

CITY OF SEATAC

**DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT
17900 INTERNATIONAL BLVD., SUITE 401, SEATAC, WA 98188-4236
241-1893/TDD 241-0091
NOMINAL LEAD AGENCY**

**STAFF REPORT AND RECOMMENDATION ISSUED JOINTLY BY THE CITY OF
SEATAC DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT AND
THE CITY OF DES MOINES DEPARTMENT OF COMMUNITY DEVELOPMENT**

FILE NUMBER: APL02-00002 **ACTION:** Appeal of SEPA Determination
issued jointly by the City of
SeaTac and the City of Des
Moines

APPELLANT: King County Water District #54
922 South 219th St.
Des Moines, WA 98198-6344

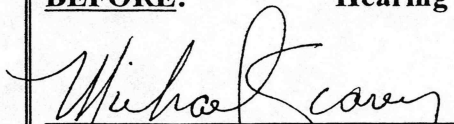
**PROPERTY
OWNER:** Port of Seattle, City of SeaTac, City of Des Moines

**PROPERTY
LOCATION:** Tyee Golf Course, Des Moines Creek Park

SUBJECT: Des Moines Creek Basin Restoration Projects

HEARING DATE: ^{TUURS} October 10, 2002 at 6:00 p.m.

BEFORE: Hearing Examiner


Michael Scarey, Senior Planner

DATE: September 26, 2002

ATTACHMENTS:

1. King County Water District #54 Appeal Letter dated July 29th, 2002
2. Supplemental Comment Letter From Water District 54, dated August 12, 2002.
3. SEPA Checklist for the Des Moines Creek Restoration Projects
4. SEPA Staff Evaluation for the Des Moines Creek Restoration Projects
5. SEPA Determination for the Des Moines Creek Restoration Projects, Issued June 28, 2002
6. Vicinity Map
7. Des Moines Creek Basin Plan DNS (File # SEP0009-97)
8. Certificate of Zoning Compliance, City of SeaTac File # CZC00-0001
9. Des Moines Creek Basin - Capital Improvement Projects Map
10. Des Moines Creek Basin Plan (Available by request)
11. Des Moines Creek Regional Capital Improvement Project: Preliminary Design Report Alternative Analysis and Addendum (Available by request)



CITY OF SEATAC – CITY OF DES MOINES



PLANNING AND COMMUNITY DEVELOPMENT
RECOMMENDATION

DATE: September 26, 2002 **FILE NO.** APL02-00002

APPELLANT: King County Water District #54

APPEAL: The appellant is appealing the City's SEPA determination for the Des Moines Creek Basin Restoration Projects.

LOCATION: Tyee Golf Course, Des Moines Creek Park

EXISTING ZONE CLASSIFICATION:
SeaTac: Aviation Operations, Industrial, and Park
Des Moines: Suburban Estates-Residential

COMPREHENSIVE PLAN DESIGNATION:
SeaTac: Airport, Industrial, and Park
Des Moines: Parks/Open Space and Public Facility

WATER DISTRICT: Highline **FIRE DISTRICT:** SeaTac
SEWER DISTRICT: Midway **SCHOOL DISTRICT:** Highline

I. BACKGROUND:

A. History/Background:

The Des Moines Creek Basin Restoration Projects constitute the implementation phase of an ongoing inter-jurisdictional effort to reduce storm-water damage and provide long-term protection to the water quality and biological community of Des Moines Creek. Parties to the inter-jurisdictional effort include the City of SeaTac, the City of Des Moines, the Port of Seattle, King County and the Washington State Department of Transportation.

The City of SeaTac has taken two previous actions with respect to the Des Moines Creek Basin Restoration Projects. On 6/28/97 the City issued a Determination of Non-Significance for the programmatic Des Moines Creek Basin Plan (File # SEP 0009-97, Attachment 7), affirming that the overall suite of projects would not have a detrimental impact on the environment. A public meeting was held as part this process. There were no appeals or substantive negative comments received on the proposal during the public process leading to the issuance of the Determination of Non-Significance.

On 3/28/00 the City of SeaTac granted by resolution a Public Agency and Utility Exemption (File # CZC00-0001), based on a Hearing Examiner Recommendation for approval, issued 2/23/00 (Attachment 8) for the projects that, due to the nature of stream restoration and surface water management projects, occur in and immediately adjacent to regulated sensitive areas. A public hearing was held as part of this process. There were no appeals or substantive negative

comments received on the proposal during the public process leading to the issuance of the Public Agency and Utility Exemption. In fact, letters of support were filed by WSDOT, the Port of Seattle, the Department of Ecology, and the City of Des Moines (see supporting materials contained in Attachment 8)

During the first quarter of 2002, the City of SeaTac and the City of Des Moines negotiated a Memorandum of Understanding (MOU) to formalize Joint Lead Agency status for the project-specific SEPA review for the implementation phase of the Basin Plan effort. This integrated suite of projects is known collectively as the Des Moines Creek Basin Restoration Projects. Under the terms of the MOU, the City of SeaTac is designated nominal lead and has responsibility for issuance of the SEPA determination and any necessary administrative actions needed to complete the SEPA review, such as this appeal.

The Cities received the application for a SEPA determination covering the project-specific actions needed to implement the Des Moines Creek Restoration Projects and, after discussions with the City of Des Moines, issued a joint SEPA Mitigated Determination of Nonsignificance (MDNS) on June 28th, 2002 (File # SEP02-00006, Attachment 5). A public meeting was held on July 17th, 2002 and the extended comment period expired on July 19th, 2002. The appeal period expired on July 29th, 2002. The appeal by Mr. Carl Mealy, representing Water District 54, was filed at the close of business on July 29th, 2002 (Attachment 1). An appellant intending to offer additional written documentation in support of its position must file any such material within 14 days of filing the initial appeal. A supplemental letter was submitted by the appellant on August 12, 2002 (Attachment 2), within the allowed time frame.

II. FINDINGS

Under Section 13.30.155 of the SeaTac Municipal Code (SMC), the appellant shall address specific criteria that a SEPA determination was issued in error. Staff will respond to the appellant's argument based on the SEPA criteria.

13.30.155 A – All appeals shall be in writing and contain the following information.

A. The basis for the appellant's standing, including:

- 1. How the appellant's interests are arguably within the zone of interests protected by SEPA;**

Appellant Statement:

The appellant states that the proposal is within the well-head protection zone for Water District 54, and that the documentation fails to adequately address local hydrologic issues. The appellant states that it is solely reliant upon the Highline aquifer beneath the Des Moines Creek Basin as its supply source for water.

Staff Response:

The Cities acknowledge that the proposed projects lie in the outer edges of area shown as well-head protection zones on maps provided by the appellant as part of the appeal letter.

- 2. How the SEPA decision being appealed will cause the appellant injury-in-fact. If the alleged injury-in-fact has not already occurred, the appellant must set forth facts establishing the immediate, concrete, and specific future injury-in-fact that will occur to the appellant as a result of the SEPA determination under appeal.**

Appellant Statement:

The appeal documents state a concern for "protection of the longevity of this aquifer and preservation of the quality of water that the aquifer supplies," and imply that the proposal will negatively impact the aquifer since peak municipal use occurs during the same period (summer months) that flow augmentation would occur.

Staff Response:

The Cities agree that the long term health of the Des Moines Creek Watershed is of importance and has worked diligently with other jurisdictions in the area to provide this protection. The Cities disagree over the level of threat the proposed flow augmentation would pose to long-term groundwater resources. Several statistics presented in the appeal letter over-state the proposed consumption of water for flow augmentation by more than an order of magnitude. Information developed during Basin Plan preparation indicates that the proposed withdrawal for flow augmentation will not materially affect groundwater resources. Well capacity and water quality were tested and found to be adequate for flow augmentation purposes (Preliminary Design Report, pg 34; Attachment 11). Several existing studies of low flow augmentation possibilities in the area were investigated and showed that the flow augmentation was feasible (Preliminary Design Report, Appendix I). Studies have also identified wells within the area that have water rights that are not being exercised. Water rights issues were identified as a permitting requirement and the disputed nature of the right to withdraw water from the well proposed for use was acknowledged (Preliminary Design Report, pg 34; SEPA Checklist, pg 19; Attachment 3).

SEPA rules state "Before requiring mitigation measures, agencies shall consider whether local, state or federal requirements and enforcement would mitigate an identified significant impact" (WAC 197-11-660(1)(e)). As the applicants have applied to the Department of Ecology for a water right, the City believes that questions concerning quantity and allocation of the existing groundwater resource should be deferred to that arena.

RCW 43.21C.090 states "Decisions of governmental agency to be accorded substantial weight. In any action involving an attack on a determination by a governmental agency relative to the requirement or absence of the requirement, or the adequacy of a "detailed statement," the decision of the governmental agency

shall be accorded substantial weight." Previous programmatic SEPA review (Des Moines Creek Basin Plan (File # SEP 0009-97; Attachment 7), has already established that this is action would have a positive effect on the environment, and this project SEPA review has reaffirmed the positive environmental nature of the proposed actions.

The decision by the Cities to issue an MDNS will not result in unmitigated significant adverse impacts. Questions regarding the availability of water and possible impacts to other groundwater users in the area will be addressed through studies required as part of the Department of Ecology's water rights process. The applicant has applied for the appropriate permit. Requiring such studies in advance of the permit process and without the oversight of the Department of Ecology is inappropriate and potentially wasteful of public dollars.

Requiring additional studies at this time will not result in a greater level of environmental protection. No action is possible without a water right, and studies to be performed as part of the Department of Ecology's process would directly address the potential impacts of concern to the appellant. Studies performed prior to the permit process would have questionable legitimacy, would not be part of any public decision-making process, and would require expenditure of public funds for no apparent benefit.

B. The specific alleged errors in the SEPA decision being appealed;

Appellant Statement:

The appellant states that the proposed projects provide inadequate surface water retention.

Staff Response:

The Cities disagree with the statement that these projects provide inadequate retention of surface water. These projects would provide approximately 250 acre-feet of surface water retention within the basin that would not occur under any other proposal. This large volume of retention is proposed solely for the purpose of improving hydrology within the basin, and is provided as a remedy for hydrologic issues created by past clearing and development within the basin. No other feasible site is available within the basin that could provide such a significant volume of retention for stormwater, short of condemning and removing existing structures at an exorbitant financial and social cost.

Appellant Statement:

The appellant states that the proposed projects rely upon groundwater to provide artificial stream flow.

Staff Response:

The Cities disagree with the statement that these projects rely on groundwater to provide artificial stream flow. The two major projects involve enhancement of

*Drying out
his water
to Bypass
washed
either to pipe
Angel sand
or IWS Recharge
NO Recharge!*

natural flood storage in the Northwest Ponds and use of an existing pipe to create a high-flow bypass system, neither of which require groundwater. Groundwater use is proposed solely for the purpose of augmenting stream flow during extreme low flow events during dry periods, in order to keep a minimum stream flow sufficient to preserve aquatic life and maintain above ground flow in the stream channel. Pumping would occur when flows fall below 1 cubic foot per second at the gauge near S. 200th St. Flows would be sized to maintain a 1 cubic feet per second (cfs) flow in the stream at the S. 200th St. gauge. Projected flow augmentation volumes would generally be in the range of 0.1-0.5 cfs. Estimated annual pumping volumes for this purpose, based on gauging records for recent years, range between 4.5 and 17.5 million gallons. The Cities believe that this is a small volume relative to the groundwater resources of the area and that it is appropriate to utilize this water to support the original "water right" holders, the stream's biological community, during periods of extreme stress.

Appellant Statement:

The appellant states that the document fails to address the quantities of water retained by the project.

Staff Response:

The Cities disagree with the statement that the documents fail to address the quantities of water retained by the project. Documentation indicates that approximately 250 acre/feet of active storage volume would be created by the proposed projects.

Appellant Statement:

The appellant states that the document fails to address water rights.

Staff Response:

The Cities disagree with the statement that the documents fail to address water rights. The Basin Plan and the Preliminary Design Report acknowledge the need to obtain a legal water right to withdraw groundwater in order to augment instream flow. The proposal is to obtain a transfer of water right from the holder of an existing water right holder and use an existing well. The Des Moines Creek Basin Committee has subsequently applied for an independent water right due to the clouded nature of existing water rights in the vicinity of the flow augmentation proposal.

Appellant Statement:

The appellant questions whether other land use proposals in the basin were adequately considered during project design. The appellant states that viable options and land use practices exist for addressing the problems facing Des Moines Creek.

Staff Response:

The Cities investigated the question of whether other land use proposals were considered during project development and asserts that they were. The Des Moines Creek Basin Plan clearly considered both large projects (the 3rd Runway, SR 509

Extension, and the South Aviation Support Area) and cumulative development within the Cities during its analysis. A total of eight different future scenarios were considered, all resulting in similar outcomes for the stream.

The Cities disagree with the statement that viable options and land use practices exist for addressing stream problems. The Des Moines Creek Basin Plan, a state of the art watershed planning effort, investigated a number of programmatic and project alternatives for addressing stream problems covering a broad range of methods. The Basin Plan concluded that methods other than those proposed were either ineffective, exorbitantly expensive or too slow (50+ years) to address the issues currently facing the stream.

Appellant Statement:

The appellant suggests that restoration of the east fork of Des Moines Creek should have been included in project design.

Staff Response:

The Cities investigated the suggestion that the east fork of Des Moines Creek be included in project design and asserts that it was (Basin Plan, Implementation Alternatives: pg 5-5, Attachment 10). The East Fork is heavily modified and is contained within pipes except in the vicinity of Tyee Golf Course. Pipes pass under hotels and under International Boulevard before surfacing in a parking lot. Investigation by the Basin Plan found little benefit and great cost for any potential restoration efforts along the east fork and recommended a focus on relieving flooding and water quality protection and improvement in this area. Improvements to habitat in the East Fork also have the potential to increase wildlife hazards to aircraft operating from SeaTac International Airport, contrary to one of the primary design criteria for the Basin Planning effort, and must be carefully engineered.

Appellant Statement:

Local retention for later release to stream is (the) best practice.

Staff Response:

Long term storage was considered during Basin Plan development and discarded due to lack of an appropriate site, large cost for creating artificial structures sufficiently large, water quality concerns, maintenance and operational issues and difficulty in obtaining permits for this kind of project.

Appellant Statement:

Opportunities for water to perk must exist.

Staff Response:

Infiltration of flows was considered during basin planning analysis and found to be infeasible as a means for providing high flow protection in a basin with already existing high levels of impervious area. Infiltration on the scale needed to protect the Creek from high flows would need to provide storage volumes much larger than those

proposed by the Basin Restoration Projects, it would need to be able to infiltrate this volume of water during severe flooding and rainfall events, and it would need to be located in a manner that would allow stream flows to be routed there using gravity flow. No such site was identified. Existing regulations encourage infiltration where possible, and affect most development and redevelopment within the watershed. Due to the slow nature of redevelopment in a highly developed watershed, the existing regulations will not have full effect in time to prevent more damage to the stream.

Appellant Statement:

Only where local retention is not possible, it (stream flow) can be augmented by other surface sources.

Staff Response:

Augmenting stream flow from another surface water source is not technically or legally feasible. Lakes and wetlands within the basin are already providing low flow support, groundwater recharge, habitat value and water quality improvements. Withdrawing water from these sources produces undesirable impacts, would require a water right, and is not typically allowed. Withdrawing water from neighboring streams would relieve problems in Des Moines Creek by creating the same problem in the "sending" creek, and is prohibited by State law.

The Cities based conclusions for all of the responses in this section of the Staff report on information contained within the Des Moines Creek Basin Plan (1997, Attachment 10), the Des Moines Creek Regional Capital Improvement Project: Preliminary Design Report Alternative Analysis and Addendum (1999, Attachment 11), and the Environmental Checklist submitted by the applicant (Attachment 3).

The Des Moines Creek Basin Plan constitutes the most thorough analysis of hydrologic conditions for the Des Moines Creek Basin available. Extensive analysis of local land use conditions, hydrologic conditions and biological conditions were performed as part of the Basin Plan. Analysis included development of a hydrologic model based on the HSPF methodology, which examined the full record of past rainfall and runoff events and projected future stream flows for a number of potential future land use conditions. All modeled scenarios showed that without action, significant damage to the stream system and adjacent infrastructure was certain to occur. This analysis also showed that the proposed Basin Restoration Projects provided an extremely effective and cost-efficient strategy for protecting the Basin's hydrology and in-stream resources. No other alternative has been identified which works as well, or is as cost-effective.

The Preliminary Design Report and Addendum present the general construction details for projects, sufficient to estimate their environmental impact for the purposes of SEPA analysis.

C. The relief requested;

The appellant requests "that water from the Highline aquifer not be used to supplement stream flow that should come from surface waters" and states that "naturally purified deep ground water should not be used to create artificial streams." While Des Moines Creek is not an artificial stream, the Cities presume that the relief requested would be the elimination of the flow augmentation portion of the proposed Basin Restoration Projects.

D. The signature, address, and phone number of the appellant and the name and address of the petitioner's designated representative, if any.

The appellant provided this information.

III. CONCLUSIONS:

1. The appellant submitted no information in his appeal showing that the City was in error regarding the SEPA Determination for the Des Moines Creek Basin Restoration Projects.
2. A comment letter submitted on July 29, 2002 stated a number of alleged inadequacies in the analysis and information available for the environmental analysis during the decision process leading to the issuance of the Mitigated Determination of Nonsignificance for the Des Moines Creek Basin Restoration Projects.
3. Investigation of the alleged inadequacies in the analysis and information indicates that the appellant did not utilize information contained within documents incorporated by reference in the environmental checklist.
4. Analysis and information contained within the documentation for this proposal is sufficient to adequately address the inadequacies alleged by the appellant.
5. Analysis and information contained within the documentation is in sufficient detail to allow the Cities to reach a valid SEPA determination.
6. Previous SEPA review at the programmatic level established the positive environmental outcomes anticipated from the Basin Restoration Projects.
7. RCW 43.21C.090 states that in cases decisions an attack on a determination by a governmental agency, "the decision of the governmental agency shall be accorded substantial weight."
8. Analysis and information contained within the documentation is in sufficient detail to conclude that questions regarding the availability of groundwater for flow augmentation are most appropriately addressed through the Department of Ecology's water right allocation process

9. The decision by the Cities to issue the Determination and defer studies to the water right process will not produce significant environmental impact and will not result in a lessening of the environmental protection afforded the natural resources of Des Moines Creek watershed.

IV. STAFF RECOMMENDATION

Staff recommends that the SEPA appeal by Water District 54 be **DENIED** and that the Cities SEPA determination for the Des Moines Creek Basin Restoration Projects be affirmed.

V. ATTACHMENTS:

1. King County Water District #54 Appeal Letter dated July 29th, 2002
2. Supplemental Comment Letter From Water District 54, dated August 12, 2002.
3. SEPA Checklist for the Des Moines Creek Restoration Projects
4. SEPA Staff Evaluation for the Des Moines Creek Restoration Projects
5. SEPA Determination for the Des Moines Creek Restoration Projects, Issued June 28, 2002
6. Vicinity Map
7. Des Moines Creek Basin Plan DNS (File # SEP0009-97)
8. Certificate of Zoning Compliance, City of SeaTac File # CZC00-0001
9. Des Moines Creek Basin - Capital Improvement Projects Map
10. Des Moines Creek Basin Plan
11. Des Moines Creek Regional Capital Improvement Project: Preliminary Design Report Alternative Analysis and Addendum

King County Water District #54

922 South 219th Street
Des Moines, WA 98198-6344
(206) 878-7210 Fax: (206) 824-1909

July 29, 2002

Judith Kilgore
Director, Dept. Community Development
City of Des Moines
21630 11th Avenue S., Suite D
Des Moines, Washington 98198

Jack Dodge
Acting Director, Dept. Of Planning and Community Development
City of SeaTac
17900 International Blvd., Suite 401
SeaTac, Washington 98188-4236

CITY OF SEATAC
RECEIVED

JUL 29 2002

TIME: 4:29 p.m.
CITY CLERK'S OFFICE
mk

Subject: Appeal Determination of Nonsignificance for Des Moines Creek Basin Restoration Projects, Case SEP02-00006

These projects fall within the Wellhead Protection Area for King County Water District 54, a municipal water purveyor. Likewise, Highline Water District, an adjacent water purveyor has wells in or near the Des Moines Creek Basin. King County Water District 54 is 100% reliant upon the Highline aquifer beneath the Des Moines Creek Basin as its supply source for water. King County Water District 54 believes that the protection of the longevity of this aquifer and preservation of the quality of water that the aquifer supplies must be addressed as part of these proposals.

While many of the projects outlined within the proposed plan could improve the local ecology within the basin, the proposal provides inadequate surface water retention and rely upon groundwater to provide artificial stream flow. Both of these have long term negative implications for the basin's long term hydrology. They reduce the water available to or within the aquifer. Water is in limited supply and it must be applied to its best use. The proposal and the SEPA responses provided in the SEPA checklist fail to adequately address local hydrologic issues. For example:

- The document fails to address how much water is or will not be retained by the basin due to storm and waste management and other diversion practices.
- Restoration of the east fork of the Des Moines basin should be included in the projects.

ATTACHMENT 1

- The proposal fails to address water rights and the implication these water withdrawals could have upon other present and future water uses.
- It is not clear what impact other land use proposals within the basin could have on these plans or the local ecology.

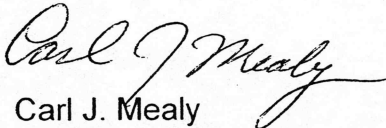
The proposed groundwater draw from the aquifer occurs at the same time as peak domestic demand occurs the implications are not quantified. Some of Highline Water District wells have been inactive for several years. Likewise, Water District 54 has request for new water rights dating back to the 1980's. Hence recent history for the water table may not adequately reflect what is likely to occur should those wells be put into service.

To put the into perspective, the 1 cfs draw equates to the daily domestic water supply for over 3,000 households. When the second well is factored in the number increases to supporting over 5,700 households. The proposed seasonal draw would equate to dropping neighboring Angle Lake by 1 to 2 feet each summer.

King County Water District 54 believes that ideally stream flow should occur naturally. Local retention of water for later release to the stream is best practice. Likewise opportunities for water to perk must exist. Only where local retention is not possible, it can be augmented by other surface water sources. Naturally purified deep ground water should not be used to create artificial streams.

We believe that viable options and land use practices exist for addressing these issues.

