



# Northeast Redevelopment Area (NERA)



**Appendix**

# A

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## Appendix - Section I

# Existing Conditions Report

# City of Burien, Washington

## Northeast Redevelopment Area Strategy

### Task 2 Detailed Market and Existing Conditions Analysis

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## I. Summary

### Overall project and report summary

The Northeast Redevelopment Area (NERA) was created in 1997 through the adoption of the City of Burien Comprehensive Plan. The NERA was identified as an area affected by present and future aviation activities at Seattle-Tacoma International Airport (SeaTac). Special planning efforts are needed in this redevelopment area due to the effects of noise and land use restrictions associated with the development of the third runway. Extensive research has been completed on the effects of the new runway on the surrounding community and environment. Special focus has been aimed at the Burien Northeast Redevelopment Area, where existing single and multi-family residential uses are unsuitable for portions of the redevelopment area due to increased decibel levels and aviation development standards.

The NERA is located within the City of Burien, bordered by South 138<sup>th</sup> Street to the north, 8<sup>th</sup> Avenue South to the west and Des Moines Memorial Drive South to the east and south. The NERA, with close proximity to the SeaTac Airport and major transportation corridors, such as State Route, 518 and 509, Interstate 5 and 405, is ripe with redevelopment potential. Please refer to Exhibit 1 in Section VIII for a vicinity map and NERA boundary. Existing conditions of the NERA include mainly residential uses, Miller Creek and associated wetlands and existing infrastructure and services.

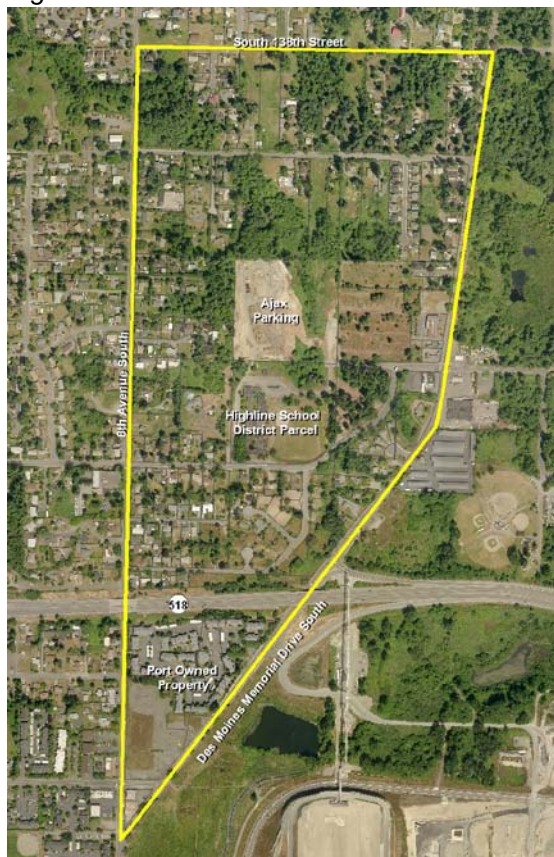
The existing conditions report for the NERA was developed through an extensive review of existing written and mapped materials related to the land use, economic and environmental conditions of the NERA. In order to fully understand the possible redevelopment opportunities for the area, the conditions and constraints must be fully understood. The Northeast Redevelopment Area has great potential for the redevelopment of uses more compatible with existing noise and development constraints.

## II. Existing Conditions

### Land Use

Land use in the NERA is constrained by both natural and man made elements, which include the Miller Creek corridor and associated wetlands, as well as, noise and land use constraints presented by the presence of the new third runway at SeaTac Airport. The area consists of mainly single-family, residential uses to the north and west with increased residential density in the southwestern portion of the NERA, north of SR-518.

Figure 1: NERA District Boundaries



NERA study area boundary with highlighted property uses as mentioned in this section. Aerial taken in 2007.

In addition to natural constraints presented by the presence of the Miller Creek Corridor, land in the NERA is further constrained by FAA (Federal Aviation Administration) restrictions due to the proximity of the new third runway and potential conflicts with flight patterns. Due to these land use restrictions and measured decibel levels, a number of properties within the NERA have been purchased by the Port of Seattle. There are varying levels of restriction

placed on land within the NERA depending on its location with the FAA regulated “object-free area” and depending on the funds used to purchase the property. This restricted land does not encompass the entire study area, but rather is focused in the south and east.

The NERA consists of approximately 158 acres of land, divided among private property ownership, Port of Seattle ownership, City of Burien ownership and ownership by the Highline School District. The majority of the land in the NERA is currently privately owned, single-family residences. Port of Seattle owned property, the second largest land ownership in the NERA (approximately 60 acres) consists of a majority of the southeastern properties within, which are within closest proximity to the new runway and most affected by its development and operations. These properties are most constrained by aviation regulations due to their location within the Runway Protection Zone (RPZ). No structures are allowed within this designated zone due to the level of negative effects of aviation traffic and safety concerns. Please refer to Exhibit 3: Aviation Constraints Map and Exhibit 4: Property Ownership Map in Section VIII.

Private property ownership within the NERA mainly consists of residential development, composed primarily of cul-de-sac development with access taken from major corridors, 8<sup>th</sup> Avenue South, South 138<sup>th</sup> Street and South 140<sup>th</sup> Street.

*Figure 2: Example of Existing Residential Uses*



*Existing residential Uses along S 140th Street*

The majority of existing homes in and around the NERA boundary consist of older home stock with varying setbacks. Adjoining properties outside of the NERA boundary, west of 8<sup>th</sup> Avenue South, vary in size and setback from the existing street. These adjoining properties consist of single-family residential uses, a commercial establishment (US West) and a church property, all located north of SR-518. Adjoining properties located west of the NERA boundary and south of SR-518 consist of more dense uses, including a multi-family apartment community, as well as, a mixed-use office complex and multifamily development at the southernmost tip of the NERA boundary. To the east of the NERA border, Des Moines Memorial Drive South and its adjacent land to the east is jurisdiction of the City of SeaTac. Within the City of SeaTac, adjacent to the NERA border is the North SeaTac Park and Sunset Playfield, which is owned by the Port of Seattle.

Uses within the NERA range in ownership and use. Single-family residential uses make up a majority of uses within the south and western areas of the NERA. Within central NERA there are three relatively large areas of land owned by three different parties, a privately owned airport parking facility, the Navos Mental Health center, owned by Highline School District and an approximately 3 acre portion of land owned by the City of Burien, also highly constrained by the physical presence of Miller Creek and its associated wetlands, as well as, regulatory constraints by the stormwater funds used to purchase the property.

The Navos Mental Health Facility, located at 1010 S 146TH ST (noted above) is situated on a 9-acre parcel in the center of the NERA. This parcel, currently under the ownership of the Highline School District is one of the larger, centrally located parcels in the NERA. Located just north of the Navos facility is a privately owned parcel, currently serving as an airport parking facility for Ajax Parking, which totals approximately 10 acres of land in central NERA, adjacent to Miller Creek. This parking facility and its associated improvements are relatively new, including access drives, grading, pavement and lighting were built around 2007.

The largest area of land with consolidated ownership is located south of SR 518. These

parcels consist of the now vacant Lora Lake apartment complex parcels and the vacant parcels to the south, together totaling approximately 12 acres of consolidated land, all within Port of Seattle owned land.

Figure 2: Vacant Parcel



Looking north onto vacant property and vacant multifamily development from S. 152<sup>nd</sup> Street. Both properties are owned by the Port of Seattle and reside directly adjacent to the Runway Protection Zone (RPZ), west of the third runway.

#### City of Burien Land Use Restrictions

Further restrictions to the properties come from existing land use regulations outlined in the City of Burien Comprehensive Plan and Zoning regulations as detailed in Section V. These regulations dictate the allowable uses and form of new development. The Comprehensive Plan divides the NERA into three subsections A, B and C, as referenced in Figure 5 in Section V. Land use designations in this special planning area range from residential to commercial and industrial uses. The existing zoning for the NERA includes: single-family (RS-7,200), multi-family residential (RM-18, RM-24), as well as, industrial (I) and intersection commercial (CI). Any new development must follow the Special Planning Area 4 (SPA-4) zoning standards rather than the requirements of the underlying zoning, which includes a 2-acre minimum on future development proposals, as well as specific design criteria.

### Transportation

The Northeast Redevelopment Area has a thorough transportation network immediately surrounding it, linking it to major transportation

corridors, including Interstate 5, Interstate 405, State Route 518, and State Route 509.

The Northeast Redevelopment Area is served by a number of area arterial roadways, both onsite and offsite, that provide connections to area freeways and other neighborhoods. These include South 128<sup>th</sup> Street, Des Moines Memorial Drive, 8<sup>th</sup> Avenue South, South 152<sup>nd</sup> Street, South 156<sup>th</sup> Street, and South 146<sup>th</sup> Street. The roadways around the perimeter of the NERA are generally in fair to good condition, and those in need of repairs and upgrades have opportunities for expansion due to availability of right-of-way. Des Moines Memorial Drive, in particular, provides a good connection to the NERA, therefore making it a potentially good candidate for a truck route due to its direct access from westbound SR 518 and relatively flat terrain. Conditions could be improved in this area to provide for a more direct access off of SR 518, as well as bringing roadways up to standard for non-residential traffic. Refer to Exhibit 5: Existing Road Conditions, in Section VIII and Infrastructure Technical Information Report in Section IX for more detailed information.

Figure 4: Northbound Des Moines Memorial Drive at SR 518.



Most of the internal roadways are minor access streets or private streets and would either require upgrades or complete reconstruction to make them adequate to handle additional traffic, especially truck traffic or pedestrian traffic. The roadways within the area do not receive much, if any, routine truck traffic, so it is uncertain whether pavements have been constructed to sustain regular loading from the heavy vehicles.

The Tukwila International Boulevard Light Rail Station, providing access to the Central Link Light Rail, is located approximately two miles east of the Northeast Redevelopment Area. King County Metro also operates a number of local and express bus routes within and nearby the Northeast Redevelopment Area. The Port of Seattle operates a large intermodal, freight transportation hub in the South Downtown (Sodo) and Harbor Island areas of Seattle, as well as nearby Seattle-Tacoma International Airport. King County International Airport, also known as Boeing Field, is located just four miles north of the Northeast Redevelopment Area.

## **Infrastructure**

### **Water**

Water services to the Northeast Redevelopment Area are supplied by King County Water Districts No. 20 and No. 125 via a 24-inch supply main and pump station operated by Seattle Public Utilities (SPU) at the southeast corner of South 146<sup>th</sup> Street and 8<sup>th</sup> Avenue South.

