogeneous processes of the dominant plants are hydrogeneous plants. (Describe in Remarks):	50 or FAC 66 ce. ns, seasonal ophytic, the well	Tree effects, etc.)	: tion criteria is met. rology Indicators (Describe in Remarks):
7 Alnus rubra ercent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace emarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrogy PDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage	50 or FAC 66 ce. ns, seasonal ophytic, the well	Tree	FAC it ition criteria is met. rology Indicators (Describe in Remarks): dicators:
7 Alnus rubra ercent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace emarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrogy accorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	50 or FAC 66 ce. ns, seasonal ophytic, the well	Tree effects, etc.) eland vegeta etland Hydr Primary Inc	FAC ition criteria is met. rology Indicators (Describe in Remarks): dicators:
7 Alnus rubra ercent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variation nice greater than 50% of the dominant plants are hydrology ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	50 or FAC 66 ce. ns, seasonal ophytic, the well	Tree effects, etc.)	FAC ition criteria is met. cology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches
7 Alnus rubra ercent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace emarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrogy accorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	50 or FAC 66 ce. ns, seasonal ophytic, the well	Tree effects, etc.) eland vegeta etland Hydr Primary Inc	ration criteria is met. rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches
alnus rubra ercent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variation fince greater than 50% of the dominant plants are hydrograph of the Gage Aerial Photograph Other	50 or FAC 66 ce. ns, seasonal ophytic, the well	Tree effects, etc.) eland vegeta etland Hydr Primary Inc	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks
ercent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing prophological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variationince greater than 50% of the dominant plants are hydrology ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	50 or FAC 66 ce. ns, seasonal ophytic, the well	Tree effects, etc.) eland vegeta etland Hydr Primary Inc	ration criteria is met. rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches
ercent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace arearks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrogy PROLOGY Pecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available	50 or FAC 66 ce. ns, seasonal ophytic, the well	Tree effects, etc.) eland vegeta etland Hydr Primary Inc	ition criteria is met. cology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
allows rubra ercent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace marks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrogy ydrodd Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	50 or FAC 66 ce. ns, seasonal ophytic, the well	Tree effects, etc.) eland vegeta etland Hydr Primary Inc	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
7 Alnus rubra ercent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T indicates trace emarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrogy and the dominant plants are hydro	50 or FAC 66 ce. ns, seasonal ophytic, the well	effects, etc.) eland vegeta etland Hydr Primary Inc	ition criteria is met. cology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
ercent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T' indicates tracemarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrograph of the dominant plants are hydrograph. Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available and Observations: Depth of Surface Water: Depth to Free Water in Pit: 6 (in.)	50 or FAC be. ons, seasonal conduct, the well	effects, etc.) eland vegeta etland Hydr Primary Inc	i: ition criteria is met. rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required):
ercent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing sorphological adaptations to wetlands. "T indicates tracemarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrogy YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	50 or FAC be. ons, seasonal conduct, the well	effects, etc.) eland vegeta etland Hydr Primary Inc	ition criteria is met. cology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
ercent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing torphological adaptations to wetlands. To indicates trace emarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrogical except than 50% of the dominant plants are	50 or FAC be. ons, seasonal conduct, the well	effects, etc.) eland vegeta etland Hydr Primary Inc	tion criteria is met. cology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches
ercent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing torphological adaptations to wetlands. To indicates trace emarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrogical except than 50% of the dominant plants are	50 or FAC be. ons, seasonal conduct, the well	effects, etc.) eland vegeta etland Hydr Primary Inc	tion criteria is met. cology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data
ercent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing torphological adaptations to wetlands. To indicates trace emarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrogical except than 50% of the dominant plants are	or FAC Dec. 100 100 100 100 100 100 100 1	effects, etc.) eland vegeta etland Hydr Primary Inc X Secondary	tion criteria is met. cology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)

							Data P	lot#:	R9a-A2
L '							Wetla	nd:	R9
Project/Si	ite: Seattle T	acoma Airport - Ma	ster Pla	n Upda	ıte	Date:	11/2/00		
SOILS									
Soil Sur	vey Data:								
Map Unit	Name: Not	mapped					Drainage Class:		
	· · · · · · · · · · · · · · · · · · ·						Field Observations Con	firm Map	pped Type?
[avonom	y (Subgroup):						Yes No X	NIA.	
							Yes No X	_ NA	
Profile Di Depth	escription: Horizon	Matrix Color		Mottle	Color		Mottle	Tev	ure. Concretions.
inches)		(Munsell Moist)			ell Moist)		Abundance/Contrast		cospheres, etc.
)-5	A	10YR 3/1					•	Sand	ly silt (fill)
-18+	С	2.5Y 3/2		2.5Y 3/	1		Many, Coarse, Faint	Sand	ly silt (fill)
H H S P R X G H H Semarks	educing Cond leyed or Low- igh Organic C (Describe soi	Moisture Regime itions Chroma Colors ontent in Surface LI disturbances, locaric soil indicators m	ıl variati			Listed Listed Aquic Organ Mottle Other	I on Local Hydric Soils List on State Hydric Soils List on National Hydric Soils Moisture Regime hic Streaking in Sandy Soils (Explain in Remarks)	it List ils	d and composed
NETLA	ND DETER	MINATION							
ydrophy	tic Vegetation	n Present?	Yes	×	No		Is this Samplin	a Point	Within a Wetland
vdric So	ils Present?		Yes	×	. No				
,							Yes >	< No	

All three wetland parameters are met.

rafameurx. mo	arametrix, Ind	٥	-
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Data Plot #:	R10-A
Wetland:	R10

				Wetland:	R10
	WET	LAND DET	TERMINA	TION	
	(Modified from: 19	87 COE W	etlands D	elineation Manual)	
Project/Site: Seattle Tacoma	Airport - Master Plan Up	date	Date: 9	0/17 / 98	-
Applicant/Owner: Port of S	eattle		County:	King	
Investigator: William Kleindl			State:	WA	
✓ 1987 Method □ 1989	Method			Community ID: 5	PEM/PSS
Do Normal Circumstances exis	st on the site?	Yes	No	, · · · · -	
				THEIR FIRE ID. 30-	<u> </u>
Is the site significantly disturbe		Y e s		<u>x</u>	
Is the area a potential Problem		Yes	_ No	<u>×</u>	
Remarks (Explain sample loc Plot is located at west edge on	·	nem areas).			
VEGETATION (Domina	ant species are checked)				
Plant Species		% Co			
Agrostis gigantea Convolvulus arvensis		60	Herb	— FACW	
2 Convolvulus arvensis 3 Equisetum telmateia		30 10	Herb Herb		
4 Ranunculus repens			Herb	FACW	
5 Urtica dioica		30	Herb	FAC+	
6. Comus stolonifera		5	Shrub	FACW	
7 Rubus discolor		50	Shrub	FACU	
8 Salix spp.(planted)		15	Shrub	FACW	
9 Spiraea spp. (planted)		10	Shrub	FACW	
emarks (Describe disturband lants are either nursery stock of egetation in cultivated areas of ydrophytic and therefore satisf	or invasive weedy specie f wetland includes Salix s	s. Area is hio	hiv altered w	with a nursery hed of doowno	d, spiraea and willow. of the vegetation is
YDROLOGY					M
ecorded Data (Describe in F	Pemarks):	14.	lational blood	-alomotodicates and a	
Stream, Lake, or		•	Primary In	rology Indicators (Describ	e in Remarks):
Aerial Photograp	•		· ·····ary iii		
Other	11			Inundated Saturated in Lieuwa 43 in-	
X No Recorded Da	ta Available			Saturated in Upper 12 inc Saturated in Upper 18 inc	
No recorded ba	a Available			Water Marks	A163
				Drift Lines	
				Sediment Deposits	
				Drainage Patterns in Wet	lands
eld Observations: Depth of Surface Water:	None (in)				
Depth to Free Water in Pit:	None (in.)		Secondary	Indicators (2 or more require	red):
Depth to Saturated Soil:	>16 (in.)		-	Oxidized Root Channels	in Upper 12 inches
	(11.)			Water-Stained Leaves	_
				Local Soil Survey Data	
				Other (Explain in Remark	s)
emarks (As relevant, describ	e recent precipitation, hy	drologic modi	fications les		
etiana nyarology is frequently i	absent from wetlands due	and the day ou	manufis, 100	ai variauons, etc.):	
dric soil the wetland hydrology	criteria is assumed to be	present.	er mona	is. Daseu of the presence o	r wetland vegetation i

AR 047909

1									Data P		R10-A
									Wetiar	nd:	R10
	· • · · · •		_								
тојеси	ite: Seattle i	acoma Airport - Mas	ter Pla	an Upda	ate		Date:	9/17/98			
SOILS	_										
Soil Sur	vey Data:										
Map Unit	Name: Unm	napped						Drainage Cla	3SS:		
								Field Observ	rations Conf	irm Map	ped Type?
Taxonom	y (Subgroup):							Yes	No	NA	x
Profile D	escription:					-				-	
Depth (inches)	Horizon Designation	Matrix Color (Munsell Moist)			Color			Mottle Abundance/(Contrast		ure, Concretions
-3	A	10YR 2/2		•							v ioam
3-16	B	10YR 2/2		2.5Y 6/	4			Common, Mediu	m. Prominent	Sand	y Clay loam
lvdric Sc	oil Indicators:										, ,
_	stosol										
	stic Epipedon							on Local Hyde			
Sı	ulfidic Odor				•			on State Hydr on National H			
Pr	obable Aquic I	Moisture Regime			-	×		Moisture Regi		JSt	
Re	educing Condi	tions			-			c Streaking in			
		Chroma Colors			_	Х	Mottles		cane, com		
		intent in Surface Lay			_		Other (Explain in Rei	marks)		
emarks	(Describe soil	disturbances, local	variatio	ons, etc	:.) :						
OII COIOT &	nd other hydn	ic soil indicators med	et the i	hydric s	oil crit	ena.					
VETLAN	ID DETER										
	ND DETERI										
	ic Vegetation	Present?	Yes	<u>x</u>	No		_	ls thi	s Sampling	Point \	Within a Wetlan
	s Present?		Yes	<u>x</u>	No						
etland Hy	drology Pres	ent?	Yes		No	X	_		Yes X	No	

ices between 1987 and 1989 delineation results):

No strong indicators of hydrology due to summer season and no recent precipitation. Vegetation is hydrophytic and soils are hydric and therefore wetland presence assumed.

P	ar	ar	n	etr	ix,	inc.
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Data Plot #:

R11-A1

Wetland:

Project/Site: Seattle Tacoma Airport - Master Plan Upda	ate	_ □)ate: 11/2	2/00
Applicant/Owner: Port of Seattle		_ 0	County: K	ing
nvestigator: W. Kleindl and J. Hawkins		s	tate: W	/A
1987 Method 1989 Method		_		Community ID: PEM
o Normal Circumstances exist on the site?	Yes _	X	No	- Field Plot ID: R11-A1
the site significantly disturbed (Atypical Situation)?	Yes		No X	_
the area a potential Problem Area?	Yes		No X	
emarks (Explain sample location, disturbances, proble	_			_
EGETATION (Dominant species are checked) Plant Species	•/-	Cover	Stratum	Indicator
A	50		Herb	FAC
Agrosus capitaits (teriors) Athynum filix-temina			Herb	FAC+
3 Equisetum teimateia	80)	Herb	FACW
4 Ins pseudacorus	5		Herb	OBL
				FACW
5 Ranunculus repens	20		Herb	
Alnus rubra ercent of Dominant Species that are OBL, FACW, o except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variation	r FAC e.	100 onal effe	Tree	FAC
Alnus rubra ercent of Dominant Species that are OBL, FACW, o except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variation ance greater than 50% of the dominant plants are hydrogeness.	r FAC e.	100 onal effe	Tree	FAC
Alnus rubra ercent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrogen YDROLOGY	r FAC e.	100 onal effe e wetlar	Tree ects, etc.): nd vegetation	on criteria is met. logy Indicators (Describe in Remarks):
Alnus rubra ercent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variation are greater than 50% of the dominant plants are hydrogen YDROLOGY	r FAC e.	100 onal effe e wetlar	Tree ects, etc.): nd vegetation	on criteria is met. logy Indicators (Describe in Remarks):
Alnus rubra ercent of Dominant Species that are OBL, FACW, o except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variation ance greater than 50% of the dominant plants are hydrogenored Data (Describe in Remarks):	r FAC e.	100 onal effe e wetlar	Tree ects, etc.): nd vegetation	on criteria is met. logy Indicators (Describe in Remarks): cators:
Alnus rubra ercent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace emarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrogen to the corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	r FAC e.	100 onal effe e wetlar	Tree ects, etc.): nd vegetation	on criteria is met. Hogy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches
6. Ainus rubra ercent of Dominant Species that are OBL, FACW, o except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrogryphology ecorded Data (Describe in Remarks):	r FAC e.	100 onal effe e wetlar	Tree ects, etc.): nd vegetation	on criteria is met. Hogy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches
Alnus rubra ercent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace emarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydroged PDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	r FAC e.	100 onal effe e wetlar	Tree ects, etc.): nd vegetation	on criteria is met. Hogy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches
Alnus rubra ercent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace emarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydroged PDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	r FAC e.	100 onal effe e wetlar	Tree ects, etc.): nd vegetation	logy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks
ercent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrograph of the dominant plants are hydrograph of the dominant plants are hydrograph of the Company of the Company of the Gage Aerial Photograph of the Company of	r FAC e.	100 onal effe e wetlar	Tree ects, etc.): nd vegetation	on criteria is met. Hogy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
ercent of Dominant Species that are OBL, FACW, o except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrograph of the dominant plants are hydrograph of the process of the dominant plants are hydrograph of the process of the dominant plants are hydrograph of the process of the dominant plants are hydrograph of the process of	r FAC e.	100 onal effe e wetlar Wetla	and Hydro	on criteria is met. Nogy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
ercent of Dominant Species that are OBL, FACW, o except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrograph Other X No Recorded Data Available ald Observations: Depth of Surface Water: None (in.)	r FAC e.	100 onal effe e wetlar Wetla	and Hydro	on criteria is met. Hogy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
Ainus rubra ercent of Dominant Species that are OBL, FACW, o except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace emarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrog YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	r FAC e.	100 onal effe e wetlar Wetla	and Hydro	lon criteria is met. logy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inche
arcent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace terrarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrogy specified to the dominant plants are hydrogy specified Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Beld Observations: Depth of Surface Water: None (in.) Depth to Free Water in Pit: >18 (in.)	r FAC e.	100 onal effe e wetlar Wetla	ects, etc.): and vegetation and Hydro rimary indi	lon criteria is met. logy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inche Water-Stained Leaves
arcent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace terrarks (Describe disturbances, relevant local variation ince greater than 50% of the dominant plants are hydrogy specified to the dominant plants are hydrogy specified Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Beld Observations: Depth of Surface Water: None (in.) Depth to Free Water in Pit: >18 (in.)	r FAC e.	100 onal effe e wetlar Wetla	ects, etc.): and vegetation and Hydro rimary indi	lon criteria is met. logy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inche

<u>Pa</u>	rametri	ix, Inc.									
1								_	Data Pio Wetland		R11-A1
Project/	Site: Seattle T	acoma Airport - Mast	er Pla	n Upda	ite	Date	11/2/00				
SOILS	S urvey Data:										
Map Ur	nit Name: Not	mapped					Drainage	Class:			
							Field Ob	servation	s Confir	п Мар	ped Type?
Taxono	my (Subgroup):						Yes	No	x	NA	
Profile	Description:										
Depth (Inches	Horizon) Designation	Matrix Color (Munsell Moist)			Color ell Moist)		Mottle Abundan	ce/Contra	ast		ure, Concretions, ospheres, etc.
0-9	Α	10YR 3/2		10YR 4	1/3		Many, Fine.	Faint		Silty	sand, oxidized rhizosphere
9-18+	<u>B</u>	10YR 4/2		10YR 4	V4		Many, Fine.	Faint		Silty	sand
×	Reducing Condi Gleyed or Low-(High Organic Co	Moisture Regime		ons att		Listed Listed Aquid Organ K Mottle	f on Locat f on State if on Nation Moisture F fic Streakin is (Explain in	Hydric So al Hydric Regime ig in San	oils List : Soils Lis dy Soils	st	
Soil colo		dicate that this soil is			·· j.				 ,		
	ytic Vegetation		Yes	Ų	No			- 41- 6			
, <u>-</u>	•		(62	<u> </u>	No		t:	s this Sa	mpling	Point	Within a Wetland?
ydric S	ioils Present?		Yes	Х	No						

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): All three wetland parameters are present.



Data Plot #:	R11-A2
Wetland:	R11

	(Modified from: 19				,
oject/Site: Seattle Tacoma	Airport - Master Plan Up	date	i	Date: 11/	/2/00
pplicant/Owner: Port of Se				County: H	King
vestigator: W. Kleindi and	· · · · · · · · · · · · · · · · · · ·			· •	NA .
1987 Method 1989				-	
o Normal Circumstances exis		Yes	X	No	Community ID: PEM
					Field Plot ID: R11-A2
the site significantly disturbed	•	Yes	—	No X	_
the area a potential Problem emarks (Explain sample local)		Yes		No <u>X</u>	
e sample plot located on Mill	er Creek Nursery site. al	bout 15	feet north	of Miller C	reek
EGETATION (Domina Plant Species	nt species are checked)		% Cover	Stratum	Indicator
-			50	Herb	FACW
Equisetum telmateia Ranunculus repens			10	Herb	FACW
			20	Herb	OBL
3 Veronica americana					
Rubus discolor A Rubus discol	noted (*) as showing etlands. "T" indicates traces, relevant local variation	ice. ons, sea	33 asonal eff		FACU
Rubus discolor reent of Dominant Species cept FAC-). Include species rphological adaptations to we marks (Describe disturbanc see greater than 50% of the dis-	noted (*) as showing etlands. "T" indicates traces, relevant local variation	ice. ons, sea	33 asonal eff	fects, etc.):	
Rubus discolor recent of Dominant Species recept FAC-). Include species rephological adaptations to we marks (Describe disturbanc rice greater than 50% of the de /DROLOGY	noted (*) as showing etlands. "T" indicates traces, relevant local variation of the hydroninant plants are hydroninant plants."	ice. ons, sea	33 asonal eff	fects, etc.):	ion criteria is met.
A Rubus discolor recent of Dominant Species cept FAC-). Include species rephological adaptations to we marks (Describe disturbanc ice greater than 50% of the di DROLOGY corded Data (Describe in F	noted (*) as showing etlands. "T" indicates traces, relevant local variation to an are hydromenant plants are hydromenant."	ice. ons, sea	33 asonal eff the wetla	fects, etc.): ind vegetati	ology Indicators (Describe in Remarks):
Rubus discolor recent of Dominant Species cept FAC-). Include species rphological adaptations to we marks (Describe disturbanc ce greater than 50% of the d 'DROLOGY corded Data (Describe in F Stream, Lake, or	noted (*) as showing etlands. "T" indicates traces, relevant local variation l	ice. ons, sea	33 asonal eff the wetla	fects, etc.):	ology Indicators (Describe in Remarks):
Rubus discolor recent of Dominant Species cept FAC-). Include species rphological adaptations to we marks (Describe disturbanc ce greater than 50% of the d 'DROLOGY corded Data (Describe in F Stream, Lake, or Aerial Photograp	noted (*) as showing etlands. "T" indicates traces, relevant local variation l	ice. ons, sea	33 asonal eff the wetla	fects, etc.): ind vegetati	ion criteria is met. blogy Indicators (Describe in Remarks): icators: Inundated
4 Rubus discolor recent of Dominant Species (cept FAC-). Include species (rphological adaptations to we marks (Describe disturbance greater than 50% of the d /DROLOGY corded Data (Describe in F Stream, Lake, or Aerial Photograp Other	noted (*) as showing etlands. "T" indicates traces, relevant local variation in an indicate traces, relevant local variation in an indicate traces. Remarks): Tide Gage h	ice. ons, sea	33 asonal eff the wetla	fects, etc.): ind vegetati	ology Indicators (Describe in Remarks):
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A Rubus discolor recent of Dominant Species recept FAC-). Include species rephological adaptations to we marks (Describe disturbance rece greater than 50% of the di /DROLOGY corded Data (Describe in F Stream, Lake, or Aerial Photograpi Other	noted (*) as showing etlands. "T" indicates traces, relevant local variation in an indicate traces, relevant local variation in an indicate traces. Remarks): Tide Gage h	ice. ons, sea	33 asonal eff the wetla	fects, etc.): ind vegetati	ion criteria is met. blogy Indicators (Describe in Remarks): icators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
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A Rubus discolor Procent of Dominant Species Recept FAC-). Include species Rephological adaptations to we Remarks (Describe disturbance Recepted The Community of the Community of the disturbance Recepted The Community of the Community of the disturbance Recepted The Community of the Commun	noted (*) as showing etlands. "T" indicates traces, relevant local variation in the indicates traces, relevant local variation in the indicates traces, relevant local variation in the indicate traces. Remarks): Tide Gage h	ice. ons, sea	33 asonal eff the wetla	fects, etc.): ind vegetati	ion criteria is met. blogy Indicators (Describe in Remarks): icators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
A Rubus discolor recent of Dominant Species cept FAC-). Include species rephological adaptations to we marks (Describe disturbanc ice greater than 50% of the d DROLOGY corded Data (Describe in F Stream, Lake, or Aerial Photograp Other X No Recorded Data	noted (*) as showing etlands. "T" indicates traces, relevant local variation in the indicates traces, relevant local variation in the indicates traces, relevant local variation in the indicate traces. Remarks): Tide Gage h	ice. ons, sea	33 asonal eff the wetla Weti	fects, etc.): Ind vegetati Iand Hydro Primary Indi	plogy Indicators (Describe in Remarks): icators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
A Rubus discolor recent of Dominant Species cept FAC-). Include species rephological adaptations to we marks (Describe disturbanc ice greater than 50% of the di DROLOGY corded Data (Describe in F Stream, Lake, or Aerial Photograp Other X No Recorded Data Id Observations: Depth of Surface Water:	noted (*) as showing etlands. "T" indicates traces, relevant local variation from in an end of the common of the c	ice. ons, sea	33 asonal eff the wetla Weti	fects, etc.): Ind vegetati Iand Hydro Primary Ind	plogy Indicators (Describe in Remarks): icators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required):
4. Rubus discolor recent of Dominant Species recept FAC-). Include species rephological adaptations to we marks (Describe disturbance rece greater than 50% of the d (DROLOGY corded Data (Describe in F Stream, Lake, or Aerial Photograp Other X No Recorded Data Id Observations: Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as showing etlands. "T" indicates traces, relevant local variation to minant plants are hydroxical etlands." Remarks): Tide Gage th ta Available None (in.)	ice. ons, sea	33 asonal eff the wetla Weti	fects, etc.): Ind vegetati Iand Hydro Primary Indi	ion criteria is met. plogy Indicators (Describe in Remarks): icators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches
A Rubus discolor Procent of Dominant Species Recept FAC-). Include species Rephological adaptations to we Recept FAC-). Include species Recept FAC-). Inclu	noted (*) as showing etlands. "T" indicates traces, relevant local variation dominant plants are hydrotectical plants." Tide Gage htta Available None (in.) (in.)	ice. ons, sea	33 asonal eff the wetla Weti	fects, etc.): Ind vegetati Iand Hydro Primary Ind	ion criteria is met. plogy Indicators (Describe in Remarks): icators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches Water-Stained Leaves
4 Rubus discolor ercent of Dominant Species except FAC-). Include species orphological adaptations to we emarks (Describe disturbance ance greater than 50% of the di YDROLOGY ecorded Data (Describe in F Stream, Lake, or Aerial Photograpi Other	noted (*) as showing etlands. "T" indicates traces, relevant local variation dominant plants are hydrotectical plants." Tide Gage htta Available None (in.) (in.)	ice. ons, sea	33 asonal eff the wetla Weti	fects, etc.): Ind vegetati Iand Hydro Primary Ind	ion criteria is met. plogy Indicators (Describe in Remarks): icators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches

Soil Survey Data: Map Unit Name: Not mapped									Data Plot	#:	R11-A2
SOILS Soil Survey Data: Map Unit Name: Not mapped	L *								Wetland:		R11
SOILS Soil Survey Data: Map Unit Name: Not mapped	Project/Site: Se	attle Tac	oma Aimort - Mas	ter Pis	n i lod	a te	Date	11/2/00			
Field Observations Confirm Mapped Type? Taxonomy (Subgroup): Yes No X NA Profile Description: Depth Horizon Matrix Color (Munsell Moist) Designation (Munsell Moist) Abundance/Contrast Rnizospheres, etc Profile Description: Listed on Local Hydric Soils List Histosol Histo Epipedon Sulfidic Odor Rock, impenetrable fill Listed on National Hydric Soils List Listed on National Hydric Soils List Probable Aquic Moisture Regime Reducing Conditions X Gleyed or Low-Chroma Colors High Organic Content in Surface Layer Pemarks (Describe soil disturbances, local variations, etc.):	SOILS		OTTO AIRPORT - WIES	ster rae	Upo.	<u>ate</u>	Date	11/2/00	·		
Field Observations Confirm Mapped Type? Yes No X NA Profile Description: Designation (Munsell Moist) (Munsell Moist) (Munsell Moist) Profile Designation (Munsell Moist) (Munsell Moist) (Munsell Moist) (Munsell Moist) Profile Designation (Munsell Moist) (Munsell Moi	Soil Survey Da	ta:									
Field Observations Confirm Mapped Type? Yes No X NA Profile Description: Designation (Munsell Moist) Mottle Color (Munsell Moist) Mottle Color (Munsell Moist) Many. Coarse. Faint Loam (fill) Designation (Munsell Moist) Loam (fill) Port Rock. Impenetrable fill Pydric Soil Indicators: Histosol Listed on Local Hydric Soils List Histic Epipedon Listed on State Hydric Soils List Sulfidic Odor Listed on National Hydric Soils List Probable Aquic Moisture Regime Aquic Moisture Regime Reducing Conditions Organic Streaking in Sandy Soils X Gleyed or Low-Chroma Colors X Mottles High Organic Content in Surface Layer Other (Explain in Remarks)	Map Unit Name:	Not ma	apped					Drainage Class			
Taxonomy (Subgroup): Profile Description: Designation Matrix Color (Munsell Moist) Mottle Color (Munsell Moist) Many. Coarse. Faint Loam (fill) Description: Designation Matrix Color (Munsell Moist) Many. Coarse. Faint Loam (fill) Description: Designation Matrix Color (Munsell Moist) Mottle Color (Munsell Moist) Abundance/Contrast Rhizospheres. etc Description: Description: Mottle Color (Munsell Moist) Mottle Color (Munsell Moist) Abundance/Contrast Rhizospheres. etc Description: Description: Mottle Color (Munsell Moist) Mottle Color (Munsell Moist) Abundance/Contrast Rhizospheres. etc Description: Description: Listed on Local Hydric Soils List Listed on Local Hydric Soils List Listed on State Hydric Soils List Listed on National Hydric Soils List Aquic Moisture Regime Aquic Moisture Regime Reducing Conditions Organic Streaking in Sandy Soils X Gleyed or Low-Chroma Colors High Organic Content in Surface Layer Other (Explain in Remarks)										Map	ped Type?
Profile Description: Profile Description: Profile Description: Profile Description: Profile Designation Matrix Color (Munsell Moist) Mottle Color (Munsell Moist) Abundance/Contrast Profile Designation (Munsell Moist) Profile Description Profile	Taxonomy (Sub	aroup):						•			, , , , , , , , , , , , , , , , , , , ,
Designation Matrix Color (Munsell Moist) Moistle Color (Munsell Moist) Abundance/Contrast Rhizospheres. etc. 10		_				=			<u> </u>	110	
ydric Soil Indicators: Histosol Histic Epipedon Sulfidic Odor Sulfidic Odor Probable Aquic Moisture Regime Reducing Conditions Gleyed or Low-Chroma Colors High Organic Content in Surface Layer Promarks (Describe soil disturbances, local variations, etc.): Rock, impenetrable fill Rock, impenetrable fill Listed on Local Hydric Soils List Listed on National Hydric Soils List Aquic Moisture Regime Organic Streaking in Sandy Soils X Mottles Other (Explain in Remarks)	Depth Horiz	on N							ntrast		
ydric Soil Indicators: Histosol Histic Epipedon Sulfidic Odor Listed on State Hydric Soils List Listed on National Hydric Soils List Listed on National Hydric Soils List Probable Aquic Moisture Regime Reducing Conditions Organic Streaking in Sandy Soils X Gleyed or Low-Chroma Colors High Organic Content in Surface Layer Other (Explain in Remarks))-10 A	10)YR 4/2		10YR	4/4		Many, Coarse, Fair	nt	Loam	(fill)
ydric Soil Indicators: Histosol Histic Epipedon Sulfidic Odor Probable Aquic Moisture Regime Reducing Conditions Gleyed or Low-Chroma Colors High Organic Content in Surface Layer Listed on Local Hydric Soils List Listed on National Hydric Soils List Aquic Moisture Regime Organic Streaking in Sandy Soils X Mottles Other (Explain in Remarks)	0+ -							-		Rock,	impenetrable fill
penetrable fill on sewer line.	Histosol Histic Ep Sulfidic C Probable Reducing X Gleyed o High Orgi	ipedon Odor Aquic Mi Condition Low-Che anic Contibe soil di	ons roma Colors tent in Surface La isturbances, local cate that this soil i	variati		c.):	Listed Listed Aquic Organ Mottle	on State Hydric on National Hydr Moisture Regime ic Streaking in Sa s (Explain in Rema	Soils List ric Soils List andy Soils arks)		At 10+ inches,
	IETI AND DE	TED:	W. 4.710.1								
ETI AND DETERMINATION											
ETLAND DETERMINATION			resent?	Yes	<u> x</u>	. ^{No}		is this !	Sampling P	oint \	Within a Wetland
drophytic Vegetation Present? Yes X No Is this Sampling Point Within a Wetland				Yes	<u> x</u>	. No		,	es X	No	
drophytic Vegetation Present? Yes X No Is this Sampling Point Within a Wetlan dric Soils Present? Yes X No Yes X No	euana myarolo(gy Prese	nt7	Yes	_ X	No		•			

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): All three parameters are present, therefore the area is a wetland.



DEG FIVE
Mada

R11-B

Project/Site: Seattle Tacoma Airport - Master Plan Up	date		Date: 11	/2/00
opplicant/Owner: Port of Seattle			County:	King
vestigator: W. Kleindl and J. Hawkins		;	State:	WA
1987 Method				Community ID: Upland Forest
Normal Circumstances exist on the site?	Yes	<u> x</u>	No _	— Field Plot ID: R11-B
the site significantly disturbed (Atypical Situation)?	Yes		No X	
the area a potential Problem Area?	Yes		No X	
marks (Explain sample location, disturbances, prot	biem are	eas):		
e sample plot is located in the Miller Creek Nursery s GETATION (Dominant species are checked)	•	- Cent to V	veuano K-	
Plant Species	,	% Cover	Stratum	indicator
1 Equisetum telmateia		15	Herb	FACW
2 ins pseudacorus		<u>t</u>	Herb	OBL
3 Polystichum munitum 4 Corvius comuta		20	Herb	FACU
5 Oemlena cerasitormis		40	Shrub Shrub	FACU FACU
6. Rubus discolor		40	Shrub	FACU
U,				
7. Rubus laciniatus		15	Shrub	FACU+
· · · · · · · · · · · · · · · · · · ·		15 50	Shrub Tree	FACU+ FAC
Rubus laciniatus Alnus rubra Populius trichocarpa recent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing		50 50		
Rubus lacinatus Ainus rubra Populus trichocarpa recent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing riphological adaptations to wetlands. "T" indicates trainmarks (Describe disturbances, relevant local variations than 50% of the dominant plants are hydrophical series."	ace. ions, sea	50 50 40 asonal eff	Tree Tree fects, etc.):	FAC FAC
Rubus laciniatus Alnus rubra Populus trichocarpa ccent of Dominant Species that are OBL. FACW, cept FAC-). Include species noted (*) as showing riphological adaptations to wetlands. "T" indicates trainmarks (Describe disturbances, relevant local variations to the dominant plants are hydroph	ace. ions, sea	50 50 40 asonal eff	Tree Tree fects, etc.):	FAC FAC criteria is not met.
Rubus laciniatus Alnus rubra Populus trichocarpa recent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing riphological adaptations to wetlands. "T" indicates trainmarks (Describe disturbances, relevant local variations to the dominant plants are hydrophydrodd Data (Describe in Remarks):	ace. ions, sea	50 50 40 asonal eff	Tree Tree fects, etc.):	FAC FAC Content is not met. Cology Indicators (Describe in Remarks):
Rubus laciniatus Ainus rubra Populus trichocarpa cent of Dominant Species that are OBL. FACW, cept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T" indicates trainarks (Describe disturbances, relevant local variations than 50% of the dominant plants are hydrophysical phology."	ace. ions, sea	50 50 40 asonal eff	Tree Tree fects, etc.): vegetation	FAC FAC : criteria is not met. ology Indicators (Describe in Remarks): dicators:
Rubus laciniatus Alnus rubra Populus trichocarpa recent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing riphological adaptations to wetlands. "T" indicates training indicates indicate	ace. ions, sea	50 50 40 asonal eff	Tree Tree fects, etc.): vegetation	FAC FAC Content is not met. Cology Indicators (Describe in Remarks):
Rubus laciniatus Alnus rubra Populus trichocarpa recent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing riphological adaptations to wetlands. "T" indicates trainmarks (Describe disturbances, relevant local variations to the dominant plants are hydrophystorided Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	ace. ions, sea	50 50 40 asonal eff	Tree Tree fects, etc.): vegetation	FAC FAC : criteria is not met. ology Indicators (Describe in Remarks): dicators: Inundated
7 Rubus laciniatus 8 Alnus rubra 9 Populus trichocarpa recent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing riphological adaptations to wetlands. "T" indicates trainmarks (Describe disturbances, relevant local variations to less than 50% of the dominant plants are hydrophydrorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	ace. ions, sea	50 50 40 asonal eff	Tree Tree fects, etc.): vegetation	FAC FAC FAC in criteria is not met. cology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks
7 Rubus laciniatus 8 Alnus rubra 9 Populus Inchocarpa recent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing imphological adaptations to wetlands. "T" indicates trainmarks (Describe disturbances, relevant local variations to less than 50% of the dominant plants are hydrophydroded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	ace. ions, sea	50 50 40 asonal eff	Tree Tree fects, etc.): vegetation	FAC FAC FAC criteria is not met. closoribe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
7 Rubus laciniatus 8 Alnus rubra 9 Populus trichocarpa recent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing riphological adaptations to wetlands. "T" indicates trainmarks (Describe disturbances, relevant local variations to less than 50% of the dominant plants are hydrophydroded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	ace. ions, sea	50 50 40 asonal eff	Tree Tree fects, etc.): vegetation	FAC FAC FAC FAC Cology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
Rubus laciniatus Alnus rubra Populus trichocarpa recent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing riphological adaptations to wetlands. "T" indicates training in the less than 50% of the dominant plants are hydrophysical contents. The less than 50% of the dominant plants are hydrophysical contents. Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	ace. ions, sea	50 50 40 asonal eff	Tree Tree fects, etc.): vegetation	FAC FAC FAC criteria is not met. closure in Remarks (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
Rubus laciniatus Alnus rubra Populus trichocarpa recent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing riphological adaptations to wetlands. "T" indicates training the less than 50% of the dominant plants are hydroph (*) DROLOGY rorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available d Observations: Depth of Surface Water: None (in.)	ace. ions, sea	50 50 40 assonal eff wetland	fects, etc.): vegetation land Hydro	FAC FAC FAC FAC criteria is not met. clicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
Rubus laciniatus Alnus rubra Populus trichocarpa recent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing riphological adaptations to wetlands. "T" indicates trainmarks (Describe disturbances, relevant local variations to less than 50% of the dominant plants are hydroph (DROLOGY) rorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available d Observations: Depth of Surface Water: Depth to Free Water in Pit: > 18 (in.)	ace. ions, sea	50 50 40 assonal eff wetland	fects, etc.): vegetation land Hydro	FAC FAC FAC FAC FAC FAC Cology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required):
Rubus laciniatus Alnus rubra Populus trichocarpa recent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing riphological adaptations to wetlands. "T" indicates training the less than 50% of the dominant plants are hydroph or celess than 50% of the dominant plants are hydroph or corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available and Observations: Depth of Surface Water: Depth to Free Water in Pit: None (in.)	ace. ions, sea	50 50 40 assonal eff wetland	fects, etc.): vegetation land Hydro	FAC FAC FAC FAC FAC Cology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches
7 Rubus lacinatus 8 Ainus rubra 9 Populus trichocarpa recent of Dominant Species that are OBL. FACW, recept FAC-). Include species noted (*) as showing imphological adaptations to wetlands. "T" indicates training in the less than 50% of the dominant plants are hydrophysical of the	ace. ions, sea	50 50 40 assonal eff wetland	fects, etc.): vegetation land Hydro	FAC FAC FAC FAC FAC FAC Cology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required):

							eta Pio	•	R11-B	
						V	Vetland	:	Upland	
roject/S	Site: Seattle T	acoma Airport - Maste	Plan Update	Date:	11/2/00					
OILS	;				-					
ioil Sur	rvey Data:									
Map Uni	it Name: Not:	mapped			Drainage	Class:				
					•	_	Confirm	n Man	ped Type?	
[axonor	ny (Subgroup):								pod Type:	
	Description:				Yes	_ No	<u>x</u>	NA		
Depth	Horizon	Matrix Color	Mottle Color		Mottle			T	0	
inches)	Designation	(Munsell Moist)	(Munsell Moist)			e/Contras	st	_	ure, Concretions Ospheres, etc.	
-8	Α	10YR 2/2						Loam		
-18+	<u>B</u>	10YR 3/3	<u> </u>		•			Loam		
ydric S	oil Indicators:									
	fistosol			l isted	on Local H	hydric Sail	n lint			
	listic Epipedon				on State F					
	ulfidic Odor				on Nationa			t		
		Moisture Regime			ic Moisture Regime					
	educing Condi			Organ	ic Streaking	in Sandy	/ Soils			
	leyed or Low-C			Mottle:	S					
		ontent in Surface Layer		_ Other	(Explain in	Remarks)	+			
marks	(Describe soil	disturbances, local va	nations, etc.):							
) indicat	ors of hydric so	oil are present.								
/ETLA	ND DETERI	MINATION								
			es No							
/drophy	TIC Venetation			,	1-	44:- C	-1:	:		
	tic Vegetation ils Present?		es No)	<u>`</u>	15	mis 25m	ipiing P	oint v	Nithin a Wetlar	

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): All three parameters are not present, therefore the area is not a wetland.

P	ar	ar	ne	tri	X,	in	c.
•	~				,		••



Data Plot #:

R13-A

WETLA	AND DE	TERI	MINA'	TIOI	Wetland: R13
(Modified from: 1987					
roject/Site: Seattle Tacoma Airport - Master Plan Updat		_		1/2/0	
		_	ounty:	Kin	
			ate:	WA	
vestigator: W. Kleindl and J. Hawkins		Ju	auc.		
1987 Method					Community ID: PSS
O ((O) (O) (O)	Yes X		io _		Field Plot ID: R13
the site significantly disturbed (Atypical Situation)?	Yes	_ `	lo _	<u> </u>	
the area a potential Problem Area?	Yes	_ ^	lo _	<u>X_</u>	
emarks (Explain sample location, disturbances, problem the sample plot is located on shallow slope about 10 feet of		iller Cn	eek on	Parc	el 321.
EGETATION (Dominant species are checked)	% C4	······································	Stratum		Indicator
Plant Species	20		Herb		FAC+
1 Athyrium filix-femina 2 Equisetum telmateia	— 20 50	-	Herb	_	FACW
3 Phalaris arundinacea	15		Herb		FACW
4 Ranunculus repens	40		Herb	_	FACW
5 Rubus discolor	90		Shrub		FACU
marks (Describe disturbances, relevant local variations once greater than 50% of the dominant plants are hydroph				•	o criteria is met.
YDROLOGY					
ecorded Data (Describe in Remarks):		Wetia	nd Hyd	drolo	gy Indicators (Describe in Remarks):
Stream, Lake, or Tide Gage		Pr	imary I	ndica	ators:
Aerial Photograph					Inundated
Other		-		_	Saturated in Upper 12 inches
X No Recorded Data Available		-		_	Saturated in Upper 18 inches
		-		_	Water Marks Drift Lines
		-		_	Sediment Deposits
		-		_	Drainage Patterns in Wetlands
eld Observations:		-		_	
Depth of Surface Water: None (in.)		Se	conda	ry in	dicators (2 or more required):
					Oxidized Root Channels in Upper 12 inche
Depth to Free Water in Pit: >18 (in.)				- (
		•			Water-Stained Leaves
Depth to Free Water in Pit: >18 (in.)		•		`	··
Depth to Free Water in Pit: >18 (in.)					• •

4								Data P	lot#:	R13-A
1								Wetlar	nd:	R13
Project/S	ite: Seattle T	acoma Airport - Ma	ster Pia	n Upda	te	_ Date:	11/2/00			
SOILS Soil Sur	vey Data:									
Map Unit	Name: Not	mapped					Drainage Cl	ass:		
							Field Observ	vations Conf	irm Map	ped Type?
Taxonom	y (Subgroup):						Yes	No X	NA	
Profile D	escription:								_	
Depth (Inches)	Horizon Designation	Matrix Color (Munsell Moist)		Mottle (Muns	Color ell Mois	it)	Mottle Abundance/	Contrast		ure, Concretions ospheres, etc.
)-10	A	10YR 2/1		-			-		Sand	ly loam
10-18+	В	10YR 2/1		10YR 4	/2 and 1	DYR 4/4	Common, Coar	se. Distinct	Sand	ly loam
lydric Sc	oil Indicators	•								
-	istosol					Listed	on Local Hyd	tric Soils List	•	
н	istic Epipedon				_		on State Hyd			
S	ulfidic Odor				_		on National H			
P	robable Aquic	Moisture Regime			_		Moisture Reg	•		
R	educing Condi	itions				Organ	ic Streaking in	Sandy Soil	s	
	=	Chroma Colors				X Mottle		•		
Hi	gh Organic Co	ontent in Surface Li	ayer			Other	(Explain in Re	emarks)		
emarks	(Describe soil	disturbances, loca	l variati	ons, etc	:.):					
bservatio		nd paper in the soil				oils have bee	n disturbed.	Soil color an	d indicto	ors support the
VETLA	ND DETER	MINATION			-					
ydrophyl	ic Vegetation	Present?	Yes	x	No		je ti	is Semplin	n Poirt	Within a Wetla
	is Present?		Yes	$\frac{\hat{x}}{x}$	No		10 (1	venipiinį	y romit	AARTINI A WOLIS I
				~	110					

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): All three parameters are present, therefore the area is a wetland.

Λ				Data Plot #:	R14a-A
L	WES	LAND DET	EDMINAT	Wetland:	R14
				elineation Manual)	
roject/Site: Seattle Tacoma	_			1/2/00	
Applicant/Owner: Port of Se			County:	King	
nvestigator: W. Kleindl and J			State:	WA	
1987 Method 1989			State.		
-		V V	No	Community ID:	PEM
o Normal Circumstances exis		Yes X	No _	Field Plot ID: R	14a-A
the site significantly disturbed	d (Atypical Situation)?	Yes	. No <u>></u>	<u> </u>	
the area a potential Problem	Area?	Yes	No <u>></u>	<u>C</u>	
marks (Explain sample loca	ation, disturbances, prot	olem areas):			
GETATION (Dominal Plant Species	nt species are checked)	% Cov	er Stratum	Indicator	
		40			
1 Athyrium filix-femina 2 Equisetum telmateia		30	Herb	FAC+	
3 Hedera helix		20	Herb	NL PACT	
4 Unica dioica		30	Herb	FAC+	
rcent of Dominant Species	that are ORL EACW	∞ FAC			
cept FAC-). Include species		75	5		
orphological adaptations to we	ittands. "T" indicates tra	ace.			
marks (Describe disturbanc					
nce greater than 50% of the d	ominant plants are hydro	ophytic, the we	tland vegeta	tion criteria is met.	
DROLOGY					
corded Data (Describe in R	temarks):	w	etiand Hydr	rology Indicators (Descr	ihe in Remarket
Stream, Lake, or	Tide Gage		Primary In		io in remains,
Aerial Photograpi	•		·	Inundated	
Other			X	Saturated in Upper 12 is	nches
X No Recorded Dat	a Available			Saturated in Upper 18 is	
				Water Marks	
				Drift Lines	
				Sediment Deposits	
				Drainage Patterns in We	etiands
Id Observations:	Name (C.)				
Depth of Surface Water: Depth to Free Water in Pit:	None (in.) 0 (in.)		Secondary	Indicators (2 or more requ	uired):
Depth to Saturated Soil:	()			Oxidized Root Channels	s in Upper 12 inches
Outdieled Odl.	<u>0</u> (in.)				
				_ Water-Stained Leaves	
				Water-Stained Leaves _ Local Soil Survey Data	

Remarks (As relevant, describe recent precipitation, hydrologic modifications, local variations, etc.):

Soil was saturated to the surface. Wetland hydrology was present on 11/02/2000. The presence of soils saturation to the surface in the growing season supports the presence of wetland criteria.

DRAFT

4 6					Dat	a Plot #:	R14a-A
•					We	tland:	R14
oject/S	ite: Seattle T	acoma Airport - Maste	r Pian Update	Date:	11/2/00		
OILS	vey Data:				111200		
lap Unit	t Name: Not	mapped			Drainage Class:		
					Field Observations C	onfirm Mar	oped Type?
axonom	ny (Subgroup):				Yes No _	X NA	
rofile D	escription:					·	
epth iches)	Horizon Designation	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)		Mottle Abundance/Contrast		ture, Concretions
		<u> </u>	(Abditioance/Contrast	131112	cospileres, etc.
	0	10YR 2/1					inic Muck
ydric So	oil Indicators: listosol listic Epipedon ulfidic Odor robable Aquic educing Condi leyed or Low-C	: Moisture Regime itions Chroma Colors ontent in Surface Layer		Listed Listed Aquic Organi Mottles	on Local Hydric Soils on State Hydric Soils on National Hydric So Moisture Regime ic Streaking in Sandy S	Orga List List lis List	
ydric So	oil Indicators: listosol listic Epipedon ulfidic Odor robable Aquic educing Condi leyed or Low-(igh Organic Co	: Moisture Regime itions Chroma Colors	nations, etc.):	Listed Listed Aquic Organi Mottles	on Local Hydric Soils on State Hydric Soils on National Hydric So Moisture Regime ic Streaking in Sandy S	Orga List List lis List	
X S P R X G X Hierarks	oil Indicators: listosol listic Epipedon ulfidic Odor robable Aquic educing Condi leyed or Low-(igh Organic Co (Describe soil c O layer and s	Moisture Regime itions Chroma Colors ontent in Surface Layer disturbances, local va	nations, etc.):	Listed Listed Aquic Organi Mottles	on Local Hydric Soils on State Hydric Soils on National Hydric So Moisture Regime ic Streaking in Sandy S	Orga List List lis List	
ydric So	oil Indicators: listosol listic Epipedon ulfidic Odor robable Aquic educing Condi leyed or Low-C igh Organic Co (Describe soil	Moisture Regime itions Chroma Colors ontent in Surface Layer disturbances, local va	nations, etc.):	Listed Listed Aquic Organi Mottles	on Local Hydric Soils on State Hydric Soils on National Hydric So Moisture Regime ic Streaking in Sandy S s (Explain in Remarks)	Orga List List ils List Soils	inic Muck
ydric Si H X S Pi R X G X Hi Pmarks Se sapric	oil Indicators: listosol listic Epipedon ulfidic Odor robable Aquic educing Condi leyed or Low-(igh Organic Co (Describe soil c O layer and s	Moisture Regime itions Chroma Colors ontent in Surface Layer disturbances, local va sulfur smell indicated th	nations, etc.):	Listed Listed Aquic Organi Mottles	on Local Hydric Soils on State Hydric Soils on National Hydric So Moisture Regime ic Streaking in Sandy S s (Explain in Remarks)	Orga List List ils List Soils	

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): All three wetland parameters are present.

WETLAND DETERMIN (Modified from: 1987 COE Wetlands Project/Site: Seattle Tacoma Airport - Master Plan Update Applicant/Owner: Port of Seattle County Investigator: W. Kleindl and J. Hawkins State: 1987 Method 1989 Method	s Delineation Manual) 11/2/00
Project/Site: Seattle Tacoma Airport - Master Plan Update Date: Applicant/Owner: Port of Seattle Count on Seattle State:	11/2/00
Applicant/Owner: Port of Seattle Count overstigator: W. Kleindl and J. Hawkins State:	
ivestigator: W. Kleindi and J. Hawkins State:	ty: King
- The state of the	
1987 Method 1989 Method	WA
	Community ID: PEM
Oo Normal Circumstances exist on the site? Yes X No	Field Plot ID: R14b-A
s the site significantly disturbed (Atypical Situation)? Yes No	x
the area a potential Problem Area? Yes No	×
EGETATION (Dominant species are checked) Plant Species % Cover Strat	ntum Indicator
1 Ranunculus repens 90 Herb	FACW
2 Rumex cnspus 5 Herb	FAC+
3 Rhododendron - horticultural vaneties 10 Shrui	
	FACU FACU
ercent of Dominant Species that are OBL, FACW, or FAC except FAC-). Include species noted (*) as showing 100 prophological adaptations to wetlands. "T" indicates trace.	
emarks (Describe disturbances, relevant local variations, seasonal effects, o	etc.):
nce greater than 50% of the dominant plants are hydrophytic, the wetland ve	getation criteria is met.
YDROLOGY	
ecorded Data (Describe in Remarks): Wetland F	Hydrology Indicators (Describe in Remark
Stream, Lake, or Tide Gage Primar	ry Indicators:
Aeriai Photograph	Inundated
Other	Saturated in Upper 12 inches
	Saturated in Upper 18 inches
X No Recorded Data Available	
X No Recorded Data Available	Water Marks Drift Lines
X No Recorded Data Available	Water Marks Drift Lines Sediment Deposits

>18

>18

(in.)

(in.)

Remarks (As relevant, describe recent precipitation, hydrologic modifications, local variations, etc.): The presence of hydrophytic vegetation and hydric soils indicate wetland hydrology is present.

Depth to Free Water in Pit:

Depth to Saturated Soil:

AR 047921

Oxidized Root Channels in Upper 12 inches

Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)

		<u> </u>			_		Data P	lot#:	R14b-A
							Wetlar	nd:	R14b
_									
Project/S	Site: Seattle T	acoma Airport - Master	Plan Up	date	Date:	11/2/00			
SOILS									
Soil Sur	rvey Data:								
Map Uni	it Name: Not	mapped				Drainage Cla	ss:		
			_	-		Field Observ	ations Confi	rm Map	ped Type?
Taxonon	ny (Subgroup):					Yes			
	Description:		~				No X	- NA	
Depth (Inches)	Horizon	Matrix Color (Munsell Moist)		ttie Color insell Moist)		Mottle Abundance/C	ontrast		ure, Concretions ospheres, etc.
0-9	Α	10YR 3/1	-			•		Loan	
9-11	С	2.5Y 4/3						- Fine :	
11-18+	Ab	10YR 3/1						Loam	
lydric S	oil Indicators:				-				
	fistosol				lietad	On Local History	ia Caile I :-+		
н	listic Epipedon					on Local Hydri on State Hydri			
	ulfidic Odor					on National Hy		ist	
		Moisture Regime				Moisture Regir			
	educing Condi					c Streaking in		;	
	leyed or Low-C				Mottles	5			
		ontent in Surface Layer			Other (Explain in Ren	narks)		
emarks	(Describe soil	disturbances, local vari	ations, d	etc.):					
oil color :	satisfies hydric	soil criteria. Buried A I	onzon .	suggests ove	rbank flow	v from Miller Ci	reek.		
	ND DETER								
	tic Vegetation	Present? Ye	s <u>x</u>	No _		ls this	s Sampling	Point \	Within a Wetlan
ydric Soi	ils Present?	Ye	s X	No -					
	ydrology Pres						Yes X		

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): All three parameters are present, therefore the area is a wetland.

Parametrix, Inc.



Data Plot #:

R14b-B

(Modified from: 19 sject/Site: Seattle Tacoma Airport - Master Plan Up	-		TANIMS	
piect/Site: Seattle Tacoma Airport - Master Plan Up		E Wetia		
	date	_		/2/00
pilicality Owner. For or Seattle		_	County:	King
estigator: W. Kleindl and J. Hawkins			•	WA
1987 Method 1989 Method		_ `		
	Vas	~	No	Community ID: Upland Lawn
Normal Circumstances exist on the site?	Yes	<u>x</u>		Field Plot ID: R14b
he site significantly disturbed (Atypical Situation)?	Yes		No <u>X</u>	
he area a potential Problem Area?	Yes		No X	-
sample plot located in front yard of parcel 321 betw	reen Mill	er Creek	and 9th A	venue South, adjacent to Welland R14.
GETATION (Dominant species are checked) Plant Species	ì	% Cover	Stratum	Indicator
1 Agrostis spp.		50	Herb	NL
2 Piantago lanceolata		20	Herb	FACU+
3 Plantago major		20	Herb	FAC
4 Poa spp		50	Herb	NL
5 Ranunculus repens		10	Herb	FACW
6 Taraxacum officinale 7 Domestic fruit trees		5 30	Tree	FACUNL
cent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T" indicates tra		20		
cept FAC-). Include species noted (*) as showing	ace. ions, sea	asonal eff	-	
cept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T" indicates trainarks (Describe disturbances, relevant local variations.	ace. ions, sea	asonal eff	-	
cept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T" indicates translated (*) as showing phological adaptations to wetlands. "T" indicates translated (*) the dominant plants are hydropheres. The second of the dominant plants are hydropheres.	ace. ions, sea	asonal eff	vegetation	
cept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T" indicates trainarks (Describe disturbances, relevant local variations than 50% of the dominant plants are hydrophophophophophophophophophophophophopho	ace. ions, sea	asonal eff wetland Weti	vegetation	rology Indicators (Describe in Remarks):
cept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T" indicates trainarks (Describe disturbances, relevant local variations than 50% of the dominant plants are hydrophoroceless than 50% of the dominant plants are hydrophoroceless (Describe in Remarks):	ace. ions, sea	asonal eff wetland Weti	vegetation	rology Indicators (Describe in Remarks):
pept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T" indicates trainarks (Describe disturbances, relevant local variations than 50% of the dominant plants are hydropherorded Data (Describe in Remarks): Stream, Lake, or Tide Gage	ace. ions, sea	asonal eff wetland Weti	vegetation	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches
pept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T" indicates trainarks (Describe disturbances, relevant local variations to less than 50% of the dominant plants are hydrophystorided Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	ace. ions, sea	asonal eff wetland Weti	vegetation	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches
phological adaptations to wetlands. "T" indicates trainarks (Describe disturbances, relevant local variations to wetlands to be less than 50% of the dominant plants are hydrophystorided Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	ace. ions, sea	asonal eff wetland Weti	vegetation	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks
phological adaptations to wetlands. "T" indicates trainarks (Describe disturbances, relevant local variations to wetlands to be less than 50% of the dominant plants are hydrophystorided Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	ace. ions, sea	asonal eff wetland Weti	vegetation	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
phological adaptations to wetlands. "T" indicates trainarks (Describe disturbances, relevant local variations to wetlands to be less than 50% of the dominant plants are hydrophystorided Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	ace. ions, sea	asonal eff wetland Weti	vegetation	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
phological adaptations to wetlands. "T" indicates trainarks (Describe disturbances, relevant local variations to wetlands to be less than 50% of the dominant plants are hydrophystorided Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	ace. ions, sea	asonal eff wetland Weti	vegetation	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
phological adaptations to wetlands. "T" indicates trainarks (Describe disturbances, relevant local variations to wetlands. "T" indicates trainarks (Describe disturbances, relevant local variations to less than 50% of the dominant plants are hydrophystorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available d Observations: Depth of Surface Water: None (in.)	ace. ions, sea	wetland Weti	land Hydr	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
phological adaptations to wetlands. "T" indicates trainarks (Describe disturbances, relevant local variations to wetlands. "T" indicates trainarks (Describe disturbances, relevant local variations to less than 50% of the dominant plants are hydrophystophysical (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available d Observations: Depth of Surface Water: None (in.)	ace. ions, sea	wetland Weti	land Hydr	cology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
phological adaptations to wetlands. "T" indicates trainarks (Describe disturbances, relevant local variations to wetlands. "T" indicates trainarks (Describe disturbances, relevant local variations to less than 50% of the dominant plants are hydrophystorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available d Observations: Depth of Surface Water: None (in.)	ace. ions, sea	wetland Weti	land Hydr	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
phological adaptations to wetlands. "T" indicates trainarks (Describe disturbances, relevant local variations to wetlands. "T" indicates trainarks (Describe disturbances, relevant local variations to less than 50% of the dominant plants are hydrophystophysical (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available d Observations: Depth of Surface Water: None (in.)	ace. ions, sea	wetland Weti	land Hydr	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inche
phological adaptations to wetlands. "T" indicates trainarks (Describe disturbances, relevant local variations to wetlands. "T" indicates trainarks (Describe disturbances, relevant local variations to less than 50% of the dominant plants are hydrophystophysical (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available d Observations: Depth of Surface Water: None (in.)	ace. ions, sea	wetland Weti	land Hydr	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inche Water-Stained Leaves

							Data Plot Wetland:		R14b-B Upland
roject/S	Site: Seattle Ta	acoma Airport - Maste	r Plan	Update	Date:	11/2/00			
OILS oil Su	rvey Data:								
1ap Uni	it Name: Not	mapped				Drainage Class	:		
						Field Observation	ons Confirm	Мар	ped Type?
axonon	ny (Subgroup):					Yes No	<u> x</u>	NA	*
rofile E	Description:								
epth ncnes)	Horizon Designation	Matrix Color (Munsell Moist)		Mottle Color (Munsell Moist)		Mottle Abundance/Con	trast		ure, Concretions ospheres, etc.
-10	A	10YR 3/2						Loam	
-18+	<u>c</u>	10YR 4/4				-		Fine s	and
vdric S	oil Indicators:	:							
_	Histosol				Listed	on Local Hydric	Soils List		
	Histic Epipedon				_	on State Hydric			
	Sulfidic Odor				Listed	on National Hydi	ric Soils List	t	
		Moisture Regime			Aquic	Moisture Regime	1		
	Reducing Condi				_ Organ	ic Streaking in Sa	andy Soils		
	Sleyed or Low-(-	_ Mottle	_			
		ontent in Surface Laye		,	_ Other	(Explain in Rema	rks)		
		disturbances, local vi	ariatio	ns, etc.):					
o neid ii	idicators of flyc	inc son are present							
VETLA	ND DETER	MINATION							
ydrophy	rtic Vegetation	Present?	Yes	No >	(Is this	Sampling F	oint '	Within a Wetla
udria Sa	oils Present?		Yes	No >	(-		
yuric sc			162	140 /	`		es :	No	

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): All three parameters are absent, therefore the area is not a wetland.



ete	Piot	#:	R15a-A

WET	LANE	DETE	RMINA	TION	Wetland: R15a
(Modified from: 19	87 CC	E Wet	lands [Delina	eation Manual)
Project/Site: Seattle Tacoma Airport - Master Plan Up	date		Date:	11/2/00	0
Applicant/Owner: Port of Seattle			County:	King	1
vestigator. W. Kleindl and J. Hawkins			State:	WA	
1987 Method				******	Community ID: PEM
o Normal Circumstances exist on the site?	Yes	x	No		Field Plot ID: R15a
the site significantly disturbed (Atypical Situation)?	Yes		No -	×	FIEIG FIOLID. KTSa
the area a potential Problem Area?	Yes		No -	<u></u>	
emarks (Explain sample location, disturbances, prob	iem are	as).	_	_	
EGETATION (> Dominant species are checked) Plant Species		% Cover	Stratus		adicate.
0					ndicator
1 Carex obnupta 2 Ranunculus repens		<u>20</u>	_ Herb Herb		ACW
3 Rumex spp.		10	Herb	<u></u>	
4 Taraxacum officinale		10	Herb		ACU
5 Unknown lawn grasses		70	Herb	— <u>``</u>	
orphological adaptations to wetlands. "T" indicates trainmarks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydrogeneous contents."	ons, sea				criteria is met.
YDROLOGY		··			
corded Data (Describe in Remarks):		Wet	land Hyd	trolog	y Indicators (Describe in Remarks):
Stream, Lake, or Tide Gage			Primary I		
Aerial Photograph				lni	undated
Other			×		aturated in Upper 12 inches
X No Recorded Data Available				_	aturated in Upper 18 inches
				w	ater Marks
				Dr	ift Lines
				_	ediment Deposits
ld Observations:				Dr	ainage Patterns in Wetlands
Depth of Surface Water: None (in.)			S000-4-		
Depth to Free Water in Pit: 12 (in.)		•	becondar		cators (2 or more required):
Depth to Saturated Soil: 10 (in.)			X		kidized Root Channels in Upper 12 inches
				_ wa	ater-Stained Leaves
					cal Soil Survey Data
				Ott	her (Explain in Remarks)

Remarks (As relevant, describe recent precipitation, hydrologic modifications, local variations, etc.):

Soil was saturation at 10 inches meets the wetland hydrology criteria.

P								eta Piot a /etiand:	t:	R15a-A R15a
Project/Si	ite: <u>Seattle T</u>	acoma Airport - Master	Plan Updat	<u>e</u>	Date:	11/2/00			- 2-2	
	vey Data:									
Map Unit	Name: Not	mapped				Drainage	Class			
							_	Confirm	Mapı	ped Type?
Taxonom	y (Subgroup):					Yes	No	Χı	NA	
	escription:					-			1	
Depth (Inches)	Horizon Designation	Matrix Color (Munsell Moist)	Mottle (Munse	Color Il Moist)		Mottle Abundance	e/Contras			re, Concretions, ospheres, etc.
0-6	Α	10YR 3/1				-		L	.oam.	. oxidized rhizosphere
6-18+	В	10YR 5/1	10YR 2/	1		Many. Coars	e. Distinct		.oam	
Hi Hi Su Pr Re X Gi His	educing Condi eyed or Low-C gh Organic Co (Describe soil	Moisture Regime			Listed Listed Aquic Organi Mottles	on Local I- on State I- on Nationa Moisture R c Streakings Explain in	lydric Soils Il Hydric S egime g in Sandy	s List Soils List / Soils		
ydrophyt ydric Soi	ND DETER	Present? Yo	es X	No _ No _ No		İs	this Sam	ipling Po	oint V No	Within a Wetland?

All technical criteria are met.

arametrix, Inc.



Data Piot #:	R15a-A2
Wetland:	R15

WETLAND DETERMINATION (Modified from: 1987 COE Wetlands Delineation Manual) Project/Site: Seattle Tacoma Airport - Master Plan Update 11/2/00 Date: Port of Seattle Applicant/Owner: County: King Investigator: W. Kleindl and J. Hawkins State: WA ✓ 1987 Method 1989 Method Community ID: PEM Do Normal Circumstances exist on the site? Yes X No Field Plot ID: R15a-A2 is the site significantly disturbed (Atypical Situation)? No Is the area a potential Problem Area? Yes No Remarks (Explain sample location, disturbances, problem areas): The sample plot is located on Parcel 252, about 25 feet south of Miller Creek VEGETATION (✓Dominant species are checked) **Plant Species** % Cover Stratum Indicator Athynum filix-femina FAC+ Herb Equisetum telmateia FACW Ranunculus repens 80 FACW Herb Scirous microcarpus 30 OBL Rubus discolor FACU Shrub Percent of Dominant Species that are OBL, FACW, or FAC (except FAC-). Include species noted (*) as showing 100 morphological adaptations to wetlands. "T" indicates trace. Remarks (Describe disturbances, relevant local variations, seasonal effects, etc.): Since 100% of the dominant plants are hydrophytic, the wetland vegetation criteria is met. **HYDROLOGY** Recorded Data (Describe in Remarks): Wetland Hydrology Indicators (Describe in Remarks): Primary Indicators: Stream, Lake, or Tide Gage Aerial Photograph Inundated Other Х Saturated in Upper 12 inches No Recorded Data Available Saturated in Upper 18 inches Water Marks **Drift Lines Sediment Deposits Drainage Patterns in Wetlands** Field Observations: Depth of Surface Water: None (in.) Secondary Indicators (2 or more required): Depth to Free Water in Pit: 0 (in.) Oxidized Root Channels in Upper 12 inches Depth to Saturated Soil: 0 (in.) Water-Stained Leaves Local Soil Survey Data

Remarks (As relevant, describe recent precipitation, hydrologic modifications, local variations, etc.): Soil was saturated to the surface. The hydrology at this location is supported by groundwater. Portions of the wetland receive water from Miller Creek.

Other (Explain in Remarks)

					Data Plot	r: R15a-A2
L.					Wetland:	R15
Project/Site: Seattle Tacoma Air	port - Master f	Pian Update	Date:	11/2/00		
SOILS Soil Survey Data:						
Map Unit Name: Not mapped	_			Drainage Clas	is:	
				•		Mapped Type?
Taxonomy (Subgroup):						
Profile Description:					No <u>x</u>	NA
Pepth Horizon Matrix Conches) Designation (Munsell		Mottle Color (Munsell Moist)		Mottle Abundance/Co		Fexture, Concretio Rhizospheres, etc.
18+ Oi 10YR 2/1		· · · · · · · · · · · · · · · · · · ·				
				-	<u> </u>	Sapric
Hydric Soil Indicators: Histosol Histic Epipedon X Sulfidic Odor Probable Aquic Moisture R Reducing Conditions X Gleyed or Low-Chroma Co X High Organic Content in Si	oiors urface Layer		Listed Listed Aquic Organi Mottles	on Local Hydric on State Hydric on National Hyd Moisture Regim c Streaking in S	c Soils List c Soils List dric Soils List e Gandy Soils	Sapric
Histosol Histic Epipedon X Sulfidic Odor Probable Aquic Moisture R Reducing Conditions X Gleyed or Low-Chroma Co X High Organic Content in Si emarks (Describe soil disturbance	oiors urface Layer ces, local varia	itions, etc.):	Listed Listed Aquic Organi Mottles Other (on State Hydric on National Hyd Moisture Regim ic Streaking in S s Explain in Rem	c Soils List c Soils List dric Soils List e Gandy Soils	Sapric
Histosol Histic Epipedon X Sulfidic Odor Probable Aquic Moisture R Reducing Conditions X Gleyed or Low-Chroma Co X High Organic Content in Si emarks (Describe soil disturbance	oiors urface Layer ces, local varia	itions, etc.):	Listed Listed Aquic Organi Mottles Other (on State Hydric on National Hyd Moisture Regim ic Streaking in S s Explain in Rem	c Soils List c Soils List dric Soils List e Gandy Soils	Sapric
Histosol Histic Epipedon X Sulfidic Odor Probable Aquic Moisture R Reducing Conditions X Gleyed or Low-Chroma Co X High Organic Content in Si emarks (Describe soil disturbance the presence of organic matter in the	olors urface Layer ces, local varia the soil surface	itions, etc.):	Listed Listed Aquic Organi Mottles Other (on State Hydric on National Hyd Moisture Regim ic Streaking in S s Explain in Rem	c Soils List c Soils List dric Soils List e Gandy Soils	Sapric
Histosol Histic Epipedon X Sulfidic Odor Probable Aquic Moisture R Reducing Conditions X Gleyed or Low-Chroma Co X High Organic Content in Si emarks (Describe soil disturbance presence of organic matter in the olors urface Layer ces, local varia the soil surface	itions, etc.): e meets the hydric s	Listed Listed Aquic Organi Mottles Other (on State Hydric on National Hyd Moisture Regim c Streaking in S s Explain in Rem	c Soils List c Soils List dric Soils List e Sandy Soils arks)		
Histosol Histic Epipedon X Sulfidic Odor Probable Aquic Moisture R Reducing Conditions X Gleyed or Low-Chroma Co	olors urface Layer ces, local varia the soil surface	ations, etc.): e meets the hydric si	Listed Listed Aquic Organi Mottles Other (on State Hydric on National Hyd Moisture Regim c Streaking in S s Explain in Rem	c Soils List c Soils List dric Soils List e Sandy Soils arks)	int Within a Wetl

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): All three wetland parameters are met.

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Pa	ram	etrix,	inc
1 (1	can	IÇUIA,	JI J.



Data Piot #:

R15a-B

	WETLA	AND DETE	RMINATIO	Wetiand ON	
(Mo	dified from: 1987	COE Wet	lands Del	ineation Manual)
roject/Site: Seattle Tacoma Airpo				2/00	
oplicant/Owner: Port of Seattle			County: K	King	
vestigator: W. Kleindl and J. Hav	wkins		State: W	VA	
1987 Method 1989 Metho			-	Community ID): Upland Lawn
o Normal Circumstances exist on t		Yes X	No	Field Plot ID:	
the site significantly disturbed (Aty		Yes	No X		
the area a potential Problem Area		Yes	No X		
emarks (Explain sample location,					
emple plot is located in an upland a EGETATION ✓ Dominant sp	ecies are checked)				
Plant Species	caes are oriented,	% Cover	Stratum	Indicator	
1 Agrostis spp.		50	Herb	NL	
2. Dactviis glomerata		50	Herto	FACU	
3 Hypochaeris radicata		<u>t</u>	Herb	FACU	
		t	Herb	FACU	
4 Taraxacum officinale					
5. Rubus discolor ercent of Dominant Species that except FAC-). Include species note orphological adaptations to wetland	ed (*) as showing ds. "T" indicates trace	FAC 0	Shrub	FACU	
5. Rubus discolor ercent of Dominant Species tha xcept FAC-). Include species note orphological adaptations to wetland emarks (Describe disturbances, re	d (*) as showing ds. "T" indicates trace elevant local variation	FAC 0	ffects, etc.):		
5. Rubus discolor ercent of Dominant Species that except FAC-). Include species note orphological adaptations to wetlandermarks (Describe disturbances, re- ince less than 50% of the dominant	d (*) as showing ds. "T" indicates trace elevant local variation	FAC 0	ffects, etc.):		
5. Rubus discolor ercent of Dominant Species that except FAC-). Include species note orphological adaptations to wetland ermarks (Describe disturbances, in nice less than 50% of the dominant	ed (*) as showing ds. "T" indicates trace elevant local variation: t plants are hydrophyti	FAC 0 s, seasonal et c, the wetland	ffects, etc.):		escribe in Remarks):
5. Rubus discolor ercent of Dominant Species that except FAC-). Include species note orphological adaptations to wetland ermarks (Describe disturbances, in nice less than 50% of the dominant	ed (*) as showing ds. "T" indicates trace elevant local variation: t plants are hydrophyticarks):	FAC 0 s, seasonal et c, the wetland	ffects, etc.):	criteria is not met	escribe in Remarks):
8 Rubus discolor Percent of Dominant Species that except FAC-). Include species note orphological adaptations to wetland amarks (Describe disturbances, indice less than 50% of the dominant YDROLOGY (Describe in Remains	ed (*) as showing ds. "T" indicates trace elevant local variation: t plants are hydrophyticarks):	FAC 0 s, seasonal et c, the wetland	ffects, etc.): divegetation tland Hydro	criteria is not met plogy Indicators (Dicators:	
5. Rubus discolor ercent of Dominant Species that except FAC-). Include species note orphological adaptations to wetland emarks (Describe disturbances, in the less than 50% of the dominant YDROLOGY ecorded Data (Describe in Rema Stream, Lake, or Tide Aerial Photograph Other	ed (*) as showing ds. "T" indicates trace elevant local variation: t plants are hydrophyticarks):	FAC 0 s, seasonal et c, the wetland	ffects, etc.): divegetation tland Hydro	criteria is not met blogy Indicators (Dicators: Inundated Saturated in Upper	12 inches
5. Rubus discolor ercent of Dominant Species tha except FAC-). Include species note orphological adaptations to wetland emarks (Describe disturbances, re nice less than 50% of the dominant YDROLOGY ecorded Data (Describe in Rema Stream, Lake, or Tide Aerial Photograph	ed (*) as showing ds. "T" indicates trace elevant local variation: t plants are hydrophyticates): erks): e Gage	FAC 0 s, seasonal et c, the wetland	ffects, etc.): divegetation tland Hydro	criteria is not met blogy Indicators (Dicators: Inundated Saturated in Upper Saturated in Upper	12 inches
5. Rubus discolor ercent of Dominant Species that except FAC-). Include species note orphological adaptations to wetland emarks (Describe disturbances, re nice less than 50% of the dominant YDROLOGY ecorded Data (Describe in Rema Stream, Lake, or Tide Aerial Photograph Other	ed (*) as showing ds. "T" indicates trace elevant local variation: t plants are hydrophyticates): erks): e Gage	FAC 0 s, seasonal et c, the wetland	ffects, etc.): divegetation tland Hydro	criteria is not met blogy Indicators (Dicators: Inundated Saturated in Upper Saturated in Upper Water Marks	12 inches
5. Rubus discolor ercent of Dominant Species that xcept FAC-). Include species note orphological adaptations to wetland emarks (Describe disturbances, refere less than 50% of the dominant YDROLOGY ecorded Data (Describe in Rema Stream, Lake, or Tide Aerial Photograph Other	ed (*) as showing ds. "T" indicates trace elevant local variation: t plants are hydrophyticates): erks): e Gage	FAC 0 s, seasonal et c, the wetland	ffects, etc.): divegetation tland Hydro	criteria is not met blogy Indicators (Dicators: Inundated Saturated in Upper Saturated in Upper	12 inches
Rubus discolor ercent of Dominant Species that except FAC-). Include species note orphological adaptations to wetland emarks (Describe disturbances, refince less than 50% of the dominant YDROLOGY ecorded Data (Describe in Rema Stream, Lake, or Tide Aerial Photograph Other	ed (*) as showing ds. "T" indicates trace elevant local variation: t plants are hydrophyticates): erks): e Gage	FAC 0 s, seasonal et c, the wetland	ffects, etc.): divegetation tland Hydro	criteria is not met plogy Indicators (Dicators: Inundated Saturated in Upper Saturated in Upper Water Marks Drift Lines	12 inches 18 inches
5. Rubus discolor ercent of Dominant Species that xcept FAC-). Include species note orphological adaptations to wetland ermarks (Describe disturbances, in ince less than 50% of the dominant YDROLOGY ecorded Data (Describe in Rema Stream, Lake, or Tide Aerial Photograph Other X. No Recorded Data Available of Control o	ed (*) as showing ds. "T" indicates trace relevant local variations t plants are hydrophyticals." erks): Gage	FAC 0 s, seasonal et c, the wetland	ffects, etc.): d vegetation ttland Hydro Primary Indi	criteria is not met plogy Indicators (Dicators: Inundated Saturated in Upper Saturated in Upper Water Marks Drift Lines Sediment Deposits Drainage Patterns in	12 inches 18 inches n Wetlands
ercent of Dominant Species that except FAC-). Include species note orphological adaptations to wetland emarks (Describe disturbances, note less than 50% of the dominant YDROLOGY ecorded Data (Describe in Rema Stream, Lake, or Tide Aerial Photograph Other X No Recorded Data Available of Surface Water: No	ed (*) as showing ds. "T" indicates trace relevant local variation t plants are hydrophyticates): Gage vailable one (in.)	FAC 0 s, seasonal et c, the wetland	ffects, etc.): d vegetation ttland Hydro Primary Indi	criteria is not met blogy Indicators (Dicators: Inundated Saturated in Upper Saturated in Upper Water Marks Drift Lines Sediment Deposits	12 inches 18 inches n Wetlands
5. Rubus discolor ercent of Dominant Species that except FAC-). Include species note orphological adaptations to wetland emarks (Describe disturbances, runce less than 50% of the dominant YDROLOGY ecorded Data (Describe in Rema Stream, Lake, or Tide Aerial Photograph Other X. No Recorded Data Av. No Recorded Data Av. No Recorded Data Av. Depth of Surface Water: Depth of Free Water in Pit: >1	ed (*) as showing ds. "T" indicates trace relevant local variation t plants are hydrophyticarks): Gage Gage Gage (in.)	FAC 0 s, seasonal et c, the wetland	ffects, etc.): d vegetation ttland Hydro Primary Indi	criteria is not met plogy Indicators (Dicators: Inundated Saturated in Upper Saturated in Upper Water Marks Drift Lines Sediment Deposits Drainage Patterns in	12 inches 18 inches n Wetlands
ercent of Dominant Species that except FAC-). Include species note corphological adaptations to wetland emarks (Describe disturbances, name less than 50% of the dominant YDROLOGY ecorded Data (Describe in Rema Stream, Lake, or Tide Aerial Photograph Other X No Recorded Data Available of Surface Water:	ed (*) as showing ds. "T" indicates trace relevant local variation t plants are hydrophyticarks): Gage Gage One (in.) (in.)	FAC 0 s, seasonal et c, the wetland	ffects, etc.): d vegetation ttland Hydro Primary Indi	criteria is not met plogy Indicators (Dicators: Inundated Saturated in Upper Saturated in Upper Water Marks Drift Lines Sediment Deposits Drainage Patterns in	12 inches 18 inches n Wetlands required): nnels in Upper 12 inche
ercent of Dominant Species that except FAC-). Include species note corphological adaptations to wetland emarks. (Describe disturbances, name less than 50% of the dominant YDROLOGY ecorded Data. (Describe in Rema Stream, Lake, or Tide Aerial Photograph Other. X. No Recorded Data Av. No Recorded Data Av. Popth of Surface Water: Depth of Surface Water: No Depth to Free Water in Pit:	ed (*) as showing ds. "T" indicates trace relevant local variation t plants are hydrophyticarks): Gage Gage Gage (in.)	FAC 0 s, seasonal et c, the wetland	ffects, etc.): d vegetation ttland Hydro Primary Indi	criteria is not met plogy Indicators (Dicators: Inundated Saturated in Upper Water Marks Drift Lines Sediment Deposits Drainage Patterns in Indicators (2 or more Oxidized Root Cha	12 inches 18 inches n Wetlands required): nnels in Upper 12 inche

4 1						Data Piot i	F:	R15a-B
						Wetland:		Upland
roject/Si	te: Seattle T	acoma Airport - Master P	lan Update	Date:	11/2/00			
OILS ioil Sun	vey Data:							
Map Unit	Name: Not	mapped			Drainage Class:			
					Field Observation	ns Confirm	Mapp	ed Type?
axonom	y (Subgroup):				Yes No	×	NA	
rofile De	escription:							
epth nches)	Horizon Designation	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)		Mottle Abundance/Contr			re, Concretions spheres, etc.
-10	A	10YR 3/3	-		-		Loam	
0-18+	В	10YR 3/3	10YR 4/4		Common, Medium, D	Distinct	Sandy	loam
ydric So	il Indicators:	:						
	stosol			Listed	on Local Hydric S	inile I iet		
н	stic Epipedon	ı		_	on State Hydric S			
Su	Ilfidic Odor		- · · · · · · · · · · · · · · · · · · ·	_	on National Hydri			
Pr	obable Aquic	Moisture Regime		_	Moisture Regime			
Re	ducing Condi	itions			ic Streaking in Sar	ndy Soils		
GI	eyed or Low-(Chroma Colors		Mottie		•		
Hi	gh Organic Co	ontent in Surface Layer		Other	(Explain in Remark	ks)		
	(Describe soil	l disturbances, local varia dric soil.	tions, etc.):					
/ETLAI	ND DETER	MINATION						
drophyt	ic Vegetation	n Present? Yes	No)	×	ls this S	ampling P	nint 4	Vithin a Wetla
	ls Present?	Yes		`		bining r	J. 1111 V	**************************************
U110 301								

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): All three parameters are not present, therefore the area is not a wetland.

	Pa	ram	etrix,	Inc.
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Data Piot #:

R15b-A

	87 COE V	Vetlands I	Delineation Manual)
roject/Site: Seattle Tacoma Airport - Master Plan Up		Date:	11/2/00
pplicant/Owner: Port of Seattle		County:	King
vestigator: W. Kleindl and J. Hawkins		State:	WA
1987 Method 1989 Method			Community ID: PEM
o Normal Circumstances exist on the site?	Yes >	(No	• • • • • • • • • • • • • • • • • • • •
the site significantly disturbed (Atypical Situation)?	Yes	No No	Field Plot ID: R15b-A
• • • • • • • • • • • • • • • • • • • •			
the area a potential Problem Area? marks (Explain sample location, disturbances, prob	Yes	No .	<u> </u>
e sample plot is located on Parcel 243 15 feet north on. Site located above sewer line fill.		<u></u>	
EGETATION (Dominant species are checked) Plant Species		over Stratu	m indicator
1 moss	50	Herb	NLNL
2 Agrostis capillans (tenuis)	20	Herb	FAC
3 Prunella vulgans	20	Herb	FACU+
4 Ranunculus repens	50	Herb	FACW
cept FAC-). Include species noted (*) as showing rphological adaptations to wetlands. "T" indicates tra marks (Describe disturbances, relevant local variations)	ace. ons, season		·
ccept FAC-). Include species noted (*) as showing uphological adaptations to wetlands. "T" indicates training marks (Describe disturbances, relevant local variations only 50% of the dominant plants are hydrophytic.	ace. ons, season	al effects, et	·
cept FAC-). Include species noted (*) as showing imphological adaptations to wetlands. "T" indicates trainmarks (Describe disturbances, relevant local variations only 50% of the dominant plants are hydrophytic, "DROLOGY"	ace. ons, season	al effects, et vegetation c	riteria is not met.
cept FAC-). Include species noted (*) as showing uphological adaptations to wetlands. "T" indicates trainmarks (Describe disturbances, relevant local variations only 50% of the dominant plants are hydrophytic, "DROLOGY corded Data" (Describe in Remarks):	ace. ons, season	al effects, et vegetation c	riteria is not met. rdrology Indicators (Describe in Remarks):
cept FAC-). Include species noted (*) as showing rephological adaptations to wetlands. "T" indicates trainarks (Describe disturbances, relevant local variations only 50% of the dominant plants are hydrophytic. [DROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage	ace. ons, season	al effects, et vegetation c	riteria is not met. rdrology Indicators (Describe in Remarks): Indicators:
cept FAC-). Include species noted (*) as showing rephological adaptations to wetlands. "T" indicates trainarks (Describe disturbances, relevant local variations only 50% of the dominant plants are hydrophytic. [*DROLOGY** Corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	ace. ons, season	al effects, et vegetation c	riteria is not met. rdrology Indicators (Describe in Remarks): Indicators: Inundated
cept FAC-). Include species noted (*) as showing rephological adaptations to wetlands. "T" indicates training in the control of the dominant plants are hydrophytic. TOROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	ace. ons, season	al effects, et vegetation c	riteria is not met. rdrology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches
cept FAC-). Include species noted (*) as showing rephological adaptations to wetlands. "T" indicates trainarks (Describe disturbances, relevant local variations only 50% of the dominant plants are hydrophytic. [*DROLOGY** Corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	ace. ons, season	al effects, et vegetation c	riteria is not met. rdrology Indicators (Describe in Remarks): Indicators: Inundated
cept FAC-). Include species noted (*) as showing rephological adaptations to wetlands. "T" indicates training in the control of the dominant plants are hydrophytic. TOROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	ace. ons, season	al effects, et vegetation c	riteria is not met. rdrology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches
cept FAC-). Include species noted (*) as showing uphological adaptations to wetlands. "T" indicates training in the control of the dominant plants are hydrophytic. /DROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	ace. ons, season	al effects, et vegetation c	riteria is not met. rdrology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks
cocept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates training orphological adaptations to wetlands. "T" indicates training or only 50% of the dominant plants are hydrophytic. /DROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available	ace. ons, season	al effects, et vegetation c	riteria is not met. rdrology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
ccept FAC-). Include species noted (*) as showing uphological adaptations to wetlands. "T" indicates training uphological adaptations to wetlands. "T" indicates training uphological adaptations to wetlands. "T" indicates training uphological variations only 50% of the dominant plants are hydrophytic. /DROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	ace. ons, season	al effects, et vegetation c Wetland Hy Primary	riteria is not met. rdrology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
ccept FAC-). Include species noted (*) as showing uphological adaptations to wetlands. "T" indicates training uphological adaptations to wetlands. "T" indicates training uphological adaptations to wetlands. "T" indicates training uphological departments are hydrophytic. /DROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	ace. ons, season	al effects, et vegetation c Wetland Hy Primary	riteria is not met. rdrology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
coept FAC-). Include species noted (*) as showing uphological adaptations to wetlands. "T" indicates training uphological adaptations to wetlands. "T" indicates training uphological adaptations to wetlands. "T" indicates training uphological adaptations, relevant local variations up to the dominant plants are hydrophytic. //DROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Id Observations: Depth of Surface Water: None (in.) Depth to Free Water in Pit: >18 (in.)	ace. ons, season	al effects, et vegetation c Wetland Hy Primary	rdrology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands ary Indicators (2 or more required):
compt FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates training orphological adaptations to wetlands. "T" indicates training orphological adaptations to wetlands. "T" indicates training orphological adaptations, relevant local variations only 50% of the dominant plants are hydrophytic. // DROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available Id Observations: Depth of Surface Water: Depth to Free Water in Pit: None (in.)	ace. ons, season	Wetland Hy Primary	rdrology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands ary Indicators (2 or more required):
cocept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates training orphological adaptations to wetlands. "T" indicates training orphological adaptations to wetlands. "T" indicates training or marks (Describe disturbances, relevant local variations or only 50% of the dominant plants are hydrophytic. YDROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	ace. ons, season	Wetland Hy Primary	rdrology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands ary Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches
Aerial Photograph Other X No Recorded Data Available Pld Observations: Depth of Surface Water: None (in.) Depth to Free Water in Pit: >18 (in.)	ace. ons, season	Wetland Hy Primary	riteria is not met. rdrology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands ary Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches Water-Stained Leaves
Accept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace marks (Describe disturbances, relevant local variation of the dominant plants are hydrophytic, YDROLOGY Coorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Pold Observations: Depth of Surface Water: Depth to Free Water in Pit: No Recorded Observations.	ons, season the wetland	al effects, et vegetation c Wetland Hy Primary Seconda	riteria is not met. rdrology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands ary Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)

						Da	ta Plot#:	R15b-A
						W	etland:	R15
roject/S	ite: Seattle Ta	acoma Airport - Master P	ian Update	Date:	11/2/00			
SOILS Soil Sur	vey Data:							
Map Unit	Name: Not	mapped			Drainage	Class:		
					Field Obs	ervations	Confirm M	apped Type?
Taxonom	y (Subgroup):				Yes	No	X N	Δ.
	escription:					_ '*		-
Depth (Inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Mo		Mottle Abundano	ce/Contras		exture, Concretions
)-9	A	10YR 4/2					Gr	ravely loam (fill)
9-18+	B	2.5Y 5/1	10YR 4/4		Common, C	oarse. Distir	na De	ense sandy silt (fill)
Hydric Si	oil Indicators:							
•	listosol	•		l istad	on Local H	dudric Soil	e Liet	
	istic Epipedon				on State H	-		
s	ulfidic Odor				on Nationa			
P	robab le Aquic	Moisture Regime	,		Moisture F			
R	educing Condi	itions			ic Streakin	-	Soils	
X G	leyed or Low-(Chroma Colors	•	X Mottle		•		
H:	igh Organic Co	ontent in Surface Layer		Other	(Explain in	Remarks))	
emarks	(Describe soil	disturbances, local varia	ations, etc.):					
		fill area of a sewer line ea		color and indic	ators meet	the hydric	soil criteri	A
-								
VETLA	ND DETER	MINATION						
ydrophy	tic Vegetation	Present? Ye	s No	x	ls	this Sam	npling Poi	nt Within a Wetla
ydric So	ils Present?	Ye	s X No					
		. •.				Yes	X	No

Only 50% of the plant species are hydrophytic. Lawn mosses were not identified and the aquatic tolerance of moss is poorly understood. The area is within the Miller Creek floodplain and has hydric soils.