Sincerely,



Carl J. Mealy
President, Board of Commissioners
King County Water District 54

cc: Highline Water District
Department of Ecology

ATTACHMENT 1.1

LEGEND:

▲ KING COUNTY WATER

WELLHEAD PROTECTION AREAS

- ZONE 1
- ZONE 2
- ZONE 3

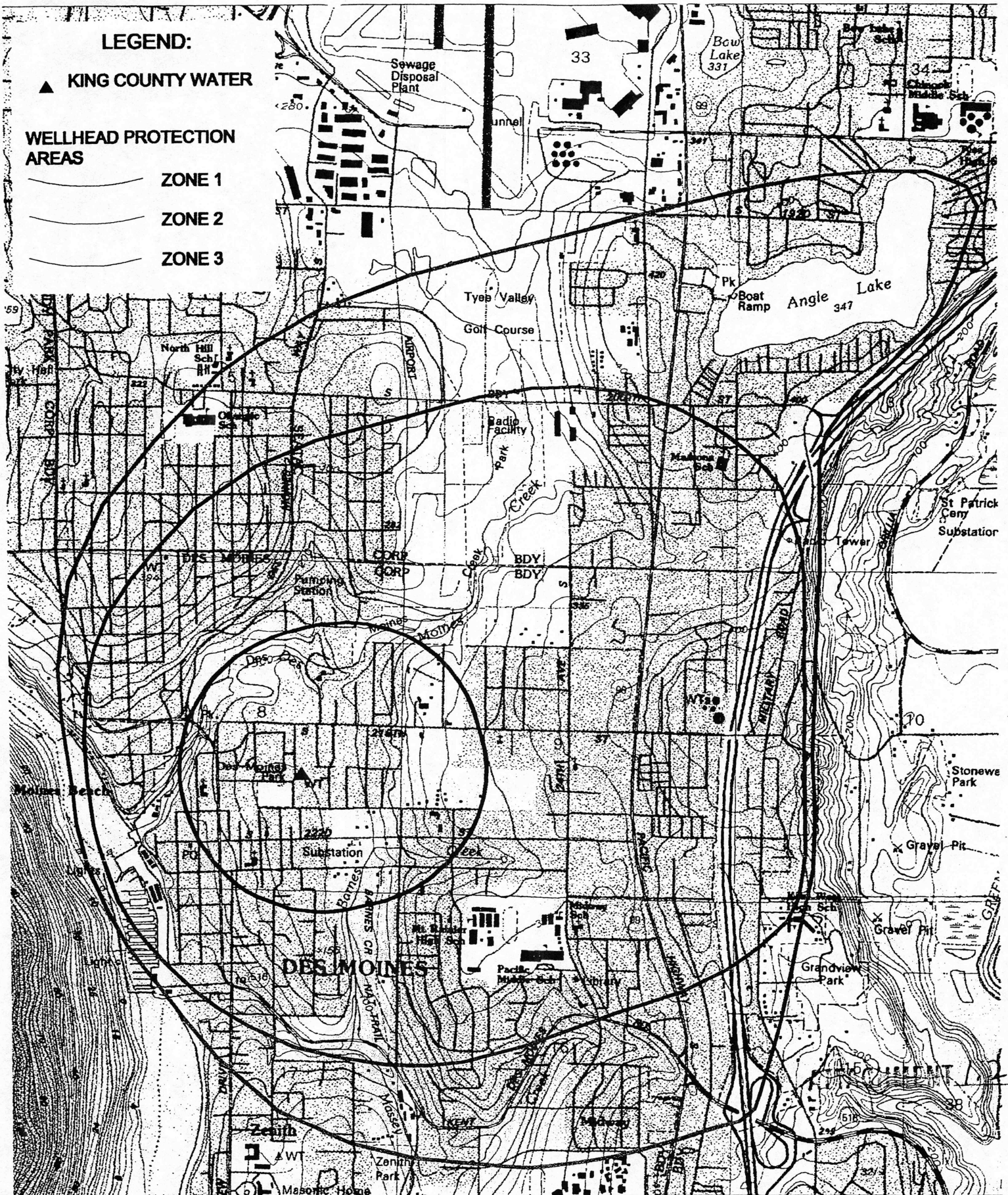


FIGURE
RECOMMENDED WELLHEAD PROTECTION AREA
FOR THE DEEP (QBc) AQUIFER SYSTEM
King County Water District 54 Wellhead Protection Plan



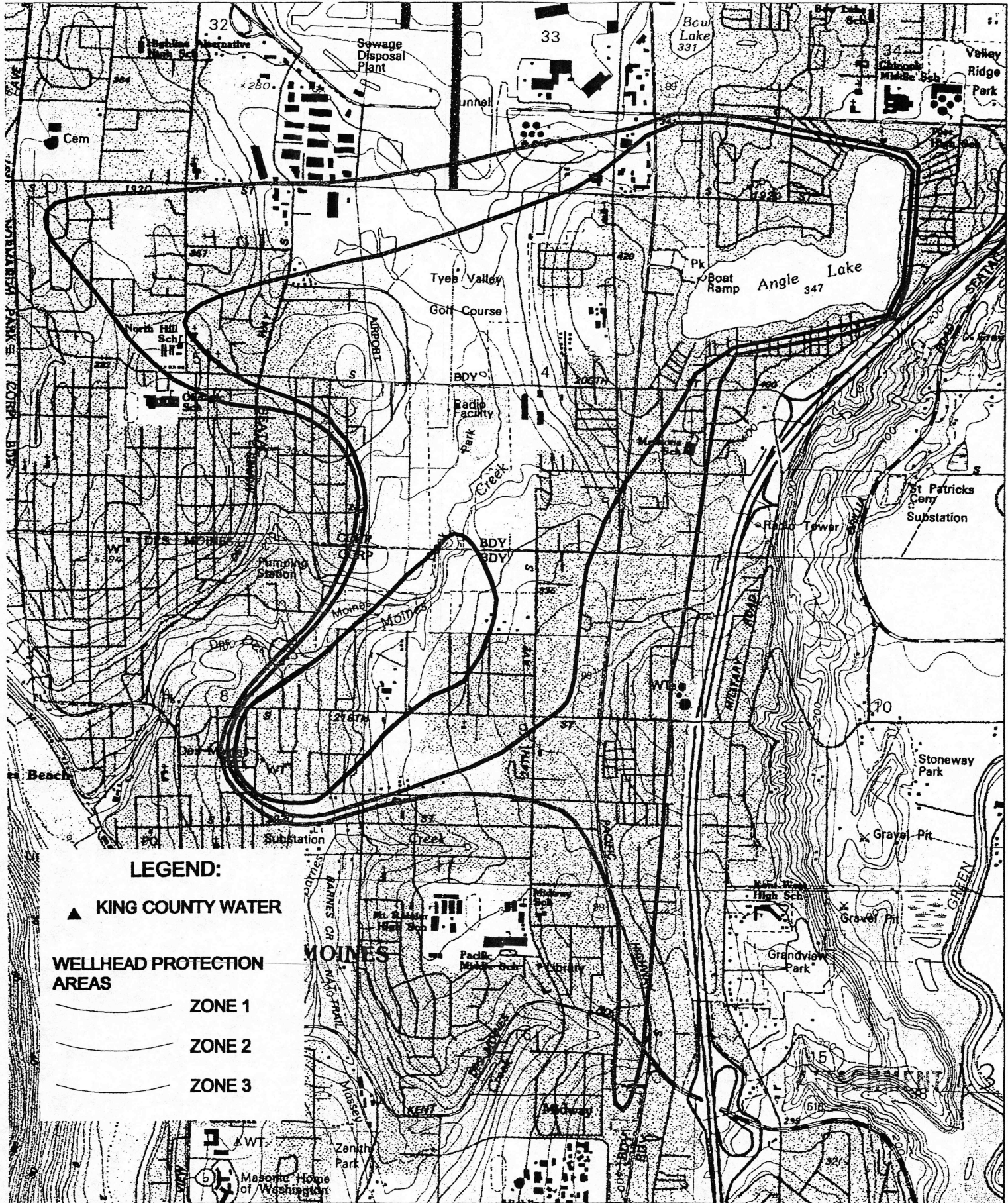


FIGURE
RECOMMENDED WELLHEAD PROTECTION AREA
FOR THE SHALLOW (QAc) AQUIFER SYSTEM
King County Water District 54 Wellhead Protection Plan

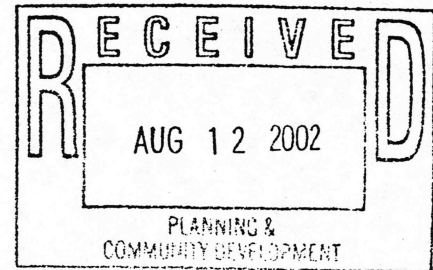


King County Water District #54

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Des Moines, WA 98198-6344
(206) 878-7210 Fax: (206) 824-1909

August 12, 2002

Judith Kilgore
Director, Dept. of Community Development
City of Des Moines
21630 11th Avenue S., Suite D
Des Moines, Washington 98198



Jack Dodge
Acting Director, Dept. of Planning and Community Development
City of SeaTac
17900 International Blvd., Suite 401
SeaTac, Washington 98188-4236

Subject: Appeal of Determination of Nonsignificance for Des Moines
Creek Basin Restoration Project, Case SEP02-00006

This communication is to supplement the July 29, 2002, Appeal filed by Carl J. Mealy on behalf of King County Water District #54, and is in response to a Faxed communication from Michael Scarey, Senior Planner, dated August 9, 2002, 12:03 PM, regarding City of SeaTac Appeal Procedures.

Mr. Mealy attended the July 17, 2002, public meeting at the SeaTac City Hall, held to discuss the proposed project. At that time he requested specific information on details of the project that affect this District. That information has not yet been provided. The District waited until the last day of the appeal period to file its appeal, assuming that we would get the information. When it was not forthcoming, we were forced to appeal.

On August 1, 2002, David Masters for the City of SeaTac contacted Mr. Mealy to discuss the appeal. He did not provide the requested information, but was invited to attend the Commissioners' meeting on August 20, 2002. We were led to believe that we would not need to file additional material until after that meeting, and after the requested information was supplied.

Mr. Mealy is on vacation, and since he is unavailable, I have reviewed both Mr. Scarey's last minute document and Mr. Mealy's communication. While it appears that Mr. Mealy's Appeal seems to meet the requirements, I will attempt to supplement it, based upon my limited knowledge of the facts.

The basis for Water District #54's standing is that it is a water district providing potable water to residents of Des Moines and

ATTACHMENT 2

SEPA Appeal
Page 2
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Normandy Park, and has been doing so since 1935. It relies solely upon well water from the Highline aquifer, the same aquifer that the Des Moines Creek Basin Restoration Project intends to pump water from.

That aquifer is not unlimited. It's level has been dropping over the years. Your project falls within the Wellhead Protection for the District, but your Determination of Nonsignificance ignores the needs of Water District #54. It also ignores the effect of the proposal by the Airport to create a "borrow" excavation ("borrow" seems an inappropriate title, since there is no intent to refill that excavation - "open pit mine" would be a more accurate description) in the same Des Moines Creek Basin, which will also greatly reduce the percolation of water into the aquifer, and may also increase the flow of surface water into Des Moines Creek.

Although the project statement indicates that it intends to rely on water rights that it will transfer from other sources, there is no determination that such transfer may take place, since there is no determination that those alleged water rights have been used in the last five years, and hence may have been abandoned under Washington State law.

The relief requested is that water from the Highline aquifer not be used to supplement stream flow that should come from surface waters. Water from that aquifer is far too precious for it to be pumped from the ground and poured into Puget Sound just to create a "babbling brook" for aesthetic purposes.

The appellant in this instance is King County Water District No. 54. Carl Mealy, President of the Board of Commissioners of the District will be its designated representative. Communications should be addressed to him at the District address, 922 South 219th Street, Des Moines, WA 98198-6344. The District's phone number is 206-878-7210. Please understand that Mr. Mealy, and the other two commissioners, do not spend their full time at the District office, so they may not be available at all times.

It may be that additional documentation will be submitted, if your departments do not already have them. Some that come to mind, but which I do not have possession of, are the various hearings before the Corps of Engineers, and the proposals (and objections) to make large excavations in the Des Moines Creek Basin. If your Department does not already have them, and hasn't already considered them, it would seem to indicate a failure to completely assess the environmental effects of your project. If you do not have them, please advise this District and we will attempt to obtain full copies for your review.

ATTACHMENT 2.1

SEPA Appeal
Page 3
August 12, 2002

The City of Des Moines has full knowledge of this District's boundaries, at least within the City, and has made projections of the number of water customers served and projected to be served, who will rely upon water from the Highline aquifer for domestic water and fire flow protection. In fact, the City of Des Moines currently has plans to expand boat storage at the Marina that will require additional fire flow protection, and a recent letter published in the local paper suggest that the existing boat storage should also be sprinklered.

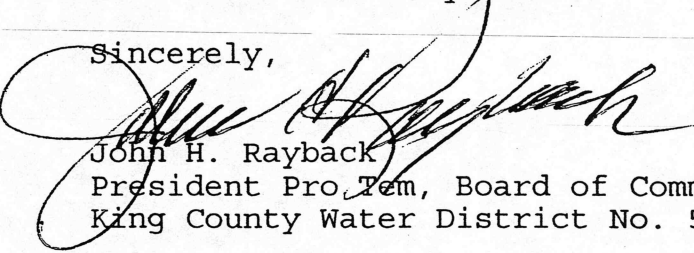
It is too bad that this District was not included in the Determination of Nonsignificance and that the document was not received by this District until June 26, 2002. Notice to this District much earlier of the intent to use water from the Highline aquifer to create stream flow would have allowed the District to have better input in the initial stages, and better prepare for the objections now being presented.

Other documents that may need to be reviewed include the history of the water rights that you have indicated you intend to seek transfer of, as well as the law on whether they may be transferred to a usage that simply pumps water from the aquifer and dumps it into Puget Sound. That does not appear to be the highest and best use of that water, and the existing water rights may well be so limited that they could not be used for the purposes you intend.

A total review of the aquifer and its history may also be required. This District is aware that the water level in the aquifer goes down in the summer--the time that your project apparently intends to use it the most.

Both SeaTac and Des Moines are aware of the problems the airport has had in controlling its runoff, and the number of times that that runoff has killed all fish in Des Moines Creek. The District recognizes that that runoff is supposed to be controlled by the airport, but your proposal seems to ignore the possibility that it will occur again, as it does not appear that you are taking steps to avoid its consequences.

Sincerely,



John H. Rayback
President Pro Tem, Board of Commissioners
King County Water District No. 54

cc: Highline Water District
Department of Ecology
Corps of Engineers

ATTACHMENT 2.2

ENVIRONMENTAL CHECKLIST

Des Moines Creek Basin Restoration Projects

Purpose of the Checklist:

The State Environmental Policy Act (SEPA), Chapter 43.21 RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decide whether an EIS is required.

Instructions for Applicants:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can.

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write “do not know” or “does not apply.” Complete answers to the questions now may avoid unnecessary delays later.

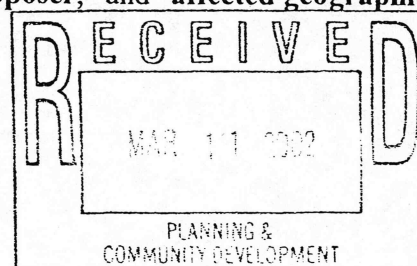
Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be a significant adverse impact.

Use of Checklist for Nonproject Proposals:

Complete this checklist for nonproject proposals, even though questions may be answered “does not apply.” In addition, complete the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (PART D).

For nonproject actions, the references in the checklist to the words “project,” “applicant,” and “property or site” should be read as “proposal,” “proposer,” and “affected geographic area,” respectively.



ATTACHMENT 3

A. BACKGROUND

1. *Name of the proposed project, if applicable:*

Des Moines Creek Basin Restoration Projects

2. *Name of Applicant:*

The Des Moines Creek Basin Committee
(City of SeaTac and City of Des Moines, Port of Seattle, King County, and Washington State
Department of Transportation)

3. *Address and phone number of applicant and contact person:*

Jon Hansen (Contact)
King County Department of Natural Resources and Parks
201 South Jackson Street, Suite 600
Seattle, WA 98104-3855
Phone: (206) 296-1966
Fax: (206) 296-0192

4. *Date checklist prepared:*

February 2002

5. *Agency requesting checklist:*

Cities of SeaTac and Des Moines and Port of Seattle

6. *Proposed timing or schedule (include phasing, if applicable):*

The proposed projects would be constructed in phases, beginning in the summer of 2003 and continuing through 2006.

7. *Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.*

An additional bypass pipe could be added in the future to increase the bypass capabilities of the system.

8. *List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.*

In recent years, numerous reports and special studies have been completed, documenting the conditions within Des Moines Creek and the basin as a whole. Following is a list of those most relevant to the current proposal:

ATTACHMENT 3.1

- Adolphson Associates. Revised May 2001. *Marine View Drive Bridge—Phase I Supplemental Biological Assessment, prepared for the City of Des Moines*. Seattle, Washington.
- Adolphson Associates. May 2001. *Marine View Drive Bridge—Phase II Supplemental Biological Assessment, prepared for the City of Des Moines*. Seattle, Washington.
- CH2M Hill, et al. May 1995. *Final Environmental Impact Statement—Des Moines Creek Technology Center*. Bellevue, Washington.
- King County Department of Natural Resources. November 1997. *Des Moines Creek Basin Plan*. Des Moines Creek Basin Committee (City of Des Moines, City of SeaTac, Port of Seattle, King County).
- King County Department of Natural Resources. November 1999. *Des Moines Creek Regional Capital Improvement Project Preliminary Design Report—Alternative Analysis*. Seattle, Washington.
- King County Department of Natural Resources. November 1999. *Des Moines Creek Regional Capital Improvement Project Preliminary Design Report—Alternative Analysis Addendum*. Seattle, Washington.
- King County Department of Natural Resources. March 1999. *Quality and Processes Affecting Aquatic Habitat at Des Moines Creek*. Seattle, Washington.
- King County Department of Natural Resources. March 1999. *Wetland Delineation Report for the Des Moines Creek Regional Detention Pond*. Seattle, Washington.
- Larson, M. and D. Booth. April 1999. *Des Moines Creek—Fluvial Geomorphic Evaluation of Bed Movement*. University of Washington Center for Urban Water Resources. Seattle, Washington.
- Sitka Corporation. January 1999. *Geotechnical Report of Preliminary Investigations—Des Moines Creek Regional Detention Facility*. Kirkland, Washington.
- URS Consultants, Inc. March 1996. *Des Moines Creek Trunk and Outfall Pipelines—Final Environmental Impact Statement—Midway Sewer District*. Seattle, Washington.
- URS Griener, Inc. November 1997. *Marine Resources in the Vicinity of the Midway Sewer District Wastewater Outfall at Des Moines, Washington*. Seattle, Washington.
- URS Griener Woodward Clyde and Berger/Abam Engineers, Inc. March 2000 (Revised December 2001). *Midway Sewer District Submarine Outfall Biological Evaluation, Des Moines, Washington*. Seattle, Washington.

9. *Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.*

Yes. The City of Des Moines, the Washington State Department of Transportation (WSDOT), the Midway Sewer District, and the Port of Seattle all have permits pending for projects that are located on or adjacent to the properties on which the facilities proposed here will be constructed. The City of Des Moines is currently seeking permits to replace the culvert under Marine View Drive Southwest with a bridge. In addition, the Midway Sewer District is seeking permits for a new outfall to Puget Sound (allowing the Des Moines Creek Basin Committee to use the abandoned pipeline and existing outfall).

ATTACHMENT 3.2

The Port of Seattle is seeking permits to expand the airport facilities at the Seattle-Tacoma (Sea-Tac) International Airport. These expansions include the third runway located to the north as well as the creation of a new South Airport Support Area, which will in part be constructed on and/or adjacent to the site (Tyee Golf Course) where critical elements of the Basin Committee's projects are proposed. Wetland mitigation areas related to the airport expansion will also be completed on the Tyee Golf Course site downstream of the regional detention facility. The WSDOT is in the process of designing the extension of State Route 509 and the South Access Roadway to Sea-Tac International Airport, which are proposed to be constructed in close proximity to the proposed regional detention facility. No permit applications have been submitted to-date for those projects.

10. *List any government approvals or permits that will be needed for your proposal, if known:*

- U.S. Army Corps of Engineers Individual Section 404 Permit
- National Marine Fisheries Service Endangered Species Act (ESA) Section 7 Consultation
- U.S. Fish and Wildlife Service ESA Section 7 Consultation
- Washington State Department of Ecology
 - Section 401 Water Quality Certification
 - Dam Safety Permit
 - National Pollutant Discharge Elimination System (NPDES) Permit (for construction)
- Washington Department of Fish and Wildlife Hydraulic Project Approval
- Washington State Department of Natural Resources Aquatic Lease Permit
- City of SeaTac Clearing and Grading Permit
- Port of Seattle Building/Grading Permit
- City of SeaTac Public Agency and Utility Exception
- City of Des Moines Clearing and Grading Permit
- City of Des Moines Shoreline Management Substantial Development Permit

11. *Give a brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on the project description.)*

The Des Moines Creek Basin Committee is proposing a suite of projects intended to help protect and restore Des Moines Creek, a 3.5-mile-long stream system located in southwest King County (see Figure 1). These projects, conceptually proposed in the *1997 Des Moines Creek Basin Plan*, include a regional detention facility, a high flow bypass system, low flow augmentation, and fish habitat enhancements throughout the length of the stream. The projects are being jointly planned and implemented by members of the Basin Committee, which includes the City of Des Moines, the City of SeaTac, the Port of Seattle, the Washington State Department of Transportation, and King County. These projects begin in the upper end of the Des Moines Creek Basin on the Tyee Golf Course and extend all the way downstream to Puget Sound. Working collectively, the members of the Des Moines Creek Basin Committee are proposing these projects to stabilize the flow regime and reduce channel erosion in Des Moines Creek.