King County Water District No. 20 (KCWD 20) Record maps have been provided by KCWD 20. KCWD 20 provides water service to the majority of the Northeast Redevelopment Area. KCWD 20 merged with King County Water District No. 85 in 2003 and provides water service to a large portion of Burien and much of the North Highline area of unincorporated King County. According to KCWD 20's 2006 Annual Water Quality Report, the district receives most of its water from the Cedar River Watershed through Seattle Public Utilities. This 2006 report also states that the forecast for the district's future water supply is good.

The water system in the Lora Lake Triangle portion of the NERA consists of 12-inch ductile iron pipes in 8<sup>th</sup> Avenue South, 6-inch cast iron pipes installed in 1944 in Des Moines Memorial Drive, and a number of 8-inch ductile iron pipes within the Lora Lakes Apartment complex connecting these lines. Although the ductile iron pipes may have adequate capacity to serve an increased demand, the age of the pipes located in Des Moines Memorial Drive would likely require replacements and upgrades to this portion of the system.

The water system north of State Route 518 also varies a bit in size and age. According to record maps, pipe sizes range from four inches to eight inches and include both cast iron and ductile iron installed as far back as 1944 and as recent as 2007. As a result, a large portion of the water system in the area, particularly the sections that are newer, is likely adequate to serve an increased demand. Older portions of the system, however, would likely require replacements and upgrades.

King County Water District No 125 (KCWD 125) KCWD 125 provides water service to a small portion of the Northeast Redevelopment Area, including properties along Des Moines Memorial Drive north of 146<sup>th</sup> Street. KCWD 125 provides water service to large portions of SeaTac and Tukwila, and small portions of unincorporated King County and Burien. Record maps have been provided by KCWD 125 that show eight-inch ductile iron water mains within Des Moines Memorial Drive.

Both KCWD 125 and KCWD 20 share a six million gallon reservoir along with KCWD 45. According to the Environmental Impact Statement prepared for the City of Burien's Northeast Special Planning Area in 2002, KCWD 125 and KCWD 20 maintain four interties, two of which are within the Northeast Redevelopment Area.

### **Sanitary Sewer**

The Northeast Redevelopment Area is served by two public sewer districts, Southwest Suburban Sewer District and Valley View Sewer District. Although the entire area is located within one of the two districts, a large portion of the Northeast Redevelopment Area does not currently have service and disposes of wastewater through individual privately owned and maintained systems. This is particularly problematic, because the central portion of the Northeast Redevelopment Area has very permeable soils which increase the likelihood of groundwater contamination. Moreover, a portion of the Northeast Redevelopment Area is located within a groundwater recharge area. Please refer to Exhibit 7 in Section VIII for sewer district service map.

### *Southwest Suburban Sewer District (SWSSD)*

The majority of the Northeast Redevelopment Area is located within the SWSSD, including the entire study area south of South 140<sup>th</sup> Street, as well as the area west of 10<sup>th</sup> Avenue South in the northwest portion of the study area. SWSSD provides service to most of Burien and Normandy Park, as well as portions of SeaTac.

SWSSD currently has an 18-inch sewer main that runs through the heart of the Northeast Redevelopment Area, and has also planned routes for future sewer lines within both SWSSD and Valley View Sewer District (VVSD) which all connect to the existing 18-inch sewer main. The future planned sewer extensions encompass most of the existing un-sewered areas within the Northeast Redevelopment Area, including the areas within both the SWSSD and VVSD. The existing 18-inch sewer main begins at the intersection of South 136<sup>th</sup> Street and 8<sup>th</sup> Avenue South, and has likely been oversized for future flows from the north. This sewer main runs south along 8<sup>th</sup> Avenue, southeast via easements to 140<sup>th</sup> Street, southeast via easements to the west terminus of 144<sup>th</sup> Street, and exits the site to the east at the intersection of South 144<sup>th</sup> Street and Des Moines Memorial Drive. The sewer main collects sewage from other sewer mains and ultimately discharges to the Miller Creek Wastewater Treatment Plant, which is owned and operated by SWSSD. Because sewage flow from both SWSSD and VVSD within the Northeast Redevelopment Area is tributary to SWSSD's sewer mains and treatment plant, the ultimate authority on future capacity within the Northeast Redevelopment Area is SWSSD.

A letter has been sent to SWSSD to determine its capacity to serve increased demand in the study area.

### *Valley View Sewer District (VVSD)*

A small portion of the Northeast Redevelopment Area is located within the Valley View Sewer District, formerly known as Val Vue Sewer District. In 1995, Rainier Vista Sewer District merged with Val Vue Sewer District. VVSD provides service to portions of SeaTac, Burien, Tukwila, and the North Highline area of unincorporated King County. VVSD does not own or operate any wastewater treatment plants and relies on contracts with King County

Wastewater Treatment Division, Midway Sewer District, and Southwest Suburban Sewer District for the ultimate conveyance and treatment of wastewater.

A letter has been sent to VVSD to determine its capacity to serve increased demand in the study area.

### **Electricity**

Electric service within the NERA is provided by Seattle City Light. From conversations with the utility it has been noted that the northeastern area of the City is already operating at near capacity, meaning that there is little room for growth in the existing electrical grid. The existing electrical capacity can accommodate the existing, low-intensity residential uses, however may not be able to provide electric service to a more high-intensity use such as industrial or commercial.

Conversations with City Light revealed plans for eventual substation development at a City Light owned parcel located along Route 509 at the NE 136<sup>th</sup> Street overpass to increase capacity for a number of areas, including the NERA. However, lead time to design and construct such a facility, as well as design, secure right-of-way for, and construct transmission lines connecting it to other similar facilities, could take over five years.

### **Natural Gas**

Natural gas service is provided by Puget Sound Energy (PSE). The study area is currently served by a system of 2-inch natural gas lines. Additionally, a 12-inch, high pressure natural gas line follows the perimeter of the study area via South 136<sup>th</sup> Street from 8<sup>th</sup> Avenue South to Des Moines Memorial Drive South and along Des Moines Memorial South from South 136<sup>th</sup> Street to South 146<sup>th</sup> Street.

### **Telecommunications**

Telephone and internet service within the Northeast Redevelopment Area is provided by Qwest Communications. A letter has been sent to Qwest to determine its capacity to serve increased demand in the study area.

Cable television, telephone, and internet service within the Northeast Redevelopment Area is provided by Comcast. A letter has been sent to Comcast to determine its capacity to serve increased demand in the study area.

Please refer to Technical Appendix A for the complete Infrastructure Technical Memorandum.

## **Stormwater and Drainage**

The City of Burien has adopted the 2005 King County Surface Water Manual as its drainage design manual. As a result, the Northeast Redevelopment Area is subject to the regulations defined in this manual, including erosion control, water quality treatment, and flow control.

The entire Northeast Redevelopment Area is tributary to Miller Creek. Miller Creek has historically had poor water quality so a high level of water quality treatment may be required. Although neither the City nor the County has any published maps that show what level of flow control is necessary for areas within the City of Burien, it is likely that development would be subject to conservation flow control requirements.

The existing drainage system is intermittent, with the majority of the Northeast Redevelopment Area relying on open ditches and culverts, as well as infiltration, to manage surface runoff. According to a 1952 U.S. Department of Agriculture Soil Survey, roughly half of the area has soil consisting of Everett Gravelly Sandy Loam, which is in the Hydrologic Soil Group A. Group A soils generally have high infiltration rates, and Everett Soils are particularly well known for having excellent potential for stormwater infiltration. As a result, throughout a large portion of the site, particularly south of South 140<sup>th</sup> Street, east of the bluff along 8<sup>th</sup> Avenue South, and north of Lora Lake Apartments, no comprehensive drainage systems exist since most surface runoff can infiltrate into the soil. It should be noted, however, that any stormwater that does currently infiltrate likely resurfaces in Miller Creek. The 1952 Soil Survey also locates two mines or quarries within the project site, one at the intersection of South 144<sup>th</sup> Way and South 144<sup>th</sup> Street, and the other in the

approximate location of SR 518. As a result, these locations may have a large amount of fill materials that may or may not be suitable building material.

The City does have mapping of existing stormwater systems, which are a combination of buried pipes and open ditches, particularly in the northern third of the Northeast Redevelopment Area, along 8<sup>th</sup> Avenue South, and within Lora Lake Apartments and the portion of the site south of Lora Lake Apartments. Stormwater travels through the site from a large offsite area along 8<sup>th</sup> Avenue South downstream to Lora Lake. It would be advantageous to maintain or replace this system when Lora Lake Apartments are demolished and when the area redevelops, without taking the system offline.

A small conveyance system in the northeast corner of the site conveys stormwater southeast to Tub Lake within North SeaTac Park. The remainder of the closed stormwater systems in the northwest portion of the site conveys runoff to Miller Creek.

## **Wetlands and Creeks**

### **Overview and Methodology**

Otak biologists delineated five wetlands and identified a perennial stream (West Fork of Miller Creek) within the NERA. Identification of these critical areas will guide land use decisions as this predominantly residential area is converted to commercial and industrial uses (Burien 2008a). This section describes the wetland and stream characteristics, wetland functions assessment, and applicable regulations relating to wetlands and streams.

The NERA is a roughly trapezoidal area located in the northeast corner of Burien. The NERA project area consists of rolling terrain with ridges and valleys that are roughly oriented from northwest to southeast. The elevations range from 295 to 425 feet above mean sea level. The West Fork of Miller Creek (Water Resource Inventory Area [WRIA] # 09-0376) bisects the NERA area flowing from northwest to southeast between 8<sup>th</sup> Avenue S to Des Moines Memorial Drive (Williams et al. 1975).

### Creeks

The West Fork of Miller Creek originates northwest of the NERA project area in a Category 3 wetland identified on the City of Burien critical areas map (Burien 2008b). The West Fork of Miller Creek is culverted between this headwater wetland and 8<sup>th</sup> Avenue S where it enters the NERA. The West Fork of Miller Creek within the NERA alternates between open channels, culverts, and concrete-lined ditches. Downstream of the NERA, this tributary flows southeast and combines with the mainstem of Miller Creek flowing out of Tub Lake.

The Burien Municipal Code (BMC 19.40.340) designates four classes of streams: Types 1, 2, 3, or 4 (Burien 2008a). This classification makes a distinction between perennial and intermittent streams and whether there is salmonid use. We assume there is perennial flow in the West Fork of Miller Creek within the NERA based on flow rates observed in July 2008.

The West Fork of Miller Creek within the NERA is identified on the Burien critical area map as a Type 3 stream with a 50-foot buffer (Burien 2008b). The Burien critical area map does not identify any Fish and Wildlife Habitat Conservation Areas within the NERA project area as defined by BMC 19.40.380 (Burien 2008b).