Par	am	etrix,	Inc.
	~	~ 61 174	



Data Plot #:

R15b-B

(mounied nom.			Delineation Manual)
roject/Site: Seattle Tacoma Airport - Master Plan	Update	Date:	11/2/00
pplicant/Owner: Port of Seattle		County:	King
vestigator: W. Kleindl and J. Hawkins		State:	WA
1987 Method			Community ID: Upland
o Normal Circumstances exist on the site?	Yes X	No _	Field Plot ID: R15b-B
the site significantly disturbed (Atypical Situation)?	Yes	No _	x
the area a potential Problem Area?	Yes	No	X
emarks (Explain sample location, disturbances, pr	robiem areas):		
GETATION (Dominant species are checke	ed) % Cov e	er Stratum	n Indicator
1 Hypochaens radicata	20	Herb	FACU
1, 17,000,000,000			NL NL
2. Unidentifiable moss species	50	Herb	
unidentifiable mowed lawn grass recent of Dominant Species that are OBL, FACtoppt FAC-). Include species noted (*) as showing imphological adaptations to wetlands. "T" indicates marks (Describe disturbances, relevant local variace less than 50% of the dominant plants are hydro	N, or FAC 0 trace.	Herb	NL):
	N, or FAC 0 trace.	Herb	NL):
Unidentifiable mowed lawn grass arcent of Dominant Species that are OBL, FACtorent FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates imarks (Describe disturbances, relevant local variance less than 50% of the dominant plants are hydrointified due to recent mowing.	N, or FAC trace. ations, seasonal ephytic, the wetlan	Herb effects, etc.	NL .): on criteria is not met. The grass species could
Unidentifiable mowed lawn grass creent of Dominant Species that are OBL, FACV coept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. To indicates marks (Describe disturbances, relevant local variance less than 50% of the dominant plants are hydrointified due to recent mowing.	N, or FAC trace. ations, seasonal ephytic, the wetlan	Herb effects, etc.	NL on criteria is not met. The grass species could drology Indicators (Describe in Remarks):
unidentifiable mowed lawn grass creent of Dominant Species that are OBL, FACtorept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates marks (Describe disturbances, relevant local variance less than 50% of the dominant plants are hydrointified due to recent mowing. **TOPOLOGY** COROLOGY** Coroded Data (Describe in Remarks):	N, or FAC trace. ations, seasonal ephytic, the wetlan	effects, etc.	NL on criteria is not met. The grass species could drology Indicators (Describe in Remarks):
unidentifiable mowed lawn grass recent of Dominant Species that are OBL, FACtoper FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates marks (Describe disturbances, relevant local variable less than 50% of the dominant plants are hydrointified due to recent mowing. /DROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage	N, or FAC trace. ations, seasonal ephytic, the wetlan	effects, etc.	NL on criteria is not met. The grass species could drology Indicators (Describe in Remarks): indicators:
Unidentifiable mowed lawn grass arcent of Dominant Species that are OBL, FACtoper FAC-). Include species noted (*) as showing orphological adaptations to wetlands. To indicates imarks (Describe disturbances, relevant local variable less than 50% of the dominant plants are hydrointified due to recent mowing. //DROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	N, or FAC trace. ations, seasonal ephytic, the wetlan	effects, etc.	NL on criteria is not met. The grass species could drology indicators (Describe in Remarks): ndicators: Inundated
unidentifiable mowed lawn grass reent of Dominant Species that are OBL, FACV copt FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates marks (Describe disturbances, relevant local variable less than 50% of the dominant plants are hydrontified due to recent mowing. /DROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	N, or FAC trace. ations, seasonal ephytic, the wetlan	effects, etc.	ncriteria is not met. The grass species could drology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks
Unidentifiable mowed lawn grass creent of Dominant Species that are OBL, FACV creent FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates imarks (Describe disturbances, relevant local variance less than 50% of the dominant plants are hydromitified due to recent mowing. //DROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	N, or FAC trace. ations, seasonal ephytic, the wetlan	effects, etc.	ncriteria is not met. The grass species could drology indicators (Describe in Remarks): indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
Unidentifiable mowed lawn grass creent of Dominant Species that are OBL, FACV creent FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates imarks (Describe disturbances, relevant local variance less than 50% of the dominant plants are hydromitified due to recent mowing. //DROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	N, or FAC trace. ations, seasonal ephytic, the wetlan	effects, etc.	ncriteria is not met. The grass species could drology indicators (Describe in Remarks): indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
Unidentifiable mowed lawn grass creent of Dominant Species that are OBL, FACtoper FAC-). Include species noted (*) as showing prohological adaptations to wetlands. "T" indicates imarks (Describe disturbances, relevant local variance less than 50% of the dominant plants are hydrointified due to recent mowing. **TOROLOGY** Corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	N, or FAC trace. ations, seasonal ephytic, the wetlan	effects, etc.	ncriteria is not met. The grass species could drology indicators (Describe in Remarks): indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
Unidentifiable mowed lawn grass creent of Dominant Species that are OBL, FACtoper FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates imarks (Describe disturbances, relevant local variable less than 50% of the dominant plants are hydromitified due to recent mowing. // OROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	N, or FAC trace. ations, seasonal ephytic, the wetlan	effects, etc.	ncriteria is not met. The grass species could drology indicators (Describe in Remarks): indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
Unidentifiable mowed lawn grass recent of Dominant Species that are OBL, FACN coept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "I indicates marks (Describe disturbances, relevant local variable less than 50% of the dominant plants are hydrontified due to recent mowing. //DROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available //d Observations: Depth to Free Water in Pit: >18 (in.)	N, or FAC trace. ations, seasonal ephytic, the wetlan	effects, etc.	irology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
Unidentifiable mowed lawn grass creent of Dominant Species that are OBL, FACtoper FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates imarks (Describe disturbances, relevant local variable less than 50% of the dominant plants are hydromitified due to recent mowing. // OROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	N, or FAC trace. ations, seasonal ephytic, the wetlan	effects, etc.	in criteria is not met. The grass species could declared is not met. The grass species could declared in Comparison (Describe in Remarks): Indicators: Inundated
Unidentifiable mowed lawn grass Incrent of Dominant Species that are OBL, FACN Incrept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. To indicates imarks (Describe disturbances, relevant local variance less than 50% of the dominant plants are hydrountified due to recent mowing. Increase that the following of the dominant plants are hydrountified due to recent mowing. Increase that the following of the dominant plants are hydrountified due to recent mowing. Increase that the following of the dominant plants are hydrountified due to recent mowing. Increase that the following of the dominant plants are hydrountified due to recent mowing. Increase that the following of the dominant plants are hydrountified due to recent mowing. Increase that the following of the dominant plants are hydrountified due to recent mowing. Increase that the following of the dominant plants are hydrountified due to recent mowing. Increase that the following of the dominant plants are hydrountified due to recent mowing. Increase that the following of the dominant plants are hydrountified due to recent mowing. Increase that the following of the	N, or FAC trace. ations, seasonal ephytic, the wetlan	effects, etc.	ncriteria is not met. The grass species could drology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands y Indicators (2 or more required): Oxidized Root Channels in Upper 12 inche

		ix, Inc.				Data Plot i	r: R15b-B
						Wetland:	Upland
_							
Project/S	Site: Seattle 7	acoma Airport - Maste	Plan Update	_ Date:	11/2/00		
SOILS Soil Sur	; rvey Data:						-
Map Uni	it Name: Not	mapped			Drainage Class:		
					Field Observatio	ns Confirm I	Manned Tyne?
Taxonon	ny (Subgroup):						
	Description:				Yes No	<u> </u>	NA
Depth Inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist	·)	Mottle Abundance/Cont		exture, Concret Rhizospheres, et
)-6	Α	10YR 4/3					andy Loam
-18+	В	2.5Y 5/3	2.5Y 5/2		Common, Coarse, Fr		ilty sand
lydric S	oil Indicators	<u>:</u>					
н	tistosol			l istad	on Local Hydric S	aile I iek	
н	listic Epipedon				on State Hydric S		
	ulfidic Odor				on National Hydri		
		Moisture Regime			Moisture Regime		
	leducing Condi				ic Streaking in Sar	ndy Soils	
G		Chroma Colors		Mottle:	5		
	ign Organic Co	ontent in Surface Layer		Other (Explain in Remark	(S)	
Hi		disturbances local var	iations, etc.):				
Hi emarks	(Describe soil						
Hi emarks	(Describe soil dicators of hyd	dric soil present.	,				
Hi Remarks lo field ind	(Describe soil dicators of hyd	dric soil present.					
Hillemarks Io field inc	ND DETER	MINATION			la aki, o		
Hillemarks Io field inc	dicators of hyd	MINATION Present?	es No	<u> </u>	is this S	ampling Po	int Within a We

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): All three parameters are absent, therefore the area is not a wetland.

Parametrix, Inc.



Data Plot #:

R17:A1

	WET	LAND DET	TERMINA	TION	Wetian		
_ (Modified from: 19				n Manua	l)	
roject/Site: Seattle Tacoma A	Airport - Master Plan Up	date	Date:	10/14/99			
pplicant/Owner: Port of Se			County:	King			
vestigator: W. Kleindl, M. Li	uther		State:	WA			
1987 Method 1989 M				С	ommunity I	D: PFO	
Normal Circumstances exist	t on the site?	Yes X	No		eld Plot ID:		
the site significantly disturbed		Yes	 No	··	-	1000	
the area a potential Problem			_ No -	×			
emarks (Explain sample loca		Yes	_ " -	<u>^</u>			
etland R17 is a ripanan wetlar							
Plant Species	it species are checked)	% Co	ver Stratui	m Indicati	or		
1 Athyrium filix-femina		10	Herb	FAC+			
2 Equisetum teimateia		20	Herb	FACW			
3 Lysichiton americanum		10	Herb	OBL	<u>_</u>		
4 Ranunculus repens		40 20	Herb Herb	FACW FAC+			
11.							
5 Unica dioica							
5 Urtica dioica 6 Rubus discolor		10 30	Shrub	FACU FAC+			
5 Unica dioica 6 Rubus discolor 7 Rubus spectabilis 8 Alnus rubra ercent of Dominant Species except FAC-). Include species	noted (*) as showing	10 30 60 or FAC	Shrub	FACU			
5 Urtica dioica 6 Rubus discolor 7 Rubus spectabilis 8 Alnus rubra recent of Dominant Species recept FAC-). Include species rephological adaptations to we marks (Describe disturbance rice greater than 50% of the di	noted (*) as showing etlands. "T" indicates traces, relevant local variat	10 30 60 or FAC ace.	Shrub Shrub Tree	FACU FAC+ FAC	a is met.		
5 Urtica dioica 6 Rubus discolor 7 Rubus spectabilis 8 Alnus rubra 8 recent of Dominant Species 9 rephological adaptations to we 9 remarks (Describe disturbance 10 greater than 50% of the described and the described are species of the described are	noted (*) as showing etlands. "T" indicates traces, relevant local variationinant plants are hydrominant plants.	or FAC ace. 10 30 60 ace. 11 ace. 12 ace. 13 acphytic, the w	Shrub Shrub Tree 100 ii effects, etceptland vege	FACU FAC+ FAC FAC c.):		Describe in Rem	arks):
5 Urtica dioica 6 Rubus discolor 7 Rubus spectabilis 8 Alnus rubra recent of Dominant Species coept FAC-). Include species rephological adaptations to we rmarks (Describe disturbance for greater than 50% of the de	noted (*) as showing stlands. "T" indicates traces, relevant local variationinant plants are hydrocentrical strategy. Remarks):	or FAC ace. 10 30 60 ace. 11 ace. 12 ace. 13 acphytic, the w	Shrub Shrub Tree 100 Il effects, etwetland vege	FACU FAC+ FAC FAC c.):		Describe in Rem	arks):
5 Urtica dioica 6 Rubus discolor 7 Rubus spectabilis 8 Alnus rubra recent of Dominant Species rephological adaptations to we marks (Describe disturbance rice greater than 50% of the dis-	noted (*) as showing etlands. "T" indicates traces, relevant local variationinant plants are hydrocentric traces. Remarks): Tide Gage	or FAC ace. 10 30 60 ace. 11 ace. 12 ace. 13 acphytic, the w	Shrub Shrub Tree 100 Il effects, etwetland vege	FACU FAC+ FAC C.): relation criteria	icators ([Describe in Rem	arks):
5 Urtica dioica 6 Rubus discolor 7 Rubus spectabilis 8 Alnus rubra recent of Dominant Species reptifications to we marks (Describe disturbance rice greater than 50% of the di DROLOGY corded Data (Describe in R Stream, Lake, or	noted (*) as showing etlands. "T" indicates traces, relevant local variationinant plants are hydrocentric traces. Remarks): Tide Gage	or FAC ace. 10 30 60 ace. 11 ace. 12 ace. 13 acphytic, the w	Shrub Shrub Tree 100 Il effects, etwetland vege	FACU FAC+ FAC c.): clation criterial drology Indicators: Inundal	icators (C	Describe in Rem	arks):
5 Urtica dioica 6 Rubus discolor 7 Rubus spectabilis 8 Alnus rubra recent of Dominant Species rephological adaptations to we marks (Describe disturbance rice greater than 50% of the di DROLOGY corded Data (Describe in R Stream, Lake, or Aerial Photograpi	noted (*) as showing etlands. "I" indicates traces, relevant local variationminant plants are hydrocentric et al. (*) (*) (*) (*) (*) (*) (*) (*) (*) (*)	or FAC ace. 10 30 60 ace. 11 ace. 12 ace. 13 acphytic, the w	Shrub Shrub Tree 100 I effects, etcetland vege Wetland Hy Primary	FACU FAC+ FAC c.): Interior criteria drology Indicators: Inundal Saturat Saturat	icators (C led ed in Upper ed in Upper		arks):
5 Urtica dioica 6 Rubus discolor 7 Rubus spectabilis 8 Ainus rubra ercent of Dominant Species rept FAC-). Include species orphological adaptations to we remarks (Describe disturbance rice greater than 50% of the de YDROLOGY corded Data (Describe in R Stream, Lake, or Aerial Photograph Other	noted (*) as showing etlands. "I" indicates traces, relevant local variationminant plants are hydrocentric et al. (*) (*) (*) (*) (*) (*) (*) (*) (*) (*)	or FAC ace. 10 30 60 ace. 11 ace. 12 ace. 13 acphytic, the w	Shrub Shrub Tree 100 I effects, etcetland vege Wetland Hy Primary	FACU FAC+ FAC c.): Interior criteria Indicators: Inundai Saturat Saturat Water I	icators (C led ed in Upper ed in Upper Marks	r 12 inches	arks):
5 Urtica dioica 6 Rubus discolor 7 Rubus spectabilis 8 Alnus rubra ercent of Dominant Species ercept FAC-). Include species orphological adaptations to we emarks (Describe disturbance ance greater than 50% of the de YDROLOGY ecorded Data (Describe in R Stream, Lake, or Aerial Photograph Other	noted (*) as showing etlands. "I" indicates traces, relevant local variationminant plants are hydrocentric et al. (*) (*) (*) (*) (*) (*) (*) (*) (*) (*)	or FAC ace. 10 30 60 ace. 11 ace. 12 ace. 13 acphytic, the w	Shrub Shrub Tree 100 I effects, etcetland vege Wetland Hy Primary	rACU FAC+ FAC c.): ctation criteria drology Ind Indicators: Inundal Saturat Saturat Water I Drift Lir	icators (Died led in Upper led in Upper Marks les	r 12 inches r 18 inches	arks):
5 Urtica dioica 6 Rubus discolor 7 Rubus spectabilis 8 Alnus rubra ercent of Dominant Species except FAC-). Include species orphological adaptations to we emarks (Describe disturbance ince greater than 50% of the de YDROLOGY ecorded Data (Describe in R Stream, Lake, or Aerial Photograph Other	noted (*) as showing etlands. "I" indicates traces, relevant local variationminant plants are hydrocentric et al. (*) (*) (*) (*) (*) (*) (*) (*) (*) (*)	or FAC ace. 10 30 60 ace. 11 ace. 12 ace. 13 acphytic, the w	Shrub Shrub Tree 100 I effects, etcetland vege Wetland Hy Primary	rACU FAC+ FAC c.): chation criteria drology Ind Indicators: Inundal Saturat Water F Drift Lir Sedime	icators (C led ed in Upper ed in Upper Marks les ent Deposits	r 12 inches r 18 inches	arks):
5 Urtica dioica 6 Rubus discolor 7 Rubus spectabilis 8 Ainus rubra except FAC-). Include species prophological adaptations to we example the factor of the discorded Data (Describe in R Stream, Lake, or Aerial Photograph Other X No Recorded Data	noted (*) as showing etlands. "I" indicates traces, relevant local variationminant plants are hydrocentric et al. (*) (*) (*) (*) (*) (*) (*) (*) (*) (*)	or FAC ace. 10 30 60 ace. 11 ace. 12 ace. 13 acphytic, the w	Shrub Shrub Tree 100 I effects, etcetland vege Wetland Hy Primary	rACU FAC+ FAC c.): chation criteria drology Ind Indicators: Inundal Saturat Water F Drift Lir Sedime	icators (C led ed in Upper ed in Upper Marks les ent Deposits	r 12 inches r 18 inches	arks):
5 Urtica dioica 6 Rubus discolor 7 Rubus spectabilis 8 Ainus rubra ercent of Dominant Species except FAC-). Include species orphological adaptations to we emarks (Describe disturbance are greater than 50% of the de YDROLOGY ecorded Data (Describe in R Stream, Lake, or Aerial Photograph Other X No Recorded Data slid Observations: Depth of Surface Water:	noted (*) as showing etlands. "I" indicates traces, relevant local variationminant plants are hydrocemarks): Tide Gage h ta Available None (in.)	or FAC ace. 10 30 60 ace. 11 ace. 12 ace. 13 acphytic, the w	Shrub Shrub Tree 100 Il effects, etcetland vege Wetland Hy Primary X	rACU FAC+ FAC c.): chation criteria drology Ind Indicators: Inundal Saturat Water F Drift Lir Sedime	icators (C ted ed in Upper ed in Upper Marks tes ent Deposits pe Patterns	r 12 inches r 18 inches s in Wetlands	arks):
5 Urtica dioica 6 Rubus discolor 7 Rubus spectabilis 8 Alnus rubra recent of Dominant Species recept FAC-). Include species rephological adaptations to we rmarks (Describe disturbance rice greater than 50% of the di PDROLOGY corded Data (Describe in R Stream, Lake, or Aerial Photograph Other X No Recorded Data ridd Observations: Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as showing etlands. To indicates traces, relevant local variations are hydrocentrical variations. Title Gage his a Available None (in.)	or FAC ace. 10 30 60 ace. 11 ace. 12 ace. 13 acphytic, the w	Shrub Shrub Tree 100 Il effects, etcetland vege Wetland Hy Primary X	FACU FAC+ FAC c.): Intation criteria Indicators: Inunda Saturat Saturat Water I Drift Lir Sedime Drainag ary Indicator	icators (C led ed in Upper Marks les ent Deposits pe Patterns	r 12 inches r 18 inches s in Wetlands e required):	
5 Urtica dioica 6 Rubus discolor 7 Rubus spectabilis 8 Alnus rubra ercent of Dominant Species except FAC-). Include species orphological adaptations to we emarks (Describe disturbance are greater than 50% of the di YDROLOGY ecorded Data (Describe in R Stream, Lake, or Aerial Photograph Other X No Recorded Data	noted (*) as showing etlands. "I" indicates traces, relevant local variationminant plants are hydrocemarks): Tide Gage h ta Available None (in.)	or FAC ace. 10 30 60 ace. 11 ace. 12 ace. 13 acphytic, the w	Shrub Shrub Tree 100 Il effects, etcetland vege Wetland Hy Primary X Seconda	FACU FAC+ FAC c.): Intation criteria Indicators: Inundal Saturat Water I Drift Lir Sedime Drainag ary Indicator Oxidize	icators (C led ed in Upper Marks les ent Deposits pe Patterns	r 12 inches r 18 inches s in Wetlands e required); annels in Upper	
5 Urtica dioica 6 Rubus discolor 7 Rubus spectabilis 8 Alnus rubra ercent of Dominant Species except FAC-). Include species orphological adaptations to we emarks (Describe disturbance ance greater than 50% of the de YDROLOGY ecorded Data (Describe in R Stream, Lake, or Aerial Photograph Other X No Recorded Data eld Observations: Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as showing etlands. To indicates traces, relevant local variations are hydrocentrical variations. Title Gage his a Available None (in.)	or FAC ace. 10 30 60 ace. 11 ace. 12 ace. 13 acphytic, the w	Shrub Shrub Tree 100 Il effects, etcetland vege Wetland Hy Primary X Seconda	FACU FAC+ FAC c.): etation criteria eta	icators (Died of the died in Upper Marks are Patterns of 2 or more died Root Charter (Control of the died of the d	r 12 inches r 18 inches s in Wetlands e required): annels in Upper	

								Data Plo	t #:	R17:A1
								Wetland	:	R17
		1.1.453		-	. Joseph	. 	· Denota a	n more no		
oject/S	ite: Seattle T	acoma Airport - Ma	ster P	an Upda	ate	Date	: 10/14/99			
OILS						_				
ioii Sur	vey Data:									
/lap Unit	Name: <u>Unn</u>	napped					Drainage Cla	ass:		
					_			rations Confirm	n Mapp	ped Type?
axonom	y (Subgroup):						Yes	No	NA	
rofile D	escription:	· · · · · · · · · · · · · · · · · · ·							14/4	<u>x</u>
epth	Horizon	Matrix Color		Mottle	Color		Mottle		Textu	re. Concretions
nches)		(Munsell Moist)		(Muns	ell Moi	st)	Abundance/0	Contrast		spheres, etc.
10	_ <u>A</u>	10YR 2/1							Loam	
)-12	_ <u>c</u>	10YR 5/2					<u> </u>		Sand	
?-18+	Bb	10YR 3/2		10YR 3	/3		Common, Mediu	m. Faint	Sandy	Loam
rdric Sc	oil Indicators:	:								
— н	istosol					Listed	on Local Hydi	ic Soils List		
	stic Epipedon				_		on State Hydr			
	ulfidic Odor						on National H		t	
		Moisture Regime			_	Aquic	Moisture Regir	ne		
	educing Condi				_	Organ	ic Streaking in	Sandy Soils		
		Chroma Colors			_	X Mottle	s			
		ontent in Surface Lay				Other	(Explain in Rer	narks)		
marks	(Describe soil	disturbances, local	variati	ions, etc	. .):					
i color a	and other hydr	ic soil indicators me	et the	hydric s	oil crite	na.				
ETI AN	ID DETER									
	ND DETER									
	ic Vegetation	Present?	Yes	_x	No		is thi	s Sampling P	oint W	/ithin a Wetlan
	s Present?		V	~	A1-		- ****	···		444(191
auc 201	3 1 163611[1		Yes	X	No					

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): The presence of all three parameters indicate this area is a wetland.

Parametrix, Inc.

					Data Plot #:	R17:A2
L ▶	WETLAND	DETE	ομινα	TIO	Wetland: N	R17
(Modified fron	1: 1987 CO	c vveti	anus L	<i>-</i>	leation Manual)	
Project/Site: Seattle Tacoma Airport - Master Pt	an Update	_	Date:	10/14	/99	
Applicant/Owner: Port of Seattle			County:	Kin		
nvestigator: W. Kleindl, M. Luther			State:	WA	<u> </u>	
1987 Method					Community ID: PS	S
o Normal Circumstances exist on the site?	Yes	<u>X</u>	No _		Field Plot ID: R17:/	A2
s the site significantly disturbed (Atypical Situation	n)? Yes		No _	X		
s the area a potential Problem Area?	Yes		No _	Х		
emarks (Explain sample location, disturbances	, problem are	as):				
etland R17 is a riparian wetland system with a s						
,						
EGETATION (Dominant species are che	cked)					
Plant Species		% Cover	Stratui	TI.	Indicator	
1 Athynum filix-femina		30	Herb		FAC+	
2 Rubus spectabilis		80	Shrub		FAC+	
ince greater than 50% of the dominant plants an	e hydrophytic.	the wetia	and vege	tatio	n criteria is met.	
YDROLOGY						
ecorded Data (Describe in Remarks):		Wet	tland Hy	droid	ogy Indicators (Describe	in Remarks):
Stream, Lake, or Tide Gage			Primary	Indic	ators:	
Aerial Photograph					inundated	
Other			<u>x</u>		Saturated in Upper 12 incl	
X No Recorded Data Available				_	Saturated in Upper 18 incl	hes
					Water Marks Drift Lines	
			x		Sediment Deposits	
			$-\hat{x}$	_	Drainage Patterns in Wetl	ands
ield Observations:						
	٦.)		Seconda	ary Ir	ndicators (2 or more require	ed):
Depth to Free Water in Pit: >20 (iii	1.)				Oxidized Root Channels in	
Depth to Saturated Soil: 5 (in	1.)				Water-Stained Leaves	
					Local Soil Survey Data	
					Other (Explain in Remarks	s)
emarks (As relevant, describe recent precipita			-		• •	
he presence of soil saturation within the upper 1.	2 inches of the	soil hon	izon sati.	sfies	the wetland hydrology crite	ena.

								Data P		R17:A2
								Wetlar	nd:	R17
rolect/S	ite: Seattle T	acoma Airport - Ma	ster Pla	n Upd	ate	Date:	10/14/99			
SOILS										
Soil Sur	vey Data:									
Map Unit	Name: Unm	apped					Drainage	Class:		
							Field Obs	ervations Conf	irm Map	ped Type?
Taxonom	y (Subgroup):						Yes	No	NA	X
² rofile D	escription:								_	
Depth Inches)	Horizon Designation	Matrix Color (Munsell Moist)			Color sell Moist)	Mottle Abundanc	e/Contrast	_	ure, Concretions, ospheres, etc.
-18+	A	10YR 3 /2		10YR :	3/4		Common, Co	arse. Faint	Sand	v Loam
H. Si Pr Re X GI Hi	educing Condi eyed or Low-C gh Organic Co (Describe soil		variati	ons, etc	 :.):	Listed Listed Aquic Organ X Mottle: Other	on State H on Nationa Moisture Re ic Streaking	in Sandy Soil	t List	
	ND DETERI			,				· · · · · · · · · · · · · · · · · · ·		
/ETLAI		Present?	Yes	X	No		le.	thic Samulia	Daine	Mish:
	ic Vegetation			<u> </u>			15	ma sambiint	y Point	Within a Wetland
/drophyt	ic Vegetation is Present?		Yes	X	No					

The presence of all three parameters indicate this area is a wetland.

AR 047938



Data Plot #:

R17:B R17 Upland Plot

roject/Site: Seattle Tacoma Ai	rport - Master Plan Up	date	ا	Date: <u>10/</u>	14/99
applicant/Owner: Port of Sea	ttie		(County: K	Cing
vestigator: W. Kleindl, P. Tou	igher, M. Luther		_	State: W	VA
1987 Method 1989 M	ethod		•	_	Community ID: Upland
o Normal Circumstances exist o	on the site?	Yes	x	No	Field Plot ID: R17:B
the site significantly disturbed	(Atypical Situation)?	Yes		No X	
the area a potential Problem A		Yes		No X	_
emarks (Explain sample locate Inland Plot located on Parcel 31,	•	nem are	as):		
EGETATION (Dominant	species are checked)		% Cover	Stratum	Indicator
1. Hex aquifolium			20	Shrub	NL NL
2 Oemiena cerasiformis			30	Shrub	FACU
3 Acer macrophyllum			30	Tree	FACU
J					
4 Thuja plicata recent of Dominant Species cept FAC-). Include species n riphological adaptations to well marks (Describe disturbance	oted (") as showing ands. "T" indicates tras, relevant local variations.	ace. ons, sea			criteria is not met.
Thuja plicata reent of Dominant Species cept FAC-). Include species n imphological adaptations to wet marks (Describe disturbance ince less than 50% of the domin	oted (") as showing ands. "T" indicates tras, relevant local variations.	ace. ons, sea	25 asonal eff	fects, etc.):	
Thuja plicata recent of Dominant Species scept FAC-). Include species n imphological adaptations to well marks (Describe disturbance size less than 50% of the domin	oted (*) as showing ands. "T" indicates tra s, relevant local variation ant plants are hydroph	ace. ons, sea	25 esonal eff	ects, etc.):	
Thuja plicata recent of Dominant Species recept FAC-). Include species in riphological adaptations to well marks (Describe disturbance rice less than 50% of the domin	oted (*) as showing ands. "T" indicates tra s, relevant local variation and plants are hydrophermarks):	ace. ons, sea	25 asonal eff wetland	ects, etc.):	criteria is not met.
Thuja plicata recent of Dominant Species recept FAC-). Include species in rephological adaptations to wet marks (Describe disturbance rice less than 50% of the domin DROLOGY corded Data (Describe in Re	oted (*) as showing ands. "T" indicates tra s, relevant local variation and plants are hydrophermarks):	ace. ons, sea	25 asonal eff wetland	ects, etc.): vegetation	criteria is not met.
Thuia plicata cent of Dominant Species cept FAC-). Include species n rphological adaptations to wetl marks (Describe disturbance ce less than 50% of the domin (DROLOGY corded Data (Describe in Re Stream, Lake, or T	oted (*) as showing ands. "T" indicates tra s, relevant local variation and plants are hydrophermarks):	ace. ons, sea	25 asonal eff wetland	ects, etc.): vegetation	criteria is not met. logy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches
4 Thuia plicata recent of Dominant Species cept FAC-). Include species in riphological adaptations to well marks (Describe disturbance ice less than 50% of the domin /DROLOGY corded Data (Describe in Re Stream, Lake, or T Aerial Photograph	oted (*) as showing ands. "T" indicates trass, relevant local variationant plants are hydrophic emarks):	ace. ons, sea	25 asonal eff wetland	ects, etc.): vegetation	criteria is not met. logy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches
Thuja plicata recent of Dominant Species recept FAC-). Include species in rephological adaptations to well marks (Describe disturbance rece less than 50% of the domin /DROLOGY corded Data (Describe in Re Stream, Lake, or T Aerial Photograph Other	oted (*) as showing ands. "T" indicates trass, relevant local variationant plants are hydrophic emarks):	ace. ons, sea	25 asonal eff wetland	ects, etc.): vegetation	criteria is not met. Rogy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks
Thuja plicata recent of Dominant Species recept FAC-). Include species in rephological adaptations to wetl rearks (Describe disturbance rice less than 50% of the domin TDROLOGY corded Data (Describe in Re Stream, Lake, or T Aerial Photograph Other	oted (*) as showing ands. "T" indicates trass, relevant local variationant plants are hydrophic emarks):	ace. ons, sea	25 asonal eff wetland	ects, etc.): vegetation	criteria is not met. Rogy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
Thuja plicata ercent of Dominant Species of Except FAC-). Include species in prophological adaptations to well of emarks (Describe disturbance ince less than 50% of the dominary PROLOGY ecorded Data (Describe in Researce Lake, or Tale Aerial Photograph Other	oted (*) as showing ands. "T" indicates trass, relevant local variationant plants are hydrophic emarks):	ace. ons, sea	25 asonal eff wetland	ects, etc.): vegetation	criteria is not met. Rogy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks
4 Thuja plicata recent of Dominant Species recept FAC-). Include species in prophological adaptations to well rmarks (Describe disturbance rice less than 50% of the domin /DROLOGY corded Data (Describe in Re Stream, Lake, or T Aerial Photograph Other X No Recorded Data	oted (*) as showing ands. "T" indicates trass, relevant local variationant plants are hydrophic emarks): Tide Gage Available	ace. ons, sea	25 asonal eff wetland	ects, etc.): vegetation	criteria is not met. Rogy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
4 Thuia plicata recent of Dominant Species recept FAC-). Include species in rephological adaptations to well marks (Describe disturbance rice less than 50% of the domin /DROLOGY corded Data (Describe in Re Stream, Lake, or T Aerial Photograph Other X No Recorded Data Id Observations: Depth of Surface Water:	oted (*) as showing ands. "T" indicates trass, relevant local variationant plants are hydrophic marks): Tide Gage Available None (in.)	ace. ons, sea	25 asonal eff wetland Wetl	ects, etc.): vegetation land Hydro Primary Indi	criteria is not met. Plogy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
Thuia plicata recent of Dominant Species cept FAC-). Include species in rephological adaptations to well marks (Describe disturbance ice less than 50% of the domin DROLOGY corded Data (Describe in Re Stream, Lake, or T Aerial Photograph Other X No Recorded Data Ind Observations: Depth of Surface Water: Depth to Free Water in Pit:	oted (*) as showing ands. "T" indicates trass, relevant local variationant plants are hydrophic marks): ide Gage None (in.)	ace. ons, sea	25 asonal eff wetland Wetl	ects, etc.): vegetation land Hydro Primary Indi	criteria is not met. cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required):
Thuja plicata From tof Dominant Species From t	oted (*) as showing ands. "T" indicates trass, relevant local variationant plants are hydrophic marks): Tide Gage Available None (in.)	ace. ons, sea	25 asonal eff wetland Wetl	ects, etc.): vegetation land Hydro Primary Indi	criteria is not met. Rogy Indicators (Describe in Remarks): Icators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
4. Thuia plicata recent of Dominant Species recept FAC-). Include species in prohological adaptations to well rmarks (Describe disturbance rice less than 50% of the domin receless than 5	oted (*) as showing ands. "T" indicates trass, relevant local variationant plants are hydrophic marks): ide Gage None (in.)	ace. ons, sea	25 asonal eff wetland Wetl	ects, etc.): vegetation land Hydro Primary Indi	criteria is not met. clogy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches

					Data Plot #:	R17:B
					Wetland:	R17 Upland Plo
Project/Site: Seattle Tacoma Airport -	Master Plan Up	odate	Date:	10/14/99		
SOILS Soil Survey Data:		<u></u>	•			
Map Unit Name: Unmapped				Drainage Clas	is:	
	-	-		Field Observa	tions Confirm Map	oped Type?
Taxonomy (Subgroup):					No NA	
Profile Description:						<u> </u>
Histosol			Listed	on Local Hydric	: Soile Liet	
Histosol Histic Epipedon Sulfidic Odor Probable Aquic Moisture Regime Reducing Conditions	2		Listed Listed Aquic I Organi	on Local Hydric on State Hydric on National Hyd Moisture Regim c Streaking in S	Soils List dric Soils List e	
Histosol Histic Epipedon Sulfidic Odor Probable Aquic Moisture Regime Reducing Conditions Gleyed or Low-Chroma Colors			Listed Listed Aquic I Organii Mottles	on State Hydric on National Hyd Moisture Regim c Streaking in S	: Soils List dric Soils List ee Sandy Soils	
Histic Epipedon Sulfidic Odor Probable Aquic Moisture Regime Reducing Conditions Gleyed or Low-Chroma Colors High Organic Content in Surface Remarks (Describe soil disturbances, lo	Layer	======================================	Listed Listed Aquic I Organii Mottles	on State Hydric on National Hyd Moisture Regim c Streaking in S	: Soils List dric Soils List ee Sandy Soils	
Histosol Histic Epipedon Sulfidic Odor Probable Aquic Moisture Regime Reducing Conditions Gleyed or Low-Chroma Colors High Organic Content in Surface Remarks (Describe soil disturbances, io	Layer	etc.):	Listed Listed Aquic I Organii Mottles	on State Hydric on National Hyd Moisture Regim c Streaking in S	: Soils List dric Soils List ee Sandy Soils	
Histosol Histic Epipedon Sulfidic Odor Probable Aquic Moisture Regime Reducing Conditions Gleyed or Low-Chroma Colors High Organic Content in Surface Remarks (Describe soil disturbances, lo	Layer	etc.):	Listed Listed Aquic I Organii Mottles	on State Hydric on National Hyd Moisture Regim c Streaking in S Explain in Rema	Soils List dric Soils List de Sandy Soils arks)	Within a Wetland?

No wetland indicators are present.

AR 047940

P	ar	am	eti	rix	inc.
•	~.,	CIII		٠٨,	



Data Plot #:	48-B
Wetland:	48

	TLAND DE		
(Modified from: 1	987 COE W	vetlands [Pelineation Manual)
Project/Site: Seattle Tacoma Airport - Master Plan U	pdate	Date:	12/16/98
Applicant/Owner: Port of Seattle		County:	King
nvestigator: William Kleindi		State:	WA
✓ 1987 Method			Community
Do Normal Circumstances exist on the site?	Yes X	No	Community ID: Upland
s the site significantly disturbed (Atypical Situation)?	Yes	-	Tield Plot ID: B52-B
s the area a potential Problem Area?	Yes		
emarks (Explain sample location, disturbances, pro		_ No _	<u>x </u>
etland and upland plot located on the western end of	f S. 212th stree	et in borrow s	ite 1.
EGETATION PODMINANT Species are checked)		
Plant Species	, % Co	ver Stratum	Indicator
1 Rubus discolor	75	Shrub	FACU
			FAC
2 Ainus rubra	20	Tree	
Pseudotsuga menziesii arcent of Dominant Species that are OBL, FACW, scept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variations)	or FAC ace.	Tree	FACU
Pseudotsuga menziesii arcent of Dominant Species that are OBL, FACW, scept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates training includes the semants (Describe disturbances, relevant local variations to be standard to be seen to be se	or FAC ace.	Tree	FACU
Pseudotsuga menziesii ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing prophological adaptations to wetlands. "T" indicates tri ermarks (Describe disturbances, relevant local variatione less than 50 % of the vegetation is hydrophytic. the	20, or FAC 3 ace. Jons, seasonal the wetland pla	Tree	FACU): not met.
Pseudotsuga menziesii ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing porphological adaptations to wetlands. "T" indicates tre emarks (Describe disturbances, relevant local variate ince less than 50 % of the vegetation is hydrophytic, to YDROLOGY corded Data (Describe in Remarks):	20, or FAC 3 ace. Jons, seasonal the wetland pla	Tree 33 I effects, etc. int criteria is i	PACU in the met. rology Indicators (Describe in Remarks):
Pseudotsuga menziesii ercent of Dominant Species that are OBL, FACW, scept FAC-). Include species noted (*) as showing priphological adaptations to wetlands. "T" indicates the smarks (Describe disturbances, relevant local variations to the second standard of the second standard second sec	20, or FAC 3 ace. Jons, seasonal the wetland pla	Tree	rology Indicators (Describe in Remarks):
Pseudotsuga menziesii ercent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing prophological adaptations to wetlands. "T" indicates tra ermarks (Describe disturbances, relevant local variat ince less than 50 % of the vegetation is hydrophytic. to YDROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	20, or FAC 3 ace. Jons, seasonal the wetland pla	Tree 33 I effects, etc. int criteria is i	rology Indicators (Describe in Remarks): dicators: Inundated
Pseudotsuga menziesii ercent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing prophological adaptations to wetlands. "T" indicates tra ermarks (Describe disturbances, relevant local variat ince less than 50 % of the vegetation is hydrophytic. to YDROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	20, or FAC 3 ace. Jons, seasonal the wetland pla	Tree 33 I effects, etc. int criteria is i	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches
Pseudotsuga menziesii ercent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing prophological adaptations to wetlands. "T" indicates tra ermarks (Describe disturbances, relevant local variat ince less than 50 % of the vegetation is hydrophytic. to YDROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	20, or FAC 3 ace. Jons, seasonal the wetland pla	Tree 33 I effects, etc. int criteria is i	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches
Pseudotsuga menziesii ercent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing prophological adaptations to wetlands. "T" indicates tra ermarks (Describe disturbances, relevant local variat ince less than 50 % of the vegetation is hydrophytic. to YDROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	20, or FAC 3 ace. Jons, seasonal the wetland pla	Tree 33 I effects, etc. int criteria is i	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks
Pseudotsuga menziesii ercent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing prophological adaptations to wetlands. "T" indicates tra ermarks (Describe disturbances, relevant local variat ince less than 50 % of the vegetation is hydrophytic. to YDROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	20, or FAC 3 ace. Jons, seasonal the wetland pla	Tree 33 I effects, etc. int criteria is i	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
Pseudotsuga menziesii ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing porphological adaptations to wetlands. "T" indicates the emarks (Describe disturbances, relevant local variations includes than 50 % of the vegetation is hydrophytic, the emarks (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	20, or FAC 3 ace. Jons, seasonal the wetland pla	Tree 33 I effects, etc. int criteria is i	pology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
Pseudotsuga menziesii ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing prophological adaptations to wetlands. "T" indicates the emarks (Describe disturbances, relevant local variations includes than 50 % of the vegetation is hydrophytic. the eless than 50 % of the vegetation is hydrophytic. the eless than 50 % of the vegetation is hydrophytic. the eless than 50 % of the vegetation is hydrophytic. the eless than 50 % of the vegetation is hydrophytic. the eless than 50 % of the vegetation is hydrophytic. the eless than 50 % of the vegetation is hydrophytic. the eless than 50 % of the vegetation is hydrophytic. The eless than 50 % of the vege	20, or FAC 3 ace. Jons, seasonal the wetland pla	Tree 33 I effects, etc. int criteria is i	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
Pseudotsuga menziesii Pseudotsuga menziesii	20, or FAC 3 ace. Jons, seasonal the wetland pla	Tree 13 I effects, etc. Int criteria is i	pology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
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Pseudotsuga menziesii Pseudotsuga menziesii	20, or FAC 3 ace. Jons, seasonal the wetland pla	Tree 13 I effects, etc. Int criteria is i	protomet. Tology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches
Pseudotsuga menziesii arcent of Dominant Species that are OBL, FACW except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates training includes the series of the vegetation is hydrophytic. the series than 50 % of the vegetation is hydrophytic. the series than 50 % of the vegetation is hydrophytic. the series than 50 % of the vegetation is hydrophytic. the series than 50 % of the vegetation is hydrophytic. the series than 50 % of the vegetation is hydrophytic. the series than 50 % of the vegetation is hydrophytic. the series than 50 % of the vegetation is hydrophytic. the series than 50 % of the vegetation is hydrophytic. the series than 50 % of the vegetation is hydrophytic. the series than 50 % of the vegetation is hydrophytic. the series than 50 % of the vegetation is hydrophytic. the series than 50 % of the vegetation is hydrophytic. the vegetation is hydrophytic. the series than 50 % of the vegetation is hydrophytic. the series than 50 % of the vegetation is hydrophytic. the series than 50 % of the vegetation is hydrophytic. the vegetation is hydrophytic. the vegetation is hydrophytic. the vegetation is hydrophytic. the vegetation is hydrophytic. the vegetation is hydrophytic. the vegetation is hydrophytic. the vegetation is hydrophytic. the vegetation is hydrophytic. the vegetation is hydrophytic. the vegetation is hydrophytic. the vegetation is hydrophytic. the vegetation is hydrophytic. the vegetation is hydrophytic. the vegetation is hydrophytic. the vegetation is hydrophytic. the vegetation is hydrophytic. The vegetation is hydrophytic. The vegetation is hydrophytic. The vegetation is hydrophytic. The vegetation is hydrophytic. The vegetation is hydrophytic. The vegetation is hydrophytic. The vegetation is hydrophytic. The vegetation is hydrophytic. The vegetation is hydrophytic. The vegetation is hydrophytic. The vegetation is hydrophytic. The vegetation is hydrophytic. The vegetation is hydrophytic. The vegetation is hydrophytic. The vegetation is hydroph	20, or FAC 3 ace. Jons, seasonal the wetland pla	Tree 13 I effects, etc. Int criteria is i	pology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands

$\overline{}$							Data Pio	t#:	48-B
							Wetland		48
roject/Si	te: Seattle Ta	coma Airport - Master	Plan Upd	ate	- Date	12/16/98			
SOILS Soil Surv	vey Data:								
Map Unit	Name:					Drainage Cla	s s:		
						Field Observa	ations Confir	m Mar	oped Type?
Taxonom	y (Subgroup):					Yes	No X	NA	
Profile De	escription:							_	
Depth Inches)	Horizon Designation	Matrix Color (Munsell Moist)		ie Color iseli Mois	t)	Mottle Abundance/C	Contrast		ture, Concretions zospheres, etc.
)-5	A1	10YR 4/3				-		San	đ
5-18	A2	10YR 4/3	10YF	5/2		Few Fine, Distr	nct	Sand	đ
Audeia Sa	oil Indicators								
•	istosol	•			List	ed on Local Hyd	ric Soils List		
	istic Epipedon	1		_	List	ed on State Hyd	nc Soils List		
s	ulfidic Odor			_	List	ed on National H	lydric Soils L	ist	
P	robable Aquic	Moisture Regime		_	Aqu	ic Moisture Regi	me		
R	educing Cond	itions			Org	anic Streaking in	Sandy Soils	5	
G	leyed or Low-	Chroma Colors			Mot	ties			
——н	igh Organic C	ontent in Surface Laye	f	_	Oth	er (Explain in Re	marks)		
	-	il disturbances, local vi soil are present.	ariations,	etc.):					
WETLA	ND DETER	MINATION			<u></u>				
	rtic Vegetatio		Yes	No	×	ls th	is Sampling	g Poin	it Within a Wetla
	oils Present?		Yes	— No	X			_	
., 00					~		Yes		ło X

This area is an upland since all wetland parameters are absent.

Param	etrix,	Inc.
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Data Plot #:	48-A	
Wetland:	48	

(Modified from: 19	87 COE W	etlands De	elineation Manual)
roject/Site: Seattle Tacoma Airport - Master Plan Upi	date	Date: 12	2/16/98
pplicant/Owner: Port of Seattle		County:	King
vestigator: William Kleindl			WA
1987 Method 1989 Method		•	Community ID: DECOREM
Normal Circumstances exist on the site?	Yes X	No	Community ID: PFO/PEM
he site significantly disturbed (Atypical Situation)?	Yes	No X	Field Plot ID: B56-A
the area a potential Problem Area?	Yes	No X	
marks (Explain sample location, disturbances, prob		- '** _^	_
tiand and upland plot located on the western end of S		· i= +===	- d
iono and apiona piot rocated on the western end of t	3. 212111 311 00 1	III DONOW SIG	e 1.
GETATION (Dominant species are checked)			
Plant Species	% Cov	er Stratum	Indicator
1 Agrostis capillans (tenuis)	20	Herb	FAC
2 Equisetum telmateia	10	Herb	FACW
3 Juncus effusus	20	Herb	FACW
4 Ranunculus repens	80	Herb	FACW
5 Rubus discolor	30	Shrub	FACU
5 Rubus discolor 6 Ainus rubra	20	Shrub Tree	FAC FAC
Rubus discolor Alnus rubra Cent of Dominant Species that are OBL, FACW, or	20		
Rubus discolor Alnus rubra cent of Dominant Species that are OBL, FACW, of cept FAC-). Include species noted (*) as showing	20 or FAC	Tree	
Rubus discolor Alnus rubra cent of Dominant Species that are OBL, FACW, copt FAC-). Include species noted (*) as showing rphological adaptations to wetlands. "T" indicates trace	20 or FAC 	Tree	FAC
Rubus discolor Alnus rubra cent of Dominant Species that are OBL, FACW, of cept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T" indicates tracentarias (Describe disturbances, relevant local variations)	20 or FAC 	Tree	FAC
Rubus discolor Alnus rubra cent of Dominant Species that are OBL, FACW, of cept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T" indicates tracentarias (Describe disturbances, relevant local variations)	20 or FAC 	Tree	FAC
Rubus discolor Ainus rubra tent of Dominant Species that are OBL, FACW, of the FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T" indicates trace traces are the properties of the dominant vegetation are in the DROLOGY	20 or FAC 	Tree	FAC
Rubus discolor Ainus rubra tent of Dominant Species that are OBL, FACW, of ept FAC-). Include species noted (*) as showing chological adaptations to wetlands. "T" indicates tractionarks (Describe disturbances, relevant local variation of the dominant vegetation are in DROLOGY	or FAC 10 ce. ons, seasonal environments, the	Tree 00 effects, etc.): e welland veg	FAC getation criteria is met
Rubus discolor Annus rubra ent of Dominant Species that are OBL, FACW, of ept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T" indicates tracearks (Describe disturbances, relevant local variation of greater than 50 % of the dominant vegetation are in OROLOGY	or FAC 10 ce. ons, seasonal environments, the	Tree 00 effects, etc.): e welland veg	getation criteria is met plogy Indicators (Describe in Remarks):
8 Rubus discolor 6 Ainus rubra ent of Dominant Species that are OBL, FACW, or ept FAC-). Include species noted (*) as showing shological adaptations to wetlands. "T" indicates tractarks (Describe disturbances, relevant local variation or greater than 50 % of the dominant vegetation are in DROLOGY orded Data (Describe in Remarks):	or FAC 10 ce. ons, seasonal environments, the	Tree O effects, etc.): e wetland veg	getation criteria is met plogy Indicators (Describe in Remarks):
5. Rubus discolor 6 Alnus rubra sent of Dominant Species that are OBL, FACW, dept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T" indicates tractionarks (Describe disturbances, relevant local variations of greater than 50 % of the dominant vegetation are in DROLOGY orded Data. (Describe in Remarks): Stream, Lake, or Tide Gage.	or FAC 10 ce. ons, seasonal environments, the	effects, etc.): e wetland veg etland Hydro Primary Indi	getation criteria is met plogy Indicators (Describe in Remarks): icators:
5. Rubus discolor 6 Alnus rubra sent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing shological adaptations to wetlands. Thindicates tractionarks (Describe disturbances, relevant local variations of greater than 50 % of the dominant vegetation are in DROLOGY orded Data. (Describe in Remarks): Stream, Lake, or Tide Gage. Aerial Photograph	or FAC 10 ce. ons, seasonal environments, the	effects, etc.): e wetland veg etland Hydro Primary Indi	getation criteria is met plogy Indicators (Describe in Remarks): icators: Inundated
8 Rubus discolor 6 Ainus rubra 2 Pent of Dominant Species that are OBL, FACW, of ept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T" indicates tractionarks (Describe disturbances, relevant local variation of greater than 50 % of the dominant vegetation are in the DROLOGY orded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	or FAC 10 ce. ons, seasonal environments, the	effects, etc.): e wetland veg etland Hydro Primary Indi	plogy Indicators (Describe in Remarks): icators: Inundated Saturated in Upper 12 inches
5. Rubus discolor 6 Ainus rubra cent of Dominant Species that are OBL, FACW, of ept FAC-). Include species noted (*) as showing chological adaptations to wetlands. "T" indicates tractionarks (Describe disturbances, relevant local variation of greater than 50 % of the dominant vegetation are in DROLOGY orded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	or FAC 10 ce. ons, seasonal environments, the	effects, etc.): e wetland veg etland Hydro Primary Indi	getation criteria is met plogy Indicators (Describe in Remarks): icators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
5. Rubus discolor 6 Alnus rubra cent of Dominant Species that are OBL, FACW, of the period of the p	or FAC 10 ce. ons, seasonal environments, the	effects, etc.): e wetland veg etland Hydro Primary Indi X X	getation criteria is met plogy Indicators (Describe in Remarks): icators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
Rubus discolor Alnus rubra cent of Dominant Species that are OBL, FACW, of Cept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T" indicates tractionarks (Describe disturbances, relevant local variation are greater than 50 % of the dominant vegetation are from the DROLOGY orded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	or FAC 10 ce. ons, seasonal environments, the	effects, etc.): e wetland veg etland Hydro Primary Indi	getation criteria is met plogy Indicators (Describe in Remarks): icators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
Rubus discolor Ainus rubra cent of Dominant Species that are OBL, FACW, or cept FAC-). Include species noted (*) as showing phological adaptations to wetlands. Thindicates trace marks (Describe disturbances, relevant local variations are greater than 50 % of the dominant vegetation are in the DROLOGY orded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available I Observations: epth of Surface Water: 1 (in.)	or FAC 10 ce. ons, seasonal environments, the	effects, etc.): e wetland veg etland Hydro Primary Indi X X	getation criteria is met Diogy Indicators (Describe in Remarks): icators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
Rubus discolor Alnus rubra cent of Dominant Species that are OBL, FACW, or sept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T" indicates tractionarks (Describe disturbances, relevant local variation are greater than 50 % of the dominant vegetation are in DROLOGY Orded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Observations: epth of Surface Water: 1 (in.) epth to Free Water in Pit: 0 (in.)	or FAC 10 ce. ons, seasonal environments, the	effects, etc.): e wetland veg etland Hydro Primary Indi X X Secondary	getation criteria is met plogy Indicators (Describe in Remarks): icators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required):
Rubus discolor Alnus rubra cent of Dominant Species that are OBL, FACW, or sept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T" indicates tractionarks (Describe disturbances, relevant local variation are greater than 50 % of the dominant vegetation are in DROLOGY Orded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Observations: epth of Surface Water: 1 (in.) epth to Free Water in Pit: 0 (in.)	or FAC 10 ce. ons, seasonal environments, the	effects, etc.): e wetland veg etland Hydro Primary Indi X X	getation criteria is met plogy Indicators (Describe in Remarks): Icators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inche
Rubus discolor Alnus rubra cent of Dominant Species that are OBL, FACW, or cept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T" indicates tractionarks (Describe disturbances, relevant local variation are than 50 % of the dominant vegetation are the DROLOGY orded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available ### Observations: epth of Surface Water: #### Observations: epth of Surface Water: #### Open	or FAC 10 ce. ons, seasonal environments, the	effects, etc.): e wetland veg etland Hydro Primary Indi X X Secondary	getation criteria is met plogy Indicators (Describe in Remarks): icators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inche Water-Stained Leaves
Rubus discolor Alnus rubra Cent of Dominant Species that are OBL, FACW, of Cept FAC-). Include species noted (*) as showing rephological adaptations to wetlands. "T" indicates tractionarks (Describe disturbances, relevant local variation are in the company of the dominant vegetation are in the company of the dominant vegetation are in the company of the company	or FAC 10 ce. ons, seasonal environments, the	effects, etc.): e wetland veg etland Hydro Primary Indi X X Secondary	getation criteria is met plogy Indicators (Describe in Remarks): Icators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inche

4						Data Pic	ot #:	48-A
						Wetland	1 :	48
oject/S	ite: Seattle Ta	acoma Airport - Master	Plan Update	Date:	12/16/98			
OILS oil Sur	vey Data:							
ap Unit	t Name: Unm	apped			Drainage Cl	ass:		
					Field Obser	vations Confi	m Map	ped Type?
ахопоп	ny (Subgroup):				Yes	No	. NA	<u>x</u>
rofile D	escription:							
epth nches)	Horizon Designation	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moi	st)	Mottle Abundance/	Contrast	-	ure, Concretions ospheres, etc.
-18	С	10YR 5/2	10YR 5/4		Few. Medium.	Distinct	Grav	eliv sand
	Reducing Cond Gleyed or Low-	Moisture Regime itions Chroma Colors ontent in Surface Laye	-	Listed Listed Aquic Organ Mottle	d on Local Hyd d on State Hyd d on National d Moisture Req nic Streaking i es (Explain in R	dric Soils List Hydric Soils L gime n Sandy Soil:	ist	
<u> </u>	_	il disturbances, local vi	ariations etc.)					
temarks			•	па				
Remarks Soil color		on of indicators meet t	•	па.	is t	his Samplin	g Point	t Within a Wetla
Remarks Soil color NETLA	and observation	en of indicators meet to RMINATION on Present?	he hydric soil crite	na. 	is t	hi s Sa mplin		

The presence of all three parameters indicate this area is a wetland.

Parametrix, Inc	ix, Inc.
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Data Plot #:	B1-A
Wetland:	B1

	1A/ 	H AND DET	EDMINIAS		Wetland	l: B 1
		LAND DET				
	(Modified from: 19	87 COE We	tiands De	elineation	Manual)
Project/Site: Seattle Tacoma	Airport - Master Plan Up	date	Date: 5/	14/98		
Applicant/Owner: Port of S	Seattle		County:	King		
nvestigator: William Kleindi	·		•	WA		
✓ 1987 Method	Method					
Do Normal Circumstances exi	st on the site?	Yes X	No		munity ID	
s the site significantly disturbe		Yes	·		Plot ID:	B1-A
s the area a potential Problem				<u></u>		
		Yes	No <u>X</u>	<u> </u>		
lemarks (Explain sample loc						
epression with apparent storr	iiwatei iiiiluence via oitori	ı ırom residenti	ai area to tri	e east.		
EGETATION - Domina						
Plant Species	ant species are checked)	% Cove				
1 Carex sp.		5		Indicator		
2 Equisetum palustre		$\frac{3}{5}$	Herb Herb	FACW FACW	-	
3 Rubus discolor		20	Shrub	FACU	-	
4 Rubus spectabilis		20	Shrub	FAC+	=	
		85	Shrub	FACW	-	
5 Spiraea douglasii						
6 Ainus rubra		20	Tree	FAC	•	
6 Alnus rubra 7 Populus trichocarpa ercent of Dominant Species xcept FAC-). Include species	noted (*) as showing	20 40 or FAC	Tree	FAC FAC		
Alnus rubra 7 Populus trichocarpa ercent of Dominant Species except FAC-). Include species prohological adaptations to we ermarks (Describe disturbance ance greater than 50% of the dis-	noted (*) as showing etlands. "T" indicates traces called variations.	20 40 or FAC ce. 100 ons, seasonal e	Tree	FAC	met.	
Alnus rubra 7 Populus trichocarpa ercent of Dominant Species except FAC-). Include species orphological adaptations to we emarks (Describe disturbance face greater than 50% of the di YDROLOGY	noted (*) as showing etlands. "T indicates traces relevant local vanation formant plants are hydro	or FAC ce. ins. seasonal e phytic, the weti	Tree) ffects, etc.): and vegetati	FAC	_	
Alnus rubra 7 Populus trichocarpa ercent of Dominant Species except FAC-). Include species prophological adaptations to with ermarks (Describe disturbance face greater than 50% of the disturbance POROLOGY Corded Data (Describe in F	noted (*) as showing etlands. "T" indicates tractes, relevant local variation forminant plants are hydrogenation. Remarks):	or FAC ce. ins. seasonal e phytic, the weti	Tree) ffects, etc.): and vegetate	FAC	_	scribe in Remarks):
Alnus rubra 7 Populus trichocarpa ercent of Dominant Species except FAC-). Include species erphological adaptations to we ermarks (Describe disturbance force greater than 50% of the di PDROLOGY Corded Data (Describe in F	noted (*) as showing etlands. "T" indicates tractes, relevant local variation formant plants are hydrogenerally. Remarks): Tide Gage	or FAC ce. ins. seasonal e phytic, the weti	Tree) ffects, etc.): and vegetati	FAC	_	scribe in Remarks):
Alnus rubra 7 Populus trichocarpa Pricent of Dominant Species Proposition of Dominant Species	noted (*) as showing etlands. "T" indicates tractes, relevant local variation formant plants are hydrogenerally. Remarks): Tide Gage	or FAC ce. ins. seasonal e phytic, the weti	Tree) ffects, etc.): and vegetate	FAC	_	scribe in Remarks):
Alnus rubra 7 Populus trichocarpa recent of Dominant Species recept FAC-). Include species rephological adaptations to we marks (Describe disturbance rice greater than 50% of the of /DROLOGY corded Data (Describe in F Stream, Lake, or Aerial Photograpi Other	noted (*) as showing etlands. "T indicates tractes relevant local variation formant plants are hydrometer and the state of	or FAC ce. ins. seasonal e phytic, the weti	Tree) ffects, etc.): and vegetate	FAC Jon criteria is i plogy Indicate icators:	ors (Des	
Alnus rubra 7 Populus trichocarpa ercent of Dominant Species except FAC-). Include species prophological adaptations to we ermarks (Describe disturbance ance greater than 50% of the of **TOROLOGY** Corded Data (Describe in F Stream, Lake, or Aerial Photograp	noted (*) as showing etlands. "T indicates tractes relevant local variation formant plants are hydrometer and the state of	or FAC ce. ins. seasonal e phytic, the weti	Tree) ffects, etc.): and vegetati tland Hydro Primary Indi X	plogy Indicate icators: Inundated Saturated in Saturated	Des (Des	2 inches
Ainus rubra 7 Populus trichocarpa ercent of Dominant Species except FAC-). Include species priphological adaptations to we emarks (Describe disturbance fince greater than 50% of the of YDROLOGY corded Data (Describe in F Stream, Lake, or Aerial Photograpi Other	noted (*) as showing etlands. "T indicates tractes relevant local variation formant plants are hydrometer and the state of	or FAC ce. ins. seasonal e phytic, the weti	Tree) ffects, etc.): and vegetat tland Hydro	plogy Indicate icators: Inundated Saturated in Saturated in Water Marks	Des (Des	2 inches
Alnus rubra 7 Populus trichocarpa ercent of Dominant Species except FAC-). Include species orphological adaptations to we emarks (Describe disturbance nice greater than 50% of the of YDROLOGY ecorded Data (Describe in F Stream, Lake, or Aerial Photograpi Other	noted (*) as showing etlands. "T indicates tractes relevant local variation formant plants are hydrometer and the state of	or FAC ce. ins. seasonal e phytic, the weti	Tree) ffects, etc.): and vegetati tland Hydro Primary Indi X	plogy Indicate icators: Inundated Saturated in Saturated in Water Mark: Drift Lines	Ors (Des 1 Upper 1) 1 Upper 1) 5	2 inches
Alnus rubra 7 Populus trichocarpa ercent of Dominant Species except FAC-). Include species prophological adaptations to with emarks (Describe disturbance face greater than 50% of the disturbance except FAC-). Include species prophological adaptations to with emarks (Describe disturbance face greater than 50% of the disturbance Extremely Stream, Lake, or Aerial Photograpi Other X No Recorded Data	noted (*) as showing etlands. "T indicates tractes relevant local variation formant plants are hydrometer and the state of	or FAC ce. ins. seasonal e phytic, the weti	Tree) ffects, etc.): and vegetati tland Hydro Primary Indi X	plogy Indicate icators: Inundated Saturated in Saturated in Water Mark: Drift Lines Sediment Drift Lines	Des (Des 1) Des	2 inches 3 inches
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Alnus rubra 7 Populus trichocarpa Pricent of Dominant Species Recept FAC-). Include species Prophological adaptations to we Pr	noted (*) as showing etlands. "T" indicates traces, relevant local variation formant plants are hydro. Remarks): Tide Gage h Available None (in.) (in.)	pr FAC 100 ce. 100 weth	Tree) ffects, etc.): and vegetati tland Hydro Primary Indi X X	pology Indicate icators: Inundated Saturated in Water Mark: Drift Lines Sediment Did Drainage Parallel indicators (2 c)	Description (Description (Descr	2 inches 8 inches Wetlands equired):
Alnus rubra 7 Populus trichocarpa ercent of Dominant Species except FAC-). Include species prophological adaptations to we emarks (Describe disturbance greater than 50% of the di YDROLOGY corded Data (Describe in F Stream, Lake, or Aerial Photograph Other X No Recorded Data Id Observations: Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as showing etlands. "T" indicates traces, relevant local variation forminant plants are hydro. Remarks): Tide Gage h a Available None (in.)	pr FAC 100 ce. 100 weth	Tree) ffects, etc.): and vegetati tland Hydro Primary Indi X X	pology Indicate icators: Inundated Saturated in Water Mark: Drift Lines Sediment Did Drainage Patindicators (2 considered Roots)	DOTS (Des	2 inches 3 inches Wetlands equired): els in Upper 12 inch
Populus inchocarpa ercent of Dominant Species except FAC-). Include species except FAC-). Include species ercent of Dominant Species except FAC-). Include species ercent of Dominant Species except FAC-). Include spec	noted (*) as showing etlands. "T" indicates traces, relevant local variation formant plants are hydro. Remarks): Tide Gage h Available None (in.) (in.)	pr FAC 100 ce. 100 weth	ffects, etc.): and vegetate tland Hydro Primary inde X X Secondary	pology Indicate icators: Inundated Saturated in Saturated in Water Mark: Drift Lines Sediment Di Drainage Palindicators (2 di Oxidized Ro Water-Staine	DOTS (Des	2 inches 3 inches Wetlands equired): els in Upper 12 inches
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4 6								Data Pic	ot #:	B1-A
L.								Wetland	1:	B1
oject/Sit	te: Seattle Ta	coma Airport - Master	Plan	Update	<u> </u>	Date:	5/14/98			
OILS il Surv	rey Data:									
ap Unit	Name: Unm	apped					Drainage	Class:		
							Field Obs	servations Confir	m Map	ped Type?
axonom	y (Subgroup):						Yes	No	NA	<u>x</u>
ofile De	escription:		-							
epth nches)	Horizon Designation	Matrix Color (Munsell Moist)		Mottle (Munse	Color Il Moist)	Mottle Abundan	ce/Contrast		ture, Concretions cospheres, etc.
12	Α	10YR 3/1					-		Clay	Loam
2-20	8	10YR 4/1	1	10YR 5/8	8		Common. M	ledium, Distinct	Clay	Loam
90	С	10YR 4/3	1	10YR 5/6	5		Few. Mediu	m. Distinct	Sand	ly loam
- /dric Sc	oil Indicators:									
- Hi	istosol					Listed	on Local	Hydric Soils List		
— ні	istic Epipedon					Listed	on State I	Hydric Soils List		
Sı	ulfidic Odor					Listed	on Nation	al Hydric Soils L	ist	
X Pr	robable Aquic	Moisture Regime				Aquic	Moisture F	Regime		
	educing Condi							ng in Sandy Soils	3	
	•	Chroma Colors			_	X Mottle				
X Hi	gh Organic Co	ontent in Surface Laye	r		_	Other	(Explain in	Remarks)		
		l disturbances, local va								
mediate	ly below 10" t	he soil color and other	hydno	o soil II	ndicato	rs meet the	hydric soil	criteria.		
/ETI AI	ND DETER	MINATION								
AE I EM			/	.,	Nia			a shia Camalian	. D	1881AL: 181-AL
.drook.d	iii. YMORIACIOI	rresentr	es :	_ <u>×</u> _	No			s this Sampling	, roint	AAIGUIU S AASIIS
ydrophyl	ils Present?		res .	×	No					

The presence of all three parameters indicate this area is a wetland.



Data Plot #:

B1-B

AAEIL	AND DETE	RMINA	TION	Wetland	B1 Upland P
(Modified from: 198	7 COE Wet	lands D	elineatio	n Manual)
Project/Site: Seattle Tacoma Airport - Master Plan Upda	ate	Date: 5	5/14/98		
Applicant/Owner: Port of Seattle		County:	King		
nvestigator: William Kleindl		State:	WA		
2 1987 Method 1989 Method					
Do Normal Circumstances exist on the site?	Yes X	No	C	ommunity i	: Upland
		No _		ield Plot ID:	B1-B
s the site significantly disturbed (Atypical Situation)?	Yes	No _	<u>x</u>		
s the area a potential Problem Area?	Yes	No _	<u>x</u>		
emarks (Explain sample location, disturbances, proble	em areas):				
pland area pair plot.					
EGETATION (>Dominant species are checked)					
Plant Species	% Cover	Stratum	Indicate	or	
1 Galium sp	10	Herb	FACU		
2 Geranium robertianum	40	Hero	NL		
Urtica dioica Oemiena cerasitomis	40	Herb	FAC+		
5 Rubus discolor	30	Shrub	FACU		
6 Acer macrophylium	40	Shrub	FACU		
	44 U	Tree	FACU		
Propert of Dominant Species, that are ODL EACH					
ercent of Dominant Species that are OBL, FACW, or					
xcept FAC-). Include species noted (*) as showing	17				
xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace	<u>17</u>				
KCEPT FACE). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace trace trace trace trace trace trace traces. The indicates trace trace trace traces.	e. <u>17</u>	ects. etc.):		
xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace	e. <u>17</u>	ects. etc.):		
coept FAC-). Include species noted (*) as showing prophological adaptations to wetlands. "T" indicates trace imarks (Describe disturbances, relevant local variation in wetland vegetation criteria are not met since the area	e. <u>17</u>	ects. etc.):		
report FAC-). Include species noted (*) as showing prohological adaptations to wetlands. "T indicates trace marks (Describe disturbances, relevant local variation in wetland vegetation criteria are not met since the area (*) PROLOGY	e. <u>17</u> is, seasonal eff is dominated b	ects, etc. y non-we): tland plants		
coept FAC-). Include species noted (*) as showing prohological adaptations to wetlands. "T" indicates trace marks (Describe disturbances, relevant local variation e wetland vegetation critena are not met since the area (*DROLOGY corded Data (Describe in Remarks):	e. 17 is, seasonal eff is dominated b	ects, etc., y non-we): tland plants rology Indi		scribe in Remarks):
coept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace marks (Describe disturbances, relevant local variation e wetland vegetation critena are not met since the area /DROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage	e. 17 is, seasonal eff is dominated b	ects, etc. y non-we): tland plants rology Indi dicators:	cators (De	scribe in Remarks):
report FAC-). Include species noted (*) as showing prohological adaptations to wetlands. "T indicates trace marks (Describe disturbances, relevant local variation is wetland vegetation criteria are not met since the area (*DROLOGY**) corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph	e. 17 is, seasonal eff is dominated b	ects, etc., y non-we); tland plants rology Indi dicators: Inundate	cators (De	
coept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. To indicates trace marks (Describe disturbances, relevant local variation is wetland vegetation criteria are not met since the area (*/DROLOGY) corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other	e. 17 is, seasonal eff is dominated b	ects, etc., y non-we): rology Indi dicators: Inundate Saturate	cators (De ed ed in Upper 1	2 inches
coept FAC-). Include species noted (*) as showing prohological adaptations to wetlands. To indicates trace marks (Describe disturbances, relevant local variation in wetland vegetation criteria are not met since the area (*) CDROLOGY (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph	e. 17 is, seasonal eff is dominated b	ects, etc., y non-we	itland plants rology Indi dicators: Inundate Saturate Saturate	cators (De ed ed in Upper 1 ed in Upper 1	2 inches
coept FAC-). Include species noted (*) as showing prophological adaptations to wetlands. "T' indicates trace trace traces (*) as showing prophological adaptations to wetlands. "T' indicates trace traces (*) and the same of the same and the same are not met since the area (*) APOLOGY (*) corded Data (*) Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	e. 17 is, seasonal eff is dominated b	ects, etc., y non-we	rology Indi dicators: Inundate Saturate Saturate Water M	cators (De ed ed in Upper 1 ed in Upper 1 arks	2 inches
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Accept FAC-). Include species noted (*) as showing prophological adaptations to wetlands. To indicates trace traces are not met since the area of the wetland vegetation criteria are not met since the area of the area of the since the area of	e. 17 is, seasonal eff is dominated b	ects, etc., y non-we	rology Indi dicators: Inundate Saturate Saturate Water M Drift Line Sedimer	cators (De ed in Upper 1 ed in Upper 1 arks	2 inches 8 inches
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Coept FAC-). Include species noted (*) as showing prophological adaptations to wetlands. To indicates trace imarks (Describe disturbances, relevant local variation in wetland vegetation criteria are not met since the area. **TOROLOGY** Corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available **Id Observations: Depth of Surface Water: Depth to Free Water in Pit: None	es. seasonal efficies dominated b Wett	ects, etc., y non-wei	rology Indi dicators: Inundate Saturate Water M Drift Line Sedimer Drainage	cators (De ed in Upper 1 ed in Upper 1 arks es at Deposits Patterns in	2 inches 8 inches Wetlands equired):
Accept FAC-). Include species noted (*) as showing prophological adaptations to wetlands. To indicates trace temarks (Describe disturbances, relevant local variation we wetland vegetation critena are not met since the area and the vegetation critena are not met since the area and the vegetation critena are not met since the area and the vegetation critena are not met since the area and the vegetation critena are not met since the area and the vegetation critena are not met since the area and the vegetation critena are not met since the area and the vegetation critena are not met since the area and vegetation critena are not met since the area and vegetation critena are not met since the area and vegetation critena are not met since the area and vegetation critena are not met since the area and vegetation critena are not met since the area and vegetation critena are not met since the area and vegetation critena are not met since the area and vegetation critena are not met since the area and vegetation critena are not met since the area and vegetation critena are not met since the area and vegetation critena are not met since the area and vegetation critena are not met since the area and vegetation critena are not met since the area and vegetation critena area area area area area area area a	es. seasonal efficies dominated b Wett	ects, etc., y non-wei	rology Indi dicators: Inundate Saturate Saturate Water M Drift Line Sedimer Drainage Indicators Oxidized	cators (De ed in Upper 1 ed in Upper 1 arks es at Deposits Patterns in (2 or more re	2 inches 8 inches Wetlands equired): lets in Upper 12 inches
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Accept FAC-). Include species noted (*) as showing prophological adaptations to wetlands. To indicates trace temarks (Describe disturbances, relevant local variation to wetland vegetation criteria are not met since the area of the wetland vegetation criteria are not met since the area of the wetland vegetation criteria are not met since the area of the wetland vegetation criteria are not met since the area of the wetland vegetation criteria are not met since the area of the wetland vegetation criteria are not met since the area of the wetland vegetation criteria are not met since the area of the wetland vegetation criteria are not met since the area of the wetland vegetation criteria. Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Id Observations: Depth of Surface Water: Depth to Saturated Soil: None (in.) >18 (in.)	es. seasonal efficies dominated b	ects, etc., y non-well	rology Indi dicators: Inundate Saturate Water M Drift Line Sedimer Drainage Indicators Oxidized Water-Si Local So Other (E.	cators (De ed ed in Upper 1 ed in Upper 1 arks es et Deposits e Patterns in (2 or more in Root Chanriained Leave il Survey Da	2 inches 8 inches Wetlands equired): lets in Upper 12 inches s
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1							Data Plot # Wetland:	B1-B B1 Upland P
oject/Si	te: Seattle Ta	acoma Airport - Mast	er Plan	Update	Date:	5/14/98		
OILS soil Sur	vey Data:							
lap Unit	Name: Unr	apped				Drainage Class	s:	
						Field Observat	ions Confirm I	Mapped Type?
axonom	y (Subgroup):					Yes N	ю !	NA X
rofile D	escription:							
epth Inches)	Horizon Designation	Matrix Color (Munsell Moist)		Aottle Color Munsell Moist)		Mottle Abundance/Co		Texture, Concretion Rhizospheres, etc.
-6	Α	10YR 3/3						Sandy loam
-11	В	10YR 4/4				-		Sandy loam
11	С	10YR 5/8				-		Sandy loam
ydric Se	oil Indicators	:						
н	listosol				Listed	I on Local Hydric	Soils List	
	listic Epipedor	l			_	on State Hydric		
	ulfidic Odor	Maraham Basima				I on National Hyd		
	robable Aquic leducing Cond	Moisture Regime				Moisture Regim nic Streaking in S		
	•	Chroma Colors		<u></u>	Organ	_	Salidy Solis	
	·	ontent in Surface Lay	er			(Explain in Rem	arks)	
		I disturbances, local the hydric soil criteri		ns, etc.):				
VETLA	ND DETER	MINATION						
ydrophy	rtic Vegetatio	n Present?	Yes	No .	×	is this	Sampling Po	oint Within a Wetla
ydric So	ils Present?		Yes .	No	×		Yes	No X
		esent?	Yes	No	X			

This area is an upland since all wetland parameters are absent.

P	ar	ar	n	eti	rix	:, I	n	c.
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Data Plot #:	B4-A
Wetland:	B4

			Data Plot #: B4-A
WET	LAND DETE	RMINATI	ON Wetland: B4
(Modified from: 198			· - · ·
Project/Site: Seattle Tacoma Airport - Master Plan Upo		_	8/98
Applicant/Owner: Port of Seattle		_	
nvestigator: William Kleindi	·· ·· · · · · · · · · · · · · · · · ·		King
∠ 1987 Method _ 1989 Method		State. V	VA
Do Normal Circumstances exist on the site?	V V		Community ID: PSS
	Yes X	No	Field Plot ID: B4-A
s the site significantly disturbed (Atypical Situation)?	Yes	No <u>X</u>	
the area a potential Problem Area? emarks (Explain sample location, disturbances, proble	Yes	No X	
lot is located along the side of the narrow ravine.			
EGETATION (Dominant species are checked) Plant Species	4 : -		
1 Polystichum munitum	% Cover		Indicator
2 Ranunculus repens	25 25	Herb Herb	FACU FACW
3 Rubus discolor	40	Shrub	FACU
4 Rubus spectabilis	40	Shrub	FAC+
except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variation as sampled in delta deposits. Higher up in the raying the	e. 20	nondomina.	ntly salmonherry. Since less than 50% of the
except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variation rea sampled in delta deposits. Higher up in the ravine the pominant plants are hydrophytic, the wetland vegetation of	e. 20	nondomina.	ntly salmonberry. Since less than 50% of the
emarks (Describe disturbances, relevant local variation as ampled in delta deposits. Higher up in the ravine the assumption of the plants are hydrophytic, the wetland vegetation of the control of the c	e. 20	nondomina.	ntly salmonberry. Since less than 50% of the
emarks (Describe disturbances, relevant local variation as ampled in delta deposits. Higher up in the ravine the immant plants are hydrophytic, the wetland vegetation of YDROLOGY	e. 20 ns, seasonal effine vegetation is intena is not me	predominal et.	
xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variation as sampled in delta deposits. Higher up in the ravine the initial plants are hydrophytic, the wetland vegetation of YDROLOGY	e. 20 ns, seasonal eff ne vegetation is intena is not me	predominal et.	logy Indicators (Describe in Remarks):
xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variation ea sampled in delta deposits. Higher up in the ravine the immant plants are hydrophytic, the wetland vegetation of YDROLOGY (Describe in Remarks): Stream. Lake, or Tide Gage Aerial Photograph	e. 20 ns, seasonal eff ne vegetation is intena is not me	predominal et.	logy Indicators (Describe in Remarks):
prophological adaptations to wetlands. The indicates trace assumption of the control of the cont	e. 20 ns, seasonal eff ne vegetation is intena is not me	predominal et.	logy Indicators (Describe in Remarks): cators:
xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variation ea sampled in delta deposits. Higher up in the ravine the immant plants are hydrophytic, the wetland vegetation of YDROLOGY (Describe in Remarks): Stream. Lake, or Tide Gage Aerial Photograph	e. 20 ns, seasonal eff ne vegetation is intena is not me	predominal et. land Hydro Primary India	logy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches
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xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variation rea sampled in delta deposits. Higher up in the ravine the aminant plants are hydrophytic, the wetland vegetation of YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	e. 20 ns, seasonal eff ne vegetation is intena is not me	predominal et. land Hydro Primary India	logy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
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xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. The indicates trace are assigned in delta deposits. Higher up in the ravine the immant plants are hydrophytic, the wetland vegetation of the corded Data. (Describe in Remarks): Stream. Lake, or Tide Gage. Aenal Photograph. Other. No Recorded Data Available. Add Observations: Depth of Surface Water: Depth to Free Water in Pit: Depth to Saurated Salve.	e. 20 ns, seasonal eff ne vegetation is intena is not me Wetl	predominal and Hydro Primary India	logy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
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except FAC-). Include species noted (*) as showing forphological adaptations to wetlands. To indicates trace the sampled in delta deposits. Higher up in the ravine the formant plants are hydrophytic, the wetland vegetation of the vegetation of the sampled in delta deposits. Higher up in the ravine the formant plants are hydrophytic, the wetland vegetation of the vegetation of vegetation of the vegetation	e. 20 ns, seasonal eff ne vegetation is intena is not me Wetl	predominal and Hydro rimary India	logy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches Water-Stained Leaves
Aerial Photograph Other X No Recorded Data Available Peld Observations: Depth of Surface Water: Depth to Free Water in Pit: Depth to Seturated	e. 20 ns, seasonal eff ne vegetation is intena is not me Wetl	predominal and Hydro rimary India	logy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data
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C							Data Plot i Wetland:	₽ :	B4-A B4
Project/:	Site: Seattle Ta	acoma Airport - Master	Plan Upda	ite	Date:	7/28/98			
SOILS Soil Su	rvey Data:								
Map Un	it Name: <u>Unm</u>	apped				Drainage Class	i:		
						Field Observati	ons Confirm	Mapp	ped Type?
Taxono	my (Subgroup):					Yes N	o	NA	<u>x</u>
Profile i	Description:								
Depth (Inches)	Horizon Designation	Matrix Color (Munsell Moist)		e Color sell Moist)		Mottle Abundance/Cor			ire, Concretions, ospheres, etc.
0-11	Α	10YR 2/1						Loam	with organics
11+	С	10YR 5/1	10YR 4	1/4		Few, Medium, Dist	inct	Loam	with organics
	Soil Indicators:					on Local Hydric			
	Histic Epipedon Sulfidic Ogor				_	l on State Hydno I on National Hyd			
		Moisture Regime				Moisture Regime			
	Reducing Condi	tions			Organ	ic Streaking in S	andy Soils		
	Gleyed or Low-(Mottle	-			
<u> </u>	High Organic Co	ontent in Surface Layer			Other	(Explain in Rema	arks)		
		disturbances, local var cators meet the hydric s							
WETL	AND DETER	MINATION			· · · · · · · · · · · · · · · · · · ·	7	· **********		
iydroph	ytic Vegetation	Present? Yes	es	No	X	Is this	Sampling P	oint \	Within a Wetland
lydric S	oils Present?	Y	es X	 No					
	Hydrology Pre	sent? Yo		No -			Yes X	. No	

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): The presence of hydro soils and wetland hydrology indicates this area is a wetland.



Data Piot #:

B4-B

		ERMINAT	-		
(Modified from:		etiands De	elineation	n Manua	I)
Project/Site: Seattle Tacoma Airport - Master Plan t	Jpdate	Date: 7	/28/98		
Applicant/Owner: Port of Seattle		County:	: King		
nvestigator: William Kleindl		State:	WA		
✓ 1987 Method			Co	mmunity (C	D: Upland
Do Normal Circumstances exist on the site?	Yes X	No		•	
s the site significantly disturbed (Atypical Situation)?	Yes	No >	—— Fre	eld Plot ID:	D4-B
s the area a potential Problem Area?	Yes		`		
Remarks (Explain sample location, disturbances, pri			<u>`</u>		
his is the upland plot next to flag B-4 F-16.	•				
COTTATION					
EGETATION (Dominant species are checked Plant Species					
Annualisation	% Cove		Indicator		
2 Oemiena cerasiformis	25	_ Shrub	FAC-		
3 Acer macrophylium	20 60	Shrub Tree	FACU FACU	-	
3 Ace macrophymum					
ercent of Dominant Species that are OBL. FACW except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates the marks (Describe disturbances, relevant local varial contents of the	/, or FAC 33 race.	effects, etc.):	:		
ercent of Dominant Species that are OBL. FACW except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates the marks (Describe disturbances, relevant local variations than 50% of the vegetation is hydrophytic. the YDROLOGY	/, or FAC 33 race.	effects, etc.):	:		
ercent of Dominant Species that are OBL. FACW except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates the marks (Describe disturbances, relevant local variational local states than 50% of the vegetation is hydrophytic. the YDROLOGY ecorded Data (Describe in Remarks):	/, or FAC 33 race. tions, seasonal end weget	effects, etc.): tation is not	: satisfied.	ators (De	escribe in Remarks)
ercent of Dominant Species that are OBL. FACW except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates the marks (Describe disturbances, relevant local variational less than 50% of the vegetation is hydrophytic. the YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage	/, or FAC 33 race. tions, seasonal end weget	effects, etc.): tation is not	: satisfied. ology Indic	ators (De	escribe in Remarks):
ercent of Dominant Species that are OBL. FACW xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates the semarks (Describe disturbances, relevant local variance less than 50% of the vegetation is hydrophytic. the YDROLOGY ecorded Data (Describe in Remarks):	/, or FAC 33 race. tions, seasonal end weget	effects, etc.): tation is not a	: satisfied. ology Indic		escribe in Remarks):
ercent of Dominant Species that are OBL. FACW except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates the marks (Describe disturbances, relevant local variational less than 50% of the vegetation is hydrophytic. the YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage	/, or FAC 33 race. tions, seasonal end weget	effects, etc.): tation is not a	: satisfied. ology Indic dicators: Inundated	3	
ercent of Dominant Species that are OBL. FACM except FAC-). Include species noted (*) as showing torphological adaptations to wetlands. "T" indicates the emarks (Describe disturbances, relevant local variatince less than 50% of the vegetation is hydrophytic. the type of the vegetation is supported by the corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	/, or FAC 33 race. tions, seasonal end weget	effects, etc.): tation is not a	: satisfied. ology Indic dicators: Inundated Saturated		12 inches
ercent of Dominant Species that are OBL. FACM except FAC-). Include species noted (*) as showing torphological adaptations to wetlands. "T" indicates the emarks (Describe disturbances, relevant local variatince less than 50% of the vegetation is hydrophytic. the type of the vegetation is specification of the vegetation of the vegetation is specification. The control of the vegetation is specification of the vegetation of t	/, or FAC 33 race. tions, seasonal end weget	effects, etc.): tation is not a	: satisfied. ology Indic dicators: Inundated Saturated Saturated Water Ma	d I in Upper 1 I in Upper 1 Irks	12 inches
ercent of Dominant Species that are OBL. FACM except FAC-). Include species noted (*) as showing torphological adaptations to wetlands. "T" indicates the emarks (Describe disturbances, relevant local variations less than 50% of the vegetation is hydrophytic. the transfer of the emarks (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	/, or FAC 33 race. tions, seasonal end weget	effects, etc.): tation is not a	satisfied. ology Indicators: Inundated Saturated Saturated Water Ma Drift Lines	d I in Upper 1 I in Upper 1 Irks	12 inches
ercent of Dominant Species that are OBL. FACM except FAC-). Include species noted (*) as showing torphological adaptations to wetlands. "T" indicates the emarks (Describe disturbances, relevant local variations less than 50% of the vegetation is hydrophytic. the transfer of the emarks (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	/, or FAC 33 race. tions, seasonal end weget	effects, etc.): tation is not a	satisfied. ology Indicators: Inundated Saturated Saturated Water Ma Drift Lines Sediment	d in Upper of the	12 inches 18 inches
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ercent of Dominant Species that are OBL. FACM except FAC-). Include species noted (*) as showing torphological adaptations to wetlands. 'T' indicates to emarks (Describe disturbances, relevant local variatince less than 50% of the vegetation is hydrophytic. to the less than 50% of the vegetation is hydrophytic. The less than 50% of the vegetation is hydrophytic. The less than 50% of the vegetation is hydrophytic. The less than 50% of the vegetatio	/, or FAC 33 race. tions, seasonal end weget	effects, etc.): tation is not a ettland Hydro Primary Ind	satisfied. ology Indicators: Inundated Saturated Water Ma Drift Lines Sediment Drainage	d in Upper fin Upper firks S Deposits Patterns in	12 inches 18 inches Wetlands
ercent of Dominant Species that are OBL. FACM except FAC-). Include species noted (*) as showing torphological adaptations to wetlands. "T" indicates to marks (Describe disturbances, relevant local variatince less than 50% of the vegetation is hydrophytic. to the vegetation is hydrophytic. The vegetation is hydrophytic. to the vegetation is hyd	/, or FAC 33 race. tions, seasonal end weget	effects, etc.): tation is not a	satisfied. lology Indicators: Inundated Saturated Water Ma Drift Lines Sediment Drainage	d in Upper 1 in Upper	12 inches 18 inches Wetlands
ercent of Dominant Species that are OBL. FACM except FAC-). Include species noted (*) as showing torphological adaptations to wetlands. "T' indicates to emarks (Describe disturbances, relevant local variatince less than 50% of the vegetation is hydrophytic. to the vegetation is	/, or FAC 33 race. tions, seasonal end weget	effects, etc.): tation is not a ettland Hydro Primary Ind	satisfied. sology Indicators: Inundated Saturated Water Ma Drift Lines Sediment Drainage Indicators (Oxidized I	d in Upper 1 in Upper	12 inches 18 inches Wetlands required): nels in Upper 12 inche
Percent of Dominant Species that are OBL. FACM except FAC-). Include species noted (*) as showing prophological adaptations to wetlands. "T indicates the company of the vegetation is hydrophytic. It is included by the vegetation is h	/, or FAC 33 race. tions, seasonal end weget	effects, etc.): tation is not a ettland Hydro Primary Ind	satisfied. cology Indicators: Inundated Saturated Water Ma Drift Lines Sediment Drainage Indicators (Coxidized I Water-State Water-State I Water-State I Satisfied I Water-State I Satisfied I Water-State I Satisfied I Water-State I Satisfied I Water-State I Satisfied I Water-State I Satisfied	d in Upper 1 d in Upper 1 d in Upper 1 driks S Deposits Patterns in 2 or more r Root Chani	12 inches 18 inches Wetlands required): nels in Upper 12 inche
Percent of Dominant Species that are OBL. FACM except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. The indicates the i	/, or FAC 33 race. tions, seasonal end weget	effects, etc.): tation is not a ettland Hydro Primary Ind	satisfied. lology Indicators: Inundated Saturated Water Ma Drift Lines Sediment Drainage Indicators (Coxidized I Water-State Local Soil	d in Upper 1 in Upper	12 inches 18 inches Wetlands required): nels in Upper 12 inche es

			······································		Data Pio	#:	84-B
					Wetland	•	B4 Upland Plo
Project/Sil	te: Seattle Ta	acoma Airport - Master Pl	an Update	Date:	7/28/98		
SOILS Soil Surv	vey Data:						
Map Unit	Name: Unm	apped			Drainage Class:		
					Field Observations Confin	п Мар	ped Type?
Taxonom	y (Subgroup):				Yes No	NA	<u>x</u>
Profile De	escription:						
Depth (Inches)	Horizon Designation	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)		Mottle Abundance/Contrast	_	ure, Concretions, ospheres, etc.
0-5	A	10YR 2/1			-	Loan	1
5-13	В	10YR 3/3			•	Loan)
13-18+	С	10YR 3/4	10YR 4/4		Few. Fine. Faint	Sand	y loam
Hydric Sc	oil Indicators	:					
н	istosol			Listed	I on Local Hydric Soils List		
	istic Epipedon	1		_	on State Hydric Soils List		
	ulfidic Odor			_	I on National Hydric Soils Li	st	
	·	Moisture Regime		 ·	Moisture Regime		
	educing Cond	Chroma Colors	-	— Organ Mottle	nic Streaking in Sandy Soils se		
	•	ontent in Surface Layer		_	(Explain in Remarks)		
	•	il disturbances, local varia	tions ats):		,,		
Remarks	•	t the hydric soil criteria.	inoris, etc.).				

This area is an upland since all wetland parameters are absent.

Hydrophytic Vegetation Present?

Wetland Hydrology Present?

Hydric Soils Present?

Is this Sampling Point Within a Wetland?