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All of the projects proposed for coverage under this checklist are recommendations taken directly from the *Des Moines Creek Basin Plan*. Their purpose is simply to protect and restore Des Moines Creek. These projects are not mitigation for, nor are they linked to any development projects currently being planned, proposed, or constructed within the basin. — water 15

Background and Purpose

The purpose of the proposed projects is to stabilize the flow regime, reduce the channel erosion rate, and restore and enhance habitat within Des Moines Creek. Des Moines Creek originates on a low-gradient plateau within the City of SeaTac and descends approximately 350 feet vertically through a steep ravine shortly before it empties into Puget Sound. It drains a largely urbanized basin of approximately 5.8 square miles located within the Cities of SeaTac and Des Moines. The basin is heavily urbanized, containing a large part of the Sea-Tac International Airport as well as extensive commercial and high-density residential development. The highly developed character of the drainage basin contributes to an unnaturally “flashy” flow regime, meaning that the volume of water flowing in the stream rises and falls quickly during storm events. This flashy flow regime has significantly degraded Des Moines Creek by increasing channel erosion and downcutting, washing away spawning gravel and large woody debris, and decreasing the number and quality of pools available within the stream. The loss of these habitat elements significantly reduces the ability of the system to support salmon and resident trout as well other fish and aquatic organisms. Unless controlled, this flow regime will continue to contribute to declining fish populations, both directly by creating inhospitable flow velocities during rainy periods and indirectly through the morphological changes discussed above. Flashy flow regimes also tend to be associated with low summer baseflows, which is the case in Des Moines Creek. It is this flow regime (both high and low) and the lack of channel complexity it creates that have been identified as the principal factors limiting the salmon and trout populations in the stream.

Basin Planning and Interjurisdictional Cooperation

Recognizing these problems and the difficulty with resolving them independently, the Cities of Des Moines and SeaTac and the Port of Seattle and King County decided to work collectively toward resolving their common problems in Des Moines Creek, one of the few remaining urban salmon streams in King County. The Washington State Department of Transportation (WSDOT) subsequently joined the Basin Committee in 1999. These parties, collectively referred to as the Des Moines Creek Basin Committee, have worked together cooperatively since 1995 to develop a mutually acceptable plan that will offset the impacts of past and the unmitigated portion of future development in the 5.8-square-mile watershed. These impacts, primarily from stormwater runoff, have been detrimental to stream stability, water quality, and fish habitat.

The specific goals of the Basin Committee include:

- Develop a flexible and resilient forum for addressing interjurisdictional stream issues.
- Develop a shared plan for addressing water quality and quantity issues.
- Develop and implement prioritized Capital Improvement Project recommendations.
- Facilitate cooperative funding for interjurisdictional projects.
- Improve the quality of human interactions with Des Moines Creek.

ATTACHMENT 3.4

In November 1997, the Basin Committee published the *Des Moines Creek Basin Plan* (hereafter referred to as "Basin Plan"), which provides an overview of the basin's environmental conditions and problems. The Basin Plan also presented and evaluated a number of alternatives to address existing and anticipated future problems.

Alternatives Considered in the Basin Plan

As part of the basin planning process, the Basin Committee considered both the level of stream protection to target as well as the methods available to attain them. The alternatives covered a broad spectrum of levels of protection, ranging in scale from taking no action, and allowing the channel to degrade unchecked, to attempting to restore a stable flow regime that would allow the system to recover without the need for ongoing stabilization efforts. . Specific consideration was given to changing stormwater regulations, changing zoning and land use patterns, constructing a large flow bypass facility, constructing a large detention facility, and taking no action. Factoring in both costs and feasibility, and largely because of the potential efficiency of operating a combined bypass and regional detention facility, it was determined that the goal of achieving a stable flow was attainable.

In addition to the regional detention pond and high flow bypass concepts, the Basin Plan evaluated traditional methods, such as changes to land use regulations and stormwater detention standards. Although both land use regulations and detention standards are critical factors in effective stormwater management, those options can most effectively deal with future development; they are very poor at addressing longstanding problems created by inadequate standards applied to past development. Because of the magnitude of the existing storm flows, the stream would continue to degrade and be largely inhospitable to aquatic life, even with no additional development. The Basin Plan therefore concluded that some action must be taken to manage the existing flows within Des Moines Creek, whether additional development occurs or not.

Basin Plan Alternatives Selected

To address the existing conditions and promote restoration of the stream as a whole, the jurisdictions represented on the Basin Committee chose to pursue a more comprehensive and effective approach that combines the regional detention facility and the bypass system. Additional information about these alternatives is covered in Section 4.2 of the Basin Plan.

The Basin Plan also investigated all technically feasible alternative sites within the basin for major regional storage. The Northwest Ponds were selected as the most logical place, for a variety of reasons, including:

1. They are uniquely located at the confluence of the two major branches of Des Moines Creek.
2. They are upstream of the higher quality habitat reaches most in need of protection from high flows.
3. Of the numerous sites investigated, the Northwest Ponds came closest to achieving/producing a stable stream system.
4. The location allows easy integration of the proposed flow bypass.
5. There were much fewer land use conflicts with this site, and no displacement of existing residences or businesses were required.

ATTACHMENT 3.5

Other sites at the Tyee Golf Course that fit some or all of these conditions were dismissed as viable options for safety reasons. Creating additional standing water on the golf course was determined to increase the danger of attracting wildlife, particularly waterfowl, into the flight path of aircraft. The risk this posed to the flying public was deemed unacceptable to officials from the Federal Aviation Administration (FAA).

A more detailed discussion of the criteria used for siting the facility, as well as an analysis of the alternative sites investigated, is located in Sections 4.2.3 and 5.1 of the Basin Plan.

The combination of watershed improvements proposed by the Basin Plan includes the following projects (see Figure 2):

- A Regional Retention/Detention Facility at the Tyee Golf Course.
- A Surface Water Flow Bypass System to Puget Sound.
- Low Flow Augmentation by well water withdrawal.
- Habitat Restoration by in-channel improvements.
- Culvert Improvement with fish passage at Marine View Drive.

This checklist is intended to cover the first four of those elements. The Marine View Drive fish passage project is being addressed separately by the City of Des Moines.

Further Study

In addition to the more general alternatives considered within the Basin Plan report, the Basin Committee commissioned an analysis of different design alternatives for the regional detention facility. That study, entitled *Des Moines Creek Regional Capital Improvement Project Preliminary Design Report* (published in November 1999), presented three alternative designs for implementing the Basin Plan recommendations. The three basic alternatives differed based on the number and location of berms to detain stormwater and the location of the bypass pipe connection. Alternatives 1 and 2 both had the same number and location of berms, but had the bypass pipe connected to the West Fork and the East Fork of Des Moines Creek, respectively. All three alternatives would have used the existing sewer line as the bypass pipe to convey water from the stream system and discharge it directly to Puget Sound. Of these three alternatives, Alternative 2 ranked highest, based on a set of selection criteria that included its ability to reduce erosion, minimize both direct and indirect wetland impacts, and cost. Alternative 2 is also the plan that is most adaptable to future infrastructure and flow changes in the basin. It is this second alternative that is being proposed and reviewed in this checklist.

Proposed Projects

- ***Regional Detention Pond***

The regional detention facility is essentially a large storage area near the upper end of the basin, where stormwater running quickly out of the highly urbanized upper basin can be captured and released slowly back into the stream. The regional pond will hold water for short periods of time following storms, but unlike a typical stormwater pond, it will be planted extensively with native vegetation. Several potential sites for this facility were evaluated as part of the basin planning process, but for a variety of reasons outlined above, the Northwest Ponds site was selected. To accommodate the storage necessary to provide

meaningful stream protection, substantial areas in the immediate vicinity of Northwest Ponds will need to be modified. This would include the construction of two berms to impound water and the excavation and regrading of approximately 8.4 acres of wetland (Cells 1 and 2 in Figure 3). Of this area, roughly 4.4 acres are degraded wetland that lie within the golf course and are dominated by turf grasses, while another 1.5 acres are degraded wetland dominated by invasive species, including blackberry and reed canarygrass. The remaining 2.5 acres include wetland dominated by native species, such as willow, dogwood, and black cottonwood. Although these modifications will disturb some existing plant communities, the disturbed areas will remain wetland and be revegetated with native wetland plant communities, with the exception of the area filled for the berms. The overall size of the wetland will actually increase as a result of the project because the area slated for excavation includes upland that will be revegetated and converted to wetland.

To minimize the disturbance of high-quality wetland areas, excavation will be limited to the highly disturbed areas within the existing golf course and to the area north of the existing open-water ponds. Throughout these areas, approximately 3 to 7 feet of soil will be removed to create additional storage area behind the first proposed berm (Berm A on Figure 3). Although final contours in these areas will vary slightly, the concept is to create a gradually sloping bench across these cells ranging in elevation from 244 to 245 feet. This will provide active storage above elevation 244.5 feet, yet provide an area that will be suitable for planting a scrub-shrub community.

Construction of the detention facility and berms will be completed using heavy equipment, including excavators, trackhoes, bulldozers, and for some of the wettest areas a drag line. Construction within the wetland will be strictly controlled to prevent mobilization of sediment downstream. During construction, water will be diverted around the worksite and water within the worksite pumped out and treated prior to release. Dewatering of the project area may also be necessary to facilitate construction. This may be accomplished using pumps attached to shallow wells immediately adjacent to the work area. Every effort will be made to keep the water withdrawn from the worksite clean, but depending on the volume and the level of turbidity, the water will be treated using either temporary settling basins and/or existing vegetation to filter the sediment out of the water. If all other methods fail, chemical flocculation may be used to ensure that the water returning to the stream meets state water quality standards.

- ***Flow Bypass System***

The flow bypass system is designed to divert high flow out of the stream above the ravine reach to reduce the volume of water that flows through the channel during moderate to high flow conditions. The bypass system will use a soon-to-be-abandoned sanitary sewer pipeline that is already in place from the southern end of the Tyee Golf Course to Puget Sound. With a few minor modifications, the 24-inch pipeline will carry excess stream flows from the East Fork of Des Moines Creek at Tyee Pond directly to Puget Sound. The pipe will outlet approximately 1,900 feet offshore at a depth of approximately 170 feet via an existing wastewater outfall, which is also scheduled to be removed from service. No modification of the existing outfall is being proposed at this time. The purpose of the bypass is to reduce the erosive energy of high flows to minimize channel erosion and create a fish-friendly flow regime. By using the bypass, the volume of water taken out of the stream increases dramatically, greatly reducing the erosive energy within the stream while at the

same time minimizing the volume of water that must be stored within the wetland/regional detention facility. Given the sensitivity of wetland areas to water level fluctuation, the bypass pipe helps to minimize adverse effects on both the stream and wetland.

Because it will make use of an existing pipe system, construction of the flow bypass system will be limited to making the connection on Tyee Golf Course, replacing a section just south of South 200th Street, and bypassing the Midway Sewage Treatment Plant. All of this work will occur in previously developed and/or modified areas and should result in only minor impacts to native plant communities. The outfall appears to have sufficient conveyance capacity and therefore will not need to be modified as part of this proposal. Future modifications to the outfall, however, might be necessary for maintenance and/or improvement of performance. If deemed to have no adverse impact on the marine environment, the addition of several new holes in the top of the pipe above the existing diffuser may be pursued at a later date.

▪ ***Low Flow Augmentation***

The low flow augmentation project is designed to provide groundwater input into the stream to help ensure the health of aquatic life when flows become dangerously low. The project is intended to offset the negative impacts of basinwide changes that have resulted in the reduction of groundwater recharge, particularly in the upper basin. Because of the loss of vegetation cover and the large percentage of impervious surfaces, rainwater that otherwise would have infiltrated into the ground, and later provide the baseflow for the stream during the summer months, runs off into the stream immediately following a storm. The objective of this project is to provide a maximum of 1.0 cubic foot per second of groundwater to augment the baseflow of Des Moines Creek during critical low flow periods. Water quality tests have shown the groundwater to be of excellent quality, although, like most groundwater, it has low levels of dissolved oxygen. The groundwater withdrawn would be aerated to improve dissolved oxygen content prior to flowing into the creek.

The Basin Committee will seek a new water right to withdraw groundwater south of South 200th Street to augment low summer flow conditions. If granted, a new well would be drilled on the Des Moines Creek Park property. As an alternative, an existing irrigation well on the Tyee Golf Course could be modified to meet this objective. Water rights for that well, however, are in dispute.

It is important to note that while the low flow augmentation is highly desirable for the overall health of the stream, it addresses only low flow issues which occur during the summer. Other project components function independently of low flow augmentation and are focussed on limiting damages from winter high flows. Reviewers should note that failure to secure water rights for this portion of the project will not negate the benefits to the stream from construction of the other project elements. Therefore, the regional detention facility, bypass pipe, and stream enhancement elements will move forward even if flow augmentation is not possible at this time.

▪ ***Habitat Restoration***

The proposed habitat restoration is primarily instream enhancement to improve fish habitat within the three zones identified on Figure 2. The approach will differ in each of the three

reaches targeted, but will focus on improving fish access and increasing habitat diversity within the channel. Native trees and shrubs will also be planted along the stream, where possible, to increase shade, improve water quality, and provide a source of woody debris and leaf litter to the stream. Design of the proposed channel improvements from the Northwest Ponds downstream to South 200th Street (Zone 3) has begun because this work was required for the design and evaluation of the regional detention facility. Conceptual design of the lower two zones (Zones 1 and 2) includes the placement of large woody debris, gravel, cobble, and large rounded boulders within the existing channel to create more diverse habitat conditions. Because the specific design of these elements will vary based on stream flow, and the final predicted flows will be subject to the outcome of permitting for the other elements, final design will be completed after the initial project elements are permitted.

The proposed enhancement work within the golf course reach will be constructed using trackhoes, excavators, bulldozers, and similar equipment. Although the work will be completed during the summer months to avoid critical lifestages of salmon and trout, a temporary bypass will be used to ensure that the project minimizes the potential for sediment transport downstream. Before the stream water is diverted into the temporary pipe, fish will be removed from the work areas and will be placed in an appropriate location downstream.

12. *Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity plan, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.*

The projects covered under this checklist would be constructed in several locations along Des Moines Creek, from the headwaters of the West Fork immediately south of the Sea-Tac International Airport downstream to a point approximately 1,900 feet into Puget Sound. For simplicity, these will be referred to as (1) the Golf Course/Regional Detention Facility Site, (2) the Ravine/Trail Reach, (3) the Midway Treatment Plant Area, and (4) the Des Moines Creek Beach Park Area.

Golf Course/Regional Detention Facility Site

As shown in Figures 2 and 3, the regional detention facility is proposed along the western edge of the existing Tyee Golf Course in the northeast quarter of Section 5 and the northwest quarter of Section 4, Township 22 North, Range 04 East. In this same area, the bypass pipe would be installed from the existing Tyee Pond to the existing 24-inch sanitary sewer line that runs under the golf course.

Ravine/Trail Reach

Below South 200th Street, two sections of new pipe will need to be installed to complete the high flow bypass system, which runs from Tyee Pond on the golf course to the outlet into Puget Sound. The first is a 1,600-foot section of new pipe beginning approximately 1,000 feet south of South 200th Street in the Des Moines Creek Park. This new section would run parallel to the existing recreational trail, first on the north and then on the west side, as the trail meanders through the park. The distance from the trail will vary as necessary to avoid existing utilities, but will typically be within 10 feet of the currently paved surface. The flow augmentation well

would also be located within the park, south of South 200th Street. This work lies in the southwest quarter of Section 4, Township 22 North, Range 04 East.

Midway Treatment Plant Area

The second section of new bypass pipe will be located on the Midway Sewage Treatment Plant property in the northwest quarter of Section 8, Township 22 North, Range 04 East. This new pipe is needed to route the stormwater around the sewage treatment plant. The new pipe section would then be reconnected to the existing piped system, allowing the stormwater to flow out into Puget Sound via an existing wastewater outfall that is soon to be abandoned.

The proposed habitat enhancement work would be completed in the West Fork of Des Moines Creek on the golf course and in several locations on the mainstem of Des Moines Creek from South 200th Street downstream to the mouth.

Des Moines Creek Beach Park/Puget Sound

Downstream of Marine View Drive, in the southwest quarter of Section 8, Township 22 North, Range 04 East, stream habitat enhancement will involve the placement of large woody debris and rounded boulders. Bank stabilization and buffer revegetation within this area may also be pursued.

B. ENVIRONMENTAL ELEMENTS

1. Earth

- a. *General description of the site (underline one): flat, rolling, hilly, steep slopes, mountainous, other.*

The proposed work encompasses a variety of settings throughout the Des Moines Creek Basin. These range from a very flat plateau at the upper end, a rather steep-sided ravine in the middle reach, and finally to a relatively flat-gradient channel that enters Puget Sound.

- b. *What is the steepest slope on the site (approximate percent slope)?*

The steepest portion of the project area is located within the ravine reach of Des Moines Creek where side slopes of the ravine range from 25 to 40 percent. All excavation and earthmoving is scheduled to occur on flat portions of the project area, with slopes no greater than 10 percent.

- c. *What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.*

The soil types throughout the basin vary widely depending on the landscape position, ranging from organic material near the headwaters to cobble beach at the edge of Puget Sound.

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Golf Course/Regional Detention Facility Site

The King County Soil Survey (U.S. Department of Agriculture, Soil Conservation Service, 1973) maps the soils in the vicinity of the regional detention facility as a combination of Urban soils (including fill and highly modified native soils), Bellingham silt loam (located immediately north and west of the Northwest Ponds), and Norma silt loam. Soil pits in this area, however, revealed an extensive amount of organic material (primarily peat) adjacent to the ponds and within the broad valley, which runs across the golf course. Indianola fine loamy sand (4 to 15 percent slopes) is mapped in the wooded, modestly sloped areas south of the ponds.

Ravine/Trail Reach

South of South 200th Street, where a new section of bypass pipe will be added, Norma silt loam and Bellingham silt loam are identified. Where the channel picks up gradient, however, the soils change to Indianola fine loamy sandy and then to Alderwood gravelly sandy loam (15 to 30 percent).

Midway Treatment Plant and Des Moines Creek Beach Park

Indianola and Alderwood soils extend down the ravine, where they transition into a combination of Alderwood-Kitsap soils near the treatment plant and Urban soils within the Des Moines Beach Park. The soils along the edge of Puget Sound are mapped as Coastal beach and consist of sand and gravel.

Midway Sanitary Sewage Pipeline/High-Flow Bypass Outfall

Soils in the intertidal and subtidal areas surrounding the Midway Sewer District wastewater outfall are characterized as gravelly sands and silty sands. Soils have a relatively high proportion of gravel to sand in the intertidal areas and grade into silty sand through the subtidal zone. Below -40 to -50 feet MLLW, soils are silty sand with occasional patches of gravel and sunken logs or other debris.

- d. *Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.*

Natural
Sections of Des Moines Creek run through a steep ravine, which has a history of small slope failures. If left unchecked, the heavy stream flows that occur during storm events will continue to erode the bed and banks of the stream and could trigger larger slope failures within the ravine reach.

- e. *Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate the source of fill.*

The proposed projects will involve extensive grading, primarily within the upper end of the basin where the proposed regional detention facility would be constructed. Although final grading plans are not yet complete, preliminary estimates suggest that 60,000 cubic yards of material will be excavated from the golf course and the area directly north of the existing ponds. Another 15,000 cubic yards of material will be imported to the site for constructing the two berms located on the golf course that will be used to contain the stormwater. Fill would likely consist of a mixture of materials, ranging from fine grained silts to small gravel, obtained from local mine sites. In addition, approximately 500 cubic yards of streambed gravel, approximately 600 rounded boulders, and 75 pieces of large

woody debris will be imported to reconstruct the stream channel on the golf course. Additional large woody debris, boulders, and streambed gravels will also be used to enhance the stream in Zones 1 and 2.

In addition, grading to install the Tye diversion pipe and the three new sections of bypass pipe in the golf course, the ravine/trail reach, and the Midway Treatment Plant area will involve the excavation of approximately 15,000 cubic yards of material. Approximately 9,000 cubic yards of this material will be used to backfill the trenches, along with an estimated 6,000 cubic yards of crushed rock and gravel.

Material excavated from the site will be disposed of off-site at an approved location in accordance with all federal, state, and local permits. Preliminary soil investigations suggest that the soil to be excavated has high organic content and therefore is unlikely to be suitable for use as structural fill (that is, not appropriate for use under roadways, buildings, etc.). Given the high organic content, however, the material may be salvaged for use as topsoil or as a soil amendment. Prior to disposal, excavated material will be tested for a variety of contaminants to ensure it is handled properly.

- f. *Could erosion occur as a result of clearing, construction, or use? If so, generally describe.*

Yes. The various phases of construction will involve extensive earthwork in and adjacent to wetland and stream areas. Although great care will be taken to minimize the potential for construction-related impacts, soil erosion is always a possibility during construction, particularly around wetlands and streams.

- g. *About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?*

→ Approximately 6,200 square feet of new impervious surface will be created, resulting from the surfacing of the earthen berms and a small well house.

- h. *Proposed measures to reduce or control erosion or other impacts to the earth, if any:*

Protecting the stream and downstream areas from erosion is the central focus of the projects. To minimize the potential for erosion, aggressive erosion control measures need to be employed. As part of the permit applications for local, state, and federal permits, including the National Pollutant Discharge Elimination System (NPDES) permit, a comprehensive temporary sediment and erosion control plan, a spill control plan, a hazardous materials management plan, and a stormwater monitoring plan will be developed and submitted for review. A partial list of specific erosion control measures to be employed is included below.

- Prior to construction, clearing limits will be marked in a highly visible manner and remain so marked until construction is complete.
- Work in wetlands and streams will only be completed during the dry summer months, when the chance of precipitation is very low.

- All in-water work will be completed within the “fish window” established by state and federal permit agencies.
- Clearing of groundcover vegetation will be completed in stages so that clearing will only occur in those areas slated for immediate excavation.
- Prior to construction and as necessary, silt fencing will be installed as appropriate to prevent sediment from entering portions of the stream and wetland that are not being modified. Silt fencing will also be placed around staging areas and stockpiles, and on the downslope side of work areas where erosion may occur.
- Where feasible, the existing golf course fairways will be used for the biofiltration of sediment-laden water.
- If necessary, temporary sediment ponds will be constructed elsewhere on the golf course property to provide additional treatment of turbid water.
- Stream flows will be bypassed with a pipe or by pump to prevent surface water from entering the worksite.
- Where instream work is unavoidable and a bypass of flows or dewatering is not possible, a silt fence with a weighted toe will be used to prevent sediment-laden water in the work area from mixing with clean water in the wetland or stream. Collected sediments will be removed manually to ensure the material is not later washed downstream.
- Excavated materials will be stockpiled outside of areas that might be subject to inundation or flowing water.
- Bare soil left unworked for more than two weeks during the dry season and two days during the wet season will be seeded and/or covered with straw, wood mulch, compost, or plastic sheeting.
- To minimize the inflow of groundwater into the work area, the outlet of the pond and the bed of the stream will be lowered prior to excavation of Cells 1 and 2.
- Clearing within work and staging areas will be minimized to maintain vegetative cover, minimize erosion, and preserve riparian vegetation and cover.