The *Miller and Walker Creeks Basin Plan* (King County 2006) identifies the West Fork of Miller Creek within the NERA and assumes there is an impassable barrier to anadromous salmon due to a 150-foot-long culvert that is downstream of the NERA (King County 2006). However, because resident cutthroat trout are reported to occur in the West Fork of Miller Creek within the NERA (King County 2006), this indicates it is a Type 2 stream that requires a 100-foot buffer.

### Wetlands

A total of five wetlands (Wetlands A through E) were delineated within the Burien NERA. These wetlands are associated and hydrologically connected to the West Fork of Miller Creek.

- Wetland A is a 0.55-acre wetland associated with the West Fork of Miller Creek near 8<sup>th</sup> Avenue S. According to the Cowardin system (1979), Wetland A contains

palustrine forested (PFO) and palustrine scrub/shrub (PSS) classes. Based on the hydrogeomorphic classification system (Brinson 1993), Wetland A is a riverine wetland.

- Wetland B is a 0.50-acre groundwater seep wetland hydrologically connected to the West Fork of Miller Creek. This wetland is formed by groundwater seeps on the north shoulder of S 140<sup>th</sup> Street that saturate a large area. According to the Cowardin system (1979), Wetland B contains palustrine scrub/shrub (PSS) and palustrine emergent (PEM) classes. Based on the hydrogeomorphic classification system (Brinson 1993), Wetland B is a slope wetland.
- Wetland C is a 3.33-acre riparian wetland associated with the West Fork of Miller Creek that is located between S 140<sup>th</sup> Street and S 144<sup>th</sup> Street. According to the Cowardin system (1979), Wetland C contains palustrine forested (PFO), palustrine scrub/shrub (PSS), and palustrine emergent (PEM) classes. Based on the hydrogeomorphic classification system (Brinson 1993), Wetland C is a riverine wetland.
- Wetland D is a 0.41-acre riparian wetland associated with the West Fork of Miller Creek on Port of Seattle property. According to the Cowardin system (1979), Wetland D contains palustrine scrub/shrub (PSS) and palustrine emergent (PEM) classes. Based on the hydrogeomorphic classification system (Brinson 1993), Wetland D is a riverine wetland.
- Wetland E is a 0-12-acre riparian wetland associated with the West Fork of Miller Creek located between Des Moines Memorial Drive and S 144<sup>th</sup> Way. According to the Cowardin system (1979), Wetland E contains palustrine forested (PFO) and palustrine scrub/shrub (PSS) classes. Based on the hydrogeomorphic classification system (Brinson 1993), Wetland E is a riverine wetland.

The wetland and buffer functions were assessed using the methodology and rating form from the *Washington State Wetland Rating System for Western Washington* (Hruby, 2004). Three general categories of wetland functions and the opportunity to perform those functions were assessed: water quality, hydrology, and habitat. The numeric values from the rating forms were translated into qualitative values of low, moderate, and high. Results of the functional assessment of five wetlands in the NERA project area are summarized in Table 1 below.

Table 1. Functional Assessment Rating for Wetlands in the NERA.

Wetland	Categories of Assessed Functions					
	Water Quality		Hydrology		Habitat	
	Potential	Opportunity	Potential	Opportunity	Potential	Opportunity
A	M	Yes	M	Yes	M	M
B	L	Yes	L	Yes	M	L
C	H	Yes	H	Yes	M	M
D	M	Yes	M	Yes	M	L
E	M	Yes	M	Yes	L	L

Where ratings for potential and opportunity is abbreviated as:  
L=Low, M=Moderate, and H=High

Wetlands A through E were rated using the criteria defined in the Department of Ecology's *Washington State Wetland Rating System for Western Washington* (Hruby 2004) and Burien Municipal Code (Burien 2008a). The Burien Municipal Code (BMC 19.40.300) designates four categories of wetlands: Categories 1, 2, 3, or 4 based on habitat scores from the Department of Ecology's rating system. Table 2 summarizes this information on wetland categories and buffer widths.

Wetlands A and C are rated Category II; while Wetlands B, D, and E are rated as Category III according to the Department of Ecology's *Washington State Wetland Rating System for*

*Western Washington*. According to the Burien Municipal Code (Burien 2008a), Wetlands A and C are rated Category 2, while Wetlands B, D, and E are rated as Category 3.

Burien Municipal Code (BMC 19.40.310) provides for permanent protection of wetlands and their buffers by regulation of development and other activities within them. Wetland buffers provide important functions, including protection of wetland functions, water quality improvement, and wildlife habitat. The Burien Municipal Code requires a 100-foot buffer for Wetlands A and C that are Category 2, and a 50-foot buffer for Wetlands B, D, and E because they are Category 3.

Table 2: Wetland Rating Summary for Burien NERA

Wetland	Area (ft <sup>2</sup> )	Area (acre)	Ecology Category <sup>1</sup>	Burien Category <sup>2</sup>	Buffer Width (ft <sup>2</sup> ) <sup>3</sup>
A	23,758	0.55	II	2	100
B	21,733	0.50	III	3	50
C	144,857	3.33	II	2	100
D	17,896	0.41	III	3	50
E	5,256	0.12	III	3	50

1–Wetland category based on Ecology rating system (Hruby 2004).

2 –Wetland and stream classification according to Burien Municipal Code (Burien 2008a)

3–Buffer width according to Burien Municipal Code (Burien 2008a)

### Other Regulatory Issues

Several federal and state regulations affect development in critical areas. Agencies that may have jurisdiction over wetlands and streams include, but may not be limited to: the U.S. Army Corps of Engineers (Corps); Washington State Department of Ecology (Ecology), and Washington Department of Fish and Wildlife (WDFW).

The Corps administers Section 404 of the Clean Water Act, which regulates the discharge of dredged or fill materials into waters of the United States, including adjacent wetlands. The onsite wetlands are likely to be under the jurisdiction of the Corps because they are hydrologically associated with the West Fork of Miller Creek, which eventually outlets to the Puget Sound. Only Corps staff can make a Jurisdictional Determination (JD). It is our opinion that there is good probability that the Corps will take

jurisdiction; however that remains to be confirmed.

Ecology administers Section 401 of the Clean Water Act and has the authority to take jurisdiction over the onsite wetlands regardless of whether the Corps takes jurisdiction or not. Again, only Ecology can make the jurisdictional call, but they do have the authority to do so under the water quality provisions in the WAC (Washington Administrative Code). The West Fork of Miller Creek is reported to be fish-bearing stream (resident cutthroat trout), so it is likely that WDFW will require a Hydraulic Project Application (HPA) approval for any work below the ordinary high water mark.

### III. Review of Plans, Policies, and Development Regulations

#### Burien Special Planning Area 4 Comprehensive Plan Policies, Zoning Regulations, and Design Standards 2003-2004

The NERA is designated by the City of Burien Comprehensive Plan and Zoning Code as Special Planning Area 4. All development must conform to those standards set out in those policies and regulations. The Comprehensive Plan Policy for Special Planning Area 4 was adopted in 2002-2003 and provides the current policy framework for the associated zoning regulations and design standards for the NERA.

#### Uses

The development and siting of uses is affected by FAA regulations for runway protection. The permitted uses within SPA 4 should be airport-compatible, have minimal environmental and land use impacts, and support family-wage jobs. The specific permitted uses vary by subarea. In addition to specific subarea uses, open space, multi-purpose trails, and studio space for artists are also encouraged. Subarea A should be the most restrictive in terms of land use intensity and potential impacts. Allowable land use intensity and potential impacts increase from subarea A to B and from subarea B to C. As such, uses permitted in subarea A are also

permitted in subarea B and C. Uses permitted in subarea B are also permitted in subarea C.

Figure 5: Special Planning Area 4 Map



#### Subarea A

Least intensive land uses and impacts

- Office, high tech
- Plant nurseries, cemeteries, parking, artist studios, recreation
- Low density and two story height limit

#### Subarea B

Moderate intensity and moderate impacts

- Subarea A uses
- Light Manufacturing
- Dense and higher than two stories
- Would require increased buffers and setbacks along north boundary (S 140<sup>th</sup> and 138<sup>th</sup>)—due to proximity to residential uses

### Subarea C

Most intensive land uses and impacts

- Subarea A and B uses
- Air cargo
- Light manufacturing/ warehousing
- New car sales

Any new development within SPA 4 is currently reviewed under the standards of the 2002-2003 comprehensive plan and zoning code policies and regulations, including a two-acre minimum on development.

### Transportation

Developments should cluster to provide internal circulation and minimize access requirements. Primary access should be from Des Moines Memorial Drive, S 140<sup>th</sup> Street, or S 144<sup>th</sup>/S 146<sup>th</sup> Street. As heavy trucking is not allowed as a principal use, the transportation system would not be designed to accommodate such uses under the currently regulations. Developments shall provide facilities for pedestrian and non-motorized circulation. Further, the development of the area should provide linkages to greater Burien bicycle and pedestrian routes.

### Performance and Design Standards

The comprehensive plan provides policies that direct the development of performance and design standards. The standards consider: aquifer recharge; streams and wetlands; plants and animals; air quality; scenic resources; housing; transportation and access; utilities; storm drainage; noise; light and glare. Specific design standards can be found in the Burien Municipal Code, Chapter 19.

### Site Development Standards

The minimum site required for a new use or development is two acres. The maximum building height shall be 30 feet in subarea A and 45 feet in subarea B and C. In all subareas, a lesser maximum building height may be determined by FAA requirements. There is no established building coverage percentage for development in SPA 4; however, all sites must not exceed the maximum impervious surface coverage of 75 percent. No setbacks are

required, unless landscaping is required. Developments should use landscape and screening to reduce glare and visibility of storage areas and related activities.

### Burien Special Planning Area 4 Design Standards

The design standards in chapter 19.48 of the Burien Municipal Code (BMC) comply with the City's Comprehensive Plan Policy SE 1.5. Site development should be coordinated with adjacent properties. This will allow a cohesively developed area that minimizes adverse impacts and ensures an efficient and effective transportation system. The design standards provide requirements for site planning and design; pedestrian and non-motorized circulation; vehicle access and parking; building design; and surface water treatment. Surface water treatment should result in no net increase.

### NEST Study

2004

The New Economic Strategy Triangle (NEST) Study concluded the highest and best use for the properties identified and evaluated near Sea-Tac airport is product-oriented uses that include manufacturing, logistics, value-added assembly, distribution, and warehousing. The NERA was included as one of the study areas.

In terms of redevelopment, the greatest long-term benefit is the off-airport market (users that benefit from close proximity to airports), while the general industrial market offers the opportunity for immediate benefits. The NEST Study also concluded that the best strategy is to accommodate the general industrial market in the near-term, while remaining flexible for the needs of off-airport users in the long-term. The NEST Study divided the Burien's Northeast Redevelopment Area (NERA) into five distinct areas based upon similar conditions in terms of property ownership, feasibility of property acquisition, and the degree of regulation necessary. These five areas combined are referred to as the Northeast Special Planning Area (NESPA). It was determined property acquisition and development was not feasible for two of the areas, so the analysis focused on the three areas nearest Sea-Tac Airport. The market analysis for each of the three feasible areas identified building sizes, lot coverage,

grading, and other site design elements for conversion to industrial uses.