Yes ____ No _X

Parametrix, Inc



				Data Pio		B11-A
WETL	AND DETE	RMINAT	ΓΙΟN	Wetland	1:	B11
(Modified from: 1987				n Manual)	
Project/Site: Seattle Tacoma Airport - Master Plan Updat		_	/18/99		•	
Applicant/Owner: Port of Seattle		County:				
nvestigator: S. Rozenbaum and Wm Kleindl		State:	King WA			
✓ 1987 Method 1989 Method		Sibite.				
_ ··· · · · · · <u>_</u> ········	V V	A1-	C	Community ID): <u>PE</u>	<u>M</u>
Alexander of the second of the	Yes X	No _	F	ield Plot ID:	B6 6	
	Yes	No _>	<u> </u>	 _		
s the area a potential Problem Area?	Yes	No _>	<u> </u>			
Vetland in borrow site. Area dominated by reed canary grant in this section.						
'EGETATION → Dominant species are checked) Plant Species	V Ca	C	44			
•	% Cover	Stratum	Indicate	Dr		
1 Phalans arundinacea 2 Rosa nutkana		Herb Shrub	FACW FAC-			
3 Rubus discolor	5	Shrub	FACU			
Deputies between the second track-	_	Tree	FAC			
ercent of Dominant Species that are OBL, FACW, or lexcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T' indicates trace, emarks (Describe disturbances, relevant local variations rea dominated by reed canarygrass. Since greater than 50	FAC 100	ects, etc.)	ı:	Implication the	wetter	
ercent of Dominant Species that are OBL, FACW, or except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace.	FAC 100	ects, etc.)	ı:	frophytic, the	wetlan	d vegetation crite
ercent of Dominant Species that are OBL, FACW, or lexcept FAC-). Include species noted (*) as showing corphological adaptations to wetlands. "T" indicates trace. emarks (Describe disturbances, relevant local variations rea dominated by reed canarygrass. Since greater than 50	FAC 100	ects, etc.)	ı:	frophytic, the	wetian	d vegetation crite
ercent of Dominant Species that are OBL, FACW, or lexcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace, emarks (Describe disturbances, relevant local variations rea dominated by reed canarygrass. Since greater than 50 stisfied.	FAC 100 s, seasonal eff	ects, etc.).	: nts are hyd			
ercent of Dominant Species that are OBL, FACW, or I except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. To indicates trace, emarks (Describe disturbances, relevant local variations rea dominated by reed canarygrass. Since greater than 50 attisfied. YDROLOGY	FAC 100 s. seasonal efform of the dom Wetl	ects, etc.).	: nts are hyd ology Indi	cators (De		
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ercent of Dominant Species that are OBL, FACW, or lexcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. Trindicates trace, emarks (Describe disturbances, relevant local variations rea dominated by reed canarygrass. Since greater than 50 strisfied. YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	FAC 100 s. seasonal efform of the dom Wetl	ects, etc.) ninant plan and Hydro rimary Inc X	ology Indidicators: Inundate Saturate Saturate	ed in Upper 1	scribe	in Remarks):
ercent of Dominant Species that are OBL, FACW, or I except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. To indicates trace, emarks (Describe disturbances, relevant local variations rea dominated by reed canarygrass. Since greater than 50 stisfied. YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	FAC 100 s. seasonal efform of the dom Wetl	ects, etc.) ninant plan and Hydro rimary Inc X	ology Indidicators: Inundate Saturate Water M	icators (De ed ed in Upper 1 ed in Upper 1 fanks	scribe	in Remarks):
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ercent of Dominant Species that are OBL, FACW, or I except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. To indicates trace, emarks (Describe disturbances, relevant local variations rea dominated by reed canarygrass. Since greater than 50 strisfied. YDROLOGY Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Available Observations: Depth of Surface Water: Depth to Free Water in Pit: Depth to Saturated Sail.	FAC 100	and Hydro	ology Indidicators: Inundate Saturate Saturate Water M Drift Line Sedimei Drainage	ed ed in Upper 1 ed in Upper 1 flarks es nt Deposits e Patterns in	scribe 2 inche 8 inche Wettar	in Remarks): es es
ercent of Dominant Species that are OBL, FACW, or lexcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. Trindicates trace, emarks (Describe disturbances, relevant local variations rea dominated by reed canarygrass. Since greater than 50 disfied. YDROLOGY Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	FAC 100	and Hydro	ology Indidicators: Inundate Saturate Saturate Water M Drift Line Sediment Drainage Indicators Oxidized	ed ed in Upper 1 flarks es nt Deposits e Patterns in 1 Root Chann	scribe 2 inche 8 inche Wettar	in Remarks): es es
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ercent of Dominant Species that are OBL, FACW, or I except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. To indicates trace, emarks (Describe disturbances, relevant local variations rea dominated by reed canarygrass. Since greater than 50 strisfied. YDROLOGY Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Available Observations: Depth of Surface Water: Depth to Free Water in Pit: Depth to Saturated Sail.	FAC 100	and Hydro	ology Indidicators: Inundate Saturate Water M Drift Line Drainage Indicators Oxidized Water-S Local Sc	ed in Upper 1 darks es nt Deposits e Patterns in 12 Root Channatained Leave bil Survey Da	scribe 2 inche 8 inche Wettar equirecenels inces	in Remarks): es es
ercent of Dominant Species that are OBL, FACW, or I except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. To indicates trace, emarks (Describe disturbances, relevant local variations rea dominated by reed canarygrass. Since greater than 50 strisfied. YDROLOGY Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Available Observations: Depth of Surface Water: Depth to Free Water in Pit: Depth to Saturated Sail.	FAC 100	and Hydro	ology Indidicators: Inundate Saturate Saturate Vater M Drift Line Sedimen Drainage Indicators Oxidized Water-S Local Sc Other (E	icators (December 1) and in Upper 1 arks as nt Deposits a Patterns in a (2 or more in a Root Chann tained Leave bil Survey Da axplain in Ren	scribe 2 inche 8 inche Wettar equirecenels inces	in Remarks): es es

Para	ametri	x, Inc.									
$\overline{\Lambda}$									Data Plot #	:	B11-A
									Wetland:		B11
Project/Si	ite: Seattle:Ta	icoma Airport - Maste	r Pla	n Update	١		Date:	1/18/99			
SOILS Soil Sun	vey Data:										
Map Unit	Name: Unm	apped						Drainage Clas	s:		
								Field Observa	tions Confirm	Map	ped Type?
Taxonom	ny (Subgroup):							Yes !	No (NA	<u>x</u>
Profile D	escription:										
Depth (Inches)	Horizon Designation	Matrix Color (Munsell Moist)		Mottle C (Munsei		ist)		Mottle Abundance/Co			ure, Concretions, ospheres, etc.
0-9	Α	10YR 3/1						-	· ·	oam	
9-18+	В	2 5YR 5/1		10YR 4/6	3			Common, Coarse	. Prominent (Grave	eliv sandv Loam
S P R X G	Reducing Condi Gleyed or Low-(High Organic Co (Describe soil	Moisture Regime	ariati			X	Listed Listed Aquic Organ Mottle	on Local Hydri on State Hydri on National Hy Moisture Regin ic Streaking in s s (Explain in Ren	c Soils List dric Soils List ne Sandy Soils		
				, , , , , , , , , , , , , , , , , , , ,	00						
WETLA	ND DETER	MINATION									
	ytic Vegetation	n Present?	Yes	<u>x</u>	No			Is this	s Sampling P	oint	Within a Wetland
-	oils Present?		Yes	<u> </u>	No	_	_		Yes X	No	·
Wetland I	Hydrology Pre	esent?	Yes	<u> </u>	No	_				•	

The presence of all three parameters indicate this area is a wetland.



Data Plot #:

B11-B

		DETE		
(Modified from: 19	987 CC	E Wetl	ands (Delineation Manual)
Project/Site: Seattle Tacoma Airport - Master Plan Up	odate		Date:	1/18/99
Applicant/Owner: Port of Seattle			County:	King
vestigator: William Kleindl		_ ;	State:	WA
1987 Method 1989 Method				Community ID: Upland
On Normal Circumstances exist on the site?	Yes	<u> x</u>	No _	Field Plot ID: B66-B
the site significantly disturbed (Atypical Situation)?	Yes		No	X
the area a potential Problem Area?	Yes		No -	×
emarks (Explain sample location, disturbances, prol	olem are	as):	-	
ired upland plot for Wetland B11-A. Sample establis	ned on f	ill soils ac	diacent t	o B11-A
EGETATION Propring the Plant Species Agrostis capillaris (tenuis)		% Cover 65	Stratum	n Indicator FAC
2 Phalans arundinacea		15	Herb	FACW
ccept FAC-). Include species noted (*) as showing imphological adaptations to wetlands. "T" indicates tra marks (Describe disturbances, relevant local variations)	ace. ions, sea	100	ects, etc	z.):
xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T' indicates transmissions (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydrogeneous and plants are hydrogeneous control of the dominant plants."	ace. ions, sea	isonal eff	ects, etc	c.): tation critena is met.
except FAC-). Include species noted (*) as showing prophological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydrotyphology."	ace. ions, sea	isonal effe	nd vege	tation criteria is met.
xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates transmired (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydrophydrology (Describe in Remarks):	ace. ions, sea	isonal effi the wetta	nd veger	drology Indicators (Describe in Remarks):
corded Data (Describe in Remarks): Stream, Lake, or Tide Gage	ace. ions, sea	isonal effi the wetta	and Hyd	drology Indicators (Describe in Remarks):
except FAC-). Include species noted (*) as showing perphological adaptations to wetlands. "T" indicates training in the second of the dominant plants are hydrocorded Data (Describe in Remarks):	ace. ions, sea	isonal effi the wetta	nd veger	drology Indicators (Describe in Remarks):Indicated
prophological adaptations to wetlands. To indicates training or phological adaptations to wetlands. To indicates training or phological adaptations to wetlands. To indicates training or prophological adaptations to wetlands. To indicates training or prophological variations are described or prophological variations. The described in Remarks or Tide Gage Aerial Photograph Other	ace. ions, sea	isonal effi the wetta	and Hyd Primary II	drology Indicators (Describe in Remarks): indicators: Inundated Saturated in Upper 12 inches
prophological adaptations to wetlands. To indicates training or phological adaptations to wetlands. To indicates training or phological adaptations to wetlands. To indicates training or prophological adaptations to wetlands. To indicates training or prophological variations are described in the dominant plants are hydrotype or prophological prophological variations. The dominant plants are hydrotype or prophological variations and plants are hydrotype or prophological variations. The dominant plants are hydrotype or prophological variations and prophological variations and prophological variations and prophological variations are hydrotype or prophological variations and prophological variations and prophological variations and prophological variations and prophological variations are hydrotype or prophological variations and prophological variations are hydrotype or prophological variations and prophological variations are hydrotype or prophological variations and prophological variations are hydrotype or prophological variations and prophological variations are hydrotype or prophological variations and prophological variations are hydrotype or prophological variations and prophological variations are hydrotype or prophological variations and prophological variations are hydrotype or prophological variations and prophological variations are hydrotype or prophological variations and prophological variations are hydrotype or prophological variations are hydrotype or prophological variations and prophological variations are hydrotype or prophological variations and prophological variations are hydrotype or prophological variations and prophological variations are hydrotype or prophological variations and prophological variations are hydrotype or prophological variations and prophological variations are hydrotype or prophological variations and prophological variations are hydrotype or prophological variations and prophological variations are hydrotype or prophological variations and prophological variations are h	ace. ions, sea	isonal effi the wetta	and Hyd Primary II	drology Indicators (Describe in Remarks):Indicated
prophological adaptations to wetlands. To indicates training adaptations to wetlands. To indicates training are greater than 50% of the dominant plants are hydrocycles and the control of the dominant plants are hydrocycles. Stream, Lake, or Tide Gage Aerial Photograph Other	ace. ions, sea	isonal effi the wetta	and Hyd Primary II	drology Indicators (Describe in Remarks): indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches
xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T' indicates training are species disturbances, relevant local variations greater than 50% of the dominant plants are hydrocycle corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	ace. ions, sea	isonal effi the wetta	and Hyd Primary II	drology Indicators (Describe in Remarks): indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. To indicates training and included the species of the dominant plants are hydrocorded Data. (Describe in Remarks): Stream, Lake, or Tide Gage. Aerial Photograph. Other. X No Recorded Data Available.	ace. ions, sea	isonal effi the wetta	and Hyd Primary II	drology Indicators (Describe in Remarks): indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
proposed FAC-). Include species noted (*) as showing orphological adaptations to wetlands. To indicates the semarks (Describe disturbances, relevant local variations are greater than 50% of the dominant plants are hydrocytheored Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Id Observations: Depth of Surface Water: None (in.)	ace. ions, sea	wetta	and Hyd Primary II X X	drology Indicators (Describe in Remarks): indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
prophological adaptations to wetlands. To indicates training or prophological adaptations to wetlands. To indicates training or prophological adaptations to wetlands. To indicates training or prophological adaptations to wetlands. To indicates training or prophological adaptations to wetlands. To indicates training or prophological variations are hydrody. YDROLOGY	ace. ions, sea	wetta	and Hyd Primary II X X	drology Indicators (Describe in Remarks): indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. To indicates transmires (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydrocyprocept (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available And Observations: Depth of Surface Water: Depth to Free Water in Pit: None (in.)	ace. ions, sea	wetta	and Hyd Primary II X X	drology Indicators (Describe in Remarks): indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands y Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches
except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. To indicates transmired greater than 50% of the dominant plants are hydrocycle or than 50% of the dominant plants are hydrocycle or t	ace. ions, sea	wetta	and Hyd Primary II X X	drology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands y Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches Water-Stained Leaves
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7						Data Plot #	: B11-B
						Wetland:	B11 Upland Plo
Project/Si	te: Seattle Ta	acoma Airport - Master Pi	an Update	Date:	1/18/99		
SOILS Soil Surv	rey Data:						
Map Unit	Name: Unm	apped			Drainage Class	s:	
					Field Observat	ions Confirm	Mapped Type?
Taxonom	y (Subgroup):				Yes N	io	NA <u>X</u>
Profile De	escription:						
Depth (Inches)	Horizon Designation	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)		Mottle Abundance/Co		Texture, Concretions, Rhizospheres, etc.
3-6	Fill	10YR 4/2	•		-		Gravelly sandy Loam (Fill)
3-13	Fill	2.5YR 4/3	7.5 YR 4/4		Few. Coarse. Disti	nct (Gravelly sandy Loam (fill)
dydric Sc	oil Indicators:						
н	istosol			Listed	on Local Hydric	: Soils List	
н	istic Epipedon			Listed	on State Hydric	Soils List	
	ulfidic Odor			Listed	on National Hyd	dric Soils List	
		Moisture Regime			Moisture Regim		
	educing Condi			_	nic Streaking in S	Sandy Soits	
	•	Chroma Colors ontent in Surface Layer		_ Mottle	s (Explain in Rem		
	•	,		- Culei	(Explain in Rem	arks)	
Remarks	(Describe soil	l disturbances, local varia	tions, etc.):				

Hydrophytic Vegetation Present?

Hydric Soils Present?

Wetland Hydrology Present?

Soil is fill and non-hydric however the fill does perch water and the vegetation is disturbed. Following Corps guidance on fill within the borrow areas, this sample location is not a wetland.

No

Is this Sampling Point Within a Wetland?

Yes ____ No _X



Data Plot #:	B12-A	
Wetland:	B12	

▶ WE	TLAND DET	ERMINA	TION Wetland: B12
(Modified from: 1	987 COE W	etlands D	Pelineation Manual)
Project/Site: Seattle Tacoma Airport - Master Plan U	pdate	Date: 1	, // 18/9 9
Applicant/Owner: Port of Seattle		County:	King
Investigator: William Kleindl		State:	WA
✓ 1987 Method 1989 Method		- ·	
Do Normal Circumstances exist on the site?	Y e s X	No	Community ID: PSS
		- ^{No} -	Field Plot ID: b-65
s the site significantly disturbed (Atypical Situation)?	Yes	- No _	<u>x</u>
s the area a potential Problem Area?	Yes	No _	X
Remarks (Explain sample location, disturbances, pro Plot established in a shallow ravine, draining westerly of	oblem areas): off the Port's on	nertv	
, and a second s	on the Follopit	perty.	
ECETATION (D.			
EGETATION (✓Dominant species are checked Plant Species			
Ass. Pro A	% Cov		
1 Athynum filix-femina 2 Polystichum munitum	30 30	Herb	FAC
3 Prunus laurocerasus	30 10	Herb Shrub	NL FACU
		311140	NC NC
Acer circinatum ercent of Dominant Species that are OBL, FACW, xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T' indicates transfer in the second of the second or the se	ace.		FAC-
Acer circinatum ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates triemarks (Describe disturbances, relevant local variations."	or FAC 66	effects, etc.):
Acer circinatum ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing iorphological adaptations to wetlands. "T" indicates triemarks (Describe disturbances, relevant local variatince greater than 50% of the dominant plants are hydrogeneous control of the dominant plants are	or FAC 66	effects, etc.):
ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing iterphological adaptations to wetlands. "T" indicates the emarks (Describe disturbances, relevant local variations greater than 50% of the dominant plants are hydromycology."	, or FAC 66 ace. tions, seasonal rophytic, the we	effects, etc.); ation criteria is met.
Acer circinatum ercent of Dominant Species that are OBL, FACW, xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates the emarks (Describe disturbances, relevant local variating greater than 50% of the dominant plants are hydrophydrogram (Describe in Remarks):	, or FAC 66 ace. tions, seasonal rophytic, the we	effects, etc.); ation criteria is met. rology Indicators (Describe in Remarks);
Acer circinatum ercent of Dominant Species that are OBL, FACW, xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates triemarks (Describe disturbances, relevant local variating greater than 50% of the dominant plants are hydromydrology	, or FAC 66 ace. tions, seasonal rophytic, the we	effects, etc. tiand vegeta etland Hydr Primary In): ation criteria is met. rology Indicators (Describe in Remarks): dicators:
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ercent of Dominant Species that are OBL, FACW, xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T' indicates training or a species of the dominant plants are hydroxydrodd pata." YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	, or FAC 66 ace. tions, seasonal rophytic, the we	effects, etc. tiand vegeta etiand Hydr Primary In X X): ation criteria is met. rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches
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Acer circinatum ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace marks (Describe disturbances, relevant local variating greater than 50% of the dominant plants are hydromorphology POROLOGY Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	, or FAC 66 ace. tions, seasonal rophytic, the we	effects, etc. tiand vegeta etiand Hyde Primary In X X X X	cology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required):
Acer circinatum ercent of Dominant Species that are OBL, FACW, xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T' indicates transmires (Describe disturbances, relevant local variatince greater than 50% of the dominant plants are hydromology ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available eld Observations: Depth of Surface Water: 2 (in.) Depth to Free Water in Pit: 0 (in.)	, or FAC 66 ace. tions, seasonal rophytic, the we	effects, etc. tiand vegeta etiand Hyde Primary In X X X X	cology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches
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Project/Site: Seattle Tacoma Airport - Master Plan Update SOILS Soil Survey Data: Map Unit Name: Indianola Drainage Class: Somewifeld Observations Confirent Taxonomy (Subgroup): Dystric Xeropsamments Profile Description: Depth Horizon Matrix Color Mottle Color (Munsell Moist) O-7 A 10YR 3/1 7-10 AB 10YR 3/1 10YR 4/4 Few. Fine. Distinct Hydric Soil Indicators: Histosol Listed on Local Hydric Soils List Sulfidic Odor Listed on National Hydric Soils List Sulfidic Odor Listed on National Hydric Soils List Probable Aquic Moisture Regime X Aquic Moisture Regime Organic Streaking in Sandy Soils X Gleyed or Low-Chroma Colors X Mottles High Organic Content in Surface Layer Remarks (Describe soil disturbances, local variations, etc.): Soil color and other hydric soil indicators meet the hydric soil critene.	B12-A B12
Soil Survey Data: Map Unit Name: Indianola Drainage Class: Somewiffield Observations Confir Taxonomy (Subgroup): Dystric Xeropsamments Yes No X Profile Description: Depth Horizon Matrix Color Mottle Color Multiple Moist Multiple Moist Multiple Moist Multiple Moist Multiple Moist Multiple Moist Multiple Moist Multiple Moist Multiple Moist Multiple Moist Multiple Moist Multiple Multiple Moist Multiple Moist Multiple Moist Multiple Multi	
Map Unit Name: Indianola Drainage Class: Somewif Field Observations Confir Taxonomy (Subgroup): Dystric Xeropsamments Yes No X Profile Description: Depth Horizon Matrix Color (Munsell Moist) Mottle Color (Munsell Moist) Designation (Munsell Moist) Abundance/Contrast D-7 A 10YR 3/1 T-10 AB 10YR 3/1 10YR 4/4 Few. Fine. Distinct Hydric Soil Indicators: Histosol Listed on Local Hydric Soils List Histic Epipedon Listed on State Hydric Soils List Sulfidic Odor Listed on National Hydric Soils List Sulfidic Odor Listed on National Hydric Soils List Probable Aquic Moisture Regime X Aquic Moisture Regime Reducing Conditions X Gleyed or Low-Chroma Colors High Organic Content in Surface Layer Remarks (Describe soil disturbances, local variations, etc.):	
Field Observations Confir Taxonomy (Subgroup): Dystric Xeropsamments Yes No X Profile Description: Depth Horizon Matrix Color Mottle Color (Munsell Moist) Mottle O-7 A 10YR 3/1	
Profile Description: Depth Horizon Matrix Color (Munsell Moist) Mottle Color (Munsell Moist) Abundance/Contrast 2-7 A 10YR 3/1	
Profile Description: Depth Horizon Designation (Munsell Moist) (Munsell Moist) Mottle Color (Munsell Moist) Designation (Munsell Moist) (Munsell Moist) (Munsell Moist) Designation (Munsell Moist) (Munsell Moist) (Munsell Moist) Designation (Munsell Moist) (Munsell Moist) (Munsell Moist) Designation (Munsell Moist) (Munsell Moist) (Munsell Moist) Designation (Munsell Moist) (Munsell Moist) (Munsell Moist) (Munsell Moist) (Munsell Moist) Designation (Munsell Moist) (Mu	т маррео туре?
Depth Horizon Designation (Munsell Moist) (Mun	NA
(Inches) Designation (Munsell Moist) (Munsell Moist) Abundance/Contrast 0-7	
7-10 AB 10YR 3/1 10YR 4/4 Few. Fine. Distinct 10-18 B 2.5YR 5/2 10YR 4/4 Few. Medium. Distinct Hydric Soil Indicators: Histosol Listed on Local Hydric Soils List Histic Epipedon Listed on State Hydric Soils List Sulfidic Odor Listed on National Hydric Soils List Probable Aquic Moisture Regime X Aquic Moisture Regime Reducing Conditions Organic Streaking in Sandy Soils X Gleyed or Low-Chroma Colors X Mottles High Organic Content in Surface Layer Other (Explain in Remarks) Remarks (Describe soil disturbances, local variations, etc.):	Texture, Concretions Rhizospheres, etc.
Hydric Soil Indicators: Histosol Histic Epipedon Sulfidic Odor Probable Aquic Moisture Regime Reducing Conditions X Gleyed or Low-Chroma Colors High Organic Content in Surface Layer Remarks (Describe soil disturbances, local variations, etc.): Histosol Listed on Local Hydric Soils List Listed on National Hydric Soils List Aquic Moisture Regime X Aquic Moisture Regime Organic Streaking in Sandy Soils X Mottles Other (Explain in Remarks)	Silt loam
Hydric Soil Indicators: Histosol Histic Epipedon Sulfidic Odor Probable Aquic Moisture Regime Reducing Conditions X Gleyed or Low-Chroma Colors High Organic Content in Surface Layer Remarks (Describe soil disturbances, local variations, etc.): Listed on Local Hydric Soils List Listed on National Hydric Soils List Aquic Moisture Regime Organic Streaking in Sandy Soils X Mottles Other (Explain in Remarks)	Silt loam
Histosol Listed on Local Hydric Soils List Histic Epipedon Listed on State Hydric Soils List Sulfidic Odor Listed on National Hydric Soils List Probable Aquic Moisture Regime Reducing Conditions X Gleyed or Low-Chroma Colors High Organic Content in Surface Layer Remarks (Describe soil disturbances, local variations, etc.):	Sandy Loam
Histosol Listed on Local Hydric Soils List Histic Epipedon Listed on State Hydric Soils List Sulfidic Odor Listed on National Hydric Soils List Probable Aquic Moisture Regime Reducing Conditions X Gleyed or Low-Chroma Colors High Organic Content in Surface Layer Remarks (Describe soil disturbances, local variations, etc.):	
Sulfidic Odor Probable Aquic Moisture Regime Reducing Conditions Cleyed or Low-Chroma Colors High Organic Content in Surface Layer Semarks (Describe soil disturbances, local variations, etc.):	
Probable Aquic Moisture Regime Reducing Conditions Cleyed or Low-Chroma Colors High Organic Content in Surface Layer Remarks (Describe soil disturbances, local variations, etc.): Aquic Moisture Regime Organic Streaking in Sandy Soils X Mottles Other (Explain in Remarks)	
Reducing Conditions X Gleyed or Low-Chroma Colors High Organic Content in Surface Layer Nemarks (Describe soil disturbances, local variations, etc.):	ist
X Gleyed or Low-Chroma Colors X Mottles	
High Organic Content in Surface Layer Other (Explain in Remarks) Remarks (Describe soil disturbances, local variations, etc.):	i
Remarks (Describe soil disturbances, local variations, etc.):	
·	
Soil color and other hydric soil indicators meet the hydric soil criteria	
WETLAND DETERMINATION	
lydrophytic Vegetation Present? Yes x No Is this Sampling	
tydric Soils Present? Yes X No Yes X) Point Within a Wetia

The presence of all three parameters indicate this area is a wetland.

Wetland Hydrology Present?



Data Plot #:

B12-B

e	Date: 1/1	lineation Manual) 8/99	
		8/99	
	County: I	King	
		VA	
	-	Community ID: Linkand	
Yes X	No	Community ID: Upland	
/es		Field Plot ID: b-65b	
	No X		
(es	No X		
	2 A .		
% Cover	Stratum	Indicator	
30			
10	Shrub		
10	Shrub	NL	
50	Shrub	FAC+	
	Tree	FACU	
	Tree	FACU	
	Tree	FACU+	
the wetland w	ects, etc.): /egetation (enteria is not met.	
Wetia	and Hydrol	ogy Indicators (Describe in Rema	
_	rimary India		arks):
P		ators:	arks):
P		Inundated	arks):
P		Inundated Saturated in Upper 12 inches	arks):
P		Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches	arks);
P		Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks	arks):
P		Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines	arks):
P		Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits	arks):
P		Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines	arks):
P		Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands	arks):
P	econdary in	Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands	
P	econdary in	Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands indicators (2 or more required): Oxidized Root Channels in Upper 1	
P	econdary is	Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 1 Water-Stained Leaves	
P	econdary is	Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands indicators (2 or more required): Oxidized Root Channels in Upper 1	
	% Cover 30 10 10 50 50 20 30 AC 20 seasonal effective wetland of the wetland of t	% Cover Stratum 30 Herb 10 Shrub 50 Shrub 50 Tree 20 Tree 30 Tree AC 20 Seasonal effects, etc.): the wetland vegetation of	% Cover Stratum Indicator 30 Herb FACU 10 Shrub UPL 10 Shrub NL 50 Shrub FAC+ 50 Tree FACU 20 Tree FACU 30 Tree FACU 30 Tree FACU 40 Seasonal effects, etc.): the wetland vegetation criteria is not met.

7								Data Plot		B12-B
L								Wetland:		B12 Upland Plo
Project/Sit	te: Seattle Ta	icoma Airport - Maste	r Plan Ut	odate	_ Da	e: <u>1/18</u>	v 9 9			
SOILS Soil Surv	rey Data:				-					
Map Unit	Name: India	nola				Drain	age Class:	Somewha	at exce	essively drained
	****					Field	Observation	ons Confirm	п Марі	ped Type?
Taxonomy	y (Subgroup):	Dystric Xeropsamn	nents			Yes_	_X No	·	NA	
Profile De	escription:								_	_
Depth Inches)	Horizon Designation	Matrix Color (Munsell Moist)		ittie Color unsell Mois	st)	Motti Abun	e dance/Con	trast		ure, Concretions, ospheres, etc.
0-2	Α	10YR 2/1				-			Sandy	y ioa m
5-18+	В	10YR 3/3				_			Sandy	y ioa m
Usalaia Ca	oil Indicators:									
	istosol				Lis	ted on Lo	cal Hydric	Soils List		
	istic Epipedon			-			ate Hydric			
S	ulfidic Odor			_	Lıs	ted on Na	ational Hydi	nc Soils Lis	st	
Pı	robable Aquic	Moisture Regime			Aq	uic Moisti	ure Regime	•		
R	educing Cond	itions		_	Οη	panic Stre	saking in Sa	andy Soils		
G	leyed or Low-(Chroma Colors			Mo	tties				
Hi	igh Organic C	ontent in Surface Laye	er	_	Ot	er (Expla	in in Rema	ırks)		
		l disturbances, local v	ariations	, etc.):						
		· · · · · · · · · · · · · · · · · · ·								
		MINATION								
• • •	tic Vegetation	n Present?	Yes	No	<u>×</u>		Is this	Sampling	Point	Within a Wetland
lydric So	ils Present?		Yes _	No	_X		,	Yes	No	x
National L	lydrology Pre	cent?	Yes	No	Х				_	

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): No wetland indicators are present.

Parametrix	, Inc.
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WETLAND DETERMINATION (Modified from: 1987 COE Wetlands Delineation Manual) Project/Site: Seattle Tacoma Airport - Master Plan Update Date: 12/17/98					
(Modified from: 1987 COE Wetlands Delineation Manual) roject/Site: Seattle Tacoma Airport - Master Plan Update	WET	LAND DE	TERMINA	TION Wetland:	B14
Opericidate County Count					
pricant/Owner: Port of Seattle County: King restigator: William Kleindi State: WA 1987 Method ☐ 1989 Method ☐ Community ID: PEM/PSS No					
vestigator: William Kleindi State: WA 1987 Method 1989 Method 1989 Method Community ID: PEM/PSS o Normal Circumstances exist on the site? Yes X No Field Plot ID: B57-A the area a potential Problem Area? Yes No X marks (Explain sample location, disturbances, problem areas): ### ### ### ### ### ### ### ### ### #		Jate			
1987 Method	· · · · · · · · · · · · · · · · · · ·				
The site significantly disturbed (Atypical Situation)? Yes No X The area a potential Problem Area? Yes No X The area a potential Problem Area? Yes No X The area a potential Problem Area? Yes No X The area a potential Problem Area? Yes No X The area a potential Problem Area? Yes No X The area a potential Problem Area? Yes No X The area a potential Problem Area? Yes No X The area a potential Problem Area? Yes No X The area a potential Problem Area? Yes No X The area a potential Problem Area? Yes No X The area a potential Problem Area? Yes No X The area a potential Problem Area? Yes No X The area a potential Problem Area? Yes No X The area apotential Brobs Area apotential area. Area a			State:	WA	
the site significantly disturbed (Atypical Situation)? Yes No X the area a potential Problem Area? Yes No X marks (Explain sample location, disturbances, problem areas): ### ### ### ### ### ### ### ### ### #	_			Community ID: P	PEM/PSS
The area a potential Problem Area? The area a potential Problem Area? The area a potential Problem Area? The area a potential Problem Area? The area a potential Problem Area? The area a potential Problem Area? The area a potential Problem Area? The area a potential Problem Area? The area a potential Problem Area? The area a potential Problem Area? The area a potential Brain Area and photographs show that the wetland has not been filled in the later area. The area area a potential Problem Area? The area area area area area area area. The area area area area area area area ar		Yes X	_ No .	Field Plot ID: B57	7-A
marks (Explain sample location, disturbances, problem areas): tland B-14 is located within an old residential area. Aenal photographs show that the wetland has not been filled in the late the late of the late	•	Yes	_ No -	×	
### Stream Lake, or Tide Gage Acral Photograph Content Data Photograph Acral Photograph Content Data Photograph	he area a potential Problem Area?	Yes	_ No _	<u>x</u>	
Plant Species 20 Herb FACW Phalans arundinacea 20 Herb FACW Phalans arundinacea 20 Herb FACW 20 Herb FACW 30 Raunculus repens 4 Rubus discolor 20 Herb FACW 21 Herb FACW 22 Herb FACW 23 Raunculus repens 4 Rubus discolor 26 Shrub FACU 27 FACU 28 FACU 29 FACI 20 Herb FACW 20 Herb FACW 21 FACW 22 FACW 23 FACU 29 FACU 20 Herb FACW 20 Herb FACW 21 FACW 22 FACW 23 FACU 29 FACU 20 Herb FACW 20 Herb FACW 21 FACW 22 FACW 23 FACU 29 FACU 20 Herb FACW 20 Herb FACW 21 FACW 22 FACU 20 Herb FACW 22 FACW 23 FACU 20 Herb FACW 24 FACW 25 FACW 26 FACW 26 FACW 27 FACW 27 FACW 28 FACW 29 FACW 20 FACW 20 FACU 20 Herb FACW 20 FACW 21 FACW 21 FACW 22 FACW 23 FACW 24 FACW 25 FACW 26 FACW 26 FACW 26 FACW 27 FACW 27 FACW 27 FACW 28 FACW 29 FACW 20 FACW 20 FACW 21 FACW 21 FACW 21 FACW 22 FACW 23 FACW 24 FACW 25 FACW 26 FACW 26 FACW 26 FACW 26 FACW 26 FACW 26 FACW 26 FACW 26 FACW 26 FACW 26 FACW 26 FACW 26 FACW 26 FACW 26 FACW 26 FACW 26 FACW 26 FACW 26 FACW 26 FACW 27 FACW 27 FACW 27 FACW 27 FACW 27 FACU 28 FACW 28 FACW 28 FACW 28 FACW 28 FACW 28 FACW 28 FACW 28 FACW 28 FACW 29 FACU 28 FACW 29 FACU 29 FACU 29 FACU 20 FACU 20 FACU 20 FACU 20 FACU 20 FACU 20 FACU 20 FACU 20 FACU 20 FACU 20 FACU 20 FACU 20 FACU 20 FACU 20 FACU 20 FACU 20 FACU 20 FACU 21 FACU					
Phatans arundinacea Ranunculus repens Rubus discolor cent of Dominant Species that are OBL. FACW, or FAC cept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T' indicates trace." narks (Describe disturbances, relevant local variations, seasonal effects, etc.): ce greater than 50% of the dominant plants are hydrophytic, the wetland vegetation criteria is met. DROLOGY orded Data (Describe in Remarks): Stream, Lake, or Tide Gage Primary Indicators: Aenal Photograph X Inundated Other X Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands d Observations: lepth of Surface Water: 1 (in.) septh to Free Water in Pit: 0 (in.) water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks) arks (As relevant, describe recent precipitation, hydrologic modifications local variations, etc.):		% Co	ver Stratus	n Indicator	
A Ranunculus repens A Rubus discolor Cent of Dominant Species that are OBL. FACW, or FAC 2pt FAC-). Include species noted (*) as showing 3 phological adaptations to wetlands. "T' indicates trace. Inarks (Describe disturbances, relevant local variations, seasonal effects, etc.): See greater than 50% of the dominant plants are hydrophytic, the wetland vegetation criteria is met. DROLOGY Orded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Wetland Hydrology Indicators (Describe in Remarks) Frimary Indicators: A linundated Other X Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands ### Observations: ### PACW ### Open	1 Juncus effusus	20	Herb	FACW	
A Rubus discolor cent of Dominant Species that are OBL. FACW, or FAC cept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T' indicates trace. marks (Describe disturbances, relevant local variations, seasonal effects, etc.): ce greater than 50% of the dominant plants are hydrophytic, the wetland vegetation criteria is met. DROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other X Inundated X Saturated in Upper 12 inches X Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands 4 Observations: Lepth to Free Water in Pit: Lepth to Saturated Soil: Oxidized Root Channels in Upper 12 in Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks) Local variations, local variations, etc.):		20	Herb	FACW	
cent of Dominant Species that are OBL. FACW, or FAC cept FAC-). Include species noted (*) as showing phological adaptations to wetlands. T indicates trace. marks (Describe disturbances, relevant local variations, seasonal effects, etc.): ce greater than 50% of the dominant plants are hydrophytic, the wetland vegetation criteria is met. DROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Pattems in Wetlands d Observations: Lepth of Surface Water: Lepth to Saturated Soil: Oxidized Root Channels in Upper 12 in Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks) Local Soil Survey Data Other (Explain in Remarks)					
phological adaptations to wetlands. "T' indicates trace. narks (Describe disturbances, relevant local variations, seasonal effects, etc.): the greater than 50% of the dominant plants are hydrophytic, the wetland vegetation criteria is met. DROLOGY Torded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other X Inundated Other X Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Doubservations: Pepth to Saturated Soil: Oxidized Root Channels in Upper 12 inches Secondary Indicators (2 or more required): Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks) arks (As relevant, describe recent precipitation, hydrologic modifications, local variations, etc.):	· · · · · · · · · · · · · · · · · · ·		SITUD	FACU	
Stream, Lake, or Tide Gage Aenal Photograph Other X No Recorded Data Available A No Recorded Data Available Observations: Depth of Surface Water: Depth to Free Water in Pit: Depth to Saturated Soil: Depth to Saturated Soil: Depth to Saturated Soil: Other Stream, Lake, or Tide Gage Annal Photograph X Inundated X Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks) Darks (As relevant, describe recent precipitation, hydrologic modifications, local variations, etc.):	ce greater than 50% of the dominant plants are hydro	phytic, the w	etland vege	ation criteria is met.	
Stream, Lake, or Tide Gage Aenal Photograph Other X Saturated in Upper 12 inches X No Recorded Data Available Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Oepth of Surface Water: Oepth to Free Water in Pit: Oepth to Saturated Soil: Oepth to Saturated Soil: Oepth to Saturated Soil: Oepth to Saturated Soil: Ocidized Root Channels in Upper 12 in Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks) Narks (As relevant, describe recent precipitation, hydrologic modifications, local variations, etc.)	· -				
Stream, Lake, or Tide Gage Aenal Photograph Other X Inundated Other X Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Depth of Surface Water: Depth to Free Water in Pit: Depth to Saturated Soil: Depth to Saturated Soil: Omega (in.) Oxidized Root Channels in Upper 12 inches Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks) Depth (As relevant, describe recent precipitation, hydrologic modifications, local variations, etc.)	corded Data (Describe in Remarks):	٧	Vetland Hyd	rology Indicators (Describ	e in Remarks):
Other X Saturated in Upper 12 inches X No Recorded Data Available Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Depth of Surface Water: Depth to Free Water in Pit: Depth to Saturated Soil: Depth to Saturated Soil: Depth to Saturated Soil: O (in.) Oxidized Root Channels in Upper 12 in Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks) Darks (As relevant, describe recent precipitation, hydrologic modifications, local variations, etc.)					
X No Recorded Data Available Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands d Observations: Lepth of Surface Water: Depth to Free Water in Pit: Depth to Saturated Soil: Drainage Patterns in Wetlands Secondary Indicators (2 or more required): District Control of the Control of				Inundated	
Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Drainage Patterns in Wetlands Drainage Patterns in Wetlands Drainage Patterns in Wetlands Drainage Patterns in Wetlands Drainage Patterns in Wetlands Drainage Patterns in Wetlands Drainage Patterns in Upper 12 in Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks) Drainage Patterns in Wetlands Oxidized Root Channels in Upper 12 in Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)			<u>X</u>		
Drift Lines Sediment Deposits Drainage Patterns in Wetlands Depth of Surface Water: Depth to Free Water in Pit: Depth to Saturated Soil: Depth to Saturated Soil: Depth to Saturated Soil: Drainage Patterns in Wetlands Drainage Patterns in Wetland	X No Recorded Data Available				thes
Sediment Deposits Drainage Patterns in Wetlands Drainage Patterns in Wetlands Drainage Patterns in Wetlands Drainage Patterns in Wetlands Drainage Patterns in Wetlands Drainage Patterns in Wetlands Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 in Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks) Drainage Patterns in Wetlands Oxidized Root Channels in Upper 12 in Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)					
Drainage Patterns in Wetlands Depth of Surface Water: Depth of Surface Water: Depth to Free Water in Pit: Depth to Saturated Soil: Discondary Drainage Patterns in Wetlands Secondary Indicators (2 or more required): Oxidized Root Channels in Upper 12 in Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks) Drainage Patterns in Wetlands				-	
Depth of Surface Water: 1				- _	iands
Depth to Free Water in Pit: 0 (in.) Depth to Saturated Soil: 0 (in					
Depth to Saturated Soil: Oxidized Root Channels in Upper 12 in Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks) Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)	\\\\\\\		Secondar	y indicators (2 or more requir	red):
Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks) arks (As relevant, describe recent precipitation, hydrologic modifications, local variations, etc.):	looth to Potential C 1				
Local Soil Survey Data Other (Explain in Remarks) arks (As relevant, describe recent precipitation, hydrologic modifications, local variations, etc.):	(in.)				Opper 12 miches
Other (Explain in Remarks) arks (As relevant, describe recent precipitation, hydrologic modifications, local variations, etc.):					
narks (As relevant, describe recent precipitation, hydrologic modifications, local variations, etc.):					s)
to the same recent precipitation, nydrologic modifications, local variations, atc. by	narks (As relevant describe recent procinitation to	.			• •
ndation is present, satisfying the wetland hydrologic criteria.	adation is present satisfying the service to the se	orologic mod	mcations, lo	cal variations, etc.):	

4 1				D	eta Plot#:	B14-A
L				W	/etland:	B14
roject/Site: Seattle	Tacoma Airport - Master	Plan Update	Date:	12/17/98		
SOILS Soil Survey Data:						
Map Unit Name: Ind	ianola			Drainage Class: S	omewhat exc	essively drained
				Field Observations	Confirm Map	ped Type?
Taxonomy (Subgroup): Dystric Xeropsamm	ents		Yes No	X NA	
Profile Description:						
Depth Horizon inches) Designation	Matrix Color on (Munsell Moist)	Mottle Cold (Munsell M		Mottle Abundance/Contra		ture, Concretions cospheres, etc.
-8 A	10YR 2/1	-		-	Muci	v loam
lydric Soil Indicators	5 :		l ister	l an Land Wildia Cod	ile I jet	
Histosol Histic Epipedo Sulfidic Odor Probable Aqui X Reducing Con	c Moisture Regime		Listed X Aquic	l on Local Hydric Soi l on State Hydric Soi l on National Hydric : Moisture Regime lic Streaking in Sand	ls List Soils List	
Histic Epipedo Sulfidic Odor Probable Aqui X Reducing Con X Gleyed or Low	c Moisture Regime ditions -Chroma Colors		Listed Listed X Aquic Organ Mottle	on State Hydric Soil on National Hydric Moisture Regime iic Streaking in Sand	ls List Soils List ly Soils	
Histic Epipedo Sulfidic Odor Probable Aqui X Reducing Con X Gleyed or Low X High Organic (Remarks (Describe so	c Moisture Regime ditions	ariations, etc.):	Listed Listed X Aquic Organ Mottle	on State Hydric Soi on National Hydric Moisture Regime lic Streaking in Sand	ls List Soils List ly Soils	
Histic Epipedo Sulfidic Odor Probable Aqui X Reducing Con X Gleyed or Low X High Organic (Remarks (Describe so	c Moisture Regime ditions -Chroma Colors Content in Surface Laye bil disturbances, local va	ariations, etc.):	Listed Listed X Aquic Organ Mottle	on State Hydric Soil on National Hydric Moisture Regime iic Streaking in Sand	ls List Soils List ly Soils	
Histic Epipedo Sulfidic Odor Probable Aqui X Reducing Con X Gleyed or Low X High Organic Con Remarks (Describe so	c Moisture Regime ditions -Chroma Colors Content in Surface Laye oil disturbances, local va dicators meet the hydric	ariations, etc.):	Listed X Aquic Organ Mottle Other	on State Hydric Soil on National Hydric in Moisture Regime hic Streaking in Sand is (Explain in Remarks	Is List Soils List by Soils	Within a Wetla
Histic Epipedo Sulfidic Odor Probable Aqui X Reducing Con X Gleyed or Low X High Organic O Remarks (Describe so Soil color and other inc	c Moisture Regime ditions -Chroma Colors Content in Surface Laye bil disturbances, local va dicators meet the hydric RMINATION on Present?	ariations, etc.): soil criteria.	Listed X Aquic Organ Mottle Other	on State Hydric Soil on National Hydric in Moisture Regime hic Streaking in Sand is (Explain in Remarks	Is List Soils List Ly Soils Topling Point	Within a Wetla

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): The presence of all three parameters indicate this area is a wetland.

Para	ame	trix,	inc.
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	WET	LAND DET	FRMINA	TION	Wetland:	B14 Upland Plot
_	(Modified from: 19				- Manual)	
			elianus i	Jenneation	i wanuai)	
Project/Site: Seattle Tacoma	a Airport - Master Plan Up	date	Date:	12/17/98	···	
Applicant/Owner: Port of S	Seattle		County:	King		
nvestigator: William Kleindi			State:	WA		
✓ 1987 Method	9 Method			Co	mmunity ID: U	pland
Do Normal Circumstances exi	ist on the site?	Yes X	No		eld Plot ID: B56-	
s the site significantly disturb	ed (Atypical Situation)?	Yes	No	X		
the area a potential Problem	n Area?	Yes	 No			
emarks (Explain sample lo	cation, disturbances, prob					
Vetland B-14 upland compans lied in the last 20 years.			nar area. A	enai priologia	ipns snow that the	e wetiand has not be
EGETATION ← Domini Plant Species	ant species are checked)	% Cov	er Stratun	n Indicator		
1 Agrostis gigantea		50	Herb	FAC		
2 Holcus lanatus		20	Herb	FAC	_	
 Hypochaens radicata 		20	Herb	FACU		
		5 0	Herb	FAC		
4 Vicia americana						
5 Rubus discolor		20	Shrub	FACU	-	
5 Rubus discolor 6 Alnus rubra ercent of Dominant Species except FAC-). Include species orphological adaptations to w emarks (Describe disturban	s noted (*) as showing retlands. "T" indicates tra ices, relevant local variation	or FAC 70 ce. ons, seasonal of	Tree	FAC	_	
Rubus discolor 6 Alnus rubra ercent of Dominant Species except FAC-). Include species orphological adaptations to we marks (Describe disturban scording to the Washington S	s noted (*) as showing retlands. "T" indicates tra ices, relevant local variation itate Delineation Manual (or FAC 70 ce. ons, seasonal of Page 68, Step	Tree	FAC	ominated by FAC	plants but lack wetl
Rubus discolor Ainus rubra ercent of Dominant Species except FAC-). Include species orphological adaptations to we marks (Describe disturban ecording to the Washington S erdrology and hydric soils do n YDROLOGY	s noted (*) as showing retlands. "T" indicates tra indicates tra indicates tra indicates tra indicates tra indicates tra indicate Delineation Manual (indicates Delineation Manual (indicates Satisfy the wetland veging indicates the indicates	or FAC 70 ce. ons, seasonal of Page 68, Step	Tree	FAC	ominated by FAC	plants but lack wetle
Rubus discolor 6 Ainus rubra ercent of Dominant Species except FAC-). Include species orphological adaptations to we marks (Describe disturban eccording to the Washington S adrology and hydric soils do n YDROLOGY	s noted (*) as showing retlands. "T" indicates tra indicates tra indicates tra indicates tra indicates tra indicates tra indicate Delineation Manual (indicates Delineation Manual (indicates Satisfy the wetland veging indicates the indicates	or FAC ce. ons, seasonal of Page 68, Step etation criteria	Tree effects, etc 13 (a)) are	FAC .): as that are do		
Rubus discolor 6 Ainus rubra ercent of Dominant Species except FAC-). Include species orphological adaptations to we marks (Describe disturban eccording to the Washington S adrology and hydric soils do n YDROLOGY	s noted (*) as showing retlands. "T" indicates tra ices, relevant local variational (ices, relevant local variational (ices, relevant local variational (ices, relevant local variational vegot satisfy the wetland vegot satisfy the wetland vegot Remarks);	or FAC ce. ons, seasonal of Page 68, Step etation criteria	Tree effects, etc 13 (a)) are	FAC .): as that are do	ominated by FAC	
Rubus discolor 6 Ainus rubra ercent of Dominant Species except FAC-). Include species orphological adaptations to w emarks (Describe disturban excording to the Washington S drology and hydric soils do n YDROLOGY ecorded Data (Describe in lease)	s noted (*) as showing vettands. "T" indicates tra ices, relevant local variational (ite Delineation Manual (ite Satisfy the wetland veg Remarks): r Tide Gage	or FAC ce. ons, seasonal of Page 68, Step etation criteria	Tree effects, etc 13 (a)) are	FAC .): as that are do	ators (Describe	
Rubus discolor Alnus rubra Bercent of Dominant Species Except FAC-). Include species Domphological adaptations to we Bercent of Dominant Species Except FAC-). Include species Domphological adaptations to we Bercent of Dominant Species Domphological adaptations of well- Bercent of Dominant Species Except FAC-). Include species Domphological adaptations of well- Bercent of Dominant Species Except	s noted (*) as showing vettands. "T" indicates tra ices, relevant local variational (ite Delineation Manual (ite Satisfy the wetland veg Remarks): r Tide Gage	or FAC ce. ons, seasonal of Page 68, Step etation criteria	Tree effects, etc 13 (a)) are	FAC .): as that are do brology Indicators: Inundated	ators (Describe	in Remarks):
5 Rubus discolor 6 Alnus rubra ercent of Dominant Species except FAC-). Include species corphological adaptations to w emarks (Describe disturban ecording to the Washington S drology and hydric soils do n YDROLOGY corded Data (Describe in I Stream, Lake, of Aerial Photograp	s noted (*) as showing retlands. "T" indicates tra ces, relevant local variation and the color satisfy the wetland vegorements." Remarks): r Tide Gage	or FAC ce. ons, seasonal of Page 68, Step etation criteria	Tree effects, etc 13 (a)) are	FAC .): as that are do brology Indicators: Inundated Saturated	ators (Describe	in Remarks);
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Rubus discolor Alnus rubra ercent of Dominant Species except FAC-). Include species orphological adaptations to w ormarks (Describe disturban ecording to the Washington S drology and hydric soils do n YDROLOGY Corded Data (Describe in I Stream, Lake, or Aerial Photograp Other	s noted (*) as showing retlands. "T" indicates tra ces, relevant local variational (interpretation Manual (interpretation Manual (interpretation Manual (interpretation)). Remarks): r Tide Gage	or FAC ce. ons, seasonal of Page 68, Step etation criteria	Tree effects, etc 13 (a)) are	FAC Irology Indicators: Inundated Saturated Water Ma Drift Lines	ators (Describe d d in Upper 12 inch d in Upper 18 inch lirks	in Remarks);
Rubus discolor Alnus rubra ercent of Dominant Species except FAC-). Include species corphological adaptations to we emarks (Describe disturbant ecording to the Washington St drology and hydric soils do not YDROLOGY corded Data (Describe in I Stream, Lake, of Aerial Photograp Other	s noted (*) as showing retlands. "T" indicates tra ces, relevant local variational (interpretation Manual (interpretation Manual (interpretation Manual (interpretation)). Remarks): r Tide Gage	or FAC ce. ons, seasonal of Page 68, Step etation criteria	Tree effects, etc 13 (a)) are	FAC Irology Indicators: Inundated Saturated Water Ma Drift Lines Sediment	ators (Describe d in Upper 12 inch in Upper 18 inch irks s Deposits	in Remarks): nes nes
Rubus discolor Alnus rubra Procent of Dominant Species Except FAC-). Include species Prophological adaptations to we Procent of the Washington State	s noted (*) as showing retlands. "T" indicates tra ces, relevant local variational (interpretation Manual (interpretation Manual (interpretation Manual (interpretation)). Remarks): r Tide Gage	or FAC ce. ons, seasonal of Page 68, Step etation criteria	Tree effects, etc 13 (a)) are	FAC Irology Indicators: Inundated Saturated Water Ma Drift Lines Sediment	ators (Describe d d in Upper 12 inch d in Upper 18 inch lirks	in Remarks): nes nes
Rubus discolor Alnus rubra ercent of Dominant Species except FAC-). Include species orphological adaptations to we emarks (Describe disturban ecording to the Washington S drology and hydric soils do n YDROLOGY ecorded Data (Describe in I Stream, Lake, of Aerial Photograp Other X No Recorded Da Id Observations: Depth of Surface Water:	s noted (*) as showing retlands. "T" indicates tra ices, relevant local variation that the Delineation Manual (interpretation of satisfy the wetland veging Remarks): r Tide Gage on the Available None (in.)	or FAC ce. ons, seasonal of Page 68, Step etation criteria	effects, etc 13 (a)) are etland Hyd	FAC Irology Indicators: Inundated Saturated Water Mater Ma	ators (Describe d in Upper 12 inch in Upper 18 inch irks s Deposits Patterns in Wetla	ein Remarks): nes nes
Rubus discolor Alnus rubra ercent of Dominant Species except FAC-). Include species erphological adaptations to we emarks (Describe disturban ecording to the Washington S edrology and hydric soils do n YDROLOGY ecorded Data (Describe in I Stream, Lake, or Aerial Photograp Other X No Recorded Da Id Observations: Depth of Surface Water: Depth to Free Water in Pit:	s noted (*) as showing retlands. "T" indicates tra ices, relevant local variation that the Delineation Manual (into satisfy the wetland veging Remarks): Tride Gage on the Manual Manua	or FAC ce. ons, seasonal of Page 68, Step etation criteria	effects, etc 13 (a)) are etland Hyd	FAC Irology Indicators: Inundated Saturated Saturated Water Ma Drift Lines Sediment Drainage	ators (Describe d in Upper 12 inch in Upper 18 inch irks s Deposits Patterns in Wetla	e in Remarks): nes nes nods
Rubus discolor Ainus rubra ercent of Dominant Species except FAC-). Include species orphological adaptations to we marks (Describe disturban ecording to the Washington S edrology and hydric soils do n YDROLOGY ecorded Data (Describe in I Stream, Lake, or Aerial Photograp Other X No Recorded Da Id Observations: Depth of Surface Water: Depth to Free Water in Pit:	s noted (*) as showing retlands. "T" indicates tra ices, relevant local variation that the Delineation Manual (interest) is attisfy the wetland vegen (interest): Tride Gage on the Available None (interest)	or FAC ce. ons, seasonal of Page 68, Step etation criteria	effects, etc 13 (a)) are etland Hyd	FAC Irology Indicators: Inundated Saturated Water Ma Drift Lines Sediment Drainage y Indicators (Oxidized I	ators (Describe d in Upper 12 inch d in Upper 18 inch irks s Deposits Patterns in Wetla 2 or more require	ein Remarks): nes nes
Rubus discolor Ainus rubra ercent of Dominant Species except FAC-). Include species orphological adaptations to we marks (Describe disturban ecording to the Washington S rdrology and hydric soils do n YDROLOGY ecorded Data (Describe in I Stream, Lake, or Aerial Photograp Other X No Recorded Da eld Observations: Depth of Surface Water: Depth to Free Water in Pit:	s noted (*) as showing retlands. "T" indicates tra ices, relevant local variation that the Delineation Manual (into satisfy the wetland veging Remarks): Tride Gage on the Manual Manua	or FAC ce. ons, seasonal of Page 68, Step etation criteria	effects, etc 13 (a)) are etland Hyd	rology Indicators: Inundated Saturated Water Ma Drift Lines Sediment Drainage y Indicators (Oxidized I Water-Sta	ators (Describe d in Upper 12 inch in Upper 18 inch irks s Deposits Patterns in Wetla 2 or more require Root Channels in	e in Remarks): nes nes nods
ercent of Dominant Species except FAC-). Include species for phological adaptations to we marks (Describe disturban according to the Washington Stydrology and hydric soils do not be species for phological adaptations to we marks (Describe disturban according to the Washington Stydrology and hydric soils do not be specified by the specified Data (Describe in Including Stream, Lake, or Aerial Photograph Other X No Recorded Data eld Observations:	s noted (*) as showing retlands. "T" indicates tra ices, relevant local variation that the Delineation Manual (into satisfy the wetland veging Remarks): Tride Gage on the Manual Manua	or FAC ce. ons, seasonal of Page 68, Step etation criteria	effects, etc 13 (a)) are etland Hyd	FAC Irology Indicators: Inundated Saturated Water Ma Drift Lines Drainage y Indicators (Oxidized I Water-Sta Local Soil	ators (Describe d in Upper 12 inch d in Upper 18 inch lirks s Deposits Patterns in Wetla 2 or more require Root Channels in lined Leaves Survey Data	in Remarks); hes hes hinds hid); Upper 12 inches
Rubus discolor Alnus rubra Rercent of Dominant Species Recept FAC-). Include species Recept FAC-). Include Species Recept FAC-	s noted (*) as showing retlands. "T" indicates tra ices, relevant local variation that the Delineation Manual (into satisfy the wetland veging Remarks): Tride Gage on the Manual Manua	or FAC ce. ons, seasonal of Page 68. Step etation criteria	effects, etc 13 (a)) are etland Hyd Primary In	FAC Irology Indicators: Inundated Saturated Water Ma Drift Lines Sediment Drainage y Indicators (Oxidized I Water-Sta Local Soil Other (Ex	ators (Describe d in Upper 12 inch d in Upper 18 inch drks s Deposits Patterns in Wetla 2 or more require Root Channels in dined Leaves Survey Data plain in Remarks)	in Remarks); hes hes hinds hid); Upper 12 inches

4							Data Plot #:	B14-B
							Wetland:	B14 Upland Plo
			÷					
roject/S	ite. Seattle Ta	acoma Airport - Maste	ř Plan Up	date	Date:	12/17/98		
SOILS Soil Sur	vey Data:							
Map Uni	t Name: India	anola				Drainage Class	Somewhat ex	cessively drained
						Field Observation	ons Confirm Ma	ipped Type?
Γaxonoπ	ny (Subgroup):	Dystric Xeropsamn	nents			Yes No	<u> </u>	
Profile D	escription:							
Depth Inches)	Horizon Designation	Matrix Color (Munsell Moist)		tle Color nsell Moist	t)	Mottle Abundance/Con		kture, Concretions, izospheres, etc.
								
-16	Fill	10YR 3/3	10YF	R 7/3		Common, Fine, Dist	inct Los	ım
lydric S	oil Indicators: distosol distic Epipedon Sulfidic Odor Probable Aquic	: Moisture Regime	10YF	7/3	Listed Listed Aquid	i on Local Hydric I on State Hydric I on National Hydr Moisture Regime	Soils List Soils List nc Soils List	ım
Hydric S	oil Indicators: distosol distic Epipedon Sulfidic Odor Probable Aquic Reducing Condi	: Moisture Regime itions	10YF	7/3	Listed Listed Aquid Organ	i on Local Hydric I on State Hydric I on National Hydr Moisture Regime Iic Streaking in Sa	Soils List Soils List nc Soils List	ım
- H	oil Indicators: distosol distic Epipedon Sulfidic Odor Probable Aquic Reducing Condi Sleyed or Low-C	: Moisture Regime itions Chroma Colors			Listed Listed Aquid Organ Mottle	d on Local Hydric d on State Hydric d on National Hydr Moisture Regime nic Streaking in Sa	Soils List Soils List nc Soils List andy Soils	ım
Hydric S H S F G H Remarks	oil Indicators: distosol distic Epipedon Sulfidic Odor Probable Aquic Reducing Condi Sleyed or Low-(digh Organic Co	: Moisture Regime itions	er ariations, v		Listed Listed Aquid Organ Mottle	i on Local Hydric I on State Hydric I on National Hydr Moisture Regime Iic Streaking in Sa	Soils List Soils List nc Soils List andy Soils	IM.
Hydric S H S F F Remarks	oil Indicators: distosol distic Epipedon Sulfidic Odor Probable Aquic Reducing Condi Sleyed or Low-(digh Organic Co	Moisture Regime itions Chroma Colors ontent in Surface Laye I disturbances, local v	er ariations, v		Listed Listed Aquid Organ Mottle	d on Local Hydric d on State Hydric d on National Hydr Moisture Regime nic Streaking in Sa	Soils List Soils List nc Soils List andy Soils	ım
Hydric S H S F Remarks	oil Indicators: distosol distic Epipedon Sulfidic Odor Probable Aquic Reducing Condi Sleyed or Low-(ligh Organic Co (Describe soil does not meet	Moisture Regime itions Chroma Colors ontent in Surface Layer I disturbances, local vithe hydric soil criteria	er ariations, v		Listed Listed Aquid Organ Mottle	d on Local Hydric d on State Hydric d on National Hydr Moisture Regime nic Streaking in Sa es (Explain in Rema	Soils List Soils List nc Soils List andy Soils rks)	nt Within a Wetland
Hydric S H S F F Remarks Goil color VETLA	oil Indicators: distosol distic Epipedon Sulfidic Odor Probable Aquic Reducing Condi Sleyed or Low-(ligh Organic Co (Describe soil does not meet	Moisture Regime itions Chroma Colors ontent in Surface Layer to the hydric soil cntene the	er ariations,	etc.):	Listed Listed Aquid Organ Mottle Other	d on Local Hydric d on State Hydric d on National Hydr Moisture Regime nic Streaking in Sa es (Explain in Rema	Soils List Soils List Inc Soils List Indy Soils Inks)	

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): All three wetland parameters are absent.

Paramet	rix, Inc.
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					Data Plot #:	B15a-A
WF	TIANE	DETE	RMINA	TION	Wetland:	B15a
(Modified from: 1					Manual)	
roject/Site: Seattle Tacoma Airport - Master Plan U			_	12/16/98	· manual/	
pplicant/Owner: Port of Seattle	poate		County:			
vestigator: William Kleindi			State:	King WA		
1987 Method						
Normal Circumstances exist on the site?	Yes	X	No			SS
the site significantly disturbed (Atypical Situation)?	Yes		_	Fie X	id Plot ID: B50)-A
the area a potential Problem Area?	Yes					
marks (Explain sample location, disturbances, pro		3e).	NO _	<u>x</u>		
GETATION Dominant species are checked						
1 Rubus discolor		% Cover	Stratum	Indicator		
		15	Shrub	<u>FACU</u>		
Rubus speciabilis cent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T" indicates transitions (Describe disturbances, relevant local variations).	ace. tions, sea	100	Shrub	FAC+	-	
Rubus speciabilis reent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing riphological adaptations to wetlands. "T indicates triple and the companies of the companies of the properties of the companies of	ace. tions, sea	100	ects, etc.):		
Rubus speciabilis cent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing riphological adaptations to wetlands. T indicates transits (Describe disturbances, relevant local variative greater than 50 % of the vegetation is hydrophytic DROLOGY	ace. tions, sea	100 sonal eff	ects, etc.): is met.	Mors (Describ	o in Romontia)
Rubus speciabilis cent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T indicates transition in the property of the vegetation is hydrophytic DROLOGY."	ace. tions, sea	100 isonal eff tland plai Weti	ects, etc.): is met. rology Indica	ators (Describ	e in Remarks):
Rubus speciabilis cent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T' indicates transition in the species in the species of the properties of the	ace. tions, sea	100 isonal eff tland plai Weti	ects, etc. nt criteria): is met. rology Indica		e in Remarks):
Rubus speciabilis cent of Dominant Species that are OBL, FACW. Dept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T indicates to narks (Describe disturbances, relevant local variative greater than 50 % of the vegetation is hydrophytic DROLOGY orded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	ace. tions, sea	100 isonal eff tland plai Weti	ects, etc. nt criteria and Hydi): is met. rology Indicators: Inundated		
Rubus speciabilis cent of Dominant Species that are OBL, FACW, port FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T indicates to narks (Describe disturbances, relevant local variative greater than 50 % of the vegetation is hydrophytic DROLOGY orded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	ace. tions, sea	100 isonal eff tland plai Weti	ects, etc. nt criteria and Hydi Primary In X X	is met. rology Indicadicators: Inundated Saturated Saturated	i I in Upper 12 inc I in Upper 18 inc	thes
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Rubus speciabilis cent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing phological adaptations to wetlands. Trindicates to marks (Describe disturbances, relevant local variative greater than 50 % of the vegetation is hydrophytic DROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available	ace. tions, sea	100 isonal eff tland plai Weti	ects, etc. nt criteria and Hydi Primary In X X	is met. rology Indicators: Inundated Saturated Water Ma Drift Lines	d in Upper 12 ind in Upper 18 ind rks	thes
Rubus speciabilis cent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing phological adaptations to wetlands. Trindicates trinarks (Describe disturbances, relevant local variative greater than 50 % of the vegetation is hydrophytic DROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available X No Recorded Data Available	ace. tions, sea	100 isonal eff tland plai Weti	ects, etc. nt criteria and Hydi Primary In X X	is met. rology Indicators: Inundated Saturated Water Ma Drift Lines Sediment	d I in Upper 12 ind I in Upper 18 ind rks S Deposits	thes thes
Rubus speciabilis cent of Dominant Species that are OBL, FACW, 2ept FAC-). Include species noted (*) as showing phological adaptations to wetlands. Trindicates trinarks (Describe disturbances, relevant local variative greater than 50 % of the vegetation is hydrophytic DROLOGY orded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available No Recorded Data Available	ace. tions, sea	100 isonal eff tland plan Wetl F	and Hydi	is met. rology Indicators: Inundated Saturated Water Ma Drift Lines Sediment Drainage	d in Upper 12 ind in Upper 18 ind rks s Deposits Patterns in Wetl	thes thes ands
Rubus speciabilis cent of Dominant Species that are OBL, FACW, 2ept FAC-). Include species noted (*) as showing phological adaptations to wetlands. Trindicates trinarks (Describe disturbances, relevant local variative greater than 50 % of the vegetation is hydrophytic DROLOGY Orded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available X No Recorded Data Available X Observations: epth of Surface Water: 2 (in.)	ace. tions, sea	100 isonal eff tland plan Wetl F	and Hydi	is met. rology Indicators: Inundated Saturated Water Ma Drift Lines Sediment Drainage	d I in Upper 12 ind I in Upper 18 ind rks S Deposits	thes thes ands
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Rubus spectabilis recent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing imphological adaptations to wetlands. Translicates the marks (Describe disturbances, relevant local variative greater than 50 % of the vegetation is hydrophytical formation of the vegetation in hydrophytical formation of the vegetation is hydrophytical formation of the vegetation is hydrophytical formation of the vegetation is hydrophytical formation of the vegetation is hydrophytical formation of the vegetation of the vegetation of the vegetation of the vegetation is hydrophytical formation of the vegetation of	ace. tions, sea	100 isonal eff tland plan Wetl F	and Hydi	is met. rology Indicators: Inundated Saturated Water Ma Drift Lines Sediment Drainage Indicators (Coxidized If Water-Sta	d in Upper 12 inc lin Upper 18 inc rks s Deposits Patterns in Wet 2 or more requir Root Channels i ined Leaves	thes thes ands
Rubus spectabilis recent of Dominant Species that are OBL, FACW, cept FAC-). Include species noted (*) as showing imphological adaptations to wetlands. Trindicates trimarks (Describe disturbances, relevant local variative greater than 50 % of the vegetation is hydrophytic (DROLOGY) corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available No Recorded Data Available d Observations: Depth of Surface Water: Depth to Free Water in Pit: Depth to Free Water in Pit: Depth to Saturated Seits	ace. tions, sea	100 isonal eff tland plan Wetl F	and Hydi	is met. rology Indicators: Inundated Saturated Water Ma Drift Lines Sediment Drainage Indicators (: Oxidized I Water-Sta Local Soil	d in Upper 12 inc lin Upper 18 inc rks s Deposits Patterns in Wetl 2 or more requir	thes thes ands ed): n Upper 12 inches

4 6						_	ata Plot #:	B15a-A	
Ľ						٧	Vetland:	B15a	
_				-	-				
Project/S	ite: Seattle Ta	coma Airport - Master	Plan Updati	<u> </u>	Date:	12/16/98			
SOILS									
Soil Sur	vey Data:								
Map Unit Name: Unmapped					Drainage Class: _				
						Field Observations	s Confirm Ma	pped Type?	
Taxonon	ny (Subgroup):					Yes No	NA	<u> </u>	
Profile D	escription:								
Depth (Inches)	Horizon Designation	Matrix Color (Munsell Moist)	Mottle (Munse	Color ell Moist)		Mottle Abundance/Contra		kture, Concretions, izospheres, etc.	
0-13	A	10YR 2/1	-			•	Mu	cky loam	
<u> </u>	oil Indicators: distosol distic Epipedon Sulfidic Odor				_ Listed	on Local Hydric So on State Hydric So on National Hydric	ils List		
					_	ric Moisture Regime			
F	Reducing Condi	tions			Organ	anic Streaking in Sandy Soils			
	X Gleyed or Low-Chroma Colors Mottle					ties			
F	Sleyed or Low-(Afternoon to the Commence of the			
×	•	ontent in Surface Layer			_ Other	(Explain in Remark	S)		
X G X H	ligh Organic Co (Describe soi	disturbances, local va	riations, etc		-				
X G X H	ligh Organic Co (Describe soi	·	riations, etc		-			eria.	
X G X H Remarks	ligh Organic Co (Describe soi	disturbances, local va high organic content, so	riations, etc		-			eria.	
X G X H Remarks Black mu	igh Organic Co (Describe soi cky soils with h	disturbances, local va aigh organic content, so	riations, etc		-	dicators meet the hy	rdric soil crite	nt Within a Wetla	
X G X + Remarks Black mu WETLA	ligh Organic Co (Describe soil cky soils with h	disturbances, local va nigh organic content, so MINATION n Present?	riations, etc	other hydn	-	dicators meet the hy	rdric soil crite		

The presence of all three parameters indicate this area is a wetland.



Applicant/Owner: Port of Seattle County: Kinvestigator: William Kleindl State: William Method 1989 Method	ineation Manual) 16/98
Project/Site: Seattle Tacoma Airport - Master Plan Update Applicant/Owner: Port of Seattle County: K Investigator: William Kleindl 1989 Method De Normal Circumstance with a site of the county of	16/98
Applicant/Owner: Port of Seattle County: K Investigator: William Kleindl State: W ✓ 1987 Method ☐ 1989 Method	
Investigator: William Kleindl State: W	11 -
✓ 1987 Method ☐ 1989 Method	ling
Do Normal Circumstances suited as the site of	VA
Do Normal Circumstances exist on the site?	Community ID: Upland
DO Normal Circumstances exist on the site? Yes X No	- Field Ptot ID: B50-B
s the site significantly disturbed (Atypical Situation)? Yes No X	- Teld Flot ID. B30-B
s the area a potential Problem Area? Yes No X	-
Remarks (Explain sample location, disturbances, problem areas):	-
aired plot with B15-A.	
EGETATION (Dominant species are checked)	
Plant Species % Cover Stratum	Indicator
1 Polystichum munitum 30 Herb	FACU
2. Ilex aquifolium 30 Shrub	UPL
3 Rubus discolor 20 Shrub 4 Acer macrophylium 30 Tree	FACU
accent of Dominant Species that are OBL, FACW, or FAC	FACU
orphological adaptations to wetlands. "T indicates trace. Imarks (Describe disturbances, relevant local variations, seasonal effects, etc.):	
orphological adaptations to wetlands. "T" indicates trace. emarks (Describe disturbances, relevant local variations, seasonal effects, etc.): ne wetland vegetation criteria are not met since the area is dominated by non-wetlan	nd plants.
emarks (Describe disturbances, relevant local variations, seasonal effects, etc.): we wetland vegetation criteria are not met since the area is dominated by non-wetlant YDROLOGY	
orphological adaptations to wetlands. "T" indicates trace. emarks (Describe disturbances, relevant local variations, seasonal effects, etc.): ne wetland vegetation criteria are not met since the area is dominated by non-wetlan YDROLOGY ecorded Data (Describe in Remarks): Wetland Hydrole	ogy Indicators (Describe in Remarks):
orphological adaptations to wetlands. "T" indicates trace. emarks (Describe disturbances, relevant local variations, seasonal effects, etc.): ne wetland vegetation criteria are not met since the area is dominated by non-wetlant YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Primary Indicates trace. Wetland Hydrology	ogy Indicators (Describe in Remarks):
emarks (Describe disturbances, relevant local variations, seasonal effects, etc.): ille wetland vegetation criteria are not met since the area is dominated by non-wetlar YDROLOGY Icorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	ogy Indicators (Describe in Remarks): ators:
perphological adaptations to wetlands. "T" indicates trace. permarks (Describe disturbances, relevant local variations, seasonal effects, etc.): per wetland vegetation criteria are not met since the area is dominated by non-wetlant YDROLOGY percorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	ogy Indicators (Describe in Remarks): lators: Inundated Saturated in Upper 12 inches
emarks (Describe disturbances, relevant local variations, seasonal effects, etc.): se wetland vegetation criteria are not met since the area is dominated by non-wetlant YDROLOGY scorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	ogy Indicators (Describe in Remarks): lators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches
perphological adaptations to wetlands. "T" indicates trace. permarks (Describe disturbances, relevant local variations, seasonal effects, etc.): per wetland vegetation criteria are not met since the area is dominated by non-wetlant YDROLOGY percorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	ogy Indicators (Describe in Remarks): ators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks
orphological adaptations to wetlands. "T" indicates trace. emarks (Describe disturbances, relevant local variations, seasonal effects, etc.): ne wetland vegetation criteria are not met since the area is dominated by non-wetlant YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	ogy Indicators (Describe in Remarks): ators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
orphological adaptations to wetlands. "T" indicates trace. emarks (Describe disturbances, relevant local variations, seasonal effects, etc.): ne wetland vegetation criteria are not met since the area is dominated by non-wetlant YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	ogy Indicators (Describe in Remarks): ators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
orphological adaptations to wetlands. "T' indicates trace. emarks (Describe disturbances, relevant local variations, seasonal effects, etc.): ne wetland vegetation criteria are not met since the area is dominated by non-wetlant YDROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	ogy Indicators (Describe in Remarks): ators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
emarks (Describe disturbances, relevant local variations, seasonal effects, etc.): ne wetland vegetation criteria are not met since the area is dominated by non-wetlant YDROLOGY recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Id Observations: Depth of Surface Water: None (in.) Secondary In	ogy Indicators (Describe in Remarks): lators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
perphological adaptations to wetlands. "T' indicates trace. permarks (Describe disturbances, relevant local variations, seasonal effects, etc.): per wetland vegetation criteria are not met since the area is dominated by non-wetlant YDROLOGY Proorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Id Observations: Depth of Surface Water: Depth to Free Water in Pit: None (in.) Secondary in	ogy Indicators (Describe in Remarks): ators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
orphological adaptations to wetlands. "T" indicates trace. emarks (Describe disturbances, relevant local variations, seasonal effects, etc.): ne wetland vegetation criteria are not met since the area is dominated by non-wetlant YDROLOGY Proorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Id Observations: Depth of Surface Water: Depth to Free Water in Pit: None (in.) Secondary In Depth to Saturated Soil: Vetland Hydrole Vetland	ogy Indicators (Describe in Remarks): ators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wellands indicators (2 or more required): Oxidized Root Channels in Upper 12 inches
perphological adaptations to wetlands. "T' indicates trace." ### Wetland Vegetation criteria are not met since the area is dominated by non-wetlant ### Wetland Vegetation criteria are not met since the area is dominated by non-wetlant ### Wetland Hydrole Stream, Lake, or Tide Gage	ogy Indicators (Describe in Remarks): ators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands

$\overline{\Lambda}$				·			Data Plo	t#:	B15a-B
							Wetland	i:	B15a Upland Pic
roject/Si	te: Seattle Ta	acoma Airport - Mast	er Plan	Update	_ Date	12/16/98			
SOILS									
Soil Sur	ey Data:								
Map Unit	Name: Unm	apped				Drainage Clas	is:		
						Field Observa	tions Confin	m Map	ped Type?
í axonom	y (Subgroup):					Yes	No	NA	_x_
	escription:								
Depth Inches)	Horizon	Matrix Color (Munsell Moist)		Mottle Color (Munsell Mois	t)	Mottle Abundance/Co	ontrast		ure, Concretions, ospheres, etc.
)-3	A	10YR 2/2						Fibno	loam
-9	В	7.5YR 3/3		•		•		Loam	n°
)+	С	7.5YR 3/4		•		-		Sand	y loa m
tydric Sc	oil Indicators:								
•	istosol	•			Liste	d on Local Hydri	c Soils List		
Н	istic Epipedon				Liste	d on State Hydri	c Soils List		
s	ulfidic Odor				Liste	d on National Hy	rdric Soils Li	ist	
Pi	robable Aquic	Moisture Regime		_	Aquid	: Moisture Regin	ne		
	educing Condi					nic Streaking in	Sandy Soils	;	
		Chroma Colors		_	Motti				
	gn Organic Co	ontent in Surface Lay	er .	_	Othe	r (Explain in Ren	narks)		
	•	disturbances, local	vanatio	ns, etc.):					
vo indicat	or of hydric so	mis present.							
VETLA	ND DETER	MINATION							
ydrophy	tic Vegetation	n Present?	Yes	No	x	ls thi	s Sampling	Point	Within a Wetland
lydric So	ils Present?		Yes	No	$\overline{\mathbf{x}}$				
	ydrology Pre		Yes	No.			Yes	No	• <u>X</u>

This area is an upland since all wetland parameters are absent.

AR 047969

Param	etrix.	Inc.
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Data Plot #:	30-A1
Wetland:	30

	***	LAND DET	ERMINA	TION Wetland: 30
(Pelineation Manual)
roject/Site: Seattle Tacoma A	Airport - Master Plan Up	date	Date:	6/15/98
Applicant/Owner: Port of Seattle			County:	King
Investigator: William Kleindl 1987 Method 1989 Method			State:	WA
				
		Vec Y	No	Community ID: PFO/PSS
o Normal Circumstances exist		Yes X	-	Field Plot ID: 30-A
the site significantly disturbed	_	Yes	No _	<u>x</u>
the area a potential Problem A	Area?	Yes	No _	<u>X</u>
emarks (Explain sample loca	ition, disturbances, prob	iem areas):		
tension of EIS wetland #30.				
GETATION Pominan	nt species are checked)			
Plant Species		% Cove		
1. Polystichum munitum		10	- Herb	FACU FACU
2 Urtica dioica 3 Rubus discolor		30	Shrub	FACU
3 Rubus discolor Rubus spectabilis		60	Shrub	FAC+
5 Salix spp		20	Shrub	FACW
6 Acer macrophyllum		30	Tree	FACU
7 Ainus rubra		10	Tree	FAC
8 Thuja plicata		10	Tree	FAC
rcent of Dominant Species	that are OBI_FACW	or EAC		
cept FAC-). Include species r		60		
	tlands. "T" indicates tra	ce.		
orphological adaptations to wet				L):
_	es, relevant local variation	ons, seasonal e	mects, etc	
marks (Describe disturbance				•
marks (Describe disturbance oce greater than 50% of the do				•
marks (Describe disturbance ce greater than 50% of the do	ominant plants are hydro	ophytic, the wet	land vege	tation criteria is met.
marks (Describe disturbance oce greater than 50% of the do 'DROLOGY' corded Data (Describe in Re	emarks):	ophytic, the wet	etland Hyd	drology Indicators (Describe in Remarks):
marks (Describe disturbance ce greater than 50% of the do 'DROLOGY corded Data (Describe in Re Stream, Lake, or 1	ominant plants are hydro emarks): Tide Gage	ophytic, the wet	etland Hyd	drology Indicators (Describe in Remarks): ndicators:
marks (Describe disturbance ce greater than 50% of the do DROLOGY corded Data (Describe in Re Stream, Lake, or T Aerial Photograph	ominant plants are hydro emarks): Tide Gage	ophytic, the wet	etland Hyd Primary I	drology Indicators (Describe in Remarks): ndicators: Inundated
marks (Describe disturbance ce greater than 50% of the do 'DROLOGY corded Data (Describe in Re Stream, Lake, or 1 Aerial Photograph Other	emarks): Tide Gage	ophytic, the wet	etland Hyd	drology Indicators (Describe in Remarks): ndicators: Inundated Saturated in Upper 12 inches
marks (Describe disturbance ace greater than 50% of the do /DROLOGY corded Data (Describe in Re Stream, Lake, or T Aerial Photograph	emarks): Tide Gage	ophytic, the wet	etland Hyd Primary I	drology Indicators (Describe in Remarks): ndicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches
marks (Describe disturbance ace greater than 50% of the do /DROLOGY corded Data (Describe in Re Stream, Lake, or 1 Aerial Photograph Other	emarks): Tide Gage	ophytic, the wet	etland Hyd Primary I	drology Indicators (Describe in Remarks): indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks
marks (Describe disturbance ace greater than 50% of the do /DROLOGY corded Data (Describe in Re Stream, Lake, or 1 Aerial Photograph Other	emarks): Tide Gage	ophytic, the wet	etland Hyd Primary I	drology Indicators (Describe in Remarks): ndicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches
marks (Describe disturbance ace greater than 50% of the do (DROLOGY) corded Data (Describe in Reservation Stream, Lake, or Take, emarks): Tide Gage	ophytic, the wet	etland Hyd Primary I	drology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines	
marks (Describe disturbance ace greater than 50% of the do (DROLOGY) corded Data (Describe in Restream, Lake, or 1 Aerial Photograph Other X No Recorded Data	emarks): Tide Gage	ophytic, the wet	etland Hyd Primary I	drology Indicators (Describe in Remarks): indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
marks (Describe disturbance oce greater than 50% of the do TOROLOGY Corded Data (Describe in Restrain Lake, or Aerial Photograph Other X No Recorded Data do Observations: Depth of Surface Water:	emarks): Tide Gage a Available	ophytic, the wet	etiand Hyd Primary I	drology Indicators (Describe in Remarks): indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
marks (Describe disturbance ace greater than 50% of the do 'DROLOGY corded Data (Describe in Research Lake, or 1 Aerial Photograph Other X No Recorded Data Id Observations: Depth of Surface Water: Depth to Free Water in Pit:	emarks): Tide Gage a Available None (in.)	ophytic, the wet	etiand Hyd Primary I	drology Indicators (Describe in Remarks): indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
marks (Describe disturbance once greater than 50% of the do for th	emarks): Tide Gage a Available	ophytic, the wet	etiand Hyd Primary I	drology Indicators (Describe in Remarks): indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
marks (Describe disturbance ince greater than 50% of the do YDROLOGY corded Data (Describe in Research Lake, or Aerial Photograph Other X No Recorded Data Add Observations: Depth of Surface Water: Depth to Free Water in Pit:	emarks): Tide Gage a Available None (in.)	ophytic, the wet	etiand Hyd Primary I	drology Indicators (Describe in Remarks): indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands ry Indicators (2 or more required): Oxidized Root Channels in Upper 12 inche
Aerial Photograph Other X No Recorded Data Id Observations: Depth of Surface Water:	emarks): Tide Gage a Available None (in.)	ophytic, the wet	etiand Hyd Primary I	drology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands ry Indicators (2 or more required): Oxidized Root Channels in Upper 12 inche Water-Stained Leaves Local Soil Survey Data
marks (Describe disturbance once greater than 50% of the do representation of the do representation of the do representation of the do representation of the do representation of the representation o	emarks): Tide Gage a Available None (in.)	wet	etland Hyder Primary I	drology Indicators (Describe in Remarks): Indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inche Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)

						Data Plo	t #:	30-A1
1						Wetland	:	30
roject/Site	: Seattle T	acoma Airport - Master P	an Update	D:	ate: 6/15/98			
SOILS								
Soil Surve	y Data:							
Map Unit N	lame: India	inola			Drainage Cla	ss: Somewh	at exce	essively drained
					Field Observ	ations Confirm	n Map	ped Type?
axonomy	(Subgroup):	Dystric Xeropsammen	ts		Yes	No X	NA	
rofile Des	cription:						140	
	Horizon	Matrix Color	Mottle C	olor	Mottle		Text	ire, Concretions,
inches)	Designation	(Munsell Moist)	(Munseli	Moist)	Abundance/C	Contrast		spheres, etc.
4	Oa	10YR 2/1					Sapno	
-13	A1	10YR 2/1					Silt Or	ganic
13	С	10YR 4/1					Sand	
ydric Soil	Indicators:							
X Hist	osol			Lis	ited on Local Hydr	ic Soils List		
Hist	ic Epipedon				ted on State Hydr			
	idic Odor				ted on National H		t	
		Moisture Regime			uic Moisture Regi			
	ucing Condi				ganic Streaking in	Sandy Soils		
		Chroma Colors			tties			
		intent in Surface Layer			er (Explain in Re	marks)		
		disturbances, local variation	ions, etc.):					
emarks (D								
emarks (D		ic soil indicators meet the		cnteria.				
emarks (D	d other hydn			cnteria.				
emarks (Dil color and	D DETER	ic soil indicators meet the	hydnc soil		la sh:	e Complia		
emarks (Dil color and	DETERI Vegetation	ic soil indicators meet the	hydnc soil	cnteria. No	ls thi	s Sampling F	Point V	Within a Wetland

The presence of all three parameters indicate this area is a wetland



Dat	ta	Plot	#:	

PIOL #:	30462	
ind:	30	

METI	AND D	ETERMII	UATI	ON	and:	30
(Modified from: 198					ual)	
Project/Site: Seattle Tacoma Airport - Master Plan Upda		Date:		5/98	•	
	ate	Coun				
Applicant/Owner: Port of Seattle		•	_	ling //		
nvestigator: William Kleindl		State		/A		
1987 Method 1989 Method				Communit	y ID: P	ss
o Normal Circumstances exist on the site?	Yes _	X No		Field Plot	ID: 30-E	3
s the site significantly disturbed (Atypical Situation)?	Yes _	No	X	-		
the area a potential Problem Area?	Yes _	No	X	_		
emarks (Explain sample location, disturbances, proble	em areas):	:				
etland plot along the extension of EIS wetland #30.						
	 					
EGETATION (Dominant species are checked)						
Plant Species			itum	Indicator		
1 Equisetum teimateia	25 25	Her		FAC+		
2 Urtica dioica 3 Rubus discolor	$\frac{25}{75}$	Hen Shri		FACU		
3 Rubus discolor 4 Rubus spectabilis	25	Shri		FAC+		
5 Acer macrophyllum	10	Tree	;	FACU		
6 Ainus rubra	10	Tree	:	FAC		
7 Thuia plicata	10	Tree	;	FAC		
orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variation nice greater than 50% of the dominant plants are hydrogy YDROLOGY	ns, seaso			on criteria is met.		
		Mindlemal				
ecorded Data (Describe in Remarks):				logy Indicators	(Describ	e in Remarks):
Stream, Lake, or Tide Gage		rima	ry indi	cators:		
Aerial Photograph				Inundated	40 :	
Other			X	Saturated in Up		
X No Recorded Data Available				Saturated in Up Water Marks	per 10 mi	1162
				Drift Lines		
				Sediment Depos	sits	
				Drainage Patter		lands
eld Observations:						
Depth of Surface Water: None (in.)		Secor	dary	Indicators (2 or m	ore requi	red):
Depth to Free Water in Pit: >24 (in.)				Oxidized Root 0	hannels	n Upper 12 inches
Depth to Saturated Soil 12 (in.)				Water-Stained L		
				Local Soil Surve	y Data	
				Other (Explain is	•	s)
marks (As relevant, describe recent precipitation, hyd						

							-	Data Pio		30-A2
								Wetland	1;	30
Project/Site	e: Seattle T	acoma Airport - Masi	er Pia	n Upd	ate	Date	: 6/15/98			
SOILS Soil Surve	y Data:									
Map Unit M	Name: <u>Indi</u>	anola				-	Drainage Class Field Observation			essively drained
-	(Subgroup):	Dystric Xeropsam	ments	i			Yes N		NA	
Profile Des Depth Inches)	Horizon	Matrix Color (Munsell Moist)			e Color sell Moi	st)	Mottle Abundance/Con	trast		ure, Concretions ospheres, etc
-9	Α	10YR 3/1		10YR	2/1		Few. Fine. Faint		Sand	y loam
-13	B1	10YR 3/1		10YR	4/3 and 1	0 R 2/1	Common. Medium.	Distinc!		v loam
3-24	B 2	10YR 3/1		N 3/1			Few. Fine. Promine	nt	Sandy	v loam
24	<u>c</u>	10YR 5/1		5YR 4	14		Few. Fine, Distinct		Sand	
Hiss Sulfi X Proi X Red X Gley X High	lucing Condi yed or Low-Co Organic Co Describe soil	Moisture Regime	ariatio	ons, et	- - - - - c.):	Listed Aquic Organ X Mottle Other	on Local Hydric S on State Hydric S on National Hydr Moisture Regime iic Streaking in Sa s (Explain in Remai	Soils List ic Soils Lis ndy Soils	i t	
		MINATION						-	-	
	Vegetation	Present?	Yes	_X	No		Is this S	ampling F	Point V	
dric Soils	Present? Irology Pres		Yes	<u> </u>	No			es X	No	
		sent /	Yes	Х	No		•		40	

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): The presence of all three parameters indicate this area is a wetland.