A more comprehensive list and description of the measures that will be taken to minimize potential impacts of construction will be outlined in the temporary sediment and erosion control plan, a spill control plan, a hazardous materials management plan, and a storm-water monitoring plan prepared for the project. These plans will be included in the construction specifications and contract documents.

2. Air

- a. *What types of emissions to the air would result from the proposal (for example, dust, automobile, odors, industrial, wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities, if known.*

During construction, exhaust from construction equipment and vehicles delivering or removing materials to or from the construction areas will be the primary source of emissions to the air. This includes emissions from trucks, excavators, bulldozers,

backhoes, trackhoes, and similar equipment. The exhaust will consist mainly of carbon monoxide, various hydrocarbons, and related substances.

The only emissions to the air resulting from the completed project would be from vehicles used by maintenance or monitoring personnel. These emissions are expected to be negligible.

- b. *Are there any off-site sources of emissions or odors that may affect your proposal? If so, generally describe.*

No. Although there are emissions from the surrounding urbanized areas, including the airport located immediately to the north, these emissions are not expected to affect the construction or operation of the completed projects.

- c. *Describe proposed measures to reduce or control emissions or other impacts to the air, if any.*

Short-term construction-related impacts to the air could be reduced or controlled by several means:

- Avoiding prolonged periods of vehicle idling.
- Using vehicles and machinery in good operating condition.
- Cleaning truck and machinery tires before leaving the staging areas to keep dirt and dust from entering the air and from being tracked onto paved streets. If necessary, local streets will be cleaned to remove dust, dirt, and/or mud.
- Controlling dust by using watering trucks as necessary during construction.

3. Water

a. *Surface:*

- 1) *Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, and wetlands)? If yes, describe the type and provide names. If appropriate, state what stream or river it flows into.*

The majority of the proposed work will occur in or adjacent to Des Moines Creek or associated wetlands. The regional detention facility described above will be constructed by modifying a portion of a large wetland, commonly referred to as the Northwest Ponds, located at the upper end of the West Fork of Des Moines Creek. This wetland contains a man-made, open-water component that will be modified to increase the storage capacity of the pond and nearby areas. Water emerging from the wetland flows downstream through Des Moines Creek, which discharges directly into Puget Sound.

Attachment 3.14

- 2) *Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.*

Yes. In order to effectively capture and control flows within the basin, a 1,200-foot reach of Des Moines Creek and approximately 9 acres of the Northwest Ponds wetland will be modified. Both areas are highly disturbed already, and will be restored with native vegetation following construction. Neither alteration will result in a loss of wetland or stream habitat. A more detailed description of these activities is included below.

In addition, modification of a soon-to-be-abandoned sanitary sewer pipeline for use as a high-flow bypass pipeline will require new sections of that pipeline to be installed in and near a wetland just south of South 200th Street, and in the vicinity of the Midway Sewage Treatment Plant. This work will be located outside of the stream, but in some cases within 20 feet of the existing channel. The existing sanitary sewer pipeline discharges directly into Puget Sound and will continue to do so after conversion to a high-flow bypass pipeline. It is possible that some work will be necessary to modify the existing diffuser at the pipe outfall within Puget Sound. The existing sewer line will be sanitized prior to use, and will be a closed system that carries only excess stream flows. Materials removed from the pipe during cleaning will be sent to the Midway Sewage Treatment Plant for treatment and disposal.

Wetland Modifications

The area referred to as the Northwest Ponds is in fact part of a large wetland system that includes the ponds themselves, portions of the existing golf course, and extensive areas both northeast and southwest of the ponds (see Figure 3). These wetlands have been extensively modified by agricultural and peat-mining activities in the past, and portions have been filled and drained for other purposes, such as development of the adjacent golf course.

To accommodate the storage necessary to provide meaningful stream protection, a substantial portion of this wetland will need to be further modified. This would require the construction of two berms to impound water and the excavation and regrading of approximately 8.4 acres of the wetland, of which 5.9 acres are already highly disturbed. Of this area, roughly 4.4 acres lie within the golf course and are dominated by turf grasses, while another 1.5 acres are dominated by invasive scrub-shrub species (see Figure 3). The remaining 2.5 acres consist of native willows, dogwood, and black cottonwood. Although these modifications will disturb some existing plant communities, the disturbed areas will be restored and, with the exception of the area filled for the berms, will remain wetland. The net change in the wetland will be the conversion of 4.4 acres of turf grass to native scrub-shrub vegetation, conversion of 1.5 acres of invasive scrub-shrub into native scrub-shrub vegetation, and the replacement of 2.5 acres of native trees and shrubs with a native shrub community dominated by willows. The wetland will also be expanded by approximately 1 acre, making the wetland larger once the project is complete.

To increase storage capacity and protect the high quality forested portions of the wetland, the water surface elevation within the existing open-water areas will be lowered by approximately 3 feet. This will allow the storage of an additional 3 feet of

water before stormwater spills over into plant communities that are more sensitive to water level fluctuations. Flooding will still occur in the forested areas as it currently does, at a frequency and duration that will maintain the forest plant communities and not adversely affect plant species diversity. For a more detailed discussion of the hydrologic models used and their results, see the discussion beginning on page 39 of the *Preliminary Design Report* (King County, 1999) and Appendix A of that report.

The berms described above would be constructed along the alignment of an existing golf-cart path, located just east of the Northwest Ponds, and at the Approach Light Road, respectively (see Figure 3). Approximately 0.6 acre of wetland within the existing golf course currently planted with turf grass or used as cart paths would be filled for berm construction. Temporary construction impacts associated with installation of the conveyance pipes to connect the East Fork to the Northwest Ponds are also expected.

Wetland Water Level Fluctuations

In addition to the direct alterations to the wetland outlined above, the use of the Northwest Ponds as part of a regional detention facility will change the volume and timing of water that enters and exits the wetland. Although the response of wetlands to the input of stormwater is not completely understood, the most comprehensive study conducted to-date in this area is the Puget Sound Wetland and Stormwater Management Research Program (PSWSMRP). That study concluded that (other than direct wetland alteration) it is the change in wetland hydrology that has the most profound effect on wetland communities as adjacent land use changes occur. Changes in wetland hydrology, typically measured by the increase in depth, frequency, and duration of flooding within wetland communities, tend to adversely affect plant species diversity. The resulting changes in the plant community in turn have an adverse effect on wetland function and wildlife species dependent on those areas. To protect existing communities, the PSWSMRP makes a series of recommendations regarding allowable changes to water level fluctuations.

Modeling completed for the *Preliminary Design Report* demonstrates that the frequency and duration of flooding in the high-quality forested community to the south and east of the existing ponds will be consistent with the recommendations of the PSWSMRP. Instead of being flooded out, those areas will in fact see fewer flooding events for shorter periods of time as a result of the project. Although construction of the berms would make it possible to store water well above current levels, this would occur so infrequently and for such short durations that it would have no measurable impact on these forested communities. The impacts on this portion of the wetland would therefore be a function of drawdown and loss of flood frequency. This drawdown effect is expected to be limited to a narrow fringe area surrounding the ponds. Because the majority of this forested wetland lies above this frequently flooded fringe, it is reasonable to assume that this change will not adversely affect its function. Pre- and post-construction monitoring of the groundwater within the fringe, however, is being proposed to more accurately track and mitigate for changes that do occur.

Within the newly configured wetland to the north and east of the existing ponds, the model shows that the goal of establishing a scrub-shrub community is attainable.

While flooding in this area is predicted to be frequent and last for several days at a time, these areas will be revegetated following excavation with willow and other native species tolerant of high water level fluctuations. The scrub-shrub community will also discourage waterfowl, particularly Canada geese, from using the regional detention facility by eliminating the open areas adjacent to the existing ponds.

More detailed information about the modeling and predicted water level fluctuations can be found beginning on page 46 of the *Preliminary Design Report* (King County, 1999). During final design, however, the model will be refined with regard to seasonal fluctuations to more reliably select the suitable species.

Stream Modifications

To effectively lower the water surface elevation of the ponds, the outlet channel (West Fork of Des Moines Creek) must also be lowered. This will require the reconstruction of approximately 1,200 linear feet of the existing channel and the removal of two artificial weirs located within that reach. To accommodate the additional depth and improve conveyance, the banks will also be modified. In its current configuration, the channel gradient (slope) is very flat (less than 0.1 percent) through much of the golf course and then steepens to approximately 2 percent as it approaches South 200th Street. The flat reach has limited flow capacity because of its low gradient and the abundance of vegetation growing within the channel. Within this reach, water quality, particularly through the summer months, has been poor, characterized by high temperatures and low dissolved oxygen levels. In order to more effectively convey water, the overall slope of the channel would be made more consistent across the golf course (approximately 1 percent), and the channel will be reconfigured to maintain a more free-flowing, gravel-bedded environment. By increasing the channel gradient, adding channel roughness, and providing a vegetative buffer, the project is expected to improve both habitat and water quality within this reach of the stream.

Restoration and enhancement of this channel will include both instream habitat features, such as large woody debris and gravel, cobbles and boulders, as well as buffer revegetation. As currently proposed, there will be no permanent loss of stream function or length as a result of conveyance improvements to the stream for either construction or operation of the regional detention facility.

Habitat Enhancement

As part of the habitat enhancement efforts within the lower two zones (see Figure 2), large woody debris, gravel, cobbles, and boulders will be placed within the stream. These will likely be added in select reaches from South 200th Street to the mouth to increase habitat diversity and improve fish passage. These materials will be added from the existing trail, where possible, or from previously improved areas such as within the Midway Sewage Treatment Plant property. Under the direction of a qualified biologist, materials to be used will be placed in the stream using trackhoes operating from outside the wetted perimeter of the stream.

ATTACHMENT 3.17

- 3) *Estimate the amount of fill and dredge material that could be placed in or removed from surface water or wetlands and indicate the area of the site that will be affected. Indicate the source of fill material.*

Based on preliminary grading plans, an estimated 60,000 cubic yards of material will be excavated from the wetland and stream areas, as outlined above.

Construction of the berms will require approximately 15,000 cubic yards of material, with roughly one-half of this being placed within the 0.6 acre of wetland. The remainder will be placed in adjacent upland locations. An estimated 500 cubic yards of streambed gravel, 600 rounded boulders, and 75 pieces of large woody debris will be placed within the reconfigured stream. Additional large woody debris, boulders, and streambed gravels will also be used to enhance the stream in Zones 1 and 2.

- 4) *Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities, if known.*

Yes. Surface water will be diverted from the East Fork of Des Moines Creek directly to Puget Sound through a bypass pipe. This will greatly reduce the volume of water flowing through the channel during storm events and therefore significantly reduce erosion. A second diversion is also planned that would route surface water from the East Fork of Des Moines Creek to the regional detention facility located in the West Fork subbasin. This would occur during storm events that are greater than the predicted 2-year event. This water would then be released slowly back into Des Moines Creek, again substantially reducing the erosive power of the stream.

- 5) *Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.*

Yes. Two reaches of Des Moines Creek have been identified as being located within the 100-year floodplain, as mapped on Flood Insurance Rate Map No. 53033C0962 F, dated May 16, 1995. The first reach, located from the mouth to Marine View Drive, is mapped as Zone AE. The second, which extends from Marine View Drive to South 212th Street (if extended), is mapped as being in Zone A. No reduction in floodplain storage volume or alteration of out-of-bank flows would occur. By routing a portion of high flows through the bypass system rather than the stream, the floodplain in the vicinity of the Des Moines Creek Beach Park should be reduced.

Based on available information, it appears that a section of new pipe needed to complete the high flow bypass around the Midway Sewage Treatment Plant would be constructed within the second floodplain area.

Although not mapped as such, portions of the Tyee Golf Course flood regularly during the winter months. Depending on the weather, these areas can remain inundated for much of the winter. A minor reduction in floodplain storage from berm creation is more than offset by excavation in this area.

ATTACHMENT 3.18

- 6) *Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.*

No. Although the proposed bypass system will use an abandoned sanitary sewer pipe, the pipe will be sanitized prior to use and will only carry excess stream water taken directly from the East Fork of Des Moines Creek. The bypass system will be entirely isolated from wastewater sources; therefore, the water discharged into Puget Sound will not contain any waste materials.

b. *Ground:*

- X 1) *Will groundwater be withdrawn, or will water be discharged to groundwater? Give general description, purpose, and approximate quantities, if known.*

As part of this proposal, groundwater would be withdrawn just below South 200th Street and released into Des Moines Creek during periods of extremely low flow. This is being proposed to help ensure the survival of fish and other aquatic life within the stream when flows fall below the target baseflow of 1 cubic foot per second. Well water would be pumped into the stream as needed to maintain the baseflow, up to a maximum of 1 cubic foot of water per second, which equates to 448.8 gallons per minute. The duration of this activity will be dependent on actual stream flow conditions, but is expected to be needed only during the dry summer and fall months. Based on gauge data from recent years, the well would likely operate regularly for three to four months, providing a range of flows between 0.01 and 0.67 cubic feet per second (5 gallons to 300.7 gallons per minute).

Using groundwater to supplement stream baseflow is sometimes a controversial concept. Depending on the depth of the groundwater being withdrawn, it is possible that water taken out in one location reduces the amount of water that would otherwise make its way to the stream via groundwater transport in another. In this case, however, the well proposed for use draws water from well below the streambed (190 to 250 feet below) and should not have any effect on the natural groundwater discharge to the stream. Water rights for groundwater withdrawal, however, need to be obtained.

- 2) *Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example, domestic sewage, industrial chemicals, agricultural, etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.*

No waste materials will be discharged into the ground.

ATTACHMENT 3.19

c. *Water Runoff (including stormwater):*

- 1) *Describe the source of runoff (including stormwater) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.*

These projects are specifically designed to alleviate erosive energy of peak flows in Des Moines Creek that have resulted from inadequate stormwater controls required in the past. As designed, the projects will employ both (1) a regional detention facility intended to store and more slowly release stormwater, and (2) a bypass pipe system that will reroute erosive stream flows directly to Puget Sound. Water stored within the facility will be released back into Des Moines Creek, but at a slower rate to decrease erosion and habitat degradation within the stream. Water carried through the bypass pipe will be discharged directly into Puget Sound, approximately 1,900 feet offshore via a soon-to-be-abandoned wastewater outfall.

- 2) *Could waste materials enter ground or surface waters? If so, generally describe.*

These projects are designed to collect and manage existing surface water from both the East and West Forks of Des Moines Creek. The projects will not generate any waste material or effluent of any kind.

It is possible, however, that waste materials and/or contaminants could enter the stream off-site and be transported by Des Moines Creek to the regional detention facility and/or the flow bypass system. The most likely source of contaminants in the stream is runoff from roadways and industrial activities upstream of the project area. The proposed regional detention facility and flow bypass system are also located downstream of the Sea-Tac International Airport's Industrial Wastewater System (IWS). The IWS collects runoff from the airport terminals, taxiways, hangars, aircraft, and vehicle maintenance areas as well as parking and cargo areas. Runoff from these areas can be contaminated by accidental fuel spills, de-icing chemicals, and wash water from the cleaning of aircraft and ground support vehicles. Wastewater collected in this system is treated in a small wastewater treatment facility and then conveyed to Puget Sound via an existing 18-inch outflow pipe.

During an extreme event, however, such as the rain-on-snow event that occurred in December 1996 through January 1997, wastewater can be released into Des Moines Creek from the IWS (Parametrix, 2000). At present, such a release would occur through a designed emergency outlet, which flows into an arm of the Northwest Ponds wetland. Following construction of the proposed projects, such a release would flow into the regional detention facility where it would be detained and eventually released back into the West Fork of Des Moines Creek. Because it is designed to release into the wetland that drains into the West Fork of Des Moines Creek, however, a potential overflow of contaminated water from the IWS could not directly enter the flow bypass system, located on the East Fork of Des Moines Creek.

The Port of Seattle is in the process of expanding the capacity of the Industrial Wastewater System, greatly increasing the storage and treatment capacity of that system and therefore significantly reducing the potential for a future emergency

release. Releases into the Northwest Ponds, however, will still be possible, but only during extreme storm events (in excess of the 100-year, 24-hour storm). Planned upgrades to the IWS that would occur as part of the Master Plan Update Improvements would reroute normal discharges into the Metro sewage collection system. When the Metro system is unable to accommodate all of the flows, the IWS would then discharge directly to Puget Sound via the existing 18-inch outfall. If those improvements are made, there should be no future discharges to the Northwest Ponds or Des Moines Creek.

The Northwest Ponds wetland can and does provide some water quality treatment for water passing through it in the form of biofiltration and the settling of sediment within the ponds themselves. Use of a portion of this wetland for stormwater detention, as proposed under this checklist, will not eliminate the capacity of the wetland to perform that function. The regional detention facility, however, is not designed to be, nor should it be, relied upon to function as a water quality treatment facility. All new development within the basin, including road systems, industrial development, and the Port of Seattle's Master Plan Update, must provide their own water quality facilities to ensure the health of Des Moines Creek and the Northwest Ponds wetland.

d. *Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:*

Mitigation for this proposal was not an afterthought but an integral part of the project design. With the stated goal of restoring Des Moines Creek as its primary purpose, the implementation of the *Des Moines Creek Basin Plan* itself is in effect mitigation for the lack of effective stormwater control in the past. Controlling the erosive flows to protect and restore the stream, however, will have an impact on the wetland area referred to as the Northwest Ponds. With the proper design and management of the facility and appropriate mitigation, however, the detrimental effects will be minimized. Over time, the resulting modifications will provide greater function to the basin overall.

To mitigate for the impacts associated with the regional detention facility, the following design and/or project components have been incorporated:

- Creation of approximately 1 acre of additional wetland within the regional detention facility by excavating existing upland areas within the golf course.
- Revegetation of the excavated areas with native wetland plant species and conversion of approximately 5.9 acres from invasive, non-native species to a native wetland community.
- Dampening of wetland water level fluctuation within the forested portions of the wetland. The reconfigured outlet channel and the connection of the flow bypass system will allow the water surface elevation of the ponds to return rapidly to normal following a storm event. This significantly reduces the effects of prolonged inundation resulting from the use of the wetland for stormwater management.
- Reduction of the erosive flows within Des Moines Creek. Although regulatory agencies generally are reluctant to grant mitigation credit for "out-of-kind" mitigation, the goal of the projects to restore and enhance the aquatic environment is beneficial to the basin as a whole.

4. Plants

a. Check or underline types of vegetation found on the site:

- Deciduous trees: alder, maple, aspen, willow, cottonwood, other
- Evergreen trees: fir, cedar, pine, other
- Shrubs: salmonberry, vine maple, hazelnut, Indian plum, blackberry
- Grass: turf grasses (found on the golf course), reed canarygrass
- Pasture
- Crop or grain
- Wet soil plants: cattail, buttercup, bulrush, skunk cabbage, other
- Water plants: water lily, eelgrass, milfoil, waterpepper, other
- Other types of vegetation: Macroalgae (seaweed) species within the marine environment. See below for details.

The majority of the project elements are located in open-space areas associated with the Tyee Golf Course, the Northwest Ponds, or the Des Moines Creek Park, which follows Des Moines Creek from South 200th Street to Puget Sound. The golf course is maintained turf grasses, with a small number of ornamental trees (that is, lombardy poplars) and willows along the cart paths or stream. The Northwest Ponds wetland includes a large forested and scrub-shrub area dominated by black cottonwood, red alder, dogwood, Indian plum, and salmonberry. Himalayan and Evergreen blackberry, reed canarygrass, and other invasive species are prolific in much of this area, except where they are shaded out completely by mature cottonwoods. The wetland also contains open-water components and emergent areas containing cattail, waterpepper, and buttercup.

The area along the Des Moines Creek trail includes a largely deciduous forest with hemlock, cedar, and fir in smaller numbers. Along the trail, big-leafed maple, alder, and cottonwood are common, with salmonberry, Indian plum, beaked hazelnut, and sword fern common in the understory. As in other areas, Himalayan blackberry is prolific along the edge of the forested areas and where disturbance has opened the canopy.

Eelgrass beds (*Zostera marina*) occur in the subtidal marine environment along the alignment of the existing Midway sanitary sewage pipeline at depths between -4 feet and 12 feet MLLW. Eelgrass beds are critical habitat for juvenile salmonids. Macroalgae (seaweed) species are also present in this area and include *Laminaria saccharina*, *Ulva lactuca*, *Sarcodiotheca gaudichaudii*, *Desmerestia* spp., *Enteromorpha* spp., and *Porphyra* spp.

b. What kind and amount of vegetation will be removed or altered?

Construction will require the removal of the following:

- Approximately 4.4 acres of emergent vegetation (that is, lawn grasses) on the golf course.
- Approximately 1.5 acres of scrub-shrub area dominated by reed canarygrass and Himalayan and Evergreen blackberries.

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- One acre of forested area consisting of cottonwood and red alder with salmonberry understory.
- Approximately 1.5 acres of shrub area dominated by native willow and dogwood species.
- Approximately 1.5 acres of upland dominated by red alder, salmonberry, and blackberry will be removed to install a new section of bypass pipe south of South 200th Street.

No eelgrass beds or other aquatic vegetation within the marine environment will be disturbed by the proposed projects.

- c. *List threatened or endangered species known to be on or near the site:*

There are no known threatened or endangered plant species known to be present within the project area.

- d. *Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:*

Following construction, all disturbed areas with wetlands, streams, or their required buffers will be revegetated with appropriate native plant species. This includes the 5.9 acres of highly disturbed wetland area within and adjacent to the golf course that will be converted from invasive, non-native species to scrub-shrub areas dominated by native willows. In addition, all areas disturbed during construction, with the exception of the paved surface of the recreational path through the Des Moines Creek Park and the tops of the berms, will be revegetated using native plants.

5. Animals

- a. *Check or underline any birds or animals that have been observed on or near the site, or are known to be on or near the site:*

- Birds: hawk, heron, eagle, songbirds, other
- Mammals: deer, bear, elk, beaver, other: fox
- Fish: bass, salmon, trout, herring, shellfish, other

Fish species known to occur in Des Moines Creek include coho and chum salmon, searun cutthroat trout, a limited number of steelhead, and an occasional pink salmon. Chinook salmon are found in the nearshore marine environment. Resident cutthroat, although not numerous, are found throughout the stream from the Northwest Ponds to just above the mouth. Warmwater species such as pumpkinseed sunfish, large mouth bass, sculpins, and sticklebacks are also present. The culvert under Marine View Drive currently creates a fish-passage barrier, effectively limiting the distribution of salmon to the reach between Marine View Drive and the mouth. The City of Des Moines is currently seeking permits to replace that culvert with a bridge on behalf of the Basin Committee.