The five areas within the NEST Study NESPA translate to the Subareas defined in the adopted Comprehensive Plan map as follows:

- Subarea A: NESPA area 5
- Subarea B: NESPA area 1, 2, and 4
- Subarea C: NESPA area 3

Figure 6: NEST Study Area Map



However, the boundary between NESPA areas 2 and 5 is different than the Burien Comprehensive Plan boundary between subareas A and B.

The NESPA boundaries follow the FAA boundary for the Approach Transition Zone (ATZ), while the City of Burien SPA 4 boundary follows parcel boundaries. A small portion of SPA 4 subarea A encroaches into the ATZ.

### NERA Planned Action EIS 2002-2003

The Final Supplemental Environmental Impact Statement for the Northeast Special Planning Area (SEIS) analyzes three land use intensity and location alternatives. Alternative 1, includes the entire study area. Alternative 2 includes the area affected by the airport overlay zone. Alternative 3 proposes no action. The SEIS then evaluates each alternative and identifies the effects and impacts on earth, water, land, energy, land use, transportation, housing, economics, utilities, noise and glare. The SEIS identified Alternative 1 as the preferred alternative.

14.05.060 Planned Actions of the Burien Municipal Code serves to expedite the permit review process for projects within Special

Planning Area 4. To qualify as a planned action several requirements listed in the ordinance must be met. The development must not be deemed an essential public facility and must be consistent with SPA 4 Comprehensive Plan policies and SPA 4 zoning regulations. The environmental impact associated with the proposed use must have been addressed in the SEIS. Lastly, the proposal must not exceed development thresholds established in the SEIS.

### FAA Regulations

The Federal Aviation Administration (FAA) has a number of regulations associated with the path of aircraft coming in and out of the airport. These regulations are in place to ensure safety and compatibility of land uses. The following FAA zones are present in the NERA. Please refer to Exhibit 3 in Section VI for a map of the FAA regulations.

- ATZ:** Approach Transition Zone
- RPZ:** Runway Protection Zone
- CAA:** Controlled Activity Area
- XOFA:** Extended Object Free Area
- XXOFA:** Double Extended Object Free Area

A small amount of the NERA lies within the Runway Protection Zone (RPZ). In the RPZ, no structures are permitted, but parking and passive recreation may be allowed in the Controlled Activity Area (CAA) of the RPZ. Per agreements in place with the FAA, the Port of Seattle has the ability purchase and develop parcels (#) located in the eastern portion of the NERA to airport compatible land uses. Although development on parcels (#) in the Double Extended Object Free Area (XXOFA) in the Approach Transition Zone, on the Northern end of the NERA may only be developed with infrastructure such as roads and stormwater, parking and passive recreation, no structures. Additionally, parcels (#), located in the XXOFA are also limited to parking or infrastructure uses. The regulations of these properties is based on the location of the parcel and what type of funds were used to purchase this property. For example, more stringent regulations are in place for future development of land purchased with federal money. Please refer to Exhibit 3: Aviation Constraints Map in Section VIII.

*Regional FAA policies require that land uses in the ATZ of the proposed third runway meet the following criteria:*

- *Be an aeronautical use or provide a noise buffer*
- *Be compatible with airport operations*
- *Not attract wildlife*
- *Not interfere with navigational aids*

*Taken from EIS*

## **IV. Market Analysis**

### **Introduction & Scope**

This market assessment presents market conditions for four general land use categories—industrial, office, retail and residential—that may be used to inform financial modeling in support of alternative redevelopment strategies developed by the consultant team in conjunction with the City of Burien and the Port of Seattle. New residential uses are not contemplated for NERA, but an understanding of the area’s residential market is needed to inform economic development strategies that may seek to encourage non-residential uses on land that is currently in residential use.

### **Summary & Key Findings**

While this assessment was not intended as a highest-and-best use analysis for the NERA, the information gained in the process of investigating market conditions can help to identify opportunities for the NERA and be used alongside public policy objectives to frame alternative economic development strategies.

Listed below are key findings from research of each of the identified land use categories:

#### **Industrial**

- Regional fundamentals for industrial/distribution are strong .
- The NERA is well positioned to compete with existing and proposed off-airport industrial space because of its access to Highway 509 and 518, very close proximity to the airport in general and to the on-airport industrial space at the north end of the airport.
  - Industrial land near the airport is poised to experience continued

demand through regional cargo trade.

- Burien could take advantage of the trend in industrial users moving south from the Duwamish Industrial Center in Seattle.

#### **Office**

- Burien has experienced little new office construction as a secondary suburban office hub and represents a small portion of regional office supply.
- Current Burien office stock is generally comprised of low-rise Class B space for small users.
- Burien contains a node of medical office space near the Highline Medical Center.
- The NERA could support professional offices, medical office and other office uses that are not very location-sensitive, but the amount of existing available office space in the market suggests that a professional/medical office complex in NERA would have to differentiate itself from existing product to be viable.
- The site’s size and location near the airport may make it desirable for a larger build-to-suit project for a corporate user seeking proximity to the airport.

#### **Retail**

- The regional retail market has grown very quickly and is likely oversupplied given the contraction in consumer spending and planned slowdowns in expansions and in many cases, store closures, by national retailers.
- With the exception of car dealerships, Burien does not have many retailers that draw from outside the local trade area; regional retail opportunities are limited because Burien, and the NERA itself, are within the trade area of Southcenter Mall and regional retailers in Tukwila.
- While the retail vacancy rate in Burien is low, the area has experienced negative absorption over the past year.

- Redevelopment projects within downtown are seeking to re-format the Burien retail experience.
  - Most of the NERA is not ideal for general or large-format retail given the lack of visibility from major arterials. That said, should large contiguities of land be assembled, the area could be viable for large-format retail given the seeming lack of large, appropriately zoned sites in the trade area.
  - The Lora Lake triangle presents much more favorable conditions for retail, and presents an opportunity for large-format retail given the size of the land assemblage south of Highway 518.

#### Residential

- The regional residential market is more stable than many others in the nation but is weak due to a contraction of credit, the expansion of which in previous years had fueled rapid price escalations.
- In the short-term, lower home prices and a lack of credit for developers will likely limit new supply.
  - Further softening of the housing market could aid redevelopment of existing residential land to non-residential uses.
  - Assemblage of small parcels would be critical to facilitating a transition to non-residential uses on existing residential land.

Please refer to Technical Appendix C for the complete Market Analysis Report.

## V. Case Study Research

The following case studies are intended to provide a brief example of present, existing conditions near large, urban airports. Case Studies include Boise, Idaho; Chicago, Illinois; and Portland, Oregon. These three case studies were chosen because of their representation of three different schemes for airport adjacent land use. In Boise, office, light manufacturing, and wholesale warehousing have begun to thrive. In fact, Boise has recently developed standards to limit office construction preserving industrial land for other uses. In Chicago, instead of redeveloping the residential areas surrounding Midway Airport, the City has established a comprehensive residential sound insulation program for every residence within the 65 Ldn isoline. In Portland, airport supportive land uses encircle the airport and recently added a Port owned retail center. Each of the case studies

## Case Study One: Boise

### Zoning

Between 2000 and 2006, Boise added more than 1.6 million square feet of office, commercial, and industrial space in the Airport Planning Area. The Airport Influence Area Overlay District requires land use in the planning area to be compatible with airport operation. Within the Airport Planning Area, industrial zoning controls much of the development, with land immediately adjacent to the terminal zoned commercial. The Airport Planning Area also contains a large amount of zoned open space.

Figure 7: Boise Aerial



Boise City relies on a mixture of zoned requirements and comprehensive plan policies to carry out development regulations. The comprehensive plan policies protect the Airport Planning Area from the encroachment of residential uses and for the encouragement of light manufacturing, office, agriculture, low-intensity recreation, and commercial uses associated with air travel. The majority of industrial land is zoned Limited Industrial M-1, which is intended to accommodate light manufacturing and warehousing. The regulations of Title 12 of the Boise Municipal Code supersede the height requirements of the zone districts for land near the airport. Title 12 of the Boise Municipal Code sets maximum tree and building heights in the Runway Protection Zone, Approach Transition Zone, Noise Transition Zone, and other runway associated zones based upon the distance of the development from the end of the runway.

For example, in the Approach Transition Zone (ATZ), one foot of height is gained for each seven feet of distance from the runway. Title 12 also supersedes use standards; chiefly, for industrial uses in the Noise Transition Zone, minimum required open space is 50% of the parcel, street frontage must exceed 100 feet, and minimum lot size is set at 15,000 sf.

### Existing Land Use

The Airport Planning Area's land use designation is Airport. The land use is comprised largely of warehousing and light industrial users that are benefited by close proximity to the airport. Previous provisions allowed office uses to intensify near the airport. To preserve industrial lands and maintain office components to industrial uses, the City of Boise created a provision allowing a maximum of 25 percent office within each structure. In addition to warehousing, light industrial uses, and office uses, the airport area serves several large users and property owners. The Idaho Air National Guard and the National Interagency Fire Center are both located near the airport. The NIFC and the United States Forest Service use close proximity to Boise Airport to coordinate and conduct wild land firefighting. The Bureau of Land Management, Idaho Air National Guard, National Interagency Fire Center (NIFC), Boise City, and the Boise Airport are the major property owners in the Airport Planning Area.

Figure 8: Boise Zoning Map



## Case Study Two: Chicago

### Zoning

Midway International Airport covers a square mile near downtown Chicago. The square mile extent is surrounded by residential and commercial uses. In 1996, the City of Chicago began a comprehensive residential sound mitigation program to insulate residences within the 65 Ldn contour.