Data Plot #:

	140	TLAND	DETER	TAMM	ION We	tiand:	B5
(1	Modified from: 19	987 CU	: wetia	ands De	ilineation Mai	iuai,	
Project/Site: Seattle Tacoma A	Airport - Master Plan Ut	pdate	_ (Date: 6/	4/98		
Applicant/Owner: Port of Sea	attie		_ (County:	King		
vestigator: William Kleindl			_ s	State:	WA		
1987 Method 1989 N	Method		_		Commu	nity ID:	PFO/PSS
o Normal Circumstances exist	on the site?	Yes	<u> </u>	No _	- Field Plo	t ID: B	5-A
the site significantly disturbed		Yes		No _	<u>. </u>		
the area a potential Problem		Yes		No >			
emarks (Explain sample loca			s):		 -		
isturbed area with a well in the and S. 12th St.	<u></u>		i may na	ive baen i	ann site. On the		
EGETATION (Dominar Plant Species	nt species are checked		% Cover	Stratum	Indicator		
Callium anadan		:	20	Herb	FACU		
2 Ranunculus repens			6 C	Herb	FACW		
3 Rumex crispus			1	Herb	FAC		
4 Solanum dulcamara			10	Herb	FAC+		
5 Salix spp			15	Shrub	FACW		
6 Salix spp			15 35	Shrub	FACW		
7 Spiraea douglasii			45	Tree	FAC		
8 Alnus rubra Fraxinus latifolia							
ercent of Dominant Species xcept FAC-). Include species	noted (*) as showing	V. or FAC	100	Tree	FACW		
ercent of Dominant Species except FAC-). Include species corphological adaptations to we emarks (Describe disturbano	noted (*) as showing etlands. "T" indicates t ses, relevant local varia	V, or FAC trace.	100	fects, etc.) :		
ercent of Dominant Species except FAC-). Include species norphological adaptations to we temarks (Describe disturbance greater than 50 % of the disturbance greater than 50 % of the disturbance.	noted (*) as showing etlands. "T" indicates t ses, relevant local varia	V, or FAC trace.	100	fects, etc.) :	et.	
ercent of Dominant Species except FAC-). Include species corphological adaptations to we emarks (Describe disturbancince greater than 50 % of the disturbance.	noted (*) as showing etlands. "T" indicates t ses, relevant local varia	V, or FAC trace.	100	fects, etc.) :	et.	
ercent of Dominant Species except FAC-). Include species orphological adaptations to we emarks (Describe disturbancince greater than 50 % of the disturbance of the d	noted (*) as showing etlands. "T" indicates t bes, relevant local varia dominant plants are hy-	V, or FAC trace.	100 sonal eff	fects, etc.): alion criteria is m		cribe in Remarks):
ercent of Dominant Species except FAC-). Include species orphological adaptations to we emarks. (Describe disturbancince greater than 50 % of the described in the second species of the second specie	noted (*) as showing etlands. "T" indicates to bes, relevant local variational plants are hypersecond (*).	V, or FAC trace.	100 sonal eff the weth	fects, etc.): alion criteria is m rology Indicator		cribe in Remarks):
ercent of Dominant Species except FAC-). Include species orphological adaptations to we amarks. (Describe disturbancince greater than 50 % of the described Data. (Describe in Recorded Data.)	noted (*) as showing etlands. "T" indicates to the case of the cas	V, or FAC trace.	100 sonal eff the weth	fects, etc. and veget): alion criteria is m rology Indicator		cribe in Remarks):
ercent of Dominant Species xcept FAC-). Include species orphological adaptations to we emarks. (Describe disturbance ince greater than 50 % of the disturbance disturbance greater than 50 % of the	noted (*) as showing etlands. "T" indicates to the case of the cas	V, or FAC trace.	100 sonal eff the weth	fects, etc. and veget): ation criteria is m rology Indicator idicators:	s (Desc	
ercent of Dominant Species xcept FAC-). Include species orphological adaptations to we emarks. (Describe disturbance ince greater than 50 % of the di YDROLOGY ecorded Data. (Describe in R Stream, Lake, or Aerial Photograpi	noted (*) as showing etlands. "T" indicates to the see, relevant local variational plants are hypermarks): Tide Gage h	V, or FAC trace.	100 sonal eff the weth	fects, etc. and veget): ation criteria is m rology Indicator idicators: Inundated Saturated in t Saturated in t	5 (Desc	inches
ercent of Dominant Species xcept FAC-). Include species orphological adaptations to we emarks. (Describe disturbance ince greater than 50 % of the di YDROLOGY ecorded Data. (Describe in R Stream, Lake, or Aerial Photograph Other	noted (*) as showing etlands. "T" indicates to the see, relevant local variational plants are hypermarks): Tide Gage h	V, or FAC trace.	100 sonal eff the weth	fects, etc. and veget): ation criteria is m rology Indicator idicators: Inundated Saturated in t Water Marks	5 (Desc	inches
ercent of Dominant Species xcept FAC-). Include species orphological adaptations to we emarks. (Describe disturbance ince greater than 50 % of the di YDROLOGY ecorded Data. (Describe in R Stream, Lake, or Aerial Photograph Other	noted (*) as showing etlands. "T" indicates to the see, relevant local variational plants are hypermarks): Tide Gage h	V, or FAC trace.	100 sonal eff the weth	fects, etc. and veget): ation criteria is m rology Indicator idicators: Inundated Saturated in t Water Marks Drift Lines	S (Desc Upper 12 Upper 18	inches
ercent of Dominant Species xcept FAC-). Include species orphological adaptations to we emarks. (Describe disturbance ince greater than 50 % of the di YDROLOGY ecorded Data. (Describe in R Stream, Lake, or Aerial Photograph Other	noted (*) as showing etlands. "T" indicates to the see, relevant local variational plants are hypermarks): Tide Gage h	V, or FAC trace.	100 sonal eff the weth	fects, etc.	rology Indicator idicators: Inundated Saturated in It Saturated in It Water Marks Drift Lines Sediment De	Description (Description)	inches inches
ercent of Dominant Species xcept FAC-). Include species orphological adaptations to we emarks. (Describe disturbance ince greater than 50 % of the of YDROLOGY ecorded Data. (Describe in R Stream, Lake, or Aerial Photograph Other X. No Recorded Data.	noted (*) as showing etlands. "T" indicates to the see, relevant local variational plants are hypermarks): Tide Gage h	V, or FAC trace.	100 sonal eff the weth	fects, etc. and veget): ation criteria is m rology Indicator idicators: Inundated Saturated in t Water Marks Drift Lines	Description (Description)	inches inches
ercent of Dominant Species (xcept FAC-). Include species (xcept FA	noted (*) as showing etlands. "T" indicates to the see, relevant local variational plants are hypermarks): Tide Gage h	V, or FAC trace.	100 sonal eff the weth	fects, etc. and veget lland Hyd Primary ir	rology Indicator idicators: Inundated Saturated in It Saturated in It Water Marks Drift Lines Sediment De	Jpper 12 Jpper 18 posits lerns in \	inches inches Vetlands
ercent of Dominant Species except FAC-). Include species orphological adaptations to we emarks. (Describe disturbance are greater than 50 % of the described bata. (Described in Research Lake, or Aerial Photograph Other. X. No Recorded Data eld Observations:	noted (*) as showing strands. "T" indicates to see, relevant local variations are hydrometric and see the see that the see	V, or FAC trace.	100 sonal eff the weth	fects, etc. and veget lland Hyd Primary ir	rology Indicator idicators: Inundated Saturated in It Saturated in It Water Marks Drift Lines Sediment Del Drainage Pat	S (Desc Upper 12 Upper 18 Doosits terns in \	inches inches Vetlands quired):
ercent of Dominant Species except FAC-). Include species orphological adaptations to we emarks. (Describe disturbance ince greater than 50 % of the disturbance of th	noted (*) as showing etlands. "T" indicates to see, relevant local variations are hydrominant plants are hydromina	V, or FAC trace.	100 sonal eff the weth	fects, etc. and veget lland Hyd Primary ir	rology Indicator idicators: Inundated Saturated in I Saturated in I Water Marks Drift Lines Sediment Dei Drainage Pat y Indicators (2 or	Jpper 12 Jpper 18 Doosits terns in \	inches inches Vetlands quired): els in Upper 12 inches
ercent of Dominant Species except FAC-). Include species incrphological adaptations to we emarks. (Describe disturbance ince greater than 50 % of the disturbance	noted (*) as showing strands. "T" indicates to see, relevant local variations are hydrominant plants are hydromina	V, or FAC trace.	100 sonal eff the weth	fects, etc. and veget land Hyd Primary ir X	rology Indicator idicators: Inundated Saturated in It Saturated in It Water Marks Drift Lines Sediment Del Drainage Pat	Jpper 12 Jpper 18 Dosits terns in \ The more re	inches inches Vetlands quired): els in Upper 12 inches
ercent of Dominant Species except FAC-). Include species incrphological adaptations to we emarks. (Describe disturbance ince greater than 50 % of the disturbance	noted (*) as showing strands. "T" indicates to see, relevant local variations are hydrominant plants are hydromina	V, or FAC trace.	100 sonal eff the weth	fects, etc. and veget land Hyd Primary ir X	rology Indicator idicators: Inundated Saturated in the Sa	Jpper 12 Jpper 18 Dosits Terms in \ Terms to Channel Leaves Tvey Date	inches inches Vetlands quired): els in Upper 12 inches s
ercent of Dominant Species except FAC-). Include species incrphological adaptations to we emarks. (Describe disturbance ince greater than 50 % of the disturbance	noted (*) as showing strands. Tr indicates to see, relevant local variations are hydrometric format plants are hydrometric for see his seen and see his seen are seen and seen are seen	V, or FAC trace. ations, sea	sonal eff	fects, etc. and veget lland Hyd Primary ir X Secondar	rology Indicator idicators: Inundated Saturated in I Saturated in I Water Marks Drift Lines Sediment Dei Drainage Pat y Indicators (2 or Oxidized Roc Water-Staine Local Soil Su Other (Explain	Jpper 12 Jpper 18 Dosits Jerns in \ Therefore more rest Channed Leaves Trey Dat Therefore in Rem	inches inches Vetlands quired): els in Upper 12 inches s

4								Data Plot #	: B5-4	\
1								Wetland:	B 5	
Project/S	Site: Seattle T	acoma Airport - Ma	ster Pla	an Updat	e	Date:	6/4/98			
SOILS Soil Su	rvey Data:									
Map Un	it Name: India	anola					Drainage Class:	Somewhat	excessive	lv drained
							Field Observation		·	
Taxonor	ny (Subgroup):	Dystric Xeropsar	nment	•			Yes X No		NA.	
	Description:						165 NC	′ –	<u> </u>	-
Depth (Inches)	Horizon	Matrix Color (Munsell Moist)		Mottle (Munse	Color ell Moist)		Mottle Abundance/Con		exture, Co	
9-0	Δ	10YR 2/1					-	N	lucky silt loa	m
8-17	B	2.5Y 4/2		10YR 3/	4. 7.5YR 3	/4	Many, Fine, Promine	ent m	ned & fine sa	andv loam
17	Oa	10YR 2/1							luck (Sapric)
Hydric S	oil Indicators	1								
	Histosol					Listed	on Local Hydric S	Soils List		
	listic Epipedon	ı					on State Hydric S			
	Sulfidic Odor					Listed	on National Hydr	ic Soils List		
		Moisture Regime				Aquic	Moisture Regime			
	Reducing Condi					Organ	ic Streaking in Sa	ndy Soils		
		Chroma Colors			x	Mottle:	5			
		ontent in Surface La				Other	(Explain in Remai	rks)		
		disturbances, local								
3 honzon	has distinct in	on depleted matrix w	rith mo	ttling. So	il color ar	nd other in	dicators meet the	hydric soil c	riteria.	
NETLA	ND DETER	MINATION								
ydrophy	rtic Vegetation	Present?	Yes	x	No		ls this S	ampling Po	int Within	a Watia-
ydric Sc	ils Present?		Yes		No -			piilig i' 0	A41(113[]	a mengi
	lydrology Pre						~	es X	No	

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): The presence of all three parameters indicate this area is a wetland.



Data Plot #:

B5-B

	ect/Site: Seattle Tacoma Airport - Master Plan Update			4/98
Applicant/Owner: Port of Seattle	t/Owner: Port of Seattle			King
nvestigator: William Kleindl			County: State:	WA
1987 Method				Community ID: Upland
o Normal Circumstances exist on the site	? Yes	<u>x</u>	No _	Field Plot ID: B5-B
he site significantly disturbed (Atypical Situation)? Yes			No >	(
ne area a potential Problem Area? Yes			No >	
temarks (Explain sample location, disturb				· · · · · · · · · · · · · · · · · · ·
isturbed area with a well in the middle of ti	he wetland. The ar	ea may ha	ave been i	farm site.
EGETATION (Dominant species a	re checked)			
Plant Species		% Cover	Stratum	Indicator
1 Polystichum munitum		2	Herb	FACU FACU
2 Urtica dioica 3 Corvius comuta		8	Herb Shrub	FACU
3 Corvius comuta Helix hedera		85	shrub	NL NL
5 Oemiena cerasiformis		2	Shrub	FACU
6 Rubus discolor		1	Shrub	FACU
7 Rubus spectabilis		8	Shrub	FAC+
8 Ainus rubra		50	Tree	FAC
9 Fraxinus latifolia		15	Tree	FACW
		20	Tree	NI
ercent of Dominant Species that are Oxcept FAC-). Include species noted (*) as	showing	50	Tree	NL NL
ercent of Dominant Species that are O xcept FAC-). Include species noted (*) as orphological adaptations to wetlands. "Temarks (Describe disturbances, relevant nice only 50 % of the dominant vegetation YDROLOGY	showing indicates trace. local variations, se	50 asonal eff wetland v	ects, etc.)	i: is not met.
ercent of Dominant Species that are O except FAC-). Include species noted (*) as iorphological adaptations to wetlands. "Temarks (Describe disturbances, relevant ince only 50 % of the dominant vegetation YDROLOGY ecorded Data (Describe in Remarks):	showing indicates trace. local variations, se	50 asonal eff wetland v	ects, etc.)	is not met. rology Indicators (Describe in Remarks):
ercent of Dominant Species that are Oxcept FAC-). Include species noted (*) as orphological adaptations to wetlands. Tremarks (Describe disturbances, relevant nice only 50 % of the dominant vegetation YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage	showing indicates trace. local variations, se	50 asonal eff wetland v	ects, etc.) egetation	is not met. rology Indicators (Describe in Remarks): dicators:
ercent of Dominant Species that are O except FAC-). Include species noted (*) as orphological adaptations to wetlands. "Temarks (Describe disturbances, relevant ince only 50 % of the dominant vegetation YDROLOGY ecorded Data (Describe in Remarks):	showing indicates trace. local variations, se	50 asonal eff wetland v	ects, etc.) egetation	is not met. rology Indicators (Describe in Remarks):
ercent of Dominant Species that are Oxcept FAC-). Include species noted (*) as orphological adaptations to wetlands. The marks (Describe disturbances, relevant ince only 50 % of the dominant vegetation YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph	showing indicates trace. local variations, se	50 asonal eff wetland v	ects, etc.) egetation	is not met. rology Indicators (Describe in Remarks): dicators: Inundated
ercent of Dominant Species that are O except FAC-). Include species noted (*) as orphological adaptations to wetlands. "T emarks (Describe disturbances, relevant ince only 50 % of the dominant vegetation YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other	showing indicates trace. local variations, se	50 asonal eff wetland v	ects, etc.) egetation	is not met. rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches
ercent of Dominant Species that are O except FAC-). Include species noted (*) as orphological adaptations to wetlands. "T emarks (Describe disturbances, relevant ince only 50 % of the dominant vegetation YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other	showing indicates trace. local variations, se	50 asonal eff wetland v	ects, etc.) egetation	is not met. rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
ercent of Dominant Species that are O except FAC-). Include species noted (*) as orphological adaptations to wetlands. "T emarks (Describe disturbances, relevant ince only 50 % of the dominant vegetation YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other	showing indicates trace. local variations, se	50 asonal eff wetland v	ects, etc.) egetation	is not met. rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
ercent of Dominant Species that are Oxcept FAC-). Include species noted (*) as orphological adaptations to wetlands. "Tremarks (Describe disturbances, relevant nice only 50 % of the dominant vegetation YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other X No Recorded Data Available	showing indicates trace. local variations, se	50 asonal eff wetland v	ects, etc.) egetation	is not met. rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
ercent of Dominant Species that are Oxcept FAC-). Include species noted (*) as orphological adaptations to wetlands. "Tremarks (Describe disturbances, relevant nice only 50 % of the dominant vegetation YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other X No Recorded Data Available	showing indicates trace. local variations, se	asonal eff wetland v	lects, etc.) egetation land Hydr	is not met. rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
ercent of Dominant Species that are Oxcept FAC-). Include species noted (*) as orphological adaptations to wetlands. "Temarks (Describe disturbances, relevant ince only 50 % of the dominant vegetation YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other X No Recorded Data Available eld Observations: Depth of Surface Water: Depth to Free Water in Pit: None	showing indicates trace. local variations, se is hydrophytic, the	asonal eff wetland v	lects, etc.) egetation land Hydr	is not met. rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required):
ercent of Dominant Species that are O except FAC-). Include species noted (*) as forphological adaptations to wetlands. "Temarks (Describe disturbances, relevant ince only 50 % of the dominant vegetation YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other X No Recorded Data Available eld Observations: Depth of Surface Water: None	showing indicates trace. local variations, se is hydrophytic, the	asonal eff wetland v	lects, etc.) egetation land Hydr	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inche
ercent of Dominant Species that are Oexcept FAC-). Include species noted (*) as iorphological adaptations to wetlands. "Temarks (Describe disturbances, relevant ince only 50 % of the dominant vegetation PROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other X No Recorded Data Available eld Observations: Depth of Surface Water: None Depth to Free Water in Pit: >18	showing indicates trace. local variations, se is hydrophytic, the	asonal eff wetland v	lects, etc.) egetation land Hydr	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inche Water-Stained Leaves
ercent of Dominant Species that are Oexcept FAC-). Include species noted (*) as norphological adaptations to wetlands. "Temarks (Describe disturbances, relevant ince only 50 % of the dominant vegetation) YDROLOGY	showing indicates trace. local variations, se is hydrophytic, the	asonal eff wetland v	lects, etc.) egetation land Hydr	rology Indicators (Describe in Remarks): dicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inche

		·					Data Plot #:	B5-B
							Wetland:	B5 Upland Pio
Project/Si	te: Seattle 1	acoma Airport - Ma	ster Plan	Update	Date:	6/4/98		
SOILS								
Soil Surv	rey Data:							
vlap Unit	Name: Indi	anola			· · · · · · · · · · · · · · · · · · ·	Drainage Class:	Somewhat ex	cessively drained
						Field Observation	ons Confirm Ma	pped Type?
axonom	y (Subgroup)	Dystric Xeropsa	nments			Yes No	X NA	
rofile De	scription:							
Depth Inches)	Horizon Designation	Matrix Color (Munsell Moist)		lottle Color Junsell Moi	st)	Mottle Abundance/Con		ture, Concretions, zospheres, etc.
4	Α	10YR 2/1	-			•	San	dy loam
-8	<u>c</u>	10YR 3/3				-	San	dy loam
-17	Ab	10YR 2/1				-	San	dy toam
7-18	Bwb	2.5Y 4/2	10	YR 3/4		Common, Fine, Dist	inct Loar	ny sand
ydric So	il Indicators	:						
His	stosol				Listed	on Local Hydric S	Soils List	
	stic Epipedon	ı		_		on State Hydric S		
	Ifidic Odor			-	Listed	on National Hydr	ic Soils List	
		Moisture Regime		_	Aquic	Moisture Regime		
	ducing Cond				Organ	c Streaking in Sa	ndy Soils	
		Chroma Colors			Mottle			
		ontent in Surface La		_	Other	Explain in Remar	rks)	
emarks (Describe soil	disturbances, local	variations	i. etc.):				
ea does /	ioi meei nya	nc soil criteria.						
ETLAN	ID DETER	MINATION				<u> </u>		
drophyti	c Vegetation	Present?	Yes	No	×	is this S	ampling Point	Within a Wetland
dric Soil	s Present?		Yes —	No	$\frac{\lambda}{x}$		pinig r vilit	**************************************
							es No	

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): This area is an upland since all wetland parameters are absent.

Parametrix, Inc.



()	\A/F-T	1 AND	DETE	RMINA	TION	Wetland	t:	B6
(Mc	vv⊏۱ 9- odified from: 19					ion Manual)	
Project/Site: Seattle Tacoma Airp					i/5/98		•	
·			_	County:	King	······································		
	-			State:	WA			
,			·····	OBIC.	<u> </u>			
1987 Method 1989 Meth			.,	.		Community ID): <u>PS</u>	8
o Normal Circumstances exist on	the site?	Yes	<u> </u>	No _	_	Field Plot ID:	B6-A	
the site significantly disturbed (A	typical Situation)?	Yes		No _	<u> </u>			
the area a potential Problem Area	a?	Yes		No _	<u>x</u>			
sturbed soil horizon, and the site	appears to have bee	n much	wetter in	the past	This are	ea may have b	een a f	ormer farm pond
EGETATION (Dominant s) Plant Species	pecies are checked)		% Cover	Stratum	Indic	estor		
			50	Herb	FAC			
			25	Herb	NL NL			
o Moss so								
2 Moss sp Rubus spectabilis			100	Shrub	FAC+	•		
Alnus rubra Alnus rubra Alnus rubra Procent of Dominant Species the except FAC-). Include species not orphological adaptations to wetlan	ed (*) as showing nds. "T" indicates tra	ice.	100 35 100	Tree	FAC			
Rubus spectabilis Alnus rubra ercent of Dominant Species the except FAC-). Include species not orphological adaptations to wettan emarks (Describe disturbances, nice greater than 50% of the dominations and the emarks of the dominations of th	ed (*) as showing nds. "T" indicates tra relevant local variati	ice. ons, sea	100 35 100 asonal ef	Tree	FAC		# · · ·	
Alnus ruora Alnus ruora ercent of Dominant Species the except FAC-). Include species not orphological adaptations to wettan emarks (Describe disturbances, nice greater than 50% of the domination of the domina	ed (*) as showing inds. "T" indicates tra relevant local variationant plants are hydro-	ice. ons, sea	100 35 100 asonal ef	Tree	FAC .): ation crite	ena is met.		
Alnus ruora Alnus ruora ercent of Dominant Species the except FAC-). Include species not orphological adaptations to wettar emarks. (Describe disturbances, ince greater than 50% of the domination of the domin	ed (*) as showing inds. "T" indicates tra relevant local variationant plants are hydromarks):	ice. ons, sea	100 35 100 asonal ef the wetta	Tree fects, etc.	FAC .): ation crite	ena is met.	escribe	in Remarks):
Alnus rubra Alnus rubra ercent of Dominant Species the except FAC-). Include species not orphological adaptations to wetter emarks (Describe disturbances, ince greater than 50% of the domination of the dominati	ed (*) as showing inds. "T" indicates tra relevant local variationant plants are hydromarks):	ice. ons, sea	100 35 100 asonal ef the wetta	Tree fects, etc.	FAC .): ation crite trology is	ena is met. ndicators (De	escribe	in Remarks):
3. Rubus spectabilis 4. Alnus rubra recent of Dominant Species the species not orphological adaptations to wetlar smarks. (Describe disturbances, nee greater than 50% of the domination of the domination of the species of the domination of the species of the domination of the species of the domination of the species of the domination of the species	ed (*) as showing inds. "T" indicates tra relevant local variationant plants are hydromarks):	ice. ons, sea	100 35 100 asonal ef the wetta	Tree fects, etc.	FAC include in the second of	ena is met. ndicators (De		
Alnus rubra Alnus rubra Alnus rubra Ircent of Dominant Species the copt FAC-). Include species not orphological adaptations to wetter smarks (Describe disturbances, note greater than 50% of the dominate of the corded Data (Describe in Rem Stream, Lake, or Tid Aerial Photograph Other	ed (*) as showing inds. "T" indicates tra relevant local variationant plants are hydromarks): e Gage	ice. ons, sea	100 35 100 asonal ef the wetta	Tree fects, etc.	FAC inclose indicators: Inunc Satur	ena is met. ndicators (Delicated in Upper	12 inch	nes
Ainus rubra Ainus rubra Procent of Dominant Species the Rocept FAC-). Include species not prehological adaptations to wetlar smarks (Describe disturbances, note greater than 50% of the domination of the domin	ed (*) as showing inds. "T" indicates tra relevant local variationant plants are hydromarks): e Gage	ice. ons, sea	100 35 100 asonal ef the wetta	Tree fects, etc.	FAC Arology Indicators: Inunc Satur	ena is met. ndicators (Delicated in Upper rated in Upper	12 inch	nes
Alnus rubra Alnus rubra Procent of Dominant Species the scept FAC-). Include species not prephological adaptations to wetlar smarks (Describe disturbances, ince greater than 50% of the dominate of the second Data (Describe in Rem Stream, Lake, or Tid Aerial Photograph Other	ed (*) as showing inds. "T" indicates tra relevant local variationant plants are hydromarks): e Gage	ice. ons, sea	100 35 100 asonal ef the wetta	Tree fects, etc.	FAC irology indicators: Inunc Satur Satur Wate	ena is met. ndicators (Delicated in Upper	12 inch	nes
Alnus rubra Alnus rubra Alnus rubra Ircent of Dominant Species the copt FAC-). Include species not orphological adaptations to wetter smarks (Describe disturbances, note greater than 50% of the dominate of the corded Data (Describe in Rem Stream, Lake, or Tid Aerial Photograph Other	ed (*) as showing inds. "T" indicates tra relevant local variationant plants are hydromarks): e Gage	ice. ons, sea	100 35 100 asonal ef the wetta	Tree fects, etc.	FAC irology indicators: Inunc Satur Satur Wate Drift	ena is met. Indicators (December) Idated Compare Indicator	12 inch	nes
Alnus rubra Alnus rubra Procent of Dominant Species the scept FAC-). Include species not prephological adaptations to wetlar smarks (Describe disturbances, ince greater than 50% of the dominate of the second Data (Describe in Rem Stream, Lake, or Tid Aerial Photograph Other	ed (*) as showing inds. "T" indicates tra relevant local variationant plants are hydromarks): e Gage	ice. ons, sea	100 35 100 asonal ef the wetta	Tree fects, etc.	irology indicators: Inunc Satur Satur Wate Drift Sedir	ena is met. Indicators (Dec.) Idated rated in Upper rated in Upper rated in Upper larks Lines	12 inch 18 inch	nes nes
3. Rubus spectabilis 4 Alnus rubra recent of Dominant Species the species of prophological adaptations to wettar smarks (Describe disturbances, nee greater than 50% of the dominate of the species of the dominate of the species of the dominate of the species of the dominate of the species of the dominate of the species of the dominate of the species	ed (*) as showing inds. "T" indicates tra relevant local variationant plants are hydromarks): e Gage	ice. ons, sea	100 35 100 asonal ef the wetta	Tree fects, etc.	irology indicators: Inunc Satur Satur Wate Drift Sedir	ena is met. Indicators (December of the content of	12 inch 18 inch	nes nes
Alnus rubra Alnus rubra recent of Dominant Species the recept FAC-). Include species not orphological adaptations to wetlar smarks (Describe disturbances, nee greater than 50% of the domination of the dominat	ed (*) as showing inds. "T" indicates tra relevant local variationant plants are hydromarks): e Gage available	ice. ons, sea	100 35 100 asonal ef the wella	fects, etc.	FAC irology indicators: Inunc Satur Satur Wate Drift Sedir	ena is met. Indicators (December of the content of	12 inch 18 inch	nes nes
Alnus rubra Alnus	ed (*) as showing inds. "T" indicates tra relevant local variationant plants are hydrosarks): de Gage available None (in.) 18 (in.)	ice. ons, sea	100 35 100 asonal ef the wella	fects, etc.	FAC drology indicators: Inunc Satur Satur Satur Drift Drain Drain	ena is met. Indicators (Decided in Upper rated in Upper er Marks Lines ment Deposits hage Patterns inters (2 or more	12 inch 18 inch n Wetta require	nes nes ands
Alnus ruora Alnus ruora ercent of Dominant Species the except FAC-). Include species not corphological adaptations to wettan emarks (Describe disturbances, ince greater than 50% of the dominate of the emarks (Describe in Remarks). Stream, Lake, or Tidal Aerial Photograph Other X No Recorded Data Aerial Photograph Other No Recorded Data Aerial Photograph Other Depth of Surface Water: Depth to Free Water in Pit:	ed (*) as showing inds. "T" indicates tra relevant local variationant plants are hydromarks): e Gage available	ice. ons, sea	100 35 100 asonal ef the wella	fects, etc. and veget land Hyd Primary II	FAC ation crite ation crite ation crite ation crite ation crite ation crite Satui Satui Wate Drift Sedir Drain y Indicat Oxidi	ena is met. Indicators (Decided in Upper rated in Upper er Marks Lines ment Deposits hage Patterns inters (2 or more	12 inch 18 inch n Wetta require	nes nes
Alnus rubra ercent of Dominant Species the xcept FAC-). Include species not orphological adaptations to wetlar smarks (Describe disturbances, ince greater than 50% of the dominate of the second Data (Describe in Rem Stream, Lake, or Tid Aerial Photograph Other X No Recorded Data Aerial Photograph Other Depth of Surface Water: Depth to Free Water in Pit:	ed (*) as showing inds. "T" indicates tra relevant local variationant plants are hydrosarks): de Gage available None (in.) 18 (in.)	ice. ons, sea	100 35 100 asonal ef the wella	fects, etc. and veget land Hyd Primary II	FAC Arology Indicators: Inunc Satur Satur Satur Satur Orier Orier Oxidi Wate	ena is met. Indicators (Decided and Upper rated in Upper rated in Upper Bern Marks Lines ment Deposits hage Patterns intors (2 or more lized Root Char	12 inch 18 inch n Wetta require nnels in ves	nes nes ands

hydrosoil the wetland hydrology criteria is assumed to be present. Hydrology was observed during winter of 98/99

1							Data Plot	#:	B6-A
							Wetland:		B6
Project/Site	Seattle 1	acoma Airport - Maste	r Plan Up	date	Date:	6/5/98			
SOILS						-			
Soil Surve	y Data:								
Map Unit N	lame: <u>Indi</u>	anola				Drainage Class:	Somewha	t exc	essively drained
						Field Observation	ns Confirm	Мар	ped Type?
Taxonomy	(Subgroup)	Dystric Xeropsamm	ents			Yes No	×	NA	
Profile Des	cription:	<u> </u>	-						
Depth (Inches)	Horizon Designation	Matrix Color (Munsell Moist)		tle Color nsell Moist))	Mottle Abundance/Cont	trast		ure, Concretions, ospheres, etc.
9-6	Oi	10YR 2/1				•		Duff	
6-0	Oe	10YR 2/1						Decor	nposed duft
0-9	<u>A</u>	10YR 2/1				•		Organ	ic nch sitt
9+	В	10YR 2/1	7.5YI	R 3/3		Few. Coarse, Distinc	ıt .	Silt	
Hydric Soil	Indicators	:							
Hist	tosol				Listed	on Local Hydric S	Soils List		
Hist	ic Epipedon	ı				on State Hydric S			
Sulf	idic Odor			_		on National Hydri			
		Moisture Regime			Aquic	Moisture Regime			
	ucing Condi				Organ	ic Streaking in Sai	ndy Soils		
		Chroma Colors		_	Mottle	_			
		ontent in Surface Layer			Other	(Explain in Remark	ks)		
temarks ([Describe soil	disturbances, local va	nations, e	etc.):					
rganic nch	topsoli with	oxidized rhizospheres	in B horiz	on. Soil col	or and other	er hydric soil indica	stors meet	the h	vdnc soil critena
VETLANI	D DETER	MINATION							
ydrophytic	Vegetation	Present? Y	es x	No		Is this S	ampling P	oint V	Vithin a Wetlan
ydric Soils	Present?	Y	es X	- No					a vveligi)
	Irology Pre					Ye	es X	No	

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results):

Hydrology assumed due dry season sampling and no recent precipitation events. Wetland determination made on vegetation and soils.

Parameti	rix, Inc.
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Data	Piot	a

B9-A

NAMET A	ND DETER	MINATIC	Neti:	and: <u>B9</u>
				.=!\
(Modified from: 1987	COE Metis	ands Deli	neation Mant	<i>141)</i>
Project/Site: Seattle Tacoma Airport - Master Plan Update		Date: 6/15	5/98	
Applicant/Owner: Port of Seattle		County: Ki	ing	
nvestigator: William Kleindi		State: W	'A	
1987 Method 1989 Method		_	Communit	v ID: PFO, PEM
o Normal Circumstances exist on the site?	es X	No	- Field Plot I	
	es —	No X		U. US-A
			-	
•	'es	No X	-	
emarks (Explain sample location, disturbances, problem	areas):			
etland is bisected by a road.				
ECETATION(Deminent species or shorted)			14. T 14. T 14.	
EGETATION (Dominant species are checked) Plant Species	% Cover	Stratum	Indicator	
·	<i>7</i> 0014.	00210111		
1. 2 Epilobium ciliatum	10	Herb	FACW-	
3 Galium apanne	30	Herb	FACU	
4 Ranunculus repens	25	Herb	FACW	
5 Rumex chapus	10	Herb	FAC	
6 Acer macrophyllum	20	Tree	FACU	
	20	-		
7 Ainus rubra	20	Tree	FAC	
8 Salix spp ercent of Dominant Species that are OBL FACW, or Fexcept FAC-). Include species noted (*) as showing	10	Tree	FACW	
8. Salix spp ercent of Dominant Species that are OBL, FACW, or Facept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace. emarks (Describe disturbances, relevant local variations ince greater than 50 % the plant community is hydrophytic YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	FAC 66 seasonal eff. therefore the	ects, etc.):	FACW lant criteria is sati. logy Indicators cators: Inundated	(Describe in Remarks):
8. Salix spp ercent of Dominant Species that are OBL. FACW, or Facept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace. emarks (Describe disturbances, relevant local variations ince greater than 50 % the plant community is hydrophytic YDROLOGY recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	FAC 66 seasonal eff. therefore the	ects, etc.): e wetland pl	FACW lant criteria is sati. logy Indicators cators:	(Describe in Remarks): per 12 inches
8. Salix spp ercent of Dominant Species that are OBL, FACW, or Facept FAC-). Include species noted (*) as showing prophological adaptations to wetlands. "T" indicates trace, remarks (Describe disturbances, relevant local variations ince greater than 50 % the plant community is hydrophytic YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	FAC 66 seasonal eff. therefore the	ects, etc.): e wetland pl	lant criteria is satialogy Indicators cators: Inundated Saturated in Up	(Describe in Remarks): per 12 inches
8. Salix spp ercent of Dominant Species that are OBL. FACW, or F xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace. emarks (Describe disturbances, relevant local variations, ince greater than 50 % the plant community is hydrophytic YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	FAC 66 seasonal eff. therefore the	ects, etc.): e wetland pl	lant criteria is satialogy Indicators cators: Inundated Saturated in Upi	(Describe in Remarks): per 12 inches
8. Salix spp ercent of Dominant Species that are OBL. FACW, or Fexcept FAC-). Include species noted (*) as showing torphological adaptations to wetlands. "T" indicates trace. emarks (Describe disturbances, relevant local variations, ince greater than 50 % the plant community is hydrophytic YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	FAC 66 seasonal eff. therefore the	ects, etc.): e wetland pl land Hydrol Primary India X X	lant criteria is satialogy Indicators cators: Inundated Saturated in Upi Saturated in Upi Water Marks	(Describe in Remarks): per 12 inches per 18 inches
ercent of Dominant Species that are OBL, FACW, or Fexcept FAC-). Include species noted (*) as showing torphological adaptations to wetlands. "T" indicates trace, semarks (Describe disturbances, relevant local variations, ince greater than 50 % the plant community is hydrophytic lydrophytic (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other No Recorded Data Available	FAC 66 seasonal eff. therefore the	ects, etc.): e wetland pl	lant criteria is satialogy Indicators cators: Inundated Saturated in Upi Saturated in Upi Water Marks Drift Lines	(Describe in Remarks): per 12 inches per 18 inches
8 Salix spp ercent of Dominant Species that are OBL, FACW, or Fixcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace, emarks (Describe disturbances, relevant local variations, ince greater than 50 % the plant community is hydrophytic YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	AC 66 seasonal eff., therefore the	ects, etc.): e wetland pl land Hydrol Primary India X X	lant criteria is satialogy Indicators cators: Inundated Saturated in Upi Saturated in Upi Water Marks Drift Lines Sediment Depos Drainage Patteri	(Describe in Remarks): per 12 inches per 18 inches sits ns in Wetlands
8 Salix spp ercent of Dominant Species that are OBL, FACW, or F except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace. emarks (Describe disturbances, relevant local variations, ince greater than 50 % the plant community is hydrophytic YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available eld Observations: Depth of Surface Water: 2 (in.)	AC 66 seasonal eff., therefore the	ects, etc.): e wetland pl land Hydrol Primary India X X	lant criteria is satialogy Indicators cators: Inundated Saturated in Upi Saturated in Upi Water Marks Drift Lines Sediment Depos	(Describe in Remarks): per 12 inches per 18 inches sits ns in Wetlands
8. Salix spp ercent of Dominant Species that are OBL, FACW, or F except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace. emarks (Describe disturbances, relevant local variations, ince greater than 50 % the plant community is hydrophytic YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available eld Observations: Depth of Surface Water: Depth to Free Water in Pit: 0 (in.)	AC 66 seasonal eff., therefore the	ects, etc.): e wetland pl land Hydrol Primary India X X	lant criteria is satialogy Indicators cators: Inundated Saturated in Upi Saturated in Upi Water Marks Drift Lines Sediment Depos Drainage Patten	(Describe in Remarks): per 12 inches per 18 inches sits ns in Wetlands
ercent of Dominant Species that are OBL, FACW, or Fexcept FAC-). Include species noted (*) as showing torphological adaptations to wetlands. "T" indicates trace. emarks (Describe disturbances, relevant local variations, ince greater than 50 % the plant community is hydrophytic YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available eld Observations: Depth of Surface Water: 2 (in.)	AC 66 seasonal eff., therefore the	ects, etc.): e wetland pl land Hydrol Primary India X X	lant criteria is satialogy Indicators cators: Inundated Saturated in Upi Saturated in Upi Water Marks Drift Lines Sediment Depos Drainage Patten	(Describe in Remarks): per 12 inches per 18 inches sits ns in Wetlands ore required): channels in Upper 12 inche
B. Salix spp ercent of Dominant Species that are OBL, FACW, or Fexcept FAC-). Include species noted (*) as showing torphological adaptations to wetlands. "T' indicates trace. emarks (Describe disturbances, relevant local variations, ince greater than 50 % the plant community is hydrophytically DROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available eld Observations: Depth of Surface Water: Depth to Free Water in Pit: 0 (in.)	AC 66 seasonal eff., therefore the	ects, etc.): e wetland pl land Hydrol Primary India X X	lant criteria is satialogy indicators cators: Inundated Saturated in Upi Water Marks Drift Lines Sediment Depos Drainage Patten Indicators (2 or m	(Describe in Remarks): per 12 inches per 18 inches sits ns in Wetlands ore required): channels in Upper 12 inche eaves
8. Salix spp Percent of Dominant Species that are OBL, FACW, or Fexcept FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T' indicates trace. Itemarks (Describe disturbances, relevant local variations. Ince greater than 50 % the plant community is hydrophytically by the plant community is	AC 66 seasonal eff., therefore the	ects, etc.): e wetland pl land Hydrol Primary India X X	lant criteria is satialogy Indicators cators: Inundated Saturated in Upi Water Marks Drift Lines Sediment Depos Drainage Patten Indicators (2 or m Oxidized Root C Water-Stained L	(Describe in Remarks): per 12 inches per 18 inches sits hs in Wetlands ore required): channels in Upper 12 inche eaves by Data
B. Salix spp Percent of Dominant Species that are OBL. FACW, or Fexcept FAC-). Include species noted (*) as showing torphological adaptations to wetlands. "T' indicates trace. Percent of Dominant Species that are OBL. FACW, or Fexcept FAC-). Include species noted (*) as showing torphological adaptations to wetlands. "T' indicates trace. Percent of Community is hydrophytical species of the plant community is hydrophytical species of the plant community is hydrophytical species. "Stream, Lake, or Tide Gage Aerial Photograph Other X	seasonal eff therefore the	ects, etc.): e wetland pl land Hydrol Primary India X X X Secondary	lant criteria is satialogy Indicators cators: Inundated Saturated in Upi Saturated in Upi Water Marks Drift Lines Sediment Depos Drainage Patten Indicators (2 or m Oxidized Root C Water-Stained L Local Soil Surve Other (Explain in	(Describe in Remarks): per 12 inches per 18 inches sits hs in Wetlands ore required): channels in Upper 12 inche eaves by Data
8. Salix spp Percent of Dominant Species that are OBL, FACW, or Fexcept FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T' indicates trace. Itemarks (Describe disturbances, relevant local variations. Ince greater than 50 % the plant community is hydrophytically by the plant community is	seasonal eff. therefore the	ects, etc.): e wetland pl land Hydrol Primary India X X X Secondary	lant criteria is satialogy Indicators cators: Inundated Saturated in Upi Saturated in Upi Water Marks Drift Lines Sediment Depos Drainage Patten Indicators (2 or m Oxidized Root C Water-Stained L Local Soil Surve Other (Explain in	(Describe in Remarks): per 12 inches per 18 inches sits hs in Wetlands ore required): channels in Upper 12 inche eaves by Data

L						Data Piot #: Wetland:	B9-A B9
roject/S	Site: Seattle T	acoma Airport - Master I	Plan Update	Date	6/15/98		
OILS	rvey Data:						
/lap Uni	it Name: India	anola			Drainage Class:	Somewhat ex	cessively drained
					Field Observation		
axonor	ny (Subgroup):	Dystric Xeropsamme	nts		Yes No	X NA	
rofile [Description:						
epth nches)	Horizon Designation	Matrix Color (Munsell Moist)	Mottle Cold (Munsell M		Mottle Abundance/Contr		kture, Concretions zospheres, etc.
-11	Oa	10YR 2/1			-	Sap	onc Muck
11	<u>c</u>	10YR 6/2	10YR 3/2		Few. Fine. Distinct	San	nd
X H	Reducing Condi Gleyed or Low-C ligh Organic Co (Describe soil	Moisture Regime tions		Listed Listed Aquic Organ X Mottle Other	on Local Hydric So on State Hydric So on National Hydric Moisture Regime ic Streaking in San s (Explain in Remark	oils List : Soils List dy Soils	
		io don marcators meet ti	ie riyaric son c	cntena.			
VETLA	ND DETER	MINATION					
/drophy	rtic Vegetation	Present? Ye	s <u>x</u> No	o	Is this Sa	mpling Poin	t Within a Wetlar
dric So	ils Present? Iydrology Pre	Ye	s <u>X</u> No		Ye		

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): The presence of all three parameters indicate this area is a wetland.

Parametrix, Inc.



Data Plot #:

B9-B

\AETi	LAND DETE	RMINATIO	Wetland:	89 Upland Pio
(Modified from: 198				
Project/Site: Seattle Tacoma Airport - Master Plan Upo		Date: 6/15		
			ing	
		State: W		
nvestigator: William Kleindl		- VI		
∠ 1987 Method 1989 Method	., .,		Community ID:	Upland
Oo Normal Circumstances exist on the site?	Yes X	No	Field Plot ID:	B8&9
s the site significantly disturbed (Atypical Situation)?	Yes	No X	_	
s the area a potential Problem Area?	Yes	No X	_	
temarks (Explain sample location, disturbances, problemer upland plot for Wetland B9 and the Wetland 30 ex				
EGETATION (Dominant species are checked)				
Plant Species	% Cover	Stratum	Indicator	
1 Polystichum munitum	10	Herb	FACU	
2 Hex aquifolium		Shrub Shrub	FACU	
3 Prunus emarginata (s) 4 Rubus discolor	75	Shrub	FACU	
5 Spiraea douglasii	25	Shrub	FACW	
	40	- 	FAC	
6 Ainus rubra	40	Tree	FAC	
7 Sorbus aucupana ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing	10 or FAC 40	Tree	UPL	
7 Sorbus aucupana ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing torphological adaptations to wetlands. "T" indicates trainemarks (Describe disturbances, relevant local variations to be start to the start of the st	or FAC ce. 40 ons, seasonal eff	Tree	UPL	
7 Sorbus aucupana ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing torphological adaptations to wetlands. "T" indicates trainemarks (Describe disturbances, relevant local variations to be start to the start of the st	or FAC ce. ons, seasonal effectivitic, the wetland	Tree fects, etc.): vegetation of	UPL critena is not met.	
Sorbus aucupana ercent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trainermarks (Describe disturbances, relevant local variation are less than 50% of the dominant plants are hydrophy	or FAC ce. ons, seasonal effectivitic, the wetland	Tree fects, etc.): vegetation of	UPL	scribe in Remarks):
Sorbus aucupana ercent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing prophological adaptations to wetlands. "T" indicates traingemarks (Describe disturbances, relevant local variation are less than 50% of the dominant plants are hydrophy	to per FAC ce. cons. seasonal effection, the wetland	Tree fects, etc.): vegetation of	UPL criteria is not met. logy Indicators (De	scribe in Remarks):
Sorbus aucupana ercent of Dominant Species that are OBL, FACW, or keept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates training the second of the dominant plants are hydrophy TOROLOGY (Describe in Remarks):	to per FAC ce. cons. seasonal effection, the wetland	Tree fects, etc.): vegetation of	UPL criteria is not met. logy Indicators (De	scribe in Remarks):
Sorbus aucupana ercent of Dominant Species that are OBL, FACW, or Keept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates training in the second of the dominant plants are hydrophystophysical or the second of the dominant plants are hydrophysical or the second of the dominant plants are hydrophysical or the second of t	to per FAC ce. cons. seasonal effection, the wetland	Tree fects, etc.): vegetation of	UPL criteria is not met. logy Indicators (Decators: Inundated Saturated in Upper 1	2 inches
Sorbus aucupana ercent of Dominant Species that are OBL, FACW, of Except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trainermarks (Describe disturbances, relevant local variation ince less than 50% of the dominant plants are hydrophystophysical disturbances are hydrophysical disturbances. Stream, Lake, or Tide Gage Aerial Photograph	to per FAC ce. cons. seasonal effection, the wetland	Tree fects, etc.): vegetation of	UPL Criteria is not met. Logy Indicators (Decators: Inundated Saturated in Upper 1 Saturated in Upper 1	2 inches
7. Sorbus aucupana ercent of Dominant Species that are OBL, FACW, of xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trainemarks (Describe disturbances, relevant local variation includes than 50% of the dominant plants are hydrophysto	to per FAC ce. cons. seasonal effection, the wetland	Tree fects, etc.): vegetation of	UPL criteria is not met. logy Indicators (Decators: Inundated Saturated in Upper 1 Water Marks	2 inches
7. Sorbus aucupana ercent of Dominant Species that are OBL, FACW, oxcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trailemarks (Describe disturbances, relevant local variation ince less than 50% of the dominant plants are hydrophy YDROLOGY acorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	to per FAC ce. cons. seasonal effection, the wetland	Tree fects, etc.): vegetation of	UPL Criteria is not met. Logy Indicators (Decators: Inundated Saturated in Upper 1 Saturated in Upper 1	2 inches
7 Sorbus aucupana ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing torphological adaptations to wetlands. "T" indicates trainemarks (Describe disturbances, relevant local variations to see than 50% of the dominant plants are hydrophylyDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	to per FAC ce. cons. seasonal effection, the wetland	Tree fects, etc.): vegetation of	criteria is not met. logy Indicators (Decators: Inundated Saturated in Upper 1 Water Marks Drift Lines	2 inches 8 inches
7. Sorbus aucupana ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trailemarks (Describe disturbances, relevant local variation ince less than 50% of the dominant plants are hydrophy YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	to per FAC ce. cons. seasonal effection, the wetland	Tree fects, etc.): vegetation of	criteria is not met. logy Indicators (Decators: Inundated Saturated in Upper 1 Water Marks Drift Lines Sediment Deposits	2 inches 8 inches
7. Sorbus aucupana ercent of Dominant Species that are OBL, FACW, of xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. To indicates trainerarks (Describe disturbances, relevant local variation ince less than 50% of the dominant plants are hydrophystyprocepts. YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available eld Observations: Depth of Surface Water: None (in.)	to pr FAC 40 ce. ons, seasonal effectivitic, the wetland	fects, etc.): vegetation of the state of the	criteria is not met. logy Indicators (Decators: Inundated Saturated in Upper 1 Water Marks Drift Lines Sediment Deposits	2 inches 8 inches Wetlands
Sorbus aucupana Procent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trainer marks (Describe disturbances, relevant local variation ince less than 50% of the dominant plants are hydrophysto	to pr FAC 40 ce. ons, seasonal effectivitic, the wetland	fects, etc.): vegetation of the state of the	critena is not met. logy Indicators (Decators: Inundated Saturated in Upper 1 Saturated in Upper 1 Water Marks Drift Lines Sediment Deposits Drainage Patterns in	2 inches 8 inches Wetlands required):
ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing corphological adaptations to wetlands. "T" indicates trail emarks (Describe disturbances, relevant local variations less than 50% of the dominant plants are hydrophy (VDROLOGY) ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available eld Observations: Depth of Surface Water: None (in.)	to pr FAC 40 ce. ons, seasonal effectivitic, the wetland	fects, etc.): vegetation of the state of the	critena is not met. logy Indicators (Decators: Inundated Saturated in Upper 1 Saturated in Upper 1 Water Marks Drift Lines Sediment Deposits Drainage Patterns in	2 inches 8 inches Wetlands equired): nets in Upper 12 inches
7 Sorbus aucupana Percent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates traitemarks (Describe disturbances, relevant local variation lince less than 50% of the dominant plants are hydrophysized less than 50% of the dominant plants are hydrophy	to pr FAC 40 ce. ons, seasonal effectivitic, the wetland	fects, etc.): vegetation of the state of the	critena is not met. logy Indicators (Decators: Inundated Saturated in Upper 1 Saturated in Upper 1 Water Marks Drift Lines Sediment Deposits Drainage Patterns in Indicators (2 or more in	2 inches 8 inches Wetlands equired): nets in Upper 12 inches
7 Sorbus aucupana Percent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates traitemarks (Describe disturbances, relevant local variation lince less than 50% of the dominant plants are hydrophysized less than 50% of the dominant plants are hydrophy	to pr FAC 40 ce. ons, seasonal effectivitic, the wetland	fects, etc.): vegetation of the state of the	Inundated Saturated in Upper 1 Water Marks Drift Lines Sediment Deposits Drainage Patterns in Oxidized Root Chan Water-Stained Leave	2 inches 8 inches Wetlands equired): nels in Upper 12 incheses
7 Sorbus aucupana Percent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates traitemarks (Describe disturbances, relevant local variation lince less than 50% of the dominant plants are hydrophysized less than 50% of the dominant plants are hydrophy	to pr FAC 40 ce. ons, seasonal effective, the wetland Wet	fects, etc.): vegetation of the secondary is a sec	criteria is not met. logy Indicators (Decators: Inundated Saturated in Upper 1 Water Marks Drift Lines Sediment Deposits Drainage Patterns in Oxidized Root Chan Water-Stained Leave Local Soil Survey Da	2 inches 8 inches Wetlands equired): nels in Upper 12 incheses

1						Data Piot #:	B9-B
						Wetland:	B9 Upland Plo
Project/S	ite: Seattle T	acoma Airport - Master	Plan Update	Date	6/15/98		
SOILS Soil Sur	vey Data:						
Map Unit	Name: Unn	napped			Drainage Class:		
			 .		Field Observatio	ns Confirm Map	ped Type?
Taxonom	y (Subgroup):				Yes No	NA NA	•
	escription:				. 33 140		<u>x</u>
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Co (Munsell M	_	Mottle Abundance/Cont		ure, Concretions, ospheres, etc.
)-4	Α	10YR 2/2	-			Loam	
-20	В	10YR 4/3	10YR 7/4		Few. Medium, Distin	ct Silt lo	am
24	С	10YR 5/4				Fine s	sand
lydric Sc	oil Indicators:	:					
н	istosol			Liste	on Local Hydric S	Soils List	
	istic Epipedon				on State Hydric S		
	ulfidic Odor			Listed	l on National Hydri	c Soils List	
		Moisture Regime		Aquic	Moisture Regime		
	educing Condi			Organ	nic Streaking in Sar	ndy Soils	
		Chroma Colors Ontent in Surface Layer		Mottle	_		
				Other	(Explain in Remark	ks)	
emarks o indicati	(Describe soil	disturbances, local van oil are present.	ations, etc.):				
	ord or riyonic si	on are present.		···········			
VETLA	ND DETER	MINATION					
ydrophyt	ic Vegetation	Present? Ye	s N) Y	le thie S	ampling Dains	Attability and an extension
dric Soi	Is Present?	Ye			13 (1113 3)	amping Foint	Within a Wetland
			- 14:	^		es No	

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results):

This area is an upland since all wetland parameters are absent

Inundation is present satisfying wetland criteria.



ata Piot #:	B10-A

WETLAND DETERMINATION (Modified from: 1987 COE Wetlands Delineation Manual) Project/Site: Seattle Tacoma Airport - Master Plan Update Applicant/Owner: Port of Seattle County: King Investigator: William Klerndl 1987 Method ☐ 1989 Method ☐ 1980 Meth		WET	I AND DET	FRMINAT	Wetland:	B 10
Date Date	(
policant/Owner: Port of Seattle County: King						
restigator: William Kleindi		· · · · · · · · · · · · · · · · · · ·	date	-	/15/98	
1987 Method		attle		•	<u>-</u>	
Normal Circumstances exist on the site? Normal Circumstances exist on the site? No				State:	WA	
the site significantly disturbed (Atypical Situation)? Yes No X the area a potential Problem Area? Yes No X marks (Explain sample location, disturbances, problem areas): the promitation from the toe of slope. Joins easterly approximately 100 feet to sand lens. GETATION (Dominant species are checked) Plant Species (Serial Indicator) 1 Equipation telephone (Serial Indicator) 2 Hedera helix (Serial Indicator) 4 Rubus discolor (Serial Indicator) 5 Acer sacchannum (Serial Indicator) 6 Alnus rubra (Serial Indicator) 6 Alnus rubra (Serial Indicator) 75 Include species that are OBL, FACW, or FAC (Serial Indicator) 76 Include species noted (") as showing (Pack). Include species noted	987 Method 1989 N	Method			Community ID: Pf	0
marks (Explain sample location, disturbances, problem areas): sp from the toe of slope. Joins easterly approximately 100 feet to sand lens. GETATION (**Dominant species are checked) Plant Species	formal Circumstances exist	on the site?	Yes X	_ No _	Field Plot ID: B10-	A
marks (Explain sample location, disturbances, problem areas): ### ### ### ### ### ### ### ### ### #	e site significantly disturbed	(Atypical Situation)?	Yes		<u> </u>	
GETATION (Dominant species are checked) Plant Species	e area a potential Problem /	Area?	Yes	No >	<u>C</u>	
Plant Species				and lens.		
20 Herb NL Rubus discolor 15 Shrub FACU 4 Rubus speciabilis 20 Shrub FAC+ 5 Acer sacchannum 30 Tree NL 6 Alnus rubra 40 Tree FAC cent of Dominant Species that are OBL, FACW, or FAC cent of Dominant Species noted (*) as showing phological adaptations to wetlands. To indicates trace. Inarks (Describe disturbances, relevant local variations, seasonal effects, etc.): It is greater than 50% of the dominant plants are hydrophytic, the wetland vegetation criteria is met. DROLOGY Orded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other X No Recorded Data Available Saturated in Upper 12 inches Saturated in Upper 18 inches		t species are checked)		ver Stratum	Indicator	
Rubus discolor Rubus speciabilis Rubus speciabili	1 Equisetum telmateia		25	Herb	FACW	
Rubus spectabilis Acer sacchannum Alnus rubra Alnus rubra Cent of Dominant Species that are OBL, FACW, or FAC cept FAC-). Include species noted (*) as showing prolological adaptations to wetlands. To indicates trace. Central formation of the dominant plants are hydrophytic, the wetland vegetation criteria is met. CDROLOGY Corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other X No Recorded Data Available Describe in Remarks (Pacchannum plants Available) Describe in Remarks (Pacchannum plants Available) Acer sacchannum plant 30 Tree NL Tree NL Tree NL Tree NL Tree NL Tree PAC To Tree NL The FAC- NL To Tree NL The FAC- The NL To Tree NL The FAC- The NL To Tree NL The FAC- The NL To Tree NL The FAC- The The F	2 Hedera helix		20	Herb	NL	
Acer sacchannum Alnus rubra A	·					
Alnus rubra 40 Tree FAC cent of Dominant Species that are OBL, FACW, or FAC cept FAC-). Include species noted (*) as showing phological adaptations to wetlands. Tr indicates trace. marks (Describe disturbances, relevant local variations, seasonal effects, etc.): ce greater than 50% of the dominant plants are hydrophytic, the wetland vegetation criteria is met. DROLOGY orded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other X Saturated in Upper 12 inches X No Recorded Data Available 40 Tree FAC Tree FAC Wetland Hydrology FAC Wetland Hydrology Indicators (Describe in Remarks): X Inundated X Saturated in Upper 12 inches Saturated in Upper 18 inches	· ————————————————————————————————————					
cent of Dominant Species that are OBL, FACW, or FAC cept FAC-). Include species noted (*) as showing prological adaptations to wetlands. To indicates trace. marks (Describe disturbances, relevant local variations, seasonal effects, etc.): ce greater than 50% of the dominant plants are hydrophytic, the wetland vegetation criteria is met. DROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other X Saturated in Upper 12 inches X No Recorded Data Available Saturated in Upper 18 inches	· — — — — — — — — — — — — — — — — — — —					
Stream, Lake, or Tide Gage Aenal Photograph Other X No Recorded Data (Describe in Remarks): Wetland Hydrology Indicators (Describe in Remarks): X Inundated X Saturated in Upper 12 inches Saturated in Upper 18 inches					,	
Stream, Lake, or Tide Gage Primary Indicators: Aenal Photograph X Inundated Other X Saturated in Upper 12 inches X No Recorded Data Available Saturated in Upper 18 inches	ROLOGY					
Aenal Photograph X Inundated Other X Saturated in Upper 12 inches X No Recorded Data Available Saturated in Upper 18 inches	rded Data (Describe in R	emarks):	٧			e in Remarks):
Other X Saturated in Upper 12 inches X No Recorded Data Available Saturated in Upper 18 inches	Stream, Lake, or	Tide Gage		Primary In	dicators:	
X No Recorded Data Available Saturated in Upper 18 inches	Aerial Photograph	1			Inundated	
THE TREE PARTICULAR TO THE TANK THE TAN	Other			X		
X Water Marks		a Available				hes
X No Recorded Data Available X Water Marks Drift Lines	X No Recorded Date	a Available			-	
Sediment Deposits					-	
Drainage Patterns in Wetlands					-	ands
d Observations:					- · · · · · · · · · · · · · · ·	
Depth of Surface Water: 1.0 (in.) Secondary Indicators (2 or more required):				Secondary	Indicators (2 or more requir	ed):
		·····/				
Jepth to Free Water in Pit: 0 (in.) Oxidized Root Channels in Linn	pin to Saturated Soil:	<u>U</u> (in.)			Water-Stained Leaves	
Depth to Free Water in Pit: 0 (in.) Depth to Saturated Soil: 0 (in.) Oxidized Root Channels in Upp						
Depth to Saturated Soil: 0 (in.) Depth to Saturated Soil: 0 (in.) Oxidized Root Channels in Upp				-	Local Soil Survey Data	

		•						Data Plot	#:	B10-A
F								Wetland:		B10
Project/Si	te: Seattle	Tacoma Airport - Mast	er P	lan Upda	ate	_ Date:	6/15/98			
SOILS Soil Sur	ey Data:									
Map Unit	Name: Urt	ban					Drainage Class	S :		
	-						Field Observat		Mapi	ped Type?
Taxonom	y (Subgroup)):						lo <u>x</u>	NA	
	scription:									
Depth Inches)	Horizon Designatio	Matrix Color on (Munsell Moist)			Color sell Moist)	Mottle Abundance/Cor			ure, Concretions, ospheres, etc.
)-4	Oa	10YR 2/1							Sapno	
L-5	Cg	10YR 5/1							Loam	
•5	<u>c </u>	10YR 5/4		10YR 5	V1		Common, Medium,	Distinct	Loam	
	-									
				-	····					
	il Indicators stosol	5 :								
	stic Epipedor	n					on Local Hydric			
	lfidic Odor						on State Hydric on National Hydi			
Pro	bable Aquic	: Moisture Regime			-		Moisture Regime			
	ducing Cond						Streaking in Sa			
		Chroma Colors				X Mottles		•		
		content in Surface Laye				Other (Explain in Rema	rks)		
emarks (Describe soi	il disturbances, local va	nati	ons, etc	.):					
oil color a	na other hydi	nc soil indicators meet	the	hyanc s	oil criteria	9.				
/ETLAN	D DETER	RMINATION				··	· · · · · · · · · · · · · · · · · · ·			
/drophyti	c Vegetation	n Present?	es/	x	No		ls thic (Sampling Pa	nime te	Miahim = 181=11 -
dric Soil	Present?	,	es'	×	No.	"	15 (1115 6	sembing PC	JINI ¥	Vithin a Wetland

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): The presence of all three parameters indicate this area is a wetland.

Parametrix, Inc	Pa	arai	me	tri	K. I	nc
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Data Plot #:

B10-B

				RMINATIO	ON Wetlar	
(1	Modified from: 198	87 CO	E Wetla	inds Del	ineation Manua	ai)
roject/Site: Seattle Tacoma A	irport - Master Plan Upo	date	_ [Date: 6/15	5/98	
pplicant/Owner: Port of Sea	attie		<	County: K	ling	
vestigator: William Kleindi			s	tate: W	VA .	
1987 Method 🔲 1989 M	lethod				Community	ID: Upland
o Normal Circumstances exist	on the site?	Yes	X	No	- Field Plot ID	: B10-B
the site significantly disturbed	(Atypical Situation)?	Yes		No X		
the area a potential Problem A	rea?	Yes		No X		
emarks (Explain sample locat	tion, disturbances, probl	iem area	as):		_	
pland area pair plot.						
			· · · · · ·			
EGETATION (Dominan	t species are checked)					
Plant Species			% Cover 30	Stratum	Indicator	
Hedera helix Hex aquifolium			20	Shrub	UPL UPL	
3 Rubus spectabilis			95	Shrub	FAC+	
			40	Tree	FAC	
4 Ainus rubra						
Alnus rubra 5 Arbutus menziesii ercent of Dominant Species eccept FAC-). Include species re	noted (*) as showing	or FAC	20	Tree	NL	
Anus rubra 5 Arbutus menziesii ercent of Dominant Species recept FAC-). Include species rupphological adaptations to wet	noted (*) as showing lands. "T" indicates traines, relevant local variations.	or FAC	20 sonal effe	ects, etc.):		
Alnus rubra 5 Arbutus menziesii ercent of Dominant Species reproposed adaptations to wet emarks (Describe disturbance wetland vegetation criteria ai	noted (*) as showing lands. "T" indicates traines, relevant local variations.	or FAC	20 sonal effe	ects, etc.):		·
Anus rubra 5 Arbutus menziesii ercent of Dominant Species recept FAC-). Include species rubriphological adaptations to wet ermarks. (Describe disturbance wetland vegetation criteria ai	noted (*) as showing lands. "T" indicates traines, relevant local variations not met since the are	or FAC	20 20 ssonal effe	ects, etc.): y non-wetla	and plants.	Describe in Remarks):
Anus rubra 5 Arbutus menziesii ercent of Dominant Species recept FAC-). Include species rubriphological adaptations to wet ermarks. (Describe disturbance wetland vegetation criteria ai	noted (*) as showing lands. "T" indicates trainer, relevant local variations are not met since the are remarks):	or FAC	20 20 ssonal effe ninated by	ects, etc.): y non-wetla	and plants.	Describe in Remarks):
Anus rubra 5 Arbutus menziesii ercent of Dominant Species recept FAC-). Include species rophological adaptations to wet rmarks (Describe disturbance wetland vegetation criteria air YDROLOGY ecorded Data (Describe in Rec	noted (*) as showing lands. "T" indicates trainers, relevant local variations on the are not met since the are emarks): Cide Gage	or FAC	20 20 ssonal effe ninated by	ects, etc.): y non-wetla and Hydro	and plants.	Describe in Remarks):
Anus rubra 5. Arbutus menziesii ercent of Dominant Species except FAC-). Include species re prophological adaptations to wet emarks (Describe disturbance ewetland vegetation criteria ai YDROLOGY ecorded Data (Describe in Re Stream, Lake, or 1	noted (*) as showing lands. "T" indicates trainers, relevant local variations on the are not met since the are emarks): Cide Gage	or FAC	20 20 ssonal effe ninated by	ects, etc.): y non-wetla and Hydro	end plants. Hogy Indicators (I	
Alnus rubra 5 Arbutus menziesii preent of Dominant Species (cept FAC-). Include species r prophological adaptations to wet remarks (Describe disturbance e wetland vegetation criteria ai YDROLOGY corded Data (Describe in Re Stream, Lake, or 1 Aerial Photograph	noted (*) as showing lands. "T" indicates trained in the straines, relevant local variations and met since the are remarks): Fide Gage	or FAC	20 20 ssonal effe ninated by	ects, etc.): y non-wetla and Hydro	end plants. Blogy Indicators (I cators: Inundated Saturated in Uppe	er 12 inches
Anus rubra 5 Arbutus menziesii ercent of Dominant Species except FAC-). Include species ropphological adaptations to wet emarks (Describe disturbance e wetland vegetation criteria ai YDROLOGY ecorded Data (Describe in Re Stream, Lake, or 1 Aerial Photograph Other	noted (*) as showing lands. "T" indicates trained in the straines, relevant local variations and met since the are remarks): Fide Gage	or FAC	20 20 ssonal effe ninated by	ects, etc.): y non-wetla and Hydro	end plants. Rogy Indicators (Incators: Inundated Saturated in Uppe Saturated in Uppe Water Marks	er 12 inches
Anus rubra 5 Arbutus menziesii ercent of Dominant Species except FAC-). Include species r orphological adaptations to wet emarks (Describe disturbance wetland vegetation criteria ai YDROLOGY ecorded Data (Describe in Re Stream, Lake, or 1 Aerial Photograph Other	noted (*) as showing lands. "T" indicates trained in the straines, relevant local variations and met since the are remarks): Fide Gage	or FAC	20 20 ssonal effe ninated by	ects, etc.): y non-wetla and Hydro	end plants. Plogy Indicators (Incators: Inundated Saturated in Uppe Saturated in Uppe Water Marks Drift Lines	er 12 inches er 18 inches
Annus rubra 5. Arbutus menziesii ercent of Dominant Species except FAC-). Include species r orphological adaptations to wet emarks (Describe disturbance wetland vegetation criteria ai YDROLOGY ecorded Data (Describe in Re Stream, Lake, or 1 Aerial Photograph Other	noted (*) as showing lands. "T" indicates trained in the straines, relevant local variations and met since the are remarks): Fide Gage	or FAC	20 20 ssonal effe ninated by	ects, etc.): y non-wetla and Hydro	end plants. Plogy Indicators (Incators: Inundated Saturated in Uppe Saturated in Uppe Water Marks Drift Lines Sediment Deposits	er 12 inches er 18 inches s
Alnus rubra 5 Arbutus menziesii ercent of Dominant Species except FAC-). Include species roprohological adaptations to wet emarks (Describe disturbance ne wetland vegetation criteria ai YDROLOGY ecorded Data (Describe in Restream, Lake, or 1 Aerial Photograph Other X No Recorded Data	noted (*) as showing lands. "T" indicates trained in the straines, relevant local variations and met since the are remarks): Fide Gage	or FAC	20 20 ssonal effe ninated by	ects, etc.): y non-wetla and Hydro	end plants. Plogy Indicators (Incators: Inundated Saturated in Uppe Saturated in Uppe Water Marks Drift Lines	er 12 inches er 18 inches s
Alnus rubra 5 Arbutus menziesii Freent of Dominant Species (cept FAC-). Include species rophological adaptations to wet remarks (Describe disturbance e wetland vegetation criteria aid YDROLOGY corded Data (Describe in Restream, Lake, or 1 Aerial Photograph Other X No Recorded Data It dobservations: Depth of Surface Water:	noted (*) as showing lands. "T" indicates traites, relevant local variations not met since the are remarks): Fide Gage Available None (in.)	or FAC	20 sonal effe minated by Wette P	ects, etc.): y non-wetla and Hydro	end plants. Rogy Indicators (Incators: Inundated Saturated in Uppe Saturated in Uppe Water Marks Drift Lines Sediment Deposite Drainage Patterns	er 12 inches er 18 inches s in Wetlands
Alnus rubra 5 Arbutus menziesii Freent of Dominant Species (cept FAC-). Include species reprohological adaptations to wet Franks (Describe disturbance is wetland vegetation criteria ai YDROLOGY corded Data (Describe in Reservations) Stream, Lake, or 1 Aerial Photograph Other X No Recorded Data Id Observations: Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as showing lands. "T" indicates traites, relevant local variations not met since the are remarks): Fide Gage Available None (in.) >18 (in.)	or FAC	20 sonal effe minated by Wette P	ects, etc.): y non-wetla and Hydro	end plants. Plogy Indicators (I cators: Inundated Saturated in Uppe Saturated in Uppe Water Marks Drift Lines Sediment Deposite Drainage Patterns	er 12 inches er 18 inches s in Wetlands e required):
Alnus rubra 5 Arbutus menziesii ercent of Dominant Species xcept FAC-). Include species r orphological adaptations to wet ermarks (Describe disturbance the wetland vegetation criteria and YDROLOGY ecorded Data (Describe in Re Stream, Lake, or 1 Aerial Photograph Other No Recorded Data	noted (*) as showing lands. "T" indicates traites, relevant local variations not met since the are remarks): Fide Gage Available None (in.)	or FAC	20 sonal effe minated by Wette P	ects, etc.): y non-wetla and Hydro	end plants. Plogy Indicators (I cators: Inundated Saturated in Uppe Saturated in Uppe Water Marks Drift Lines Sediment Deposite Drainage Patterns	er 12 inches er 18 inches s in Wetlands e required): annels in Upper 12 inche
Alnus rubra Arbutus menziesii ercent of Dominant Species except FAC-). Include species r orphological adaptations to wet emarks (Describe disturbance the wetland vegetation criteria and YDROLOGY ecorded Data (Describe in Reservations). Aerial Photograph Other X No Recorded Data eld Observations: Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as showing lands. "T" indicates traites, relevant local variations not met since the are remarks): Fide Gage Available None (in.) >18 (in.)	or FAC	20 sonal effe minated by Wette P	ects, etc.): y non-wetla and Hydro	end plants. Flogy Indicators (I cators: Inundated Saturated in Uppe Water Marks Drift Lines Sediment Depositional Drainage Patterns (2 or mor Oxidized Root Chainage Root	er 12 inches er 18 inches s in Wetlands e required): annels in Upper 12 inche aves

			Wetland		
			Wellerin	:	B10 Upland Plo
oject/Site: Seattle Tacoma Airport - Master Plan Update	Date:	6/15/98			
OILS					
oil Survey Data:					
ap Unit Name: Urban		Drainage Class	:		
		Field Observati	ons Confirm	n Mapp	ed Type?
axonomy (Subgroup):		Yes N	ь х	NA	
ofile Description:					
epth Horizon Matrix Color Mottle Color (ches) Designation (Munsell Moist) (Munsell Moist)		Mottle Abundance/Con	ıtrast		re, Concretions,
A 10YR 2/2 -		-		Sandy	loam
C1 10YR 6/4 -		•		Sand	
C2 10YR 5/3		-		Clav L	oem
rdric Soll Indicators:					
Histosol	Listed	on Local Hydric	Soils List		
Histic Epipedon	Listed	on State Hydric	Soils List		
Sulfidic Odor		on National Hydi		t	
Probable Aquic Moisture Regime Reducing Conditions	_	Moisture Regime			
Gleyed or Low-Chroma Colors	Organi Mottle:	ic Streaking in Sa	andy Soils		
High Organic Content in Surface Layer	_	s (Explain in Rema	rire)		
marks (Describe soil disturbances, local variations, etc.):		,—,,			
il colors indicate area is well drained.					

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): This area is an upland since all wetland parameters are absent.

Wetland Hydrology Present?

Yes ____ No __X__



(Modified from: 19	87 CC)E Wet	lands D	elineation Manual)
Project/Site: Seattle Tacoma A				_	1/18/99
Applicant/Owner: Port of Se		Jaic		County:	King
nvestigator: William Kleindi		.,		State:	WA
₹ 1987 Method 1989 M	Method				
Oo Normal Circumstances exist	on the site?	Yes	X	No	· · · · · · · · · · · · · · · · · · ·
s the site significantly disturbed	(Atypical Situation)?	Yes		_	— Field Plot ID: G3-A X
the area a potential Problem	-	Yes	×	No -	
emarks (Explain sample loca				-	 -
EGETATION Plant Species	t species are checked)		% Cover	Stratum	Indicator
1 Agrostis capillans (tenuis)			50	Herb	FAC
		_	50		
xcept FAC-). Include species is orphological adaptations to we emarks (Describe disturbance	noted (*) as showing tlands. "T" indicates tra es, relevant local variatio	ce. ons, sea	100	fects. etc.	.): Ohytic the welland vegetation criteria is met
ercent of Dominant Species xcept FAC-). Include species is orphological adaptations to well emarks. (Describe disturbance ther unknown grasses. Since g	noted (*) as showing tlands. "T" indicates tra es, relevant local variatio	ce. ons, sea	100	fects. etc.	
ercent of Dominant Species xcept FAC-). Include species is orphological adaptations to well emarks (Describe disturbance ther unknown grasses. Since grant y DROLOGY	noted (*) as showing trands. "T" indicates transisting relevant local variation reater than 50% of the control	ce. ons, sea	100 asonal ef	fects. etc.	.): phytic, the wetland vegetation criteria is met.
ercent of Dominant Species except FAC-). Include species is corphological adaptations to well emarks. (Describe disturbance ther unknown grasses. Since graph YDROLOGY ecorded Data. (Describe in Reference of Page 1988).	noted (*) as showing tiands. "T" indicates traces, relevant local variation reater than 50% of the commerce.	ce. ons, sea	100 asonal ef nt plants	fects. etc. are hydro	phytic, the wetland vegetation criteria is met. Irology Indicators (Describe in Remarks):
ercent of Dominant Species except FAC-). Include species is orphological adaptations to well emarks. (Describe disturbance ther unknown grasses. Since grand Stream. Lake, or Stream. Lake, or Stream. Lake, or Stream.	noted (*) as showing tiands. "T" indicates traces, relevant local variation reater than 50% of the commarks): Tide Gage	ce. ons, sea	100 asonal ef nt plants	fects. etc. are hydro land Hyd Primary in	phytic, the wetland vegetation criteria is met. prology Indicators (Describe in Remarks): indicators:
ercent of Dominant Species xcept FAC-). Include species is corphological adaptations to well the remarks (Describe disturbance ther unknown grasses. Since grant YDROLOGY ecorded Data (Describe in Reference of the remarks)	noted (*) as showing tiands. "T" indicates traces, relevant local variation reater than 50% of the commarks): Tide Gage	ce. ons, sea	100 asonal ef nt plants	fects. etc. are hydro	phytic, the wetland vegetation criteria is met. Prology Indicators (Describe in Remarks): Indicators: Inundated
ercent of Dominant Species xcept FAC-). Include species is orphological adaptations to well emarks. (Describe disturbance their unknown grasses. Since grand Stream, Lake, or Aenal Photograph	noted (*) as showing tiands. "T" indicates traces, relevant local variation reater than 50% of the commarks): Tide Gage	ce. ons, sea	100 asonal ef nt plants	fects. etc. are hydro land Hyd Primary in	phytic, the wetland vegetation criteria is met. prology Indicators (Describe in Remarks): indicators:
ercent of Dominant Species except FAC-). Include species is orphological adaptations to well emarks. (Describe disturbance ther unknown grasses. Since graph Corded Data. (Describe in Research Lake, or Aenal Photograph Other.)	noted (*) as showing tiands. "T" indicates traces, relevant local variation reater than 50% of the commarks): Tide Gage	ce. ons, sea	100 asonal ef nt plants	fects. etc. are hydro land Hyd Primary ir X	phytic, the wetland vegetation criteria is met. prology Indicators (Describe in Remarks): indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks
ercent of Dominant Species except FAC-). Include species is orphological adaptations to we emarks. (Describe disturbance ther unknown grasses. Since graphology ecorded Data. (Describe in Research Lake, or Aenal Photograph Other.)	noted (*) as showing tiands. "T" indicates traces, relevant local variation reater than 50% of the commarks): Tide Gage	ce. ons, sea	100 asonal ef nt plants	fects. etc. are hydro land Hyd Primary in	phytic, the wetland vegetation criteria is met. prology Indicators (Describe in Remarks): indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
ercent of Dominant Species except FAC-). Include species is corphological adaptations to well emarks. (Describe disturbance ther unknown grasses. Since grant Stream, Lake, or Aenal Photograph Other	noted (*) as showing tiands. "T" indicates traces, relevant local variation reater than 50% of the commarks): Tide Gage	ce. ons, sea	100 asonal ef nt plants	fects. etc. are hydro land Hyd Primary ir X	phytic, the wetland vegetation criteria is met. prology Indicators (Describe in Remarks): indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
ercent of Dominant Species except FAC-). Include species is corphological adaptations to well emarks. (Describe disturbance ther unknown grasses. Since graph of the service of Aenal Photograph other. No Recorded Data eld Observations:	noted (*) as showing tiands. "T" indicates traces, relevant local variation reater than 50% of the commarks): Tide Gage	ce. ons, sea	100 asonal ef nt plants	fects. etc. are hydro land Hyd Primary ir X	phytic, the wetland vegetation criteria is met. prology Indicators (Describe in Remarks): indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
ercent of Dominant Species xcept FAC-). Include species is corphological adaptations to well emarks (Describe disturbance ther unknown grasses. Since grant Stream, Lake, or Aenal Photograph Other No Recorded Data selid Observations: Depth of Surface Water:	noted (*) as showing trands. To indicates transists, relevant local variation reater than 50% of the comments.): Tide Gage a Available surface (in.)	ce. ons, sea	100 asonal efint plants Wet	fects. etc. are hydro iand Hyd Primary ir X	phytic, the wetland vegetation criteria is met. prology Indicators (Describe in Remarks): indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
ercent of Dominant Species except FAC-). Include species is corphological adaptations to well amarks. (Describe disturbance ther unknown grasses. Since graph of Stream. Lake, or Aenal Photograph Other No Recorded Data Include Species in Recorded Data No Recorded Data Include Species in Recorded Data Includ	noted (*) as showing trands. To indicates transists, relevant local variation reater than 50% of the commercial commercia	ce. ons, sea	100 asonal efint plants Wet	fects. etc. are hydro iand Hyd Primary ir X	phytic, the wetland vegetation criteria is met. prology Indicators (Describe in Remarks): indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands y Indicators (2 or more required):
ercent of Dominant Species xcept FAC-). Include species is corphological adaptations to well emarks (Describe disturbance ther unknown grasses. Since grant Stream, Lake, or Aenal Photograph Other No Recorded Data selid Observations: Depth of Surface Water:	noted (*) as showing trands. To indicates transists, relevant local variation reater than 50% of the comments. Tide Gage A Available surface (in.)	ce. ons, sea	100 asonal efint plants Wet	fects. etc. are hydro land Hyd Primary ir X X Secondary	phytic, the wetland vegetation criteria is met. prology Indicators (Describe in Remarks): indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands y Indicators (2 or more required):
ercent of Dominant Species except FAC-). Include species is corphological adaptations to well emarks. (Describe disturbance other unknown grasses. Since graph of Stream, Lake, or Aenal Photograph Other No Recorded Data eld Observations: Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as showing trands. To indicates transists, relevant local variation reater than 50% of the commercial commercia	ce. ons, sea	100 asonal efint plants Wet	fects. etc. are hydro land Hyd Primary ir X X Secondary	phytic, the wetland vegetation criteria is met. prology Indicators (Describe in Remarks): indicators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands y Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches

		-					Data Plot	#:	28-A1
							Wetland:		28
oject/Site	e: Seattle Ta	acoma Airport - Maste	r Plan Upda	ite	Date:	1/18/99			
OILS oil Surve	ey Data:								
lap Unit N	Name: unma	apped				Drainage Clas	is:		
						Field Observa		Mapp	ped Type?
axonomy	(Subgroup):					Yes !	No	NA	<u>x</u>
rofile Des	scription:						- · · - · ·		
epth iches)	Horizon Designation	Matrix Color (Munsell Moist)		Color ell Moist)		Mottle Abundance/Co			re, Concretions
18+	0	10YR 2/1	-					Muck	
								MUCA	
X His His Sulf Pro Red	lucing Condit	Moisture Regime tions			Listed Listed Aquic I	on Local Hydric on State Hydric on National Hyd Moisture Regim c Streaking in S	c Soils List c Soils List dric Soils List de	MIOCK.	
X His His Sulf Pro Rec	tosol tic Epipedon fidic Odor bable Aquic I ducing Condit yed or Low-C	Moisture Regime tions Chroma Colors	,		Listed Listed Aquic I Organi Mottles	on State Hydric on National Hyd Moisture Regim ic Streaking in S	c Soils List c Soils List dric Soils List de Gandy Soils		
X His His Sulf Pro Rec Gie High	tosol tic Epipedon fidic Odor bable Aquic I ducing Condit yed or Low-C n Organic Co Describe soil	Moisture Regime tions	riations, etc		Listed Listed Aquic I Organi Mottles	on State Hydric on National Hyd Moisture Regim c Streaking in S	c Soils List c Soils List dric Soils List de Gandy Soils		
X His His Sulf Pro Rec Gle High	tosol tic Epipedon fidic Odor bable Aquic I ducing Condit yed or Low-C n Organic Co Describe soil it with ash lay	Moisture Regime tions Chroma Colors intent in Surface Laye disturbances, local va ver at 8 inches. Hydno	riations, etc		Listed Listed Aquic I Organi Mottles	on State Hydric on National Hyd Moisture Regim ic Streaking in S	c Soils List c Soils List dric Soils List de Gandy Soils		
X Hiss Hiss Sulf Pro Rec Gle High Imarks ([ganic pea	tosol tic Epipedon fidic Odor bable Aquic I ducing Condit yed or Low-C n Organic Co Describe soil If with ash lay	Moisture Regime tions Chroma Colors Intent in Surface Laye disturbances, local vaiver at 8 inches. Hydno	riations, etc soils are pr	c.): resent.	Listed Listed Aquic I Organi Mottles	on State Hydric on National Hyd Moisture Regim ic Streaking in S s Explain in Rem	c Soils List c Soils List dric Soils List de Sandy Soils arks)		
X Hiss Hiss Sull Pro Rec Gle: High marks ([ganic pea	tosol tic Epipedon fidic Odor bable Aquic I ducing Condit yed or Low-C n Organic Co Describe soil it with ash lay	Moisture Regime tions Chroma Colors Intent in Surface Laye disturbances, local valver at 8 inches. Hydno	riations, etc		Listed Listed Aquic I Organi Mottles	on State Hydric on National Hyd Moisture Regim ic Streaking in S s Explain in Rem	c Soils List c Soils List dric Soils List de Sandy Soils arks)		Vithin a Wetlar

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): All three wetland parameters are present, therefore the area was delineated as a wetland.

Pa	ram	etrix,	inc.
1 61	3 611 11	CUL,	1116



Data Piot #:

28-A2

	(Modified from: 198	7 COE Wet	lands D	elineation Manua	ai)
Propost/Cite: Castilla Tassana					,
Project/Site: Seattle Tacoma Applicant/Owner: Port of S		ate	-	/18/99	· · · · · · · · · · · · · · · · · · ·
	earue		County:	King	
vestigator: William Kleindi 1987 Method 1989	A4-M		State:	WA	
	Method			Community	ID: PEM
o Normal Circumstances exis	st on the site?	Yes X	No _	Field Plot ID	: G1-A
the site significantly disturbe	ed (Atypical Situation)?	Yes	No _	<u>~</u>	
the area a potential Problem	Area?	Yes X	No		
emarks (Explain sample loc	ation, disturbances, proble	em areas):	_		
ot located on western section	n of the Tyee Valley Golf C	Course.			
EGETATION (Domina	ant species are checked)				
Plant Species	op 2002 212 011001100,	% Cover	Stratum	Indicator	
1 Agrostis capillans (tenuis	i)	50	Herb	FAC	
2 Festuca arundinacea	··	50	Herb	FAC	
xcept FAC-). Include species orphological adaptations to w emarks (Describe disturbant ther unknown grasses. A row	s noted (*) as showing etlands. "T" indicates trac ces, relevant local variation of cottonwood is present	e. ns, seasonal ef	fects, etc.		dominant plants are
xcept FAC-). Include species orphological adaptations to w marks (Describe disturbant ther unknown grasses. A row	s noted (*) as showing etlands. "T" indicates trac ces, relevant local variation of cottonwood is present	e. ns, seasonal ef	fects, etc.		dominant plants are
except FAC-). Include species or phological adaptations to we marks (Describe disturbancher unknown grasses. A row drophytic, the wetland vegetal.	s noted (*) as showing etlands. "T" indicates trac ces, relevant local variation of cottonwood is present	e. ns, seasonal ef	fects, etc.		dominant plants are
except FAC-). Include species or phological adaptations to we marks (Describe disturbant the runknown grasses. A row drophytic, the wetland vegetal YDROLOGY	s noted (*) as showing etlands. "T" indicates trac ces, relevant local variation w of cottonwood is present ation criteria is met.	e. 100 ns. seasonal ef within wetland	fects, etc. Since gi	eater than 50% of the	
except FAC-). Include species or phological adaptations to we marks (Describe disturbant the runknown grasses. A row drophytic, the wetland vegetal YDROLOGY	s noted (*) as showing etlands. "T" indicates trac ces, relevant local variation of cottonwood is present ation criteria is met. Remarks):	e. 100 ns. seasonal ef within wetland	fects, etc. Since gi	eater than 50% of the	dominant plants are Describe in Remarks):
except FAC-). Include species or phological adaptations to we marks (Describe disturbant their unknown grasses. A row drophytic, the wetland vegetal YDROLOGY (Describe in Facorded Data)	s noted (*) as showing etlands. "T" indicates trac ces, relevant local variation of cottonwood is present ation criteria is met. Remarks): Tide Gage	e. 100 ns. seasonal ef within wetland	fects, etc. Since gi	rology Indicators (I	
except FAC-). Include species orphological adaptations to we marks (Describe disturbant their unknown grasses. A row drophytic, the wetland vegetal YDROLOGY acorded Data (Describe in Factorian Lake, or	s noted (*) as showing etlands. "T" indicates trac ces, relevant local variation of cottonwood is present ation criteria is met. Remarks): Tide Gage	e. 100 ns. seasonal ef within wetland	fects, etc. Since gr land Hydi	rology Indicators (I	Describe in Remarks):
emarks (Describe disturbant ther unknown grasses. A roward physic, the wetland vegetal YDROLOGY ecorded Data (Describe in factorial Photography)	s noted (*) as showing etlands. "T" indicates trac ces, relevant local variation w of cottonwood is present ation criteria is met. Remarks): r Tide Gage	e. 100 ns. seasonal ef within wetland	fects, etc. Since gr land Hydi	rology Indicators (I	Describe in Remarks):
xcept FAC-). Include species orphological adaptations to we marks. (Describe disturbant ther unknown grasses. A rowardophytic, the wetland vegetal YDROLOGY ecorded Data. (Describe in Facial Photograp Other.)	s noted (*) as showing etlands. "T" indicates trac ces, relevant local variation w of cottonwood is present ation criteria is met. Remarks): r Tide Gage	e. 100 ns. seasonal ef within wetland	fects, etc. Since gr land Hydi	rology Indicators (I dicators: Inundated Saturated in Uppe	Describe in Remarks):
xcept FAC-). Include species orphological adaptations to we marks. (Describe disturbant ther unknown grasses. A rowardophytic, the wetland vegetal YDROLOGY ecorded Data. (Describe in Facial Photograp Other.)	s noted (*) as showing etlands. "T" indicates trac ces, relevant local variation w of cottonwood is present ation criteria is met. Remarks): r Tide Gage	e. 100 ns. seasonal ef within wetland	fects, etc. Since gr land Hydi	rology Indicators (I dicators: Inundated Saturated in Uppe Saturated in Uppe	Describe in Remarks):
xcept FAC-). Include species orphological adaptations to we marks. (Describe disturbant ther unknown grasses. A rowardophytic, the wetland vegetal YDROLOGY ecorded Data. (Describe in Facial Photograp Other.)	s noted (*) as showing etlands. "T" indicates trac ces, relevant local variation w of cottonwood is present ation criteria is met. Remarks): r Tide Gage	e. 100 ns. seasonal ef within wetland	fects, etc. Since gr land Hydi	rology Indicators (I dicators: Inundated Saturated in Uppe Saturated in Uppe Water Marks Drift Lines Sediment Deposits	Describe in Remarks): r 12 inches r 18 inches
except FAC-). Include species orphological adaptations to we marks (Describe disturbant ther unknown grasses. A rowardophytic, the wetland vegetal YDROLOGY ecorded Data (Describe in Stream, Lake, or Aerial Photograp Other No Recorded Data	s noted (*) as showing etlands. "T" indicates trac ces, relevant local variation w of cottonwood is present ation criteria is met. Remarks): r Tide Gage	e. 100 ns. seasonal ef within wetland	fects, etc. Since gr land Hydi	rology Indicators (I dicators: Inundated Saturated in Uppe Saturated in Uppe Water Marks Drift Lines	Describe in Remarks): r 12 inches r 18 inches
xcept FAC-). Include species or phological adaptations to we marks. (Describe disturbant their unknown grasses. A round rophytic, the wetland vegetal action of their unknown grasses. A round rophytic, the wetland vegetal action of their stream, Lake, or Aerial Photographytheir Other No Recorded Data action of their No Recorded D	s noted (*) as showing etlands. "T" indicates traces, relevant local variation of cottonwood is present ation criteria is met. Remarks): r Tide Gage th	e. 100 ns. seasonal ef within wetland. Wet	fects, etc. Since gi	rology Indicators (I dicators: Inundated Saturated in Uppe Saturated in Uppe Water Marks Drift Lines Sediment Deposits Drainage Patterns	Describe in Remarks): r 12 inches r 18 inches in Wetlands
xcept FAC-). Include species orphological adaptations to we marks. (Describe disturbant their unknown grasses. A rowardrophytic, the wetland vegetal YDROLOGY ecorded Data. (Describe in factorial Photographytic). Stream, Lake, or Aerial Photographytic. No Recorded Data.	s noted (*) as showing etlands. "T" indicates traceces, relevant local variation of cottonwood is present ation criteria is met. Remarks): r Tide Gage oh Ita Available surface (in.)	e. 100 ns. seasonal ef within wetland. Wet	fects, etc. Since gi	rology Indicators (I dicators: Inundated Saturated in Uppe Saturated in Uppe Water Marks Drift Lines Sediment Deposits	Describe in Remarks): r 12 inches r 18 inches in Wetlands
xcept FAC-). Include species orphological adaptations to we marks (Describe disturbant ther unknown grasses. A rowardrophytic, the wetland vegetal YDROLOGY ecorded Data (Describe in Facial Photographytic). Aerial Photographytic No Recorded Data (Describe Data (Describe in Facial Photographytic). No Recorded Data (Describe in Facial Photographytic). No Recorded Data (Describe Data (Describe).	s noted (*) as showing etlands. "T" indicates traceces, relevant local variation of cottonwood is present ation criteria is met. Remarks): r Tide Gage oh ta Available surface (in.) 0 (in.)	e. 100 ns. seasonal ef within wetland. Wet	fects, etc. Since gi	rology Indicators (Idicators: Inundated Saturated in Uppe Saturated in Uppe Water Marks Drift Lines Sediment Deposits Drainage Patterns	Describe in Remarks): r 12 inches r 18 inches in Wetlands
xcept FAC-). Include species orphological adaptations to we marks (Describe disturbant ther unknown grasses. A rowardophytic, the welland vegetal YDROLOGY ecorded Data (Describe in Facial Photograp Other No Recorded Data (Describe Depth of Surface Water: Depth to Free Water in Pit:	s noted (*) as showing etlands. "T" indicates traceces, relevant local variation of cottonwood is present ation criteria is met. Remarks): r Tide Gage oh Ita Available surface (in.) (in.)	e. 100 ns. seasonal ef within wetland. Wet	land Hyd Primary In X Secondary	rology Indicators (Idicators: Inundated Saturated in Uppe Saturated in Uppe Water Marks Drift Lines Sediment Deposits Drainage Patterns	Describe in Remarks): r 12 inches r 18 inches in Wetlands e required): innels in Upper 12 inches
except FAC-). Include species corphological adaptations to we marks (Describe disturbanisher unknown grasses. A rowardophytic, the wetland vegetal YDROLOGY ecorded Data (Describe in Facial Photograp Other No Recorded Data (Describe Data Photograp Other No Recorded Data (Describe Depth of Surface Water: Depth to Free Water in Pit:	s noted (*) as showing etlands. "T" indicates traceces, relevant local variation of cottonwood is present ation criteria is met. Remarks): r Tide Gage oh ta Available surface (in.) 0 (in.)	e. 100 ns. seasonal ef within wetland. Wet	land Hyd Primary In X Secondary	rology Indicators (I dicators: Inundated Saturated in Uppe Saturated in Uppe Water Marks Drift Lines Sediment Deposits Drainage Patterns Indicators (2 or more Oxidized Root Cha	Describe in Remarks): r 12 inches r 18 inches in Wetlands e required): sinnels in Upper 12 inches eves
Aerial Photograp Other No Recorded Da eld Observations: Depth of Surface Water: Depth to Free Water in Pit:	s noted (*) as showing etlands. "T" indicates traceces, relevant local variation of cottonwood is present ation criteria is met. Remarks): r Tide Gage oh ta Available surface (in.) 0 (in.)	e. 100 ns. seasonal ef within wetland. Wet	land Hyd Primary In X Secondary	rology Indicators (I dicators: Inundated Saturated in Uppe Saturated in Uppe Water Marks Drift Lines Sediment Deposits Drainage Patterns Indicators (2 or more Oxidized Root Cha	Describe in Remarks): r 12 inches r 18 inches in Wetlands e required): unnels in Upper 12 inches uves Data

								Data P	lot #:	28-A2
L '								Wetlar	nd:	G1
_										
Project/Si	ite: Seattle Ta	acoma Airport - Master	Plai	n Upda	te	Date:	1/18/99	· · · · · · · · · · · · · · · · · · ·		
SOILS										
Soil Surv	vey Data:									
Map Unit	Name: unma	apped					Drainage	Class:		
							Field Ob	servations Cont	firm Map	ped Type?
Taxonom	y (Subgroup):						Yes	No	NA	x
Profile Do	escription:								-	
Depth (inches)	Horizon	Matrix Color (Munsell Moist)		Mottle (Muns	Color ell Moist)	Mottle Abundan	ce/Contrast		ure, Concretions ospheres, etc.
0-18+	0	10YR 2/1					-		Muck	
X Hi Hi Su Pr Re Gi Hi Remarks	educing Condi leyed or Low-C gh Organic Co (Describe soil	Moisture Regime tions Chroma Colors Intent in Surface Layer disturbances, local va	riatio			Listed Listed Aquic Organ Mottle Other	on State i on Nation Moisture f ic Streakir s	Hydric Soils Lis Hydric Soils List all Hydric Soils Regime ng in Sandy Soil Remarks)	t List	
Organic pe	eat with ash lay	ver at 6 inches. Hydrid	soil	indical	ors pres	ent.				
WETLA	ND DETER	MINATION								
hidrophid	tic Vegetation	Present?	'es	x	No		ı	s this Samplin	g Point	Within a Wetlan
iyai opiiyt								,		
	Is Present?	Y	'es	X	No			Yes X	. No	

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): All three wetland parameters are present and therefore area was delineated as a wetland.