Surveys of marine animal species along the alignment of the Midway sanitary sewage pipeline, near the mouth of Des Moines Creek, revealed use of the area by nine species of clam, six species of sea star, sea anemone, sea pen, mussel, octopus, squid, Dungeness

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crab, red rock crab, kelp crab, crab (*Cancer gracilis*), sea cucumber, tube worm, C-O sole, and English sole (juvenile). It is also possible that the area is used by surf smelt, sand lance, and/or Pacific herring, though these species have not been observed during surveys of the area. Brown and copper rockfish are known to use the Des Moines artificial reef just south of the pipeline alignment. All of the salmon and trout species that use Des Moines Creek (listed above), with the exception of resident cutthroat trout, also use the nearshore marine environment, especially eelgrass beds, during some stage of their life histories.

The mixed-forested community within the Des Moines Creek Park, adjacent to the Northwest Ponds, provides habitat for many species of birds and mammals. Bird species observed within the project vicinity include the American robin, cedar waxwing, black-capped chickadee, common bushtit, downy woodpecker, European starling, American goldfinch, red-shafted flicker, song sparrow, Steller's jay, rufous-sided towhee, belted kingfisher, rufous hummingbird, mallard ducks, common crow, glaucous-winged gulls, dark-eyed junco, Canada goose, red-tailed hawk, Virginia rail, and great blue heron. Bald eagles have been sighted in the vicinity, with the closest nest being located near Angle Lake. Roost trees used by eagles have also been reported near the mouth of Des Moines Creek by local residents.

Mammals reported to be present in the project area include western gray squirrel, raccoon, opossum, rabbit, coyote, deer, deer mouse, voles, and Pacific Coast mole. Red fox has also been sighted near the Midway Sewage Treatment Plant. Bullfrogs and three-spined sticklebacks have been found within the open-water portions of the Northwest Ponds.

b. *List any threatened or endangered species known to be on or near the site:*

Lists obtained from the U.S. Fish and Wildlife Service and the National Marine Fisheries Service indicate that the marbled murrelet, resident and wintering bald eagles, bull trout, and chinook salmon may be located within the vicinity of the project. Recent Section 7 consultations for another project on Des Moines Creek indicated no use of the stream or the surrounding area by these species. Both chinook salmon and bull trout, however, may use the nearshore environment near the mouth of Des Moines Creek. Section 7 consultations for these projects are anticipated.

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c. *Is the site part of a migration route? If so, explain.*

Yes, the site is located on the Pacific Flyway and therefore may provide some refuge for migratory birds. The lower reaches of Des Moines Creek and the nearshore marine environment near the creek's mouth are also used by salmon and trout at various life stages, including upstream and downstream migration. Although access is currently limited, the replacement of the Marine View Drive culvert with a bridge will greatly expand the habitat available for salmon and trout species.

ATTACHMENT 3.24

d. *Proposed measures to preserve or enhance wildlife, if any:*

The primary goal of these projects is to restore and enhance Des Moines Creek and the fish species that use that system. This will be accomplished by stabilizing the channel, reducing erosion, and removing physical barriers to upstream migration. Large woody debris and natural streambed materials will be added to degraded reaches of the stream to help recreate channel complexity for the benefit of salmon, trout, and other aquatic life. By increasing stability, removing barriers, and improving habitat conditions, an additional mile of suitable habitat should become available to salmon species. The proposed low flow augmentation should likewise make the stream more habitable for resident fish and aquatic organisms, as well as increase the likelihood of survival for juvenile coho salmon that rear in their natal streams for an entire year. Regrading low-gradient portions of the stream will eliminate the seasonal low-dissolved oxygen area on the golf course, which is believed to be lethal to fish. Buffer restoration in this same reach will provide much-needed shade over the stream and help reduce high water temperatures common during summer months.

By removing extensive areas of invasive non-native species and revegetating with appropriate native plant species, the project will have a positive effect on wildlife as well. Aside from the fish, terrestrial species dependant on the stream will likewise benefit directly and indirectly by having a healthier stream.

In the area immediately south of the Sea-Tac International Airport surrounding the proposed regional detention facility, however, wildlife use will not be encouraged. Much of the proposed construction there is located directly under the flight path of both inbound and outbound flights. The Federal Aviation Administration (FAA) has deemed wildlife in these areas, particularly large-bodied birds and flocks of smaller birds, to be a hazard to the flying public. To minimize the risk, the FAA has promoted the control and, where possible, the elimination of hazard wildlife species in and adjacent to airport properties. It has also instituted an official policy, outlined in FAA Advisory Circular 150, that wildlife attracting land uses within 10,000 feet of airports should be strongly discouraged. In keeping with this policy, this project will not intentionally create any new permanent open-water areas and will use vegetation to cover areas outside of the existing ponds that are inundated following storm events. If necessary, netting or other mechanical means will be used to discourage waterfowl from using the areas where additional short-term storage will occur. Areas that are currently flooded for weeks or months on the golf course will, after construction of the pond, no longer be so attractive to waterfowl due to reduction in flooding frequency and conversion of turf grasses to a scrub-shrub vegetative cover. As planned, the threat of bird strikes should decrease.

6. Energy and Natural Resources

- a. *What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.*

The completed projects will use a limited amount of electricity to operate the well pump, installed to supplement the stream during extreme low flow conditions. The projects will otherwise not use any energy.

ATTACHMENT 3.25

- b. *Would your project affect the potential use of solar energy by adjacent properties? If so, explain.*

No. The projects will have no effect on solar energy availability.

- c. *What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:*

The pump selected for the flow augmentation well will be operated only when necessary to supplement low flow conditions within the stream. The amount of electricity used should be limited, but can be further reduced by using an automated switch that turns the pump on and off, based on flow rate and/or depth of water within the stream channel.

7. Environmental Health

- a. *Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.*

As designed, the regional detention facility will, at maximum capacity, retain a large volume of water behind its berms. While remote, it is possible that these berms could fail, releasing water downstream. To minimize the risk of this occurrence, the berms will be designed to meet or exceed state dam safety requirements and be operated in accordance with a comprehensive dam safety plan developed specifically for these dams. To further ensure the safe design, construction, and operation of the facility, the Washington State Department of Ecology will review the facilities for safety and require monitoring and periodic inspections of the berms.

Accidental fuel spills, de-icing chemicals, and other contaminants originating off-site could also potentially reach Des Moines Creek and the proposed project site. Such occurrences are beyond the control of the projects proposed for coverage under this checklist.

- 1) *Describe special emergency services that might be required.*

In the event of berm failure, South 200th Street would likely need to be closed. Downstream areas, particularly the senior center buildings located in the Des Moines Beach Park, would also need to be advised and the occupants evacuated to ensure that no one would be injured.

- 2) *Proposed measures to reduce or control environmental health hazards, if any:*

The berms are being designed to exceed state dam safety standards and will be operated in accordance with a dam safety plan.

Stormwater entering the proposed regional detention facility will at times contain contaminants picked up from nonpoint sources within the upper basin. These include runoff from roadways, industrial uses, and businesses upstream that receive varying levels of stormwater treatment. The Northwest Ponds wetland can and does provide

some water quality treatment for this stormwater in the form of biofiltration and the settling of sediment within the ponds themselves. Use of a portion of this wetland for stormwater detention will not eliminate the capacity of the wetland to perform that function. The regional detention facility, however, is not designed to be, nor should it be, relied upon to function as a water quality treatment facility. All new development within the basin, including road systems, industrial development, and the Port of Seattle's Master Plan Update, must provide their own water quality facilities to ensure the health of Des Moines Creek and the Northwest Ponds wetland.

As described above in B.3.c (2), modifications to the Sea-Tac International Airport's Industrial Wastewater System (IWS) should greatly reduce, if not eliminate, the potential for a contaminant release from the airport to Des Moines Creek. In addition, the Port of Seattle has prepared a Stormwater Pollution Prevent Plan (SWPPP) and a Spill Control, Containment, and Countermeasure Plan (SPCCC) that are intended to manage potential contaminants. In accordance with those plans, Port of Seattle personnel will monitor releases from their IWS and contain any and all spills that might occur.

b. Noise:

- 1) *What types of noise exist in the area that may affect your project (for example, traffic, equipment operation, other)?*

The proposed regional detention facility lies immediately beneath the flight path of the Sea-Tac International Airport. Aircraft noise in this area is quite frequent and loud, and at times makes it difficult to hear other background noises. In addition, traffic along the streets in the project vicinity will contribute a small amount of background noise to the project area. These sources of noise will have no effect on the performance of the completed projects, but may create a periodic disruption of verbal communication between construction crews during project construction.

- 2) *What types and levels of noise would be created by or associated with the project on a short-term or long-term basis (for example, traffic construction, equipment operation, other)? Indicate what hours noise would come from the site.*

Construction of the regional detention facility and the new sections of bypass line will create some short-term noise impacts. The most intensive noise levels will occur at the construction sites where the noise levels will typically range from 75 to 95 dBA (decibels).

- 3) *Proposed measures to reduce or control noise impacts, if any:*

Construction noise will comply with the provisions of applicable noise ordinances. Equipment operation will be limited to the hours from 7 a.m. to 7 p.m., Monday through Friday. Work on Saturday will be limited to the hours from 9 a.m. to 5 p.m.

8. Land and Shoreline Use

- a. *What is the current use of the site and adjacent properties?*

The basin as a whole is largely developed with commercial uses, including the airport, warehouses, hotels, multifamily residential areas, and local businesses dominating the upper basin. The central portion of the basin has a higher percentage of single-family residential uses, but also supports commercial and local businesses. The lower basin includes portions of the City of Des Moines that have a mix of commercial and residential structures. Land uses in the vicinity of the proposed regional detention facility include recreational property. The locations within the basin that will be affected most by these projects are largely recreational areas, including the Tyee Golf Course and the Des Moines Creek Park. Both areas are primarily open space. Upon project completion, no visible disturbance or change of use will occur in the Des Moines Creek Park. Changes to the Tyee Golf Course will eliminate use of Fairway 13, but would otherwise allow continued use as a recreational site. However, the Tyee Golf Course is scheduled for closure due to disruptions anticipated from construction of other projects in the area.

- b. *Has the site been used for agriculture? If so, describe.*

The site of the proposed regional detention pond was once used for agriculture. Aerial photographs from 1936 to present show an evolution from agricultural use to peat extraction and eventually to golf course development. The remainder of the proposed work is located along the stream and within the ravine associated with it; they do not appear to have been used extensively for agriculture.

- c. *Describe any structures on the site.*

The Tyee Golf Course property has a number of structures located on it, including the clubhouse, a golf-cart storage garage, a maintenance garage, and a small snack shack. In addition, there are a series of approach light towers on the site that extend south from one of the runways to South 200th Street. The structures related to the operation of the golf course may be removed if and when the golf course closes.

One of the new sections of bypass pipe will be constructed across the Midway Sewage Treatment Plant site. There are several medium-sized buildings and enclosed treatment facilities on that site.

Downstream of Marine View Drive, the Des Moines Beach Park contains the community center and several other small buildings.

- d. *Will any structures be demolished? If so, what?*

None of these structures will be removed or modified as part of this proposal.

- e. *What is the current zoning classification of the site?*

SeaTac: Aviation Operations and Park.
Des Moines: Suburban Estates – Residential.

ATTACHMENT 3.28

f. *What is the current comprehensive plan designation of the site?*

SeaTac: Airport, Industrial, and Park.

Des Moines: Parks/Open Space and Public Facility (Midway Sewage Treatment Plant).

g. *If applicable, what is the current shoreline master program designation of the site?*

Des Moines Creek itself is a small stream (less than 20 cubic feet per second of average annual flow) that does not meet the requirements for shorelines jurisdiction. Where Des Moines Creek flows into Puget Sound, however, the shoreline is classified as Urban.

h. *Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.*

Yes. Des Moines Creek and the Northwest Ponds wetland are identified as sensitive areas under the applicable city and state classifications. In addition, a second wetland located south of South 200th Street would also be considered a sensitive area. Within the ravine reach, it is likely that much of the area is considered steep slopes and would be at risk for erosion. At the downstream end of the project area, Puget Sound is considered a shoreline of the state and should be managed to protect aquatic species using that area.

i. *Approximately how many people would reside or work in the completed project?*

None. The completed projects will not create housing or an employment center.

j. *Approximately how many people would the completed project displace?*

None. The projects will not displace any businesses or residences.

k. *Proposed measures to avoid or reduce displacement impacts, if any:*

Not applicable.

l. *Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:*

The proposed projects are consistent with planning goals and policies of both the City of Des Moines and the City of SeaTac. In keeping with Des Moines' Comprehensive Plan policies 4-03-01, 4-03-03, 4-03-14, 4-03-15, and 4-03-17, the proposed projects promote sound and innovative environmental management to protect and preserve habitat at a watershed scale and to cooperatively manage stormwater with other affected jurisdictions.

The Comprehensive Plan for the City of SeaTac identifies the high peak flows in Des Moines Creek as one of the major environmental management issues facing the city. Consistent with comprehensive plan policies 8.1 E, 8.2 G, 8.2 I, 8.2 N, 8.3 A, and 8.3 B, the proposed projects will help manage stormwater to protect and enhance Des Moines Creek and the aquatic species dependent on that system by using a watershed level approach. The proposed projects also follow the guidance provided in Comprehensive Plan policies 8.1 H and 8.3 D, which deal with wetland protection.

ATTACHMENT 3.29

The proposed projects covered by this checklist are recommendations of the *Des Moines Creek Basin Plan* and are therefore consistent with that document. Although not specifically identified in other planning documents, the projects are also consistent with the goals of the applicable zoning codes and stormwater management guidelines, which are intended to protect sensitive areas and provide meaningful stormwater management. The projects accomplish both by stabilizing the flow regime within Des Moines Creek and enhancing and protecting the higher quality portions of the wetland at the Northwest Ponds. With more manageable flows, existing fish habitat becomes more stable, and more meaningful fish habitat enhancement can be made.

Although the underlying zoning for the regional detention facility site is Industrial, the portion of the property proposed for this use is a part of the Northwest Ponds wetland. As such, it would not likely be developed regardless of the zoning.

9. Housing

- a. *Approximately how many units would be provided, if any? Indicate whether high-, middle-, or low-income housing.*

None. These projects will not create any housing.

- b. *Approximately how many units, if any, would be eliminated? Indicate whether high-, middle-, or low-income housing.*

Not applicable.

- c. *Proposed measures to reduce or control housing impacts, if any:*

Not applicable.

10. Aesthetics

- a. *What is the tallest height of any proposed structure(s), not including antennas? What principal exterior building material(s) are proposed?*

The tallest proposed structures are the earthen berms, which are expected to be less than 10 feet high. All the other project elements are below ground.

- b. *What views in the immediate vicinity would be altered or obstructed?*

The berms will be constructed across the Tye Golf Course along an existing golf cart path and at the approach light road (see Figure 3). In both locations, the ground surface will be raised to form a berm approximately 10 feet high with a 15-foot-wide driveable surface on top to provide maintenance and emergency access. The berms will have gradual (4 feet horizontal for every 1 foot vertical) side slopes, for a total width of 75 feet. Native vegetation will be planted on either side of the berms. For dam safety reasons, the side slopes of the berms will be vegetated with grasses and low growing ground covers. These alterations will substantially change the appearance of what is now a portion of the golf .

ATTACHMENT 2.30

course. While notably different than the current golf course vistas, the native vegetation to be planted should soften the effects of the berms and help them blend into the landscape.

c. *Proposed measures to reduce or control aesthetic impacts, if any:*

The detention facility will be vegetated to create a native plant community in the areas where additional water will be stored. The presence of vegetation will help the facility blend in with the adjacent native areas and conceal the berms.

11. Light and Glare

a. *What type of light or glare will the proposal produce? During what time of day would it mainly occur?*

The projects will not produce any light or generate any glare.

b. *Could light or glare from the finished project be a safety hazard or interfere with views?*

No. The reflection of light off the water stored in the detention pond was evaluated as a potential source of glare affecting pilots approaching or departing from the Sea-Tac International Airport. Given the elevation and position of the ponds and the angle of approaching and outgoing flights, the facility should not generate any reflection that could interfere with incoming or departing flights. In addition, the facility will be entirely vegetated, thereby substantially reducing the amount of light that could potentially be reflected. Both Port of Seattle and Federal Aviation Administration (FAA) personnel have been, and will continue to be, consulted on the design of the facility to ensure that there are no adverse impacts to flight operations.

c. *What existing off-site sources of light or glare may affect your proposal?*

None.

d. *Describe proposed measures to reduce or control light and glare impacts, if any.*

Vegetation planted throughout the detention facility will help limit the amount of solar radiation reaching the flooded areas of the pond and help diffuse the reflections of that light. In addition, the vegetation planted within the facility and along the stream will help shade the stream, helping lower water temperatures and improving water quality during the summer months.

12. Recreation

a. *What designated and informal recreational opportunities are in the immediate vicinity?*

The Tye Golf Course and the Des Moines Creek trail provide recreational opportunities near the upper end of the project in the vicinity of the regional detention facility. The trail continues south and would be in proximity to some of the proposed stream enhancement as well as pipeline repair that will be required. At the mouth of Des Moines Creek, the

Des Moines Beach Park, Des Moines Community Center, and Des Moines Marina provide a variety of recreational opportunities.

- b. *Would the proposed project displace any existing recreational uses? If so, describe.*

The regional detention facility is located on the western edge of the Tyee Golf Course. Construction of the detention facility would eliminate the thirteenth hole and fairway entirely. If the course were to remain open, the remaining holes would need to be reconfigured. Other portions of the golf course, however, have been slated for development as part of the Port of Seattle's Master Plan projects. Anticipated impacts from the proposed extension of State Route 509 would also heavily impact the Tyee Golf Course. If plans for those projects move forward, the golf course would not have sufficient area to continue to operate as a regulation course.

- c. *Proposed measures to reduce or control impacts on recreation, including recreational opportunities to be provided by the project or applicant, if any:*

By stabilizing the stream, reducing erosion, and enhancing the fish habitat available within it, the projects should have a positive effect on recreational opportunities for trail users by creating a more complex habitat supporting a greater diversity of native plant and animal species. Construction of the Marine View Drive bridge will allow extension of the existing Des Moines Creek trail, providing additional trail mileage and facilitating linkage to existing trail networks.

13. Historical and Cultural Preservation

- a. *Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.*

Yes. The Des Moines Creek Beach Park is listed on the State Register of Historical Sites. In addition, several shell middens that are of cultural and archaeological importance have previously been discovered in the area. Additional information regarding these and other historical and/or culturally significant sites will be requested from the Washington State Office of Archaeology and Historic Preservation, the City of Des Moines, and the King County Office of Cultural Resources.

- b. *Generally describe any landmarks or evidence of historical, archaeological, scientific, or cultural importance known to be on or next to the site.*

Des Moines Creek Beach Park, formerly known as Covenant Beach Bible Camp, is listed on the Washington State Register of Historic Places. As a former mill site, church bible camp, and campground for the Muckleshoot Indians, the site has a long and varied history. In addition to shell middens found on the site in the past, there are several small cabins and cottages built in the 1930s that have been preserved. Such features may be considered important cultural and archaeological resources that may need to be protected. None of the work proposed is expected to impact any of the identified historical or archaeological sites.

ATTACHMENT 3.32

- c. *Describe proposed measures to reduce or control impacts, if any.*

The work proposed within the Des Creek Beach Park is limited to stream enhancement, which would include the placement of large woody debris and large rounded rock to increase channel complexity. None of this work is expected to impact any of the aforementioned historical, archaeological, or culturally significant resources.

Because the projects are not expected to impact any listed or proposed archaeological or historical resources, no mitigation is being proposed. However, peat deposits like those found at the regional detention pond site are known to preserve artifacts relatively well, and artifacts have been found in other peat deposits in King County. If cultural or archaeological resources are uncovered or encountered during project construction, work will cease immediately, and appropriate steps necessary to protect those resources will be taken prior to resumption of construction. If resources are discovered, the Washington State Office of Archaeology and Historic Preservation, the King County Office of Cultural Resources, the appropriate cities, and any affected tribal groups will be notified immediately, and an on-site inspection will be conducted by a state-certified archaeologist and other qualified resource professionals. A mitigation plan will be prepared prior to resuming construction at the site.

In addition, the measures and the possibility of uncovering materials of archaeological or historical significance near inland waters will be addressed in contract documents and discussed during a preconstruction conference with the construction crew/contractor prior to performing the work on-site. A certified archaeologist will also review the checklist during the comment period.

14. Transportation

- a. *Identify public streets and highways serving the site and describe proposed access to the existing street system. Show on-site plans, if any.*

The regional detention site will be accessed from the south via South 200th Street and 18th Avenue South, which both run along the edge of the existing Tyee Golf Course. The upper portion of bypass line and stream enhancement work will cross South 200th Street and then follow the Des Moines Creek trail. Stream enhancement in the lower reaches of the stream and the section of bypass pipe around the wastewater treatment facility will likely use South 216th Street to gain access to the Midway Sewage Treatment Plant site. From there, the service road can be used to move up or downstream. Once the new Marine View Drive bridge is in place and other related construction is completed, the service road will likely be resurfaced (by others) to extend the trail to Des Moines Beach Park.

- b. *Is the site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?*

Not applicable.

- c. *How many parking spaces would the completed project have? How many would the project eliminate?*

No parking spaces will be created or required.

- d. *Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).*

No. The completed projects will not require the creation of any new streets or roads. Access during construction will be from existing roads, but will not necessitate their improvement.

- e. *Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.*

Although the projects will not use air, rail, or water transportation, the regional detention facility and the upper end of the bypass pipe are located immediately south of the Sea-Tac International Airport.

- f. *How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.*

The completed projects will not generate any regular vehicular trips. Access to the sites for regular maintenance and monitoring activities will occur once or twice a month on average, but should not make any notable change in the base traffic counts.

During construction, approximately 3,500 trucks with trailers will be required to remove excavated material, bring in fill for the berms, and deliver the various construction equipment and supplies.

- g. *Proposed measures to reduce or control transportation impacts, if any:*

Traffic impacts are expected to occur primarily during the summer months in each of the four years the projects are under construction. The work will be staged such that the number of trips is spread over a four-year construction period during which the volume of trucks will vary. Peak volumes of trucks would occur during the summers of 2004 and 2005, when the majority of the earthwork would be completed. In subsequent years, the amount of traffic generated should be lower and more dispersed.