Figure 9: Chicago Zoning Map

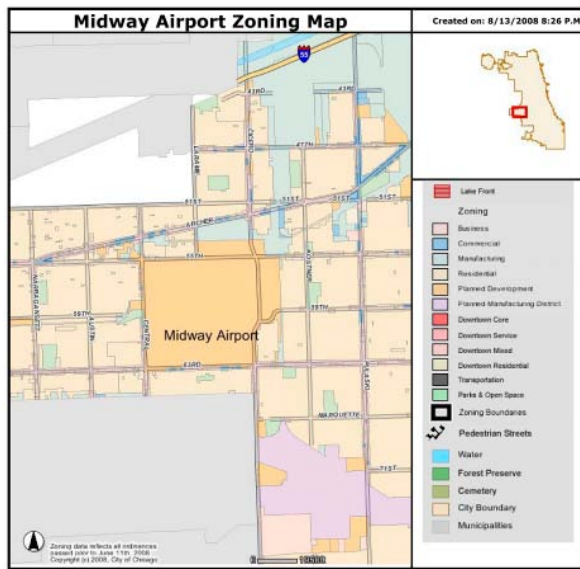
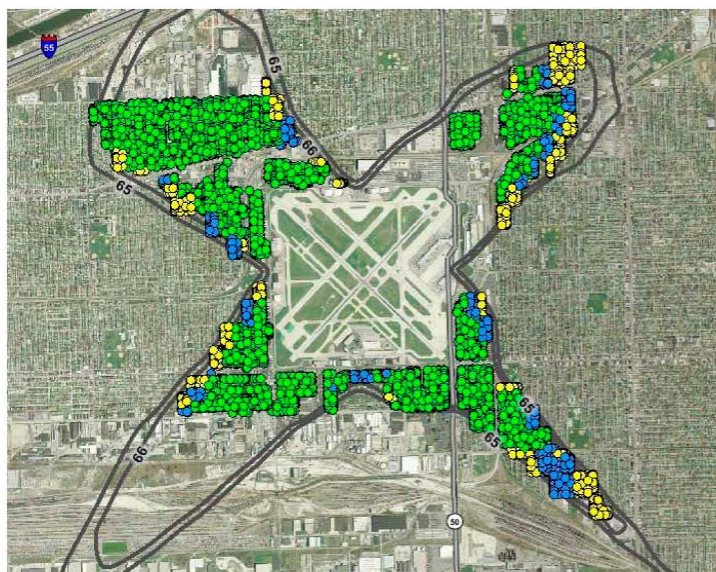


Figure 10: Midway Insulation Map



The Airport Insulation Map demonstrates the impact of this program since 1996 with the last of the residences slated for insulation in 2008. As shown in the Midway Airport Zoning Map most of the area surrounding the airport is zoned residential with manufacturing to the North of the airport. The industrial area to the South of the airport lies outside the City of Chicago.

Figure 11: Midway Aerial



### Existing Land Use

With single family and multi-family residential

Midway International Airport  
Residential Sound Insulation Program  
City of Chicago  
Richard M. Daley  
Mayor

Department of Aviation  
Richard L. Rodriguez  
Commissioner

Legend  
Address Search Location  
Properties-Midway  
This home has been sound insulated  
2007 Program Year  
2008 Program Year  
2004 Noise Contour



and commercial uses immediately adjacent to Midway International, the character of the existing land use is that of a neighborhood. The neighborhood scale is also evident in the rectilinear street grid based on blocks 640 feet by 300 feet. As the airport dates back to the 1920s, compatibility wasn't achieved between the airport and surrounding land uses.

### Case Study Three: Portland

#### Zoning

The Portland International Airport is located along the Northern edge of the City in an advantageous position against the Columbia River. As such, the airport only impacts land use on three sides. Areas near the Portland International Airport are zoned EG or IG. General employment zones provide for mixed employment opportunities that focus on

restrictions to the base zone for properties near the airport. The (x) overlay limits requires noise insulation and restricts new residential construction based upon noise contours. No new residential uses are allowed within noise contours of Ldn 68 or greater and new residential uses within noise contours Ldn 65 to 68 are required to dedicate a noise easement.

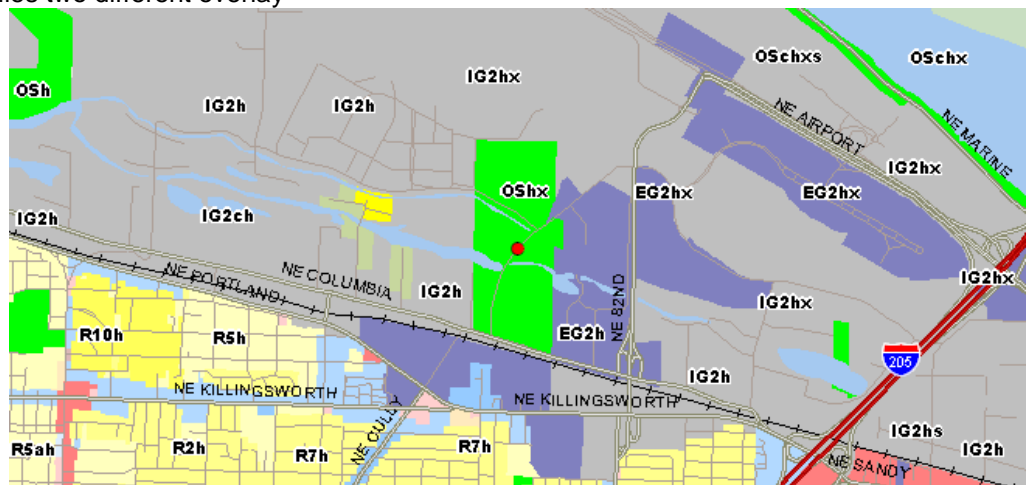


#### Existing Land Use

Lands located near the airport are characterized by large lot industrial, employment, and open space uses. This includes warehousing, light manufacturing, office, large format retail, and golf courses and other open space. The IC2hx zones include some off-airport uses such as a wholesale distribution center for airline caterer Sky Chefs Inc. The EC2hx zone includes airport supportive land uses and Cascade Station Retail Center to the east of the airport. The center is owned by the Port of Portland and includes IKEA, Best Buy, and several other retailers.

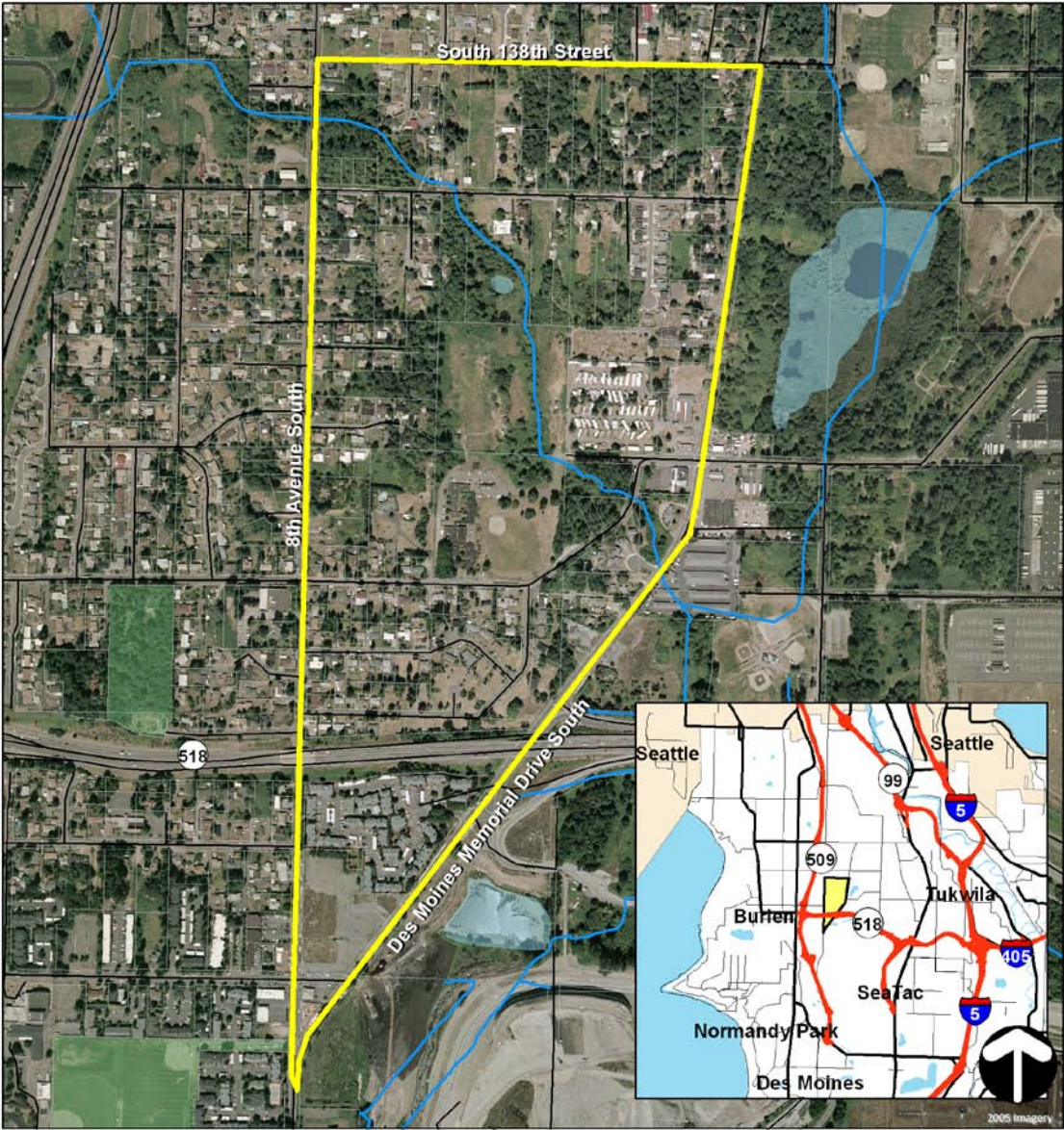
industrial and industrial-related uses. The 2 in EG2 and IG2 relates to the character of the zone. In 2 zones, the parcels are generally larger on an irregular block pattern. Usually, the building coverages range from low to medium and the buildings are setback from the street. The City of Portland applies two different overlay designations to properties near the airport. The first is the Aircraft Landing (h) overlay zone. The second is the Portland International Airport Noise Impact (x) overlay zone. The (h) overlay provides additional height

uses and Cascade Station Retail Center to the east of the airport. The center is owned by the Port of Portland and includes IKEA, Best Buy, and several other retailers.