Parametrix, Inc.



Data Plot #:

28-A3

L '	WET	LANE	DETE	RMINA	NOIT	٧	Vetland:	'	G2
	(Modified from: 19					stion M	anual)		
Project/Site: Seattle Tacoma				_			4.1041,		
Applicant/Owner: Port of S		cate			1/18/99				
Investigator: William Kleindi				County:	King				
	9 Method			State:	WA				
						Comm	unity ID:	PEM	<u> </u>
Do Normal Circumstances exi		Yes	<u> </u>	No _		Field F	Plot ID:	G2-A	
s the site significantly disturbe		Yes		No _	<u> </u>				
s the area a potential Problem		Yes	X	No _					
Remarks (Explain sample loo Plot located on western section									
EGETATION (✓Domina Plant Species	ant species are checked)		% Cover	Stratun	n Ind	icator		·	
Agrostis capillans (tenuis	s)		50	Herb	FA	2			
			50	Herb	FA				
except FAC-). Include species norphological adaptations to w lemarks: (Describe disturban	s noted (*) as showing vetlands. "T" indicates trainces, relevant local variations."	ce. ons, sea	100	fects, etc	:.):				
rercent of Dominant Species except FAC-). Include species forphological adaptations to w remarks (Describe disturban lince greater than 50% of the of	s noted (*) as showing vetlands. "T" indicates trainces, relevant local variations."	ce. ons, sea	100	fects, etc	:.): tation cr	tena is m	et.		
Percent of Dominant Species except FAC-). Include species prophological adaptations to with the community of	s noted (*) as showing retiands. To indicates training the case relevant local variation dominant plants are hydro	ce. ons, sea	100 asonal eff	fects, etc	tation cn			cribe in	(Remarks)
Percent of Dominant Species except FAC-). Include species prorphological adaptations to with the community of the community o	s noted (*) as showing retiands. "T" indicates trainices, relevant local variation dominant plants are hydro	ce. ons, sea	100 asonal eff the wetla Wet	fects, etc	tation cri	Indicator		cribe in	Remarks):
ercent of Dominant Species except FAC-). Include species forphological adaptations to we marks (Describe disturbanince greater than 50% of the dis	s noted (*) as showing retiands. "T" indicates traitions, relevant local variation dominant plants are hydro Remarks): r Tide Gage	ce. ons, sea	100 asonal eff the wetla Wet	fects, etc	tation cn trology	Indicator		cribe in	Remarks):
ercent of Dominant Species except FAC-). Include species except FA	s noted (*) as showing retiands. "T" indicates traitions, relevant local variation dominant plants are hydro Remarks): r Tide Gage	ce. ons, sea	100 asonal eff the wetla Wet	fects, etc and veget land Hyd Primary I	drology ndicator	Indicator s: ndated	rs (Des		
ercent of Dominant Species except FAC-). Include species corphological adaptations to will emarks. (Describe disturbantance greater than 50% of the disturbantance greater tha	s noted (*) as showing retiands. "T" indicates traition in the state of the state o	ce. ons, sea	100 asonal eff the wetla Wet	fects, etc and veget land Hyd Primary I	drology ndicator	Indicator	rs (Des	2 inches	5
ercent of Dominant Species except FAC-). Include species except FA	s noted (*) as showing retiands. "T" indicates traition in the state of the state o	ce. ons, sea	100 asonal eff the wetla Wet	fects, etc and veget land Hyd Primary I	drology ndicator Inur Sati	indicator s: ndated urated in urated in er Marks	rs (Des	2 inches	5
Percent of Dominant Species except FAC-). Include species norphological adaptations to w lemarks (Describe disturban lince greater than 50% of the of IYDROLOGY ecorded Data (Describe in language) Stream, Lake, of Aenal Photograp Other	s noted (*) as showing retiands. "T" indicates traition in the state of the state o	ce. ons, sea	100 asonal eff the wetla Wet	fects, etc and veget land Hyd Primary I	drology ndicator Inur Satu Satu Val Drift	Indicator s: ndated urated in urated in er Marks Lines	Upper 18	2 inches	5
Percent of Dominant Species except FAC-). Include species norphological adaptations to w lemarks (Describe disturban lince greater than 50% of the of IYDROLOGY ecorded Data (Describe in language) Stream, Lake, of Aenal Photograp Other	s noted (*) as showing retiands. "T" indicates traition in the state of the state o	ce. ons, sea	100 asonal eff the wetla Wet	fects, etc and veget land Hyd Primary I	drology ndicator inur Sati Sati Vat Drift	Indicator s: ndated urated in urated in er Marks Lines iment De	Upper 12 Upper 18 Upper 18	2 inches 3 inches	S
Percent of Dominant Species except FAC-). Include species prophological adaptations to witemarks (Describe disturbantince greater than 50% of the college of	s noted (*) as showing retiands. "T" indicates traition in the state of the state o	ce. ons, sea	100 asonal eff the wetla Wet	fects, etc and veget land Hyd Primary I	drology ndicator inur Sati Sati Vat Drift	Indicator s: ndated urated in urated in er Marks Lines	Upper 12 Upper 18 Upper 18	2 inches 3 inches	S
ercent of Dominant Species except FAC-). Include species (orphological adaptations to we marks (Describe disturbanince greater than 50% of the company of th	s noted (*) as showing retiands. To indicates training to call variation dominant plants are hydrotectical formula of the call	ce. ons, sea	100 asonal eff the wetla Wett	fects, etc and veget land Hyd Primary II	drology ndicator inur Satt Satt Wat Drift Dran	Indicator s: indated urated in urated in er Marks Lines iment De nage Pat	Upper 18 Upper 18 Upper 18 Upper 18 Upper 18 Upper 18	2 inches 3 inches Wetland	s s
ercent of Dominant Species except FAC-). Include species (orphological adaptations to we marks (Describe disturbanince greater than 50% of the company of th	s noted (*) as showing retrands. To indicates training retrands. To indicates training retrands are hydrodominant plants	ce. ons, sea	100 asonal eff the wetla Wett	fects, etc and veget land Hyd Primary II	drology ndicator Inur Sati Sati Wat Drift Sed Drai	Indicators: indated in urated in ura	Upper 18 Upp	2 inches 3 inches Wetland	s s s
rercent of Dominant Species except FAC-). Include species forphological adaptations to with the companience greater than 50% of the compan	s noted (*) as showing retiands. To indicates training to call variation dominant plants are hydrotectical formula of the call	ce. ons, sea	100 asonal eff the wetla Wett	fects, etc and veget land Hyd Primary II	drology ndicator Sati Sati Sati Driff Drai y Indica Oxid	Indicators: Indica	Upper 18 Upp	2 inches 3 inches Wetland equired)	s s
Percent of Dominant Species except FAC-). Include species norphological adaptations to witemarks (Describe disturbantince greater than 50% of the collection	s noted (*) as showing retrands. To indicates training retrands. To indicates training retrands are hydrodominant plants	ce. ons, sea	100 asonal eff the wetla Wett	fects, etc and veget land Hyd Primary II	drology ndicator Sate Sate Drift Sed Drai y Indica Oxic Wat	Indicators: indated in urated in ura	Upper 18 Upp	2 inches 3 inches Wetland equired) els in U	s s s

								Data Pi	ot #:	28-A3
J. *								Wetian	d:	G2
Project/S	ite: Seattle T	acoma Airport - Maste	r Plai	n Updat	e	Date	1/18/99			
SOILS Soil Sur	vey Data:									
Map Unit	Name: unm	apped					Drainage	Class:		
							Field Ob	servations Confi	m Map	ped Type?
Taxonom	ny (Subgroup):						Yes	No	NA	x
	escription:								•	
Depth Inches)	Horizon	Matrix Color (Munsell Moist)		Mottie (Munse	Color eli Moist))	Mottle Abundan	ce/Contrast		ure, Concretions ospheres, etc.
)-4	0	10YR 4/1		-			-	 	Clay	Loam
L-10	A	10YR 3/1					-		Clay	_oam
0-18+	С	10YR 5/1		10YR 3/	1		Many, Medi	um Distinct	Clay	
lydric S	oil Indicators	:								
н	listosol					Liste	on Local I	Hydric Soils List		
	listic Epipedon	İ				Liste	on State I	Hydric Soils List		
	ulfidic Odor					Liste	on Nation	al Hydric Soils L	ist	
		Moisture Regime					Moisture F	•		
	educing Cond							ig in Sandy Soils	3	
	•	Chroma Colors	_			Motti	_			
	-	ontent in Surface Laye			_	Other	(Explain in	Remarks)		
		disturbances, local v	anatio	ons, etc	.) :					
tyunc 30	il Indicators pr	esen(.								
VETLA	ND DETER	MINATION								
ydrophy	tic Vegetation	n Present?	Yes	x	No		ŧ	s this Sampling	Point	Within a Wetla
	ils Present?		Yes		No				,	
								Yes X		

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): All three wetland parameters are present and therefore area was delineated as a wetland.

Pa	ram	etrix,	inc.



	WET	LAND DETE	RMINATI	ION	Wetian	d:	28 Upland P
	tor: William Kleindi Method	n					
Project/Site: Seattle Tacom						-,	
				<u>_</u>			
			State: V	WA .			· · · · · · · · · · · · · · · · · · ·
		V V		С	Community I	D: Uplai	nd
			NO	F	ield Plot ID:	G3-B	
		Yes	No X	_			
·			No				
emarks (Explain sample id	ocation, disturbances, proble	em areas):					
orano companson pior rocar	eu on eastern section of the	' I yee Valley Go	olf Course.				
EGETATION - Domin	nant species are checked)						
Plant Species		% Cover	Stratum	Indicato	or .		
	NS)	50	Herb				
2 Poa pratensis		50	Herb				
xcept FAC-). Include specie orphological adaptations to vermarks (Describe disturban	es noted (*) as showing wetlands. "T" indicates traci nces, relevant local variation	e. 100	ects, etc.): n 50% of th	ne domina	ant plants an	e hydroph	lytic, the wetla
xcept FAC-). Include species orphological adaptations to vermarks (Describe disturbations to which with the runknown grasses within getation criteria is met.	es noted (*) as showing wetlands. "T" indicates traci nces, relevant local variation	e. 100	ects, etc.): n 50% of th	ne domina	ant piants an	e hydroph	tytic, the wetla
xcept FAC-). Include species orphological adaptations to vermarks (Describe disturbancher unknown grasses within getation criteria is met. YDROLOGY	as noted (*) as showing wetlands. "T" indicates trace notes, relevant local variation the golf course grasses. S	e. 100 es. seasonal efficience greater tha	n 50% of th				
xcept FAC-). Include species orphological adaptations to vermarks (Describe disturbanther unknown grasses within getation criteria is met. YDROLOGY (Describe in granther in the provided Data (Describe in the provided Data)	as noted (*) as showing wetlands. "T" indicates trace notes, relevant local variation the golf course grasses. S Remarks):	e. 100 ns, seasonal efficience greater tha	n 50% of th	logy India			
xcept FAC-). Include species orphological adaptations to vermarks (Describe disturbanther unknown grasses within getation criteria is met. YDROLOGY corded Data (Describe in Stream, Lake, c	as noted (*) as showing wetlands. "T" indicates tracences, relevant local variation the golf course grasses. S Remarks): or Tide Gage	e. 100 ns, seasonal efficience greater tha	n 50% of th	logy Indicators:	cators (De		
xcept FAC-). Include species or phological adaptations to vermarks. (Describe disturbation of the result of the re	as noted (*) as showing wetlands. "T" indicates tracences, relevant local variation the golf course grasses. S Remarks): or Tide Gage	e. 100 ns, seasonal efficience greater tha	n 50% of th	logy Indicators:	cators (De	escribe in	
xcept FAC-). Include specie orphological adaptations to v emarks (Describe disturbar ther unknown grasses within getation cntena is met. YDROLOGY corded Data (Describe in Stream, Lake, c Aerial Photogra Other	as noted (*) as showing wetlands. "T" indicates trace inces, relevant local variation in the golf course grasses. S Remarks): or Tide Gage ph	e. 100 ns, seasonal efficience greater tha	n 50% of th	logy Indicators: Inundate Saturate	cators (De	scribe in	
xcept FAC-). Include specie orphological adaptations to v emarks (Describe disturbar ther unknown grasses within getation cntena is met. YDROLOGY corded Data (Describe in Stream, Lake, c Aerial Photogra Other	as noted (*) as showing wetlands. "T" indicates trace inces, relevant local variation in the golf course grasses. S Remarks): or Tide Gage ph	e. 100 ns, seasonal efficience greater tha	n 50% of th	logy Indicators: Inundate Saturate Saturate	cators (De ed ed in Upper 1 d in Upper 1	scribe in	
xcept FAC-). Include specie orphological adaptations to v emarks (Describe disturbar ther unknown grasses within getation cntena is met. YDROLOGY corded Data (Describe in Stream, Lake, c Aerial Photogra Other	as noted (*) as showing wetlands. "T" indicates trace inces, relevant local variation in the golf course grasses. S Remarks): or Tide Gage ph	e. 100 ns, seasonal efficience greater tha	n 50% of th	logy Indicators: Inundate Saturate Saturate Water M	cators (De ed ed in Upper 1 d in Upper 1 arks	scribe in	
ecorded Data (Describe in Stream, Lake, C Aerial Photogra	as noted (*) as showing wetlands. "T" indicates trace inces, relevant local variation in the golf course grasses. S Remarks): or Tide Gage ph	e. 100 ns, seasonal efficience greater tha	n 50% of th	logy Indicators: Inundate Saturate Saturate Water M Drift Line	cators (De ed d in Upper 1 d in Upper 1 arks	scribe in	
corphological adaptations to vermarks (Describe disturbanther unknown grasses within getation criteria is met. YDROLOGY corded Data (Describe in Stream, Lake, of Aerial Photogra Other No Recorded Data	as noted (*) as showing wetlands. "T" indicates trace inces, relevant local variation in the golf course grasses. S Remarks): or Tide Gage ph	e. 100 ns, seasonal efficience greater tha	n 50% of th	logy Indicators: Inundate Saturate Saturate Water M Drift Line Sedimen	cators (De ed d in Upper 1 d in Upper 1 arks es	escribe in 12 inches 18 inches	Remarks):
emarks (Describe disturbant ther unknown grasses within agetation criteria is met. YDROLOGY ecorded Data (Describe in Stream, Lake, con Aerial Photogra Other No Recorded Data (Described Dat	as noted (*) as showing wetlands. "T" indicates trace inces, relevant local variation in the golf course grasses. S Remarks): or Tide Gage ph ata Available	e. 100 ns, seasonal efficience greater tha Wetta	and Hydrol	logy Indicators: Inundate Saturate Saturate Water M Drift Line Sedimen Drainage	cators (De ed on Upper 1 d in Upper 1 arks es it Deposits Patterns in	scribe in 12 inches 18 inches	Remarks):
xcept FAC-). Include species or phological adaptations to vermarks (Describe disturbant ther unknown grasses within getation criteria is met. YDROLOGY ecorded Data (Describe in Stream, Lake, con Aerial Photogram, Other No Recorded Data (Describe Described Data (Described Described Des	as noted (*) as showing wetlands. "T" indicates trace inces, relevant local variation in the golf course grasses. S Remarks): or Tide Gage ph ata Available None (in.)	e. 100 ns, seasonal efficience greater tha Wetta	and Hydrol	logy Indicators: Inundate Saturate Saturate Water M Drift Line Sedimen Drainage	cators (De ed on Upper 1 d in Upper 1 arks es it Deposits Patterns in	scribe in 12 inches 18 inches	Remarks):
corphological adaptations to vermarks (Describe disturbant ther unknown grasses within getation criteria is met. YDROLOGY corded Data (Describe in Stream, Lake, con Aerial Photogram, Other No Recorded Data (Describe in No Recorded Data (Describ	ss noted (*) as showing wetlands. "T" indicates trace inces, relevant local variation in the golf course grasses. S Remarks): or Tide Gage ph ata Available None (in.)	e. 100 ns, seasonal efficience greater tha Wetta	and Hydrol nmary Indic	logy Indicators: Inundate Saturate Saturate Water M Drift Line Sedimen Drainage	cators (De ed ed in Upper 1 ed in Upper 1 earks es et Deposits Patterns in	escribe in 12 inches 8 inches Wetlands	Remarks):
emarks (Describe disturbant ther unknown grasses within agetation criteria is met. YDROLOGY ecorded Data (Describe in Stream, Lake, con Aerial Photogra Other No Recorded Data (Describe in No Recorded Data (Describe	ss noted (*) as showing wetlands. "T" indicates trace inces, relevant local variation in the golf course grasses. S Remarks): or Tide Gage ph ata Available None (in.)	e. 100 ns, seasonal efficience greater tha Wetta	and Hydrol	logy Indicators: Inundate Saturate Saturate Water M Drift Line Sedimen Drainage	cators (De ed ed in Upper 1 ed in Upper 1 earks es et Deposits Patterns in	scribe in 12 inches 8 inches Wetlands equired):	Remarks):
except FAC-). Include species or photographological adaptations to viewarks (Describe disturbant ther unknown grasses within egetation criteria is met. YDROLOGY ecorded Data (Describe in Stream, Lake, con Aerial Photogram)	ss noted (*) as showing wetlands. "T" indicates trace inces, relevant local variation in the golf course grasses. S Remarks): or Tide Gage ph ata Available None (in.)	e. 100 ns, seasonal efficience greater tha Wetta	and Hydrol	logy Indicators: Inundate Saturate Saturate Water M Drift Line Sedimen Drainage Indicators Oxidized Water-St.	cators (De ed in Upper 1 ed in Upper 1 arks es it Deposits Patterns in (2 or more re	scribe in 12 inches 18 inches Wetlands equired): nels in Up	Remarks):
except FAC-). Include species for phological adaptations to view and the runknown grasses within agetation criteria is met. YDROLOGY ecorded Data (Describe in Stream, Lake, con Aerial Photogram, Other No Recorded Data (Describe in No Recorded Da	ss noted (*) as showing wetlands. "T" indicates trace inces, relevant local variation in the golf course grasses. S Remarks): or Tide Gage ph ata Available None (in.)	e. 100 ns, seasonal efficience greater tha Wetta	and Hydrol	logy Indicators: Inundate Saturate Saturate Water M Drift Line Sedimen Drainage Indicators Oxidized Water-St. Local Soi	ed in Upper 1 d in Upper 1 arks es it Deposits e Patterns in (2 or more reached area (2 or more reached area Leave Il Survey Dai	scribe in 12 inches 8 inches Wetlands equired): nels in Up	Remarks):
except FAC-). Include species or phological adaptations to viewarks. (Describe disturbanther unknown grasses within agetation criteria is met. YDROLOGY ecorded Data. (Describe in Stream, Lake, con Aerial Photogram, Other No Recorded Data.) Id Observations: Depth of Surface Water: Depth to Saturated Soil:	ss noted (*) as showing wetlands. "T" indicates trace inces, relevant local variation in the golf course grasses. S Remarks): or Tide Gage ph ata Available None (in.)	e. 100 ns. seasonal efficience greater tha Wetti	and Hydrol	logy Indicators: Inundate Saturate Saturate Water M Drift Line Sedimen Drainage andicators Oxidized Water-St. Local Soi Other (Ex	cators (De ed in Upper 1 in upper 1 arks es in Deposits Patterns in (2 or more re Root Channalmed Leave il Survey Da	scribe in 12 inches 8 inches Wetlands equired): nels in Up	Remarks):

$\overline{\Lambda}$							Data Plot #:	28-B
1							Wetland:	28 Upland Plot
Project/Si	te: Seattle T	acoma Airport - Master	Plan Ur	odate	Date:	1/18/99		
SOILS Soil Sun	vey Data:							
Map Unit	Name: unm	apped				Drainage Class:		
						Field Observation	ns Confirm Ma	apped Type?
	y (Subgroup):	******				Yes No	NA	<u> </u>
	escription:					••	_	
Depth (Inches)	Horizon Designation	Matrix Color (Munsell Moist)		ittle Color unsell Moist)		Mottle Abundance/Contr		xture, Concretions, izospheres, etc.
)-3	0	10YR 3/2				•	Fib	nc/ Sandy Loam
3-6	A1	10YR 3/2					Sar	ndv Loam
3-7	Сь	2.5YR 5/2				-	Loa	imv Sand
-15	A2	10YR 3/2				•	Cot	obly Gravelly Loam
5+	В	10YR 4/4				•	Gra	velly Loam
lydric Sc	oil Indicators	:						
н	istosol				Listed	on Local Hydric S	oils List	
н	istic Epipedon	1		_	Listed	on State Hydric S	oils List	
S	ulfidic Odor				Listed	on National Hydrid	Soils List	
		Moisture Regime				Moisture Regime		
	educing Cond					ic Streaking in Sar	idy Soils	
	•	Chroma Colors ontent in Surface Layer			Mottle		· · · · ·	
		•			Other	(Explain in Remark	(5)	
	soil indicators	I disturbances, local va	nations,	etc.):				
,		p. 000.11						
VETLA	ND DETER	MINATION						
ydrophy	tic Vegetation	n Present?	es >	(No		Is this S	ampling Poir	nt Within a Wetland
ydric So	ils Present?	Y	es —	No ·	×		-	
	ydrology Pre		es —	No .		Ye	es ^	No <u>X</u>

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results):

Although the grass planted in the upland area of the golf course is adapted for wetter soils, no other wetland indicators are present and therefore the area is not a wetland.

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	~ ~ ^	trix,	
r_{AI}	41110	LIIX	



Data Piot #:	52-A1
Wetland:	52

. ▶				Wetland:	52
		LAND DET		TION	24
	(Modified from: 19	87 COE We	tlands [Delineation Manual)	
roject/Site: Seattle Tacoma	Airport - Master Plan Upo	date	Date:	3/1 8/9 9	
pplicant/Owner: Port of S			County:	King	
vestigator: M. Louther, C. /	Antieau		State:	WA	-
1987 Method 1989	Method		JU 10.		
Normal Circumstances exis	st on the site?	Yes X	No	· · · · · · · · · · · · · · · · · · ·	PEM
the site significantly disturbe			·	· · · · · · · · · · · · · · · · · · ·	√- D
he area a potential Problem		Yes	_	<u>x</u>	
·		Yes	No _	x	
marks (Explain sample loc	Zalion, disturbances, probi	em areas):		n the Tyee Golf Course. Th	
GETATION r Domina Plant Species	ant species are checked)	% Cove	er Stratum	n Indicator	
1. Agrostis capillans (tenuis)	90	Herb	FAC	
 Festuca arundinacea 		<u>T</u>	Herb	FAC	
a lungua officia				FACW	
3 Juncus effusus		25	Herb	PACW	
Scripus acutus cent of Dominant Species cept FAC-). Include species phological adaptations to we narks (Describe disturbance	inoted (*) as showing etlands. "T" indicates tracces, relevant local variatio	T or FAC te. ns. seasonal e	Herb	Σ:	
Scirpus acutus cent of Dominant Species cept FAC-). Include species phological adaptations to we marks (Describe disturbance ce less than 50 % of the vegi	inoted (*) as showing etlands. "T" indicates tracces, relevant local variatio	T or FAC te. ns. seasonal e	Herb	Σ:	
scripus acutus cent of Dominant Species cept FAC-). Include species phological adaptations to we marks (Describe disturbance ce less than 50 % of the vegi	etlands. "T indicates traces, relevant local variation is hydrophytic, the	T or FAC te. ns, seasonal e	Herb O effects, etc. criteria is	.): met.	
Scirpus acutus cent of Dominant Species cept FAC-). Include species phological adaptations to we marks (Describe disturbanc ce less than 50 % of the vegi DROLOGY orded Data (Describe in R	etiands. "T" indicates trac etiands. "T" indicates trac ces, relevant local variatio letation is hydrophytic, the Remarks):	T or FAC te. ns, seasonal e	Herb O effects, etc. criteria is	.): met.	be in Remarks):
Scripus acutus cent of Dominant Species sept FAC-). Include species sphological adaptations to we marks (Describe disturbance se less than 50 % of the vegi DROLOGY orded Data (Describe in R Stream, Lake, or	etiands. "T" indicates traces, relevant local variation tetation is hydrophytic, the Remarks): Tide Gage	T or FAC te. ns, seasonal e	Herb O effects, etc. criteria is	.): met. rology Indicators (Descri	be in Remarks):
Scripus acutus Dent of Dominant Species sept FAC-). Include species sphological adaptations to we harks (Describe disturbance seless than 50 % of the vegi DROLOGY Drded Data (Describe in R Stream, Lake, or Aerial Photograph	etiands. "T" indicates traces, relevant local variation tetation is hydrophytic, the Remarks): Tide Gage	T or FAC te. ns, seasonal e	Herb Officets, etc. criteria is	.): met. rology Indicators (Descri	be in Remarks):
A Scripus acutus Dent of Dominant Species sept FAC-). Include species sphological adaptations to we marks (Describe disturbance less than 50 % of the vegi DROLOGY Drded Data (Describe in R Stream, Lake, or Aerial Photograph Other	etlands. "To indicates traces, relevant local variation tetation is hydrophytic, the Remarks): Tide Gage	T or FAC te. ns, seasonal e	offects, etc. criteria is ettand Hyd Primary Ir	rology Indicators (Descri	
Scripus acutus Dent of Dominant Species sept FAC-). Include species sphological adaptations to we harks (Describe disturbance seless than 50 % of the vegi DROLOGY Drded Data (Describe in R Stream, Lake, or Aerial Photograph	etlands. "To indicates traces, relevant local variation tetation is hydrophytic, the Remarks): Tide Gage	T or FAC te. ns, seasonal e	offects, etc. criteria is etland Hyd Primary Ir	rology Indicators (Descrindicators: Inundated Saturated in Upper 12 in Saturated in Upper 18 in	ches
Scripus acutus cent of Dominant Species cept FAC-). Include species cept FAC-). Include species cept FAC-). Include species cept FAC-). Include species cept FAC-). Include species cept FAC-). Include species cept FAC-). Include species contact for the species cept FAC-). Include s	etlands. "To indicates traces, relevant local variation tetation is hydrophytic, the Remarks): Tide Gage	T or FAC te. ns, seasonal e	offects, etc. criteria is etland Hyd Primary Ir	rology Indicators (Descrindicators: Inundated Saturated in Upper 12 in Water Marks	ches
Scripus acutus cent of Dominant Species cept FAC-). Include species phological adaptations to we marks (Describe disturbance ce less than 50 % of the vegi DROLOGY orded Data (Describe in R Stream, Lake, or Aerial Photograph Other	etlands. "To indicates traces, relevant local variation tetation is hydrophytic, the Remarks): Tide Gage	T or FAC te. ns, seasonal e	offects, etc. criteria is etland Hyd Primary Ir	rology Indicators (Descrindicators: Inundated Saturated in Upper 12 in Water Marks Drift Lines	ches
Scirpus acutus cent of Dominant Species cept FAC-). Include species phological adaptations to we marks (Describe disturbance ce less than 50 % of the vegi DROLOGY orded Data (Describe in R Stream, Lake, or Aerial Photograph Other	etlands. "To indicates traces, relevant local variation tetation is hydrophytic, the Remarks): Tide Gage	T or FAC te. ns, seasonal e	offects, etc. criteria is etland Hyd Primary Ir	rology Indicators (Descrindicators: Inundated Saturated in Upper 18 in Water Marks Drift Lines Sediment Deposits	ches ches
A Scripus acutus cent of Dominant Species cept FAC-). Include species phological adaptations to we marks (Describe disturbance ce less than 50 % of the vegi DROLOGY corded Data (Describe in R Stream, Lake, or Aerial Photograph Other No Recorded Data d Observations:	etlands. "To indicates traces, relevant local variation tetation is hydrophytic, the Remarks): Tide Gage	T or FAC te. ns, seasonal e	offects, etc. criteria is etland Hyd Primary Ir	rology Indicators (Descrindicators: Inundated Saturated in Upper 12 in Water Marks Drift Lines	ches ches
A Scripus acutus cent of Dominant Species cept FAC-). Include species cept FAC-). Include species cept FAC-). Include species cept FAC-). Include species cept factorial adaptations to we can ack (Describe disturbance cept less than 50 % of the vego DROLOGY orded Data (Describe in R Stream, Lake, or Aerial Photograph Other X No Recorded Data Observations: cepth of Surface Water:	etlands. "T indicates traces, relevant local variation letation is hydrophytic, the Remarks): Tide Gage h a Available	T or FAC te. ns. seasonal e wetland plant We	offects, etc. criteria is ettand Hyd Primary in X X	rology Indicators (Descrindicators: Inundated Saturated in Upper 18 in Water Marks Drift Lines Sediment Deposits Drainage Patterns in We	ches ches tlands
A Scripus acutus cent of Dominant Species cept FAC-). Include species cept FAC-). Include species cept FAC-). Include species cept FAC-). Include species cept s	etiands. The indicates traces, relevant local variation etation is hydrophytic, the remarks): Tide Gage The indicates traces, relevant local variation etation is hydrophytic, the remarks. Tide Gage Tide Ga	T or FAC te. ns. seasonal e wetland plant We	offects, etc. criteria is ettand Hyd Primary in X X	rology Indicators (Descrindicators: Inundated Saturated in Upper 12 in Saturated in Upper 18 in Water Marks Drift Lines Sediment Deposits Drainage Patterns in We	ches ches tlands red):
cent of Dominant Species cent of Dominant Species cept FAC-). Include species phological adaptations to we marks (Describe disturbance ce less than 50 % of the vego DROLOGY orded Data (Describe in R Stream, Lake, or Aerial Photograph Other X No Recorded Data I Observations: epth of Surface Water: epth to Free Water in Pit:	etlands. "T indicates traces, relevant local variation letation is hydrophytic, the Remarks): Tide Gage h a Available	T or FAC te. ns. seasonal e wetland plant We	offects, etc. criteria is ettand Hyd Primary in X X	rology Indicators (Descrindicators: Inundated Saturated in Upper 12 in Saturated in Upper 18 in Water Marks Drift Lines Sediment Deposits Drainage Patterns in We Indicators (2 or more requinations)	ches ches tlands red):
Scirpus acutus recent of Dominant Species rept FAC-). Include species rphological adaptations to we marks (Describe disturbanc ce less than 50 % of the vegi DROLOGY corded Data (Describe in R Stream, Lake, or Aerial Photograph Other	etiands. The indicates traces, relevant local variation etation is hydrophytic, the remarks): Tide Gage The indicates traces, relevant local variation etation is hydrophytic, the remarks. Tide Gage Tide Ga	T or FAC te. ns. seasonal e wetland plant We	offects, etc. criteria is ettand Hyd Primary in X X	rology Indicators (Descrindicators: Inundated Saturated in Upper 12 in Saturated in Upper 18 in Water Marks Drift Lines Sediment Deposits Drainage Patterns in We Indicators (2 or more requications) Water-Stained Leaves	ches ches tlands red):
A Scirpus acutus recent of Dominant Species cept FAC-). Include species rephological adaptations to we marks (Describe disturbance ce less than 50 % of the vego DROLOGY corded Data (Describe in R Stream, Lake, or Aerial Photograph Other X No Recorded Data d Observations: lepth of Surface Water: lepth to Free Water in Pit:	etiands. The indicates traces, relevant local variation etation is hydrophytic, the remarks): Tide Gage The indicates traces, relevant local variation etation is hydrophytic, the remarks. Tide Gage Tide Ga	T or FAC te. ns. seasonal e wetland plant We	offects, etc. criteria is ettand Hyd Primary in X X	rology Indicators (Descrindicators: Inundated Saturated in Upper 12 in Saturated in Upper 18 in Water Marks Drift Lines Sediment Deposits Drainage Patterns in We Indicators (2 or more requinations)	ches ches tlands red): in Upper 12 inches

7							Data P	ot#:	52-A1
1							Wetiar	ıd:	52
Project/Sit	te: Seattle Ta	coma Airport - Maste	er Plan Up	date	Date	3/18/99			
SOILS Soil Surv	ey Data:								
Map Unit	Name: unm	apped				Drainage	Class:		
						Field Ob	servations Conf	irm Map	ped Type?
Taxonomy	y (Subgroup):					Yes	No	_ NA	<u>x</u>
Profile De	escription:								
Depth (Inches)	Horizon Designation	Matrix Color (Munsell Moist)	_	ttie Color Insell Mo		Mottle Abundan	ce/Contrast		ture, Concretions ospheres, etc.
0-4	Α	10YR 3/2						grave	elly sandy loam
4-9	В	N 3/1				-		Sittv	Sand
9-15	В	N 3/1	10Y	R 5/4		Few. Fine. i	Prominent	Sitty	sand
Hydric So	oil Indicators:								
Hi	stosol				Liste	d on Local	Hydric Soils List	ì	
	stic Epipedon			,	Liste	d on State i	Hydric Soils List		
	ulfidic Odor						al Hydric Soils I	List	
		Moisture Regime				: Moisture F	-		
	educing Condi			-			ig in Sandy Soil	S	
	•	Chroma Colors ontent in Surface Lav	ar	•	Motti		Domadia)		
······································	-	•		-	—— Othe	(Explain if	Remarks)		
		disturbances, local van of indicators meet							
30.11 00.101		" Of malcators meet	rie riyaric	Son Citte	na.				
WETLAI	ND DETER	MINATION							
lydrophyt	ic Vegetation	Present?	Yes x	No		ı	s this Samplin	g Point	Within a Wetla
lydric Soi	is Present?		Yes X	No					
		sent?		_			Yes X	. No	`

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results):

The presence of all three parameters indicate this area is a wetland.

_			_	-		
12 5	222	m	Otr	IV	100	
1 C	31 G		etr	IA,		ı.



Data Plot #:	52-A2
Wetland:	52

Do Normal Circumstances exist on the site? Yes X No Field Is the site significantly disturbed (Atypical Situation)? Yes No X	Manual) Immunity ID: PEM If Plot ID: TB4-A
(Modified from: 1987 COE Wetlands Delineation Methods: Seattle Tacoma Airport - Master Plan Update Date: 3/18/99 Applicant/Owner: Port of Seattle County: King Notestigator: M. Louther, C. Antieau State: WA 2 1987 Method 1989 Method 2 Common Comm	nmunity ID: PEM
Project/Site: Seattle Tacoma Airport - Master Plan Update Date: 3/18/99 Applicant/Owner: Port of Seattle County: King Date: WA Project/Site: Seattle Tacoma Airport - Master Plan Update County: King Date: WA Project/Owner: Port of Seattle County: King Date: WA Project/Owner: Port of Seattle County: King Date: WA Project/Owner: Port of Seattle County: King Date: WA Project/Owner: Port of Seattle County: King Date: WA Project/Owner: Port of Seattle County: King Date: WA Project/Owner: Port of Seattle County: King Date: WA Project/Owner: Port of Seattle County: King Date: WA Project/Owner: Port of Seattle County: King Date: WA Project/Owner: Port of Seattle County: King Date: WA Project/Owner: Port of Seattle County: King Date: WA Project/Owner: Port of Seattle County: Wing Date: WA Project/Owner: Port of Seattle County: King Date: WA Project/Owner: Port of Seattle County: WA Project/Owner: Port of Seattle County: Wing Date: WA Project/Owner: Port of Seattle County: Wing Date: WA Project/Owner: Port of Seattle County: WA Proje	nmunity ID: PEM
pplicant/Owner: Port of Seattle County: King vestigator: M. Louther, C. Antieau State: WA 1987 Method 1989 Method Common Normal Circumstances exist on the site? Yes X No Field the site significantly disturbed (Atypical Situation)? Yes No X	· -
vestigator: M. Louther, C. Antieau State: WA 1987 Method 1989 Method Common Normal Circumstances exist on the site? Yes X No Field the site significantly disturbed (Atypical Situation)? Yes No X	· -
1987 Method 1989 Method Comr Normal Circumstances exist on the site? Yes X No Field the site significantly disturbed (Atypical Situation)? Yes No X	· -
o Normal Circumstances exist on the site? Yes X No Field the site significantly disturbed (Atypical Situation)? Yes No X	· -
the site significantly disturbed (Atypical Situation)? YesNoX	Plot ID: TB4-A
the area a potential Problem Area? Yes No _X	
marks (Explain sample location, disturbances, problem areas):	
tland 52 that was previously delineated by others. GETATION (✓Dominant species are checked) Plant Species	
Agrostis sp. (cf tenuis) 100 Herb FAC	
2 Bellis perennis T Herb NL	-
3 Givcena grandis T Herb OBL	-
rcent of Dominant Species that are OBL, FACW, or FAC cept FAC-). Include species noted (*) as showing 100 repnological adaptations to wetlands. "T" indicates trace. marks (Describe disturbances, relevant local variations, seasonal effects, etc.): indeed area downslope with patch of closed-sheath grass, probably Glyceria sp. Since less than	n 50 % of the vegetation is hydropi
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4 N								Data Pi	ot #:	52-A2
								Wetlan	d:	52
oject/Si	te: Seattle T	acoma Airport - Mas	ter Pia	an Upda	ite	Date:	3/18/99			
OILS oil Sun	vey Data:									
lap Unit	Name: unm	apped					Drainage	Class:		
							Field Ob	servations Confi	m Map	ped Type?
axonom	y (Subgroup):						Yes	No	NA	X
	escription:								, 1964	
epth nches)	Horizon	Matrix Color (Munsell Moist)			Color ell Moist)		Mottle Abundan	ce/Contrast		ure, Concretions ospheres, etc.
1	A	10YR 2/2							sandy	/ sift
5	<u>e</u>	10YR 3/2		10YR 3	V6		Common. M	ledium. Faint	sand	/ Silt
33	В	Gley N 4/1					Few, Fine, f	aint	sandy	/ sift
dric So	oil Indicators:	:								
Hi	stosoi					Listed	on Local I	Hydric Soils List		
Hi	stic Epipedon							Hydric Soils List		
	ulfidic Odor					Listed	on Nation	al Hydric Soils L	st	
Pr	obable Aquic	Moisture Regime			×	Aquic	Moisture F	Regime		
	educing Condi					Organ	ic Streakin	g in Sandy Soils		
	•	Chroma Colors				Mottle	-			
<u> —</u> н	gh Organic Co	ontent in Surface Lay	er			Other	(Explain in	Remarks)		
		disturbances, local								
i color a	and observation	on of indicators meet	the h	ydnc so	il cntena					
								·		
		MINATION								
drophyt	ic Vegetation	Present?	Yes	<u>X</u>	No _		łs	this Sampling	Point 1	Within a Wetlan
dric Soi	ls Present?		Yes	X	No					
	ydrology Pre							Yes X	No	

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): The presence of all three parameters indicate this area is a wetland.

Parametriy In

No evidence of hydrology is present.

1							Plot #:	5	2-B
WET	TLANI	D DETE	RMIN	ATIO	NC	***	iano:	_	
(Modified from: 19	987 C	DE Wet	lands	Deli	ineat	ion Man	ual)		
Project/Site: Seattle Tacoma Airport - Master Plan Un			Date:	3/18			·		
Applicant/Owner: Port of Seattle			County	. — к	ing				
Investigator: C. Antieau			State:	w					
✓ 1987 Method				-					
Do Normal Circumstances exist on the site?	Yes	X	No			Communi	ly ID:	Uplan	d
s the site significantly disturbed (Atypical Situation)?					-	Field Plot	ID: 52	?-B	
	Yes		No	<u>X</u>	_				
s the area a potential Problem Area?	Yes		No	<u> </u>	_				
emarks (Explain sample location, disturbances, probacated in the Tyee Golf Course. Vegetation was not in	blem are	eas):							
EGETATION (✓Dominant species are checked) Plant Species)	% Cover	Stratu	ım	Indica	ntor			
1 Agrostis capillans (tenuis)		100	Herb		FAC				
2 Equisetum telmateia		5	Herb		FACM	/			
- ·									
3 Festuca arundinacea		Trace	Herb		FAC				
4 Festuca pratensis		Trace Trace	Herb		FACU FACU				
Festuca pratensis Hypochaens radicata ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as snowing									
Festuca pratensis Typochaens radicata ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as snowing orphological adaptations to wetlands. To indicates tracemarks (Describe disturbances, relevant local variations to the Washington State Delineation Manual (*)	ons, sea	Trace Trace 100 asonal eff	Herb Herb	c.):	FACU		d by FA	C plar	nts but lack v
Festuca pratensis Typochaens radicata ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates training to the Washington State Delineation Manual (edrology and hydric soils do not satisfy the wetland vegitable.	ons, sea	Trace Trace 100 asonal eff	Herb Herb	C.): eas ti	FACU		d by FA	IC plan	nts but lack v
Festuca pratensis Typochaens radicata Percent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as snowing orphological adaptations to wetlands. To indicates training and indicates training to the Washington State Delineation Manual (adrology and hydric soils do not satisfy the wetland vegical and the Washington State Delineation Manual (adrology and hydric soils do not satisfy the wetland vegical and t	ons, sea	Trace Trace 100 asonal eff 8. Step 13 criteria.	Herb Herb	eas ti	FACU FACU	e dominate			
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Festuca pratensis Typochaens radicata ercent of Dominant Species that are OBL, FACW, except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. Tr indicates training to the Washington State Delineation Manual (excluding to the Washington State Delineation Manual (excluding and hydric soils do not satisfy the wetland vegically excluded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other X No Recorded Data Available Ild Observations: Depth of Surface Water: Depth to Free Water in Pit: >14 (in.)	ons, sea	Trace Trace 100 assonal eff 8. Step 13 contenia. Wetti	Herb Herb Hects, etc 3 (a)) and And Hy	drote drote	FACU FACU	dicators ated ated in Upp ated in Upp Marks anes ant Deposi ated Patterns ated or mo	(Descni er 12 in er 18 in ts s in We	be in Forches iches	
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47					Data P	lot#:	52-B
r,					Wetla	nd:	
Project/Site: Seattle Tacoma Airport - I	Master Plan U	odate	Date:	3/18/ 9 9			
SOILS Soil Survey Data:				-			
Map Unit Name: Unmapped				Drainage	Class:		
	· · · · · · · · · · · · · · · · · · ·			Field Obs	servations Con	firm Map	ped Type?
axonomy (Subgroup):				Yes	No	_ NA	<u>x</u>
Profile Description:							
Depth Horizon Matrix Color Inches) Designation (Munsell Moist)		ottle Color unsell Moist)	Mottle Abundan	ce/Contrast		ure. Concretions, ospheres, etc
1-14 A 10YR 3/3	-			-		Sand	y silt
ydric Soil Indicators:							
Histosol Histic Epipedon Sulfidic Odor Probable Aquic Moisture Regime Reducing Conditions Gleyed or Low-Chroma Colors High Organic Content in Surface	: Layer	etc.):	Listed Listed Aquic Organ Mottle	on State hon National Moisture Faic Streakings	Hydric Soils Lis Hydric Soils Lis al Hydric Soils Regime g in Sandy Soi Remarks)	t List	
Histosol Histic Epipedon Sulfidic Odor Probable Aquic Moisture Regime Reducing Conditions Gleyed or Low-Chroma Colors High Organic Content in Surface	: Layer	etc.):	Listed Listed Aquic Organ Mottle	on State hon National Moisture Faic Streakings	Hydric Soils Lis al Hydric Soils Regime g in Sandy Soi	t List	
Histosol Histic Epipedon Sulfidic Odor Probable Aquic Moisture Regime Reducing Conditions Gleyed or Low-Chroma Colors High Organic Content in Surface emarks (Describe soil disturbances, lo	: Layer	etc.):	Listed Listed Aquic Organ Mottle	on State hon National Moisture Faic Streakings	Hydric Soils Lis al Hydric Soils Regime g in Sandy Soi	t List	
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Histic Epipedon Sulfidic Odor Probable Aquic Moisture Regime Reducing Conditions Gleyed or Low-Chroma Colors	: Layer ocal variations.		Listed Listed Aquic Organ Mottle Other	on State Hon National Moisture Fair Streakins	Hydric Soils Lis al Hydric Soils Regime g in Sandy Soi Remarks)	t List	

All three wetland parameters are absent.

AR 048003

Parametrix, I	in	c.
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				Data Plot	#: <u>G2-A</u>	
WET	LAND DET	ERMINA	TION	Wetland:	G2	
(Modified from: 198				Manuai)		
Project/Site: Seattle Tacoma Airport - Master Plan Upd		_		,		
Applicant/Owner: Port of Seattle	ate	•	3/18/99			_
Investigator: M. Louther, C. Antieau		County:	King			
✓ 1987 Method 1989 Method		State:	WA			-
Do Normal Circumstances exist on the site?	V V		Com	munity ID:	PEM	
	Yes X	. No _	Field	Plot ID: 1	TB2-A	
Is the site significantly disturbed (Atypical Situation)?	Yes	No _	<u>X</u>			
is the area a potential Problem Area?	Yes	No _	<u>x</u>			
Remarks (Explain sample location, disturbances, proble Small seep area below the Tyee Golf Course clubhouse.		angular wa	Mand This is a			
as "TB-2" in the field.	THIS IS A TECLE	angular we	uana. Inisisa) small wetit	and with 5 flags.	It is labele
VEGETATION (✓Dominant species are checked)						
Plant Species	% Cove	r Stratum	Indicator			
✓ 1 Agrostis tenuis	60	Herb	FAC			
2 Bellis perrennis	10	Herb	NL	- -		
3 Hypochaens radicata		Herb	FACU	- -		
y 4 Juncus sp. (seedlings) Percent of Dominant Species that are OBL, FACW, or Output Description: Descrip	50	Herb	FACW	-		
morphological adaptations to wetlands. Thindicates trace Remarks (Describe disturbances, relevant local variation Moss present in trace amounts. Since greater than 50% of	ns, seasonal e	ffects, etc.): Phydrophytic t	he wettend	Magatation and a	- i •
HYDROLOGY			yoropriyile, i	ne welland	vegetation criteria	ıs met.
Recorded Data (Describe in Remarks):	104					
	We	tland Hydi	rology Indicat	ors (Desc	ribe in Remarks):	
Stream, Lake, or Tide Gage Aenal Photograph		Primary In	dicators:			
Other		X	Inundated			
X No Recorded Data Available		X		n Upper 12		
No Necorded Data Available		-	Water Mark	n Upper 18	inches	
			Drift Lines	3		
			Sediment D	eposits		
Field Observations:		X	Drainage Pa		etlands	
Death of Surface Moses						
Depth to Free Water in Pit: >4 (in.)		Secondary	Indicators (2	or more req	uired):	
Depth to Saturated Soil: 0 (in.)		X	Oxidized Ro	ot Channel	s in Upper 12 incl	hes
, viii)			Water-Stain	ed Leaves	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
			_ Local Soil S	urvey Data		
			Other (Expla		rks)	
temarks (As relevant, describe recent precipitation, hydrogen area on slope above area.	rologic modific	ations loc	al variations e	to 1:		
eep area on slope above green. Saturated 0-10" Oxidize	ed rhizosohere	es with livin	er variations, et	lli. Ji		
	_30p016		g root in B san	u layer		

$\overline{\Lambda}$								Data Pi	ot #:	G2-A
•								Wetian	id:	G2
olect/Site	Seattle Ta	acoma Airport - Mast	er Plai	n Updai	te	Date:	3/18/99			
OILS										
ap Unit Nai		anned					Drainage	Class:		
ap com ruc							•	ervations Conf	irm Map	ped Type?
exonomy (S	Subaroup):						Yes	No	NA	X
ofile Desc	•								-	
epth H	lorizon	Matrix Color (Munsell Moist)		Mottle (Muns	Color ell Moist)		Mottle Abundano	æ/Contrast		ure, Concretions ospheres, etc.
. A		10YR 2/2					-		Silty	sand
10 B		N 4/1		10YR 3	/4		Few. Fine, D	estinct	Coan	se sand
Sulfid Proba Redu X Gleye High	sol Epipedon lic Odor able Aquic cing Condi ed or Low-(Organic Co	Moisture Regime	variatio			Listed Listed Aquic Organ Mottle Other	on State Hon National Moisture Roic Streaking	g in Sandy Soil	l List	
ii color and	Other Hydr	ic son moreators me	et tite i	iyunc s	on chiena	l.				-
	DETER	MINATION								
EILAND	/egetation	Present?	Yes	<u> </u>	No .		is	this Samplin	g Point	Within a Wetla
drophytic \	-									
	Present?		Yes	<u>x</u>	No .			Yes X	. No	

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): All three parameters present, therefore the area is a wetland.

Parametrix, Inc	P	ar	ar	n	et	ri)	(.	ir	ıc
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				Data Plot #:	G2-B
WETI	AND DETE	DMINA'	TION	Wetland:	G2 Upland Pi
(Modified from: 1987	/ COE Wet	iands D	elineation	Manual)	
Project/Site: Seattle Tacoma Airport - Master Plan Upda	ite	Date: 3	/18/99		
Applicant/Owner: Port of Seattle		County:	King		
nvestigator: M. Louther, C. Antieau		State:	WA	-,_,	
✓ 1987 Method					
Do Normal Circumstances exist on the site?	Yes X	No	Com	munity ID: Up	pland
		No _	Field	Plot ID: TB2-	B
	Yes	No _	<u>×</u>		
	Yes	No _	<u> </u>		
emarks (Explain sample location, disturbances, problem					
nis is an upland plot located near wetland GB-2, in the Ty	vee Golf Cour.	se. The pl	ot in field is GE	3 -2 .	
	_				
EGETATION (Dominant species are checked)					
Plant Species	% Cover	Stratum	Indicator		
1 Agrostis capillaris (tenuis)	80	Herb	FAC		
2 Bellis perennis	<15	Herb	NL	-	
3 Hypochaens radicata	40	Herb	FACU	-	
4 Plantago lanceolata	t	Herb	FACU+		
5 Infolium repens	<u> </u>	Herb	FAC-		
xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace. emarks (Describe disturbances, relevant local variations	50 s. seasonal eff	ects. etc.)	:		
xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace. emarks (Describe disturbances, relevant local variations	50 s. seasonal eff	ects. etc.)	: ts are hydroph	ytic, the wetlan	d vegetation crite
emarks (Describe disturbances, relevant local variations to wetlands. "T" indicates trace. emarks (Describe disturbances, relevant local variations ass (100%) underlain with other vegetation. Since only 50 timet.	50 s. seasonal eff	ects. etc.) inant plan	: ts are hydroph	ytic, the wetlan	d vegetation crite
except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T' indicates trace. emarks (Describe disturbances, relevant local variations ass (100%) underlain with other vegetation. Since only 50 t met. YDROLOGY	50 s, seasonal eff 2% of the dom	inant plan	ts are hydroph		
coept FAC-). Include species noted (*) as showing prohological adaptations to wetlands. "T" indicates trace. Imarks (Describe disturbances, relevant local variations as (100%) underlain with other vegetation. Since only 50 thmet. **CDROLOGY** Corded Data (Describe in Remarks):	s, seasonal eff ow of the dom	and Hydr	ts are hydroph	ytic, the wetlan	
coept FAC-). Include species noted (*) as showing prohological adaptations to wetlands. "T' indicates trace. marks (Describe disturbances, relevant local variations as (100%) underlain with other vegetation. Since only 50 met. **CDROLOGY** Corded Data (Describe in Remarks): Stream, Lake, or Tide Gage	s, seasonal eff ow of the dom	inant plan	ology Indicate		
ccept FAC-). Include species noted (*) as showing prohological adaptations to wetlands. Thindicates trace, marks (Describe disturbances, relevant local variations is stated (100%) undertain with other vegetation. Since only 50 to met. **TOROLOGY** Corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	s, seasonal eff ow of the dom	and Hydr	ology Indicate	Ors (Describe	in Remarks):
coept FAC-). Include species noted (*) as showing prohological adaptations to wetlands. Thindicates trace, marks (Describe disturbances, relevant local variations is statement (100%) undertain with other vegetation. Since only 50 timet. **TOROLOGY** Corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other	s, seasonal eff ow of the dom	and Hydr	ology Indicated inundated Saturated in	Ors (Describe	in Remarks): es
ccept FAC-). Include species noted (*) as showing prohological adaptations to wetlands. Thindicates trace, marks (Describe disturbances, relevant local variations is stated (100%) undertain with other vegetation. Since only 50 to met. **TOROLOGY** Corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	s, seasonal eff ow of the dom	and Hydr	ology Indicated incompleted in Saturated in	Ors (Describe Upper 12 inch Upper 18 inch	in Remarks): es
coept FAC-). Include species noted (*) as showing prohological adaptations to wetlands. Thindicates trace, marks (Describe disturbances, relevant local variations is statement (100%) undertain with other vegetation. Since only 50 timet. **TOROLOGY** Corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other	s, seasonal eff ow of the dom	and Hydr	ology Indicated in Saturated in Water Mark:	Ors (Describe Upper 12 inch Upper 18 inch	in Remarks): es
coept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. Thindicates trace, imarks (Describe disturbances, relevant local variations ass (100%) underlain with other vegetation. Since only 50 to met. **TOROLOGY** Corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other	s, seasonal eff ow of the dom	and Hydr	ology Indicated in Saturated in Water Mark: Drift Lines	Ors (Describe Oupper 12 inch Oupper 18 inch	in Remarks): es
xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T indicates trace. emarks (Describe disturbances, relevant local variations ass (100%) undertain with other vegetation. Since only 50 at met. YDROLOGY scorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other X No Recorded Data Available	s, seasonal eff ow of the dom	and Hydr	ology Indicated caterated in Saturated in Water Mark: Drift Lines Sediment De	Ors (Describe Oupper 12 inch Oupper 18 inch Seposits	in Remarks): es es
xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. Thindicates trace, emarks (Describe disturbances, relevant local variations ass (100%) underlain with other vegetation. Since only 50 at met. YDROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other X No Recorded Data Available	s, seasonal eff ow of the dom	and Hydr Primary Ind X	ology Indicated caterated in Saturated in Water Mark: Drift Lines Sediment De	Ors (Describe Oupper 12 inch Oupper 18 inch	in Remarks): es es
xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. Thindicates trace, remarks (Describe disturbances, relevant local variations ass (100%) undertain with other vegetation. Since only 50 to met. YDROLOGY Coorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other X No Recorded Data Available Id Observations: Depth of Surface Water: Depth to Free Witters Directions or index (in.)	s. seasonal eff 0% of the dom Wetl	and Hydramary Ind	ology Indicated ficators: Inundated Saturated in Saturated in Water Mark: Drift Lines Sediment Did Drainage Pa	Ors (Describe Oupper 12 inch Oupper 18 inch oupper 18 inch oupper 18 inch	in Remarks): es es
copt FAC-). Include species noted (*) as showing orphological adaptations to wetlands. Thindicates trace, imarks (Describe disturbances, relevant local variations ass (100%) underlain with other vegetation. Since only 50 to met. **TOROLOGY** Corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other X No Recorded Data Available **Todo Observations: Depth of Surface Water: Depth to Free Water in Pit: No Positive Setting of Setting Observations (In.)	s. seasonal eff 0% of the dom Wetl	and Hydramary Ind	ology Indicate dicators: Inundated Saturated in Saturated in Water Mark: Drift Lines Sediment Drainage Pa	Ors (Describe Dupper 12 inch Upper 18 inch s Dupper 18 inch s Dupper 18 inch s	in Remarks): es es nds
coept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T indicates trace. emarks (Describe disturbances, relevant local variations as (100%) underlain with other vegetation. Since only 50 to met. YDROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Id Observations: Depth of Surface Water: Depth to Free Water in Pit: >8 (in.)	s. seasonal eff 0% of the dom Wetl	and Hydramary Ind	ology Indicate dicators: Inundated Saturated in Saturated in Water Mark: Drift Lines Sediment Drainage Palindicators (2 decorated Coxidized Ro	Ors (Describe Dupper 12 inch Dupper 18 inch Seposits Describe in Wetla Or more required of Channels in	in Remarks): es es nds
xcept FAC-). Include species noted (*) as showing orphological adaptations to wetlands. Thindicates trace, emarks (Describe disturbances, relevant local variations as (100%) underlain with other vegetation. Since only 50 at met. YDROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other X No Recorded Data Available Id Observations: Depth of Surface Water: Depth to Free Water in Pit: Depth to Saturated Sell-	s. seasonal eff 0% of the dom Wetl	and Hydramary Ind	ology Indicated ficators: Inundated Saturated in Water Mark: Drift Lines Sediment De Drainage Patindicators (2 de Oxidized Rowater-Staine	Ors (Describe Dupper 12 inch Upper 18 inch s Dupper 19 in	in Remarks): es es nds
emarks (Describe disturbances, relevant local variations oss (100%) undertain with other vegetation. Since only 50 of met. YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other X No Recorded Data Available Available Seld Observations: Depth to Free Water in Pit: Depth to Saturated Self.	s. seasonal eff 0% of the dom Wetl	and Hydramary Ind	ology Indicated ficators: Inundated Saturated in Water Mark: Drift Lines Sediment Dorainage Patindicators (2 of Oxidized Rowater-Stains Local Soil Si	Ors (Describe Dupper 12 inch Upper 18 inch s Dupper 19 in	in Remarks): es es
except FAC-). Include species noted (*) as showing horphological adaptations to wetlands. Trindicates trace. emarks (Describe disturbances, relevant local variations loss (100%) undertain with other vegetation. Since only 50 of met. YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other X No Recorded Data Available eld Observations: Depth of Surface Water: Depth to Free Water in Pit: Depth to Saturated Soil: No Recorded Section No Recorded Section	s. seasonal eff 0% of the dom Weti	and Hydranary Ind	ology Indicated ficators: Inundated Saturated in Saturated in Water Mark: Drift Lines Sediment D. Drainage Palindicators (2 of Oxidized Rowater-Stains Local Soil Significations) Other (Explains)	Drs (Describe Describe D	in Remarks): es es nds
Aerial Photograph Other X No Recorded Data Available Peld Observations: Depth of Surface Water: Depth to Free Water in Pit: Depth to Saturated Soils Depth to Saturated Soils	s. seasonal eff 0% of the dom Weti	and Hydranary Ind	ology Indicated ficators: Inundated Saturated in Saturated in Water Mark: Drift Lines Sediment D. Drainage Palindicators (2 of Oxidized Rowater-Stains Local Soil Significations) Other (Explains)	Drs (Describe Describe D	in Remarks): es es nds

Wetland: G2 Upland Pi 2: 3/18/99 Drainage Class: Field Observations Confirm Mapped Type? Yes No NA _X Mottle
Drainage Class: Field Observations Confirm Mapped Type? Yes No NA _X Mottle Texture. Concretions
Field Observations Confirm Mapped Type? Yes No NAX Mottle Texture. Concretions
Field Observations Confirm Mapped Type? Yes No NAX Mottle Texture. Concretions
Yes No NA _X Mottle Texture Concretions
Mottle Texture. Concretions

- Sitty sand
- sand w/cobble
ed on Local Hydric Soils List
ed on State Hydric Soils List
d on National Hydric Soils List
c Moisture Regime
inic Streaking in Sandy Soils
es
r (Explain in Remarks)

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): All three parameters absent, therefore the area is not a wetland

Hydrophytic Vegetation Present?

Hydric Soils Present?

Wetland Hydrology Present?

Is this Sampling Point Within a Wetland?

Yes ____ No _X

	P	ar	an	net	rix	, In	C.
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Data Plot #:	G4-A
Wetland:	G4

	/BA - 4101 - 4 7 4 7		RMINATI	
	(Modified from: 19	87 COE Weti	ands De	lineation Manual)
roject/Site: Seattle Tacom	a Airport - Master Plan Up	date	Date: 3/1	8/99
pplicant/Owner: Port of	Seattle		County: F	King
vestigator: M. Louther, C.	. Antieau		State: V	VA
1987 Method 198	9 Method		•	Community ID: PEM
o Normal Circumstances ex	ist on the site?	Yes X	No	
the site significantly disturb	ped (Atypical Situation)?	Yes	No X	— Field Plot ID: TD-A
the area a potential Probler	m Area?	Yes X	No	
emarks (Explain sample lo				-
cated in the Tyee Valley Go			-	
- coo m and type valley co	Codice died. Vegelano	ii was not mowa	u.	
GETATION - Domin		-		
Plant Species	nant species are checked)	*/ 6		
A	in)	% Cover	Stratum	Indicator
Agrostis capillaris (tenui 2 Bellis perennis	15 !	80	Herb	FAC
3 Festuca arundinacae		50	Herb Herb	- NL FAC
4 Hypochaeris radicata		i	Herb	FACU
5. Trifolium repens			Herb	FAC:
rcent of Dominant Specie	that are OBL EAGUE			· Ac-
	vetlands. "T" indicates tracinces, relevant local variation		ects. etc)	
marks (Describe disturban ner unknown grasses. A lai	nces, relevant local variations	ns, seasonal effe	ects, etc.): ind. Since g	reater than 50% of the dominant plants are
marks (Describe disturban ner unknown grasses. A lai frophytic, the wetland veget	nces, relevant local variations	ns, seasonal effe	ects, etc.): nd. Since g	reater than 50% of the dominant plants are
marks (Describe disturbanter unknown grasses. A lai drophytic, the wetland veget.	nces, relevant local variation rge cottonwood is present ation critena is met.	ns, seasonal effe to south of wetla	nd. Since g	
marks (Describe disturbanter unknown grasses. A lai rophytic, the wetland veget. DROLOGY corded Data (Describe in	nces, relevant local variation rige cottonwood is present ation criteria is met. Remarks):	ns, seasonal effi to south of wetla Wetla	nd. Since g	ogy Indicators (Describe in Remarks):
marks (Describe disturbanter unknown grasses. A lai rophytic, the wetland veget. DROLOGY: orded Data (Describe in Stream, Lake, o	nces, relevant local variation rige cottonwood is present ation criteria is met. Remarks): or Tide Gage	ns, seasonal effi to south of wetla Wetla	and Hydrol	logy Indicators (Describe in Remarks): cators:
marks (Describe disturbanter unknown grasses. A lair rophytic, the wetland veget. DROLOGY corded Data (Describe in Stream, Lake, o Aerial Photograf)	nces, relevant local variation rige cottonwood is present ation criteria is met. Remarks): or Tide Gage	ns, seasonal effi to south of wetla Wetla	and Hydrol	logy Indicators (Describe in Remarks): cators:
narks (Describe disturbanter unknown grasses. A lair rophytic, the wetland veget. DROLOGY orded Data (Describe in Stream, Lake, o Aerial Photogram, Other	nces, relevant local variation repercontonwood is present ation criteria is met. Remarks): or Tide Gage	ns, seasonal effi to south of wetla Wetla	and Hydrol	logy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches
narks (Describe disturbanter unknown grasses. A lair rophytic, the wetland veget. DROLOGY orded Data (Describe in Stream, Lake, o Aerial Photogram, Other	nces, relevant local variation repercontonwood is present ation criteria is met. Remarks): or Tide Gage	ns, seasonal effi to south of wetla Wetla	and Hydrol	logy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches
marks (Describe disturbanter unknown grasses. A lair rophytic, the wetland veget. DROLOGY corded Data (Describe in Stream, Lake, o Aerial Photogram, Other	nces, relevant local variation repercontonwood is present ation criteria is met. Remarks): or Tide Gage	ns, seasonal effi to south of wetla Wetla	and Hydrol	logy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks
marks (Describe disturbant or unknown grasses. A laid frophytic, the wetland veget. DROLOGY corded Data (Describe in Stream, Lake, o Aerial Photogram, Other	nces, relevant local variation repercontonwood is present ation criteria is met. Remarks): or Tide Gage	ns, seasonal effi to south of wetla Wetla	and Hydrol	logy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
marks (Describe disturbanter unknown grasses. A laidrophytic, the wetland veget. DROLOGY corded Data (Describe in Stream, Lake, o Aerial Photogra; Other X No Recorded Data	nces, relevant local variation repercontonwood is present ation criteria is met. Remarks): or Tide Gage	ns, seasonal effi to south of wetla Wetla	and Hydrol	logy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
marks (Describe disturbanter unknown grasses. A laidrophytic, the wetland veget. IDROLOGY corded Data (Describe in Stream, Lake, o Aerial Photographyther No Recorded Data No Recorded Data described in Stream, Lake, o Aerial Photographyther No Recorded Data described in Stream, Lake, o Aerial Photographyther No Recorded Data described in Stream, Lake, o Aerial Photographyther No Recorded Data described in Stream, Lake, o Aerial Photographyther No Recorded Data described in Stream, Lake, o Aerial Photographyther No Recorded Data described in Stream, Lake, o Aerial Photographyther No Recorded Data described in Stream, Lake, o Aerial Photographyther No Recorded Data described in Stream, Lake, o Aerial Photographyther No Recorded Data described in Stream, Lake, o Aerial Photographyther No Recorded Data described in Stream, Lake, o Aerial Photographyther No Recorded Data described in Stream, Lake, o Aerial Photographyther No Recorded Data described in Stream, Lake, o Aerial Photographyther No Recorded Data described in Stream, Lake, o Aerial Photographyther No Recorded Data described in Stream, Lake, o Aerial Photographyther No Recorded Data described in Stream, Lake, o Aerial Photographyther No Recorded Data described in Stream, Lake, o Aerial Photographyther No Recorded Data described in Stream, Lake, o Aerial Photographyther No Recorded Data described in Stream, Lake, o Aerial Photographyther No Recorded Data described in Stream, Lake, o Aerial Photographyther No Recorded Data described in Stream, Lake, o Aerial Photographyther No Recorded Data described in Stream, Lake, o Aerial Photographyther No Recorded Data described in Stream, Lake, o Aerial Photographyther No Recorded Data described in Stream, Lake, o Aerial Photographyther No Recorded Data described in Stream, Lake, o Aerial Photographyther No Recorded Data described in Stream, Lake, o Aerial Photographyther No Recorded Data described in Stream, Lake, o Aerial Photographyther No Recorded Data described in Stream, Lake, o Aerial Photographyther No Recorde	nces, relevant local variation rige cottonwood is present ation criteria is met. Remarks): or Tide Gage ph ata Available	ns, seasonal effi to south of wetla Wetla	and Hydrol	logy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
marks (Describe disturbanter unknown grasses. A lail rophytic, the wetland veget. DROLOGY corded Data (Describe in Stream, Lake, o Aerial Photogram, Other X No Recorded Data d Observations: Depth of Surface Water:	nces, relevant local variation rige cottonwood is present ation criteria is met. Remarks): or Tide Gage ph ata Available surface (in.)	ons, seasonal effi to south of wetla Wetli P	and Hydrol	logy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
marks (Describe disturbanter unknown grasses. A lai rophytic, the wetland veget. DROLOGY corded Data (Describe in Stream, Lake, o Aerial Photographyther No Recorded Data No Recorded Data No Recorded Data Describe in Stream, Lake, o Aerial Photographyther No Recorded Data No R	nces, relevant local variation repercottonwood is present atton criteria is met. Remarks): Tride Gage ph ata Available surface (in.) 4 (in.)	ons, seasonal effi to south of wetla Wetli P	and Hydrol Immary India X X X econdary In	logy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
marks (Describe disturbanter unknown grasses. A laid drophytic, the wetland veget. //DROLOGY corded Data (Describe in Stream, Lake, o Aerial Photographytic) // No Recorded Data (Describe in Stream, Lake, o Aerial Photographytic) // Other // No Recorded Data (Describe) // Observations: // Depth of Surface Water: // Depth to Free Water in Pit:	nces, relevant local variation rige cottonwood is present ation criteria is met. Remarks): or Tide Gage ph ata Available surface (in.)	ons, seasonal effi to south of wetla Wetli P	and Hydrol Immary India X X X econdary In	logy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches
imarks (Describe disturbanther unknown grasses. A laid drophytic, the wetland veget. YDROLOGY corded Data (Describe in Stream, Lake, o Aerial Photographytic) Other X No Recorded Data (Describe in Stream, Lake, o Aerial Photographytic) Edd Observations: Depth of Surface Water: Depth to Free Water in Pit:	nces, relevant local variation repercottonwood is present atton criteria is met. Remarks): Tride Gage ph ata Available surface (in.) 4 (in.)	ons, seasonal effi to south of wetla Wetli P	and Hydrol rimary Indic X X econdary In	logy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches Water-Stained Leaves
her unknown grasses. A laidrophytic, the wetland veget. DROLOGY corded Data (Describe in Stream, Lake, o Aerial Photograf Other	nces, relevant local variation repercottonwood is present atton criteria is met. Remarks): Tride Gage ph ata Available surface (in.) 4 (in.)	ons, seasonal effi to south of wetla Wetli P	and Hydrol rimary Indic X X econdary II	logy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data
marks (Describe disturbanther unknown grasses. A laid drophytic, the wetland veget. /DROLOGY corded Data (Describe in Stream, Lake, o Aerial Photograthogr	nces, relevant local variation rige cottonwood is present ation criteria is met. Remarks): or Tide Gage ph ata Available surface (in.) 4 (in.) surface (in.)	was, seasonal effects south of wetla Wetla	and Hydrol rimary Indic X X econdary In	logy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)
marks (Describe disturbant of the marks) (DROLOGY) Corded Data (Describe in Stream, Lake, o Aerial Photogrations: Depth of Surface Water: Depth to Saturated Soil: Contact As relevant, describe disturbant of Stream and the marks (As relevant, describe disturbant of Stream and the marks (As relevant, describe and the marks)	nces, relevant local variation rige cottonwood is present ation criteria is met. Remarks): or Tide Gage ph ata Available surface (in.) 4 (in.) surface (in.)	Wetla	and Hydrol Immary Indic	logy Indicators (Describe in Remarks): cators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)

4							Data P	tot #:	G4-A
							Wetia	nd:	G4
roject/S	Site: Seattle Ta	acoma Airport - Master F	lan Update		Date:	3/18/99			<u> </u>
SOILS Soil Sur	rvey Data:								
Map Uni	t Name: unm	apped				Drainage	Class:		
						Field Obs	servations Con	firm Map	ped Type?
Taxonon	ny (Subgroup):					Yes	No	_ NA	<u>x</u>
Profile D	Description:								
Depth (inches)	Horizon Designation	Matrix Color (Munsell Moist)	Mottle C (Munsell			Mottle Abundan	ce/Contrast	_	ure, Concretions ospheres, etc.
)-4	Α	10YR 2/2	_			-		grave	elly sand loam
L -	В	10YR 3/2	10YR 3/6			Few. Faint.	Distinct	Sand	ly loam
lvdric S	ioil Indicators:								
•	ristosol	•			Listed	l on Local i	Hydric Soils Lis	:t	
	Histic Epipedon						lydric Soils Lis		
x s	Sulfidic Odor						al Hydric Soils		
F	Probable Aquic	Moisture Regime		X	Aquic	Moisture F	Regime		
F	Reducing Condi	itions			Organ	ic Streakin	g in Sandy Soi	Is	
	Sieyed or Low-(Chroma Colors		x	Mottle	s			
+	tigh Organic Co	ontent in Surface Layer			Other	(Explain in	Remarks)		
lemarks	(Describe soi	disturbances, local varia	ations, etc.):						
fost root ntena	s in 4 inch surf	ace. Oxidized roots cha	nneis below	4 inche	s. Soil col	or and oth	er hydnc soil in	dicators	meet the hydric .
VETLA	ND DETER	MINATION							
ydrophy	ytic Vegetation	Present? Ye	s <u>x</u>	No		ů:	s this Samplin	g Point	Within a Wetlar
ydric Sc	oils Present?	Ye	s X	No -					
							Yes >	K No	

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): All three parameters present, therefore the area is a welland.

Param	etrix,	inc.
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Soil dry, no water in pit.

			Data Plot #:	G4-B
WE	TLAND DET	FRMINAT	Wetland:	G4 Upland Plot
(Modified from: 1	38/ COE We	tiands De	lineation Manual)	
Project/Site: Seattle Tacoma Airport - Master Plan U	pdate	Date: 3/	18/99	
Applicant/Owner: Port of Seattle		County:	King	
Investigator: M. Louther, C. Antieau		State: \	WA	
1987 Method		•	Community ID: Up	pland
Do Normal Circumstances exist on the site?	Yes X	No	· -	
is the site significantly disturbed (Atypical Situation)?	Y e s	No X	Field Plot ID: TD-B)
Is the area a potential Problem Area?	Yes	No X		
Remarks (Explain sample location, disturbances, pro		NO _^		
	Dieni aleas).			
Located in the Tyee Valley Golf Course area.				
VEGETATION (Dominant species are checked)			
Plant Species	% Cove	r Stratum	Indicator	
1 Agrostis capillans (tenuis)	80	Herb	FAC	
2 Festuca arundinacae	30	Herb	FAC	
3 Hypochaens radicata	<u>t</u> _	Herb	FACU	
4 Plantago lanceolata 5 Trifolium pratense	t	Herb	FACU+	
		Herb Herb	FACU	
Percent of Dominant Species that are OBL, FACW,				
except FAC-). Include species noted (*) as showing norphological adaptations to wetlands. "T" indicates tra	<u>50</u>			
emarks (Describe disturbances, relevant local variations to the located in an expense of fide and fide	ions, seasonal e	ffects, etc.):		
est pit is located in an abandoned "driveway" area; sol vdrophytic, the wetland vegetation critena is not met.	me compaction.	but soils dry.	Since only 50% of the domi	nant plants are
YDROLOGY				
ecorded Data (Describe in Remarks):	We	tland Hydro	logy Indicators (Describe	in Remarks):
Stream, Lake, or Tide Gage		Primary Indi	cators:	
Aerial Photograph			Inundated	
Other			Saturated in Upper 12 inch	es
X No Recorded Data Available			Saturated in Upper 18 inche	
			Water Marks	
			Drift Lines	
			Sediment Deposits	
eld Observations:			Drainage Patterns in Wetlar	nds
Depth of Surface Water: None (in.)		_		
Depth to Free Water in Pit: >18 (in.)	:	Secondary I	ndicators (2 or more required	d) :
Depth to Saturated Soil: >18 (in.)			Oxidized Root Channels in	Upper 12 inches
()			Water-Stained Leaves	

Remarks (As relevant, describe recent precipitation, hydrologic modifications, local variations, etc.):

Local Soil Survey Data Other (Explain in Remarks)

AR 048010

							Data Plot #:	G4-B	
							Wetland:	G4 Upland Plo	
Project/Si	ite: Seattle Ta	acoma Airport - Maste	r Plan I	Update	Date:	3/18/99			
SOILS Soil Sur	vey Data:		_						
Map Unit	Name: unm	apped				Drainage Class	s:		
						Field Observat	ions Confirm M	tapped Type?	
Taxonom	y (Subgroup):					Yes N	lo N	IA <u>X</u>	
rofile D	escription:								
Depth inches)	Horizon Designation	Matrix Color (Munsell Moist)		fottle Color Munsell Moist)		Mottie Abundance/Co		exture, Concretions, hizospheres, etc.	
-10	Α	10YR 3/3				-	gr	avelly sand loam	
0-18	<u> </u>	2.5Y 3/3	10	OYR 3/4		Few. Fine. Distinct	gr	aveliv sand loam	
lydric Sc	oil Indicators:	<u>:</u>							
н	istosol				Listed	on Local Hydro	Soils List		
Н	istic Epipedon					on State Hydric			
s	ulfidic Odor				Listed	on National Hyd	tric Soils List		
	,	Moisture Regime		****		Moisture Regim			
	educing Condi					ic Streaking in S	andy Soils		
	•	Chroma Colors		•	Mottle	-			
-	-	ontent in Surface Laye			Other	(Explain in Rem	arks)		
		disturbances, local va							
ompacte	d layer below	10 inches. Abundant	cobble.	Soil color and	other hyd	ric soil indicators	meet the hydi	nc soil criteria	
VETLA	ND DETER	MINATION							
ydrophy	tic Vegetation	Present?	r e s	No	X	ls this	Sampling Poi	int Within a Wetland	
udric Sa	ils Present?	,	es –	No -	Y				
yunic 30			. 63	110			Yes		

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): All three parameters absent, therefore the area is not a wetland.



Data Plot #:	G5-A1
Wetland	GE

WET					
	LAND DET	FRMINA	TION	Wetland:	G5
(Modified from: 198				Manuall	
		tialius D	emieation	manuai)	
pject/Site: Seattle Tacoma Airport - Master Plan Upd	iate	Date: 3	3/18/99		
plicant/Owner: Port of Seattle		County:	King		
estigator: M. Louther, C. Antieau		State:	WA		
1987 Method			Con	nmunity ID: PE	M
Normal Circumstances exist on the site?	Yes X	No		· -	
he site significantly disturbed (Atypical Situation)?	Yes	No 2	X	d Plot ID: T-3-2	
he area a potential Problem Area?	Yes X	•			
narks (Explain sample location, disturbances, proble		· '*° _			
s data plot is in the Tyee Golf Course.	ciii aicas).				
- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1					
GETATION (Dominant species are checked)					
Plant Species	% Cov	er Stratum			
1 Agrostis capillans (tenuis)			Indicator		
2 Bellis perennis	90 30	Herb Herb	- FAC		
3 Hypochaens radicata	20	Herb	FACU		
4 Juncus effusus	<1	Herb	FACW	-	
Paralla mara	< 5	Herb	FACU+	_	
5 Prunella vulgans					
6 Ranunculus repens ent of Dominant Species that are OBL, FACW, of pept FAC-). Include species noted (*) as showing	FAC 56	Herb	FACW	- -	
Ranunculus repens sent of Dominant Species that are OBL, FACW, or ept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T" indicates trace arks (Describe disturbances, relevant local variation	r FAC 66 e.	effects, etc.)	ı:	ytic, the wetland	vegelation criten
Ranunculus repens tent of Dominant Species that are OBL. FACW, of ept FAC-). Include species noted (*) as showing chological adaptations to wetlands. "T" indicates trace arks (Describe disturbances, relevant local variations in sobnupta at outer edge of plot. Since greater than 50 cm.	r FAC 66 e.	effects, etc.)	ı:	ytic, the wetland	vegetation criten
Ranunculus repens tent of Dominant Species that are OBL. FACW, of ept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T" indicates trace arks (Describe disturbances, relevant local variation in a confidence of plots. Since greater than 50 DROLOGY	r FAC 66 e. ns, seasonal e	effects. etc.)	i: s are hydroph		
Ranunculus repens sent of Dominant Species that are OBL, FACW, of ept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T indicates trace arks (Describe disturbances, relevant local variation is obnupta at outer edge of plot. Since greater than 50 OROLOGY orded Data (Describe in Remarks):	r FAC 66 e. ns, seasonal e	effects, etc.) ninant plants etland Hydr	: s are hydroph rology Indica	vtic, the wetland	
Ranunculus repens sent of Dominant Species that are OBL, FACW, of ept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T" indicates trace arks (Describe disturbances, relevant local variation is obnupta at outer edge of plot. Since greater than 50 DROLOGY orded Data (Describe in Remarks): Stream, Lake, or Tide Gage	r FAC 66 e. ns, seasonal e	effects. etc.)	: s are hydroph rology Indica		
Ranunculus repens ent of Dominant Species that are OBL. FACW, of ept FAC-). Include species noted (*) as showing chological adaptations to wetlands. "T" indicates trace arks (Describe disturbances, relevant local variation is obnupta at outer edge of plot. Since greater than 50 DROLOGY orded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	r FAC 66 e. ns, seasonal e	effects, etc.) innant plants etland Hydri Primary Inc	s are hydroph rology Indica dicators:	tors (Describe	in Remarks):
Ranunculus repens tent of Dominant Species that are OBL. FACW, of ept FAC-). Include species noted (*) as showing shological adaptations to wetlands. "T" indicates trace arks (Describe disturbances, relevant local variation is obnupta at outer edge of plot. Since greater than 50 DROLOGY orded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	r FAC 66 e. ns, seasonal e	effects, etc.) ninant plants etland Hydr	s are hydroph rology Indica dicators: Inundated Saturated	tors (Describe	in Remarks):
Ranunculus repens ent of Dominant Species that are OBL. FACW, of ept FAC-). Include species noted (*) as showing chological adaptations to wetlands. "T" indicates trace arks (Describe disturbances, relevant local variation is obnupta at outer edge of plot. Since greater than 50 DROLOGY orded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	r FAC 66 e. ns, seasonal e	effects, etc.) innant plants etland Hydri Primary Inc	ology Indicadicators: Inundated Saturated Saturated	tors (Describe in Upper 12 inche in Upper 18 inche	in Remarks):
Ranunculus repens tent of Dominant Species that are OBL. FACW, of ept FAC-). Include species noted (*) as showing shological adaptations to wetlands. "T" indicates trace arks (Describe disturbances, relevant local variation is obnupta at outer edge of plot. Since greater than 50 DROLOGY orded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	r FAC 66 e. ns, seasonal e	effects, etc.) innant plants etland Hydri Primary Inc	ology Indicadicators: Inundated Saturated i Saturated i Water Mari	tors (Describe in Upper 12 inche in Upper 18 inche	in Remarks):
Ranunculus repens tent of Dominant Species that are OBL. FACW, of ept FAC-). Include species noted (*) as showing shological adaptations to wetlands. "T" indicates trace arks (Describe disturbances, relevant local variation is obnupta at outer edge of plot. Since greater than 50 DROLOGY orded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	r FAC 66 e. ns, seasonal e	effects, etc.) innant plants etland Hydri Primary Inc	ology Indicadicators: Inundated Saturated in Saturated in Water Mark	n Upper 12 inche n Upper 18 inche s	in Remarks):
Ranunculus repens tent of Dominant Species that are OBL. FACW. or ept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T indicates tractionarks (Describe disturbances, relevant local variation in a consultationary in a consultat	r FAC 66 e. ns, seasonal e	effects, etc.) innant plants etland Hydri Primary Inc	ology Indicadicators: Inundated Saturated i Saturated i Water Mari	n Upper 12 inchen Upper 18 inchens	in Remarks): es
Ranunculus repens tent of Dominant Species that are OBL, FACW, or ept FAC-). Include species noted (*) as showing phological adaptations to wetlands. "T" indicates tractionarks (Describe disturbances, relevant local variation in a consultation of the consultation o	r FAC 66 e. ns, seasonal e	effects, etc.) innant plants etland Hydri Primary Inc. X	ology Indicadicators: Inundated Saturated i Saturated i Water Mari	n Upper 12 inche n Upper 18 inche s	in Remarks): es
Ranunculus repens ent of Dominant Species that are OBL. FACW, of ept FAC-). Include species noted (*) as showing chological adaptations to wetlands. "T' indicates trace arks (Describe disturbances, relevant local variations in sobnupta at outer edge of plot. Since greater than 50 DROLOGY orded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Observations: Option of Surface Water O (in.)	r FAC 66 e. ns, seasonal e	effects, etc.) innant plants etland Hydri Primary Inc X	cology Indicadicators: Inundated Saturated Water Mari Drift Lines Sediment Drainage P	n Upper 12 inchen Upper 18 inc	in Remarks): es es
Ranunculus repens sent of Dominant Species that are OBL. FACW, of ept FAC-). Include species noted (*) as showing chological adaptations to wetlands. "T" indicates trace arks (Describe disturbances, relevant local variations in a cobnupta at outer edge of plot. Since greater than 50 DROLOGY orded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X. No Recorded Data Available Observations: Spith of Surface Water: Ophth to Saturated Settle 10 (in.)	r FAC 66 e. ns, seasonal e	effects, etc.) ininant plants itland Hydr A X Secondary	ology Indicadicators: Inundated Saturated in Saturated in Water Main Drift Lines Sediment Drainage P	n Upper 12 inchen Upper 18 inchens	in Remarks): es es ids
Ranunculus repens ent of Dominant Species that are OBL. FACW, of ept FAC-). Include species noted (*) as showing chological adaptations to wetlands. "T' indicates trace arks (Describe disturbances, relevant local variations in sobnupta at outer edge of plot. Since greater than 50 DROLOGY orded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Observations: Option of Surface Water O (in.)	r FAC 66 e. ns, seasonal e	effects, etc.) innant plants etland Hydri Primary Inc X	cology Indicadicators: Inundated Saturated in Saturated i	n Upper 12 inche n Upper 18 inche ss Deposits attems in Wetlar or more required	in Remarks): es es ids
Ranunculus repens sent of Dominant Species that are OBL. FACW, of ept FAC-). Include species noted (*) as showing chological adaptations to wetlands. "T" indicates trace arks (Describe disturbances, relevant local variations in a cobnupta at outer edge of plot. Since greater than 50 DROLOGY orded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X. No Recorded Data Available Observations: Spith of Surface Water: Ophth to Saturated Settle 10 (in.)	r FAC 66 e. ns, seasonal e	effects, etc.) ininant plants itland Hydr A X Secondary	ology Indicadicators: Inundated Saturated Saturated Drift Lines Sediment Drainage Publicators (2 Oxidized R Water-Stair	n Upper 12 inches Upper 18 inc	in Remarks): es es ids
Ranunculus repens sent of Dominant Species that are OBL. FACW, of ept FAC-). Include species noted (*) as showing chological adaptations to wetlands. "T" indicates trace arks (Describe disturbances, relevant local variations in a cobnupta at outer edge of plot. Since greater than 50 DROLOGY orded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X. No Recorded Data Available Observations: Spith of Surface Water: Ophth to Saturated Settle 10 (in.)	r FAC 66 e. ns, seasonal e	effects, etc.) ininant plants itland Hydr A X Secondary	cology Indicadicators: Inundated Saturated Water Mari Drift Lines Sediment Drainage Pundicators (2 Oxidized R Water-Stair Local Soil S	n Upper 12 inches Upper 18 inc	in Remarks): es es ids

Project/Site: S SOILS Soil Survey Da Map Unit Name		- Master Plan Update	Date:		etiand:	G5
SOILS Soil Survey Da	ata:	- Master Plan Update	Date:	3/18/99		
Soil Survey Da						
•						
Map Unit Name						
	: unmapped			Drainage Class:		
				Field Observations (Confirm Map	ped Type?
Taxonomy (Sut	ogroup):			Yes No	NA	<u>x</u>
Profile Descrip					·	
Depth Hor	izon Matrix Color signation (Munsell Moi	Mottle Colo	•••	Mottie Abundance/Contrast	_	ture, Concretions, cospheres, etc.
)-6 A	10YR 2/1			-	grave	eliv sand loam
5-11 B	10YR 2/1	<u> </u>		•		elly sand toam
1-14 C	10YR 3/2	10YR 3/6		Common, Medium, Distir	nct Stity	sand
lydric Soil Ind	icators:					
Histoso	l		Listed	on Local Hydric Soils	List	
Histic E	pipedon		Listed	on State Hydric Soils	List	
X Sulfidic			Listed	on National Hydric S	oils List	
	e Aquic Moisture Regi	me		Moisture Regime		
	ng Conditions or Low-Chroma Colors		X Mottle	nic Streaking in Sandy	Soils	
	ganic Content in Surfa			(Explain in Remarks)		
	-	local variations, etc.):		(Explain in Floridatio)		
ive roots and o		n 0 to 11 inches. Below	11 inches soil i	mixed (tilled?), slight s	ulfidic odor.	Soil color and othe

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): All three parameters present, therefore the area is a wetland.

Hydric Soils Present?

Wetland Hydrology Present?