Every effort will be made to minimize the impact to local streets and neighborhood traffic by following a detailed traffic mitigation plan. The plan will include, at minimum, the following:

- All trucks will enter and exit the site through designated construction entrances.
- Flaggers will be provided at the construction entrances and in other locations, as necessary, to improve safety and minimize and control conflicts between construction vehicles and normal neighborhood traffic.
- All trucks and trailers will be within legal weight limits, follow posted speed limits, and be timed to avoid rush hour traffic. Loaded trucks will be covered during transport in accordance with local and state regulations.

- Trucks entering and exiting the site will follow a detailed haul plan outlining the routes that will be taken to and from the site. The plan will be developed and submitted for review to the cities and other appropriate permit agencies prior to construction. The plan will be coordinated with the cities, the Port of Seattle, and the Washington State Department of Transportation to avoid conflicts with other construction projects and to avoid overly congested or problematic routes.

15. Public Services

- a. *Would the projects result in an increased need for public services (for example, fire protection, police protection, health care, schools, other)? If so, generally describe.*

No. The projects will not increase the need for public services.

- b. *Proposed measures to reduce or control direct impacts on public services, if any:*

Not applicable.

16. Utilities

- a. *Underline utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.*

- b. *Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity that might be needed.*

Implementation of the low flow augmentation element will require groundwater withdrawal and a transfer or new acquisition of water rights. To operate the well pump, electrical connections will need to be made. Electrical service is already available at the site from Puget Sound Energy. The completed projects will not otherwise require any additional utility services.

C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: _____

Title: _____

Date Submitted: _____

Jon Hana
Senior Ecologist
March 2002

ATTACHMENT 3.35

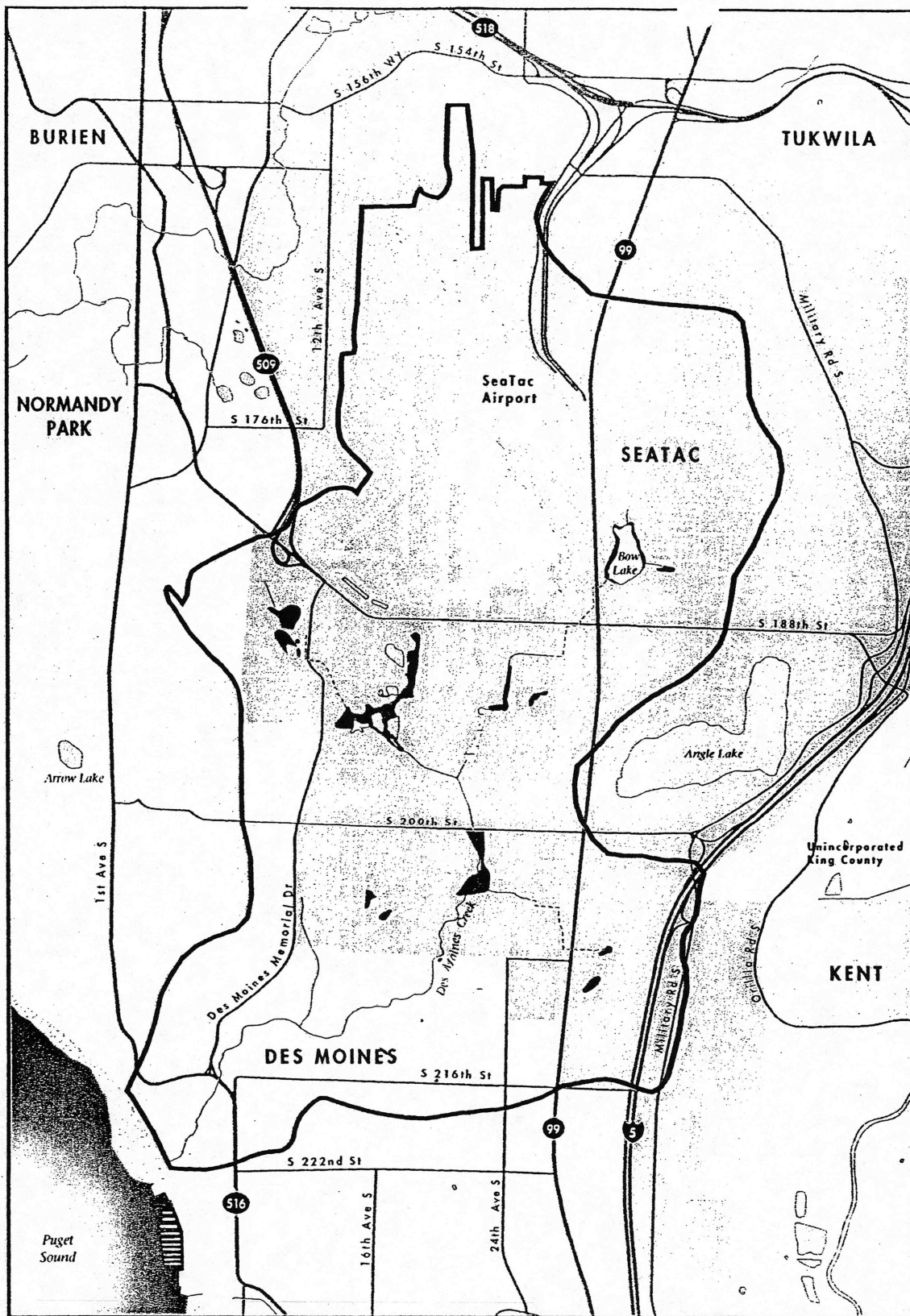
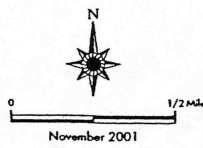


Figure 1
DES MOINES CREEK BASIN

- Basin Boundary
- Stream
- Piped Stream
- Lake
- Wetland
- R/D Facility



Map produced by:
GIS and Visual Communications Unit
Department of Natural Resources
0111DMONESJurisdictions.ni WCG

Base Map Notes:
All updates require to USGS RS
Wetland Sources:
Fot of Seattle Wetland Mapping 1995
Map does not include wetland R22
Stream and Pipe Location Sources:
USGS Digital Line Graph
King County Storm Water Program 1987
Aerial Photo 1979
Fot of Seattle Urban Mapping 1975
Roadway Sources:
USGS Digital Line Graph
Aerial Photo 1987
Industrial Wastewater System Sources:
Fot of Seattle Comprehensive Wastewater and
Industrial Wastewater Plan
Con sewer Line Sources:
USGS Digital Line Graph
Incorporated Areas Source:
King County GIS coverage



ATTACHMENT 3-36

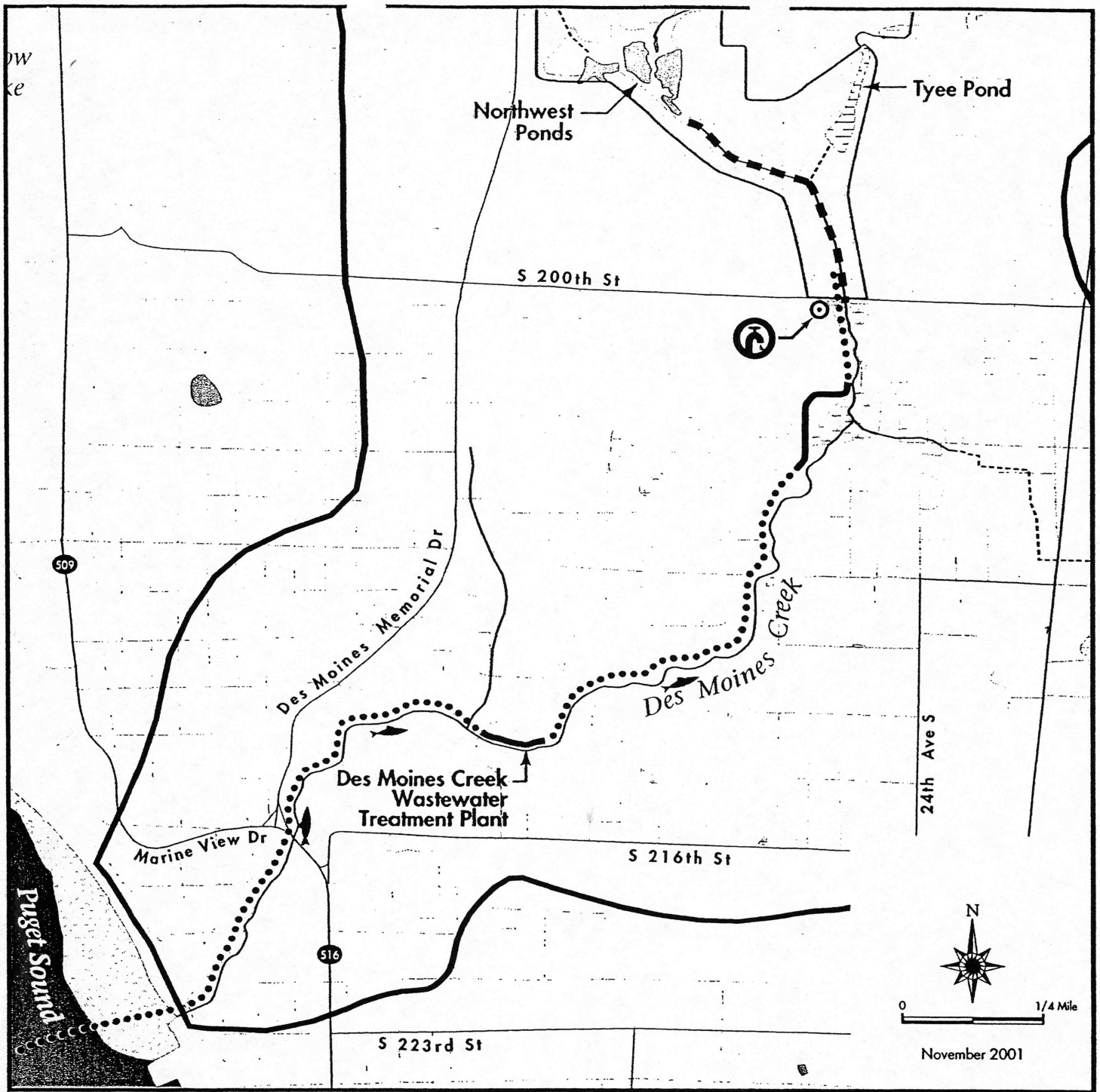


Figure 2
DES MOINES CREEK BASIN
 Capital Improvement Project Sites

- | | | |
|----------------|---|--|
| Basin Boundary | Regional Detention Facility Site | Fish Habitat Improvement Zones 1 and 2 |
| Stream | Flow Bypass Pipe: New Pipe | Stream Channel Reconstruction Reach Zone 3 |
| Piped Stream | Flow Bypass Pipe: Reused Pipe | |
| Lake | Fish Passage Improvement at Marine View Drive | |
| Wetland | Low Flow Augmentation Facility | |
| R/D Facility | | |
| Shoreline | | |

ATTACHMENT 3.37
 KING COUNTY

CITY OF SEATAC
FINAL STAFF EVALUATION FOR ENVIRONMENTAL CHECKLIST
FILE NO: SEP02 - 00006

PROJECT: Des Moines Creek Basin Restoration Projects

APPLICANT: Des Moines Creek Basin Committee (City of SeaTac, City of Des Moines, Port of Seattle, King County, Washington State Department of Transportation)

CONTACT: **City of SeaTac:** Michael Scarey, Senior Planner at (206) 241-1893/TDD (206) 241-0091. [E-mail: mikes@seatac.wa.gov]
City of Des Moines: Corbitt Loch, Planning Manager for the City of Des Moines at (206) 870-7576
Basin Committee: David Masters, Project Coordinator at (206) 354-9749

LOCATION: Des Moines Creek Corridor, and Wetlands South of Sea-Tac Airport Runways, East of Des Moines Memorial Drive, (see attached map).

PROPOSAL: The proposal involves the construction of several coordinated surface water management facilities to improve existing water quality conditions and to reduce existing flooding conditions within the Des Moines Creek basin. The improvements were identified in the Des Moines Creek Basin Plan which was published in 1997. More specifically, the proposal includes improvement of in-stream conditions by reduction of high flows, reduction in stream erosion, improvement of water quality, and improvement of in-stream fish habitat. The proposal includes numerous mitigation measures recommended by state, regional and local agencies to prevent and/or minimize potential adverse impacts. Projects include a new detention facility near the headwaters of Des Moines Creek, a high flow bypass pipe along Des Moines Creek, improving fish habitat conditions within Des Moines Creek, and low-flow augmentation to maintain fish-friendly water flows during dry summer months. These improvements are inter-related and operate in a coordinated fashion to reduce existing impacts to Des Moines Creek. The projects are intended to provide long-term stream health and to correct problems in the basin caused by past development, and are not mitigation for any future construction. These Basin Plan improvements will work in concert with the Marine View Drive Culvert Replacement.

COMPREHENSIVE PLAN DESIGNATIONS: The project area is not a single site, but takes place at the western headwaters of Des Moines Creek (the Northwest Ponds), and at various locations along the stream corridor. The Comprehensive Plan Land Use designations for the property in the City of SeaTac are Industrial, Airport, and Park; the Comprehensive Plan Land Use designations for the property in the City of Des Moines are Parks/Open Space, and Public Facility.

A. BACKGROUND

The Des Moines Creek Basin Committee, comprised of the City of SeaTac, the City of Des Moines, the Port of Seattle, and King County, developed the Des Moines Creek Basin Plan ("Plan"), in coordination with other agencies, including the Washington Department of

Transportation, and the Midway Sewer District. The Plan has analyzed alternatives for restoring the creek for wildlife habitat. Des Moines Creek experiences scouring during heavy rain events, and uneven flows in periods of dry weather, resulting in portions of the creek becoming dry. Both of these conditions are detrimental to fish spawning habitat. The Basin Plan has identified a preferred alternative that will significantly reduce the possibility of scouring, and significantly reduce the possibility of dangerously reduced flows during dry weather periods. The subject of this SEPA Review, the Des Moines Creek Restoration Projects, will implement the Des Moines Creek Basin Plan.

Pursuant to WAC 197-11-340(2), The City of SeaTac is required to send this determination to DOE and other agencies with jurisdiction, affected tribes, and other interested parties.

B. ENVIRONMENTAL ELEMENTS

This action was proposed in the City of SeaTac Comprehensive Plan. The environmental impacts of this action have been thoroughly analyzed in the completed Draft and Final EIS on the Comprehensive Plan.

1. **Earth:** Concur with Checklist. See additional mitigation conditions in SEPA Determination for file # SEP02-00006
2. **Air:** Concur with Checklist
3. **Water:** Concur with Checklist. See additional mitigation conditions in SEPA Determination for file # SEP02-00006
4. **Plants:** Concur with Checklist. See additional mitigation conditions in SEPA Determination for file # SEP02-00006
5. **Animals:** Concur with Checklist
6. **Energy and Natural Resources:** Concur with Checklist
7. **Environmental Health:** Concur with Checklist. See additional mitigation conditions in SEPA Determination for file # SEP02-00006
8. **Land and Shoreline Use:** Concur with Checklist
9. **Housing:** Concur with Checklist
10. **Aesthetics:** Concur with Checklist
11. **Light and Glare:** Concur with Checklist

ATTACHMENT 4.1

12. Recreation: Concur with Checklist. See additional mitigation conditions in SEPA Determination for file # SEP02-00006

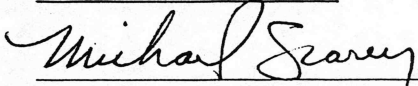
13. Historic and Cultural Preservation: Concur with Checklist

14. Transportation: Concur with Checklist. See additional mitigation conditions in SEPA Determination for file # SEP02-00006

15. Public Services: Concur with Checklist. See additional mitigation conditions in SEPA Determination for file # SEP02-00006

16. Utilities: Concur with Checklist

C. PREPARED BY



Michael Scarey, AICP, Senior Planner

II STAFF DETERMINATION

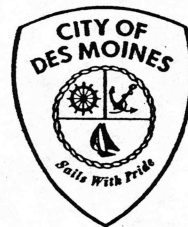
The lead agency for this proposal has determined that it does not have a probable significant adverse impact on the environment, and an environmental impact statement (EIS) is not required under RCW 43.21C.030(2)(c), only if certain conditions are met. Therefore, an environmental impact statement (EIS) is not required under RCW 43.21C.030(2)(c). This decision was made after review of a completed environmental checklist, the City of SeaTac Comprehensive Plan and EIS, and other information on file with the lead agency. This information is available to the public on request by contacting **Michael Scarey at 241-1893/241-0091TDD.**

\\edgar\data\group\planning\des moines creek basin plan\restoration projects sepa\sepa staff evaluation.doc

ATTACHMENT 4.2



CITY OF SEATA C CITY OF DES MOINES SEPA NOTICE



MITIGATED DETERMINATION OF NONSIGNIFICANCE FILE SEP02-00006

DESCRIPTION OF PROPOSAL: The proposal involves the construction of several coordinated surface water management facilities to improve existing water quality conditions and to reduce existing flooding conditions within the Des Moines Creek basin. The improvements were identified in the Des Moines Creek Basin Plan which was published in 1997. More specifically, the proposal includes improvement of in-stream conditions by reduction of high flows, reduction in stream erosion, improvement of water quality, and improvement of in-stream fish habitat. The proposal includes numerous mitigation measures recommended by state, regional and local agencies to prevent and/or minimize potential adverse impacts. Projects include a new detention facility near the headwaters of Des Moines Creek, a high flow bypass pipe along Des Moines Creek, improving fish habitat conditions within Des Moines Creek, and low-flow augmentation to maintain fish-friendly water flows during dry summer months. These improvements are inter-related and operate in a coordinated fashion to reduce existing impacts to Des Moines Creek. The projects are intended to provide long-term stream health and to correct problems in the basin caused by past development, and are not mitigation for any future construction. These Basin Plan improvements will work in concert with the Marine View Drive Culvert Replacement.

PROPONENT/S: Des Moines Creek Basin Committee (City of SeaTac, City of Des Moines, Port of Seattle, King County, Washington State Department of Transportation)

CONTACT: City of SeaTac: Michael Scarey, Senior Planner at (206) 241-1893/TDD (206) 241-0091. [E-mail: mikes@seatac.wa.gov]
City of Des Moines: Corbitt Loch, Assistant City Manager at (206) 870-7576. [E-mail: cloch@cityofdesmoines.com]
Basin Committee: David Masters, Project Coordinator at (206) 354-9749

LOCATION OF PROPOSAL: Des Moines Creek Corridor, and Wetlands South of Sea-Tac Airport Runways, East of Des Moines Memorial Drive, (see attached map).

LEAD AGENCY: City of SeaTac and the City of Des Moines are acting as Co-Lead Agencies, with the City of SeaTac acting as the Nominal Lead Agency.

The responsible official of the City of SeaTac hereby makes the following determination based upon impacts identified in the environmental checklist and the Final Staff Evaluation for Environmental Checklist (Case No. SEP02-00006), and Conclusions of Law based upon the City of SeaTac Comprehensive Plan, and other Municipal policies, plans, rules and regulations designated as a basis for the exercise of substantive authority of the Washington State Environmental Policy Act Rules pursuant to RCW 43.21C.060.

The lead agency for this proposal has determined that it does not have a probable significant adverse impact on the environment, provided that certain mitigating conditions are met, and an environmental impact statement (EIS) is not required under RCW 43.21C.030(2)(c). The mitigating conditions are specified in the SEPA Checklist (Case No. SEP02-00006) and below in this SEPA Determination. This
MDNS SEP02-00006

decision was made after review of a completed environmental checklist and other information on file with the lead agency. *The Lead Agency reserves the right to review any new information, future revisions or alterations to the site or the proposal (WAC 197-11-340) in order to determine the environmental significance or non-significance of the project at that point in time.*

FINDINGS OF FACT:

1. The Des Moines Creek Restoration Projects were developed through the Des Moines Creek Basin Planning Project by the Des Moines Creek Basin Committee.
2. The Des Moines Creek Basin Committee was comprised of the City of SeaTac, the City of Des Moines, the Port of Seattle, and King County.
3. Des Moines Creek has its headwaters in the City of SeaTac, including on land owned by the Port of Seattle, and runs through portions of the City of SeaTac and the City of Des Moines.
4. Des Moines Creek contains salmonids, including coho salmon fry and resident cutthroat trout.
5. Des Moines Creek experiences scouring during heavy rain events, which degrades fish spawning habitat.
6. Des Moines Creek experiences uneven flows in periods of dry weather, resulting in portions of the creek becoming dry.
7. The Des Moines Creek Basin Plan has analyzed alternatives for restoring the creek for wildlife habitat, and has identified a preferred alternative that will significantly reduce the possibility of scouring, and significantly reduce the possibility of dangerously reduced flows during dry weather periods.
8. The FINAL STAFF EVALUATION FOR ENVIRONMENTAL CHECKLIST FILE No.SEP02-00006 is hereby incorporated as stated in full within the Environmental Checklist.

CONCLUSION OF LAW:

The following policies are SEPA policies that apply to the proposed development.

1. Preserve and protect the water quality of natural surface water storage sites that help regulate stream flows and recharge groundwater (**Policy 8.1D**).
2. Protect the water quality, natural drainage, fish and wildlife habitat, and aesthetic functions of streams, creeks, and lakes (**Policy 8.1E**).
3. Maintain and enhance natural drainage systems to protect water quality, reduce public costs, and prevent environmental degradation. Do not alter natural drainage systems without acceptable mitigation measures which eliminate the risk of flooding or negative impacts to water quality (**Policy 8.2 H**).
4. Protect water quality and natural drainage systems by controlling the quality and quantity of stormwater runoff (**Policy 8.2I**).
5. Design site plans and construction practices to minimize on-site erosion and sedimentation during and after construction (**Policy 8.2K**).

ATTACHMENT 5.1

CONDITIONS

Traffic

1. A truck haul plan shall be submitted to each City for review and approval. The truck haul plan shall identify which streets are proposed for use for import and export of soils from the project site. The plan shall include map(s) of the area street network and address provisions for temporary traffic control measures and street sweeping.
2. A truck wash facility shall be established at each location where project trucks reenter the public road network. The truck wash facility shall be in place at all times during construction and shall be used when weather and soil conditions warrant it.

Des Moines Creek Trail

3. Construction and staging shall be designed to minimize disruption to Des Moines Creek Trail users. Should any work temporarily restrict use of the Des Moines Creek Trail, proper public notice of trail closure shall be provided at all points of entry to the satisfaction of the Cities.
4. A trail disturbance phasing and restoration plan shall be submitted to each City for review and approval. The plan will identify areas that will be impacted, identify the nature and duration of the impacts, and identify specific restoration measures that will be utilized to restore the trail corridor to pre-project conditions.