# VI. Existing Conditions Maps

## Exhibit I: NERA Overview & Vicinity Map

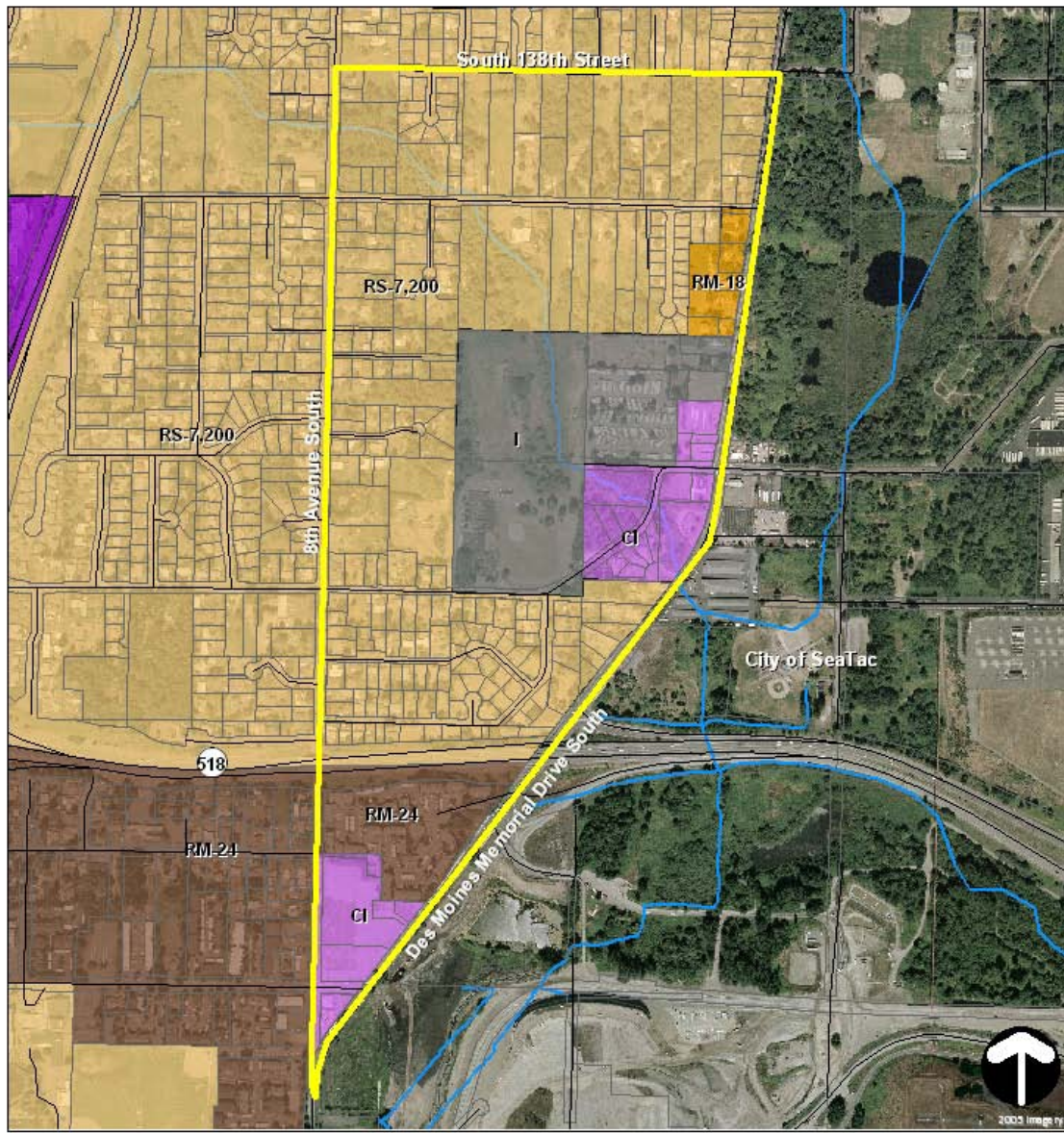


Disclaimer: The information shown in this map is assembled Geographic Information System data acquired from local government and private agencies. Otak cannot guarantee the accuracy of this data.

- |               |            |             |  |
|---------------|------------|-------------|--|
| <b>Legend</b> |            |             |  |
| NERA Boundary | Park       | Streets     |  |
| Parcels       | Water body | Watercourse |  |

0 250 500 Feet

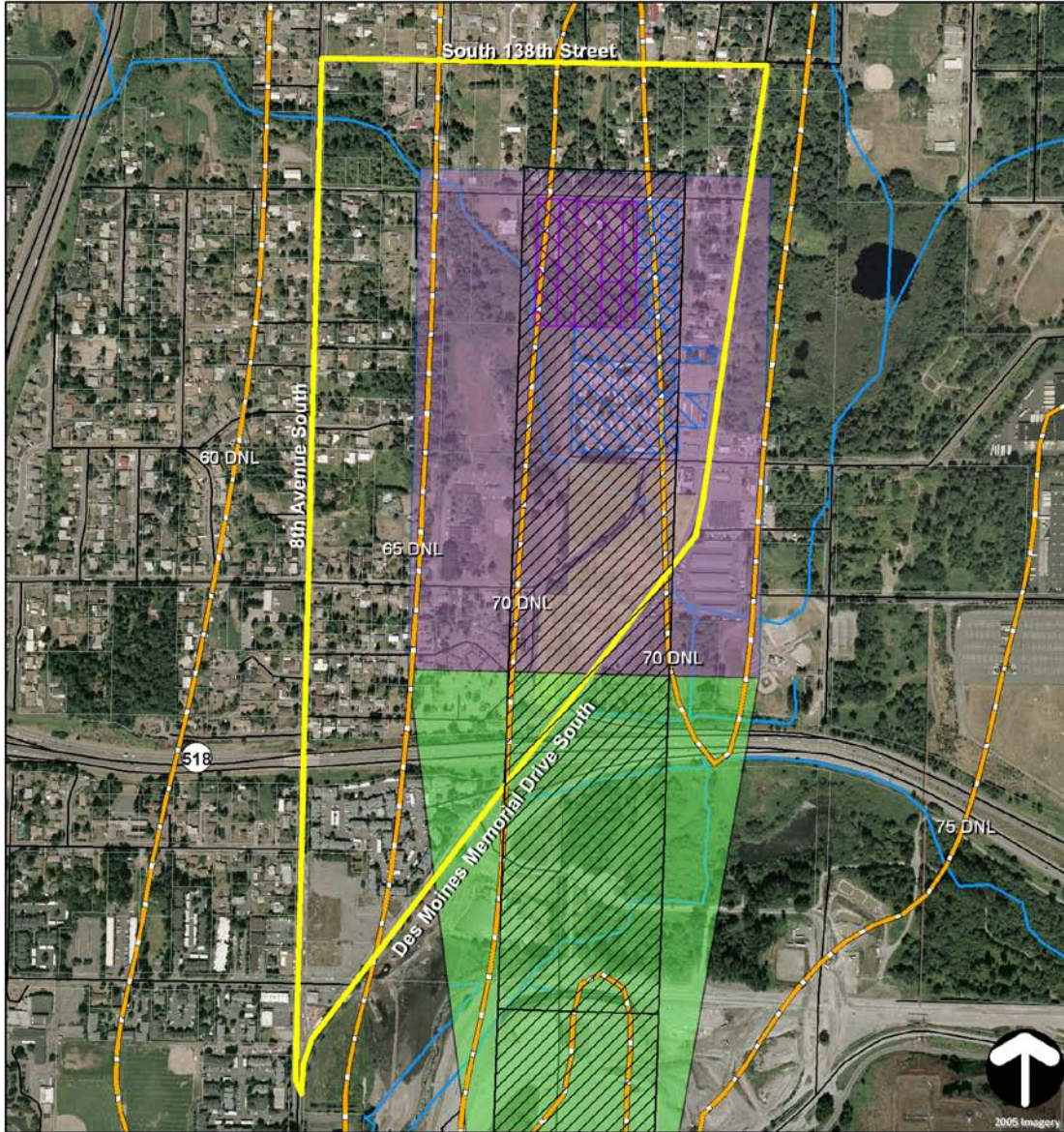
**Exhibit 2: NERA Zoning**



Disclaimer: The information shown in this map is assembled from Geographic Information System data acquired from local government and private agencies. Italic cannot guarantee the accuracy of this data.











**Exhibit 3: NERA Aviation Constraints**



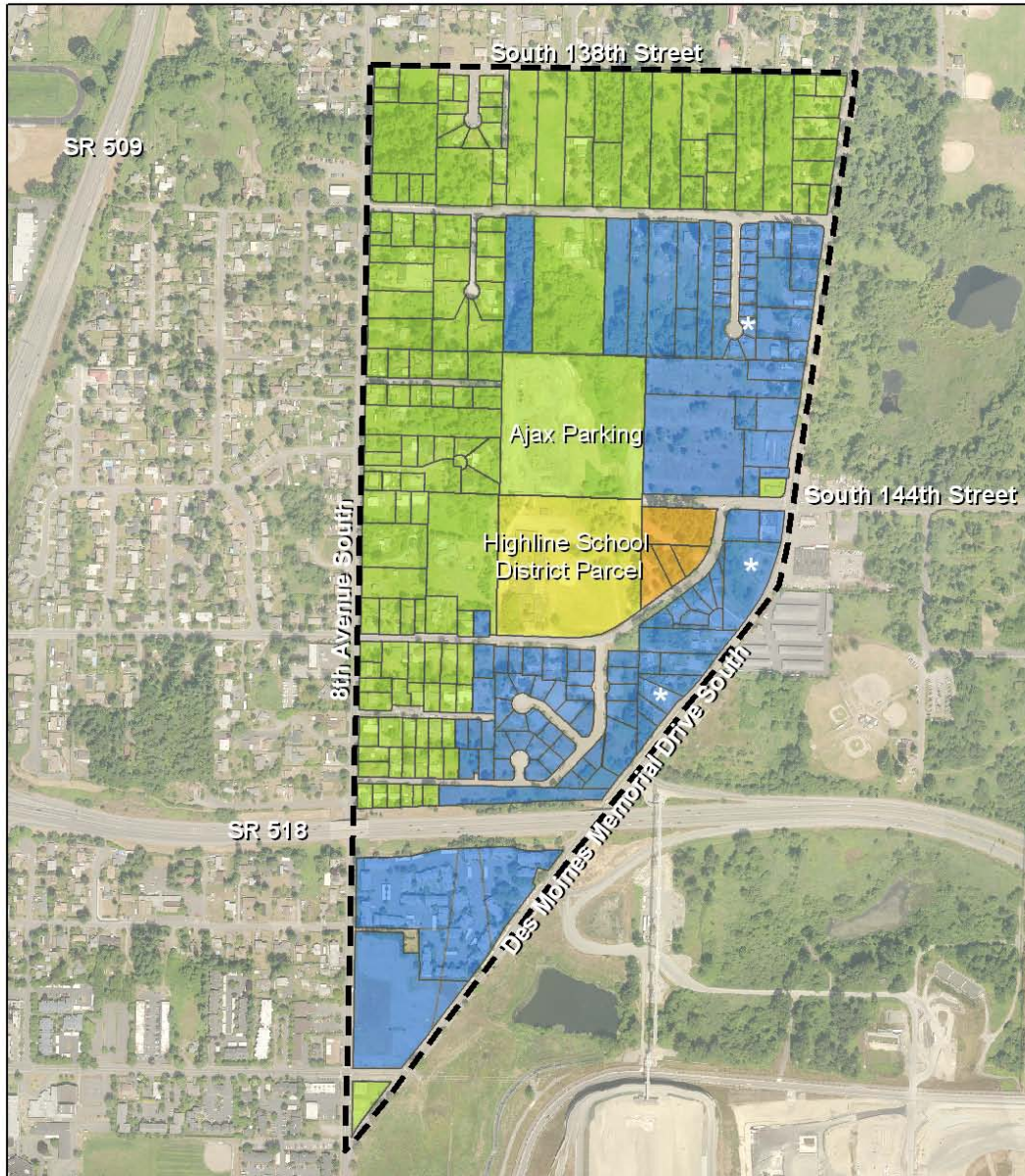
Disclaimer: The information shown in this map is assembled Geographic Information System data acquired from local government and private agencies. Otak cannot guarantee the accuracy of this data.