 Yes
 X
 No

 Yes
 X
 No

Yes _X No ____

Param	etrix.	inc.
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Data Plot #:	G5-A2
Wetland:	G5

1 1					Data Plot #:	G5-A2
J	WETLAN	D DETE	RMINAT	TION	Wetland:	G5
(Modified	from: 1987 C				Manual)	
roject/Site: Seattle Tacoma Airport - Mast		-				
pplicant/Owner: Port of Seattle	er Fran Opodie		Date: 3			
vestigator: M. Louther, C. Antieau			County: State:	King WA		
1987 Method 1989 Method			State.	WA .		
o Normal Circumstances exist on the site?	V-		A1-	Com	munity ID: P	EM
the site significantly disturbed (Atypical Site	Ye:		No _		Plot ID: T-3-	4
			_	<u>x </u>		
the area a potential Problem Area? marks (Explain sample location, disturba	Ye		No _	_		
EGETATION PODMINANT species are	- Chacked					
Plant Species	cirecked)	% Cover	Stratum	Indicator		
1 Agrostis capillaris (tenuis)		100	Herb	FAC		
		30	Herb	NL	-	
2 Bellis perennis					-	
a hypochaens radicate recent of Dominant Species that are OB (cept FAC-). Include species noted (*) as surphological adaptations to wetlands. "T" includes the companion of the	howing dicates trace. ocal variations, se	50 easonal ef	Herb	FACU	-	
3 Hypochaens radicata recent of Dominant Species that are OB (cept FAC-). Include species noted (°) as surphological adaptations to wetlands. To include the second of the	howing dicates trace. Deal variations, so ty disturbed from	50 easonal ef	fects, etc.)):	: i0% of the dom	inant plants are
Hypochaens radicata reent of Dominant Species that are OB cept FAC-). Include species noted (*) as supphological adaptations to wetlands. "T" in marks (Describe disturbances, relevant to ss - 5%. Turf grass. Vegetation community frophytic, the wetland vegetation critena is a	howing dicates trace. Deal variations, so ty disturbed from	50 easonal ef	fects, etc.)):	60% of the dom	inant plants are
Hypochaens radicata reent of Dominant Species that are OB (cept FAC-). Include species noted (*) as supphological adaptations to wetlands. "T" in marks (Describe disturbances, relevant to ss - 5%. Turf grass. Vegetation communitations to the wetland vegetation criteria is in the communitation of the c	howing dicates trace. Deal variations, so ty disturbed from	50 easonal ef	fects, etc.)): s. Since only 5	·	
Hypochaens radicate recent of Dominant Species that are OB cept FAC-). Include species noted (*) as simphological adaptations to wetlands. "T" in marks (Describe disturbances, relevant to ss - 5%. Turf grass. Vegetation communitations the wetland vegetation criteria is in the community of the wetland vegetation criteria is in the community of the wetland vegetation criteria.	howing dicates trace. Deal variations, so ty disturbed from	50 easonal ef goff cours	fects, etc.)	i: s. Since only 5 rology Indical	i0% of the dom	
3. Hypochaens radicata recent of Dominant Species that are OB recept FAC-). Include species noted (*) as surphological adaptations to wetlands. "T" includes species noted (because of the species of the	howing dicates trace. Deal variations, so ty disturbed from	50 easonal ef goff cours	fects, etc.) se activities	i: s. Since only 5 rology Indical	·	
Hypochaens radicata recent of Dominant Species that are OB cept FAC-). Include species noted (*) as significant adaptations to wetlands. "T" in marks (Describe disturbances, relevant to sis - 5%. Turf grass. Vegetation community frophytic, the wetland vegetation criteria is in TOROLOGY Corded Data (Describe in Remarks): Stream, Lake, or Tide Gage	howing dicates trace. Deal variations, so ty disturbed from	50 easonal ef goff cours	fects, etc.) se activities	i: s. Since only 5 rology Indicat dicators: Inundated	·	e in Remarks):
Hypochaens radicata recent of Dominant Species that are OB cept FAC-). Include species noted (*) as simphological adaptations to wetlands. "T" in marks (Describe disturbances, relevant to ss - 5%. Turf grass. Vegetation community frophytic, the wetland vegetation criteria is in TOROLOGY Corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	howing dicates trace. Deal variations, so ty disturbed from	50 easonal ef goff cours	fects, etc.) se activities land Hydr	s. Since only 5 rology Indicat dicators: Inundated Saturated i Saturated i	n Upper 12 ind n Upper 18 ind	e in Remarks): hes
Hypochaens radicata recent of Dominant Species that are OB recept FAC-). Include species noted (*) as supphological adaptations to wetlands. "T" in marks (Describe disturbances, relevant to see - 5%. Turf grass. Vegetation communitations to the wetland vegetation criteria is a CDROLOGY Corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	howing dicates trace. Deal variations, so ty disturbed from	50 easonal ef goff cours	fects, etc.) se activities land Hydr	s. Since only 5 rology Indicat dicators: Inundated Saturated i Saturated i Water Man	n Upper 12 ind n Upper 18 ind	e in Remarks): hes
a Hypochaens radicata recent of Dominant Species that are OB recept FAC-). Include species noted (*) as supphological adaptations to wetlands. "T" in marks (Describe disturbances, relevant to ress - 5%. Turf grass. Vegetation communitations to the wetland vegetation criteria is a CDROLOGY Corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	howing dicates trace. Deal variations, so ty disturbed from	50 easonal ef goff cours	fects, etc.) se activities land Hydr	ology Indicat dicators: Inundated Saturated i Saturated i Water Man	n Upper 12 ind n Upper 18 ind	e in Remarks): hes
a Hypochaens radicata From the Mypochaens radicate From the Mypo	howing dicates trace. Deal variations, so ty disturbed from	50 easonal ef goff cours	fects, etc.) se activities land Hydr	s. Since only 5 sology Indicat dicators: Inundated Saturated i Saturated i Water Mani Drift Lines Sediment D	n Upper 12 incl n Upper 18 incl s Deposits	e in Remarks): hes hes
a Hypochaens radicata freent of Dominant Species that are OB (cept FAC-). Include species noted (*) as supphological adaptations to wetlands. "Thin marks (Describe disturbances, relevant to less - 5%. Turf grass. Vegetation community drophytic, the wetland vegetation criteria is a Vegetation criteria is a Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	thowing dicates trace. ocal variations, sity disturbed from not met.	50 easonal ef goff cours	fects, etc.) se activities land Hydr Primary Inc	s. Since only 5 sology Indicat dicators: Inundated Saturated i Saturated i Water Mani Drift Lines Sediment D	n Upper 12 ind n Upper 18 ind	e in Remarks): hes hes
Hypochaens radicate recent of Dominant Species that are OB cept FAC-). Include species noted (*) as suppological adaptations to wetlands. "T in marks (Describe disturbances, relevant to ss - 5%. Turi grass. Vegetation communitations the wetland vegetation criteria is in the wetland vegetation criteria is in the wetland vegetation criteria is in the wetland vegetation criteria is in the wetland vegetation criteria is in the wetland vegetation criteria is in the wetland vegetation criteria is in the wetland vegetation criteria is in the wetland vegetation criteria is in the wetland vegetation criteria is in the wetland vegetation criteria is in the wetland vegetation criteria. Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available d Observations: Depth of Surface Water: none	thowing dicates trace. ocal variations, sity disturbed from not met.	easonal ef	land Hydr Primary Inc	cology Indicated in Saturated in Water Manual Drift Lines Sediment Drainage P	n Upper 12 incl n Upper 18 incl s Deposits atterns in Wetla	e in Remarks): hes hes
a Hypochaens radicata From the Mypochaens radicate From the Mypo	chowing dicates trace. cal variations, sity disturbed from not met. (in.)	easonal ef	land Hydr Primary Inc	s. Since only 5 rology Indicated dicators: Inundated Saturated in Water Main Drift Lines Sediment Drainage P	n Upper 12 incl n Upper 18 incl ss Deposits atterns in Wetta	e in Remarks): hes hes ands
a Hypochaens radicata From the Mypochaens radicate From the Mypo	thowing dicates trace. ocal variations, sity disturbed from not met.	easonal ef	land Hydr Primary Inc	s. Since only 5 rology Indicated dicators: Inundated Saturated if Saturated in Water Main Drift Lines Sediment Drainage P Indicators (2 Oxidized Ri	n Upper 12 inci n Upper 18 inci ss Deposits atterns in Wetla or more require not Channels in	e in Remarks): hes hes
a hypochaens radicate ercent of Dominant Species that are OB except FAC-). Include species noted (*) as something properties of the proper	chowing dicates trace. cal variations, sity disturbed from not met. (in.)	easonal ef	land Hydr Primary Inc	s. Since only 5 rology Indicated dicators: Inundated Saturated in Water Main Drift Lines Sediment Drainage P	n Upper 12 inci n Upper 18 inci is Deposits atterns in Wetla or more require pot Channels in led Leaves	e in Remarks): hes hes ands

								Data Plot #:	G5-A2
								Wetland:	G5
roject/S	Site: Seattle Ta	acoma Airport - Mas	ter Pla	n Upda	te	. Date:	3/18/99		
SOILS Soil Sur	vey Data:								
Map Uni	t Name: unm	apped					Drainage Cla	SS:	
							Field Observ	ations Confirm M	apped Type?
Taxonon	ny (Subgroup):						Yes	No N	4 X
	escription:								<u> </u>
Depth (inches)	Horizon	Matrix Color (Munsell Moist)		Mottle (Muns	Color ell Moist)	Mottle Abundance/C		exture, Concretions
-10	Α	10YR 2/1		-				sa	ndy silt
10-15	В	5Y 3/1						Sa	nd
lvdric S	oil Indicators:							••••	
•	tistosol					l isteri	on Local Hydi	ric Soile Liet	
	listic Epipedon						on State Hydr		
	Sulfidic Odor						-	ydnc Soils List	
P	robable Aquic	Moisture Regime					Moisture Regi		
R	Reducing Condi	tions				Organ	ic Streaking in	Sandy Soils	
_ <u>X</u> G	Sleyed or Low-(Chroma Colors				Mottle	5		
н	ligh Organic Co	ontent in Surface Lay	/er			Other	(Explain in Rei	marks)	
lemarks	(Describe soil	disturbances, local	variati	ons, etc	.):				
lign orga	nic content in L	upper artificial top so	il. Soil	color a	nd other	hydric soil i	ndicators mee	t the hydric soil c	ntena.
VETLA	ND DETER	MINATION							
ydrophy	rtic Vegetation	Present?	Yes	X	No		is th	is Sampling Poi	nt Within a Wetla
ydric Sc	ils Present?		Yes	$\overline{\mathbf{x}}$	No				
	dydrology Pre							Yes X	No

Vegetation meets technical criteria of the ACOE 1987 Wetland Delineation Manual 35,b,(1). Strong soil and wetland hydrology present.

Para	met	rix.	Inc.
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						1	Data Piot	#:	G5-B
-	WET	TLANI	DETE	RMINA	TION	,	Wetland:		G5 Upland Pl
	(Modified from: 19					tion M	lanııal\		
rouget/Site: Seettle Tee			1101			UII N	raiiual)		
roject/Site: Seattle Tacoma		odate		•	3/18/99	·			
Applicant/Owner: Port of S				County:	King				
evestigator: M. Louther, C.				State:	WA				
1987 Method						Comn	nunity ID:	Upl	and
o Normal Circumstances exis		Yes		No _	X	Field I	Plot ID:	T1-1	
the site significantly disturbe	d (Atypical Situation)?	Yes		No _	<u>x</u>				
the area a potential Problem	Area?	Yes	_x_	No					
ansect 1 Plot 1 in Tyee Golf (Course.								
	nt species are checked)								
Plant Species			% Cover	Stratum	Indi	cator			
1 Agrostis sp.			25	Herb	FAC	:			
					NL				
Bellis perennis 3 Poa sp recent of Dominant Species (cept FAC-). Include species orphological adaptations to we marks (Describe disturbance)	noted (*) as snowing etlands. "T" indicates traces, relevant local variations.	ice. ons, sea	25 25 50 asonal eff	Herb Herb	NL):				
Bellis perennis 3 Poa sp recent of Dominant Species cept FAC-). Include species imphological adaptations to we marks (Describe disturbanc is is a constructed golf course	noted (*) as snowing etlands. "T" indicates tractes, relevant local variation with drainage features.	ice. ons, sea	25 50 asonal ef	Herb	NL):	s. Since	only 50%	of the	e dominant plant
2 Beliis perennis 3 Poa sp reent of Dominant Species cept FAC-). Include species rphological adaptations to we marks (Describe disturbanc is is a constructed golf course frophytic, the wetland vegeta	noted (*) as snowing etlands. "T" indicates tractes, relevant local variation with drainage features.	ice. ons, sea	25 50 asonal ef	Herb	NL):	s. Since	only 50%	of the	e dominant plant
Bellis perennis Poa sp recent of Dominant Species recept FAC-). Include species rephological adaptations to we marks (Describe disturbanc is is a constructed golf course drophytic, the wetland vegeta	noted (*) as snowing etlands. "T" indicates traces, relevant local variation with drainage features, tion criteria is not met.	ice. ons, sea	50 asonal effation is se	Herb	NL): ' species				
Bellis perennis Poa sp recent of Dominant Species cept FAC-). Include species imphological adaptations to we marks (Describe disturbanc is is a constructed golf course irrophytic, the wetland vegeta	noted (*) as snowing etlands. "T" indicates traces, relevant local variable with drainage features, tion criteria is not met.	ice. ons, sea	50 asonal effort is se	Herb	NL species	ndicato			e dominant plant
Beliis perennis 3 Poa sp recent of Dominant Species recent FAC-). Include species rephological adaptations to we marks (Describe disturbanc is is a constructed golf course drophytic, the wetland vegeta DROLOGY corded Data (Describe in Recent Page 1981)	noted (*) as snowing etlands. "T" indicates traces, relevant local variable with drainage features, tion criteria is not met. Remarks): Tide Gage	ice. ons, sea	50 asonal effort is se	Herb dects, etc.	NL): species rology i	ndicato			
Bellis perennis 3 Poa sp recent of Dominant Species recept FAC-). Include species rephological adaptations to we marks (Describe disturbanc is is a constructed golf course drophytic, the wetland vegeta "DROLOGY corded Data (Describe in R Stream, Lake, or	noted (*) as snowing etlands. "T" indicates traces, relevant local variable with drainage features, tion criteria is not met. Remarks): Tide Gage	ice. ons, sea	50 asonal effort is se	Herb dects, etc.	nl.): f species rology I dicators	ndicato : dated	rs (Des	cribe i	n Remarks):
Bellis perennis Poa sp recent of Dominant Species cept FAC-). Include species rphological adaptations to we marks (Describe disturbanc is is a constructed golf course drophytic, the wetland vegetal TOROLOGY Corded Data (Describe in R Stream, Lake, or Aerial Photograpi	noted (*) as snowing plands. "T" indicates tra ces, relevant local variation with drainage features. It in criteria is not met. Remarks): Tide Gage	ice. ons, sea	50 asonal effort is se	Herb fects, etc. peded turn fend Hyde	rology i dicators Inuni Satu Satu	ndicato : dated rated in rated in	Upper 12	cribe i	n Remarks):
Bellis perennis Poa sp recent of Dominant Species recept FAC-). Include species phological adaptations to we marks (Describe disturbance is is a constructed golf course drophylic, the wetland vegetal /DROLOGY corded Data (Describe in R Stream, Lake, or Aerial Photograph Other	noted (*) as snowing plands. "T" indicates tra ces, relevant local variation with drainage features. It in criteria is not met. Remarks): Tide Gage	ice. ons, sea	50 asonal effort is se	Herb fects, etc. peded turn fend Hyde	rology i dicators Inuni Satu Water	ndicato : dated rated in rated in er Marks	Upper 12	cribe i	n Remarks):
Bellis perennis Poa sp recent of Dominant Species recept FAC-). Include species phological adaptations to we marks (Describe disturbance is is a constructed golf course drophylic, the wetland vegetal /DROLOGY corded Data (Describe in R Stream, Lake, or Aerial Photograph Other	noted (*) as snowing plands. "T" indicates tra ces, relevant local variation with drainage features. It in criteria is not met. Remarks): Tide Gage	ice. ons, sea	50 asonal effort is se	Herb fects, etc. peded turn fend Hyde	rology i dicators Inuni Satu Wate Drift	ndicato : dated rated in rated in er Marks Lines	Upper 12	cribe i	n Remarks):
Bellis perennis 3 Poa sp Procept FAC-). Include species orphological adaptations to we marks (Describe disturbancies is a constructed golf course drophytic, the wetland vegetal (DROLOGY) Corded Data (Describe in R Stream, Lake, or Aerial Photography Other	noted (*) as snowing plands. "T" indicates tra ces, relevant local variation with drainage features. It in criteria is not met. Remarks): Tide Gage	ice. ons, sea	50 asonal effort is se	ects, etc. eeded turi	rology i dicators Inuni Satu Wate Drift Sedii	ndicato : dated rated in rated in er Marks Lines ment De	Upper 12 Upper 18	cribe ii	n Remarks): es
Bellis perennis Poa sp recent of Dominant Species recept FAC-). Include species rephological adaptations to we marks (Describe disturbance is is a constructed golf course drophytic, the wetland vegeta /DROLOGY corded Data (Describe in R Stream, Lake, or Aenal Photograpi Other X No Recorded Data d Observations:	noted (*) as snowing plands. "T" indicates tra ces, relevant local variation with drainage features. It in criteria is not met. Remarks): Tide Gage	ice. ons, sea	50 asonal effort is se	Herb fects, etc. peded turn fend Hyde	rology i dicators Inuni Satu Wate Drift Sedii	ndicato : dated rated in rated in er Marks Lines ment De	Upper 12	cribe ii	n Remarks): es
Beliis perennis 3 Poa sp reent of Dominant Species cept FAC-). Include species imphological adaptations to we marks (Describe disturbances is a constructed golf course irrophytic, the wetland vegeta (DROLOGY corded Data (Describe in R Stream, Lake, or Aenal Photograpi Other X No Recorded Data d Observations: Depth of Surface Water:	noted (*) as snowing etlands. "T" indicates traces, relevant local variable with drainage features, tion criteria is not met. Remarks): Tide Gage	ice. ons, sea	50 asonal eff ation is se	lects, etc.	rology I dicators Inun Satu Satu Wate Drift Sedii Drain	ndicato : dated rated in rated in er Marks Lines ment De	Upper 12 Upper 18 upper 18 eposits	cribe ii	n Remarks): is is
Beliis perennis Poa sp recent of Dominant Species recept FAC-). Include species rephological adaptations to we marks (Describe disturbance is is a constructed golf course drophytic, the wetland vegeta PROLOGY Corded Data (Describe in R Stream, Lake, or Aenal Photograpi Other X No Recorded Data d Observations: Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as snowing etlands. "T" indicates traces, relevant local variable with drainage features. tion criteria is not met. Remarks): Tide Gage a Available O (in.) 10 (in.)	ice. ons, sea	50 asonal eff ation is se	ects, etc. eeded turi	rology i dicators Inuni Satu Wate Drift Sedii Drain	ndicato dated rated in rated in rated in rated in er Marks Lines ment De lage Pal	Upper 12 Upper 18 upper 18 upper 18 upposits	cribe ii Pinche Inche Vetlan	n Remarks): es es es
Bellis perennis Poa sp Procent of Dominant Species recept FAC-). Include species prohological adaptations to we marks (Describe disturbance is is a constructed golf course drophytic, the wetland vegeta (DROLOGY Corded Data (Describe in R Stream, Lake, or Aerial Photograpi Other X No Recorded Data d Observations: Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as snowing etlands. "T" indicates traces, relevant local variable with drainage features, tion criteria is not met. Remarks): Tide Gage	ice. ons, sea	50 asonal eff ation is se	lects, etc.	rology i dicators Inuni Satu Satu Wate Drift Sedii Drain Indicat	ndicato : dated rated in rated in er Marks Lines ment De lage Pal	Upper 12 Upper 18 Eposits Items in V	cribe ii Pinche Inche Vetlan Quired	n Remarks): is is
Bellis perennis 3 Poa sp ercent of Dominant Species except FAC-). Include species prophological adaptations to we emarks (Describe disturbance dis is a constructed golf course drophytic, the wetland vegetal YDROLOGY corded Data (Describe in R Stream, Lake, or Aenal Photograph Other	noted (*) as snowing etlands. "T" indicates traces, relevant local variable with drainage features. tion criteria is not met. Remarks): Tide Gage a Available O (in.) 10 (in.)	ice. ons, sea	50 asonal eff ation is se	lects, etc.	rology i dicators Inuna Satu Satu Wate Drift Sedii Drain Indicat Oxidi	ndicato : dated rated in rated in er Marks Lines ment De lage Pal ors (2 o zed Roc r-Staine	Upper 12 Upper 18 upper 18 upper 18 upposits	cribe ii Prinche Prinche Vetlan Quired	n Remarks): es es es

								Data Pi	ot #:	G5-B
L.								Wetian	ıd:	G5 Upland Plo
Project/Site:	Seattle Ta	acoma Airport - Mas	er Pla	n Updai	te	Date	e: 3/1 8/9 9			
SOILS Soil Survey	Data:					_				
Map Unit Na	me: unm	apped					Drainage (Class:		
							Field Obse	ervations Conf	irm Map	pped Type?
Taxonomy (S	Subgroup):						Yes	No	_ NA	x
	lorizon	Matrix Color (Munsell Moist)	-	Mottle (Muns	Color ell Mois	it)	Mottle Abundano	e/Contrast		ure, Concretions, ospheres, etc.
-5 A		10YR 2/2		-			· ·		Sano	ly silt loam
-10 B		10YR 3/6							Silty	sand
0-		10YR 2/2							Sitty	sand
lydric Soil I Histo					_			ydric Soils Lis		
	ic Odor				_			ydnc Soils List I Hydric Soils I		
		Moisture Regime			_		c Moisture R	•		
Redu	cing Condi	itions				Orga	ınıc Streaking	in Sandy Soil	s	
Gleye	ed or Low-(Chroma Colors			_	Mott	les			
—— High	Organic Co	ontent in Surface La	/er			Othe	r (Explain in I	Remarks)		
		disturbances, local diwood chips in soil p			•	indicators (present.			
VETLAND	DETER	MINATION								
ydrophytic '	Vegetation	Present?	Yes		No		is	this Samplin	g Point	Within a Wetlan
ydric Soils I	Present?		Yes	×	No			Yes	- No	

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): Soil highly disturbed. This plot is located just outside wetland boundary.

P	ar	am	etrix	Inc
•	~,,	CHILL	CHIA	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,



Data Plot #:	G7-A
Wetland:	G 7

(Modified from: 1987) Dject/Site: Seattle Tacoma Airport - Master Plan Update plicant/Owner: Port of Seattle estigator: K. Dunkin, M. Louther 1987 Method 1989 Method Normal Circumstances exist on the site? Y the site significantly disturbed (Atypical Situation)? Yes	coe we	Date: 3 County: State: No No No No	
pject/Site: Seattle Tacoma Airport - Master Plan Update plicant/Owner: Port of Seattle estigator: K. Dunkin, M. Louther 1987 Method 1989 Method Normal Circumstances exist on the site? Y ne site significantly disturbed (Atypical Situation)? Y ne area a potential Problem Area? Y narks (Explain sample location, disturbances, problem is plot is located in Wetland G7 (flagged in the field as We	es X es es	Date: 3 County: State: No No No No	WA Community ID: PSS/PFO Field Plot ID: DpS2
plicant/Owner: Port of Seattle estigator: K. Dunkin, M. Louther 1987 Method 1989 Method Normal Circumstances exist on the site? Y ne site significantly disturbed (Atypical Situation)? Y ne area a potential Problem Area? Y nearks (Explain sample location, disturbances, problem is plot is located in Wetland G7 (flagged in the field as We	es X	County: State: No No _> No _>	Community ID: PSS/PFO Field Plot ID: DpS2
estigator: K. Dunkin, M. Louther 1987 Method 1989 Method Normal Circumstances exist on the site? Y ne site significantly disturbed (Atypical Situation)? Y ne area a potential Problem Area? Y nearks (Explain sample location, disturbances, problem is plot is located in Wetland G7 (flagged in the field as We	es es areas):	State:	Community ID: PSS/PFO Field Plot ID: DpS2
1987 Method 1989 Method Normal Circumstances exist on the site? Y ne site significantly disturbed (Atypical Situation)? You ne area a potential Problem Area? You nearks (Explain sample location, disturbances, problem is plot is located in Wetland G7 (flagged in the field as We	es es areas):	No	Community ID: PSS/PFO Field Plot ID: DpS2
Normal Circumstances exist on the site? You site significantly disturbed (Atypical Situation)? You are a potential Problem Area? You marks (Explain sample location, disturbances, problem is plot is located in Wetland G7 (flagged in the field as Wetland G7)	es es areas):	No >	Field Plot ID: DpS2
ne site significantly disturbed (Atypical Situation)? You he area a potential Problem Area? You harks (Explain sample location, disturbances, problem is plot is located in Wetland G7 (flagged in the field as Wetland G7)	es es areas):	No >	Field Plot ID: DpS2
ne area a potential Problem Area? Yonarks (Explain sample location, disturbances, problem is plot is located in Wetland G7 (flagged in the field as We	es	No <u>></u>	X
ne area a potential Problem Area? Yonarks (Explain sample location, disturbances, problem is plot is located in Wetland G7 (flagged in the field as We	es	No <u>></u>	
narks (Explain sample location, disturbances, problem is plot is located in Wetland G7 (flagged in the field as We	areas):	-	<u>`</u>
plot is located in Wetland G7 (flagged in the field as We	areas). itiand S/S:	S), south of	
Plant Species	% Cove	er Stratum	Indicator
1 Agrostis capillaris (tenuis)	65	Herb	FAC
2 Holcus ianatus	- 1	Herb	FAC
3 Hypochaens radicata	2	Herb	FACU
4 Juncus effusus	25	Herb	FACW
5 Ainus rubra (s)	_ 5	Shrub	FAC
6 Populus balsamifera ssp. trichocarpa (s) 7 Rubus discolor	= 35 5	Shrub Shrub	FAC
arks (Describe disturbances, relevant local variations, segreater than 50% of the dominant plants are hydrophyti	seasonal e	effects, etc.): land vegetat	tion criteria is met
ROLOGY			
rded Data (Describe in Remarks):	We	tiand Hude	ology Indicators (C
Stream, Lake, or Tide Gage		Primary ind	ology Indicators (Describe in Remarks):
Aerial Photograph		X	Inundated
Other		$\frac{\hat{x}}{x}$	Saturated in Upper 12 inches
X No Recorded Data Available			Saturated in Upper 12 inches
			Water Marks
			Drift Lines
		X	Sediment Deposits
Observations:		x	Drainage Patterns in Wetlands
pth of Surface Water 1-2 (in.)		Secondari	lediana, re
pth to Free Water in Pit: none (in.)			Indicators (2 or more required):
oth to Saturated Soil. 0-6 (in.)		X	Oxidized Root Channels in Upper 12 inches
			Water-Stained Leaves
			Local Soil Survey Data
			Other (Explain in Remarks)
rks (As relevant, describe recent precipitation, hydrologis of standing water in the product			

								Data Piot #	t:	G7-A
L								Wetland:		G 7
roject/S	Site: Seattle Ta	acoma Airport - Master	Pla	n Updat	<u>e</u>	Date:	3/23/99			
SOILS Soil Sur	rvey Data:									
Map Uni	it Name: unm	apped					Drainage Class	:		
							Field Observation	ons Confirm	Мар	ped Type?
axonor	ny (Subgroup):						Yes N	°	NA	<u> </u>
rofile [Description:									
epth incnes)	Horizon Designation	Matrix Color (Munsell Moist)		Mottle (Munse	Color ell Moist)		Mottle Abundance/Cor			ure, Concretions ospheres, etc.
-12	A	5GY 6/1		5Y 4/2.	7.5YR 5/6		Common, Medium.	Distinct	prave	ily sand loam
2-15	<u>B</u>	2.5Y 5/3		7.5Y 5/4	. 7 5YR 5/4		Common, Medium,	Distinct	grave	iliv dav loam
vdric S	ioil Indicators	:								
-	Histosol					Listed	on Local Hydric	Soils List		
<u> </u>	Histic Epipedon					Listed	on State Hydric	Soils List		
	Sulfidic Odor					Listed	l on National Hyd	nc Soils List		
F	Probable Aquic	Moisture Regime			X	_ Aquic	Moisture Regime	•		
	Reducing Cond						nic Streaking in Si	andy Soils		
	Sleyed or Low-				X	_ Mottle	· -			
—	righ Organic Ci	ontent in Surface Layer				_ Other	(Explain in Rema	arks)		
		I disturbances, local vai								
-12 inch	es is saturated	. below 12 inches soils	very	/ moist.	Hydric soi	indicati	ors present.			
VETLA	AND DETER	MINATION								
vdroph	ytic Vegetatio	Present?	es	×	No		le thie	Sampling P	oin.	Within a Wetla
	,					_		ibinig F	Jiiil	***************************************
vdric S	oils Present?	·	es	Х	No					

This data plot is located near flags SS1 and S1 near northern portion of wetland. All three wetland parameters present, therefore the area is a wetland



				Data Plot #:	G7-B
WET	LAND DE	TEDMIN/	TION	Wetland:	G7 Upland Plo
(Modified from: 198				Manual)	
(MODINED NOM: 196	or COE W	reciailus i	Delineation	mariuai)	
Project/Site: Seattle Tacoma Airport - Master Plan Upd	ate	Date:	3/23/99		
Applicant/Owner: Port of Seattle		County:	King		
nvestigator: K. Dunkin, M. Louther		State:	WA		
			Соп	munity ID: Up	pland
Do Normal Circumstances exist on the site?	Yes X	No .	— Field	Piot ID: DpS	1
s the site significantly disturbed (Atypical Situation)?	Yes	_ No	<u> </u>		
the area a potential Problem Area?	Yes	No	×		
emarks (Explain sample location, disturbances, problem	em areas):	_			
this area is located where the wetland was a gravel/borrags S-25 and SS 16, wetland renamed as Wetland E4. **EGETATION** (**Dominant species are checked)	Other upland	d vegetation	not in plot incli	uded A. menzisi	i.
Plant Species	% Co	wer Stratu	m Indicator		
Agrostis capillans (tenuis)	30	Herb	FAC		
2 Cytisus scoparius	25	Shrub	NL	_	
3 Rubus discolor	10	Shrub	FACU	_	
			EAC		
except FAC-). Include species noted (*) as showing lorphological adaptations to wetlands. "T" indicates trace emarks (Describe disturbances, relevant local variation	ce. ons, seasona				
ercent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variation ince only 50% of the plants are hydrophytic, the wetland	or FAC	offects, etc.	c.):		
ercent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variation ince only 50% of the plants are hydrophytic, the wetland YDROLOGY	or FAC ce. ons, seasona d plant criteri	offects, etc a is not sati	c.): sfied		
ercent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variation ince only 50% of the plants are hydrophytic, the wetland YDROLOGY (Describe in Remarks):	or FAC ce. ons, seasona d plant criteri	offects, etc is is not sati	c.): sfied. drology Indica	tors (Describe	e in Remarks):
ercent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variation ince only 50% of the plants are hydrophytic, the wetland YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage	or FAC ce. ons, seasona d plant criteri	offects, etc is is not sati	c.): sfied	tors (Describe	n Remarks):
ercent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracemarks (Describe disturbances, relevant local variation ince only 50% of the plants are hydrophytic, the wetland YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	or FAC ce. ons, seasona d plant criteri	offects, etc is is not sati	c.): sfied. drology Indica Indicators: Inundated		
ercent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tracteristics (Describe disturbances, relevant local variation ince only 50% of the plants are hydrophytic, the wetland YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	or FAC ce. ons, seasona d plant criteri	offects, etc is is not sati	drology Indica Indicators: Inundated Saturated	in Upper 12 incl	nes
ercent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace emarks (Describe disturbances, relevant local variation ince only 50% of the plants are hydrophytic, the wetland YDROLOGY ecorded Data (Describe in Remarks):	or FAC ce. ons, seasona d plant criteri	offects, etc is is not sati	drology Indica Indicators: Inundated Saturated Saturated	in Upper 12 incl in Upper 18 incl	nes
ercent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tractermarks (Describe disturbances, relevant local variation ince only 50% of the plants are hydrophytic, the wetland YDROLOGY accorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	or FAC ce. ons, seasona d plant criteri	offects, etc is is not sati	drology Indica Indicators: Inundated Saturated Saturated Water Mar	in Upper 12 incl in Upper 18 incl	nes
ercent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates tractering in the series of the plants are hydrophytic, the wetland YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	or FAC ce. ons, seasona d plant criteri	offects, etc is is not sati	drology Indica Indicators: Inundated Saturated Saturated Water Mar Drift Lines	in Upper 12 incl in Upper 18 incl ks	nes
ercent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace emarks (Describe disturbances, relevant local variation ince only 50% of the plants are hydrophytic, the wetland YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other X No Recorded Data Available	or FAC ce. ons, seasona d plant criteri	offects, etc is is not sati	drology Indica Indicators: Inundated Saturated Saturated Water Mar Drift Lines Sediment I	in Upper 12 incl in Upper 18 incl ks	nes nes
ercent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing torphological adaptations to wettands. "T" indicates trace emarks (Describe disturbances, relevant local variation ince only 50% of the plants are hydrophytic, the wetland YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	or FAC ce. ons, seasona d plant criteri	offects, etc a is not sati	drology Indica Indicators: Inundated Saturated Saturated Water Mar Drift Lines Sediment I	in Upper 12 incl in Upper 18 incl ks Deposits	nes nes
ercent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing orphological adaptations to wetlands. "T" indicates trace emarks (Describe disturbances, relevant local variation ince only 50% of the plants are hydrophytic, the wetland YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other X No Recorded Data Available	or FAC ce. ons, seasona d plant criteri	of the state of th	drology Indica Indicators: Inundated Saturated Water Mar Drift Lines Sediment I Drainage F	in Upper 12 incl in Upper 18 incl ks Deposits	nes nes ands
ercent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing perphological adaptations to wetlands. "T" indicates trace temarks (Describe disturbances, relevant local variation ince only 50% of the plants are hydrophytic, the wetland YDROLOGY (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Add Observations: Depth of Surface Water: None (in.) Depth to Free Water in Pit: >16 (in.)	or FAC ce. ons, seasona d plant criteri	of the state of th	drology Indica Indicators: Inundated Saturated Water Mar Drift Lines Sediment I Drainage F	in Upper 12 ind in Upper 18 ind ks Deposits Patterns in Wetla or more require	nes nes ands ed):
ercent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing orphological adaptations to wettands. "T" indicates trace emarks (Describe disturbances, relevant local variation ince only 50% of the plants are hydrophytic, the wetland YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	or FAC ce. ons, seasona d plant criteri	of the state of th	drology Indica Indicators: Inundated Saturated Water Mar Drift Lines Sediment I Drainage F ry Indicators (2 Oxidized R	in Upper 12 incl in Upper 18 incl ks Deposits Patterns in Wetla or more require toot Channels in	nes nes ands
ercent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing torphological adaptations to wetlands. "T" indicates trace emarks (Describe disturbances, relevant local variation since only 50% of the plants are hydrophytic, the wetland YDROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available eld Observations: Depth of Surface Water: None (in.) Depth to Free Water in Pit: >16 (in.)	or FAC ce. ons, seasona d plant criteri	of the state of th	drology Indica Indicators: Inundated Saturated Water Mar Drift Lines Sediment I Drainage F ry Indicators (2 Oxidized R Water-Stai	in Upper 12 ind in Upper 18 ind ks Deposits Patterns in Wetla or more require	nes nes ands ed):
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recent of Dominant Species that are OBL, FACW, of except FAC-). Include species noted (*) as showing horphological adaptations to wetlands. "T" indicates trace temarks (Describe disturbances, relevant local variation ince only 50% of the plants are hydrophytic, the wetland IVPROLOGY ecorded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available eld Observations: Depth of Surface Water: Depth to Free Water in Pit: No Recorded Data (in.)	or FAC ce. ons, seasona d plant criteri	Netland Hy Primary Seconda	drology Indica Indicators: Inundated Saturated Water Mar Drift Lines Sediment I Drainage F ry Indicators (2 Oxidized R Water-Stai Local Soil: Other (Exp	in Upper 12 incl in Upper 18 incl ks Deposits Patterns in Wetla for more require toot Channels in ned Leaves Survey Data Jain in Remarks	nes ands ed): i Upper 12 inches

						Data F	Piot #:	G7-B
						Wetia	nd:	G7 Upland Pic
'roject/S	Site: Seattle 1	Tacoma Airport - Master	Plan Update	Date:	3/23/99			
SOILS Soil Sur	vey Data:							
Map Uni	t Name: unn	napped			Drainage (Class:		
					Field Obse	ervations Conf	firm Map	ped Type?
Taxonom	ny (Subgroup)	<u>.</u>			Yes	No	NA	X
rofile D	escription:			******		_ '**	- '*^	^
Depth Inches)	Horizon Designation	Matrix Color n (Munsell Moist)	Mottle Colo (Munsell Mo		Mottle Abundance	e/Contrast		ure, Concretions, ospheres, etc.
-12	Α	10YR 4/3	-		-		grave	elly sand loam
2-16	В	10YR 4/4			-		grave	Hy loam sand
ydric S	oil Indicators	:		-				
н	istosol			Listed	on Local H	ydric Soils Lis		
н	istic Epipedor	1				ydric Soils List ydric Soils List		
s	ulfidic Odor					Hydric Soils I		
P	robable Aquic	Moisture Regime		_	Moisture Re			
R	educing Cond	itions				in Sandy Soil	s	
		Chroma Colors		Mottle:		.,	_	
Hi	gh Organic Co	ontent in Surface Layer		Other ((Explain in F	Remarks)		
emarks o hydric i	(Describe soil	l disturbances, local van sent	ations, etc.):					
/ETLA	ND DETER	MINATION						
drophyt	tic Vegetation	Present? Ye	s No	X	ls t	this Sampline	a Point	Within a Wetland
	Is Present?	Υe		×		oempini	y - Ont	TAILLING THE CIRCLE
disc 301								

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): This plot is located in a typical upland area.



Data Plot #:	WH-A
Wetland:	WH

	WET	LAND DET	ERMINA	TION	Wet	uenu.	WH
	(Modified from: 19				ation Man	nual)	
Project/Site: Seattle Tacoma				11/1/00		·	
Applicant/Owner: Port of S	Seattle		County:	King	· · · · · · · · · · · · · · · · · · ·		
Investigator: William Kleindi	. Pat Tougher		State:	WA			
✓ 1987 Method 1989	Method				Communi	in ID: D	= · ·
Do Normal Circumstances exi	st on the site?	Yes X	No		Communi	· -	EM
Is the site significantly disturbe	ed (Atypical Situation)?	Yes	No -	X	Field Plot	ID: WH	-A
Is the area a potential Problem	n Area?	Yes	_	x			
Remarks (Explain sample lo	cation, disturbances, prob			^_			
/EGETATION (✓Domina	ant species are specked)	, <u></u>					
Plant Species	uni species are checked)	% Cove	er Stratum	g imali	icator		
✓ 1 Mowed Golf Lawn		100	Herb	NL	· UE (UI		
except FAC-). Include species norphological adaptations to water Remarks (Describe disturban Since less than 50% of the don	s noted (*) as showing retiands. To indicates traces, relevant local variation in the plants are hydrophysical to the control of the control	ce. Ons, seasonal e	effects, etc	.):	a is not mot	- Cenara a	
except FAC-). Include species norphological adaptations to water temarks (Describe disturban tince less than 50% of the don	s noted (*) as showing retiands. To indicates traces, relevant local variation in the plants are hydrophysical to the control of the control	ce. Ons, seasonal e	effects, etc	.): on criteri	a is not met	. Grass s	pecies could no
except FAC-). Include species inorphological adaptations to with the describe disturbants of the done in the described due to recent moving the described due to recent moving the described and the described due to recent moving the described due to recent movin	s noted (*) as showing retiands. To indicates traces, relevant local variation in the plants are hydrophysical to the control of the control	ce. Ons, seasonal e	effects, etc	.): on criteria	a is not met	. Grass s	pecies could no
except FAC-). Include species norphological adaptations to with the second seco	s noted (*) as showing retiands. Tindicates tracces, relevant local variation in antipolar plants are hydrophy.	ons, seasonal e	d vegetatio	on criteri			
except FAC-). Include species norphological adaptations to with the second seco	s noted (*) as showing retiands. "T" indicates traices, relevant local variation in anti-plants are hydrophy (Remarks): r Tide Gage	ons, seasonal e	d vegetatio	on criteria	Indicators		pecies could no
except FAC-). Include species incorphological adaptations to with the common structure incorphological adaptations to with the content of the dentified due to recent mowing styphology incorded Data (Describe in Stream, Lake, of Aerial Photograp	s noted (*) as showing retiands. "T" indicates traices, relevant local variation in anti-plants are hydrophy (Remarks): r Tide Gage	ons, seasonal e	d vegetatio	rology I	Indicators		
except FAC-). Include species norphological adaptations to with the control of the dorse less than 50%	s noted (*) as showing retiands. Trindicates tracces, relevant local variation in anti-plants are hydrophy. Remarks): Tide Gage	ons, seasonal e	d vegetatio	rology I	Indicators	(Describe	e in Remarks):
except FAC-). Include species incorphological adaptations to with the incorphological adaptations to with the incorphological adaptations to with the incorphological adaptations to with the incorphological	s noted (*) as showing retiands. Trindicates tracces, relevant local variation in anti-plants are hydrophy. Remarks): Tide Gage	ons, seasonal e	d vegetatio	irology I ndicators Inun Satu	Indicators :: :dated :rated in Up !rated in Up	(Describe	e in Remarks): hes
except FAC-). Include species norphological adaptations to with the second seco	s noted (*) as showing retiands. Trindicates tracces, relevant local variation in anti-plants are hydrophy. Remarks): Tide Gage	ons, seasonal e	d vegetatio	rology Indicators Inun Satu Wate	Indicators :: :: :: :: :: :: :: :: :: :: :: :: ::	(Describe	e in Remarks): hes
except FAC-). Include species norphological adaptations to with the second seco	s noted (*) as showing retiands. Trindicates tracces, relevant local variation in anti-plants are hydrophy. Remarks): Tide Gage	ons, seasonal e	d vegetatio	Irology I Indicators Inun Satu Satu Drift	Indicators :: :dated :rated in Up _l :rated in Up _l er Marks Lines	(Describe per 12 inci per 18 inci	e in Remarks): hes
except FAC-). Include species morphological adaptations to with the control of the dentified due to recent mowing stream. Lake, or Aerial Photograp Other No Recorded Data No Recorded Data	s noted (*) as showing retiands. Trindicates tracces, relevant local variation in anti-plants are hydrophy. Remarks): Tide Gage	ons, seasonal e	d vegetatio	Irology Indicators Inun Satu Satu Vate Drift Sedi	Indicators i: idated irated in Upi irated in Upi er Marks Lines ment Depos	(Describe	e in Remarks): hes hes
except FAC-). Include species norphological adaptations to with the control of the donor dentified due to recent mowing stream. Lake, or Aerial Photograp Other No Recorded Data (Describe Describe D	s noted (*) as showing retiands. "T" indicates traices, relevant local variation in anti-plants are hydrophy. Remarks): Tride Gage oh	ons, seasonal e	etland Hyd	Irology Indicators Inun Satu Satu Vate Drift Sedi	Indicators :: :dated :rated in Up _l :rated in Up _l er Marks Lines	(Describe	e in Remarks): hes hes
except FAC-). Include species norphological adaptations to with Remarks (Describe disturbant Since less than 50% of the don dentified due to recent mowing HYDROLOGY Recorded Data (Describe in Stream, Lake, or Aerial Photograp, Other No Recorded Data (Describe Data) Beld Observations: Depth of Surface Water:	s noted (*) as showing retiands. "T" indicates traicces, relevant local variation in anti-plants are hydrophy. Remarks): r Tide Gage oh	ons, seasonal e	etland Hyd Primary in	Irology Indicators Inun Satu Satu Vate Drift Sedii Drain	Indicators i: idated irated in Upi irated in Upi er Marks Lines ment Depos	(Describe per 12 inci per 18 inci sits ns in Wetla	e in Remarks): hes hes
except FAC-). Include species norphological adaptations to with the control of the dentified due to recent mowing a stream. Lake, or Aerial Photographother. No Recorded Data (Describe in the control of Surface Water: Depth to Free Water in Pit:	s noted (*) as showing retiands. To indicates training the state of th	ons, seasonal e	etland Hyd Primary in	Irology Indicators Inun Satu Satu Wate Drift Drain	Indicators :: idated irrated in Upi irrated in Upi er Marks Lines ment Depos nage Pattern tors (2 or me	(Describe per 12 inci per 18 inci sits ns in Wett	e in Remarks): hes hes ands
except FAC-). Include species morphological adaptations to with Remarks (Describe disturbants) force less than 50% of the don dentified due to recent mowing HYDROLOGY Recorded Data (Describe in Stream, Lake, or Aerial Photograp, Other No Recorded Data (Describe Data (Describe Data) Photograp, Other No Recorded Data (Describe Data) Photograp, Other No Recorded Data (Describe Data) Photograp (Describe Data) Photograp, Other No Recorded Data (Describe Data) Photograp (Describe Data)	s noted (*) as showing retiands. "T" indicates traicces, relevant local variation in anti-plants are hydrophy. Remarks): r Tide Gage oh	ons, seasonal e	etland Hyd Primary in X Secondary	Irology Indicators Inun Satu Satu Wate Drift Sedii Drair / Indical	Indicators :: idated irrated in Upi irrated in Upi er Marks Lines ment Depos nage Pattern tors (2 or me	(Describe per 12 inco per 18 inco sits ns in Wetta ore require	e in Remarks): hes hes
Aerial Photograp Other No Recorded Da ield Observations: Depth of Surface Water: Depth to Free Water in Pit:	s noted (*) as showing retiands. To indicates training the state of th	ons, seasonal e	etland Hyd Primary in X Secondary	irology Indicators Inun Satu Satu Wate Drift Sedii Drain / Indicat Wate Wate Wate Wate Wate Wate Wate Wa	Indicators i: Idated Irated in Upi Irated in Upi	(Describe per 12 inco per 18 inco sits ns in Wetta ore require channels in eaves	e in Remarks): hes hes ands

Based of the presence of hydric soil, the wetland hydrology criteria is assumed to be present. An inundated pond is located in the center of the wetland. Data plot was taken about 3 feet above the elevation of the pond. Area was observed flooded in the winter of 1999-2000.

Par	ametr	ix, Inc.							
P								Data Piot #: Wetland:	WH-A WH
Project/S	Site: Seattle T	acoma Airport - Mas	ter Pla	ın Upda	te	Date:	11/1/00		
SOILS Soil Sui	rvey Data:								
Map Uni	it Name: <u>Unm</u>	napped					Drainage Class:		
							Field Observation	ns Confirm Mar	oped Type?
Taxonon	ny (Subgroup):						Yes No	NA	λ
Profile D	Description:								
Depth (Inches)	Horizon Designation	Matrix Color (Munsell Moist)		Mottle (Muns	Color ell Moist)		Mottle Abundance/Contr		ture, Concretions,
0-9	4	10YR 4/2				-	-	Grav	eliv Loam (fill)
9-13+	В	10YR 3/2		2.5Y 5/	1		Many, Coarse, Distin	ct Grav	eliv Loam w/ ORZ
13-18+	Bii	10YR 4/2		2 5Y 6/	1		Common, Coarse, Di	stinct Grav	eliv Loam (fill)
X G	Reducing Condi Gleyed or Low-(digh Organic Co (Describe soil)	Moisture Regime itions Chroma Colors ontent in Surface Lay disturbances, local	variati			Listed Listed Aquic Organ (Mottle Other	(Explain in Remari	oils List c Soils List ndy Soils	
SOII COIOI	and other indic	cators meet the hydri	c soil	cntena.	Soils on	the site w	ere disturbed by go	off course const	ruction.
WETLA	ND DETER	MINATION							
lydrophy	tic Vegetation	Present?	Yes	X	No	<u></u>	is this Sa	ampling Point	Within a Wetland?
lydric Sc	oils Present?		Yes	X	No		_		
Vetland i	lydrology Pre	sent?	Yes	X	No		Ye	es X No	· ——

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): Vegetation meets technical criteria of the ACOE 1987 Wetland Delineation Manual 35,b,(1).

Data Sheet For Wetland DMC From the SR509/South Access Road EIS Wetlands Discipline Report (CH2Mhill, 2000). Data was collected by Shapiro and Associates, Inc. and reported in the above report as Wetland G.

WETLAND DETERMINATION INTERMEDIATE-LEVEL ONSITE METHOD SOILS, HYDROLOGY & SUMMARY

Project Number: 6973020 Date: 10/2/98 Project/Site: SR 509 / Wetland G Sample Plot #: SPG6 Field Investigator(s): RP, JC SOILS SCS Mapping Unit: Urban Is soil a histosol? no Field Identification: no Histic epipedon present? no is soil on hydric soils list? no Is soil mottled? no Is soil gleyed? no Horizon Matrix Occurrence Mottle Gley Organic Horizon Depth Texture Color Color of Mottles Color 10YR 2.5/2 faint tew none Landform/Topography: Comments: Hydric Soils? yes Basis: low chroma HYDROLOGY = Is ground surface inundated? no Surface water depth: none is soil saturated? Depth to saturation: none Depth to free-standing water in pit: none Yes No -Oxidized root zones ☐ Yes
No -Water-stained leaves ☐ Yes 🗵 No -Water marks ☐ Yes 🖾 No -Surface scoured areas 🗆 Yes 💆 No -Drift lines Yes No -Wetland drainage patterns ☐ Yes 🛭 No -Water-borne sediment deposits Yes 🛭 No -Morphological plant adaptations Comments: Wetland Hydrology? yes Basis: hydrology assumed SUMMARY Do normal environmental conditions exist at the plant community? yes Has the vegetation, soils, and/or hydrology been significantly disturbed? no Disturbed area? yes Basis: Vegetation maintained as golf course fairway Problem area? Basis: Comments: Wetland determination based on hydric soils (histosol and low chroma soils) and indicators of wetlland hydrology is the hydrophytic vegetation criterion met? Is the hydric soil criterion met? yes is the wetland hydrology criterion met? yes is the vegetation unit or plot wetland? yes Rationale for jurisdictional decision: Presences of hydric soils and wetland hydrology Atypical vegetation was not used in determination

WETLAND DETERMINATION INTERMEDIATE-LEVEL ONSITE METHOD VEGETATION UNIT SAMPLING PROCEDURE



Project/Site: SR 509 / Wetland G Field Investigator(s): RP, JC Sample Plot #: SPG6

Date: 10/2/98

	Sp Code	Herbs & Bryophytes	Indicator Status**	% Areal Cover	Cover Class	Midpoint	Rank	
_		mowed grass		100	7	98.0	1	
	pima	Plantago major	FACU+	10	2	10.5	2	
t								

Sum of Midpoints: Dominance Threshold:

108.5 54.3

Sp Code Shrubs Indicator % Areal Cover Status™ Cover Class Midpoint Rank

Sum of Midpoints: Dominance Threshold:

Sp Code Saplings	indicator	% Area!	Cover		
Sp Code Saplings	Status**	Cover	Class	Midpoint	Rank
	· · · · · · · · · · · · · · · · · · ·				1 1401 100

Sum of Midpoints: Dominance Threshold:

Co Codo Tanas	ndicator	% Areal	Cover		
Sp Code Trees	Status**	Cover	Class	Midpoint	Rank

Sum of Midpoints: Dominance Threshold:

% of Dominants that are OBL, FACW, and/or FAC:

Hydrophytic Vegetation?

Comments: atypical vegetation, Vegetation maintained as golf course fairway

Vegetation would revert to hydrophytic vegetation if golf course maintenance were stopped.

To determine dominants, first rank species by micborns. Then sum micborns in proof unit 50% of total to all species (commance threshoot) is immediately excessed. All species committeding to the cumulative total plus any others having 20% of the total micbornt value are marked with an asterials.

** Species that do not appear on the National List (Reed, 1988) may have been assigned an indicator status based on lield observations and habital attemption from the iterature.



Data Plot #:

IWSa-A

L *	WETL	LAND DETE	RMINAT	ION W	etiand:	IWSa
	(Modified from: 198				anual)	
roject/Site: Seattle Tacoma				16/99	,	
pplicant/Owner: Port of S			_	King		
	and Knstie Dunkin			NA NA		
	9 Method		State.			
Normal Circumstances exi	· -	Yes X	No	Commu	inity ID: P	FO
		-	No		ot ID: IWS	Sa-A
the site significantly disturbed	,	Yes	No X	_		
the area a potential Problem		Yes	No X	_		
emarks (Explain sample lo		em areas):				
etland located north of the IV	WS Lagoon.					
GETATION (Domini	ant species are checked)			· · · · · · · · · · · · · · · · · · ·		
Plant Species		% Cover	Stratum	Indicator		
1 Rubus discolor		30	Shrub	FACU		
2 Ainus rubra		40	Tree	FAC		
		6 0	Tree	FAC+		
3 Populus tremuloides 4 Rhampus purshiana						
4 Rhamnus purshiana		25	Tree	FAC-		
Rhamnus purshiana 5 Salix sitchensis reent of Dominant Specie (cept FAC-). Include species	s noted (*) as showing	25 r FAC	Tree	FACW		
A Rhamnus purshiana 5 Salix sitchensis reent of Dominant Specie cept FAC-). Include species riphological adaptations to w marks (Describe disturban	s noted (*) as showing vetlands. "T" indicates trace ices, relevant local variation	r FAC 80 e.	Tree	FACW	ot.	
Rhamnus purshiana 5 Salix sitchensis reent of Dominant Specie cept FAC-). Include species rphological adaptations to w marks (Describe disturban ce greater than 50% of the o	s noted (*) as showing vetlands. "T" indicates trace ices, relevant local variation	r FAC 80 e.	Tree	FACW	ot.	
A Rhamnus purshiana Salix sitchensis recent of Dominant Specie cept FAC-). Include species rphological adaptations to w marks (Describe disturban ce greater than 50% of the of	s noted (*) as showing vetlands. "T" indicates trace ces, relevant local variation dominant plants are hydrop	e. 80 ns, seasonal effo	Tree ects. etc.): nd vegetati	FACW on criteria is me		e in Remarke)
A Rhamnus purshiana Salix sitchensis recent of Dominant Specie cept FAC-). Include species riphological adaptations to w marks (Describe disturban ce greater than 50% of the of	s noted (*) as showing vetlands. "T" indicates trace ices, relevant local variation dominant plants are hydrop. Remarks):	25 r FAC e. ns, seasonal efforhytic, the wetlan	Tree ects. etc.): nd vegetati	on criteria is me		e in Remarks);
A Rhamnus purshiana Salix sitchensis recent of Dominant Specie cept FAC-). Include species rphological adaptations to w marks (Describe disturban ce greater than 50% of the of DROLOGY corded Data (Describe in 1988)	s noted (*) as showing vetlands. "T" indicates trace ices, relevant local variation dominant plants are hydrop. Remarks): r Tide Gage	25 r FAC e. ns, seasonal efforhytic, the wetlan	Tree ects, etc.): nd vegetation	on criteria is me		e in Remarks):
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A Rhamnus purshiana 5 Salix sitchensis reent of Dominant Specie cept FAC-). Include species rphological adaptations to w marks (Describe disturban ce greater than 50% of the of DROLOGY corded Data (Describe in in Stream, Lake, on Aerial Photograp	s noted (*) as showing vetlands. "T" indicates trace ices, relevant local variation dominant plants are hydrop. Remarks): or Tide Gage	25 r FAC e. ns, seasonal efforhytic, the wetlan	ects. etc.): nd vegetation and Hydro	on criteria is me logy Indicators cators: Inundated Saturated in Li	Describe	hes
Rhamnus purshiana 5 Salix sitchensis reent of Dominant Specie cept FAC-). Include species rphological adaptations to w marks (Describe disturban ce greater than 50% of the of DROLOGY Corded Data (Describe in in Stream, Lake, on Aerial Photograp Other	s noted (*) as showing vetlands. "T" indicates trace ices, relevant local variation dominant plants are hydrop. Remarks): or Tide Gage	25 r FAC e. ns, seasonal efforhytic, the wetlan	ects. etc.): nd vegetation and Hydro	on criteria is me logy indicators cators:	Describe	hes
A Rhamnus purshiana Salix sitchensis recent of Dominant Specie cept FAC-). Include species rphological adaptations to w marks (Describe disturban ce greater than 50% of the of DROLOGY CORDORY Corded Data (Describe in in Stream, Lake, on Aerial Photograp Other	s noted (*) as showing vetlands. "T" indicates trace ices, relevant local variation dominant plants are hydrop. Remarks): or Tide Gage	25 r FAC e. ns, seasonal efforhytic, the wetlan	ects. etc.): nd vegetation and Hydro	on critena is me logy Indicators cators: Inundated Saturated in U Saturated in U Water Marks Drift Lines	(Describe	hes
A Rhamnus purshiana Salix sitchensis reent of Dominant Specie cept FAC-). Include species rephological adaptations to w marks (Describe disturban ice greater than 50% of the of DROLOGY CORDED Stream, Lake, of Aerial Photograp Other	s noted (*) as showing vetlands. "T" indicates trace ices, relevant local variation dominant plants are hydrop. Remarks): or Tide Gage	25 r FAC e. ns, seasonal efforhytic, the wetlan	ects, etc.): nd vegetatil and Hydro rimary Indi	on criteria is me logy Indicators cators: Inundated Saturated in U Saturated in U Water Marks Drift Lines Sediment Dep	(Describe	hes hes
A Rhamnus purshiana 5 Salix sitchensis recent of Dominant Species recept FAC-). Include species rephological adaptations to w marks (Describe disturban rice greater than 50% of the of /DROLOGY corded Data (Describe in in Stream, Lake, on Aenal Photograp Other X No Recorded Data	s noted (*) as showing vetlands. "T" indicates trace ices, relevant local variation dominant plants are hydrop. Remarks): or Tide Gage	25 r FAC e. ns, seasonal efforhytic, the wetlan	ects. etc.): nd vegetation and Hydro	on critena is me logy Indicators cators: Inundated Saturated in U Saturated in U Water Marks Drift Lines	(Describe	hes hes
A Rhamnus purshiana 5 Salix sitchensis reent of Dominant Specie (cept FAC-). Include species (rephological adaptations to w marks (Describe disturban (ce greater than 50% of the control TOROLOGY corded Data (Describe in its Stream, Lake, or Aerial Photograp Other X No Recorded Data d Observations:	s noted (*) as showing vetlands. "T" indicates trace ices, relevant local variation dominant plants are hydrop. Remarks): or Tide Gage	e. 80 e. ns. seasonal effohytic, the wetlal	ects. etc.): and vegetation and Hydro mary Indi	on criteria is me logy Indicators cators: Inundated Saturated in U Saturated in U Water Marks Drift Lines Sediment Dep Drainage Patte	(Described) Ipper 12 including the proper 18 included to consist the proper in Wetlerns i	hes hes ands
Rhamnus purshiana 5 Salix sitchensis recent of Dominant Specie coept FAC-). Include species imphological adaptations to w marks (Describe disturban ince greater than 50% of the of CDROLOGY corded Data (Describe in it Stream, Lake, or Aerial Photogram Other X No Recorded Data d Observations: Depth of Surface Water: Depth to Free Water in Pit:	s noted (*) as showing vetlands. "T" indicates trace ces, relevant local variation dominant plants are hydrop. Remarks): or Tide Gage on ata Available.	e. 80 e. ns. seasonal effohytic, the wetlal	ects. etc.): and vegetation and Hydro mary Indi	on criteria is me logy indicators cators: Inundated Saturated in U Water Marks Drift Lines Sediment Dep Drainage Patte	(Described) Ipper 12 including per 18 including osits Ipper 18 in Wetlerns i	hes hes ands ed):
Rhamnus purshiana 5 Salix sitchensis recent of Dominant Specie coept FAC-). Include species imphological adaptations to w marks (Describe disturban ice greater than 50% of the of //DROLOGY corded Data (Describe in it Stream, Lake, or Aerial Photogram Other X No Recorded Data d Observations: Depth of Surface Water: Depth to Free Water in Pit:	s noted (*) as showing vetlands. The indicates trace indicates trace indicates trace indicates trace indicates trace indicates trace indicates trace indicates trace indicates trace indicates trace indicates are hydrop. Remarks): Tride Gage on indicates trace indicates indic	e. 80 e. ns. seasonal effohytic, the wetlal	and Hydro rimary Indi X econdary i	on critena is me logy Indicators cators: Inundated Saturated in U Water Marks Drift Lines Sediment Dep Drainage Patte ndicators (2 or i	dpper 12 inc dpper 18 inc osits erns in Wetl more requir Channels ii	hes hes ands ed):
Rhamnus purshiana 5 Salix sitchensis recent of Dominant Species coept FAC-). Include species prohological adaptations to w marks (Describe disturban ace greater than 50% of the of /DROLOGY corded Data (Describe in in Stream, Lake, on Aerial Photograp Other	s noted (*) as showing vetlands. The indicates trace indicates trace indicates trace indicates trace indicates trace indicates trace indicates trace indicates trace indicates trace indicates trace indicates are hydrop. Remarks): Tride Gage on indicates trace indicates indic	e. 80 e. ns. seasonal effohytic, the wetlal	ects. etc.): and vegetation and Hydro mary Indi	on critena is me logy Indicators cators: Inundated Saturated in U Water Marks Drift Lines Sediment Dep Drainage Patte indicators (2 or in Oxidized Root Water-Stained	Opper 12 inc opper 18 inc osits erns in Wetl more requir Channels in Leaves	hes hes ands ed):
Rhamnus purshiana 5 Salix sitchensis recent of Dominant Specie coept FAC-). Include species imphological adaptations to w marks (Describe disturban ince greater than 50% of the of CDROLOGY corded Data (Describe in it Stream, Lake, or Aerial Photogram Other X No Recorded Data d Observations: Depth of Surface Water: Depth to Free Water in Pit:	s noted (*) as showing vetlands. The indicates trace inces, relevant local variation dominant plants are hydrop. Remarks): In Tide Gage on the incess at a Available. None (in.) (in.)	e. 80 e. ns. seasonal effohytic, the wetlal	and Hydro rimary Indi X econdary i	on critena is me logy Indicators cators: Inundated Saturated in U Water Marks Drift Lines Sediment Dep Drainage Patte ndicators (2 or i	dpper 12 incolors in Wetl more require Channels ii Leaves vey Data	hes hes ands ed): n Upper 12 inches

								Data Plot #	t:	rwsa-A
								Wetland:		IWSa
roject/Sit	e: Seattle Ta	coma Airport - Maste	Plan	Updat	e	_ Date	6/16/99			
OILS ioil Surv	ey Data:									
Map Unit	Name: <u>Unm</u>	apped					Drainage Clas	SS:		
			-				Field Observa	ations Confirm	Mapp	ped Type?
Taxonomy	(Subgroup):						Yes	No I	NA	x
	scription:									
Depth (Inches)	Horizon	Matrix Color (Munsell Moist)		Mottle (Munse	Color ell Mois	t)	Mottle Abundance/C			ire, Concretions espheres, etc.
)-2	Α	10YR 3/2		-			-	(Cours	e Sandy Loam
2-10+	В	2.5Y 5/1		10YR 4/	6		Many, Coarse, D	istinct (Cours	e Sandy Loam
His His X Su Pro Re X Gle X Hig	ducing Conditions of the condition of th	Moisture Regime tions Chroma Colors ontent in Surface Laye disturbances, local va	natio			Liste Liste Aqui Orga X Mott	d on Local Hydrid on State Hydrid on National Hydrid Moisture Reginnic Streaking in es	ic Soils List ydnc Soils List ne Sandy Soils		
ow chrom	a soil matrix v	vith mottles satisfies ti	ne hyd	dnc soi	criteria). 				
VETLAN	ID DETER	MINATION								
ydrophyti	ic Vegetation	Present?	es/	_x_	No		ls this	s Sampling Po	oint \	Within a Wetla
ydric Soil	s Present?	,	'es	×	No			Yes X	No	

The presence of all three parameters indicate this area is a wetland. Wetland Delineated on changes in hydrology

Parametrix,	In	C.
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						Data P		IWSb-A
	WET	TLAND	DETE	RMINA7	TION	Wetlar	nd:	WS b
	(Modified from: 19					tion Manua	al)	
Project/Site: Seattle Tacoma					16/99		,	
Applicant/Owner: Port of Se		AGE.	_	County:	King			
	and Kristie Dunkin		_	State:	WA			
✓ 1987 Method			_			Community	ID: PF	
Do Normal Circumstances exis	st on the site?	Yes	x	No		Community	-	
s the site significantly disturbe	d (Atypical Situation)?	Yes		No X	-	Field Plot ID	IWS)-A
s the area a potential Problem		Yes		No X				
temarks (Explain sample loca	ation disturbances prob		s):		<u>`</u>			
Vetland located north of the IW	VS Lagoon.							
/EGETATIONDemine								
EGETATION (✓Dominal Plant Species	int species are checked)		4 Cover	Stratum	India	cator		
1 Equisetum telmateia			10	Herb	FAC			
2 Alnus rubra			5	Tree	FAC			
except FAC-). Include species corphological adaptations to we emarks (Describe disturbanc	noted (*) as showing etlands. "T" indicates traces traces, relevant local variati	ace. ons, seas	100 ional eff	ects, etc.)	: mat			
except FAC-). Include species incrphological adaptations to we emarks (Describe disturbanc ince 100 of the dominant plant.	noted (*) as showing etlands. "T" indicates traces traces, relevant local variati	ace. ons, seas	onal eff	ects, etc.) criteria is	: met.			
except FAC-). Include species inorphological adaptations to we semarks (Describe disturbancince 100 of the dominant plant. IYDROLOGY	noted (*) as showing etlands. "T" indicates traces, relevant local variations are hydrophytic, the way	ace. ons, seas	ional eff getation	criteria is	met.	ndicators (F)occibo	in Parada)
except FAC-). Include species inorphological adaptations to we semarks (Describe disturbancince 100 of the dominant plant. IYDROLOGY	noted (*) as showing etlands. "T' indicates traces, relevant local variations are hydrophytic, the will remarks):	ace. ons, seas	onal eff getation Wetl	criteria is	met. ology i	ndicators (D	Describ e	in Remarks);
except FAC-). Include species to propose to we emarks (Describe disturbancince 100 of the dominant plant. YDROLOGY ecorded Data (Describe in Recorded Data)	noted (*) as showing etlands. "T' indicates traces, relevant local variations are hydrophytic, the will remarks): Tide Gage	ace. ons, seas	onal eff getation Wetl	criteria is	met. ology I	:	Describe	in Remarks):
except FAC-). Include species orphological adaptations to we semarks. (Describe disturbancince 100 of the dominant plant. YDROLOGY ecorded Data (Describe in Routh Stream, Lake, or	noted (*) as showing etlands. "T' indicates traces, relevant local variations are hydrophytic, the will remarks): Tide Gage	ace. ons, seas	onal eff getation Wetl	criteria is	ology i	: dated		
except FAC-). Include species orphological adaptations to we emarks. (Describe disturbancince 100 of the dominant plant. YDROLOGY ecorded Data (Describe in Rough Stream, Lake, or Aerial Photograph	noted (*) as showing etlands. "T" indicates traces, relevant local variations are hydrophytic, the warm of the control of the	ace. ons, seas	onal eff getation Wetl	and Hydr	ology I dicators Inuni Satu	:	r 12 inch	es
except FAC-). Include species orphological adaptations to we emarks. (Describe disturbancince 100 of the dominant plant. YDROLOGY ecorded Data (Describe in R Stream, Lake, or Aerial Photograph Other	noted (*) as showing etlands. "T" indicates traces, relevant local variations are hydrophytic, the warm of the control of the	ace. ons, seas	onal eff getation Wetl	and Hydr	ology I dicators Inuni Satu	: dated rated in Upper	r 12 inch	es
except FAC-). Include species to reprotogral adaptations to we emarks. (Describe disturbance 100 of the dominant plant. IYDROLOGY ecorded Data (Describe in Round of the Control of the	noted (*) as showing etlands. "T" indicates traces, relevant local variations are hydrophytic, the warm of the control of the	ace. ons, seas	onal eff getation Wetl	and Hydr	ology i dicators inuni Satu Satu Wate	: dated rated in Upper rated in Upper er Marks Lines	r 12 inch r 18 inch	es
except FAC-). Include species norphological adaptations to we temarks. (Describe disturbanchince 100 of the dominant plant. IYDROLOGY ecorded Data (Describe in R Stream, Lake, or Aerial Photograph Other	noted (*) as showing etlands. "T" indicates traces, relevant local variations are hydrophytic, the warm of the control of the	ace. ons, seas	onal eff getation Wetl	and Hydr	ology I dicators Inun Satu Satu Wate Drift Sedii	: dated rated in Upper rated in Upper er Marks Lines ment Deposits	r 12 inch r 18 inch	ees ees
except FAC-). Include species norphological adaptations to we temarks. (Describe disturbance ince 100 of the dominant plant. IYDROLOGY ecorded Data (Describe in Rough Stream, Lake, or Aerial Photograph Other No Recorded Data	noted (*) as showing etlands. "T" indicates traces, relevant local variations are hydrophytic, the warm of the control of the	ace. ons, seas	onal eff getation Wetl	and Hydr	ology I dicators Inun Satu Satu Wate Drift Sedii	: dated rated in Upper rated in Upper er Marks Lines	r 12 inch r 18 inch	ees ees
except FAC-). Include species forphological adaptations to we semarks (Describe disturbance ince 100 of the dominant plant. IYDROLOGY ecorded Data (Describe in Recorded Data (Describe in Recorded Data) Other No Recorded Data eld Observations: Depth of Surface Water:	noted (*) as showing etlands. The indicates traces, relevant local variations are hydrophytic, the will remarks): Tide Gage h ta Available None (in.)	ace. ons, seas	onal eff getation Wetl	and Hydr Primary Ind X	ology I dicators Inunc Satu Satu Wate Drift Sedii	: dated rated in Upper rated in Upper er Marks Lines ment Deposits lage Patterns	r 12 inch r 18 inch ; in Wetla	nes les
except FAC-). Include species forphological adaptations to we emarks. (Describe disturbance ince 100 of the dominant plant. YDROLOGY ecorded Data. (Describe in Recorded Data.) Stream. Lake, or Aerial Photograph. Other. No Recorded Data. Peld Observations: Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as showing etlands. The indicates traces, relevant local variations are hydrophytic, the will remarks): Tide Gage h ta Available	ace. ons, seas	onal eff getation Wetl	and Hydr Primary Ind X	ology i dicators Inuni Satu Satu Wate Drift Sedii Drain	dated rated in Upper rated in Upper Programmer Marks Lines ment Deposits age Patterns ors (2 or more	r 12 inch r 18 inch in Wetla	nes nds d):
except FAC-). Include species forphological adaptations to we emarks. (Describe disturbance ince 100 of the dominant plant. YDROLOGY ecorded Data. (Describe in Recorded Data.) Stream. Lake. or Aerial Photograph. Other. No Recorded Data.	noted (*) as showing etlands. The indicates traces, relevant local variations are hydrophytic, the wild remarks): Tide Gage h ta Available None (in.)	ace. ons, seas	onal eff getation Wetl	and Hydr Primary Ind X	ology I dicators Inune Satu Satu Wate Drift Sedii Drain Indicat Oxidi	dated rated in Upper	r 12 inch r 18 inch in Wetla e require	nes nds d):
except FAC-). Include species horphological adaptations to we temarks (Describe disturbance ince 100 of the dominant plant. IYDROLOGY ecorded Data (Describe in Recorded Data (Describe in Recorded Data) Stream, Lake, or Aerial Photograph Other No Recorded Data eld Observations: Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as showing etlands. The indicates traces, relevant local variations are hydrophytic, the wild remarks): Tide Gage h None (in.) 11 (in.)	ace. ons, seas	onal eff getation Wetl	and Hydr Primary Ind X	ology I dicators Inune Satu Satu Wate Drift Sedii Drain Indicat Oxidi Wate	dated rated in Upper rated in Upper rated in Upper rated in Upper rated Marks Lines ment Deposits lage Patterns ors (2 or more zed Root Char-Stained Lear	r 12 inch r 18 inch in Wetla e require innels in ves	nes nds d):
except FAC-). Include species norphological adaptations to we remarks (Describe disturbance fince 100 of the dominant plant. HYDROLOGY Recorded Data (Describe in Recorded Data (Describe in Recorded Data) Other No Recorded Data iteld Observations: Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as showing etlands. The indicates traces, relevant local variations are hydrophytic, the wild remarks): Tide Gage h None (in.) 11 (in.)	ace. ons, seas	onal eff getation Wetl	and Hydr Primary Ind X	ology I dicators Inuna Satu Satu Wate Drift Sedii Drain Indicat Wate Local	dated rated in Upper rated in Upper rated in Upper rated in Upper rated Marks Lines ment Deposits lage Patterns ors (2 or more zed Root Char-Stained Lear Soil Survey E	r 12 inch r 18 inch in Wetla e require innels in ves Data	ies inds d): Upper 12 inches
Aerial Photograph Other No Recorded Date ield Observations: Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as showing etlands. The indicates traces, relevant local variations are hydrophytic, the wild remarks): Tide Gage h None (in.) 11 (in.) Surface (in.)	ace. ons. seas retiand veg	Wetl	and Hydronmary Income	ology I dicators Inuni Satu Satu Wate Drift Drain Indicat Oxidi Wate Local Othel	dated rated in Upper rated in Upper rated in Upper ref Marks Lines ment Deposits lage Patterns in C2 or more zed Root Charr-Stained Lear Soil Survey E (Explain in Ref	r 12 inch r 18 inch in Wetla e require innels in ves Data	ies inds d): Upper 12 inches

Λ						Data P	lot#:	IWSb-A
-						Wetiar	nd:	IWS b
Domin at /S	ita. Saettle Te	saama Aimant Baassa f	Non Lindain	Data	6/16/99			
·	ile: Seattle 12	Icoma Airport - Master F	rian Opoate	Date:	0/10/33			
SOILS Soil Sur	vey Data:							
Map Unit	Name: Unm	apped			Drainage Cia	ass:		
					Field Observ	rations Conf	firm Map	ped Type?
Taxonom	ny (Subgroup):				Yes	No	NA	x
	escription:						_ `"`	
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colo (Munseil Mo		Mottle Abundance/	Contrast		ure, Concretions, ospheres, etc.
)-7	A	10YR 3/1	-		•		Coun	e Loamy Sand
7-12+	В	10YR 4/1	10YR 4/6		Common, Coan	e. Distinct	Grave	ally Course Sand
S P R X G X H	educing Condi leyed or Low-C igh Organic Co (Describe soil	Chroma Colors Intent in Surface Layer disturbances, local vari		Listed Listed Aquid Organ X Mottle Other	d on Local Hyd d on State Hyd f on National H Moisture Reg nic Streaking in es (Explain in Re	ric Soils Lis lydric Soils ime n Sandy Soil	t List	
ow chron	na soil matrix v	vith mottles satisfies the	hydric soil crite	ena.				
NETLA	ND DETER	MINATION						
ydrophy	tic Vegetation	Present? Ye	s <u>x</u> No		ls th	is Samplin	g Point	Within a Wetlar
•	ils Present?	Ye	s X No			Yes X	(No	
letiand H	lydrology Pre:	sent? Ye	s X No			163	No	

The presence of all three parameters indicate this area is a wetland. Wetland Delineated on changes in hydrology.

Par	ame	etrix	c. Ir	ìC.
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Data Piot #:	E1-A
Wetland:	F1

					Data Plot #:	E1-A
L	WETLAND	SCTED	MINAT	CLON	Wetland:	E1
(Modified from					Manual)	
· _		_			mariaar,	
Project/Site: Seattle Tacoma Airport - Master Pl	an Update		_	/19/99		
Applicant/Owner: Port of Seattle			ounty:	King		
Investigator: C. Antieau M.Eccleston S.Rozent	baum	Si	ate:	WA		
				Con	munity ID: P	FO
Do Normal Circumstances exist on the site?	Yes	<u>x</u> 1	1 0	Field	Plot ID: E1-	4
Is the site significantly disturbed (Atypical Situation	on)? Yes		4 0 _>	<u> </u>		
Is the area a potential Problem Area?	Yes		10 <u>></u>	<u> </u>		
Remarks (Explain sample location, disturbances	s, problem area	as):				
VEGETATION (>Dominant species are che		% Cover	Chanta and	la dia atau		
Plant Species			Stratum	Indicator		
Rubus discolor Alnus rubra			Shrub Tree	FACU FAC		
✓ 2. Alnus rubra		30		FAC	-	
Populus balsamifera ssp. mchocarpa Percent of Dominant Species that are OBL, Fa	ACW, or FAC	60 67	Tree	FAC	-	
Percent of Dominant Species that are OBL, Freexcept FAC-). Include species noted (*) as show morphological adaptations to wetlands. "T" indical Remarks (Describe disturbances, relevant local species and the species of the species o	ACW, or FAC ring ites trace. variations, sea	67	cts, etc.)):	-	
Populus balsamifera ssp. inchocarpa Percent of Dominant Species that are OBL, Friexcept FAC-). Include species noted (*) as show morphological adaptations to wetlands. "T" indical Remarks (Describe disturbances, relevant local Since greater than 50 % the plant community is hy	ACW, or FAC ring ites trace. variations, sea	67	cts, etc.)):	d .	
Percent of Dominant Species that are OBL, Freezept FAC-). Include species noted (*) as show morphological adaptations to wetlands. "T" indical Remarks (Describe disturbances, relevant local Since greater than 50 % the plant community is hy	ACW, or FAC ring ites trace. variations, sea	67 sonal effer wetland p	cts, etc.)): erie is satisfied		e in Remarks)
Percent of Dominant Species that are OBL, Freezept FAC-). Include species noted (*) as show morphological adaptations to wetlands. "T" indical Remarks (Describe disturbances, relevant local Since greater than 50 % the plant community is hydrophysical Describe in Remarks):	ACW, or FAC ring ites trace. variations, sea	67 sonal effer wetland p	cts, etc.) lant crite): erie is satisfied	d.	e in Remarks):
Populus balsamifera ssp. inchocarpa Percent of Dominant Species that are OBL, Frecept FAC-). Include species noted (*) as shown or phological adaptations to wetlands. "T" indicate Remarks (Describe disturbances, relevant local Since greater than 50 % the plant community is hystyphology Recorded Data (Describe in Remarks): Stream, Lake, or Tide Gage	ACW, or FAC ring ites trace. variations, sea	67 sonal effer wetland p	cts, etc.) lant crite and Hydr): eria is satisfied rology Indica dicators:		e in Remarks):
Populus balsamifera ssp. Inchocarpa Percent of Dominant Species that are OBL, Fr. except FAC-). Include species noted (*) as show morphological adaptations to wetlands. "T" indica Remarks (Describe disturbances, relevant local species are than 50 % the plant community is hy HYDROLOGY Recorded Data (Describe in Remarks):	ACW, or FAC ring ites trace. variations, sea	67 sonal effer wetland p	cts, etc.) lant crite): eria is satisfied rology Indica dicators: Inundated	tors (Describ	
Populus balsamifera ssp. inchocarpa Percent of Dominant Species that are OBL, Frecept FAC-). Include species noted (*) as shown orphological adaptations to wetlands. "T" indical Remarks (Describe disturbances, relevant local Since greater than 50 % the plant community is hystype of the plant community is hystype or the plant community is hysty	ACW, or FAC ring ites trace. variations, sea	67 sonal effer wetland p	cts, etc.) lant crite nd Hydr mary in	eria is satisfied rology Indica dicators: Inundated Saturated		hes
Populus balsamifera ssp. inchocarpa Percent of Dominant Species that are OBL, Frexcept FAC-). Include species noted (*) as shown or phological adaptations to wetlands. "T" indical Remarks (Describe disturbances, relevant local Since greater than 50 % the plant community is hystype of the plant community is hystype of the plant (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	ACW, or FAC ring ites trace. variations, sea	67 sonal effer wetland p	cts, etc.) lant crite nd Hydr mary in	eria is satisfied rology Indica dicators: Inundated Saturated	tors (Describ in Upper 12 inc in Upper 18 inc	hes
Percent of Dominant Species that are OBL, Frexcept FAC-). Include species noted (*) as shown or phological adaptations to wetlands. "T" indical Remarks (Describe disturbances, relevant local Since greater than 50 % the plant community is hystype of the plant community is hystyp	ACW, or FAC ring ites trace. variations, sea	67 sonal effer wetland p	cts, etc.) lant crite nd Hydr mary in	rology Indica dicators: Inundated Saturated Saturated Water Mai	tors (Describ in Upper 12 inc in Upper 18 inc ks	hes
Percent of Dominant Species that are OBL, Frexcept FAC-). Include species noted (*) as shown or phological adaptations to wetlands. "T" indical Remarks (Describe disturbances, relevant local Since greater than 50 % the plant community is hystype of the plant community is hystyp	ACW, or FAC ring ites trace. variations, sea	67 sonal effer wetland p	nd Hydrimary Inc. X	rology Indica dicators: Inundated Saturated Saturated Water Mai Drift Lines Sediment	in Upper 12 inc in Upper 18 inc tks	hes hes
Percent of Dominant Species that are OBL, Friexcept FAC-). Include species noted (*) as show morphological adaptations to wetlands. "T" indical Remarks (Describe disturbances, relevant local Since greater than 50 % the plant community is hystype than the plant community is hystype	ACW, or FAC ring ites trace. variations, sea	67 sonal effer wetland p	cts, etc.) lant crite nd Hydr mary in	rology Indica dicators: Inundated Saturated Saturated Water Mai Drift Lines Sediment	tors (Describ in Upper 12 inc in Upper 18 inc ks	hes hes
Percent of Dominant Species that are OBL, Frexcept FAC-). Include species noted (*) as shown or phological adaptations to wetlands. "T" indicate Remarks (Describe disturbances, relevant local spince greater than 50 % the plant community is hystype than the plant community is hystyp	ACW, or FAC ring ites trace. variations, sea vdrophytic, the	67 sonal effective wetland p Wetland Pri	nd Hydrimary Inc. X	rology Indicadicators: Inundated Saturated Water Mai Drift Lines Sediment Drainage F	in Upper 12 inc in Upper 18 inc ks Deposits Patterns in Wet	hes hes ands
Percent of Dominant Species that are OBL, Frexcept FAC-). Include species noted (*) as show morphological adaptations to wetlands. "T" indical Remarks (Describe disturbances, relevant local Since greater than 50 % the plant community is hystype of the plant community is hystype	ACW, or FAC ring ites trace. variations, sea vdrophytic, the	67 sonal effective wetland p Wetland Pri	nd Hydrimary Inc. X	prology Indica dicators: Inundated Saturated Saturated Water Mai Drift Lines Sediment Drainage f	in Upper 12 inc in Upper 18 inc ks Deposits Patterns in Wet	thes thes ands ed):
Percent of Dominant Species that are OBL, Frexcept FAC-). Include species noted (*) as shown or phological adaptations to wetlands. "T" indicate Remarks (Describe disturbances, relevant local spince greater than 50 % the plant community is hystype than the plant community is hystyp	ACW, or FAC ring ites trace. variations, sea vdrophytic, the	67 sonal effective wetland p Wetland Pri	nd Hydrimary Inc. X	rology Indica dicators: Inundated Saturated Saturated Water Mar Drift Lines Sediment Drainage F	in Upper 12 inc in Upper 18 inc ks Deposits Patterns in Wet cor more requir	hes hes ands
Percent of Dominant Species that are OBL, Friexcept FAC-). Include species noted (*) as show morphological adaptations to wetlands. "T" indical Remarks (Describe disturbances, relevant local Since greater than 50 % the plant community is hystype than the plant community is hystype	ACW, or FAC ring ites trace. variations, sea vdrophytic, the	67 sonal effective wetland p Wetland Pri	nd Hydrimary Inc. X	rology Indica dicators: Inundated Saturated Saturated Water Mai Drift Lines Sediment Drainage F	in Upper 12 inc in Upper 18 inc ks Deposits Patterns in Wet or more requir Root Channels in	thes thes ands ed):
Percent of Dominant Species that are OBL. Fr. (except FAC-). Include species noted (*) as show morphological adaptations to wetlands. "T" indical Remarks (Describe disturbances, relevant local Since greater than 50 % the plant community is hystype than the plant community is hystyp	ACW, or FAC ring ites trace. variations, sea vdrophytic, the	67 sonal effective wetland p Wetland Pri	nd Hydrimary Inc. X	rology Indica dicators: Inundated Saturated Saturated Water Mai Drift Lines Sediment Drainage F	in Upper 12 inc in Upper 18 inc ks Deposits Patterns in Wet cor more requir	hes hes ands ed): n Upper 12 inches

C						Data Plot : Wetland:	# :	E1-A E1
roject/	Site: Seattle T	acoma Airport - Master P	ian Update	Date:	1/19/99			
OILS	rvey Data:							
иар Оп	it Name: Unm	apped			Drainage Class:			
					Field Observation		Марр	ed Type?
Taxonoi	ny (Subgroup):				Yes No)	NA	×
rofile l	Description:							
epth inches)	Horizon Designation	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)		Mottie Abundance/Con			re. Concretions,
-10	A	10YR 2/2			•		Cobbly	gravel
1-14	B	10YR 2/2	10YR 3/4		Manv. Medium, Dist	inct	Cobbiy	gravel loam
X (Reducing Condi Sleyed or Low-C tigh Organic Co (Describe soil	Moisture Regime tions		Listed Listed Aquic Organ Mottle	on Local Hydric : on State Hydric : on National Hydr Moisture Regime ic Streaking in Sa s (Explain in Remai	Soils List nc Soils List andy Soils		
	and other male	ators meet the nyanc sol	i criteria.					
VETLA	ND DETER	MINATION						
ydroph	tic Vegetation	Present? Yes	X No		Is this S	Sampling Po	oint V	Vithin a Wetlan
ydric So	oils Present? Hydrology Pre:	Yes	X No			es X	No	

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): The presence of all three parameters indicate this area is a wetland.