Clearing and Grading

5. Full time, on-site construction oversight will be provided by the Basin Committee to minimize effects of project construction. Construction oversight staff will be a qualified expert or experts with the skills and knowledge needed to address activities which are occurring (such as wetland restoration, streams relocation, erosion control, clearing and grading). The names and qualifications of proposed construction oversight experts will be submitted to the Cities for approval prior to construction. All contracts awarded for construction will clearly grant authority to the construction oversight expert(s) to stop work or modify construction activities in order to ensure compliance with all permit conditions.
6. An erosion control plan, designed under the direction of a registered civil engineer, shall be submitted to each City for review and approval. The erosion control plan shall include a staging/phasing plan that identifies the sequence and timing in which temporary erosion control activities, clearing, grading, revegetation and final erosion control will occur. The erosion control plan will include contingency plans identifying how the project sequencing will be altered should there be unseasonable rainfall events.
7. Specific grading and clearing limits shall be clearly field-marked during each phase of the project
8. Clearing and grading plans shall be designed so as to minimize the disturbance or destruction of existing significant trees (significant trees are defined as having 8" (eight inch) caliper diameter measured 3' (three feet) vertically from ground level.). Clearing and grading plans shall include an inventory and assessment of existing significant trees within the pipe corridor area, and identify any significant trees that can not be avoided during construction. Clearing and grading plans shall identify methods to protect significant trees during construction.

Soil Quality

9. All vegetative debris, garbage, concrete, contaminated soil or irregular aggregate material encountered or created within established grading and clearing limits shall be removed from the project site and properly disposed of. Woody debris that meets the specifications will, if possible, be incorporated into the habitat enhancement portion of the project.

10. All surplus or unsuitable soils shall be removed from the site and disposed of appropriately. Soils excavated from the site that do not contain contaminants above acceptable limits, especially those rich in organic matter, may be re-used on-site and/or be salvaged for use elsewhere.
11. All relocated and imported soils shall meet the required specifications for use on site (as shown on the construction plans and in the contract specification documents), and be free of contaminants at levels which might present a risk to surrounding water supplies or surface waters.

Bypass Line

12. A long-term arrangement for use or ownership of the bypass line shall be finalized with Midway Sewer District prior to initiation of construction. Should the use arrangement be a long-term lease, rather than a transfer of ownership, a capital replacement plan shall be finalized to assure replacement of the bypass line in a timely fashion prior to lease expiration.
13. During construction and project start-up, water quality impacts associated with sanitizing the bypass line will be minimized to the maximum extent possible in both Des Moines Creek and Puget Sound, in accordance with applicable federal and/or state standards.

Streams and Wetlands

14. Prior to construction, applicants shall obtain approval of a Reasonable Use Exception from the City of Des Moines for any work in sensitive areas or their buffers. ((Applicants have already received a Public Agency/Utility Exception from the City of SeaTac for work in sensitive areas and their buffers)).
15. Operation of the Regional Detention Facility shall be consistent with the findings and recommendations of the Puget Sound Wetland and Stormwater Management Research Program. It is recognized that a portion of the wetland will be modified for stormwater detention, and that a new vegetation community will be established in that area. Therefore, the recommendations regarding the frequency and duration of water level fluctuations intended to protect existing plant communities will not be applied in those areas.
16. Prior to beginning work, wetlands and wetland buffers, and streams and stream buffers shall be fenced and signed to prevent encroachment into wetlands, streams and associated buffers. This condition may be waived based on specific site conditions, and in areas where the basin plan indicates specific changes necessary to implement the plan.

Safety

17. A site address shall be established for the various work areas within the project area. It is preferred that the work area addresses be devised from the address grid at the point of access from the public street to the specific work area in the project area. Construction trailers shall have the established site address posted near the telephone and on the trailer near the primary entrance.
18. Emergency vehicle access shall be provided to the site at all times during construction and after completion of the project. If it is absolutely necessary to restrict, block or close any existing public street, notice to the appropriate Fire Department shall be provided prior to any such action. Contractors shall notify the Fire Department at least 24 hours in advance of any restriction of the public street that leaves at least one half the right-of-way available for emergency vehicle passage. Contractors shall notify the Fire Department at least 48 hours in advance of any full closure of the public street that does not leave at least one half the right-of-way available for emergency vehicle passage; complete closures shall include a plan of an alternative route of access. Notice to the Fire Department shall be specific as to the area of restriction, the level of the restriction, the time of the restriction, the duration of the restriction and the name and cellular telephone number of the responsible supervisor in the field. The Fire Department shall be informed immediately of all field extensions or changes in the above conditions as necessary.

20. Permits for any fuel storage and/or dispensing shall be obtained from the appropriate Fire Department.
21. Develop and maintain an emergency operations plan covering construction. The plan shall address specific work sites and site identifiers for any emergencies that might occur during construction. A separate emergency operations plan shall be prepared and submitted prior to initiating project operations and shall address emergencies that might occur during ongoing operations, such as berm failure.

The lead agency for this proposal has determined that it does not have a probable significant adverse impact on the environment, and an environmental impact statement (EIS) is not required under RCW 43.21C.030(2)(c), only if certain conditions are met. This decision was made after review of a completed environmental checklist and other information on file with the lead agency. *The City reserves the right to review any new information, future revisions or alterations to the site or the proposal (WAC 197-11-340) in order to determine the environmental significance or non-significance of the project at that point of time.* Detailed information and copies of the conditions are available to the public on request. CONTACT: Michael Scarey, Senior Planner at 241-1893/TDD 241-0091. [E-mail: mikes@seatac.wa.gov]

COMMENT PERIOD

This DNS is issued under WAC 197-11-340(2); the lead agency will not act on this proposal for **21 days** from the date of issuance. Comments must be submitted to the City of SeaTac by **5:00 P.M. on July 19, 2002**. A Public Meeting to discuss the proposed Basin Plan Restoration Projects will be held at 7:00 p.m. on Wednesday, July 17, 2002 at SeaTac City Hall, 17900 International Boulevard, Suite 401, SeaTac, WA 98188.

APPEAL PERIOD

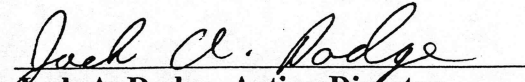
Any person wishing to appeal this determination may **file** such an appeal within **ten (10) days** of the expiration of the comment period to the SeaTac City Clerk. All appeals of the above determination must be filed by **5:00 P.M. July 29, 2002**. **THERE IS A \$100.00 DOLLAR FEE TO APPEAL THIS DETERMINATION.**

DATE ISSUED/PUBLISHED IN THE SEATTLE TIMES: JUNE 28, 2002

ATTACHMENT 5.4

RESPONSIBLE OFFICIAL:


Jack A. Dodge, Acting Director
Department of Planning & Community Development
17900 International Blvd., Suite 401
SeaTac, Washington 98188-4236
(206) 241-1893/TDD 241-0091


Jack A. Dodge, Acting Director

Date 6-27-02

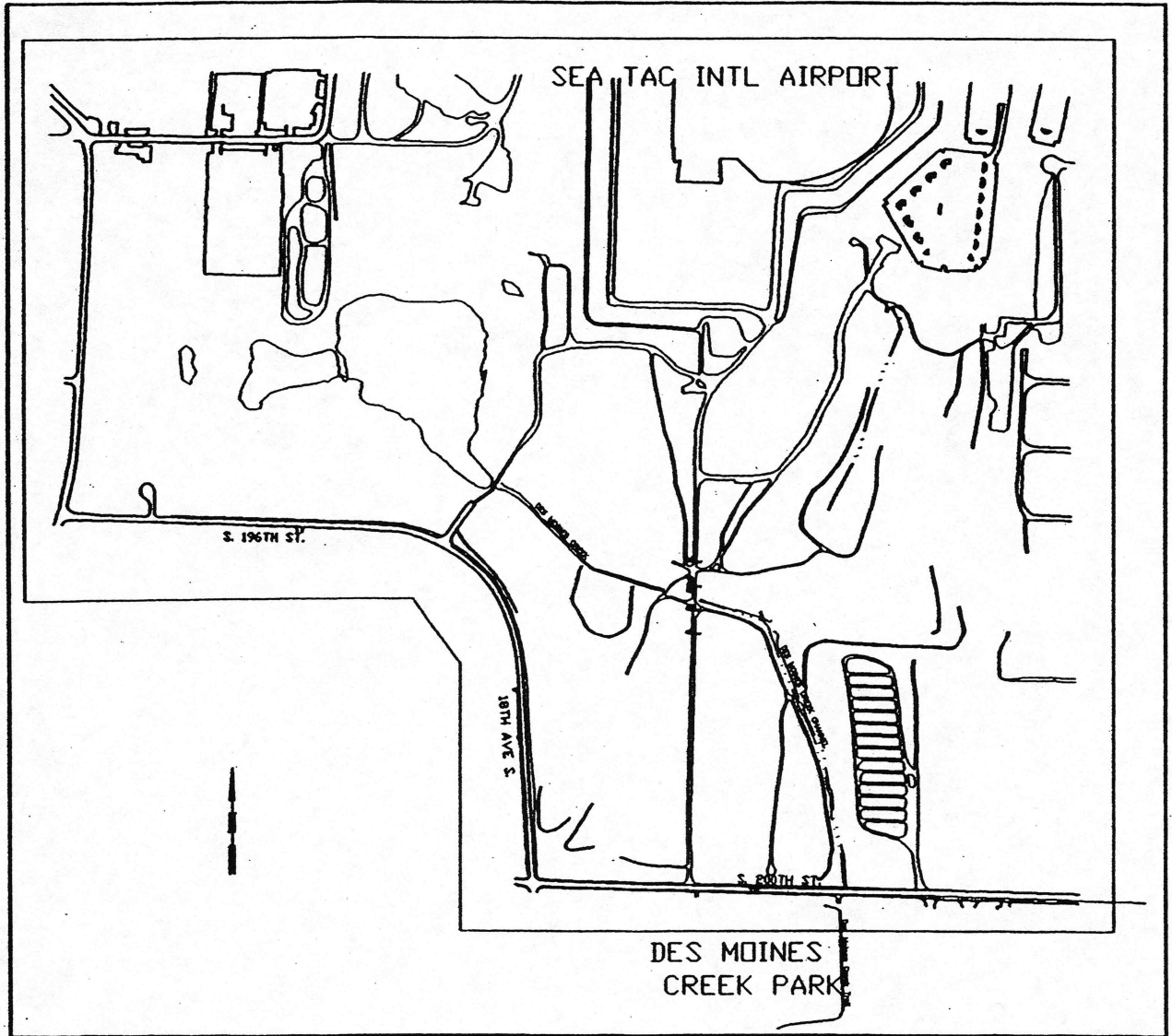
RESPONSIBLE OFFICIAL:

Judith Kilgore, Director
City of Des Moines Dept. Community Development
21630 11th Avenue S., Suite D
Des Moines, Washington 98198
(206) 870-7576


Judith Kilgore, Director

Date 6-27-02

Des Moines Creek Basin Vicinity Map

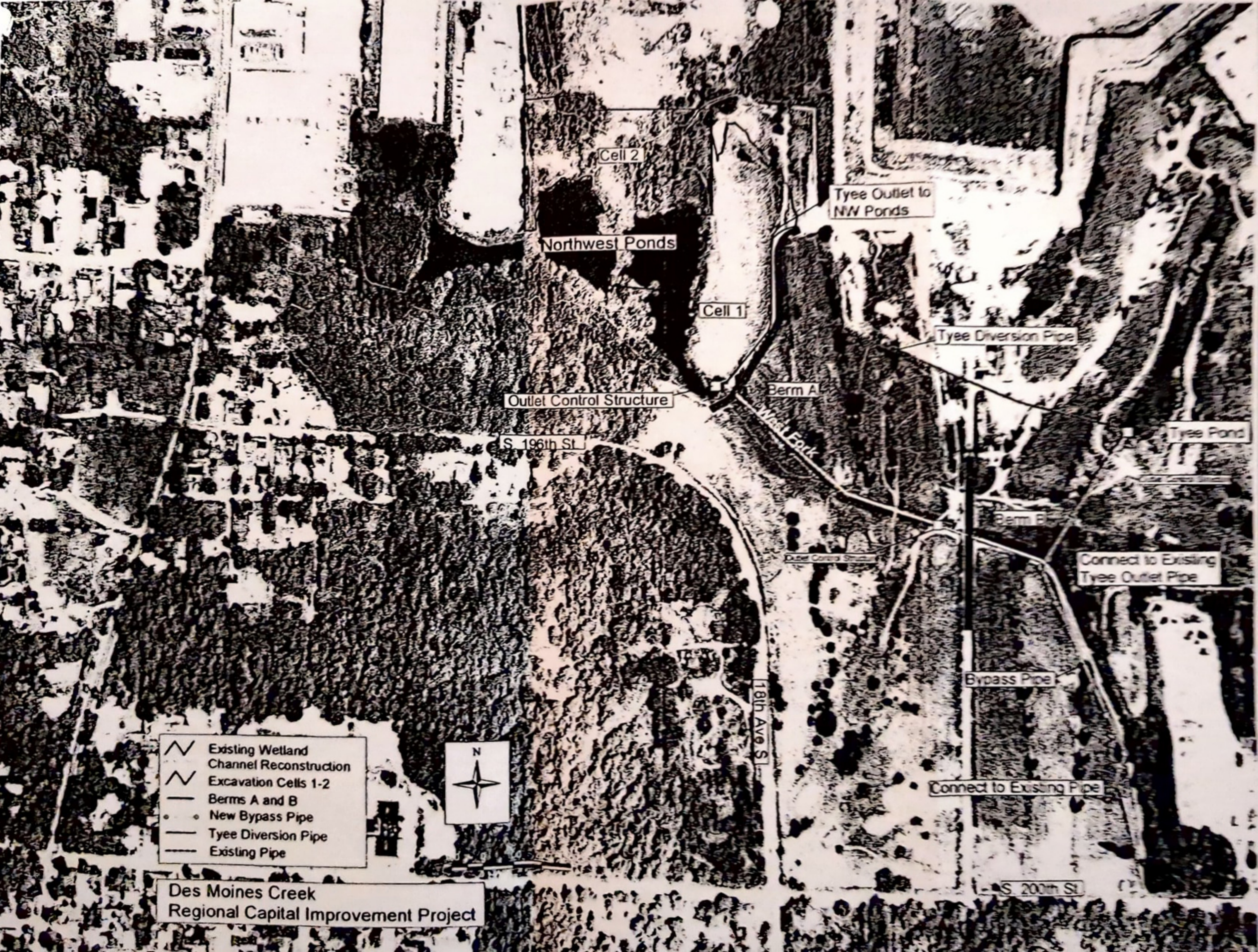


INDEX

SHEET	DESCRIPTION
1	COVER
2	RETENTION-DETECTION FACILITY PLAN
3	RETENTION-DETECTION FACILITY APPROACH LIGHT AREA PLAN
4	RETENTION-DETECTION FACILITY CROSS-SECTIONS
5	CHANNEL RECONSTRUCTION - PLAN & PROFILE
6	CHANNEL RECONSTRUCTION - PLAN & PROFILE
7	BYPASS PIPE - PLAN & PROFILE
8	BYPASS PIPE - PLAN & PROFILE
9	BYPASS PIPE - PLAN & PROFILE

ATTACHMENT 6

SURVEYED: K.C. SURVEY/GOULE	6/01		APPROVED: DON ALTHAUSER, PE	DATE: 2/28/02	FED. AID 1
BASE MAP PLOT: RADELLA	12/01		PROJECT MANAGER: ZAHID KAHN	DATE: 2/28/02	
DESIGN PLOT: RADELLA	12/01		ENGINEERING LEAD: W. KARA / W. MANSFIELD	DATE: 2/28/02	PROJECT 1
CHECKED: W. MANSFIELD	12/01		PROJECT		



Cell 2

Northwest Ponds

Cell 1

Tye Outlet to NW Ponds

Tye Diversion Pipe

Outlet Control Structure

Berm A

S 196th St

Tye Pond

Small Fork

Berm B

Connected to Existing Tye Outlet Pipe



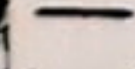
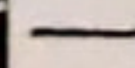
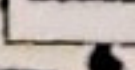
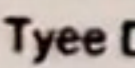
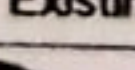
Outlet Control Structure

Bypass Pipe

Connect to Existing Pipe

18th Ave St

S 200th St

-  Existing Wetland
-  Channel Reconstruction
-  Excavation Cells 1-2
-  Berms A and B
-  New Bypass Pipe
-  Tye Diversion Pipe
-  Existing Pipe



Des Moines Creek
Regional Capital Improvement Project

CITY OF SEATAC

PUBLIC NOTICE

FINAL DETERMINATION OF NONSIGNIFICANCE FILE SEP0009-97

DESCRIPTION OF PROPOSAL: Des Moines Creek Basin Plan. A policy plan, with technical analysis of several alternatives for overall improvements that could be made to the Des Moines Creek Basin. The proposed projects, which will be separate actions, range from changing existing wells, flow controls that would consist of detention/high flow bypass facilities and general improvements. The Plan denotes a phased approach, with specific SEPA review on actual construction activities, Phase I (1-4 years); Phase II (5-10 years); and Phase III (10-20 years).

PROPONENT: Des Moines Creek Basin Committee
King County - Lead Staff Contact - David Masters
City of SeaTac, City of Des Moines, Port of Seattle

LOCATION OF PROPOSAL: Properties ranging throughout the jurisdictions of Port of Seattle, City of SeaTac, City of Des Moines and King County.

LEAD AGENCY: City of SeaTac

JOINT AGENCIES: King County, City of Des Moines, & Port of Seattle

The responsible official of the City of SeaTac hereby makes the following determination based upon information in the environmental checklist and the Final Staff Evaluation for Environmental Checklist (Case No. SEP0009-97), and Conclusions of Law based upon the City of SeaTac Comprehensive Plan, and other Municipal policies, plans, rules and regulations designated as a basis for the exercise of substantive authority of the Washington State Environmental Policy Act Rules pursuant to R.C.W. 43.21C.060.

DETERMINATION

The lead agency for this proposal has determined that, due to the programmatic approach (Policy Adoption and Individual SEPA reviews on projects), the Des Moines Creek Basin Plan does not have a probable significant adverse impact on the environment, and an environmental impact statement (EIS) is not required under RCW 43.21C.030(2)(c). This decision was made after review of a completed environmental checklist and other information on file with the lead agency. *The City reserves the right to review any new information, future revisions or alterations to the site or the proposal (WAC 197-11-340) in order to determine the environmental significance or non-significance of the project at that point of time.* **CONTACT: Michael Booth, Senior Planner at 241-1893/TDD 241-1893. [E-mail: Michael@seatac.wa.gov]**

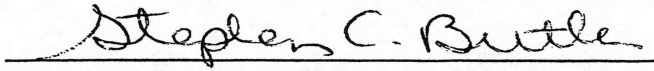
COMMENT PERIOD

This DNS is issued under WAC 197-11-340(2); the lead agency will not act on this proposal for **fifteen (15)** days from the date of issuance. Comments must be submitted by **5:00 P.M. by on July 14, 1997.**

APPEAL PERIOD

Any person wishing to appeal this determination may **file** such an appeal within **ten (10)** days of the expiration of the comment period to the SeaTac City Clerk. All appeals of the above determination must be filed by **5:00 P.M. July 24, 1997.**

RESPONSIBLE OFFICIAL:


Stephen C. Butler, AICP
Director of Planning and Community Development

POSITION/TITLE:

Planning and Community Development Dept.

ADDRESS:

17900 International Blvd., Suite 401
SeaTac, Washington 98188-4236
(206) 241-1893/TDD 241-0091

DATE ISSUED: June 28, 1997

\\seatac\vol1\group\planning\michael\sepa\creek.dns.doc

ATTACHMENT 2.1

COPY

RESOLUTION NO. 00-005

A RESOLUTION of the City Council of the City of SeaTac, Washington accepting the Hearing Examiner's recommendation and granting Public Agency Exceptions for the Des Moines Creek Basin Improvements Phase I.

WHEREAS, the parties to the Des Moines Creek Basin Planning Committee have been working cooperatively since 1995 to develop a mutually acceptable plan to offset impacts of past and future urbanization within the 5.8 square-mile watershed; and

WHEREAS, it has become apparent that a regional retention/detention facility should be constructed within the Class I wetlands of the Northwest Pond and through reconstruction of approximately 1,600 lineal feet of the West Branch of Des Moines Creek, a Class II salmonid stream; and

WHEREAS, to complete such construction it is required that a Public Agency Utility Exception from the City's sensitive areas regulations be granted, pursuant to Chapter 15.30 of the SeaTac Municipal Code;

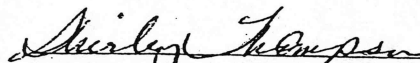
NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF SEATAC, WASHINGTON HEREBY RESOLVES as follows:

A Public Agency Utility Exception to the City's sensitive areas regulations is hereby granted for the Des Moines Creek Basin Improvements Phase I and the recommendation of the City Hearing Examiner is hereby accepted.

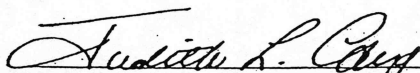
ATTACHMENT 8

PASSED this 28th day of March, 2000 and signed in authentication thereof on this 28th day of March, 2000.


CITY OF SEATAC


Shirley Thompson, Mayor

ATTEST:


Judith L. Cary, City Clerk

Approved as to Form:


Robert L. McAdams, City Attorney

ATTACHMENT 8.1

Mayor
Shirley Thompson

Deputy Mayor
Kathy Gehring

Councilmembers
Gene Fisher
Terry Anderson
Frank Hansen
Joe Brennan
Don DeHan



City Manager
Calvin P. Hoggard

Assistant City Manager
Jay Holman

City Attorney
Robert L. McAdams

City Clerk
Judith L. Cary

"The Hospitality City"

DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT

NOTICE OF DECISION

TO: RECIPIENTS OF THE HEARING EXAMINER'S DECISION

DATE: February 24, 2000

FROM: JACK DODGE, PRINCIPAL PLANNER

SUBJECT: HEARING EXAMINER'S RECOMMENDATION, PUBLIC AGENCY UTILITY EXCEPTION (PAUE), FILE NO. CZC00-00001

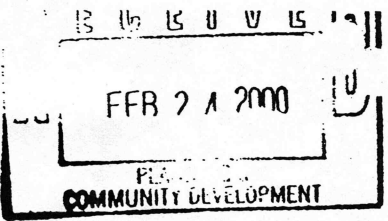
Attached is a copy of the Hearing Examiner's recommendation regarding a request by The Des Moines Creek Basin Planning Committee for a Public Agency Utility Exception. The recommendation will tentatively go before Council late March or early April, 2000.