**Legend**

- |  |  |
|--|--|
|  NERA Boundary                  |  Double Extended Object Free Area (XXOFA) |
|  Approach Transition Zone (ATZ) |  XXOFA Airport Funds                      |
|  Runway Protection Zone (RPZ)   |  XXOFA Developable                        |
|  Decibel Level Contour          |  Non-Developable Land                     |








0 250 500 Feet

**Exhibit 4: NERA Property Ownership**

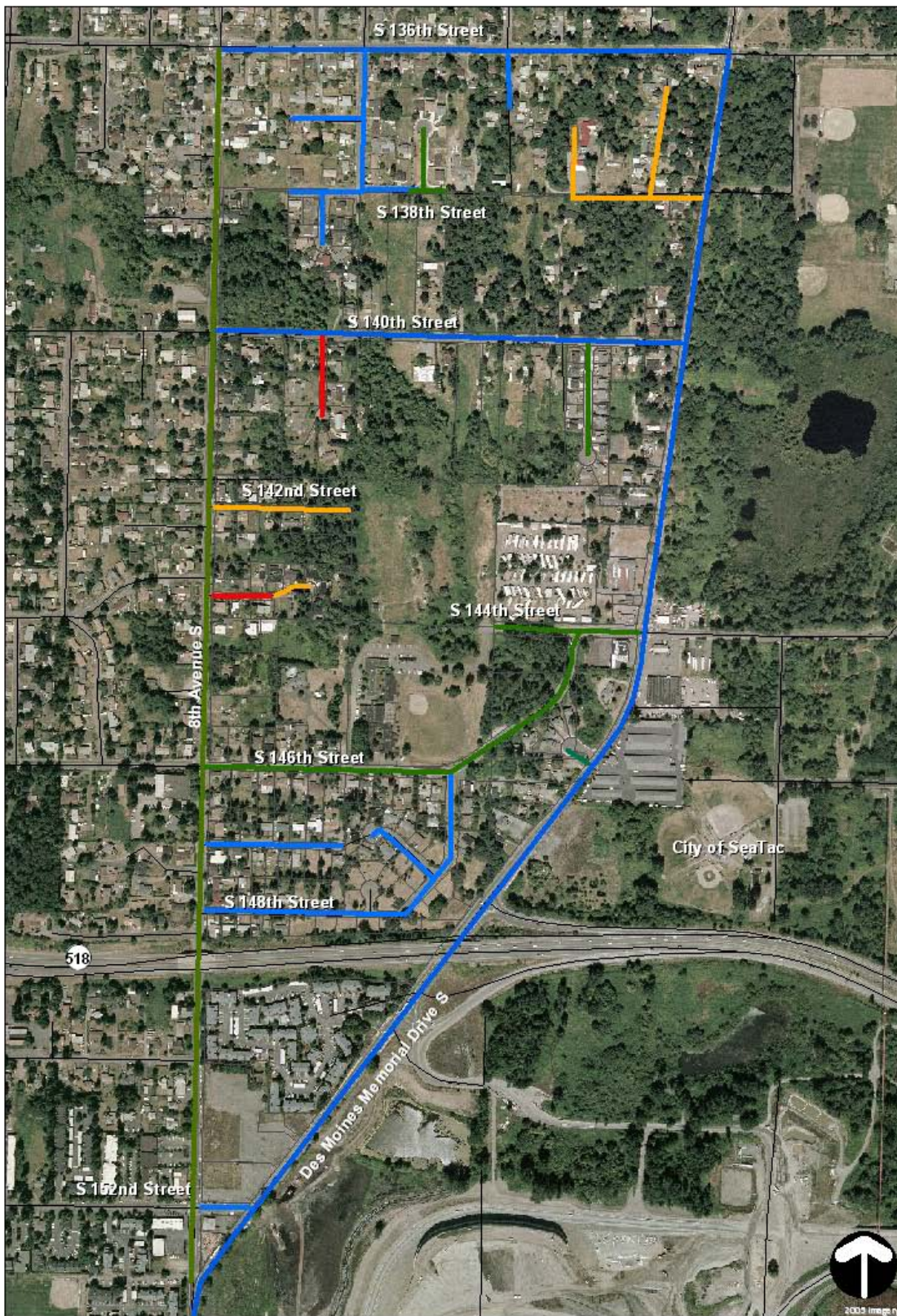


Disclaimer: The information shown in this map is assembled Geographic Information System data acquired from local government and private agencies. Otak cannot guarantee the accuracy of this data.

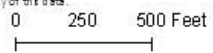
**Legend**

- |   |                  |   |                              |  |                                    |   |
|---|------------------|---|------------------------------|--|------------------------------------|---|
|  | NERA Boundary    |  | Port of Seattle Ownership    |  | City of Burien Ownership           |  |
|  | Private Property |  | Port of Seattle Plans to Buy |  | Highline School District Ownership |   |

**Exhibit 5: NERA Street Conditions**



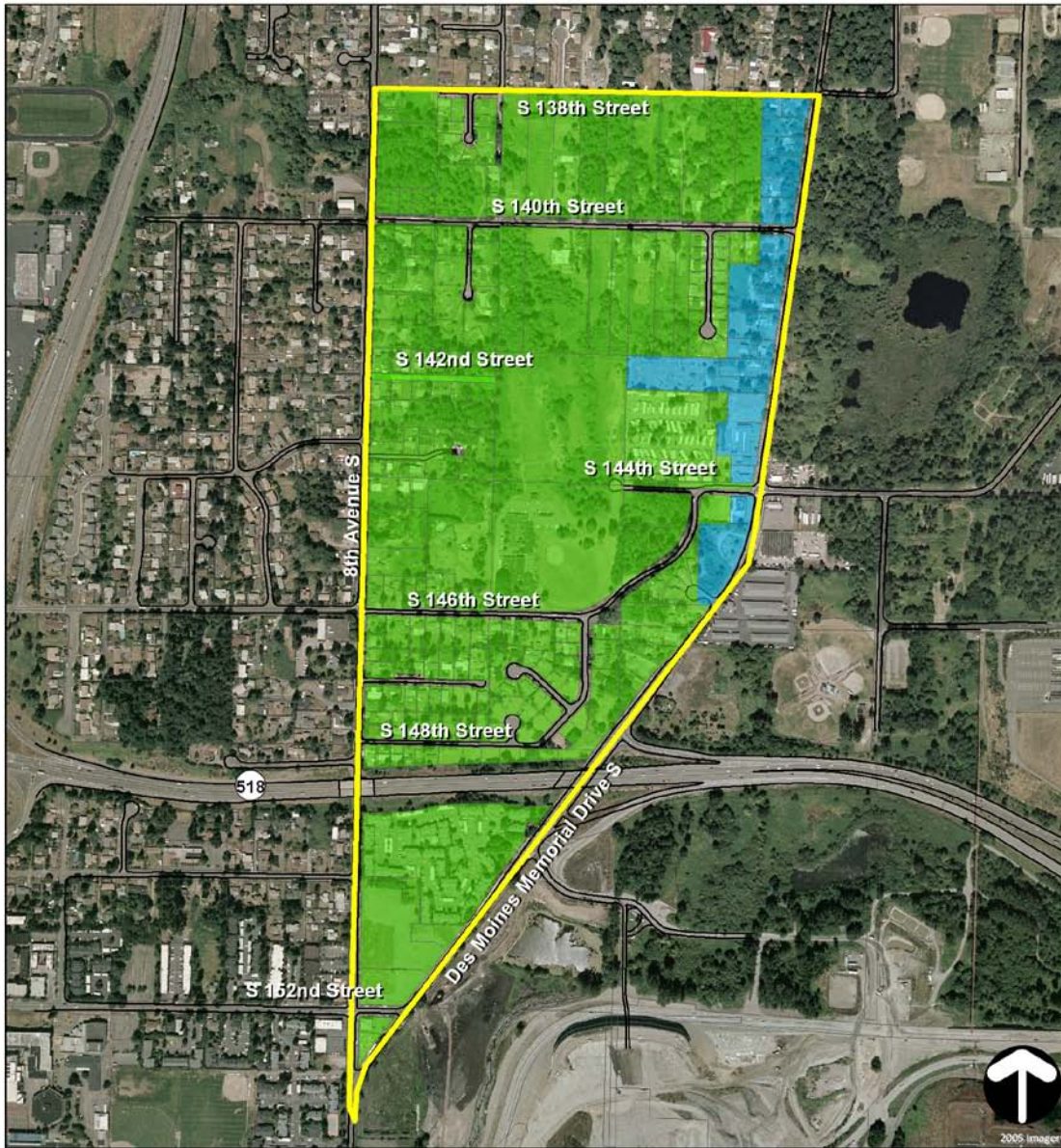
Disclaimer: The information shown in this map is assembled Geographic Information System data acquired from local government and private agencies. Otak cannot guarantee the accuracy of this data.