•	WET	ם מאם וי	ETERMIN	ATION	Weti	end:	E1 Upland Pi
					etion Man	۱۱.	
•	(Modified from: 19	87 COE	vvetiands	Demne	alion Mani	Jai)	
roject/Site: Seattle Tacoma	Airport - Master Plan Up	date	_ Date:	1/19/99			
pplicant/Owner: Port of Se	attie		County	/: King			
vestigator: C. Antieau M.E.	ccleston S.Rozenbaum		State:	WA			
1987 Method 🔲 1989 I	Method				Communit	y ID:	Upland
o Normal Circumstances exis	t on the site?	Yes _	X No		Field Plot	ID: E	1-B
the site significantly disturbed	d (Atypical Situation)?	Yes	No	X			
the area a potential Problem	Area?	Yes	No	×			
emarks (Explain sample loca	ation disturbances prob	_					
is upland plot is located outsi iture location of the Puget Soi			-A) south of 1	astn & ea	ist of the tank	rams	, in the City of Sea
EGETATION (Dominal	nt species are checked)	•/	Cause Steet		41		
Plant Species		60	Cover Strat		licator CU		
1 Rubus discolor 2 Salix scoulenana		10			.cu .c		
3 Spiraea douglasii	······································	25			cw		
4 Ainus rubra		10	Tree	FA	С		
5 Populus balsamifera ssp.	tnchocarpa	30	Tree	FA	<u>c</u>		
cept FAC-). Include species imphological adaptations to we	noted (*) as showing etlands. "T" indicates tra	ce.	67	·	CU		
rcent of Dominant Species (cept FAC-). Include species orphological adaptations to we marks (Describe disturbanc ttonwood canopy rooted in the	noted (*) as showing etlands. "T" indicates tra es, relevant local variation	or FAC	67 onal effects, e	etc.):		rophyt	ic, the wetland plan
rcent of Dominant Species cept FAC-). Include species imphological adaptations to we marks. (Describe disturbanc attonwood canopy rooted in the satisfied.	noted (*) as showing etlands. "T" indicates tra es, relevant local variation	or FAC	67 onal effects, e	etc.):		rophyl	ic, the wetland plan
rcent of Dominant Species (cept FAC-). Include species orphological adaptations to we marks. (Describe disturbance ttonwood canopy rooted in the satisfied.	noted (*) as showing etlands. "T" indicates tra es, relevant local variation wetland margin. Since	or FAC	67 onal effects, e an 50 % the p	etc.): olant com	munity is hyd		
rcent of Dominant Species cept FAC-). Include species rephological adaptations to we marks (Describe disturbanc tronwood canopy rooted in the latisfied.	noted (*) as showing etlands. "T" indicates tra les, relevant local variation e wetland margin. Since etland margin.	or FAC	67 nnal effects, e an 50 % the p Wetland H	etc.): olant com	munity is hyd		ic, the wetland plan
recent of Dominant Species cept FAC-). Include species rphological adaptations to we marks (Describe disturbance tonwood canopy rooted in the latisfied. TOROLOGY corded Data (Describe in R	noted (*) as showing strands. "T" indicates tra les, relevant local variation wetland margin. Since demarks): Tide Gage	or FAC	67 nnal effects, e an 50 % the p Wetland H	etc.): plant com: ydrology y indicator	munity is hyd		
rcent of Dominant Species cept FAC-). Include species rphological adaptations to we marks (Describe disturbance tonwood canopy rooted in the latisfied. TOROLOGY corded Data (Describe in Research). Stream, Lake, or	noted (*) as showing strands. "T" indicates tra les, relevant local variation wetland margin. Since demarks): Tide Gage	or FAC	67 nnal effects, e an 50 % the p Wetland H	etc.): plant com. ydrology y indicator	munity is hyd Indicators	(Desc	ribe in Remarks):
recent of Dominant Species cept FAC-). Include species rphological adaptations to we marks (Describe disturbance atonwood canopy rooted in the atisfied. ZDROLOGY corded Data (Describe in R Stream, Lake, or Aerial Photograph	noted (*) as showing etlands. "T" indicates tra les, relevant local variation wetland margin. Since elevant margin. Since elevants): Tide Gage	or FAC	67 nnal effects, e an 50 % the p Wetland H	etc.): plant com. ydrology y Indicator Inu Sai	munity is hyd Indicators s:	(Desc	ribe in Remarks): inches
rcent of Dominant Species cept FAC-). Include species rphological adaptations to we marks (Describe disturbanc ttonwood canopy rooted in the atisfied. /DROLOGY corded Data (Describe in R Stream, Lake, or Aerial Photograph Other	noted (*) as showing etlands. "T" indicates tra les, relevant local variation wetland margin. Since elevant margin. Since elevants): Tide Gage	or FAC	67 nnal effects, e an 50 % the p Wetland H	etc.): plant com. ydrology / Indicator Inu Sat Sat Wa	Indicators rs: Indated turated in Upp	(Desc	ribe in Remarks): inches
rcent of Dominant Species rcept FAC-). Include species orphological adaptations to we marks. (Describe disturbanc ttonwood canopy rooted in the satisfied. /DROLOGY corded Data (Describe in R Stream, Lake, or Aenal Photograph Other	noted (*) as showing etlands. "T" indicates tra les, relevant local variation wetland margin. Since elevant margin. Since elevants): Tide Gage	or FAC	67 nnal effects, e an 50 % the p Wetland H	ydrology y Indicator Inu Sat Wa	Indicators rs: Indated turated in Upp turated in Upp ter Marks It Lines	(Desc per 12 per 18	ribe in Remarks): inches
rcent of Dominant Species coept FAC-). Include species prohological adaptations to we marks (Describe disturbanc ttonwood canopy rooted in the satisfied. /DROLOGY corded Data (Describe in R Stream, Lake, or Aerial Photograph Other	noted (*) as showing etlands. "T" indicates tra les, relevant local variation wetland margin. Since elevant margin. Since elevants): Tide Gage	or FAC	67 nnal effects, e an 50 % the p Wetland H	ydrology y Indicator Sat Sat Drift Sec	Indicators rs: Indated turated in Upp turated in Upp ter Marks rt Lines diment Depos	(Desc per 12 per 18	ribe in Remarks): inches inches
rcent of Dominant Species (cept FAC-). Include species (rphological adaptations to we marks (Describe disturbance (ttonwood canopy rooted in the satisfied. /DROLOGY corded Data (Describe in R Stream, Lake, or Aerial Photograph Other X No Recorded Data	noted (*) as showing etlands. "T" indicates tra les, relevant local variation wetland margin. Since elevant margin. Since elevants): Tide Gage	or FAC	67 nnal effects, e an 50 % the p Wetland H	ydrology y Indicator Sat Sat Drift Sec	Indicators rs: Indated turated in Upp turated in Upp ter Marks It Lines	(Desc per 12 per 18	ribe in Remarks): inches inches
rcent of Dominant Species (cept FAC-). Include species (rphological adaptations to we marks (Describe disturbance (ttonwood canopy rooted in the satisfied. (DROLOGY corded Data (Describe in R Stream, Lake, or Aerial Photograph Other X No Recorded Data	noted (*) as showing etlands. "T" indicates tra les, relevant local variation wetland margin. Since elevant margin. Since elevants): Tide Gage	or FAC	67 onal effects, e an 50 % the Wetland H Primary	ydrology y Indicator Inu Sat Sat Drif	Indicators rs: Indated turated in Upp turated in Upp ter Marks rt Lines diment Depos	(Desc per 12 per 18 its its	ribe in Remarks): inches inches
rcent of Dominant Species (cept FAC-). Include species (rphological adaptations to we marks (Describe disturbance (ttonwood canopy rooted in the satisfied. (DROLOGY corded Data (Describe in R Stream, Lake, or Aerial Photograph Other X No Recorded Data (Id Observations: Depth of Surface Water: Depth to Free Water in Pit:	noted (*) as showing etlands. "T" indicates tra les, relevant local variation wetland margin. Since et wetland margin. Since et wetland margin. Since et wetland margin. Since et wetland margin. Since et wetland margin. Since et wetland margin. Since et wetland margin. Since et wetland margin. Since et wetland margin. Since et wetland margin. Since et wetland margin.	or FAC	67 onal effects, e an 50 % the Wetland H Primary	ydrology y indicator Sal Wa Drif Sec Dra	Indicators rs: Indated Rurated in Upp Reference of the Lines diment Depos Reference of the Lines dimage Pattern ators (2 or mo	(Desc per 12 per 18 lits ins in V	inches inches inches
rcent of Dominant Species coept FAC-). Include species prohological adaptations to we marks (Describe disturbanc ttonwood canopy rooted in the satisfied. /DROLOGY corded Data (Describe in R Stream, Lake, or Aerial Photograph Other	noted (*) as showing ettands. "T indicates tra les, relevant local variation wetland margin. Since demarks): Tide Gage in la Available	or FAC	67 onal effects, e an 50 % the Wetland H Primary	ydrology y indicator Sai Sai Wai Sec Dra	Indicators rs: Indated Iturated in Upp Iter Marks It Lines Idiment Depos Image Patterr Idized Root C	(Desconer 12 per 18 its as in Wore reconer 18 per 18 in Wore reconer 18 per 18	ribe in Remarks): inches inches
rcent of Dominant Species rcept FAC-). Include species orphological adaptations to we marks (Describe disturbance ittonwood canopy rooted in the satisfied. **TOROLOGY** corded Data (Describe in R Stream, Lake, or Aerial Photograph Other X No Recorded Data Itd Observations: Depth of Surface Water: Depth to Free Water in Pit.	noted (*) as showing ettands. "T indicates tra les, relevant local variation wetland margin. Since temarks): Tide Gage in transport to the least transport to the least transport to the least transport to the least transport to the least transport transport to the least transport transp	or FAC	67 onal effects, e an 50 % the Wetland H Primary	ydrology y Indicator Sai Sai Drif Sec Dra lary Indic	Indicators rs: Indated turated in Upp turated in Upp ter Marks ft Lines diment Depos prinage Patterr ators (2 or max dized Root C ter-Stained Lo	(Desc per 12 per 18 lits ns in W pre rec hanne	inches inches inches /etlands luired):
rcent of Dominant Species rcept FAC-). Include species orphological adaptations to we marks (Describe disturbance ittonwood canopy rooted in the satisfied. **TOROLOGY** corded Data (Describe in R Stream, Lake, or Aerial Photograph Other X No Recorded Data Itd Observations: Depth of Surface Water: Depth to Free Water in Pit.	noted (*) as showing ettands. "T indicates tra les, relevant local variation wetland margin. Since temarks): Tide Gage in transport to the least transport to the least transport to the least transport to the least transport to the least transport transport to the least transport transp	or FAC	67 onal effects, e an 50 % the Wetland H Primary	ydrology y Indicator Sai Sai Drif Sec Dra lary Indic	Indicators TS: Indicators TS: Indated Iturated in Upp Iturated in Upp Iter Marks It Lines Idiment Depos Image Pattern Idized Root C Iter-Stained Le Ital Soil Survey	Oper 12 per 18 its is in Wore received hanne eaves y Data	inches inches inches /etlands juired): Is in Upper 12 inche
rcent of Dominant Species rcept FAC-). Include species orphological adaptations to we marks (Describe disturbance ittonwood canopy rooted in the satisfied. **TOROLOGY** corded Data (Describe in R Stream, Lake, or Aerial Photograph Other X No Recorded Data Itd Observations: Depth of Surface Water: Depth to Free Water in Pit.	noted (*) as showing strands. "T indicates tra les, relevant local variation wetland margin. Since strands: Itemarks): Tide Gage in la Available None (in.) >16 (in.)	or FAC ce. ons, seaso greater tha	Wetland H Primary	ydrology y Indicator Sat Sat Drift Sec Dra lary Indica Va Loc Oth	Indicators rs: Indated turated in Upp ter Marks it Lines diment Depos sinage Patterr ators (2 or moduzed Root C ter-Stained Le cal Soil Surve ter (Explain in	Oper 12 per 18 its is in Wore received hanne eaves y Data	inches inches inches /etlands juired): Is in Upper 12 inche

						Da	ta Piot #:	E1-B
						W	etiand:	E1 Upland Plo
Project/Sit	e: Seattle T	acoma Airport - Master F	Plan Updat	<u>e</u>	Date:	1/19/99		
SOILS Soil Surv	ey Data:							
Map Unit	Name: Unrr	napped				Drainage Class:		
						Field Observations	Confirm Ma	pped Type?
Taxonomy	(Subgroup):					Yes No	NA	<u>x</u>
Profile De	scription:							
Depth (Inches)	Horizon Designation	Matrix Color (Munsell Moist)	Mottle (Munse	Color eli Moist)		Mottle Abundance/Contras		ture, Concretions, zospheres, etc.
0-6	A	10YR 3/3	-				San	dv loam
5-16	В	7 5YR 3/4					San	dv loam
Hydric So	il Indicators	:						
-	stosol				Listed	on Local Hydric Soil	s List	
His	stic Epipedon					on State Hydric Soil		
Su_	Ifidic Odor				Listed	on National Hydric S	oils List	
Pro	obable Aquic	Moisture Regime			Aquic	Moisture Regime		
	ducing Cond	itions			Organ	ic Streaking in Sandy	Soils	
Re		- .			8.4 - 441 -	e		
	eyed or Low-(Chroma Colors			Mottle			
Gle		Ontent in Surface Layer			_	(Explain in Remarks)		
Gle Hiç Remarks	gh Organic Co	ontent in Surface Layer i disturbances, local vari	ations, etc	.):	_	_		
Gle Hig Remarks Hydric soil	gh Organic Co (Describe soil indicators are	ontent in Surface Layer i disturbances, local vari	ations, etc	.):	_	_		
Gle Hig Remarks Hydric soil	gh Organic Co (Describe soil Indicators are	ontent in Surface Layer I disturbances, local van e not present. MINATION			_	(Explain in Remarks)		
Gie Hig Remarks Hydric soil WETLAN	gh Organic Co (Describe soil indicators are	ontent in Surface Layer disturbances, local van e not present. MINATION	s <u>x</u>	No	_	(Explain in Remarks)		t Within a Wetlan

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results):

Wetland vegetation is present, however both wetland hydrology and hydric soils are absent. Therefore, the area is not a wetland.

Parametrix,	ì	r	10	
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Data Plot #:	E2-A

(Modified from: 198	AND DETE	RMINAT	TON Wetland: E2
(7 COE Wet	lands De	elineation Manual)
roject/Site: Seattle Tacoma Airport - Master Plan Upda		_	1/99
Applicant/Owner: Port of Seattle		County:	King
ivestigator: M. Louther		•	WA
1987 Method			Community ID: PFO/PSS
o Normal Circumstances exist on the site?	Yes X	No	
the site significantly disturbed (Atypical Situation)?	Yes	No X	Field Plot ID: E2-A
the area a potential Problem Area?	Yes	_	
emarks (Explain sample location, disturbances, proble		No _X	
EGETATION (Dominant species are checked)			
Plant Species	% Cover	Stratum	Indicator
1 Festuca arundinacea	10	Herb	FAC
2 Rubus discolor	40	Shrub	FACU
3 Salix sp	15	Shrub	FACW
4 Ainus rubra	50	Tree	FAC
5 Populus balsamifera ssp. tnchocarpa	5 0	Tree	<u>FAC</u>
orphological adaptations to wetlands. "T" indicates trace marks (Describe disturbances, relevant local variation	ns, seasonal eff	fects, etc.):	
orphological adaptations to wetlands. "T" indicates trace marks (Describe disturbances, relevant local variation find greater than 50 % the plant community is hydrophyt	e. ns, seasonal eff	fects, etc.): plant criter	na is satisfied
rephological adaptations to wetlands. "T" indicates trace marks (Describe disturbances, relevant local variation for greater than 50 % the plant community is hydrophyte (DROLOGY)	e. ns, seasonal eff tic, the wetland	plant criter	na is satisfied
rphological adaptations to wetlands. "T" indicates trace marks (Describe disturbances, relevant local variation ce greater than 50 % the plant community is hydrophyt (DROLOGY)	e. ns, seasonal eff tic, the wetland Wetl	plant criter	plogy Indicators (Describe in Remarks):
rephological adaptations to wetlands. "T" indicates trace marks (Describe disturbances, relevant local variation ce greater than 50 % the plant community is hydrophyt /DROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage	e. ns, seasonal eff tic, the wetland Wetl	plant criter land Hydro	ology Indicators (Describe in Remarks):
rephological adaptations to wetlands. "T" indicates trace marks (Describe disturbances, relevant local variation ice greater than 50 % the plant community is hydrophyt DROLOGY corded Data (Describe in Remarks):	e. ns, seasonal eff tic, the wetland Wetl	plant criter	plogy Indicators (Describe in Remarks): icators:
rephological adaptations to wetlands. "T" indicates trace marks (Describe disturbances, relevant local variation ice greater than 50 % the plant community is hydrophyt 'DROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph	e. ns, seasonal eff tic, the wetland Wetl	plant criter	ology Indicators (Describe in Remarks):
prohological adaptations to wetlands. "T" indicates trace marks (Describe disturbances, relevant local variation lice greater than 50 % the plant community is hydrophyt (DROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	e. ns, seasonal eff tic, the wetland Wetl	plant criter	plogy Indicators (Describe in Remarks): icators: Inundated Saturated in Upper 12 inches
prophological adaptations to wetlands. "T" indicates trace properties (Describe disturbances, relevant local variation proceed greater than 50 % the plant community is hydrophyte DROLOGY Corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	e. ns, seasonal eff tic, the wetland Wetl	plant criter	plogy Indicators (Describe in Remarks): icators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
prohological adaptations to wetlands. "T" indicates trace marks (Describe disturbances, relevant local variation fice greater than 50 % the plant community is hydrophyt (DROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other	e. ns, seasonal eff tic, the wetland Wetl	plant criter land Hydro Pnmary Ind X X	plogy Indicators (Describe in Remarks): icators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits
prophological adaptations to wetlands. "T" indicates trace properties (Describe disturbances, relevant local variation proce greater than 50 % the plant community is hydrophyte YDROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available	e. ns, seasonal eff tic, the wetland Wetl	plant criter	plogy Indicators (Describe in Remarks): icators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines
prohological adaptations to wetlands. "T" indicates trace marks (Describe disturbances, relevant local variation for greater than 50 % the plant community is hydrophyte (DROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available d Observations: Depth of Surface Water: 6-14 (in.)	e. ns, seasonal eff tic, the wetland Wetl	plant criter land Hydro Primary Ind X X X	plogy Indicators (Describe in Remarks): icators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands
prohological adaptations to wetlands. "T" indicates trace marks (Describe disturbances, relevant local variation are greater than 50 % the plant community is hydrophyte (DROLOGY) corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aenal Photograph Other X No Recorded Data Available d Observations: Depth of Surface Water: Depth to Free Water in Pit: Surface (in.)	e. ns, seasonal eff tic, the wetland Wetl	plant criter land Hydro Primary Ind X X X	plogy Indicators (Describe in Remarks): icators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required):
prophological adaptations to wetlands. "T" indicates trace imarks (Describe disturbances, relevant local variation are greater than 50 % the plant community is hydrophyte (DROLOGY) corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Id Observations: Depth of Surface Water: Depth to Free Water in Pit: Surface (in.)	e. ns, seasonal eff tic, the wetland Wetl	plant criter land Hydro Primary Ind X X X	plogy Indicators (Describe in Remarks): icators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches
prophological adaptations to wetlands. "T" indicates trace traces (Describe disturbances, relevant local variation ince greater than 50 % the plant community is hydrophyte (DROLOGY) Corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Id Observations: Depth of Surface Water: Depth to Free Water in Pit: Surface (in.)	e. ns, seasonal eff tic, the wetland Wetl	plant criter land Hydro Primary Ind X X X	plogy Indicators (Describe in Remarks): icators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches Water-Stained Leaves
Aerial Photograph Other X No Recorded Data Available Id Observations: Depth of Surface Water: 6-14 (in.) Depth to Free Water in Pit: Surface (in.)	e. ns, seasonal eff tic, the wetland Wetl	plant criter land Hydro Primary Ind X X X	plogy Indicators (Describe in Remarks): icators: Inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data
prophological adaptations to wetlands. "T" indicates trace trace traces to the property of the plant community is hydrophyte. Property of the plant community is hydrophyte.	e. ns, seasonal eff lic. the wetland Wett	land Hydro Primary Ind X X Secondary	plogy Indicators (Describe in Remarks): icators: inundated Saturated in Upper 12 inches Saturated in Upper 18 inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Indicators (2 or more required): Oxidized Root Channels in Upper 12 inches Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks)

							Data Piot i Wetland:	¥ :	E2-A E2
roject/Site:	Seattle Ta	coma Airport - Master	Plan Upo	iate	_ Date:	2/1/99			
OILS oil Survey	/ Data:								
lap Unit Na	ame: <u>Unm</u>	apped				Drainage Class:			
			-			Field Observation	ons Confirm	Mapp	ped Type?
axonomy (Subgroup):					Yes No	· (NA	<u>x</u>
rofile Desc	cription:								
,	Horizon Designation	Matrix Color (Munsell Moist)		le Color nsell Mois	it)	Mottle Abundance/Con			re, Concretions spheres, etc.
2	4							Grave	lly sand loam
12 4	<u> </u>	10YR 5/1	<u> </u>	·				Grave	liv sand loam
dric Soil	Indicators:								
Histo	osol				Listed	on Local Hydric S	Soils List		
Histi	c Epipedon					on State Hydric S			
X Sulfi	dic Odor			_	Listed	on National Hydr	nc Soils List		
		Moisture Regime		_	X Aquic	Moisture Regime			
	ucing Condi			_	Organ	ic Streaking in Sa	ndy Soils		
		Chroma Colors			Mottle	s			
—— High	Organic Co	ontent in Surface Layer		_	Other	(Explain in Remai	rks)		
		disturbances, local va							
epletions in	soil matrix,	soil consists of some	native gra	ivel mate	rial. Soil cold	or and other indica	tors indicate	e hyd	Inc soil present
ETLAND	DETER	MINATION							
drophytic	Vegetation	Present? Y	es <u>x</u>	_ No		Is this S	Sampling Po	oint V	Within a Wetlar
dric Soils	Present?	Y	es X	No					
							'es X	No	

This area has been disturbed and may be a man-made feature resulting from grading activities for south 188th or other project. The presence of all three parameters indicate this area is a wetland.



L	WET	I AND	DETE	DMINA	TIO	N	We	tland:		E2 Uplan	id Pi
							·- •				
	(Modified from: 19	101 CC	⊅⊏ vveti	ianos i	Jeiin	leati(n mar	iuai)			
Project/Site: Seattle Tacoma	Airport - Master Plan Up	date		Date:	1/2/99	9					
Applicant/Owner: Port of S	Seattle			County:	Kin	9					
nvestigator: M. Louther				State:	WA		·				_
1987 Method 🔲 1989	Method						ommun	ity ID:	Upia	ind	_
o Normal Circumstances exi	st on the site?	Yes	X	No			ield Plot	•			
the site significantly disturbe	ed (Atypical Situation)?	Yes		No -	×	,	reiu Fiui	ID. E.	2-6		
the area a potential Problem	n Area?	Yes		-	X						
emarks (Explain sample loc	cation disturbances nrobi			-	^						
GETATION (✓Domina Plant Species	ant species are checked)		% Cover	Stratur	n ŧ	ndicat	or				
1 Agrostis capillans (tenuis	3)		45	Herb	F	FAC					
			40	Shrub	;	AC					
 Populus balsamifera ssp 	trichocarpa (s)		10	Shrub							
Rubus discolor Present of Dominant Specie Recept FAC-). Include species Apphological adaptations to w	s that are OBL, FACW, of noted (*) as showing retlands. "T" indicates trace	or FAC	90 50	Shrub	f	ACU					
Rubus discolor Procent of Dominant Specie Rocept FAC-). Include species Prophological adaptations to well- Romarks (Describe disturbant	s that are OBL, FACW, of noted (*) as showing etlands. "T" indicates training to the cost variation of the cost relevant local variation.	or FAC ce.	50 50 asonal eff	Shrub	F		10 feet e	ast of th	ne gra	ivel road.	
Rubus discolor recent of Dominant Specie recept FAC-). Include species orphological adaptations to w rmarks (Describe disturbani ot's broom and madrone are	s that are OBL, FACW, of noted (*) as showing etlands. "T" indicates training to the cost variation of the cost relevant local variation.	or FAC ce.	50 sonal eff	Shrub	F		10 feet e	ast of th	ne gra	ivel road.	
Rubus discolor arcent of Dominant Specie (cept FAC-). Include species (prophological adaptations to w marks (Describe disturbant of's broom and madrone are	s that are OBL, FACW, (s noted (*) as showing etlands. "T" indicates tracces, relevant local variation present to the north. This	or FAC ce.	50 sonal eff	Shrub ects, etc	:.): roximi	ately 3					
Rubus discolor recent of Dominant Specie recept FAC-). Include species rephological adaptations to w marks (Describe disturbant of's broom and madrone are	s that are OBL, FACW, on the control of the control	or FAC ce.	50 asonal eff olot is local	Shrub ects, etc	:.): roximi	ately 3				vel road. n Remarks	a):
Rubus discolor recent of Dominant Species coept FAC-). Include species prohological adaptations to w marks (Describe disturbant of's broom and madrone are /DROLOGY corded Data (Describe in lease)	s that are OBL, FACW, on some of the state o	or FAC ce.	50 asonal eff olot is local	Shrub ects, etc	.): roxima drolog	ately 3	cators				3):
Rubus discolor recent of Dominant Specie ccept FAC-). Include species orphological adaptations to w marks (Describe disturbant of's broom and madrone are /DROLOGY corded Data (Describe in I Stream, Lake, or	s that are OBL, FACW, on some of the state o	or FAC ce.	50 asonal eff olot is local	Shrub ects, etc	i.): roxima irolog ndicati	ately 3 gy Ind ors: nundat	icators ed	(Descri	ribe ir	Remarks	3):
Rubus discolor recent of Dominant Specie cept FAC-). Include species rphological adaptations to w marks (Describe disturbant of's broom and madrone are /DROLOGY corded Data (Describe in I Stream, Lake, or Aerial Photograp	s that are OBL, FACW, of noted (*) as showing etlands. "T" indicates tracces, relevant local variation present to the north. This Remarks): Tide Gage	or FAC ce.	50 asonal eff olot is local	Shrub ects, etc	i.): roxima drolog ndicati	ately 3 gy Ind ors: nundat aturat	cators	(Descri	ribe in	Remarks	·):
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Rubus discolor Procent of Dominant Species Rocept FAC-). Include species Rocept FAC-). Inc	s that are OBL, FACW, of noted (*) as showing etlands. "T" indicates tracces, relevant local variation present to the north. This Remarks): Tide Gage	or FAC ce.	50 asonal eff olot is local	Shrub ects, etc	i.): roximi irolog ndicati In Si Si W Di	ately 3 y Ind ors: aundal aturat aturat /ater M rift Line edime	ed ed in Up ed in Up darks es	(Descriper 12 ii	ribe in	n Remarks s	·):
Rubus discolor recent of Dominant Specie cept FAC-). Include species orphological adaptations to w marks (Describe disturbanion's broom and madrone are /DROLOGY corded Data (Describe in language) Stream, Lake, or Aerial Photograp Other X No Recorded Data d Observations: Depth of Surface Water:	s that are OBL, FACW, (s noted (*) as showing etlands. "T" indicates traices, relevant local variation present to the north. This Remarks): Tide Gage other in the control of the control	or FAC ce.	50 sonal eff plot is local Wetl	ects, etc aled app	drolog	ately 3 Indicors: aundal aturat aturat /ater in inft Lin edime rainag	ed ed in Up ed in Up Marks es nt Depos e Pattern	(Descriper 12 in per 18 in sits	nches	n Remarks s s):
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4								Data P	lot #	E2-B
								Wetian		E2 Upland Pto
Project/Si	te: <u>Seattle</u>	Tacoma Airport - Master	Plan U	pdate		Date:	1/2/99			
SOILS Soil Surv	vey Data:							· · · · · · · · · · · · · · · · · · ·		
Map Unit	Name: Un	mapped					Drainage	Class:		
	-		-				-	servations Conf	irm Map	pped Type?
Taxonomy	y (Subgroup) :					Yes	No	NA	X
Profile De	scription:						_	_ ``	- ''	^
Depth (inches)	Horizon Designatio	Matrix Color on (Munsell Moist)	_	ittie C	olor Moist)		Mottle Abundan	ce/Contrast		ure, Concretions, ospheres, etc.
0-10	<u> </u>	2.5YR 4/3							Grave	elly sand loam
10-12	<u> </u>	2.5YR 4/3	10Y	'R 4/6			Few. Mediu	m, Distinct	Grave	eliv sand loam
Hydric So	il Indicator:	s :								
Hi:	stosol					Listed	on Local I	Hydric Soils List	<u>!</u>	
His	stic Epipedo	n						Hydric Soils List		
	Ifidic Odor							al Hydric Soils L		
		Moisture Regime			_		Moisture F			
	ducing Cond					Organ	c Streakin	g in Sandy Soil:	S	
		-Chroma Colors				Mottle:	s			
		Content in Surface Layer				Other	Explain in	Remarks)		
Remarks (Describe so	il disturbances, local va	iations,	etc.):						
Soil is com	posed of fill	material. No hydno soil i	ndicator	s <i>pr</i> es	sent.					
WET! AL	ID DETER	RMINATION								
		n Present?	es		No	×			_	Within a Wetland

Remarks (If applicable, explain any differences between 1987 and 1989 delineation results): All three wetland parameters are absent, therefore, the area is an upland.

Wetland Hydrology Present?

Yes ____ No _X

Para	metri:	x, Inc.
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Data Plot #:	E3-A
Wetland:	E3

1987 Method	PFO PSE2-A
vestigator: William Kleindl State: WA 1987 Method 1989 Method Community ID: Normal Circumstances exist on the site? Yes X No Field Plot ID: the site significantly disturbed (Atypical Situation)? Yes No X the area a potential Problem Area? Yes No X	
1987 Method	
the area a potential Problem Area? No mornal Circumstances exist on the site? Yes X No Field Plot ID: Yes No X Yes No X	
the site significantly disturbed (Atypical Situation)? Yes No _X	PSE2-A
the area a potential Problem Area? Yes No X	
marks (Explain sample location, disturbances, problem areas):	
GETATION (Dominant species are checked)	
Plant Species % Cover Stratum Indicator	
1 Juncus effusus 10 Herb FACW 2 Populus balsamifera ssp. tnchocarpa 80 Tree FAC	
cent of Dominant Species that are OBL, FACW, or FAC	
rphological adaptations to wetlands. "T indicates trace. marks (Describe disturbances, relevant local variations, seasonal effects, etc.):	
marks (Describe disturbances, relevant local variations, seasonal effects, etc.): ce greater than 50% of the dominant plants are hydrophytic, the wetland vegetation criteria is met.	
marks (Describe disturbances, relevant local variations, seasonal effects, etc.): ce greater than 50% of the dominant plants are hydrophytic, the wetland vegetation criteria is met. /DROLOGY	
marks (Describe disturbances, relevant local variations, seasonal effects, etc.): ce greater than 50% of the dominant plants are hydrophytic, the wetland vegetation criteria is met. [DROLOGY] corded Data (Describe in Remarks): Wetland Hydrology Indicators (Des	cribe in Remarks):
marks (Describe disturbances, relevant local variations, seasonal effects, etc.): ce greater than 50% of the dominant plants are hydrophytic, the wetland vegetation criteria is met. //DROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage April Describe in April Describe in Remarks (Describe in Remarks): April Describe in Remarks (Describe in Remarks): Wetland Hydrology Indicators (Describe in Remarks):	cribe in Remarks):
marks (Describe disturbances, relevant local variations, seasonal effects, etc.): ce greater than 50% of the dominant plants are hydrophytic, the wetland vegetation criteria is met. IDROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Wetland Hydrology Indicators: A Primary Indicators: X Inundated	
marks (Describe disturbances, relevant local variations, seasonal effects, etc.): ce greater than 50% of the dominant plants are hydrophytic, the wetland vegetation criteria is met. IDROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Aerial Photograph Other Wetland Hydrology Indicators (Describe in Remarks): X Inundated X Saturated in Upper 12	inches
marks (Describe disturbances, relevant local variations, seasonal effects, etc.): the greater than 50% of the dominant plants are hydrophytic, the wetland vegetation criteria is met. DROLOGY torded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other Wetland Hydrology Indicators (Describe in Remarks): X Inundated X Saturated in Upper 12	inches
marks (Describe disturbances, relevant local variations, seasonal effects, etc.): the greater than 50% of the dominant plants are hydrophytic, the wetland vegetation criteria is met. DROLOGY torded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X No Recorded Data Available Wetland Hydrology Indicators (Describe in Remarks): X Inundated X Saturated in Upper 18	inches
marks (Describe disturbances, relevant local variations, seasonal effects, etc.): ce greater than 50% of the dominant plants are hydrophytic, the wetland vegetation criteria is met. DROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X Inundated Other X Saturated in Upper 12 X No Recorded Data Available Water Marks Drift Lines Sediment Deposits	inches Inches
marks (Describe disturbances, relevant local variations, seasonal effects, etc.): ce greater than 50% of the dominant plants are hydrophytic, the wetland vegetation criteria is met. //DROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X Inundated Other X Saturated in Upper 12 X No Recorded Data Available Water Marks Drift Lines Sediment Deposits Drainage Patterns in V	inches Inches
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marks (Describe disturbances, relevant local variations, seasonal effects, etc.): ce greater than 50% of the dominant plants are hydrophytic, the wetland vegetation criteria is met. DROLOGY corded Data (Describe in Remarks): Stream, Lake, or Tide Gage Aerial Photograph Other X Inundated X Saturated in Upper 12 X No Recorded Data Available Water Marks Drift Lines Sediment Deposits Drainage Patterns in No Pepth of Surface Water: Depth to Free Water in Pit: Oxidized Root Change Oxidized Root Change	inches inches Vetlands quired): els in Upper 12 inche:

						Data P	lot#:	E3-A
						Wetiar	nd:	E3
roject/S	ite: Seattle T	acoma Airport - Master F	ian Update	Date	2/17/99			
OILS oil Sur	vey Data:							
fap Unit	Name: Unn	napped			Drainage	Class:		
					_	servations Conf	im Map	ped Type?
axonom	y (Subgroup):				Yes	No	NA	X
rofile D	escription:				_		- ''	^
epth nches)	Honzon Designation	Matrix Color (Munsell Moist)	Mottle Co (Munsell I		Mottle Abundan	ce/Contrast		ure, Concretions Ospheres, etc.
8	C1	10YR 5/1	-				Fine	sand
8+	C2	2.5Y 8/1			-		Fine s	and
Hi Hi X Su Pr Re X Gi Hig	educing Condi eyed or Low-C gh Organic Co (Describe soil	Moisture Regime	tions, etc.): • hydnc soil (Listed Listed X Aquic Organ Mottle Other	on State h on Nationa Moisture F ic Streakin s	Hydric Soils List Hydric Soils List al Hydric Soils I Regime g in Sandy Soil Remarks)	_ist	
ETLAN	UD DETER	MNATON						
	ND DETER							
	ic Vocatetie-							
drophyt	ic Vegetation Is Present?	Present? Yes			ls	this Sampling	Point \	Within a Wetlar

The presence of all three parameters indicate this area is a wetland

WETLAND DETERMINATION INTERMEDIATE-LEVEL ONSITE METHOD VEGETATION UNIT SAMPLING PROCEDURE

Project Number: 6943017

Herbs & Bryophytes

Project/Site: SeaTac - Borrow sites - Area 1

Date: 11/29/94 Sample Plot #: 1

Field Investigator(s): AS/SL

Indicator . % Areal Cover Status** Cover Class Midpoint Rank

Sum of Midpoints: Dominance Threshold:

Shrubs	Indicator Status	% Areal Cover	Cover Class	Midpoint	Rank
Rubus spectabilis	FAC+	85	6	85.5	1*
Rubus discolor	FACU	5	1	3.0	2
	e	m of Midnalm	.	90 E	

Dominance Threshold:

88.5 44.3

Saplings		Indicator Status	% Areai Cover	Cover Class	Midpoint	Rank
Ainus rubra	F/	v C	15	2	10.5	1*
		S	- of Midaein		105	

Sum of Midpoints:
Dominance Threshold:

10.5 5.3

Trees	indicator Status**	% Area! Cover	Cover Class	Midpoint	Rank
Ainus nibra	FAC	45	4	38.0	1*
		n of Midpoin		38.0	
	Domina	nce Thresho	id:	19.0	

% of Dominants that are OBL, FACW, and/or FAC:

3/3 = 100%

Hydrophytic Vegetation?

YES

Comments: FORESTED UPLAND.

Plot located in depression dominated by FAC vegetation. Spirea stand located in depression.

To determine dominants, first spirit species by miditaring. Then sum miditarins in order until 50% of tests for all species dominance translately is entradistary excessed. All species combines to the cumulative total plus any others having 20% of the total middless was a minimate with an allegest.

** Species that do not access on the Nazonal List (Reed, 1986) may have been assigned an indicator status based on field observations and habital information from the Maranus.

WETLAND DETERMINATION INTERMEDIATE-LEVEL ONSITE METHOD SOILS, HYDROLOGY & SUMMARY

Date: 11/29/94 Project Number: 5943017 Project/Site: SeaTac - Borrow sites - Area 1 Sample Plot #: 1 Field Investigator(s): AS/SL SOILS E SCS Mapping Unit: Alderwood gravelly sandy loam, 6-15 is soil a histosol? no Field Identification: Alderwood Histic epipedon present? no - is soil mattled? yes ls soil on hydric soils list? no is soil gieved? no Matrix Color Mottle Оссителся Horizon Depth Color Texture Color of Mottles Horizon sandy loam 10YR 2/2 0-14 10YR 3/2 10YR 4/3 7.5YR 4/4 c.1.d В 14-18 sandy loam 10YR 3/3 Landform/Topography: flat, barely depressional. Comments: Basis: Lack of hydric characteristics. Hydric Soils? NO HYDROLOGY . !" pround surface inundated? no Surface water depth: N/A : roil saturated? Depth to saturation: N/A Depth to free-standing water in pit: N/A ☑ Yes ☐ No -Oxidized root zones ☐ Yes ☐ No -Water-stained leaves ☐ Yes No -Water marks Yes No Surface scoured areas ☐ Yes 图 No -Drift lines ☐ Yes ☐ No -Wetland drainage patterns ☐ Yes ☐ No -Water-borne sediment deposits Yes No -Morphological plant adaptations Comments: There are a few oxidized mizospheres in B horizon. Wetland Hydrology? NO Basis: Lack of hydrologic indicators. SUMMARY Do normal environmental conditions exist at the plant community? yes Has the vegetation, soils, and/or hydrology been significantly disturbed? no Disturbed area? no Basis: no recent disturbance Basis: normal environmental conditions observed Problem area? no Comments: is the hydrophytic vegetation criterion met? YES

NO

NO

NO

is the hydric soil criterion met?

is the wetland hydrology criterion met?

is the vegetation unit or plot wetland?

Rationale for jurisdictional decision: Soils and hydrology parameters do not satisfy wetland criteria.

AR 048045

WETLAND DETERMINATION INTERMEDIATE-LEVEL ONSITE METHOD VEGETATION UNIT SAMPLING PROCEDURE

Project Number: 6943017

Project/Site: SeaTac - Borrow sites - Area 2

Date: 11/29/94

Sample Plot #: 2

Field Investigator(s): AS/SL

Herbs & Bryophytes	indicator Status	% Areai Cover	Cover Class	Midpoint	Ramk
Ranunculus repens	FACW	65	5	63.0	1*
Poz sp.	FACW-UPL"	5	1	3.0	3
Lollum perenne	FACU	5 ·	1	3.0	3
Geranium molle	FACW**	15	2	10.5	2
Agrostis tenuis	FAC	15	2	10.5	2
	Sum	of Midpoint	3:	90.0	
	Dominano	Threshok	d:	45.0	

Indicator % Areal Cover Shrubs Status-Cover -Midpoint Rank

> Sum of Midpoints: Dominance Threshold:

indicator % Armsi Cove Cover Saplings Status" Midpoint Rank

> Sum of Midpoints: Dominance Threshold:

Indicator % Areal Cover Trees Status" Cover Midpoint Rank

> Sum of Midpoints: Dominance Threshold:

% of Dominants that are OBL, FACW, and/or FAC:

1/1 = 100%

Hydrophytic Vegetation?

YES

Comments: GRASSLAND.

Area is abandoned pasture. Pasture grasses give way to buttercup in lowest portions of small depression at head of drainage.

To determine dominants, first starts species by mispoints. Then sum mispoints in order until 50% of total for all species (commence threshold) is investigately expended. All species contributing to this contileve total past any others having 20% of the total mispoint value are missed with an electric.

Sciences that do not appear on the National List (Read, 1988) may have been assigned an indi-status based on field observations and haping information from the instatute.

WETLAND DETERMINATION

INTERMEDIATE-LEVEL ONSITE METHOD SOILS. HYDROLOGY & SUMMARY Date: 11/29/94 Project Number: 6943017 Project/Site: SeaTac - Borrow Sites - Area 2 Sample Plot #: 2 Field Investigator(s): AS/SL SOILS E ls soil a histosoi? no SCS Mapping Unit: Alderwood Gravelly sandy loam, 6-15 Histic epipedon present? no Field Identification: Alderwood Is soil mottled? no Is soil on hydric soils list? no Is soil gleyed? no Оссителов Matrix Mottle Organic Horizon Color of Mottles Color Color Horizon Texture 10YR 3/2 0-10 7.5YR 4/4 10YR 4/2 c.1,d В 10-18 sandy loam Landform/Topography: drainageway bottom, hilly Comments: Basis: low chroma, mottles Hydric Soils? YES HYDROLOGY = Surface water depth: N/A is ground surface inundated? no is soil saturated? Depth to saturation: surface Depth to free-stamping water in pit: 10 ☑ Yes ☐ No -Oxidized root zones ☐ Yes ☑ No -Water-stained leaves ☐ Yes 🗷 No -Water marks ☐ Yes 图 No -Surface scoured areas ☐ Yes 图 No -Drift lines Yes No -Wetland drainage patterns ☐ Yes 🖾 No -Water-borne sediment deposits ☐ Yes ☑ No -Morphological plant adaptations Comments: Water seeping into pit at 4 inches. Oxidized root zones at 10-18 inches. Plot located in bottom of drainageway. Water flows to small culvert at Wetland D's west end. Wetland Hydrology? YES Basis: saturation to surface and free standing water at 10 inches. SUMMARY Do normal environmental conditions exist at the plant community? yes Has the vegetation, soils, and/or hydrology been significantly disturbed? no Basis: No recent disturbance Disturbed area? no Basis: Normal environmental conditions observed Problem area? no Comments: is the hydrophytic vegetation criterion met? YES

YES

YES

is the wetland hydrology criterion met? Is the vegetation unit or plot wetland? YES Rationale for jurisdictional decision: All three parameters satisfy wetland criteria.

is the hydric soil criterion met?

Indicator

Status

Project Number: 6943017

Herbs & Bryophytes

Date: 11/30/94

% Area

Cover

Project/Site: SeaTac - Borrow sites - Area 3 Field Investigator(s): AS/SL

Sample Plot #: 3

_	-		
		Sum of Midpoints:	
		Dominance Threshold:	

Shrubs	Indicator Status	% Areal Cover	Cover Comm	Midpoint	Ramk
Rubus spectabilis	FAC+	65	5	63.0	1*
•	Sur	m of Midpoin	nts:	63.0	

Dominance Threshold:

31.5

Midpoint

Saplings	Indicator Status	% Areal Cover	Cover Class	Midpoint	Rank
Ainus rubra	FAC	10	2	10.5	1*
	Su	m of Midpois	nts:	10.5	•

Dominance Threshold:

5.3

Trees	Indicator Status**	% Areai Cover	Cover Class	Midpoint	Runk
Ainus nubra	FAC	55	5 .	63.0	1*
Populus trichocarpa	FAC	2	1	3.0	2
Rhamnus purshiana	FAC-	tr	1	3.0	2
	Sur	n of Midpoin	ts:	69.0	
	Domina	nce Thresho	ıld:	34.5	

% of Dominants that are OBL, FACW, and/or FAC:

3/3 = 100%

Hydrophytic Vegetation?

YES

Rank

Comments: UPLAND FOREST.

Plot located in large depressional area dominated by FAC vegetation.

To determine constructs, first tank spaces by middents. Then sum middents in order until 50% of total for all spaces (dominance transhold) is immediately exceeded. All spaces contributing to the curriculative total pair any others having 20% of the total middent use or marked with an attention.

WEILAND DETERMINATION INTERMEDIATE-LEVEL ONSITE METHOD SOILS. HYDROLOGY & SUMMARY

SOILS =

Project Number: 6943017

Project/Site: SeaTac - Borrow sites - Area 3

Field Investigator(s): AS/SL

Date: 11/30/94

Sample Plot #: 3

SCS Mapping Unit: Indianola loamy fine sand, 4-15% slop

Field Identification: Inclusion Is soil on hydric soils list? no

is soil a histosol? no

Histic epipedon present? no

is soil mottled? yes

is sail gleyed? no

Horizon	Horizon Depth		Texture	Matrix Color	Mottle Color	Occurrence of Mottles	Caley	Organic Content
A	0-5	msdi		10YR 2/2				
В	5-18	loam		10YR 3/2	10YR 3/4	f/c, 1, f		
				10YR 3/3				

Landform/Topography: flat, barely depressional

Comments:

Hydric Soils? YES

Basis: low chroma and mottles

Is ground surface inunits soil saturated? Depth to free-standing	no	Surface water depth: N/A Depth to saturation: N/A
□ - 図 No -V □ - 図 No -V □ -3 図 No -V	later-borne sediment deposits	☐ Yes ☑ No -Water-stained leaves ☐ Yes ☑ No -Surface scoured areas ☐ Yes ☑ No -Wetland drainage patterns ☐ Yes ☑ No -Morphological plant adaptations tone apparent along live root channels.
Wetland Hydrology? NO	Basis: Lacks hydrologic	
	tions exist at the plant community? or hydrology been significantly distu	•
Disturbed area? no	Basis: no recent disturbanc	

Problem area? no

Basis: normal environmenta conditions observed

Comments:

Is the hydrophytic vegetation criterion met? YES Is the hydric soil criterion met? YES is the wetland hydrology criterion met? NO is the vegetation unit or plot wetland? NO

Rationale for jurisdictional decision: Hydrologic parameter does not satisfy wetland criteria.

Project Number: 6943017

Project/Site: SeaTac - Borrow sites - Area 3

Date: 11/30/94 Sample Plot #: 4

Field investigator(s): AS/SL

Herbs & Bryophytes	-	indicator Status**	% Areal Cover	Cover Class	Midpoint	Ramk
Glycena grandis	,	OBL	5	1	3.0	1*
Veronica americana		OBL	1	1	3.0	1"

Sum of Midpoints:

Dominance Threshold:

6.0 3.0

Shrubs	indicator Status	% Areal Cover	Cover Chas	Midpoint	Runk
Spiraes douglasii	FACW	5	1	3.0	1*
-	e		*	2.0	•

Sum of Midpoints: Dominance Threshold: 3.0 1.5

	indicator	% Area	Cover		
Saplings	Status**	Cover	Class	Midpoint	Rank

Sum of Midpoints: Dominance Threshold:

Trees	Indicator Status	% Areal . Cover	Cover Class	Midpoint	Rank
Safix lasiandra	FACW+	25	3	20.5	1*
Salix sitchensis	FACW	20	3	20.5	1*
	Sui	m of Midpoin	ts:	41.0	
	Domina	ince Thresho	ld:	20.5	

% of Dominants that are OBL, FACW, and/or FAC:

5/5 = 100%

Hydrophytic Vegetation?

YES

Comments: PFO/SS.

Plot located in depression and dominated by FACW vegetation.

To determine dominants, first cark species by indipolins. Then sum microents in order until 50% of time for all executes (dominance threshold) is immediately exceeded. All species contributing to the curricularies tool plus any others having 20% of the local microent value are minimal with an attention.

"Species that do not appear on the National List (Read, 1988) may have been status blased on feed observations and habital anomalizer from the franchise.

AR 048050

WETLAND DETERMINATION INTERMEDIATE-LEVEL ONSITE METHOD SOILS, HYDROLOGY & SUMMARY

Date: 11/30/94 Project Number: 6943017 Sample Plot #: 4 Project/Site: SeaTac - Borrow sites - Area 3 Field Investigator(s): AS/SL SOILS is soil a histosol? no SCS Mapping Unit: Indianola loamy fine sand, 4-15% slop Histic epipedon present? yes Field Identification: Inclusion is soil mottled? no is soil on hydric soils list? no is soil gieyed? yes Occumence Matrix Mottle Horizon Depth Texture Color Calar of Mottles Content Horizon 10YR 2/1 high 0-8 mucky peat 5Y5/1 bw В 8-18 silt loam 5Y6/1 Landform/Topography: flat, depressional Comments: Basis: organics, low chroma, gleyed Hydric Soils? YES HYDROLOGY M is ground surface inundated? no Surface water depth: Is soil saturated? Depth to saturation: surface Depth to free-standing water in pit: surface ☐ Yes 图 No -Oxidized root zones ☑ Yes ☐ No -Water-stained leaves ☑ Yes ☐ No -Water marks ☐ Yes 🖾 No -Surface scoured areas ☐ Yes 图 No -Drift lines Yes No -Wetland drainage patterns ☐ Yes No -Water-borne sediment deposits ☐ Yes ☑ No -Morphological plant adaptations Comments: Large depression likely is saturated to surface for most of the year. Wetland Hydrology? YES Basis: saturated to surface SUMMARY Do normal environmental conditions exist at the plant community? yes Has the vegetation, soils, and/or hydrology been significantly disturbed? no Basis: no recent disturbance Distribed area? no Basis: normal environmental conditions observed Pro am area? Comments: is the hydrophytic vegetation criterion met? YES is the hydric soil criterion met? YES YES is the wetland hydrology criterion met?

YES

is the vegetation unit or plot wetland?

Rationale for jurisdictional decision: All three criteria for wetland determination satisfied.

Project Number: 6943017

Project/Site: SeaTac - Borrow sites - Area 3

Date: 11/30/94 Sample Plot #: 5

Field Investigator(s): AS/SL

Herbs & Bryophytes Athyrium filix-lemina Solanum dukamara				_		
Herbs & Bryophytes	indicator Status**	% Areas Cover	Cover Cases	Midpoint	Rank	
Athyrium filix-lemina	FAC	10	2	10.5	1*	
Solanum dulcarnara	FAC+	10	2	10.5	1*	
Ranunculus repens	FACW	2	1	3.0	2	

Sum of Midpoints:

24.0

Cover

Dominance Threshold:

120

Midpoint

Shrubs	Indicator Status	% Areai Cover	Cover Class	Midpoint	Rank
Cornus stolonifera	FACW	20	3	20.5	1*
Spiraea douglasii	FACW	20	3	20.5	1*
Rubus spectabilis	FAC+	2	1	3.0	2
•	Sui	n of Midpoin	ts:	44.0	
	Domina	nce Thresho	id:	22.0	•

indicator

Status

Cover Sum of Midpoints: Dominance Threshold:

% Area

Trees	indicator Status**	% Areai Cover	Cover Class	Midpoint	Rani
Ainus rubra	FAC	35	4	38.0	1.
Acer macrophyllum	FACU	15	2	10.5	2*
	Sur	n of Midpoin	rts:	48.5	
	Domina	nce Thresho	id:	24.3	

% of Dominants that are OBL, FACW, and/or FAC:

5/6 = 83%

Hydrophytic Vegetation?

YES

Rank

Comments: UPLAND FOREST.

Sapiings

Plot located just south of Wetland A in north side of same large depression in which Plot 3 is located.

To determine dominants, first rank spaces by midports. Then sum midports in order until 50% of total for all spaces (dominance treateds) is invinciously execution. All apaces combusing to the combines total page any others having 20% of the total midport value are marked with an assense.

"Spaces that do not appear on the National List (Reed, 1986) may have been status based on field observations and habital information from the literature.

WETLAND DETERMINATION INTERMEDIATE-LEVEL ONSITE METHOD SOILS. HYDROLOGY & SUMMARY

Project Number: 6943017

Date: 11/30/94

Project/Site: SeaTac - Borrow sites - Area 3

Sample Plot #: 5

Field investigator(s): AS/SL

SOILS I

SCS Mapping Unit: Indianola loamy fine sand, 4-15% slop

is soil a histoso!? no

Field Identification: Indianoia

Histic epipedon present? no

is soil on hydric soils list? no

is soil mottled? no

is soil gleyed? no

Horizon	Horizon Depth	Texture	Matrix Color	Mottle Color	Occurrence of Mottles	Glay Color	Organic Content
A	0-6	loam	10YR 3/2				
B1	6-12	loamy sand	2.5Y 4/3	10YR3/4,3/6			
B2	12-22	loamy sand	25Y 4/2				
B3	22-30	ioam	10YR 2/1				

Landform/Topography: flat, barely depressional

Comments:

Hydric Soils? NO

Basis: tack of hydric characteristics.

is ground surface inun	dated? no	Surface water depth:
is soil saturated?	no	Depth to saturation: 22 inches
Depth to free-standing	water in pit:	· — · · · · · · · · · · · · · · · · · ·
∏ Yes RENo.d	Oxidized root zones	☐ Yes ☑ No -Water-stained leaves

Comments: Oxidized rhizospheres were found at 22-30 inches. Soils appear moderately well drained.

Wetland Hydrology? NO

Basis: Lack of hydrologic indicators.

SUMMARY

Do normal environmental conditions exist at the plant community? yes Has the vegetation, soils, and/or hydrology been significantly disturbed? no

Disturbed area? no

Basis: no recent disturbance

Problem area? no

Basis: normal environmental conditions observed

Comments:

Is the hydrophytic vegetation criterion met? YES is the hydric soil criterion met? NO is the wetland hydrology criterion met? NO is the vegetation unit or plot wetland? NO

Rationale for jurisdictional decision: Soils and hydrologic parameters do not satisfy wetland criteria.

Project Number: 6943017

Herbs & Bryophytes

Date: 11/29/94

Project/Site: SeaTac - Borrow sites - Area 3

Sample Plot #: 6

Field investigator(s): AS/SL

indicator Status*** % Area

Cover

R

Seems ____

Cover

Midseint

Rank

Sum of Midpoints: Dominance Threshold:

Shrubs	indicator Status**	% Areal Cover	Cover Class	Midpoint	Rank
Rubus discolor	FACU	85	6	85.5	1*
Rubus speciabilis	FAC+	10	2	10.5	2
Laurus sp.	FACUTT	Т	1	3.0	3
•	Sui	m of Midpoin	ts:	99.0	
	Domina	nce Thresho	ld:	49.5	
Saplings	indicator Status	% Areal Cover	Cover	Midpoint	Rank

Sum of Midpoints: Dominance Threshold:

Trees	indicator Status**	% Area! Cover	Cover Class	Midpoint	Ramk
Alnus rubra	FAC	90	6	85. 5	1*
Populus trichocarpa	FAC	10	2	10.5	2
	Sur	n of Midpoin	ts:	96.0	
	Domina	nce Thresho	ld:	48.0	

% of Dominants that are OBL, FACW, and/or FAC:

1/2 = 50%

Hydrophytic Vegetation?

NO

Comments: UPLAND FOREST.

Plot located in red alder dominated upland forest adjacent to Wetland B.

To determine dominates, first strick species by mispoints. Then sum misboards in order until 50% of texts for all species (domination breathod) is immediately exceeded. All associates contributing to this constituting both any others having 20% of the steal pulse any critical pulse are mismode with an assertify.

"Species that do not appear on the National List (Read, 1988) may have been assigned an indicator status based on fast operangers and habitat mornation from the Barcaire.

WETLAND DETERMINATION INTERMEDIATE-LEVEL ONSITE METHOD

SOILS. HYDROLOGY & SUMMARY

Projec: Number: 6943017

Date: 11/30/94

Project/Site: SeaTac - Borrow sites - Area 3 Field investigator(s): AS/SL

Sample Plot #: 6

SOILS I

SCS Mazzing Unit: Urban land Field an impation: Urban land " Is soil on hydric soils list? no

is soil a histosol? no

Histic epipedon present? no

is soil mottled? yes

is soil gleyed? m

Horizon	Horizon Depth	Texture	Matrix Color	Mottle Color	Occurrence of Mottles	Gley Color	Organic Content
A	0-3	oan	10YR 3/2	-			
B 1	3-14	loamy sand	10YR 3/3	5YR 5/8 10YR 4/6	m, 1, d c, 2, f&d		
B2	14-24	loamy sand	25Y 4/4	10YR 3/3	c, 1&2, d		

Landform/Topography: flat to hummocky

Comments:

Hydric Soils? NO

Basis: Lack of hydric characteristics

	HYDROLOGY			
Is ground surface inun	dated? no	Surfa	ice wati	er depth:
is soil saturated?	no	Depti	h to sat	uration:
Depth to free-standing	water in pit:			
☐ Yes 図 No -	Oxidized root zones	☐ Yes	⊠ No	-Water-stained leaves
⊡ Yes 戛 No⊸		Yes	No.	-Surface scoured areas
☐ Yes 置 No-l	-	Yes	No.	-Wetland drainage patterns
☐ Yes 図 No -1	Water-borne sediment deposits	☐ Yes	No.	-Morphological plant adaptations
		characteri:	stics.	
Wetland Hydrology? NO Do normal environmental cond	Basis: Lack of hydrologic SUMMARY ditions exist at the plant community? ye	es	stics.	
	Basis: Lack of hydrologic	es	stics.	
Wetland Hydrology? NO Do normal environmental cond Has the vegetation, soils, and	Basis: Lack of hydrologic SUMMARY litions exist at the plant community? yellor hydrology been significantly disturb Basis: no recent disturbance	es ed? no		
Wetland Hydrology? NO Do normal environmental conditions the vegetation, soils, and Disturbed area? no	Basis: Lack of hydrologic SUMMARY litions exist at the plant community? you hydrology been significantly disturb	es ed? no		ed
Wetland Hydrology? NO Do normal environmental cond Has the vegetation, soils, and Disturbed area? no Problem area? no	Basis: Lack of hydrologic SUMMARY litions exist at the plant community? yellor hydrology been significantly disturb Basis: no recent disturbance	es ed? no		ed
Wetland Hydrology? NO Do normal environmental cond Has the vegetation, soils, and Disturbed area? no Problem area? no Comments:	Basis: Lack of hydrologic SUMMARY litions exist at the plant community? yellor hydrology been significantly disturb Basis: no recent disturbance	ed? no conditions		e d
Wetland Hydrology? NO Do normal environmental conditions the vegetation, soils, and Disturbed area? no Problem area? no Comments:	Basis: Lack of hydrologic SUMMARY litions exist at the plant community? yellor hydrology been significantly disturb Basis: no recent disturbance Basis: normal environmental	ed? no conditions		ed
Wetland Hydrology? NO Do normal environmental conditions the vegetation, soils, and Disturbed area? no Problem area? no Comments:	Basis: Lack of hydrologic SUMMARY ditions exist at the plant community? year for hydrology been significantly disturb Basis: no recent disturbance Basis: normal environmental of the hydrophytic vegetation criterion met	ed? no conditions		e d

Project Number: 6943017

Project/Site: SeaTac - Borrow sites - Area 3

Date: 11/30/94

Field Investigator(s): AS/SL

Sample Plot #: 7

Herbs & Bryophytes	indicator Status	% Areai Cover	Cover Cass	Midpoint	Rank
Athyrium filix-lemina	FAC	2	1	3.0	1*
Equisetum arvense	FAC	2	1	3.0	1*
Polystichum munitum	FACU	1	1	3.0	1
•	Sun	of Midpoint	ts:	9.0	

Dominance Threshold: 4.5

Shrubs	Indicator Status**	% Areal Cover	Cover Cass	Midpoint	Rank
Rubus spectabilis	FAC+	65	5	63.0	1*
Rubus ursinus	FACU	10	2	10.5	2
	Su	m of Midpoin	ts:	73.5	
	Domina	ince Thresho	id:	36.8	

Status. Midpoint Rank

Sum of Midpoints: Dominance Threshold:

Trees	indicator Status	% Area! Cover	Cover Class	Midpoint	Rank
Ainus rubra	FAC	85	6	85.5	1.
	Sun	n of Midpoin	its:	85.5	
	Domina	nce Thresho	id:	42.8	

% of Dominants that are OBL, FACW, and/or FAC:

4/4 = 100%

Hydrophytic Vegetation?

YES

Comments: PFO.

Saplings

Plot located in red aider/salmonberry dominated forest in Wetland B.

To determine dominants, feet rank species by midpoints. Then sum midpoints is order until 50% of total for all species dominance invested it is immediately excessed. All species contributing to this compassive local plas any others hereig 20% of the local midpoint value are majned with an agencia.

"Scenars this do not appear on the Nazonal List (Read, 1988) may have been assigned an indicator status based on feet observations and habites information from the literature.

WETLAND DETERMINATION INTERMEDIATE-LEVEL ONSITE METHOD

SOILS. HYDROLOGY & SUMMARY Date: 11/30/94 Project Number: 6943017 Project/Site: SeaTac - Borrow sites - Area 3 Sample Plot #: 7 Field Investigator(s): AS/SL SOILS I ls soil a histosol? no SCS Mapping Unit: Indianola loamy fine sand, 4-15% slop Field Identification: Inclusion Histic epipedon present? no Is soil mottled? no Is soil on hydric soils list? no is soil gleyed? no Matrix Color Mottle Color Organic Content Horizon Depth of Mottles Texture Horizon 0-14 10YR 2/0 bam В gravelly sandy loam 10YR 3/1 14+ Landform. Topography: 20 degree slope. Comments: Basis: low chroma Hydric Soils? YES HYDROLOGY . is ground surface inundated? no Surface water depth: Is soil saturated? Depth to saturation: surface Depth to free-standing water in pit: 10 es 🖾 No -Oxidized root zones ☐ Yes ☑ No -Water-stained leaves as No -Water marks ☐ Yes 🔞 No -Surface scoured areas ☐ Yes 图 No -Drift lines ☐ Yes ☑ No -Wetland drainage patterns ☐ Yes ☑ No -Water-borne sediment deposits ☐ Yes ☑ No -Morphological plant adaptations Comments: Water seeps from hillside at plot and along much of the western slope of Wetland B. Wetland Hydrology? YES Basis: saturated to surface SUMMARY Do normal environmental conditions exist at the plant community? yes Has the vegetation, soils, and/or hydrology been significantly disturbed? no Disturbed area? no Basis: no recent disturbance

Comments: Plot located in Wetland B.

Problem area? no

is the hydrophytic vegetation criterion met? YES is the hydric soil criterion met?

YES

is the wetland hydrology criterion met? YES

YES

Basis: normal environmental conditions observed

is the vegetation unit or plot wetland?

Rationale for jurisdictional decision: All three parameters satisfy wetland determination criteria.

Project Number: 6943017

Project/Site: SeaTac - Borrow sites - Area 1

Date: 12/1/94 Sample Plot #: 8

Field investigator(s): AS/SL

Herbs & Bryophytes	indicator Sums**	% Areas Cover	Cover Class	Midpoint	Rank
Juncus effusus	FACW	15	2	10.5	2
Agrostis tenuis	FAC	65	5	63.0	1*
Holcus lanatus	FAC	2	1	3.0	3
Taraxacum officinale	FACU	1	1	3.0	3
	Sun	of Midpoint	ts:	79.5	
•		ce Threshol		39.8	

Shrubs	indicator Status**	% Areal Cover	Cover Class	Midpoint	Rank
Rubus discolor	FACU	2	1	3.0	1*
	C		.		

Sum of Midpoints:

Dominance Threshold: 1.5

Saplings	Indicator Status	- % Armsi Cover	Cover Class	Midpoint	Rank
Alnus rubra	FAC	T	1	3.0	1*

Sum of Midpoints: Dominance Threshold:

3.0 1.5

Indicator % Arms Cover Trees Status" Midpoint Cases Cover Rank FAC+ 20 3 Salix babylonica 20.5

> Sum of Midpoints: Dominance Threshold:

20.5 10.3

% of Dominants that are OBL, FACW, and/or FAC:

3/4 = 75%

Hydrophytic Vegetation?

YES

Comments: PEML

Plot located in wet meaadow adjacent to S. 216th. Other species present include EPWA and POTR sapling.

To determine dominants, first stark assesse by midstants. Then sum midstants in order and 50% of total for all assesse recommence invariants) in introductory exceeded. All assesses contributing to the contribution total paper any others heaving 20% of the total midpoint value are missed with an assertic.

"Sciences that do not appear on the National List (Reed, 1966) may have been assigned an initial status based on field observations and habbon information from the learning.

WETLAND DETERMINATION INTERMEDIATE-LEVEL ONSITE METHOD

SOILS. HYDROLOGY & SUMMARY Project Number: 6943017

Project/Site: SeaTac - Borrw sites - Area 1

Date: 12/1/94 Sample Plot #: 8

Field Investigator(s): AS/SL

SOILS

SCS Mapping Unit: Alderwood gravelly sandy loam, 6-15

Field Identification: Inclusion

is soil a histosol? no Histic epipedon present? no

Is soil on hydric soils list? no

is soil mottled? yes

Is soil gleyed? no

Hortzon	Horizon Depth	Texture	Matrix Color	Mattle Color	Occurrence of Mottles	Caley Color	Organic Contant
A	0-18	ioam .	10YR3/3				
8	6-18	sandy loam	2.5Y4/3	10YR 4/6			
		•		10YR 3/6			

Landform/Topography: flat, slightly depressional

Comments: Soil likely is fill.

Hydric Soils? YES

Basis: Aquic moisture regime. The development of active rhizospheres in probable fill.

Is ground surface inunda	ted? no	Surface water depth:
Is soil saturated?	yes	Depth to saturation: surface
Depth to free-standing wa	ster in pit: 12"	
Maryes □ No -Ox	idized root zones	☐ Yes 图 No -Water-stained leaves
☐ Yes 图 No -Wa	ter marks	Yes No Surface scoured areas
☐ Yes 🏻 No -Dri	It lines	Yes No -Wetland drainage patterns
☐ Yes 🔣 No -Wa	ter-borne sediment deposits	Yes No Morphological plant adaptations

Wetland Hydrology? YES

Basis: saturation to surface

SUMMARY

Do normal environmental conditions exist at the plant community? yes

Has the vegetation, soils, and/or hydrology been significantly disturbed? no

Disturbed area? no

Basis: no recent disturbance

Problem area? no

Basis: normal environmental conditions observed

Comments:

is the hydrophytic vegetation criterion met? YES

is the hydric soil criterion met?

YES

Is the wetland hydrology criterion met?

YES

is the vegetation unit or plot wetland?

YES

Rationale for jurisdictional decision: All three parameters satisfy wetland determination criteria.

Project Number: 6943017

Project/Site: SeaTac - Borrow sites - Area 2

Date: 12/1/94

Sample Plot #: 9

Field Investigator(s): AS/SL

Herbs & Bryophytes	Indicator Status	% Areal Cover	Cover Class	Midpoint	Rank
Taraxacum officinale	FACU	1	1	3.0	3
Cirsium arvense	FACU+	1	1	3.0	3
Festica arundinacea	FAC-	5	1	3.0	3
Phieum pratense	FAC-	5	1	3.0	3
Poz sp.	FACW-UPL"	30	4	38.0	2
Agropyron repens	FAC-	60	5	63.0	1*
-gapy, a.repunz	Sum	of Midpoint	·	113.0	

Sum of Midpoints:

56.5

Dominance Threshold:

· · · · · · · · · · · · · · · · · · ·	indicator	% Area	Cover		
Shrubs	Status**	Cover	Cass	Midpoint	Rank

Sum of Midpoints:

Dominance Threshold:

	 indicator	% Areal	Cover		
Saplings	Status"	Cover	Class	Midpoint	Rank

Sum of Midpoints:

Dominance Threshold:

	Indicator	% Areai	Cover		
Trees	Status**	Cover	Class	Midpoint	Rank

Sum of Midpoints: Dominance Threshold:

% of Dominants that are OBL, FACW, and/or FAC:

0/1 = 0%

Hydrophytic Vegetation?

NO

Comments: GRASSLAND/PASTURELAND.

Upland plot in abandoned pasture south of Wetland D.

To determine dominance, fast zers, specials by midplents. Then sum midpoints in order until 50% of total for all scales informations invariently is immediately exceeded. All specials contributing to this cumulative local plus any others having 20% of the total midpoint value are manifest with an asterials.

** Sources that do not access on the National List (Reed, 1988) may have been assigned an indicator status based on feed observations and hadiotic adomnstion from the literature.

WETLAND DETERMINATION INTERMEDIATE-LEVEL ONSITE METHOD SOILS HYDROLOGY & SIMMARY

SOILS, HYDROLOGY & SUMMARY Project Number: 6943017 Data: 12/1/94 Project/Site: SeaTac - Borrow sites - Area 2 Sample Plot #: 9 Field Investigator(s): AS/SL SOILS SCC Azoping Unit: Alderwood gravelly sandy loam, 6-15 is soil a histosol? no Fier: sentification: Histic epipedon present? no Is soil on hydric soils list? no is soil mottled? yes is soil gleyed? m Matrix Horizon Depth Mottle Color Оскативо Organic Content Texture Color Horizon of Mottles 0-3 ioam 10YR 3/3 В 3-18 sandy loam 10YR 3/3 10YR 5/8 f.3.f&d Landform/Topography: upslope of drainageway in horse pasture. Comments: Soils varigated. Histric :: s? NO Basis: lack of hydric characteristics HYDROLOGY I is ground surface inundated? no Surface water depth: Is soil saturated? Depth to saturation: Depth to free-standing water in pit: ☐ Yes No -Oxidized root zones ☐ Yes 图 No -Water-stained leaves ☐ Yes M No -Water marks ☐ Yes ☐ No -Surface scoured areas ☐ Yes 图 No -Drift lines Yes No -Wetland drainage patterns ☐ Yes 👿 No -Water-borne sediment deposits ☐ Yes No -Morphological plant adaptations Comments: Wetland Hydrology? NO Basis: lack of hydrologic indicators SUMMARY Do normal environmental conditions exist at the plant community? yes Has the vegetation, soils, and/or hydrology been significantly disturbed? no Disturbed area? no Basis: no recent disturbance Problem area? Basis: normal environmental conditions observed Comments: Soils moist at the time of the investigation. is the hydrophytic vegetation criterion met? NO Is the hydric soil criterion met? NO Is the wetland hydrology criterion met? NO Is the vegetation unit or plot wetland? NO

Rationale for jurisdictional decision: None of the parameters satisfy wetland determination criteria.

Project Number: 6943017

Project/Site: SeaTac - Borrow sites - Area 5

Date: 12/6/94

Sample Plot #: 10

Field Investigator(s): AS/SL

Herbs & Bryophytes	indicator Surus	% Areal Cover	Cover Cleas	Midpoint	Rank
Ranunculus repens	FACW	60	5	63 .0	1"
Juneus effusus	FACW	20	3	20.5	2*
Agrostis sp.	FACVI-FACU	15	2	10.5	3
	_				

Sum of Midpoints:

94.0

Dominance Threshold:

47.0

Shrubs	indicator Status**	% Armsi Cover	Cover Class	Midpoint	Rank	
Rubus discolor	FACU	6	2	10.5	1*	

Sum of Midpoints:

10.5

Dominance Threshold:

5.3

Saplings	Indicator Status	% Area Cover	Cover Cases	Midpoint	Rank
Ainus rubra	FAC	5	1	3.0	1*
Populus trichocarpa	FAC	4	1	3.0	1*
	Su	m of Midpoin	nts:	6.0	
	Domina	ince Thresho	old:	3.0	

	indicator	% Armsi	Cover		
Trees	Status"	Cover	Class	Midpoint	Rank

Sum of Midpoints: Dominance Threshold:

% of Dominants that are OBL, FACW, and/or FAC:

4/5 = 80%

Hydrophytic Vegetation?

YES

Comments: HERBACEOUS VEGETATION.

Plot located in roadside depression. ALRU and POTR rooted upslope.

To determine comments, first rank spaces by midpoints. Then sam midpoints in order until 50% of total for all spaces identifications shall be enviroletted established as a spaces contributing to the currousine total pass any others having 20% of the total midpoint value are manual with an alternit.

"Species that do not appear on the National List (Reed, 1988) may have been assigned an indicator seaso based on field observations and habitat information from the fearitism.

WETLAND DETERMINATION

INTERMEDIATE-LEVEL ONSITE METHOD SOILS. HYDROLOGY & SUMMARY Date: 12/6/94 Project Number: 6943017 SeaTac - Borrow sites - Area 5 Project/S Sample Plot #: 10 Field inv etor(s): AS/SL SOILS I SCS Mapping Unit: Not mapped (Urban land) is soil a histosol? no Field Identification: Urban land Histic epipedon present? no is soil mottled? yes !- on hydric soils list? is soil gleyed? m

Horizon	Horizon Depth	Texture	Matrix Color	Mottle Color	Occurrence of Mottles	Gley Color	Organic Content
A	0-9	gravelly sandy loam	10YR 3/3				
		_	10YR 3/2				
B1	9-14	gravelly sandy loam	10YR 4/4				
B2	14-18	sandy loam	25Y 4/4	10YR 5/8	f, 3,d		

Landform pography: roadside depressional area

Comments. Flecks of rotten rock (5YR 5/8) throughout profile.

Hydric Soils? NO

Basis: lack of hydric characteristics

s ground surface inundated? no	Surface water depth:
s soil saturated?	Depth to saturation: 14 inches
Depth to free-standing water in pit:	
☐ Yes 図 No -Oxidized root zones	☐ Yes ☑ No -Water-stained leaves
Yes No -Water marks	Yes No Surface scoured areas
☐ Yes No -Drift lines	Yes No -Wetland drainage patterns
☐ Yes ☑ No -Water-borne sediment deposits	Yes No -Morphological plant adaptations

Wetland Hydrology? YES

Basis: saturation at 14 inches

SUMMARY

Do normal environmental conditions exist at the plant community? yes Has the vegetation, soils, and/or hydrology been significantly disturbed? no

Disturbed area? no

Basis: no recent disturbance

Problem area? no

Basis: normal environmental conditions observed

Comments:

is the hydrophytic vegetation criterion met? YES is the hydric soil criterion met? NO Is the wetland hydrology criterion met? YES ·NO

is the vegetation unit or plot wetland?

Rationale for jurisdictional decision: Soil parameter does not satisfy wetland determination criteria.

Project Number: 6943017

Project/Site: SeaTac - Borrow sites - Area 5

Date: 12/6/94

Sample Plot & 11

Field Investigator(s): AS/SL

Herbs & Bryophytes	indicator Status	% Armsi Cover	Cover Cases	Midpoint	Rank
Phalaris arundinacea	FACW	20	3	20.5	1*
	_				

Sum of Midpoints:

20.5

Dominance Threshold:

10.3

Shrubs	indicator Status**	% Areai Cover	Cover Ches	Midpoint	Rank
Rubus discolor	FACU	10	2	10.5	1*
	Sum of Midpoints: 10			10.5	

Dominance Threshold:

5.3

Saplings	indicator Status	% Areai Cover	Cover Class	Midpoint	Rank
Safix sp.	OBL-FACU	5	1	3.0	1*
Populus trichocarpa	FAC	2	1	3.0	1*
	Su	m of Midpoi	nts:	6.0	

Dominance Threshold:

3.0

Trees	indicator Status**	% Areal Cover	Cover Cass	Midpoint	Rank
Populus tricnocarpa	FAC	3 5	4	38.0	1*
Salix sp.	OBL-FACU	5	1	3.0	2
Ainus rubra	FAC	5	1	3.0	2
	Sur	m of Midpoin	its:	44.0	
		nce Thresho		22.0	

% of Dominants that are OBL, FACW, and/or FAC:

4/5 = 80%

Hydrophytic Vegetation?

YES

Comments: PFO.

Plot located in roadside depression.

To desumme dominants, list rank spaces by midborts. Then earn midborts in ordural 50% of total for all spaces (dominance breaking) is instructionly exceeded. All spaces commissing to the commission total plus any others having 20% of the total midbort value are marked with an automic.

** Sourcet that do not appear on the Naponal List (Read, 1988) may have been assigned an indicator status based on field observations and habital information from the Statestine.

WEILAND DETERMINATION INTERMEDIATE-LEVEL ONSITE METHOD

SOILS, HYDROLOGY & SUMMARY Project N. mber: 6943017 Date: 12/6/94 Project/S :s: SeaTac - Borrow sites - Area 5 Sample Plot #: 11 Field investigator(s): AS/SL SOILS = SCS Mapping Unit: Not mapped (Urban land) is soil a histosol? Field Identification: Urban land Histic epipedon present? no is soil on hydric soils list? no is soil mottled? no is soil gleyed? so Matrix Color Horizon Depth Mottle Color Organic Content Horizon Texture of Matties A1 0-4 bam 10YR 2/2 **A2 ≟-16** gravelly sandy loam 10YR 3/2 В .5-18 silt loam 25Y 5/2 7.5 YR 4/6 m,3,p Landform/Topography: wide roadside depression Comments: Silt loam is strongly cemented. Rotten reddish rock throughout profile. Hydric Soils? YES Basis: low chroma, mottles HYDROLOGY = is ground surface inundated? no Surface water depth: N/A is soil saturated? Depth to saturation: ? Depth to frae-standing water in pit: N/A ☐ Yes
☐ No -Oxidized root zones ☐ Yes ☑ No -Water-stained leaves ☐ Yes 图 No -Water marks ☐ Yes 图 No -Surface scoured areas ☐ Yes I No -Drift lines Yes. No -Wetland drainage patterns ☐ Yes No -Water-borne sediment deposits Yes No -Morphological plant adaptations Comments: Water seeping into pit at 16 inches. Wetland Hydrology? YES Basis: saturation and seepage above 18 inches SUMMARY Do normal environmental conditions exist at the plant community? yes Has the vegetation, soils, and/or hydrology been significantly disturbed? no

Disturbed area? no

Basis: no recent disturbance

Problem area?

Basis: normal environmental conditions observed

Comments:

is the hydrophytic vegetation criterion met? YES

is the hydric soil criterion met?

YES.

is the wetland hydrology criterion met?

is the vegetation unit or plot wetland?

YES YES

Rationale for jurisdictional decision: All three parameters satisfy wetland determination criteria.

INTERMEDIATE-LEVEL ONSITE METHOD VEGETATION UNIT SAMPLING PROCEDURE

Project Number: 6943017

Herbs &

Project/Site: SeaTac - Borrow sites - Area 5

Date: 12/6/94

Field Investigator(s): AS/SL

Sample Plot #: 12

	indicator	% Area	Cover		
Bryophytes	Status	Cover	Class	Midpoint	Rank

Sum of Midpoints:

Dominance Threshold:

Shrubs	indicator Status	% Areal Cover	Cover Class	Midpoint	Rank
Rubus discolor	FACU	15	2	10.5	2*
Rubus ursinus	FACU	25	3	20.5	1*

Sum of Midpoints:

31.0

	Dominance	Thresho	ıld:	15.5
	indicator	% Area	Cover	
Saplings	Status"	Cover	Class	Midpoint

FACT 5 Betula papyrifera Pseudotsuga menziesii FACU* 5

Rank .1* 3.0 3.0 1"

Sum of Midpoints: Dominance Threshold:

6.0 3.0

Trees	Indicator Status =	% Area! Cover	Cover Class	Midpoint	Rank
Populus tricnocarpa	FAC	90	6	85.5	1*
Betula papyrifera	FAC*	3	1	3.0	2
	Sui	n of Midpoin	its:	88.5	
	Domina	nce Thresho	old:	44.3	

% of Dominants that are OBL, FACW, and/or FAC:

2/5 = 40%

Hydrophytic Vegetation?

1

1

NO

Comments: FORESTED UPLAND.

Plot located to the west of Plot 11 in same depression.

To determine dominants, first rank spaces by midpoints. Then sum midpoints in or until 50% of total to all spaces, dominance financing a minimal excessor. All spaces community to the cumulative total pass any others having 20% of the step midpoint value are mainted with an asserter.

** Somes that do not appear on the National List (Reed, 1988) may have bee stalks based on test observations and happes information from the learning.

WETLAND DETERMINATION INTERMEDIATE-LEVEL ONSITE METHOD SOILS, HYDROLOGY & SUMMARY

Project Number: 6943017

Project/Site: SeaTac - Borrow sites - Area 5

Field Investigator(s): AS/SL

Date: 12/6/94

Sample Plot #: 12

SOILS I

SCS Mapping Unit: Not mapped (Urban land)

Field Identification: Urban land is soil on hydric soils list? no

10-18

Is soil a histosol? no

Histic epipedon present? no

7.5YR 5/8

is sail mattled? yes is soil gleyed? m

f&c,3.p

Horizon	Horizon Depth	Texture	Matrix Color	Mattle Color	Occurrence of Mottles	Glay Color	Organic Content
	0-10	bam	10YR 3/2				
^	G 10		10YR 3/3				

25Y 5/4

2.5Y 4/4

Landform/Topography: flatt, roadside depression

gravelly sand

Comments:

В

Hydric Soils? NO

Basis: Lack of hydric characteristics.

is ground surface inundated? no	Surface water depth:
Is soil saturated?	Depth to saturation:
Depth to free-standing water in pit:	
Yes No -Oxidized root zones	Yes No -Water-stained leaves
Yes Mo -Water marks	Yes No -Surface scoured areas
☐ Yes No -Dritt lines	Yes No -Wetland drainage patterns
Yes No -Water-borne sediment deposits	Yes No -Morphological plant adaptations
nments:	

SUMMARY

ormal environmental conditions exist at the plant community? yes the vegetation, soils, and/or hydrology been significantly disturbed? no

Disturbed area? no

Basis: no recent disturbance

Problem area? no

Basis: normal environmental conditions observed

Comments:

is the hydrophytic vegetation criterion met? YES

is the hydric soil criterion met?

NO

Is the wetland hydrology criterion met?

NO

is the vegetation unit or plot wetland?

NO

Rationale for jurisdictional decision: None of the parameters satisfy the wetland criteria.

MEITWAND REIEBBURGIOS INTERMEDIATE-LEVEL ONSITE METHOD VEGETATION UNIT SAMPLING PROCEDURE

Project Number: 6943017

Project/Site: SeaTac - Borrow sites - Area 5

Date: 12/6/94

Sample Plot #: 13

Field Investigator(s): AS/SL

1 1016 1111 4011 4011 411 1111					
Herbs & Bryophytes	Indicator Status	% Areni Cover	Cover Ctass	Midpoint	Rank
Agrostis sp.	FACW-FACU	60	5	63.0	1"
Carex so.	OBL-FAC	8	2	10.5	2
Carex sp. Epilobium watsonii	FACW	1	1	3.0	3
Juncus effusus	FACW	1	1	3.0	3
Polystichum munitum	FACU	3	1	3.0	3
•	E.,	ed Midneim	·e-	825	

Sum of Midpoints:

Dominance Threshold:

41.3

Shrubs	indicator Status	% Areal Cover	Cover Class	Midpoint	Rank
Spiraea douglasii	FACW	8	2	10.5	1*
Rubus discolor	FACU	4	1	3.0	2
Rubus ursinus	FACU	1	1	3.0	2
Rubus laciniatus	FACU+	1	1	3.0	2
	Su	m of Midpoin	rts:	19.5	
	Domina	ince Thresho	ld:	9.8	

	indicator	% Area	Cover		
Saplings	Sizitus"	Cover	Class	Midpoint	Rank

Sum of Midpoints: Dominance Threshold:

Trees	Indicator Status**	% Areal Cover	Cover Class	Midpoint	Rank
Salix sp.	OBL-FACU	50	4	38.0	1*
Populus trichocarpa	FAC _	45	4	38.0	2*
	Sur	m of Midpoin	ıts:	76.0	
	Domina	ince Thresho	old:	38.0	

% of Dominants that are OBL, FACW, and/or FAC:

4/4 = 100%

Hydrophytic Vegetation?

YES

Comments: PFO

To distentine domestics, first rank species by mispoints. Then sum mispoints in order until 50% of loss for all species (dominance treathold) is invitablely escaleded. All species commissions commissioned by the commission state place any others having 20% of the loss involunt space are managed with an automatic.

"* Scenes that do not accept on the National Let (Reed, 1988) may have been assigned an indic status based on field coservations and habitat information from the intrature.

WETLAND DETERMINATION INTERMEDIATE-LEVEL ONSITE METHOD SOILS, HYDROLOGY & SUMMARY

SOILS. HYDROLOGY & SUMMARY Date: 12/6/94 Project Number: 6943017 Project/Site: SeaTac - Borrow sites - Area 5 Sample Plot #: 13 Field Investigator(s): AS/SL SOILS I SCS Mapping Unit: Not mapped (Urban land) le soil a histosol? Histic epipedon present? no Field Identification: Urban land is sail mattled? yes is soil on hydric soils list? no is soil gleyed? yes Matrix Color Horizon Mottle Occurrence Organic Content Color Horizon Depth Territore Color of Mottles 10YR 3/3 gravelly sandy loam Α. sandy loam 5Y 5/1 10YR5/8 m, 1&2, p 5Y 5/1 В 4-16 Landform/Topography: hilly Comments: Cobbles prevent penetration below 16 inches. Wavy boundary between horizons. Basis: Low chroma, mottles Hydric Soils? YES HYDROLOGY . . .: surface inundated? no Surface water depth: is soil saturated? yes Depth to saturation: apx 10 inches Depth to free-standing water in pit: ☑ Yes ☐ No -Oxidized root zones Yes No -Water-stained leaves ☐ Yes 图 No -Water marks Yes No -Surface scoured areas ☐ Yes 图 No -Drift lines Yes No -Wetland drainage patterns ☐ Yes ☑ No -Water-borne sediment deposits Yes No -Morphological plant adaptations Comments: Wetland Hydrology? YES Basis: Saturation, redoximorphic features. SUMMARY Do normal environmental conditions exist at the plant community? yes Has the vegetation, soils, and/or hydrology been significantly disturbed? no Disturbed area? no Basis: no recent disturbance Problem area? no Basis: normal environmental conditions observed Comments: is the hydrophytic vegetation criterion met? YES Is the hydric soil criterion met? YES is the wetland hydrology criterion met? YES is the vegetation unit or plot wetland? YES

Rationale for jurisdictional decision: All three parameters satisfy wetland criteria.

Project Number: 6943017

Herbs & Bryophytes

Project/Site: SeaTac - Borrow sites - Area 5

Date: 12/7/94

Sample Plot #: 14

Cover

Field Investigator(s): AS/SL

indicator Status"

% Aven

Cover

Midpoint

Rank

Sum of Midpoints:

Dominance Threshold:

Shrubs	indicator Status	% Areal Cover	Cover Class	Midpoint	Rank	_
Rubus discolor	FACU	100	7	98.0	1*	
	e	4 88141-		98.0		

Sum of Midpoints:

Dominance Threshold:

49.0

	indicator	% Area	Cover		
Saplings	Status"	Cover		Midpoint	Rank

Sum of Midpoints:

Dominance Threshold:

Trees	indicator Status**	% Areal Cover	Cover Class	Midpoint	Rank
Alnus rubra	FAC	60	5	63.0	1*
Populus trichocarpa	FAC	10	2	10.5	2
	Sur	n of Midpoin	ts:	73.5	
	Domina	nce Thresho	id:	36.8	

% of Dominants that are OBL, FACW, and/or FAC:

1/2 = 50%

Hydrophytic Vegetation?

YES

Comments: FORESTED UPLAND.

Plot located in red alder and blackberry dominated forest. Species outside plot include POMU, PTAR, and

RUUR.

To community continues, list rank spaces by midbeints. Then sum midboints in order until 50% of total for all spaces (community treehold) is investigately exceeded. All spaces community to the commissive total pass any others having 20% of the total midboint value are manifest with an allered.

"Spinous that do not appear on the National List (Read, 1988) may have been assigned an indicator agains beened on field open-values, and habitat information from the facilities.

WETLAND DETERMINATION INTERMEDIATE-LEVEL ONSITE METHOD SOILS, HYDROLOGY & SUMMARY

Date: 12/7/94 Project Number: 6943017 Project/Site: SeaTac - Borrow sites - Area 5 Sample Plot #: 14 Field Investigator(s): AS/SL SOILS SCS Mapping Unit: Not mapped (Urban land) is soil a histosol? no Field Identification: Urban land Histic epipedon present? no is soil mottled? no is soil on hydric soils list? no is soil gleyed? m Horizon Matrix Color Mottle Organic Calor Texture of Mottles Horizon Depth Color 10YR 3/2 0-11 sandy loam 25Y 4/4 11-20 sandy loam Landform/Topography: hillside plot in hilly area Comments: Streaks occur from 14-20 inches - 10YR 5/6. Hydric Soils? NO Basis: Lack of hydric characteristics HYDROLOGY : is ground surface inundated? no Surface water depth: Is soil saturated? ves Depth to saturation: 20 inches Depth to free-standing water in pit: ☐ Yes
☐ No -Oxidized root zones ☐ Yes 图 No -Water-stained leaves ☐ Yes I No -Water marks ☐ Yes ☐ No -Surface scoured areas ☐ Yes 图 No -Drift lines Yes No -Wetland drainage patterns ☐ Yes ☑ No -Water-borne sediment deposits Yes No -Morphological plant adaptations Comments: Wetland Hydrology? NO Basis: Lack of hydrologic indicators SUMMARY Do normal environmental conditions exist at the plant community? yes Has the vegetation, soils, and/or hydrology been significantly disturbed? no Disturbed area? no Basis: no recent disturbance Problem area? no Basis: normal environmental conditions observed Comments: is the hydrophytic vegetation criterion met? YES is the hydric soil criterion met? NO is the wetland hydrology criterion met? NO is the vegetation unit or plot wetland? NO

Rationale for jurisdictional decision: Soils and hydrology parameters do not satisfy wetland criteria.

AR 048071

Project Number: 6943017

Date: 12/7/94

Project/Site: SeaTac - Borrow sites - Area 5

Sample Plot #: 15

Field Investigator(s): AS/SL

Herbs & Bryophytes	indicator Status**	% Aresi Cover	Cover Class	Midpoint	Rank
Вготиз sp.	••	90	6	85.5	1*

Sum of Midpoints:

85.5

Dominance Threshold:

42.8

Shrubs	indicator Status**	% Areni Cover	Cover Class	Midpoint	Rank
Rubus ursinus	FACU	2	1	3.0	1*
	Sur	m of Midpoin	ts:	3.0	

Dominance Threshold: 1.5

Saplings	Indicator Status**	% Areal Cover	Cover Class	Midpoint	Rank	
Robinia pseudo-acacia	FACU	5	1	3.0	1*	
•	Sur	m of Midpols	rts:	3.0		

Indicator

Status"

FACU

Dominance Threshold: 1.5

> % Areal Cover Cover Midpoint Rank 1. 20.5

Sum of Midpoints: 20.5 Dominance Threshold: 10.3

% of Dominants that are OBL, FACW, and/or FAC:

0/4 = 0%

Hydrophytic Vegetation?

NO

Comments: GRASSLAND

Robinia pseudo-acacia

Trees

To desermine dominants, first rank spaces by meaponts. Then sum miscourts in or until 50% of test for all sciences (dominance threshold) is immunicative escended. All spaces combining to the cumulative root bits any others having 20% of the total miscourt value are mainted with an atterest.

"Spaces that do not appear on the National List (Resp., 1996) may have been against based on field observations and happen stormagner from the largeure.

WETLAND DETERMINATION INTERMEDIATE-LEVEL ONSITE METHOD SOILS. HYDROLOGY & SUMMARY

SOILS. HYDROLOGY & SUMMARY Project Number: 6943017 Date: 12/7/94 Project/Site: SeaTac - Borrow sites - Area 5 Sample Plot #: 15 Field Investigator(s): AS/SL SOILS I SCS Mapping Unit: Not mapped (Urban land) ls soil a histosol? Field Identification: Urban land Histic epipedon present? no is soil on hydric soils list? no Is soil mottled? no is soil gleyed? m Horizon Matrix Mottle Horizon Texture Color of Motties 10YR 3/2 0-11 gravelly sandy loam A : 11-20 sandy loam 10YR 3/3 Landform/Temagraphy: flat, top of hill Comments: Hydric Soils? NO Basis: Lack of hydric characteristics. HYDROLOGY = Is ground surface inundated? no Surface water depth: Is soil saturated? Depth to saturation: Depth to free-standing water in pit: ☐ Yes 🖸 No -Oxidized root zones ☐ Yes ☐ No -Water-stained leaves ☐ Yes 图 No -Water marks ☐ Yes ☑ No -Surface scoured areas ☐ Yes 图 No -Drift lines ☐ Yes 🖾 No -Wetland drainage patterns ☐ Yes ☐ No -Water-borne sediment deposits ☐ Yes ☐ No -Morphological plant adaptations Comments: Wetland Hydrology? NO Basis: Lack of hydrologic indicators. SUMMARY Do normal environmental conditions exist at the plant community? yes Has the vegetation, soils, and/or hydrology been significantly disturbed? no Disturbed area? no Basis: no recent disturbance Problem area? no Basis: normal conditions observed Comments: Is the hydrophytic vegetation criterion met? NO Is the hydric soil criterion met? NO

NO

NO

is the wetland hydrology criterion met?

is the vegetation unit or plot wetland?

Rationale for jurisdictional decision: None of the parameters satisfy the wetland criteria.

AR 048073

Project Number: 6943017

Date: 12/7/94

Project/Site: SeaTac - Borrow sites - Area 5

Sample Plot #: 16

Field Investigator(s): AS/SL

Herbs & Bryophytes

% Area Cover

Midpoint

Rank

Sum of Midpoints: Dominance Threshold:

Shrubs	indicator Status	% Areal Cover	Cover Cases	Midpoint	Rank
Spiraea douglasii	FACW	95	6	85.5	1*
Spirada douglasii Rubus laciniatus	FACU+	T	1	3.0	2
Rubus laciniaius Rubus discolor	FACU	Т	1	3.0	2
	Su	m of M idpoin	its:	91.5	

Dominance Threshold:

45.8

% Arms Rank Status Cover Midpoint

Sum of Midpoints:

Dominance Threshold:

Indicator % Arnel Cover Rank Midpoint Status" Cover Trees

> Sum of Midpoints: Dominance Threshold:

% of Dominants that are OBL, FACW, and/or FAC:

1/1 = 100%

Hydrophytic Vegetation?

YES

Comments: SHRUBLAND.

Saplings

Plot in monotypic stand of spirea. Appears area was drained many years ago to accompdate development.

Rubus sp., ALRU, ACMA, PYRUS, and COCO occur as associated species outside of plot.

To determine dominarias, first sprice species by migherits. Then sum mighorits in order until 50% of treat for all exposes (dominance threshold) is introduced exceeded. All species commissing to this commission treat past any others having 20% of the treat mighorit value are minimal with an assertic.

"Species that do not appear on the National List (Read, 1988) may have bee status bless on field observations and habitat relormation from the Sarratire.

WETLAND DETERMINATION INTERMEDIATE-LEVEL ONSITE METHOD SOILS HYDROLOGY & SUMMARY

SOILS. HYDROLOGY & SUMMARY Project Number: 6943017 Date: 12/7/94 Project/Site: SeaTac - Borrow sites - Area 5 Sample Plot #: 16 Field Investigator(s): AS/SL SOILS = SCS Mapping Unit: Not mapped (Urban land) Is soil a histosol? no Field Identification: Urban land Histic epipedon present? no is soil on hydr: - ails list? no is soil mottled? no is soil gleyed? ID Осситился Horizon Depth Matrix Mattle Organic Color Horizon Texture Color of Mottles Oi 3-0 duff A1 0-20 bam 10YR 2/1 20-24+ В sandy loam 25Y 4/3 7.5YR 4/4 m, 1&2, d Landform - ography: flat Comments . . . an tile or old cement pipe found at 20 inches. Soils appear drained Hydric Soils? NO Basis: Lack of hydric characteristics HYDROLOGY = ... aund surface inundated? no Surface water depth; is soil saturated? Depth to saturation: Depth to free-standing water in pit: ☐ Yes ☑ No -Oxidized root zones ☐ Yes 图 No -Water-stained leaves ☐ Yes No -Water marks Yes No Surface scoured areas ☐ Yes 图 No -Drift lines ☐ Yes ☐ No -Wetland drainage patterns ☐ Yes ☐ No -Water-borne sediment deposits ☐ Yes ☑ No -Morphological plant adaptations Comments: Drain tile or cement pipe found at 20 inches. Area appears to have been drained. Wetland Hydrology? NO Basis: Lack of hydrologic indicators. SUMMARY Do normal environmental conditions exist at the plant community? yes Has the veceration, soils, and/or hydrology been significantly disturbed? no Disturbed area? no Basis: no recent disturbance Basis: normal environmental conditions observed Problem area? no Comments: is the hydrophytic vegetation criterion met? YES Is the hydric soil criterion met? NC

NO

NO

is the wetland hydrology criterion met?

Rationale for jurisdictional decision: Soils and hydrology parameters do not satisfy wetland criteria.

is the vegetation unit or plot wetland?

INTERMEDIATE-LEVEL ONSITE METHOD VEGETATION UNIT SAMPLING PROCEDURE

Project Number: 6943017

Project/Site: SeaTac - Borrow sites - Area 8

Date: 12/9/94

Sample Plot #: 17

Field Investigator(s): AS/SL

Herbs & Bryophytes	indicator Status**	% Armi Cover	Cover Class	Midpoint	Rank
Geum macrophyllum	FACW-	1	1	3.0	3
Equisetum arvense	FAC	35	4	38.0	1*
Agrostis tenuis	FAC	25	3	20.5	2 *
Holcus ianatus	FAC	5	1	3.0	3
Festuca sp.	FACW-UPL"	1	1	3.0	3
	Sum	of Midpoint	:s:	67.5	

Dominance Threshold: 33.8

Shrubs	Indicator Status**	% Areai Cover	Cover Class	Midpoint	Rank
Rubus discolor	FACU	Т	1	3.0	1*
	Str.	of Midneim	٠	2.0	*

Dominance Threshold:

1.5

Saplings	indicator Status	% Anna Cover	Cover Class	Midpoint	Rank
Alnus rubra	FAC	Т	1	3.0	1
Salix sitchensis	FACW	5	1	3.0	1*
	Su	m of Midpoir	nts:	6.0	

Dominance Threshold:

3.0

Trees	Indicator Status	% Areal Cover	Cover Class	Midpoint	Rank
Salix sp.	OBL-FACU	50	4	38.0	1*
Populus trichocarpa	FAC	7	2	10.5	2*
	Sur	n of Midpoin	ts:	48.5	
	Domina	nce Thresho	id:	24.3	

% of Dominants that are OBL, FACW, and/or FAC:

5/6 = 83%

Hydrophytic Vegetation?

YES

Comments: PFO.

Plot located in the willow dominated forest of Wetland G.

To determine dominants, first sent species by midpoints. Then sum mitpoints in order until 50% of total to all species (commence threshold) is immediately excessed. All options contributing to the committees total plus any others having 20% of the total midpoint value are missed with an assentic.

"Solicies that do not appear on the National List (Reed, 1988) may have been assigned an indicator status cased on feel observations and habitat information from the latestates.

WEILAND DETERMINATION INTERMEDIATE-LEVEL ONSITE METHOD SOILS, HYDROLOGY & SUMMARY

SOILS. HYDROLOGY & SUMMARY Date: 12/9/94 Project Number: 6943017 Project/Site: SeaTac - Borrow sites - Area 8 Sample Plot #: 17 Field Investigator(s): AS/SL SOILS I SCS Mapping Unit: Not mapped (Urban land) le soil a histosol? no Field Identification: Urban land Histic epipedon present? no is soil mottled? no is soil on hydric soils list? no is soil gleyed? so Matrix Color Mottie Color Occurrence of Mottles Organic Content Horizon Texture Horizon 25Y 4/2 sand Landform/Topagraphy: flat area at base of large hill Comments: sand gieyed at 32". Soil appears to be fill and eroded/deposited material from slope to east. Hydric Soils? NO Basis: Lack of hydric characteristics. HYDROLOGY is ground surface inundated? no Surface water depth: is soil saturated? no Depth to saturation: Depth to free-standing water in pit: ☐ Yes No -Oxidized root zones ☐ Yes ☑ No -Water-stained leaves ☐ Yes 图 No -Water marks ☐ Yes 图 No -Surface scoured areas □ Yes 盟 No -Drift lines ☐ Yes 🔀 No -Wetland drainage patterns ☐ Yes No -Water-borne sediment deposits Yes No -Morphological plant adaptations Comments: Soil appears to be an aquent. Hydrology is inferred from this moisture regime and vegetation is hydrophytic. Wetland Hydrology? YES Basis: Interred from aquic moisture regime and veg. SUMMARY Do norm: "rironmental conditions exist at the plant community? no Has the mon, soils, and/or hydrology been significantly disturbed? yes Disturbe: area? yes Basis: recent erosional deposition Problem area? yes Basis: soils do not display hydric characteristics Comments: is the hydrophytic vegetation criterion met? YES is the hydric soil criterion met? NO is the wetland hydrology criterion met? YES is the vegetation unit or plot wetland? YES

Rationale for jurisdictional decision: Vegetation and hydrology parameters met. Recent soil deposition over hydric

soil.

WEILEN PEIEIMMA. INTERMEDIATE-LEVEL ONSITE METHOD VEGETATION UNIT SAMPLING PROCEDURE

Project Number: 6943017

Project/Site: SeaTac - Borrow sites - Area 8

Date: 12/7/94

Eald Investigated AS/S!

Sample Plot #: 18

Herbs & Bryophytes	indicator Status***	% Area	Cover Ches	Midpoint	Rank
Equisetum telmateia	FACW	30	4	38.0	1*
Veronica americana	OBL	5	1	3.0	2
Glyceria grandis	OBL	5	1	3.0	2
Holcus langus	FAC	1	1	3.0	2
Rorippa nasturtium-aquaticum	OBL	1	1	3.0	2
		n of Midpoint ice Threshoi		50.0 25.0	
	Indicator	% Armsi	Cover		
Shrubs	Status"	Cover	Channe	Midpoint	Rank
Rubus spectabilis	FAC+	T	1	3.0	1*
•	Sun	ts:	3.0		
	Domina	nce Thresho	ld:	1.5	
Saplings	Indicator Status	% Arest Cover	Cover Class	Midpoint	Ramik
Salix sitchensis	FACW	20	3	20.5	1*
	Sur	n of Midpoin	rts:	20.5	
		nce Thresho		10.3	
	Indicator	% Aread	Cover		
Trees	Status**	Cover	Class	Midpoint	Rank
Salix lasiandra	FACW+	5 5	5	63.0	1*
	Sun	of Midpoint	ts:	63.0	
		ce Thresho	lai.	31.5	

Hydrophytic Vegetation?

YES

Comments: PFO.

Plot located in forested Wetland H.

To determine dominants, first zank species by midports. Then sum midports in order until 50% of total for all species (dominance invested) is immediately exceeded. All species contributing to this committee and plus any others having 20% of the total midports visite are minimal with an assertist.

"Sciences that do not access on the National List (Reed, 1988) may have been assigned an indicator status tassed on field conservations and habitat information truth the Barature.

WETLAND DETERMINATION INTERMEDIATE-LEVEL ONSITE METHOD SOILS, HYDROLOGY & SUMMARY

Date: 12/7/94 Project Number: 6943017 Project/Site: SeaTac - Borrow sites - Area 8 Sample Plot #: 18 Field Investigator(s): AS/SL SOILS is soil a histosol? no SCS Maconic Unit: Not mapped (Urban land) Histic epipedon present? no Field Identification: Urban land is sail mattled? no is soil on hydric soils list? no is soil gleyed? yes Occurrence Matrix Mottle Organic Content Horizon Depth Color Texture Color of Matties Horizon 5G 4/1 0-18 sand Landform/Topography: fizt low area Comments: Hydric Soils? YES Basis: Gley soil HYDROLOGY Surface water depth: Is ground surface inundated? no is soil saturated? Depth to saturation: surface Pepth to free-standing water in pit: surface ☐ Yes ☐ No -Oxidized root zones Yes No -Water-stained leaves 图 Yes I No -Water marks Yes No -Surface scoured areas ☐ Yes 图 No -Drift lines Yes No -Wetland drainage patterns Yes No -Water-borne sediment deposits Yes No -Morphological plant adaptations Comments: Wetland Hydrology? YES Basis: Saturation to surface and other indicators SUMMARY rmal environmental conditions exist at the plant community? yes · vegetation, soils, and/or hydrology been significantly disturbed? no Basis: no recent disturbance Discord area? no Basis: normal environmental conditions observed Problem area? no Comments: Is the hydrophytic vegetation criterion met? YES is the hydric soil criterion met? YES YES is the wetland hydrology criterion met? YES is the vegetation unit or plot wetland?

Rationale for jurisdictional decision: All three parameters satisfy wetland criteria.

OBL

FACW

OBL

FAC+

FACW

Project Number: 6943017

Glyceria grandis

Unica dioica

Ranunculus repens

Scirpus microcarpus

Phalaris arundinacea

Project/Site: SeaTac - Borrow sites - Area 8

Date: 12/8/94

Sample Plot #: 19

3

Field Investigator(s): JT/CW

Herbs & Bryophytes

Indicator Status	% Areni Cover	Cover	Midpoint	Rank	_
BL	2	1	3.0	1*	
NCW	3	1	3.0	1*	
RI	5	1	3.0	1*	

1

Sum of Midpoints: Dominance Threshold: 15.0 7.5

3.0

3.0

1.

Shrubs	indicator Status**	% Areal Cover	Cover Class	Midpoint	Rank
Rubus discolor	FACU	5	1	3.0	1*
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Sum of Midpoints:			3.0	
	Domina	ince Thresho	id:	1.5	

indicator Status % Area Cove Midpoint Rank Saplings

Sum of Midpoints: Dominance Threshold:

Trees	indicator Status	% Areal Cover	Cover Class	Midpoint	Rank
Populus trichocarpa	FAC	10	2	10.5	2
Salix sitchensis	FACW	15	2	10.5	2
Salix lasiandra	FACW+	35	4	38.0	1*
	Sui	59.0			
	Domina	29.5			

% of Dominants that are OBL, FACW, and/or FAC:

6/7 = 85%

Hydrophytic Vegetation?

YES

Comments: PFO.

Plot located in Wetland L

To determine dominants, first raint species by mispoints. Then sum mapoints in or und 50% of total for all species (dominants) a remodeler exceeded, All species contributing to the combinative loss plus any others having 20% of the total mispoint value are marked with an asterior.

Sources that do not account on the National Let (Reed, 1988) may have been as this based on Seld observations and historic information from the lateralism.

WETLAND DETERMINATION INTERMEDIATE-LEVEL ONSITE METHOD SOILS HYDROLOGY & SUMMARY

SOILS. HYDROLOGY & SUMMARY Project Number: 6943017 Date: 12/8/94 Project/Site: SeaTac - Borrow sites - Area 8 Sample Plot #: 19 Field Investigator(s): JT/CW SOILS SCS Mapping Unit: Not mapped (Urban land) Is soil a histosol? Field Identification: Inclusion Histic epipedon present? no Is soil on hydric soils list? no is soil mattled? no is soil gleyed? no Hortzon Depth Matrix Mattle Horizon Texture Color of Mottles 0-3 bam 10YR 4/1 med-high В 3-13 mucky loam 10YR 2/2 high Landform/Topog sphy: flat, low area Comments: Basis: Low chroma and high organic content Hydric Soils? YES HYDROLOGY = is ground surface inundated? no Surface water depth: Is soil saturated? yes Depth to saturation: 3 inches Depth to free-standing water in pit: 8 inches ☐ Yes ☑ No -Oxidized root zones Yes No -Water-stained leaves ☐ Yes 图 No -Water marks ☐ Yes 图 No -Surface scoured areas ☐ Yes No -Drift lines Yes No -Wetland drainage patterns ☐ Yes No -Water-borne sediment deposits ☐ Yes ☑ No -Morphological plant adaptations Comments: Wetland Hydrology? YES Basis: Saturation at 3 inches SUMMARY Do normal environmental conditions exist at the plant community? yes Has the vegetation, soils, and/or hydrology been significantly disturbed? no Disturbed area? no Basis: no recent disturbance Problem area? Basis: normal environmental conditions observed Comments: is the hydrophytic vegetation criterion met? yes Is the hydric soil criterion met? yes is the wetland hydrology criterion met? yes

yes

is the vegetation unit or plot wetland?

Rationale for jurisdictional decision: All three parameters satisy wetland criteria.

Project Number: 6943017

Date: 12/12/94

Project/Site: SeaTac - Borrow sites - Area 8

Sample Plot #: 20

Field Investigator(s): AS/JT

Herbs & Bryophytes	Indicator Status	% Arms	Cover Cases	Midpoint	Rank
mess	••	5	1	3.0	2
Equisetum arvense	FAC	18	3	20.5	1*

Sum of Midpoints: Dominance Threshold:

23.5 11.8

Shrubs	indicator Status**	% Areal Cover	Cover Class	Midpoint	Rani
Rubus discolor	FACU	25	3	20.5	2.
Rubus spectabilis	FAC+	70	5	63.0	1*
Oemleriz cerasiformis	FACU	15	2	10.5	3
	Su	94.0			
	Domina	nce Thresho	ld:	47.0	
Saplings	indicator Status	% Aresi Cover	Cover	Midpoint	Rank

Sum of Midpoints: Dominance Threshold:

Trees	Indicator Status**	% Area! Cover	Cover Class	Midpoint	Rank
Alnus rubra	FAC	20	3	20.5	1*
	Sur	n of Midpoin	rts:	20.5	
	Domina	nce Thresho	id:	10.3	

% of Dominants that are OBL, FACW, and/or FAC:

3/4 = 100%

Hydrophytic Vegetation?

YES

Comments: PFO/SS.

Plot located in small PFO/SS-portion of forested Wetland I.

To operative dominants, that park species by midpoints. Then sum midpoints in order and 50% of total for all exposes foormalines invested;) is immediately expensed. All appeals contributing to this cumulative total past any others having 20% of the total midpoint value are marked with an attention.

WETLAND DETERMINATION INTERMEDIATE-LEVEL ONSITE METHOD

SOILS. HYDROLOGY & SUMMARY Project Number: 6943017 Date: 12/12/94

Project/Site: SeaTac - Borrow sites - Area 8 Field Investigator(s): AS/JT

Sample Plot #: 20

SOILS

SCS Mapping Unit: Not mapped (Urban land)

is soil a histosol? yes Histic epipedon present? yes

Field identification: Urban land is son on hydric soils list? no

Is soil mottled? yes

is sail gleyed? yes

Hortzon	Horizon Depth	Texture	Matrix Color	Mottle Color	Occurrence of Mottles	Caler Color	Organic Content
Oa	1-3	pezty muck	10YR 2/1				Н
В	3-8	loamy sand		7.5YR 4/6	c. 1. d	5GY 4/1	H
20	8-12	peaty muck	10YR 2/1		-, -, -		н
28	12+	loarny sand	10YR 4/1				H

Landform/Topography: flat, low area

Comments:

Hydric Soils? YES

Basis: Low chroma, organics.

Is ground surface inundated? no Is april saturated? yes Depth to free-standing water in pit: 12 inches	Surface water depth: Depth to saturation: surface
☐ Yes 図 No -Oxidized root zones ☐ Yes 図 No -Water marks ☐ Yes 図 No -Drift lines ☐ Yes 図 No -Water-borne sediment deposits	☐ Yes ☑ No -Water-stained leaves ☐ Yes ☑ No -Surface scoured areas ☐ Yes ☑ No -Wetland drainage patterns ☐ Yes ☑ No -Morphological plant adaptations

Wetland Hydrology? YES

Basis: Saturation to surface

Do normal environmental conditions exist at the plant community? yes

Has the vegetation, soils, and/or hydrology been significantly disturbed? no

Disturbed area? no

Basis: no recent disturbance

Problem area? no

Basis: normal environmental conditions observed

SUMMARY

Comments:

Is the hydrophytic vegetation criterion met? YES

Is the hydric soil criterion met?

YES

is the wetland hydrology criterion met?

YES

is the vegetation unit or plot wetland?

YES

Rationale for jurisdictional decision: All three parameters satisfy wetland criteria.

WETLAND DETERMINATION INTERMEDIATE-LEVEL ONSITE METHOD VEGETATION UNIT SAMPLING PROCEDURE

Project Number: 6943017

Project/Site: SeaTac - Borrow sites - Area 8

Date: 12/12/94 Sample Plot # 21

Field Investigator(s): ASAIT

Lield Hisastidesails):					
Herbs & Bryophytes	indicator Status	% Areal Cover	Cover Chas	Midpoint	Rent
Ranunculus recens	FACW	35	4	38.0	1*
Phalaris arundinacea	FACW	25	3	20.5	2*
Urtica dioica	FAC+	3	1	3.0	4
Glyceria grandis	OBL	10	2	10.5	3
Agrostis sp.	FACW-FACU	1	1	3.0	4
Equisetum arvense	FAC	2	1	3.0	4
Juncus etiusus	FACW	10	2	10.5	3
	Sum	of Midpoint	ts:	88.5	

Dominance Threshold:

44.3

	indicator	% Areal	Cover		
Shrubs	Status"	Cover	Canas	Midpoint	Rank
					

Sum of Midpoints: Dominance Threshold:

Saplings	indicator Status	% Area Cover	Cover Class	Midpoint	Rank
Salix lasiandra	FACW+	40	4	38.0	1*
Alnus rubra	FAC	10	2	10.5	2
Salix sitchensis	FACW	40	4	38.0	1*
	Su	m of Midpoin	rts:	86.5	

Dominance Threshold: 43.3

Trees	indicator Status**	% Areal Cover	Cover Class	Midpoint	Rank
Alnus rubra	FAC	15	2	10.5	2*
Salix lasiandra	FACW+	40	4	38.0	1"
	Sur	n of Midpoin	ts:	48.5	
	Domina	nce Thresho	id:	24.3	

% of Dominants that are OBL, FACW, and/or FAC:

6/6 = 100%

Hydrophytic Vegetation?

YES

Comments: PFO.

Plot located in forested Wetland J.

To determine dominates, first rank spaces by midpoints. Then sum midpoints in o until 50% of total for all execute dominance tresheld) is immediately excessed. As spicious contributing to this committee total plus any others having 20% of the total midpoint value are majored with an element.

Date: 12/12/94 Project Number: 6943017 Project/Site: SeaTac - Borrow sites - Area 8 Sample Plot #: 21 Field investigator(s): ASAJT SOILS I is soil a histosol? SCS Mapping Unit: Not mapped (Urban land) Field Identification: Inclusion Histic epipedon present? no Is soil mottled? no is soil on hydric soils list? no is soil gleyed? m Matrix Color Mottle Horizon Territore Depth Color of Matter Horizon 10YR 2/1 high Landform. Topography: flat, low area Comments: Basis: Low chroma Hydric Soils? YES HYDROLOGY # Is ground surface inundated? no Surface water depth: yes Is soil saturated? Depth to saturation: surface Depth to free-standing water in pit: ☐ Yes 图 No -Oxidized root zones ☐ Yes Mo -Water-stained leaves ☐ Yes 図 No -Water marks Yes No -Surface scoured areas ☐ Yes 图 No -Drift lines Yes No -Wetland drainage patterns Yes 🖪 No -Water-borne sediment deposits Yes No -Morphological plant adaptations Comments. Wetland Hydrology? YES Basis: Saturation to surface SUMMARY Do normal environmental conditions exist at the plant community? yes Has the vegetation, soils, and/or hydrology been significantly disturbed? no Disturbed area? no Basis: no recent disturbance Basis: normal environmental conditions observed Problem area? no Comments: is the hydrophytic vegetation criterion met? YES YES is the hydric soil criterion met? is the wetland hydrology criterion met? YES is the vegetation unit or plot wetland? YES

Rationale for jurisdictional decision: All three parameters satisfy wetland criteria.

WETLAND DEIEHMINATION INTERMEDIATE-LEVEL ONSITE METHOD VEGETATION UNIT SAMPLING PROCEDURE

OBL

FAC

Project Number: 6943017

Herbs & Bryophytes Phaiaris arundinacea Unica dioica Giyceria grandis Potentilla sp.

Scirpus microcarpus

Equisetum arvense

Project/Site: SeaTac - Borrow sites - Area 8

Date: 12/12/94 Sample Plot #: 22

Field Investigator(s): AS/JT

Indicator Status	% Areal Cover	Cover	Midpoint	Rank
FACW	15	2	10.5	2*
FAC+	3	1	3.0	3
OBL	15	2	10.5	2*
OBL-FACU	20	3	20.5	1*

1

2

Sum of Midpoints:

10

Dominance Threshold:

58.0 29.0

3.0

10.5

3

2.

Shrubs	indicator Status**	% Areal Cover	Cover Class	Midpoint	Rank
Sambucus racemosa	FACU	15	2	10.5	1.
Rubus discolor	FACU	8	2	10.5	1*
Rubus speciabilis	FAC+	15	2	10.5	1*
	Su	m of Midpoin	ts:	31.5	
	Dominance Threshold: 15.8				

	indicator	% Area	Cover		
Saplings	Status"	Cover	Class	Midpoint	Ramk

Sum of Midpoints: Dominance Threshold:

Trees	Indicator Status**	% Areal Cover	Cover Class	Midpoint	Rank
Salix lasiandra	FACW+	60	5	63.0	1*
Salix sitchensis	FACW	20	3	20.5	2*
	Sur	n of Midpoin	ts:	83 .5	
		nce Thresho		41.8	

% of Dominants that are OBL, FACW, and/or FAC:

7/9 = 78%

Hydrophytic Vegetation?

YES

Comments: PFO.

Plot located in forested Wetland K.

To determine dominants, first rank species by midpoints. Their sum midpoints in or send 50% of social or all species stormes non-triviality is immediately exceeded. All species contributing to the cumulative total plus any others having 20% of the seal midpoint value are marked with an extension.

Species that do not appear on the National List (Read, 1986) may have been assigned an ind But based on field observations and highest information from the flamburs.

INTERMEDIATE-LEVEL ONSITE METHOD

WETLAND DETERMINATION SOILS. HYDROLOGY & SUMMARY Date: 12/12/94 Project Number: 6943017 Project/Site: SeaTac - Borrow sites - Area 8 Sample Plot #: 22 Field Investigator(s): AS/JT SOILS

SCS Mapping Unit: Not mapped (Urban land) Field Identification: Urban land is soil on hydric soils list? no

le soil a histosol? yes Histic epipedon present? yes is soil mottled? no is soil gleyed? m

Horizon	Horizon Depth	Texture	Matrix Color	Mottle Color	Occurrence of Mottles	Cley Color	Organic Content
01	0-2	loamy muck	· 10YR 2/0				H
02	2-8	mucky loam	10YR 3/1				H
		•	10YR 3/2				
œ	8-18	mucky pezt	10YR 2/1				H

Landform/Topography: flat, low area

Comments: Large woody debris present throught profile.

mund surface inundated? no	Surface water depth:
saturated? yes	Depth to saturation: surface
Depth to free-standing water in pit: 7 inches	Deput to saturation. Surface
Yes No -Oxidized root zones	Yes No -Water-stained leaves
Yes No -Water marks	☐ Yes No -Surface scoured areas
☐ Yes Yes Yes Interes	Yes No -Wetland drainage patterns
Yes No -Water-borne sediment deposits	Yes No -Morphological plant adaptations
omments:	
/etland Hydrology? YES Basis: Saturation to the s	surface
SUMMARY	

Disturbed area? no

Basis: no recent disturbance

Problem area? no

Basis: normal environmental conditions observed

Comments:

is the hydrophytic vegetation criterion met? YES is the hydrin soil criterion met? YES is the wetland hydrology criterion met? YES

is the vegetation unit or plot wetland?

YES

Rationale for jurisdictional decision: All three parameters satisfy wetland criteria.

WETLAND DETERMINATION INTERMEDIATE-LEVEL ONSITE METHOD VEGETATION UNIT SAMPLING PROCEDURE

Project Number: 6943017

Field Investigator(s): AS/JT

Project/Site: SeaTac - Borrow sites - Area 8

Date: 12/12/94

Sample Plot #: 23

Herbs & Bryophytes	indicator Status	% Areal Cover	Cover Class	Midpoint	Runk
moss		20	3	20.5	

Sum of Midpoints:

20.5

Dominance Threshold:

10.3

Shrubs	indicator Status	% Areal Cover	Cover Class	Midpoint	Rank
Rubus discolor	FACU	5	1	3.0	2*
Rubus ursinus	FACU	7	2	10.5	1*
•	Sur	n of Midpoin	ts:	13.5	
	Domina	nce Thresho	ld:	6.8	_
Saplings	indicator Status**	% Areal Cover	Cover Class	Midpoint	Rank

Sum of Midpoints: Dominance Threshold:

Trees	Indicator Status**	% Areal Cover	Cover Class	Midpoint	Rank
Salix sp.	OBL-FACU	40	4	38.0	2*
Sambucus racemosa	FACU	60	5	63.0	1"
	Sur	n of Midpoin	ts:	101.0	
	Domina	nce Thresho	id:	50.5	

% of Dominants that are OBL, FACW, and/or FAC:

1/4 = 25%

Hydrophytic Vegetation?

NO

Comments: FORESTED UPLAND.

Plot located upsiope and south of Plot 22 and Wetland K.

To determine comments, line rank spaces by midpoints. Then sum midpoints in order until 50% of total for all spaces, remnerce swethold) is immediately exceeded. All spaces contributing to the consequent total plus any others having 20% of the total midpoint value are manted with an asserter.

"Species that do not access on the Hazonal List (Reed, 1988) may have been assigned an indicastes being on field observations and habitat information from the freezulfs.

WETLAND DETERMINATION INTERMEDIATE-LEVEL ONSITE METHOD

SOILS. HYDROLOGY & SUMMARY Project Number: 6943017 Date: 12/12/94 Project/Site: SeaTac - Borrow sites - Area 8 Sample Plot #: 23 Field Investigator(s): ASAIT SOILS I SCS Mapping Unit: Not mapped (Urban land) Is soil a histosol? no Field Identification: Urban land Histic epipedon present? no is soil on hydric soils list? no Is soil mottled? no Is soil gleyed? m Horizon Matrix Mottle Occurrence Organic Content Color Texture Horizon Depth Cotor of Mottles Oi 1-0 duff Oa 0-7 peat 7.5YR 3/2 Н **B**1 7-14 sandy loam 25Y 4/2 н **B2** 14-18 sandy loam 2.5Y 3/2 Н 2.5Y 4/2 Landform/Topography: upslope of wetland in rolling terrain Comments: Basis: Lack of hydric characteristics Hydric Soils? NO HYDROLOGY = Is ground surface inundated? no Surface water depth: is soil saturated? Depth to saturation: Depth to free-standing water in pit: ☐ Yes 图 No -Oxidized root zones ☐ Yes 图 No -Water-stained leaves ☐ Yes No -Water marks ☐ Yes
No -Surface scoured areas ☐ Yes No -Drift lines Yes No -Wetland drainage patterns Yes No -Water-borne sediment deposits Yes No -Morphological plant adaptations Comments: Wetland Hydrology? NO Basis: Lack of hydrologic indicators SUMMARY Do normal environmental conditions exist at the plant community? yes Has the vegetation, soils, and/or hydrology been significantly disturbed? no Disturbed area? no Basis: no recent disturbance Problem area? Basis: normal conditions observed Comments:

NO

NO

NO

Is the hydrophytic vegetation criterion met? NO

is the hydric soil criterion met?

is the wetland hydrology criterion met?

Rationale for jurisdictional decision: None of the parameters satisfy wetland criteria.

is the vegetation unit or plot wetland?

AR 048089

WETLAND DETERMINATION INTERMEDIATE-LEVEL ONSITE METHOD VEGETATION UNIT SAMPLING PROCEDURE

Project Number: 6943017

Project/Site: SeaTac - Borrow sites - Area 8

Date: 12/12/94

Sample Plot #: 24

Field Investigator(s): AS/JT

Herbs & Bryophytes	indicator Status	% Aresi Cover	Cover Cass	Midpoint	Rank
Typha latifolia	OBL	12	2	10.5	3
Juncus effusus	FACW	50	4	38.0	1*
Scirpus microcirpus	OBL	20	3	20.5	2*
Epilobium watsonii	FACW	20	3	20.5	2"
Equisetum arvense	FAC	5	1	3.0	4
-,	Sun	of Midpoint	ts:	92.5	
	5		-d-	40.0	

Dominance Threshold: 46.3

% Am Status." Rank Midpoint Shrubs Cover

> Sum of Midpoints: Dominance Threshold:

indicator Cover Status Midpoint Rank Saplings

> Sum of Midpoints: Dominance Threshold:

Trees	Indicator Status	% Areal Cover	Cover Class	Midpoint	Rank
Salix lasiandra	FACW+	45	4	38.0	1*
Salix sitchensis	FACW	15	2	10.5	2
Alnus rubra	FAC	10	2	10.5	2
	Sui	n of Midpoin	ts:	59.0	
	Domina	nce Thresho	ld:	29.5	

% of Dominants that are OBL, FACW, and/or FAC:

4/4 = 100%

Hydrophytic Vegetation?

YES

Comments: PFO/PEM.

Plot located on hillside in seep area in Wetland L. RUDI and CYSC located along south edge of wetland.

To determine dominaries, first suris species by midpents. Then sum midports in order until 50% of treat for all assesses (determines freemoth) is attractively exceeded. All appears contributing to the consultave total pass any others leaving 20% of the total midport value are majored with an assertion.

** Spaces that do not appear on the Natural List (Reed, 1988) may have been assigned an indicate status based on field observations and habital information from the illustrature.

Project Number: 6943017

Project/Site: SeaTac - Borrow sites - Area 8

Field Investigator(s): ASAIT

Date: 12/12/94

Sample Plot #: 24

SCS Mapping Unit: Not mapped (Urban land)

Field identification: Urban land is so, on hydric sous list? no

ls soil a histosol? no

Histic epipedon present? no

Is soil mottled? yes is soil gleyed? yes

Horizon	Horizon Depth	Texture	Matrix Color	Mottle Color	Occurrence of Mottles	Gley Color	Organic Contant
	0-8	sandy loam	10YR 3/2				M
	8- 18	gravelly sandy loam		7.5Y 4/4	c,1,d	5GY 4/1	
				7.5Y 4/6		5GY 3/1	

SOILS

Landform/Topography: 20 degree slope, hillside seep.

Comments:

Sydric Seit? YES

Basis: Low chroma, gley, mottles

is ground surface inundat	ed? no	Surface water depth:
Is soil saturated?	yes	Depth to saturation: surface
Depth to free-standing wat	er in pit < 10 inches	
☐ Yes 🖾 No -Oxid	lized root zones	Yes No -Water-stained leaves
☐ Yes 图 No -Wat	er marks	
☐ Yes 图 No -Dritt	lines	☐ Yes ☑ No -Surface scoured areas
 	er-borne sediment deposits	Yes 🖸 No -Wetland drainage patterns

Comm

Wetland Hydrology? YES

Basis: Saturated to surface

SUMMARY

Do normal environmental conditions exist at the plant community? yes Has the vegetation, soils, and/or hydrology been significantly disturbed? no

Disturbe irea? no

Basis: no recent disturbance

Problem area? no

Basis: normal environmental conditions observed

Comments:

Is the hydrophy:: vegetation criterion met? YES Is the hydric sc.: criterion met? YES Is the wetland hydrology criterion met? YES is the vegetation unit or plot wetland? YES

Rationale for jurisdictional decision: All three parameters satisfy wetland criteria

WETLAND DETERMINATION INTERMEDIATE-LEVEL ONSITE METHOD VEGETATION UNIT SAMPLING PROCEDURE

Project Number: 6943017

Project/Site: SeaTac - Borrow sites - Area 8

Date: 12/12/94

Field investigator(s): AS/JT

Sample Plot #: 25

Herbs & Bryophytes	indicator Stane**	% Areal Cover	Cover Class	Midpoint	Rank
Ranunculus repens	FACW	50	4	38.0	1*
Equisetum arvense	FAC	18	3	20.5	2*
•	•				

Sum of Midpoints: Dominance Threshold:

58.5 29.3

% Area Midpoint Shrubs Status"

> Sum of Midpoints: Dominance Threshold:

Indicate Status % Areal Cover Saplings Midpoint Rank

> Sum of Midpoints: Dominance Threshold:

Trees	Indicator Status	% Armi Cover	Cover Class	Midpoint	Rank
Populus trichocarpa	FAC	60	5	63.0	1.
Alnus rubra	FAC	40	4	38.0	2*
	Sur	n of Midpoin	rts:	101.0	
	Domina	nce Thresho	id:	50.5	

% of Dominants that are OBL, FACW, and/or FAC:

4/4 = 100%

Hydrophytic Vegetation?

YES

Comments: PFO.

Plot in slight depression. Deciduous forest overstory. Rubus/red alder upland outside of wetland.

To determine comments, first sank species by mispairs. Then sum mispoirts in or until 50% of scal for all species (dominance triveshold) is introductory exceeded. All species contributing to the currotative total pairs any others having 20% of the total mispoirt value are marked with an assemble.

"Scenes that do not appear on the National List (Reed, 1988) may have be Statut based on field observations and happing antomistion from the Servation

Project Number: 6943017

Date: 12/12/94

Project/Site: SeaTac - Borrow sites - Area 8

Sample Plot #: 25

Field Investigator(s): ASAIT

SCS Mapping Unit: Not mapped (Urban land)

is soil a histosoi? no

SOILS I

Field Identification: Inclusion is soil on hydric soils list? no

Histic epipedon present? no is soil mottled? yes

is soil gieved? yes

Hortzon	Horizon Depth	Texture	Matrix Color	Mottle Color	Occurrence of Mottles	Gley Color	Organic Content
A	1-3	loam	. 10YR 3/1		•		low
€.	3-17	silt loam		7.5YR 4/6	c, 1-2, d	10Y 5/1	
						10Y 4/1	
B 2	17-20	sand		7.5YR 4/6	c, 1-2 , d	10Y 4/1	

Landform/Topography: flat, slight depression

Comments:

Hydric Soils? YES

Basis: Low chroma, mottles

is ground surface inur	dated? no	Surface water depth:
ls soil saturated?	yes .	Depth to saturation: 18*
Depth to free-standing	water in pit:	
☐ Yes 💆 No -	Oxidized root zones	☐ Yes 180 No -Water-stained leaves
☐ Yes 図 No -	Water marks	Yes No -Surface scoured areas
□Yes 図No-	Drift lines	Yes No -Wetland drainage patterns
☐ Yes No -1	Nater-bome sediment deposits	Yes No -Morphological plant adaptations

C

Wetland Hydrology? YES

Basis: Saturation within 18 inches.

SUMMARY

Do normal environmental conditions exist at the plant community? yes Has the vegetation, soils, and/or hydrology been significantly disturbed? no

Disturbed area? no

Basis: no recent disturbance

Problem area? no

Basis: normal environmental conditions observed

Comments:

is the hydrophytic vegetation criterion met? YES

is the hydric soil criterion met?

YES

is the wetland hydrology criterion met?

YES

is the vegetation unit or plot wetland?

YES

Rationale for jurisdictional decision: All three parameters satisfy wetland criteria.

WETLAND DETERMINATION INTERMEDIATE-LEVEL ONSITE METHOD VEGETATION UNIT SAMPLING PROCEDURE

Project Number: 6943017

Project/Site: SeaTac - Borrow sites - Area 8

Date: 12/12/94

Sample Plot #: 26

Field investigator(s): AS/JT

Herbs & Bryophytes	Indicator Status**	% Areni Cover	Cover Cass	Midpoint	Rank
Scirpus microcarpus	OBL	15	2	10.5	2*
Equisetum arvense	FAC	15	2	10.5	2
Phalaris arundinacea	FACW	20	3	20.5	1*
Poe sp.	FACW-UPL"	5	1	3.0	3

Sum of Midpoints: Dominance Threshold:

44.5 22.3

Shrubs	indicator Status	% Areal Cover	Cover Class	Midpoint	Rank
Rubus discolor	FACU	tr	1	3.0	1*
llex sp.	FACU**	tr	1	3.0	1*
·	Su	m of Midpoin	rts:	6.0	
	Domina	nce Thresho	id:	3.0	
Santings	indicator Status	% Areas Cover	Cover	Midpoint	Rank

Sum of Midpoints: Dominance Threshold:

Trees	Indicator Status	% Areal Cover	Cover Class	Midpoint	Rank
Ainus rubra	FAC	100	7	98.0	1*
	Sur	n of Midpoin	ts:	98.0	
	Domina	nce Thresho	ld:	49.0	

% of Dominants that are OBL, FACW, and/or FAC:

4/4 = 66%

Hydrophytic Vegetation?

YES

Comments: PFO.

Plot located in roadside depression portion of Wetland P.

To determine convenies, first static spaces by michonis. Then sum michonis in order until 50% of total for all spaces (determines investrict) is immediately exceeded. All spaces combinating to the combinative total pairs any others having 20% of the total michonis value are michonis with all attems.

"Species that do not access on the National List (Resd., 1988) may have been assigned an indi-stance based on feet observations and habitat information from the literature.

WETLAND DETERMINATION

INTERMEDIATE-LEVEL ONSITE METHOD SOILS. HYDROLOGY & SUMMARY Project Number: 6943017 Date: 12/12/94 Project/Site: SeaTac - Borrow sites - Area 8 Sample Plot #: 26 Field Investigator(s): ASAIT SOILS SCS Mapping Unit: Not mapped (Urban land) is soil a histosol? no Field Identification: Inclusion Histic epipedon present? yes is soil mottled? yes is soil on hydric soils list? no is soil gleyed? yes Horizon Depth Matrix Оссиленов Mottle Organ Horizon Texture Color Color of Mottles 0-10 mucky loam 10YR 3/1 В 7.5YR 4/6 10-18 sandy loam f.1.f 5Y 2.5/1 Landform/Topography: depression in flat area in rolling terrain Comments: Basis: Histic epipedon, low chroma, mottles Hydric Soils? YES HYDROLOGY Is ground surface inundated? no Surface water depth: is soil saturated? yes Depth to saturation: surface Depth to free-standing water in pit: 14 inches ☐ Yes 图 No -Oxidized root zones ☐ Yes ☐ No -Water-stained leaves ☐ Yes 図 No -Water marks ☐ Yes ☑ No -Surface scoured areas ☐ Yes No -Drift lines Yes No -Wetland drainage patterns ☐ Yes ☑ No -Water-borne sediment deposits ☐ Yes ☑ No -Morphological plant adaptations Comments: Wetland Hydrology? YES Basis: Saturated at 14 inches SUMMARY Do normal environmental conditions exist at the plant community? yes Has the vegetation, soils, and/or hydrology been significantly disturbed? no Disturbed area? no Basis: no recent disturbance Problem area? Basis: normal environmental conditions observed Comments:

Is the hydrophytic vegetation criterion met? YES

Is the hydric soil criterion met?

YES

is the wetland hydrology criterion met?

YES

is the vegetation unit or plot wetland?

YES

Rationale for jurisdictional decision: All three parameters satisfy wetland criteria.

ME: ----INTERMEDIATE-LEVEL ONSITE METHOD VEGETATION UNIT SAMPLING PROCEDURE

Project Number: 6943017

Field investigator(s): AS/JT

Project/Site: SeaTac - Borrow sites - Area 8

Date: 12/12/94

Sample Plot #: 27

Herbs & Bryophytes	Indicater Status	% Arest Cover	Cover Class	Midpoint	Rank
Glyceria grandis	OBL	2	1	3.0	3
Scirpus microcarpus	OBL	10	2	10.5	2
Eolobium watsonii	FACW	8	2	10.5	2
Juncus effusus	FACW	6	2	10.5	2
Phalaris arundinacea	FACW	30	4	38.0	1*
Equiseum arvense	FAC	5	1	3.0	3
Polystichum munitum	FACU	10	2	10.5	2
Athyrium filix-lemina	FAC	. 50	4	38.0	1*
	Sun	of Midpoint	3:	124.0	

Dominance Threshold:

62.0

Shrubs	Indicator Status	% Areal Cover	Cover Class	Midpoint	Rank
Rubus discolor	FACU	25	3	20.5	1*
	e	- of Midnele	.	20.5	

Sum of Midpoints: Dominance Threshold:

20.5 10.3

Saplings	andicator Status***	% Arms Cover	Cover	Midpoint	Rank
Populus trichocarpa	FAC	20	3	20.5	1-
	Su	m of Midpoir	nts:	20.5	
	Domina	ince Thresho	old:	10.3	

	 Indicator	% Areal	Cover		
Trees	Status**	Cover	Class	Midpoint	Rank

Sum of Midpoints: Dominance Threshold:

% of Dominants that are OBL, FACW, and/or FAC:

3/4 = 75%

Hydrophytic Vegetation?

YES

Comments: PEM.

To determine dominants, first sent species by midboints. Then sum midboints in on unit 50% of total to all species, formwence the should a crimicism with species. All species constituting to the currentness test plus any others having 20% of the total midpoint value are missiand with an assess.

SOILS. HYDROLOGY & SUMMARY Project Number: 6943017 Date: 12/12/94 Project/Site: SeaTac - Borrow sites - Area 8 Sample Plot #: 27 Field Investigator(s): AS/JT SOILS I SCS Mapping Unit: Not mapped (Urban land) is soil a histosol? no Field Identification: Urban land Histic epipedon present? no is soil on hydric soils list? no is soil mottled? yes is soil gleyed? yes Horizon Matrix Color Mottle Оссытелов Calor Texture Hortzon Death Color of Mottles 0-12 10YR 2/0 bam B 12-18 sandy loam 7.5YR 4/6 c, 1-2 d 10Y 4/1 10GY4/1 Landform/Topography: Slight slope. Slight depression. Comments: Hydric Soils? YES Basis: Low chroma, mottles, gley HYDROLOGY = is ground surface inundated? no Surface water depth: is soil saturated? yes Depth to saturation: surface Depth to free-standing water in pit: ☐ Yes Yes No -Oxidized root zones Yes No -Water-stained leaves Yes No -Water marks ☐ Yes ☑ No -Surface scoured areas ☐ Yes No -Drift lines Yes No -Wetland drainage patterns ☐ Yes 图 No -Water-borne sediment deposits Yes No -Morphological plant adaptations Comments: Water slowly seeping into pit at about 6 inches. Inundated areas throughout the wetland - 1-6 inches. Wetland Hydrology? YES Basis: Saturation to surface SUMMARY Do normal environmental conditions exist at the plant community? yes Has the vegetation, soils, and/or hydrology been significantly disturbed? no Disturbed area? no Basis: no recent disturbance Problem area? no Basis: normal environmental conditions observed Comments: is the hydrophytic vegetation criterion met? YES Is the hydric soil criterion met? YES is the wetland hydrology criterion met? YES

YES

is the vegetation unit or plot wetland?

Rationale for jurisdictional decision: All three parameters satisfy wetland criteria.

INTERMEDIATE-LEVEL ONSITE METHOD VEGETATION UNIT SAMPLING PROCEDURE

Project Number: 6943017

Project/Site: SeaTac - Borrow sites - Area 8

Date: 12/20/94

Sample Plot #: 28

Field Investigator(s): AS/CW

Herbs & Bryophytes	indicator Status	% Aresi Cover	Cover Cases	Midpoint	Rank	
Cirsium arvense	FACU+	18	3	20.5	2*	
Festuca arundinacea	FAC-	2	1	3.0	4	
Urtica dioica	FAC+	10	2	10.5	3	-
Phalaris arundinacea	FACW	25	3	20.5	2*	
Brassica nigra	FAC**	10	2	10.5	3	
Agrostis stolonifera	FAC*	40	4	38.0	1*	
	Sum	of Midnejet		102.0		

Sum of Midpoints:

Dominance Threshold:

103.0 51.5

Shrubs Indicator % Areal Shrubs Status Cover

Cover

Cover
Class Midpoint

Rank

Sum of Midpoints:

Dominance Threshold:

Saplings Indicator
Saplings Status

% Areal Cover

Midpoint

Midpoint

Rank

Sum of Midpoints:

Dominance Threshold:

Trees Indicator

Status

% Area! Cover Cover

Rank

Sum of Midpoints: Dominance Threshold:

% of Dominants that are OBL, FACW, and/or FAC:

2/3 = 57%

Hydrophytic Vegetation?

YES

Comments: PEM.

Plot located in flat area east of Lake Reba.

To determine dominates, flot rains species by mispoints. Then sum midpoints in order until 50% of total for all episces (dominance threshold) is envirolment encouncied. All exploses constituting to this currounties loss plus any others having 20% of the total mispoint reuse are mispoin with an element.

"Species that do not appear on the Naponal List (Reed, 1998) may have been assigned an indicato

WETLAND DETERMINATION INTERMEDIATE-LEVEL ONSITE METHOD

SOILS. HYDROLOGY & SUMMARY

Project Number: 6943017

Project/Site: SeaTac - Borrow sites - Area 8

Date: 12/20/94

Field Investigator(s): AS/CW

Sample Plot #: 28

SOILS E

SCS Mapping Unit: Not mapped (Urban land)

Field Identification: Urban land is soil on hydric soils list? no

is soil a histosol? no Histic epipedon present? no

> is soil mottled? no is soil gleyed? m

Hertzen	Horizon Depth	Texture	Matrix Color	Mottle Color	Occurrence of Mottles	Calor Color	Organic Content
A	ر ے	ioam	10YR 2/1				m
В		gravelly sandy loam	10YR 2/1				m/h

Landform/" cography: flat

Comments: wood chunks below 8 inches.

Hydric Soils? YES

Basis: Low chroma

Is ground surface inundated? no	Surface water depth:
Is soil saturated? yes	Depth to saturation: surface
Depth to free-standing water in pit: 8 inches	
☐ Yes No -Oxidized root zones	Yes R No -Water-stained leaves
☐ Yes 图 No -Water marks	Yes No -Surface scoured areas
Yes Mo -Drift lines	Yes No -Wetland drainage patterns
☐ Yes No -Water-borne sediment deposits	Yes No -Morphological plant adaptations
naments: Pit dug during storm with heavy precipitation.	

SUMMARY

Do normal environmental conditions exist at the plant community? yes Has the vegetation, soils, and/or hydrology been significantly disturbed? no

Disturbed area? no

Basis: no recent disturbance

Problem area? no

Basis: normal environmental conditions observed

Comments:

is the hydrophytic vegetation criterion met? YES

is the hydric soil criterion met?

YES

is the wetland hydrology criterion met? is the vegetation unit or plot wetland?

YES YES

Rationale for jurisdictional decision: All three parameters satisfy wetland criteria.

INTERMEDIATE-LEVEL ONSITE METHOD VEGETATION UNIT SAMPLING PROCEDURE

Project/Site: SeaTac - Operations area

Field Investigator(s): AS, CW

Sample Plot #: 29

Date: 9/1/94

Herbs & Bryophytes	indicator Status	% Areai Cover	Cover Class	Midpoint	Rank
Equisetum arvense	FAC	60	5	63.0	1*
Typha latifolia	OBL	15	2	10.5	2
Epilobium watsonii	FACW	12	2	10.5	2
Holeus lanatus	FAC	6	2	10.5	2
Agrostis sp.	FACW-FACU	1	1	3.0	3
	Sum	of Midpoint	s:	97.5	
	Dominan	ce Threshol	d:	48.8	

Sum	of	Midpoints:	
Dominanc	•	Threshold:	

Shrubs	indicator Status**	% Areal Cover	Cover Cases	Midpoint	Rank
Rubus laciniatus	FACU+	1	1	3.0	2
Rubus discolor	FACU	10	2	10.5	. 1*
	Su	m of Midpoin	ts:	13.5	
	Domina	nce Thresho	ld:	6.8	

_		indicator	% Areal	Cover		
	Saplings	Status"	Cover	Class	Midpoint	Rank

Sum of Midpoints: Dominance Threshold:

						-
	indicator	% Area!	Cover			
Trees	Status"	Cover	Class	Midpoint	Rank	

Sum of Midpoints: Dominance Threshold:

% of Dominants that are OBL, FACW, and/or FAC:

1/2 = 50%

Hydrophytic Vegetation?

YES

Comments:

To determine dominante, first cank spaces by mispoints. Then sum mispoints in or unit 50% of total for all spaces; (dominance tiveshold) is immediately expensed. All spaces contributing to this cumulative total puts any others having 20% of the total mispoint value are mained with an attention.

"Sommer that do not appear on the National List (Reed, 1988) may have been assigned an indicato status based on feel opportunities and habital information from the (sensure.



Project/Site: SeaTac - Operations area

Field Investigator(s): AS, CW

Sample Plot #: 29

Date: 9/1/94

SOILS TO THE RESIDENCE OF THE PROPERTY OF THE

SCS Mapping Unit: Unclassified (Urban Land)

Field Identification: Urban Land Is soil on hydric soils list? NO

is soil a histosol? NO

Histic epipedon present? NO

is soil mottled? YES

is soil glayed? YES

Hortzon	Horizon Depth	Texture	Matrix Color	Mattle Color	Occurrence of Mottles	Gley Color	Organic Content
A B	0-6- 6-12-	ioam ailt loam	10YR 4/2 5Y5/2 5Y5/1	10YR 5/6	C,1,P		med/hi

Landform/Topography: Steep fill material.

Comments: Soil on steep fill material deposited as foundation for runways

Hydric Soils? YES

Basis: Low chroma, mottles

HYDROLOGY

Is ground surface inundated? NO

Is soil saturated?

YES

Depth to free-standing water in pit: 12"

The state of the s Surface water depth: NA

Depth to saturation: 8°

X Oxidized root zones

Water marks Drift lines

Water-borne sediment deposits

Water-stained leaves Surface scoured areas

X Wetland drainage patterns Morphological plant adaptations

Comments: Water discharges along steep hillside (up to 45%).

Wetland Hydrology? YES

Basis: Saturation, wetland drainage patterns, oxidized root zones.

SUMMARY

Do normal enviral mental conditions exist at the plant community? YES

Has the vegeta: ,, soils, and/or hydrology been significantly disturbed? NO

Disturbed area? NO

Basis: no recent disturbance

Problem area? NO

Basis: normal environmental conditions observed

Comments: Wetland associated with a hillside seep.

is the hydrophytic vegetation criterion met? YES

is the hydric soil criterion met?

YES

is the wetland hydrology criterion met?

YES

is the vegetation unit or plot wetland?

YES

Rationale for jurisdictional decision: All three wetland parameters met

INTERMEDIATE-LEVEL ONSITE METHOD VEGETATION UNIT SAMPLING PROCEDURE



Project/Site: SeaTac - Operations area

Field Investigator(s): AS, CW

Sample Plot #: 30 Date: 8/25/94

Herbs & Bryophytes	Indicator Status	% Areai Cover	Cover	Midpoint	Rank	
Athyrium filix-lemina	FAC	35	4	38.0	1*	
Polystichum munitum	FACU	10	2	10.5	3	
Equisetum telmateia	FACW	25	3	20.5	2*	
Lysichium americanum	OBL	10	2	10.5	3	
Phalaris arundinacea	FACW	5	1	3.0	4	

Sum of Midpoints:

82.5

Dominance Threshold:

41.3

Shrubs	Indicator Status**	% Areal Cover	Cover Class	Midpoint	Rank
Rubus speciabilis	FAC+	35	4	38.0	,1*
Oemleria cerasiformis	FACU	5	1	3.0	2
Rubus ursinus	FACU	5	1	3.0	2
Corvius comuta	FACU	5	1	3.0	2
•	Su	m of Midpoin	its:	47.0	
	Domina	ince Thresho	ld:	23.5	

Control of the Contro	indicator	% Area	Cover		
Saplings	Status**	Cover	Class	Midpoint	Rank

Sum of Midpoints: Dominance Threshold:

	Indicator	% Armal	Cover		
Trees	Status"	Cover	Class	Midpoint	Rank
Alnus rubra	FAC	70	5	63.0	1*
Acer macrophyllum	FACU	10	2	10.5	2
	Sui	m of Midpoin	its:	73.5	
	Domina	nce Thresho	old:	36.8	

% of Dominants that are OBL, FACW, and/or FAC:

4/4 = 100%

Hydrophytic Vegetation?

YES

Comments:

To determine dominents, first rank spaces by mispoints. Then sum mispoints is order until 50% of total for all spaces (comminence invested) is immediate exceeded. All spaces contributing to this cumulative total plus any others having 20% of the total mispoint value are mainted with an assemble.

"Spaces that do not appear on the National List (Reed, 1988) may have been assigned an indicate



Project/Site: SeaTac - Operations area

Field Investigator(s): AS, CW

Sample Plot #: 30

Date: 8/25/94

SOILS -----

SCS Mapping Unit: Unclassified (Urban Land)

Field Identification: Urban Land Is soil on hydric soils list? NO

is soil a histosol? NO

Histic epipedon present? NO

is soil mottled? NO

is soil gleyed? YES

Hortzon	Horizon Depth	Texture	Matrix Color	Motte Color	Occurrence of Mottles	Color	Organic Contant
	0-10"	sandy loam	10YR 3/1	"			med/hi
	10-18"	sandy loam				5GY 4/1 5Y 4/1	med/hi

Landform/Topography: East-west oriented ravine.

Comments:

Hydric : 1s? YES

Basis: Low chroma, gleyed colors

HYDROLOGY

The same definition of the same of the sam is ground surface inundated? NO

la soil saturated?

YES

Surface water depth: NA

Depth to saturation: Surface

Depth to ree-standing water in pit: 20"

Oxidized root zones

Water marks Drift lines

Water-borne sediment deposits

Y Water-stained leaves Surface scoured areas

X Wetland drainage patterns Morphological plant adaptations

The same the same that the same same to save the same the same the same the same the same the same the same the

Comments: Plot located adjacent to small stream.

Wetland Hydrology? YES

Basis: Saturation, wetland drainage patterns, water-stained leaves

SUMMARY

Do normal environmental conditions exist at the plant community? YES

Has the vegetation, soils, and/or hydrology been significantly disturbed? NO

Disturbed area? NO

Basis: no recent disturbance

Problem area? NO

Basis: normal envirormental conditions observed

Comments: Located at west end of ravine. Stream enters culvert at this end and exits at 12th.

is the hydrophytic vegetation criterion met? YES

is the hydric soil criterion met?

YES

is the wetland hydrology criterion met?

YES

Is the vegetation unit or piot wetland?

YES

Rationale for jurisdictional decision: All three wetland parameters met.

INTERMEDIATE-LEVEL ONSITE METHOD VEGETATION UNIT SAMPLING PROCEDURE



Project/Site: SeaTac - Operations area

Field Investigator(s): AS, CW

Sample Plot #: 31 Date: 8/19/94

Herbs & Bryophytes	Indicator Status	% Areai Cover	Cover Coss	Midpoint	Rank
Holeus lanatus	FAC	30	4	38.0	1"
Agrostis stoloniiera	FAC*	30	4	38.0	1*
Agrostis tenuis	FAC	25	3	20.5	2
Rumex crispus	FAC+	1	1	3.0	
Juncus effusus	FACW	6	2	10.5	
Anthoxanthum odoratum	FACU	10	2	10.5	
Enilohium watennii	FACW	1	1	3.0	

Sum of Midpoints:

123.5 61.8

		Domina	II CE	Thresi	hold:	
CONTRACTOR CONTRACTOR	200 VI 0		بالمتعلق			
	ind	Louise	•	C Arrest		_

Shrubs	indicator Status**	% Areal Cover	Cover Class	Midpoint	Rank
Rubus discolor	FACU	5	1	3.0	1*
Cytisus scoparius	UPL**	2	1	3.0	1*
	Sur	n of Midpoin	its:	6.0	
	Domina	nce Thresho	ld:	3.0	
All the second s	ladiene.	2 A	<u> </u>		

Indicator % Areal Cover
Saplings Status** Cover Class Midpoint Rank

Sum of Midpoints: Dominance Threshold:

	Indicator	% Aresi	Cover		
Trees	Status**	Cover	Class	Midpoint	Rank

Sum of Midpoints: Dominance Threshold:

% of Dominants that are OBL, FACW, and/or FAC:

2/4 = 50%

Hydrophytic Vegetation?

YES

Comments: DEPRESSIONAL AREA AT TOE OF SLOPE, SOME ALDER AND WILLOW TREES ALONG WETLAND EDGES AT SOUTHERN END. SHRUBS LARGELY ROOTED OUTSIDE OF WETLAND.

To desermine dominante, first tank species by midbonts. Then sum midbonts in order until 50% of total for all species (dominance treatrach is immediately excluded). All species contributing to the cumulative total plus any others neverg 20% of the total midbonts value are midded with all attention.

"Species that do not atteam on the National List (Read, 1988) may have been assigned an indicate



Project/Site: SeaTac - Operations area

Field Investigator(s): AS, CW

Sample Plot #: 31

Date: 8/19/94

TOTAL TOTAL TOTAL CONTROL OF THE SOLLS SOLLS

SCS Mapping Unit: Unclassified (Urban Land)

Field Identification: Urban Land is soil on hydric soils list? NO

is soil a histosol? NO

Histic ecipedon present? NO

Is soil mottled? YES

is soil gleyed? YES

Horizon	Horizon Depth	Texture	Matrix Color	Mattle Color	Occurrence of Mottles	Glay Color	Organic Content
<u> </u>	0-4"	loam	25Y 4/2				medium
8	4-12	loam	2.5Y 4/2	7.5YR 4/6	M, 2, D		medium
С	12 - 18"	sandy loam	5Y 5/2				bw

Landform/Topography: Depression at toe of slope.

Comments: B horizon is densely compacted hardpan.

Hydric Soils? YES

Basis: Low chroma, mottles

HYDROLOGY

Is ground surface inundated? NO is soil saturated? NO

Surface water depth: NA Depth to saturation: NA

Depth to free-standing water in pit: NA

X Oxidized root zones Water marks

Drift lines
Water-borne sediment deposits

Water-stained leaves Surface scoured areas

X Wetland drainage patterns

Morphological plant adaptations

males of the state

Comments: Depression at toe of slope, oxidized root zones in upper portion of B horizon. Root penetration to 9 inches.

SUMMARY

Wetland Hydrology? YES

Basis: Oxidized root zones, wetland drainage patterns, hydric soil.

Do normal environmental conditions exist at the plant community? YES

Has the vegetation, soils, and/or hydrology been significantly disturbed? NO

Disturbed area? NO

Basis: No recent disturbance.

Problem area? NO

Basis: Normal environmental conditions exist.

Comments: Wetland occur between roadway and toe of slope, drains south to drop structure.

Is ne hydrophytic vegetation criterion met? YES

Is the hydric soil criterion met?

YES

is the wetland hydrology criterion met?

YES

is the vegetation unit or plot wetland?

YES

Rationale for jurisdictional decision: All three wetland parameters met.

INTERMEDIATE-LEVEL ONSITE METHOD VEGETATION UNIT SAMPLING PROCEDURE



Project/Site: SeaTac - Operations area

Field Investigator(s): AS, CW

Sample Plot #: 32

Date: 8/25/94

Herbs & Bryophytes Status* Cover Class Midpoint Rank

Polystichum munitum FACU 4 1 3.0 1*

Sum of Midpoints: 3.0

Dominance Threshold: 1.5

Shrubs	Indicator Surces	% Areal Cover	Cover	Midpoint	Rank
	FAC+	25	3	20.5	2.
Rubus spectabilis	FACU	40	4	38.0	1*
Rubus discolor	• • • • • • • • • • • • • • • • • • • •	5	1	3.0	3
Unknown shrub	FACU	20	3	20.5	2*
Rubus ursinus Ilex sp.	FACU"	2	1	3.0	3
	Sum	of Midpoin	rts:	85.0	
	Dominano	e Thresho		42.5	
Control of the Contro	indicator	% Area	Cover		
Saplings	Status"	Cover	Class	Midpoint	Renk

Sum of Midpoints: Dominance Threshold:

The state of the s	Indicator	% Aresi	Cover		
Trees	Status**	Cover	Class	Midpoint	Rank
Acer macrophyllum	FACU	15	2	10.5	2
Ainus rubra	FAC	60	5	63.0	1"
Corylus comuta	FACU	10	2	10.5	2
	Sur	n of Midpoin	its:	84.0	
		nce Thresho		42.0	

% of Dominants that are OBL, FACW, and/or FAC:

25 = 40%

Hydrophytic Vegetation?

NO

Comments:

To desermine comments, first tents species by middents. Then sum midpoints in order und 50% of total for all species (dominance treeshold) is immediately excessed. All species coverbusing to this cumulative stat plus any others having 20% of the total midpoint vigue are mainted with an assensi.

" Species that do not appear on the National List (Read, 1988) may have been assigned an indicator



Project/Site: SeaTac - Operations area

Field investigator(s): AS, CW

Sample Plot #: 32

Date: 8/25/94

SOILS

SCS Mapping Unit: Unclassified (Urban Land)

Field Identification: Urban Land

is soil on hydric sous list? NO

le soil a histosol? NO

Histic epipedon present? NO

Is soil mottled? NO

is soil gieyed? NO

Hortzon	Herizon Depth	Texture	Matrix Color	Mottle Color	Occurrence of Mottles	Gley Color	Organic Content
A	0-4"	sit loam	10YR 4/2				med/hi
B 1	4-16"	siit ioam	10YR 4/3				med/hi
B 2	16-18	silt loam	10YR 3/3				med

andform/Topography: East-west oriented ravine. Rolling terrain outside of steep ravine.

Comments:

Hydric Soils? NO

Basis: Lack of hydric indicators.

HYDROLOGY

- The many that makes a market on the transfer of the second contract of the second contrac is ground surface inundated? NO

Is soi: saturated?

NO

Depth to free-standing water in pit. NA

Surface water depth: NA

Depth to saturation: NA

Drift lines

Oxidized root zones Water marks

Water-borne sediment deposits

Water-stained leaves Surface scoured areas Wetland drainage patterns Morphological plant adaptations

And the second s

The same the same that the sam

Comments:

Wetland Hydrology? NO

Basis: Lack of hydrologic indicators.

Do normal environmental conditions exist at the plant community? YES

Has the vegetation, soils, and/or hydrology been significantly disturbed? NO

Disturbed area? NO

Basis: no recent disturbance

Problem area?

Basis: normal environmental conditions observed

SUMMARY

Comments: Wetland located apx 150 feet southeast of Plot #8 at the top of the southern slope of the ravine.

Is the hydrophytic vegetation criterion met? NO

Is the hydric soil criterion met?

is the wetland hydrology criterion met?

NO

is the vegetation unit or plot wetland?

NO

Rationale for jurisdictional decision: None of the wetland parameters met.



INTERMEDIATE-LEVEL ONSITE METHOD VEGETATION UNIT SAMPLING PROCEDURE

Project/Site: SeaTac - Operations area

Field Investigator(s): AS, CW

Sample Plot #: 33

Date: 8/23/94

Herbs & Bryophytes	Indicator Status	% Areal Cover	Cover	Midpoint	Rank
Ranuncuius repens	FACW	9	2	10.5	2*
Equiseum arvense	FAC	4	1	3.0	
Urtica dioica	FAC+	2	1	3.0	
Bidens cernuz	FACW+	4	1	3.0	
Agrostis tenuis	FAC	10	2	10.5	1"
Tiarella trifoliata	FAC-	1	1	3.0	
Pos sp.	FACW-UPL**	5	1	3.0	
Convovulus arvensis	. FAC**	1	1	3.0	
Polysichum munitum	FACU	1	1	3.0	
•	Sum	of Midpoint	!\$:	42.0	

21.0

Dominance Threshold:

Shrubs	indicator Status'''	% Area! Cover	Cover Class	Midpoint	Rank
Rubus spectabilis	FAC+	10	2	10.5	2.
Rubus discolor	FACU	50	4	38.0	1*
Rubus ursinus	FACU	5	1	3.0	
Oemleria cerasitormis	FACU	1	1	3.0	
	Sur	m of Midpoin	ts:	54.5	
	Dominance Threshold: 27.3				

	A-74-0	COTE		
Status =	Cover	Cizes	Midpoint	Rank

Sum of Midpoints: Dominance Threshold:

Trees	Indicator Status	% Areal Cover	Cover Class	Midpoint	Rank
Alnus rubra	FAC	80	6	85.5	1*
Acer macrophyllum	FACU	10	2	10.5	
	Sur	n of Midpoin	ts:	96.0	
	Domina	nce Thresho	ld:	48.0	

% of Dominants that are OBL, FACW, and/or FAC:

4/5 = 80%

Hydrophytic Vegetation?

YES

Comments:

Saplings

To determine dominants, first rank species by midpoints. Then sum midpoints in order until 50% of total for all species (dominance threshold, a immediately exceeded. All attracts to not access on the National List (Reed, 1988) may have been assigned an intilicator status based on field observations and habitat information from the iterature.



Project/Site: SeaTac - Operations area

Field Investigator(s): AS, CW

Sample Plot #: 33

Date: 8/23/94

SOILS

SCS Mapping Unit: Unclassified (Urban Land)

Field Identification: Urban Land is soil on hydric soils list? NO

Is soil a histosol? NO Histic epipedon present? NO

is soil mottled? NO

is soil gleyed? NO

Horizon	Horizon Depth	Texture	Matrix Color	Mottle Color	Occurrence of Mottles	Color	Organic Content
A	0-7	sandy loam	10YR 3/2				med/high
С	7-14	sandy loam	10YR 3/3				medium
R	14*+	basalt regolith (glacial erratic)					***************************************

Landform/Topography: Topographic trough

Comments: East-west trending trough, west-central portion of POS property.

Hydric Soils? NO

Basis: High chromas, no redoxymorphic features.

HYDROLOGY

and the second of the second s Is ground surface inundated? NO

is soil saturated?

NO

Depth to free-standing water in pit: NA

Surface water depth: NA

Depth to saturation: NA

Oxidized root zones Water marks

Drift lines

Water-borne sediment deposits

Water-stained leaves Surface scoured areas

Wetland drainage patterns Morphological plant adaptations

The free who will be the the second of the s

Com-

3: Ponding may occur in isolated depressions during wetter times of the year.

Wetland Hydrology? NO

Basis: Lack of hydrologic indicators.

Do normal environmental conditions exist at the plant community? YES Has the vegetation, soils, and/or hydrology been significantly disturbed? NO

Disturbed area? NO

Basis: No recent disturbance.

Figalem area? NO

Basis: Normal environmental conditions observed.

SUMMARY

Comments:

is the hydrophytic vegetation criterion met? YES

Is the hydric soil criterion met?

NO

is the wetland hydrology criterion met?

NO

is the vegetation unit or plot wetland?

NO

Rationale for jurisdictional decision: Only one of three wetland parameters meet.

WETLAND DETERMINATION INTERMEDIATE-LEVEL ONSITE METHOD VEGETATION UNIT SAMPLING PROCEDURE



Project/Site: SeaTac - Operations Area

Field Investigator(s): AS, CW

Sample Plot #: 34

Date: 8/23/94

Herbs & Bryophytes	indicator Status	% Areal Cover	Cover Class	Midpoint	Rank
Equisetum telmateia	FACW	55	5	63.0	1*
Polystichum munitum	FACU	10	2	10.5	
Hederz helix	FACU**	15	2	10.5	-
Epilobium angustifolium	FACU+	2	1	3.0	
	Sun	87.0			
	Dominar			43.5	
Shrubs	indicator Status	% Areal Cover	Cover Class	Midpoint	Rank
Rubus discolor	FACU	30	4	38.0	1*
	Sun	n of Midpoin	ts:	38.0	
	Domina	nce Thresho	ld:	19.0	•

Cover C

% Area

Dominance Threshold:

Trees	indicator Status	% Areal Cover	Cover Class	Midpoint	Rani
Alnus rubra	FAC	55	5	63. 0	1*
	Sur	n of Midpoin	ts:	63.0	
	Domina	nce Thresho	id:	31.5	

Status

% of Dominants that are OBL, FACW, and/or FAC:

2/3 = 67%

Hydrophytic Vegetation?

YES

Rank

Comments: LOCATED AT TOE OF SLOPE.

Saplings

To determine dominants, first rank statists by midpoints. Then sum midpoints in order until 50% of total for all statists from transcer treatment is introduced with example to the cumulative total plus any others having 20% of the total midpoint value are marked with an assemble.

" Species that do not access on the National List (Reed, 1988) may have been assigned an indicator

Cover Class

Midpoint



Project/Site: SeaTac - Operations area

Field Investigator(s): AS, CW

Sample Pict #: 34

Date: 8/23/94

SOILS

SC: F

-vig Unit Unclassified (Urban Land)

ication: Urban Land

le

vetric soils list? NO

is soil a histosol? Histic epipedon present? NO

is soil mottled? YES

is sail aleved? NO

Horizon Depth Matrix Color Occurrence Mattle Horizon Texture Color of Motties 0-7 bam 10YR 3/3 В 7-18 10YR 3/4 loam 7.5YR 34 F. 1. D

Landform/Topography: Hillside slope

Comments: Area topographocally lower than Sample Plot #35, approximately 50 feet west.

Hydric Soils? NO

Basis: High chroma

HYDROLOGY

Marie The Secretary of the Secretary of the Secretary of the Secretary Secretary Secretary Secretary Secretary is ground surface inundated? NO

Is soil saturated?

NO

Surface water depth: NA

Depth to saturation: NA

Depth to free-standing water in pit: NA

Oxidized root zones

Water marks Drift lines

Water-borne sediment deposits

Water-stained leaves Surface scoured areas

The state of the s

Wetland drainage patterns Morphological plant adaptations

Comments:

Wetland Hydrology? NO

Basis: Lack of hydrologic indicators.

Do normal environmental conditions exist at the plant community? YES

Has the vegetation, soils, and/or hydrology been significantly disturbed? NO

Disturbed area? NO

Basis: No recent disturbance

Problem area? NO

Basis: Normal environmental conditions observed.

SUMMARY

Con ments:

is the hydrophytic vegation criterion met? YES

is the hydric soil criteric:. met?

NO

is the wetland hydrology criterion met?

NO

is the vegetation unit or plot wetland?

NO

Rationale for jurisdictional decision: Only one of three wetland parameters met.



INTERMEDIATE-LEVEL ONSITE METHOD VEGETATION UNIT SAMPLING PROCEDURE

Project/Site: SeaTac - Operations area

Field Investigator(s): AS, CW

Sample Plot #: 35

Date: 8/23/94

Herbs & Bryophytes	Indicator Status	% Area	Cover Class	Midpoint	Rank
Athyrium filix-lemina	FAC	45	4	38.0	1*
Equisetum arvense	FAC	25	3	20.5	2*
Equisetum telmateia	FACW	20	3	20.5	3.
Urtica dioica	FAC+	1	1	3.0	
Pteridium aquilinum	FACU	5	1	3.0	
	Sun	of Midpoint	t s-	85.0	

Sum of Midpoints:

Dominance Threshold:

85.0 42.5

Shrubs	indicator Status**	% Areal Cover	Cover Class	Midpoint	Rank
Rubus speciabilis	FAC+	3	1	3.0	2°
Rubus discolor	FACU	5	1	3.0	. 1*
	Su	m of Midpoin	ts:	6.0	
	Domina	nce Thresho	ld:	3.0	

Indicator % Areal Cover
Saptings Status*** Cover Class Midpoint Rank

Sum of Midpoints: Dominance Threshold:

Trees	indicator Status**	% Areai Cover	Cover Class	Midpoint	Rank
Ainus rubra	FAC	25	3	20.5	
Acer macrophyllum	FACU	8 5	6	85.5	1*
	Sui	n of Midpoin	its:	105.0	
	Domina	nce Thresho	ild:	53.0	

% of Dominants that are OBL, FACW, and/or FAC:

4/6 = 67%

Hydrophytic Vegetation?

YES

Comments: WETLAND ASSOCIATED WITH SIDEHILL SEEP.

To determine dominants, first rank species by misseres. Then sum misseres in order unal 50% of test for all species dominance treatment in unreadistiv excessed. All species contributing to the cumulative test past any others feeling 20% of the test

" Spierres that do not appear on the Missonii List (Read, 1988) may have been assigned an indicator Easts Dated on fest created that are set have a decreated from the least one.



Project/Site: SeaTac - Operations area

Field Investigator(s): AS, CW

Sample Plot #: 35

Date: 8/23/94

SOILS SOILS

SCS Mapping Unit: Unclassified (Urban Land)

Field Identification: Urban Land

is soil on hydric soils list? NO

la soil a histosol? NO

Histic epipedon present? NO

is soil mottled? YES

is soil gleyed? YES

Hortzon	Horizon Depth	Texture	Matrix Color	Mattle Color	Occurrence of Mottles	Gley Color	Organic Content
A	0-9"	bam	10YR 27				high
Btg	9 - 14"	silty clay loam	10YR 5/1	5YR 4/6	C, 2&3, P		medium
C	14 - 18"+	sandy loam	10YR 4/1	5YR 4/6	C, 2&3, P	5B 5/1	medium

Landform/Topography: Hummocky protrusion on slope.

Comments: Mottles occur along root channels and pores in Btg horizon. Lenses of fine material (sitts and ciays) within C

horizon.

Hydric Soils? YES

Basis: Gleyed, low chroma, mottles.

HYDROLOGY

and the second s is ground surface inundated? NO

is soil saturated?

YES

Depth to free-standing water in pit: NA

Surface water depth: NA

Depth to saturation: 18 inches

. Nowas it somewhere remaining to the second

Oxidized root zones

Water marks

Drift lines

Water-borne sediment deposits

Water-stained leaves Surface scoured areas

Wetland drainage patterns

Morphological plant adaptations

Comments: Sample plot topographically higher than surrounding area, saturated soil may be result of artesian flow from area

to east

Wetland Hydrology? YES

Basis: Saturation at 18", hydric soils.

SUMMARY

Do normal environmental conditions exist at the plant community? YES Has the vegetation, soils, and/or hydrology been significantly disturbed? NO

Disturbed area? NO

Basis: No recent disturbance

Problem area

NO

Basis: Normal environmental conditions exist at site.

Comments: Wetland may be result of artesian flow from eastern area.

is the hydrophytic vegetation criterion met? YES

is the hydric soil criterion met?

YES

is the wetland hydrology criterion met?

YES

is the vegetation unit or plot wetland?

YES

Rationale for jurisdictional decision: All three wetland parameters met.

SHAPIRO& ASSIDIATES

WETLAND DETERMINATION INTERMEDIATE-LEVEL ONSITE METHOD VEGETATION UNIT SAMPLING PROCEDURE

Project/Site: SeaTac - Operations area

Sample Plot #: 36

Field Investigator(s): AS, CW

Date: 8/23/94

Herbs & Bryophytes	Indicator Status**	% Areas	Cover	Midpoint	Rank
Equisetum telmateia	FACW	50	4	38.0	1*
Athyrium filix-femina	FAC	2	1	3.0	
•	Sun	n of Midpoin	ts:	41.0	
	Dominar	ce Threshol	d:	20.5	

	D4.,				
Shrubs	indicator Street	% Areal Cover	Cover Class	Midpoint	Rank
Rubus discolor	FACU	50	4	38.0	1*
	Sur	m of Midpoin	ts:	38.0	
	Domina	ince Thresho	ld:	19.0	
Saplings	Indicator Status**	% Areal Cover	Cover Class	Midpoint	Rank

Sum of Midpoints: Dominance Threshold:

Trees	Indicator Status	% Areal Cover	Cover Class	Midpoint	Rank
Acer macrophyllum	FACU	50	4	38.0	1*
	Sur	m of Midpoin	its:	38.0	
	Domina	ince Thresho	id:	19.0	

% of Dominants that are OBL, FACW, and/or FAC:

2/3 = 67%

Hydrophytic Vegetation?

YES

Comments: MID-SLOPE SEEP AREA.

To determine dominants, first rank spaces by middents. Then sum middents in order until 50% of total for all scales (dominance treatable) is immediately excessed. All spaces contributing to the contained examination and pass any others having 20% of the total middent lead are mainted with an attention.

"Species that do not appear on the Nasonal List (Reed, 1998) may have been assigned an indicator



Project/Site: SeaTac - Operations area

Field Investigator(s): AS, CW

Sample Plot #: 36

Date: 8/23/94

SOILS SOILS

SCS Mapping Unit: Unclassified (Urban Land)

Field Identification: Urban Land

is soil on invaric soils list? NO

le soil a histosol? NO

Histic epipedon present? NO

is soil mottled? YES

is soil dieved? NO

Hortzon	Horizon Depth	Texture	Matrix Color	Mottle Color	Occurrence of Mottes	Gley Cotor	Organic Content
A	0 - 12	icam	10YR 3/1				med/high
B	12 - 18"+	loam	25Y 4/2	7.5YR 5/6	C, 1&2.D		međum

Landform/Topography: Hillside seep Comments: no root penetration below 6"

The California State of the Ca

Hydric Soils? YES

Basis: Low chroma, mottles

HYDROLOGY

is ground surface inundated? NO is soil saturated?

YES

Surface water depth: NA

Depth to saturation: 12"

- The Manual Comments of the Comment

Depth to free-standing water in pit. NA

Oxidized root zones

Water marks

Drift lines

Water-borne sediment deposits

Water-stained leaves Surface scoured areas Wetland drainage patterns Morphological plant adaptations

Comments: Uphill edge of wetland saturated to ground surface, pockets of inundation.

Wetland Hydrology? YES

Basis: Saturation at 12".

Do normal environmental conditions exist at the plant community? YES

Has the vegetation, soils, and/or hydrology been significantly disturbed? NO

Disturbed area? NO

Basis: No recent disturbance

Problem area? NO

We the second se

Basis: Normal environmetal conditions exist.

SUMMARY

Comments: Wetland appears to be a seep from filled hillside.

is the hydrophytic vegetation criterion met? YES

is the hydric soil criterion met?

YES

is the wetland hydrology criterion met?

YES

Is the vegetation unit or plot wetland?

YES

Rationale for jurisdictional decision: All three wetland parameters met.

AR 048115

INTERMEDIATE-LEVEL ONSITE METHOD VEGETATION UNIT SAMPLING PROCEDURE



Project/Site: SeaTac - Operations area

Field Investigator(s): AS, CW

Sample Plot #: 37

Date: 8/25/94

Herbs & Bryophytes	Indicator Status	% Areal Cover	Cover	Midpoint	Ramk
Typha latifolia	OBL	5	1	3.0	3
Hoicus lanatus	FAC	28	4	38.0	1*
Agrostis stolonifera	FACT -	15	2	10.5	2*
Jungus effusus	FACW	7	2	10.5	2
Eleocharis sp.	OBL	5	1	3.0	3
Carex pachystachya	FAC	5	1	3.0	3
Dactylis glomerata	FACU	10	2	10.5	2
Rumex crispus	FAC+	5	1	3.0	3
		15	2	10.5	2°
Equisetum arvense	FAC	1	1	3.0	3
•	Sum	of Midpoint	s:	95.0	
		ce Threshol	d:	47.5	
	indicator	% Armei	Cover		
Shrubs	Status**	Cover	Cass	Midpeint	Rank

Sum of Midpoints: Dominance Threshold:

indicator % Area Cover Saplings Status" Midpoint Rank FACW+ 10 2 Safix lasiandra 10.5 FAC 1. Alnus rubra 15 10.5 Sum of Midpoints: 21.0

Sum of Midpoints: 21.0

Dominance Threshold: 10.5

Trees	Indicator Status	% Areal Cover	Cover Class	Midpoint	Rani
Alnus rubra	FAC	3	1	3.0	2
Populus trichocarpa	FAC	10	2	10.5	1*
Betula papyrifera	FAC*	6	2	10.5	1*
Acer macrophyllum	FACU	4	1	3.0	2
	Sur	n of Midpoin	ts:	27.0	
	Domina	nce Thresho	ld:	13.5	

% of Dominants that are OBL, FACW, and/or FAC:

7/7 = 100%

Hydrophytic Vegetation?

YES

Comments: EPILOBIUM WATSONII ALSO IS PRESENT IN THE PLOT AT 1%. IT IS ASSUMED THAT, GIVEN THE STATUS OF KNOWN PLANTS, THAT THE UNKNOWN GRASS IS FAC.

To determine dominants, first rank species by midbores. Then aum melbories in order until 50% of total for all sciences (dominance timesheld) is immensive exceeded. All appears contributing to this cumulative total plus any others raiving 20% of the total micborit value are marked with as asserted.

T Should that do not account on the National Lat (Read, 1969) may have been assigned an indicate status bearing on find conceptors and hardy extrements from the status on



Project/Site: SeaTac - Operations area

Field Investigator(s): AS, CW

Sample Plot #: 37

Date: 8/25/94

SOILS THE RESIDENCE OF THE PROPERTY OF THE PRO

SCS Mapping Unit: Unclassified (Urban Land)

Field Identification: Urban Land

Is soil on hyan is list? NO

is soil a histosol? NO

Histic epipedon present? NO

is soil mottled? YES

is soil gleyed? NO

Horizon	Horizon Depth	Texture	Matrix Color	Mottle Color	Occurrence of Mottles	Gley Color	Organic Content
A B	0-8" 8-16"	gravelly sandy loam sandy loam	10YR 3/2 2.5Y 4/2	7.5YR 4/6	C,3.D		med
_	U	teroy roun.	۵, ۳۲	1211 40	C,3,D		low-med

Landform/Topography: Slight depression on topographically high area. Surrounding terrain is hilly.

Comments: Soils extremely compact.

Hydric Soils? Yes

Basis: Low chroma, mottles

HYDROLOGY

is ground surface inundated? NO

is soil saturated?

NO

Depth to free-standing water in pit: NA

Surface water depth: NA

Thereselve Williams

Depth to saturation: NA

Oxidized root zones

Water marks

Drift lines

Water-borne sediment deposits

Water-stained leaves Surface scoured areas X Wetland drainage patterns

Morphological plant adaptations

Comments:

Wetland Hydrology? YES

Basis: Hydric soils, wetland drainage patterns, obligate vegetation.

SUMMARY

Do na may environmental conditions exist at the plant community? YES

Has the vegetation, soils, and/or hydrology been significantly disturbed? NO

Disturbed area? NO

Basis: no recent disturbance

Problem area? NO

Basis: normal environmental conditions observed

Comments: Located apx 100 feet south of Plot #6. Highly compacted soils in slight depression.

is the hydrophytic vegetation criterion met? YES

Is the hydric soil criterion met?

YES

is the wetland hydrology criterion met?

YES YES

Is the vegetation unit or plot wetland? Rationale for jurisdictional decision: All three wetland parameters met.

AR 048117

WETLAND DETERMINATION INTERMEDIATE-LEVEL ONSITE METHOD VEGETATION UNIT SAMPLING PROCEDURE



Project/Site: SeaTac - Operations area

Field Investigator(s): AS, CW

Sample Plot #: 38

Herbs & Bryophytes	Indicator Status	% Areai Cover	Cover	Midpoint	Rank
Holcus lanatus	FAC	25	3	20.5	2*
Juncus effusus	FACW	12	2	10.5	3
Anthoxanthum odoratum	FACU	5	1	3.0	4
Hieracium sp.	FACU**	1	1	3.0	4
Trifolium pratense	FACU	1	1	3.0	4
Lolium perenne	FACU	15	2	10.5	3
Agrostis so.	FACW-FACU	40	4	38.0	1*
Plantago lanceolata	FAC	1	1	3.0	4
•	Sum	of Midpoin	ts:	91.5	
	Dominan	ce Threshol	ld:	45.8	
Shrubs	indicator Status	% Areai Cover	Cover	Midpoint	Rank
		of Midpoin	•		
	Dominar	ice Thresho	id:		
Saplings	indicator Status	% Areas Cover	Cover Class	Midpoint	Renk

Sum of Midpoints: Dominance Threshold:

A STATE OF THE STA						_
	indicator	% Area!	Cover			
Trees	Status-	Cover	Class	Midpoint	Ramk	

Sum of Midpoints: Dominance Threshold:

% of Dominants that are OBL, FACW, and/or FAC:

2/2 = 100%

Hydrophytic Vegetation?

YES

Comments: AGROSTIS ASSUMED TO BE A MIXTURE OF STOLINIFERA (FAC) AND TENUIS (FAC).

To determine comments, first raint species by mispoints, Then sum mispoints in order until 50% of total for all species (dominance interhold) is immediately excessed. All species contributing to this cumulative total glue any others having 20% of the total mispoint value are marked with an assertat.

"Sommer that do not account on the National List (Rend, 1985) may have been assigned an indicator scalus based on feet occar-values and habitat information from the intrature.



Project/Site: SeaTac - Operations area

Field Investigator(s): AS, CW

Sample Plot #: 38

Date: 8/30/94

「こことをはなった日本はないではんなからはないとなっている。 SOILS

SCS Mapping Unit: Unclassified (Urban Land)

Field Identification: Urban Land is soil on hydric soils list? NO

Is soil a histosol? NO

Histic epipedon present? NO

is soil mottled? YES

is soil gleyed? NO

Horizon	Horizon Depth	Texture	Matrix Color	Mottle Color	Occurrence of Mottles	Calar Color	Organic Content
Aī	0-4"	sandy loam	10YR 4/2				
A2	4-9"	fine sandy loam	10YR 5/2	10YR 5/6	C,1,F		
Cī	9-14"	gravelly loam	10YR 4/2	7.5YR 4/4	M,1,D		
œ	14-18+*	gravelly loam	10YR 4/3	7.5YR 4/4		•	

Landform/Topography: Fiat area level with runways. Comments: Little black nodules in C2 horizon could be Mn.

Hydric Soils? YES

Basis: Low chroma, mottles.

HYDROLOGY

The state of the s is ground surface inundated? NO

Is soil saturated?

Surface water depth: NA

Depth to saturation: NA

Depth to free-standing water in pit: NA

Oxidized root zones

Water marks Drift lines

Water-borne sediment deposits

Water-stained leaves Surface scoured areas Wetland drainage patterns

Morphological plant adaptations

Comme 2012: Drainage drop structures are positioned in the center of the wetland and in the southern corner.

Wetland Hydrology? YES

Basis: Hydric soils, wetland drainage patterns

SUMMARY

Do normal environmental conditions exist at the plant community? YES

Has the vegetation, soils, and/or hydrology been significantly disturbed? NO

Disturbed area? NO

Basis: no recent disturbance

Problem area? NO

Basis: normal environmental conditions observed

Comments: Deep tire ruts left during the wet season.

The control of the co

is the hydrophytic vegetation criterion met? YES

Is the hydric soil criterion met?

YES

is the wetland hydrology criterion met?

YES

is the vegetation unit or plot wetland?

YES

Rationale for jurisdictional decision: All three wetland parameters met

INTERMEDIATE-LEVEL ONSITE METHOD VEGETATION UNIT SAMPLING PROCEDURE

Project/Site: SeaTac - Operations area

Field Investigator(s): AS, CW

Sample Plot #: 39 Date: 8/19/94

Herbs & Bryophytes	Indicator Status	% Areal Cover	Cover	Midpoint	Runk
Eleocharis sp.	OBL	40	4	38.0	1*
Holeus langus	FAC	1	1	3.0	
Typha latifolia	OBL	2	1	3.0	
Agrostis stolonifera	FAC*	1	1	3.0	
Anthoxamhum odoratum	FACU	1	7	3.0	
· 	Sun	n of Midpoint	of Midpoints:		
	Dominance Threshold:			25.0	

Shrubs	indicator Status**	% Areal Cover	Cover Class	Midpoint	Rank
Rubus discolor	FACU	2	1	3.0	1"
	Sur	Sum of Midpoints:			•
	Dominance Threshold:			1.5	

Saplings	Indicator Status	% Areal Cover	Cover Class	Midpoint	Ramk
Salix lasiandra	FACW+	3	1	3.0	1*
	Sur	m of Midpoir	nts:	3.0	
	Domina	1.5			

Trees	indicator Status**	% Areal Cover	Cover Class	Midpoint	Rank
Populus trichocarpa	FAC	20	3	20.5	1*
Salix scouleriana	FAC	10	2	10.5	2*
Salix lasiandra	FACW+	1	1	3.0	
	Sur	n of Midpoin	ts:	34.0	
		nce Thresho		17.0	

% of Dominants that are OBL, FACW, and/or FAC:

4/5 = 80%

Hydrophytic Vegetation?

YES

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Comments: HUMMOCKY DEPRESSION

To determine dominants, fast rank species by midpoints. Then sum midpoints in order until 50% of state for all species (commence sweetaids is introduced. All species (somewhate sweetaids is introduced. All species (somewhaters) to the state (see a species commenced to the state of set occurrences and repost information from the language.



Project/Site: SeaTac - Operations area

Field Investigator(s): AS, CW

Sample Plot #: 39

Date: 8/19/94

SOILS

SCS Mapping Unit: Unclassified (Urban Land)

Field Identification: Urban Land

is soil on hydric soils list? NO

Is soil a histosol? NO

Histic epipedon present? NO

is soil mottled? NO

is sail gleved? NO

Hortzon	Horizon Depth	Texture	Matrix Color	Mottle Color	Occurrence of Mottles	Calor	Organic Content
Oi	1-0	bryophyte mat	10YR 2/1				high
A	0-3	loamy coarse sand	10YR 4/1				medium
С	3 - 16"+	very gravelly loamy coarse sand	10YR 4/1				medium

____florm/Topography: Depressional area between two roadways.

Comments: Enclosed depression with evidence of prolonged inundation, maybe stormwater detention area.

Hydric Soils? YES

Basis: Aquic moisture regime, low chroma

des and the on The Sugar Sugar Sugar Sugar Come to Show the HYDROLOGY

is ground surface inundated? NO

is soil saturated?

NO

Surface water depth: NA

Depth to saturation: NA

Depth to free-standing water in pit: NA

Oxidized root zones

Water marks

Drift lines

Water-borne sediment deposits

Water-stained leaves X

X Surface scoured areas

X Wetland drainage patterns

X Morphological plant adaptations

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Comments. Algai mats on ground surface, water marks on butressed tree trunks.

Wetland Hydrology? YES

Basis: Algal mats, water marks, wetland drainage patterns.

SUMMARY Do normal environmental conditions exist at the plant community? YES

Has the vegetation, soils, and/or hydrology been significantly disturbed? NO

Disturbed area? NO

Basis: No recent disturbance

Problem area? NO

Basis: Normal environmental conditions observed.

Comments: Area maybe stormwater detention area.

Some Company and the state of t

is the hydrophytic vegetation criterion met? YES

Is the hydric soil criterion met?

YES

is the wetland hydrology criterion met?

YES

is the vegetation unit or plot wetland?

YES

Rationale for jurisdictional decision: All three wetland parameters met.