**Existing Street Conditions**

- |   |      |   |        |
|---|------|---|--------|
|  | Good |  | Poor   |
|  | Fair |  | Gravel |

**Exhibit 6: NERA Water District Jurisdiction**

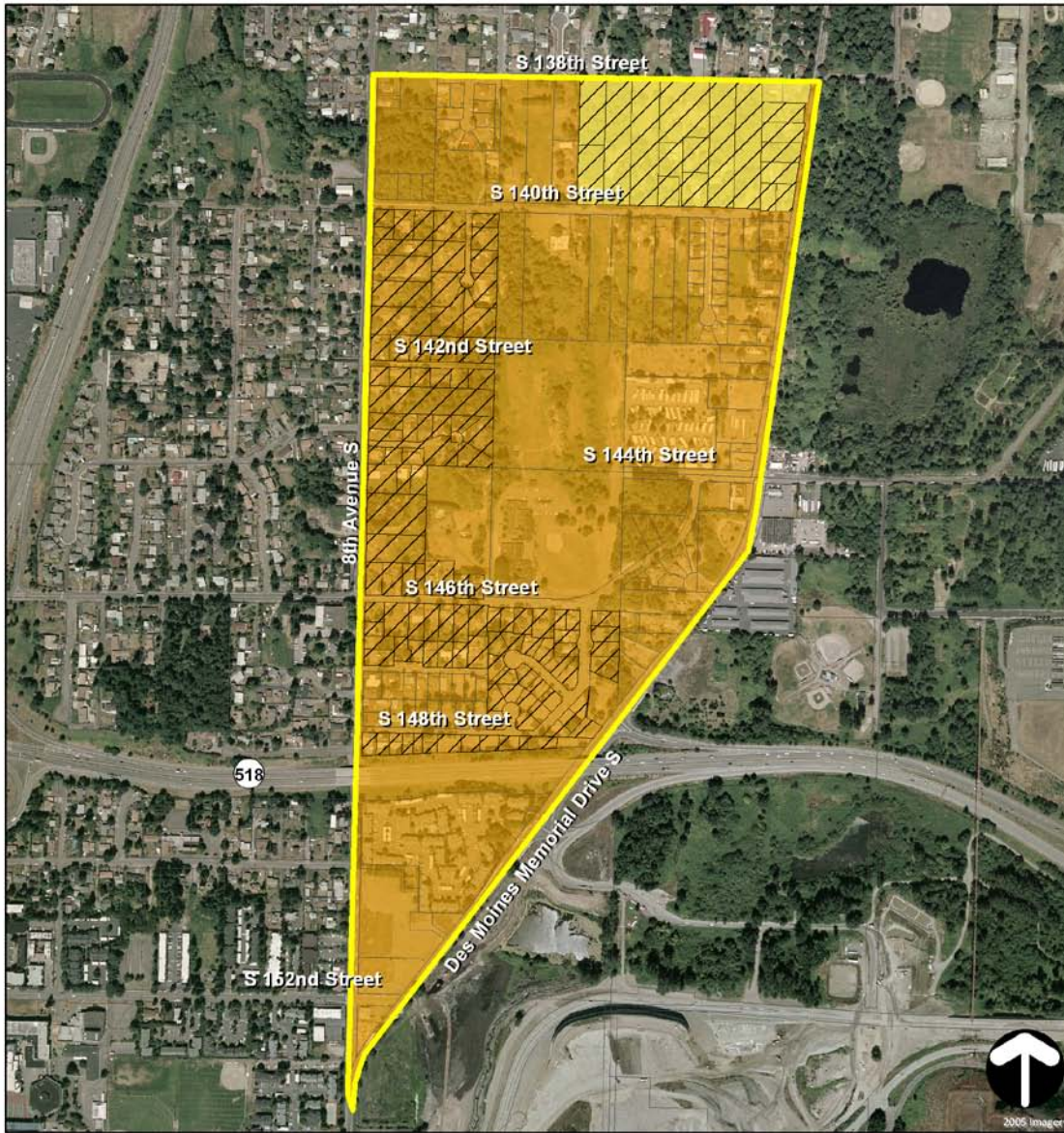


Disclaimer: The information shown in this map is assembled Geographic Information System data acquired from local government and private agencies. Utak cannot guarantee the accuracy of this data.

**Legend**

- NERA Boundary
- King County Water District #125
- King County Water District #20

**Exhibit 7: NERA Sewer District Jurisdiction**



Disclaimer: The information shown in this map is assembled Geographic Information System data acquired from local government and private agencies. Otak cannot guarantee the accuracy of this data.

0 250 500 Feet

**Legend**

- |   |                     |   |                                   |
|---|---------------------|---|-----------------------------------|
|  | NERA Boundary       |  | Valley View Sewer District        |
|  | No Sanitary Service |  | Southwest Suburban Sewer District |

**Exhibit 8: NERA Wetland Map  
(DRAFT)**



Disclaimer: The information shown in this map is assembled Geographic Information System data acquired from local government and private agencies. Otak cannot guarantee the accuracy of this data.

**Legend**

- |  |                    |  |                     |
|--|--------------------|--|---------------------|
|  | NERA Boundary      |  | 50 ft Stream Buffer |
|  | Wetland Buffer     |  | Miller Creek        |
|  | Delineated Wetland |  |                     |

**VII. Appendix** (under separate cover)

**Appendix A - Infrastructure Technical Memorandum**

**Appendix B—Critical Areas Study**

**Appendix C—Burien NERA Market Conditions Report**

## VIII. References

City of Burien, Northeast Special Planning Area, Final Supplemental Environmental Impact Statement (Final SEIS), Prepared by EDAW, Inc., Prepared for City of Burien, November 2002.

King County iMap, King County GIS Center, 201 South Jackson Street, Suite 706, Seattle, WA 98104, [http://www.metrokc.gov/gis/Mappointal/iMAP\\_main.htm](http://www.metrokc.gov/gis/Mappointal/iMAP_main.htm)

Southwest Suburban Sewer District Map, CHS Engineers, LLC, October 2007

Southwest Suburban Sewer District Web Page, <http://www.swssd.com/>

Valley View Sewer District Web Page, <http://www.valvue.com/home.asp>

King County Water District No. 20 Web Page, <http://www.kc wd20.com/>

King County Water District No. 125 Web Page, <http://www.waterdistrict125.com/>

Seattle Public Utilities Web Page, <http://www.seattle.gov/util/services/>

Field Visit, July 30, 2008.

City of Burien GIS Data, year.

*The Burien Plan*, Comprehensive Plan for the City of Burien, Washington, November 2006.

Highline Choice Academy Web Page, <http://www.hsd401.org/ChoiceAcademy/History.htm>

City of Burien Northeast Redevelopment Area (NERA) Ownership Map, dated December 2007.

*King County, Water & Land Resources Division, Drinking Water Supply Website:*  
<http://www.kingcounty.gov/sites/environment/waterandland/drinking-water/sources.aspx>

Microsoft Live Search Maps, (used for aerial photography & mapping), last accessed yesterday, **August 14, 2008**, <http://maps.live.com/>

Google Maps, (used for aerial photography & mapping), last accessed yesterday, **August 14, 2008**, <http://maps.google.com/>

*Soil Survey, King County, Washington, Series 1938, No.31, Issued Septemeber 1952, USDA.*

GVA Kidder Mathews, NERA Real Estate Report, 2006.

EDAW, Inc., Northeast Special Planning Area EIS, 2002.

Central Puget Sound Economic Development District, NEST Study: Development Properties around Sea-Tac Airport, 2004.

Summerhays, Diane, ATZ Land Acquisition in Burien, 2005.

J.A. Brennan and Associates & Pomegranate Center, City of Burien: City of Burien Pedestrian and Bicycle Facilities, 2004. <[http://www.burienwa.gov/publicworks/bike\\_ped.htm](http://www.burienwa.gov/publicworks/bike_ped.htm)>

Washington Department of Transportation, Miller and Walker Creek Basin Plan, 2006.

Burien Municipal Code, 14.05.060 Planned Action Ordinance, 2005.

City of Burien, Comprehensive Plan: Policies relating to the Northeast Redevelopment Area/Special Planning Area 4, 2007.

Burien Municipal Code, 19.48, Special Planning Area 4 Design Standards, 2007.

Burien Municipal Code, Section 19.15.070, Special Planning Area 4 Zoning regulations (SPA-4), 2007.

Washington State Department of Transportation, Airport and Compatible Land Use, Volume 1, 1999.

City of Calgary, Plan it | Calgary: Integrated Land Use and Mobility Plan, 2007.

King County iMap, King County GIS Center, 201 South Jackson Street, Suite 706, Seattle, WA 98104, [http://www.metrokc.gov/gis/Mapportal/iMAP\\_main.htm](http://www.metrokc.gov/gis/Mapportal/iMAP_main.htm)

Southwest Suburban Sewer District Map, CHS Engineers, LLC, October 2007

Field Visit, July 30, 2008.

City of Burien GIS Data, 2005, 2007.

*The Burien Plan*, Comprehensive Plan for the City of Burien, Washington, November 2006.

Highline Choice Academy Web Page, <http://www.hsd401.org/ChoiceAcademy/History.htm>

City of Burien Northeast Redevelopment Area (NERA) Ownership Map, dated December 2007.

*King County, Water & Land Resources Division, Drinking Water Supply Website:*  
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Microsoft Live Search Maps, (used for aerial photography & mapping), last accessed, **August 14, 2008**, <http://maps.live.com/>

Google Maps, (used for aerial photography & mapping), last accessed yesterday, **August 14, 2008**, <http://maps.google.com/>

Soil Survey, King County, Washington, Series 1938, No.31, Issued Septemeber 1952, USDA.

- Brinson, M. M. 1993. *A hydrogeomorphic classification for wetlands*. [Technical Report WRP-DE-4](#), U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS. NTIS No. AD A270 053.
- Burien. 2008a. City of Burien Municipal Code—Chapter 19.40 Critical Areas. Obtained from website: <http://www.ci.burien.wa.us/commdvlpmnt/zoning/zoningcodeindex.htm>
- Burien. 2008b. City of Burien Critical Areas Map. Obtained from website: <http://www.ci.burien.wa.us/commdvlpmnt/zoning/criticalmap%2010-03.pdf>
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. U.S. Fish and Wildlife Service Publication FWS/OBS-79/31, Washington, D.C.
- Hruby, T. 2004. *Washington State Wetland Rating System for Western Washington*. Washington State Department of Ecology Publication No. 04-06-025. Olympia, Washington.
- Hruby, T., T. Granger and E. Teachout. 1999. *Methods for Assessing Wetlands Functions. Volume I: Riverine and Depressional Wetlands in the Lowlands of Western Washington, Parts 1 and 2*. Washington State Department of Ecology Publication #99-115, Washington State Department of Ecology, Olympia, Washington.
- King County. 2006. *Miller and Walker Creek Basin Plan*. Prepared by King County Department of Natural Resources, City of Burien, City of Normandy Park, City of SeaTac, Port of Seattle, and Washington Department of Transportation.
- Olson, P. and E. Stockdale. 2008. *Determining the Ordinary High Water Mark on Streams in Washington State*. Washington State Department of Ecology, Shorelands & Environmental Assistance Program, Lacey, WA. Ecology Publication # 08-06-001.
- Washington State Department of Ecology. 1997. *Washington State Wetlands Identification and Delineation Manual*. Ecology Publication #96-94, Washington State Department of Ecology, Olympia, Washington.
- Washington State Department of Ecology. 2008. *Focus Sheet: Shorelands and Environmental Assistance, Using the Wetland Rating System in Compensatory Mitigation* Ecology Publication #08-06-009, Washington State Department of Ecology, Olympia, Washington.
- Williams, R. Walter, Richard M. Laramie and James J. Ames. 1975. *A Catalog of Washington Streams and Salmon Utilization. Volume 1, Puget Sound Region*. Washington Department of Fisheries.