Should you have any questions, please contact me at (206)241-1893.

Sincerely,

Jack Dodge
Principal Planner

ATTACHMENT 8.2



Irv Berteig, Hearing Examiner

BEFORE THE HEARING EXAMINER FOR THE CITY OF SEATAC
17900 International Boulevard, Suite 401, SeaTac, WA 98188

RE: The Des Moines Creek Basin Planning Committee applied for a Public Agency Utility Exception [PAUE]
Case No. CZC00-00001
FINDINGS, CONCLUSIONS, AND DECISION

BACKGROUND INFORMATION:

The Des Moines Creek Basin Planning Committee applied for a Public Agency Utility Exception [PAUE] for the following:

- 1. Construction of a regional retention/detention facility in the Northwest Ponds, a Class I Wetland.
2. Excavation of a 1,600-foot reach of the upper West Branch of Des Moines Creek, a Class II salmonid stream.

The DesMoines Creek Basin Planning Committee is a multi-jurisdictional group comprised of representatives from the Cities of SeaTac and Des Moines, the Port of Seattle, and King County.

PROCEDURAL INFORMATION:

Open Record Hearing Date: February 17, 2000

The hearing was opened at 6:00 p.m. in the SeaTac City Hall Council Chambers, 17900 International Blvd., Suite 400. A verbatim recording of the public hearing was made, and the recording is maintained in the Planning and Community Development Department file.

Participants:

- Jack Dodge, SeaTac, Principal Planner
Don Althausser, King County Department of Natural Resources

ATTACHMENT 8.3

1 Jon Hansen, King County Department of Natural Resources

2 Wendy Karr, King County Department of Natural Resources

3 Don Monahan, SeaTac, Assistant Director of Public Works

4 Rena Hamburger, Land/Water Steward, Des Moines Creek

5 No other parties were present to testify.

6 The Hearing Examiner closed the public hearing at 7:40 p.m.

7 **HEARING EXHIBITS:**

8 Exhibit 1: Staff Report, together with nine exhibits as attachments:

9 Attach 1: Vicinity Map

10 Attach 2: Interlocal Agreements

11 Attach 3: Des Moines Creek Basin Plan Report

12 Attach 4: Capital Improvement Project (CIP) Preliminary Design Report

13 Attach 5: Wetland Report

14 Attach 6: Capital Improvement Project Preliminary Design Report Addendum

15 Attach 7: Letter of Support, Wash. State Dept. of Transportation, 2/3/00

16 Attach 8: Letter of Support, Port of Seattle, 2/3/00

17 Attach 9: Letter of Support, City of Des Moines, 2/2/00

18 Exhibit 2: Letter of Support, Wash. State Department of Ecology, 1/31/00

19 **FINDINGS OF FACT**

20 1. The parties to the Des Moines Creek Basin Planning Committee have
21 worked together cooperatively since 1995 to develop a mutually
22 acceptable plan that will offset the impacts of past and future
23 urbanization in the 5.8 square-mile watershed. The basic goals of the
24 basin planning committee include:

- 25 ▪ *develop a flexible and resilient forum for addressing inter-*
jurisdictional stream issues;
- 26 ▪ *develop a shared plan for addressing water quality and quantity issues;*
- 27 ▪ *develop and implement prioritized Capital Improvement Project*
recommendations;
- 28 ▪ *facilitate cooperative funding for inter-jurisdictional projects; and*
- 29 ▪ *improve the quality of human interactions with the creek.*

ATTACHMENT 8.3

1 2. Two specific activities of the proposed project are affected by
2 the PAUE requirement:

3 Proposed Project Activity #1: Construction of a public regional
4 retention/detention facility within the boundaries of the Northwest
5 Ponds, a Class I wetlands. Applicable regulations include:

- 6 ▪ SMC 15.30.300 G.2 (a-e) and
- 7 ▪ SMC 15.30.070 A.2 (a-b) and A.3.

8 Proposed Project Activity #2: Alteration of a 1,600-foot reach of the
9 upper West Branch of Des Moines Creek, a Class II salmonid stream.

10 Applicable regulations include:

- 11 ▪ SMC 15.30.350 E.2 (a-d).

12 3. A non-project action Final Mitigated Determination of
13 Significance [DNS] was issued following the publication of the Des
14 Moines Creek Basin Plan report. Project specific SEPA compliance will
15 occur subsequent to the hearing.

16 The Staff Report contains Findings, I.A-H, at pages 2-9, which the
17 Examiner now adopts as his own Findings of Fact.

18 4. The Department of Ecology [DOE] submitted a letter of support for
19 the proposal [Exhibit 2]. Since DOE is an agency with special
20 expertise and responsibilities, and since DOE does not encourage
21 alterations to streams and wetlands, their analysis and support is of
22 special significance.

23 5. A local resident attended the public hearing with numerous
24 questions. She had been trying for some time to learn about the
25 proposal due to her role as a land/water steward for Des Moines Creek.
26 Ms. Hamburger testified that the presentation answered many of her
27 questions, but went on to explain her frustrations at obtaining
28 information from the government agencies.

29 ATTACHMENT 8.5

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REVIEW CRITERIA

The proposed project requires a Public Agency Utility Exception under the provisions of SMC 15.30.070.

CONCLUSIONS OF LAW

- 1. The Class I Wetland is currently impacted by major water fluctuation levels.
- 2. The proposed retention/detention system will dampen the fluctuation levels in the wetland, thereby contributing to the greater diversity of wetland vegetation in the wetland.
- 3. There would be no net loss of wetland functions and area.
- 4. The use of the Class I Wetland as a retention/detention facility will enhance the hydrologic and biologic functions of the Des Moines Creek Basin.
- 5. The current extension of the West Fork of Des Moines Creek is severely degraded.
- 6. The realignment of the creek will enhance the hydrologic functions of this portion of the creek.
- 7. The frustrations experienced by citizens in getting information from their local government were explained (the Committee meetings were staff work sessions). Ms. Hamburger displayed diligence by attending the public hearing, and appeared satisfied with the presentations. The Examiner accepts the Committee's explanation and promised to include legislation adopted in 1992 that remind us all to do a better job of making public records available.¹

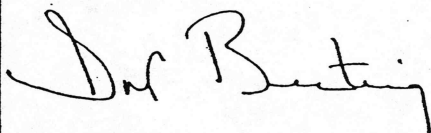
¹ RCW 42.17.251 Construction. The people of this state do not yield their sovereignty to the agencies that serve them. The people, in delegating authority, do not give their public servants the right to decide what is good for the people to know and what is not good for them to know. The people insist on remaining informed so that they may maintain control over the instruments that they have created. The public records subdivision of this chapter shall be liberally construed and its exemptions narrowly construed to promote this public policy.

1 **RECOMMENDATION**

2 Based on the testimony at the Open Record Appeal Hearing, the
3 documents and exhibits admitted into the record, and the previously
4 made Findings of Fact and Conclusions of Law, it is hereby the
5 recommendation of the SeaTac City Hearing Examiner that the Public
6 Agency Utility Exception be **APPROVED**, subject to the following:

- 7 1. Prior to issuance of a clearing and/or grading permit for the
8 proposed project, the applicant must demonstrate that the
9 detailed project plans and specifications meets all the
10 provisions of SMC 15.30.300 G.2(b-e). These are:
11 *b. Constructed in accordance with the requirements of the Surface Water
12 Design Manual.*
13 *c. The use will not alter the rating or the factors used in rating the
14 wetland.*
15 *d. The proposal is in compliance with the latest adopted findings of
16 the Puget Sound Wetlands Research Project.*
17 *e. There are no significant adverse impacts to the wetland.*
18 2. Prior to issuance of a clearing and/or grading permit for the
19 proposed project, the applicant must submit a detailed plan for
20 wetland and stream restoration consistent with the conceptual
21 restoration and enhancement plans. The Plans shall be consistent
22 with the provisions of SMC 15.30.130 (Mitigation, Maintenance,
23 Monitoring and Contingency), SMC 15.30.300 and .320 (Wetlands-
24 Permitted Alterations and Mitigation Requirements) and SMC
25 15.30.350 and .360 (Streams-Permitted Alterations and Mitigation
26 Requirements).
27 3. The applicant shall receive all required federal and state
28 permits for work within the wetland and stream prior to the
29 issuance of any construction, clearing, or grading permits.
30 4. Project specific SEPA compliance shall precede individual
31 projects.

32 DATED this 23rd day of February 2000.

33 

34 Irv Berteig
35 Hearing Examiner for the City of SeaTac

36 ib

37 **ATTACHMENT 8.7**



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Northwest Regional Office, 3190 - 160th Ave S.E. • Bellevue, Washington 98008-5452 • (425) 649-7000
January 31, 2000

Mr. Irv Berteig
Hearing Examiner
City of SeaTac
9025 42nd Ave NE
Seattle, WA 98115

Dear Mr. Berteig:

RE: Public Agency Utility Exception (PAUE) for Des Moines Creek Basin Plan Project

Please accept this letter as an expression of support for granting a Public Agency Utility Exception (PAUE) for the Des Moines Creek Basin Plan proposals currently before you. The interjurisdictional Des Moines Creek Basin Committee has worked for the last several years to develop an integrated water resource management plan for the Des Moines watershed which both protects and improves water quality, stream flows and fish habitat. The Basin Committee's work has shown that, unless corrective actions are taken, the Des Moines Creek stream system faces a continuing escalation in erosion and sedimentation events due to the large amount of impervious area already within the basin. These high flow events are already degrading fish habitat, reducing water quality and threatening existing infrastructure.

The Basin Plan proposals require a PAUE for two specific actions:

1. Construction of a Regional Detention (R/D) facility on the site of the Northwest Ponds, a Class I wetland
2. Alterations to a 1,600 foot reach of the upper West Branch of Des Moines Creek, a Class II salmonid stream

While the Department of Ecology does not encourage alterations to streams and wetlands, this is a case where the negative impacts of the proposed alteration are greatly outweighed by the positive impacts that the proposed projects will produce. To accomplish the water quality and fish habitat protection elements of the Basin Plan, control over high flow events must be greatly improved. The Basin Plan investigated a number of alternative methods for gaining control of high flow events, as well as investigating all technically feasible alternative sites within the basin, and concluded that this was the only location in the Basin which would effectively control the large water volumes involved with high flow events.

Implementation of both recommendations will require a Public Agency Utility Exception. Because the Department of Ecology feels that both proposals will result in a net improvement of the natural resources of the Des Moines Creek basin, we strongly support the granting of a PAUE for these actions.

ATTACHMENT 8.8



Proposal #1: Construction of R/D facility within the boundaries of the Northwest Ponds

Committee members have proposed constructing an R/D facility within the boundaries of the Northwest Ponds, a Class I wetland that currently experiences large and frequent fluctuations in water surface elevation. The proposed R/D facility is expected to decrease both the frequency and volume of fluctuations, which will in turn result in reduced flooding problems, improved downstream habitat conditions for fish and other wildlife, and improved conditions for human health and safety.

Natural Resource Benefits

Development of the R/D facility is one in a series of steps designed to achieve the overarching goal of the Des Moines Creek Basin Committee; namely, to offset the impacts of past urbanization in the watershed and develop a plan for addressing water quality and quantity issues. The proposed R/D facility is expected to significantly reduce channel erosion rates in Des Moines Creek, which will in turn allow additional improvements to habitat conditions for fish and other wildlife. In addition, implementation of the proposed R/D facility will result in an increase in wetland plant communities in the watershed as approximately 5 acres of golf-course fairway will be converted to scrub-shrub wetlands.

Health and safety issues

The Northwest Ponds are situated within 10,000 feet of SeaTac International Airport and are therefore subject to FAA advisories. Current advisories address the issue of R/D facilities, and specifically state that "detention structures be designed to minimize the area of open surface water...that could attract hazardous wildlife." The current proposal for the R/D facility will actually decrease the frequency, duration and areal extent of flooding in the vicinity, thereby reducing the threat of bird strikes and protecting public health and safety in the vicinity of SeaTac Airport. The FAA and their technical experts on wildlife issues (the Department of Agriculture) have been consulted on this project and have expressed support for this proposal.

Proposal #2: Alteration of upper West Branch of Des Moines Creek

To achieve the goals of retention/detention at the R/D facility and to improve natural resource conditions throughout the Des Moines Creek system, committee members have recommended altering a 1,600 foot reach of the upper West Branch of Des Moines Creek, a Class 2 salmonid stream. Current conditions in this reach include slow transit time, elevated temperatures and very low dissolved oxygen concentrations during the summer months. Due in part to these conditions, there is very little (or no) fish use in this particular reach during summer months and very low utilization during winter months.

Salmonids found in this reach are limited to resident cutthroat trout. There is no anadromous salmonid use of this reach due to blockages lower in the system. The Basin Plan proposes to remove most blockages lower in the system, but to leave the existing blockage at S. 200th to preclude anadromous salmonid use of the upper stream system. This is due the generally poor quality of existing habitat above S. 200th.

ATTACHMENT 8.9

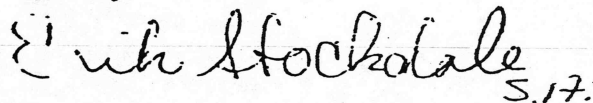
Natural Resource Benefits:

The proposal would increase the gradient of 1,600 feet of stream to decrease residence time and improve flow characteristics. The proposal would also revegetate the stream banks of this reach, which currently do not have an effective stream buffer, and place woody debris at selected sites throughout the affected reach of the creek. These alterations are expected to result in improved oxygen levels in the stream, and reduced temperature increases in this reach. The Department of Ecology agrees with the committee's conclusion that there will be no permanent loss of stream function or length as a result of the proposed stream alterations.

Because both of these proposals are expected to result in net improvements to the natural resources of the Des Moines Creek basin, the Department of Ecology would like to reiterate its support for the granting of a Public Agency Utility Exception.

Thank you for your time. Please contact me at 425-649-7061 or esto461@ecy.wa.gov if you have any questions.

Sincerely,


S.17.

Erik C. Stockdale
Senior Wetlands Specialist
Shorelands & Environmental Assistance Program

ES:SA

cc: David Masters, King County WLRD
Ray Hellwig, Regional Director, Ecology
Jeannie Summerhays, Ecology
Tom Luster, Ecology

ATTACHMENT 8.10



**Washington State
Department of Transportation**

Sid Morrison
Secretary of Transportation

Northwest Region
15700 Dayton Avenue North
P.O. Box 330310
Seattle, WA 98133-9710

(206) 440-4000

February 3, 2000

Mr. Irv Berteig
Hearing Examiner
9025 42nd Ave NE
Seattle, WA 98115

Dear Mr. Berteig:

With this letter, the Washington State Department of Transportation (WSDOT) would like to offer its support for granting a Public Agency Utility Exception (PAUE) for the Des Moines Creek Basin Plan proposals currently before you. The WSDOT has been participating in the Des Moines Creek Basin Plan Committee for the last year and has a very strong interest in supporting the committee's ongoing efforts to improve natural resources and protect human health and safety throughout the Basin.

It is our understanding that two of the proposals put forth by the basin planning committee require a PAUE. These include: construction of a Regional Detention (R/D) facility on the site of the Northwest Ponds, and alterations to a 1,600 foot reach of the upper West Branch of Des Moines Creek.

Having participated in all of the discussions related to these proposals, the WSDOT is confident that the natural resource and human health and safety benefits expected to result greatly outweigh the negative impacts of the proposed alterations. Therefore, we strongly support the granting of a PAUE.

Natural Resource Benefits

The WSDOT is very interested in contributing to the basin committee's efforts to offset the impacts of past development in the Des Moines Creek Basin and improve natural resources therein. The proposed R/D facility is expected to significantly reduce channel erosion rates in Des Moines Creek, which will in turn allow additional improvements to habitat conditions for fish and other wildlife.

These proposals are also expected to improve current conditions in the upper West Branch of Des Moines Creek. These conditions include slow transit time, elevated temperatures, and very low dissolved oxygen concentrations during the summer months. These conditions are largely responsible for the fact that very few fish use this particular reach during the winter months, and even fewer (if any) utilize it during the summer months. The proposal includes a number of

ATTACHMENT 8.11

measures designed to improve these conditions, including: increasing the gradient of 1,600 feet of stream to decrease residence time and improve flow characteristics, revegetating the stream banks of this reach, and placement of woody debris at selected sites throughout the affected reach of the creek.

Human health and safety benefits

Bird strikes at Seatac Airport are a significant and ongoing safety concern both to the Port of Seattle and to the Federal Aviation Administration (FAA). Open water that is present for extended periods of time attracts birds, many of which present a threat to aircraft. Due to their close proximity to the airport (within 10,000 feet), the Northwest Ponds are subject to FAA advisories regarding wildlife issues. The R/D facility would include scrub-shrub communities that are specifically designed to deter large aircraft-threatening birds and would therefore be an improvement over current conditions as far as safety is concerned.

Because these proposals are expected to significantly improve the natural resources of the Des Moines Creek Basin, the WSDOT would like to reiterate our support for the granting of a Public Agency Utility Exception.

Thank you for your time. Please contact me at (206) 440-4774 if you have any questions.

Sincerely,

Susan Everett, Engineering Manager for

Craig J. Stone
Area Administrator - South King

CJS/lz

cc: John White
Day file

ATTACHMENT 8.12
ATTACHMENT 1-1



February 3, 2000

Irv Berteig
Hearing Examiner
9025 42nd Avenue NE
Seattle, WA 98115

Dear Mr. Berteig:

With this letter, the Port of Seattle would like to offer its support for granting a Public Agency Utility Exception (PAUE) for the Des Moines Creek Basin Plan proposals currently before you. The Port of Seattle has been an active participant in the Des Moines Creek Plan Committee since its inception in 1995 and has a very strong interest in supporting the committee's ongoing efforts to improve natural resources and protect human health and safety throughout the Basin.

It is our understanding that two of the proposals put forth by the basin planning committee require a PAUE. These include: construction of a Regional Detention (R/D) facility on the site of the Northwest Ponds, and alterations to a 1,600 foot reach of the upper West Branch of Des Moines Creek.

Having participated in all of the discussions related to these proposals, the Port of Seattle is confident that the natural resource and human health and safety benefits expected to result, greatly outweigh the negative impacts of the proposed alterations. Therefore, we strongly support the granting of a PAUE.

Natural Resource Benefits

The Port of Seattle is very interested in contributing to the basin committee's efforts to offset the impacts of uncontrolled development in the Des Moines Creek Basin and improve natural resources therein. The proposed R/D facility is expected to significantly reduce channel erosion rates in Des Moines Creek, which will in turn allow additional improvement to habitat conditions for fish and other wildlife.

These proposals are also expected to improve current conditions in the upper West Branch of Des Moines Creek. These conditions include slow transit time, elevated temperatures, and very low dissolved oxygen concentrations during the summer months. These conditions are largely responsible for the fact that very few fish use

Seattle-Tacoma
International Airport
P.O. Box 68727
Seattle, WA 98168 U.S.A.
TELEX 703433
FAX (206) 431-5912



ATTACHMENT 8.1 B

February 3, 2000
Page 2

this particular reach during the winter months, and even fewer (if any) utilize it during the summer months. The proposal includes a number of measures designed to improve these conditions, including: increasing the gradient of 1,600 feet of stream to decrease residence time and improve flow characteristics, revegetating the stream banks of this reach, and placement of woody debris at selected sites throughout the affected reach of the creek.

Human Health and Safety Benefits

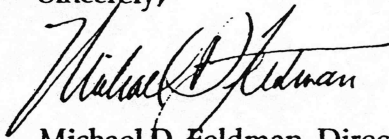
Bird strikes at Sea-Tac Airport are a significant and ongoing safety concern both to the Port and to the Federal Aviation Administration (FAA). Open water that is present for extended periods of time attracts birds, many of which present a threat to aircraft. Due to their close proximity to the airport (within 10,000 feet), the Northwest Ponds are subject to FAA advisories regarding wildlife issues. The R/D facility would include scrub-shrub communities that are specifically designed to deter large aircraft-threatening birds and would therefore be an improvement over current conditions as far as safety is concerned. The FAA and the Department of Agriculture (the FAA's technical experts on wildlife issues) have given support for the current proposals.

Because these proposals are expected to significantly improve the health and safety concerns related to Sea-Tac Airport mentioned above, as well as result in net improvements to the natural resources of the Des Moines Creek Basin, the Port of Seattle would like to reiterate our support of the granting of a Public Agency Utility Exemption.

Thank you for your time.

Please contact Tom Hubbard of my staff at 206-248-7135 if you have any questions.

Sincerely,



Michael D. Feldman, Director
Aviation Facilities

Cc Jack Dodge, Don Monaghan, City of SeaTac
David Masters, Hilary Culverwell, King County Water and Land Resources

ATTACHMENT 8.14

City of Des Moines



DEPARTMENT OF PUBLIC WORKS
21650 11TH AVENUE SOUTH
DES MOINES, WASHINGTON 98198-6317
(206) 870-6522 FAX: (206) 870-6596



February 2, 2000

Irv Berteig
Hearing Examiner
9025 42nd Avenue Northeast
Seattle, WA 98115

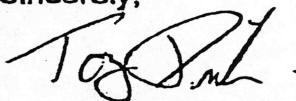
Dear Mr. Berteig:

With this letter, the City of Des Moines is indicating our support for the Des Moines Creek Basin Plan and the related projects. The City Council of Des Moines approved the plan on November 13, 1997. This plan is the result of the formation of the Basin Plan Committee in 1995. The committee, made up of representatives from the City of Des Moines, City of SeaTac, the Port of Seattle, and King County, was a logical result of concerns held by all of these agencies about the deteriorated condition of the creek. The degraded condition is a result of the development that has taken place over the last approximately 75 years. Not only has the City of Des Moines contributed to the development in the basin, but also is situated at the lower portion of the creek. Consequently, we are very aware of the present health and safety problems with the creek.

The committee members all felt that we could come up with the most effective solution to the stream problems if we worked together on that solution. Two very important components of the solution include construction of a Regional Detention Facility on the site of the Northwest Ponds and alteration to a 1,600-foot reach of the upper West Branch of Des Moines Creek. These improvements must be built in such a manner that they minimize the possibility of bird strikes at SeaTac Airport. Because these proposals are expected to result in net improvements to the natural resources for Des Moines Creek Basin, the City of Des Moines would like to reiterate our support.

Thank you for your time. Please contact Tim Heydon, Public Works Director, at (206) 870-6522 if you have any questions.

Sincerely,

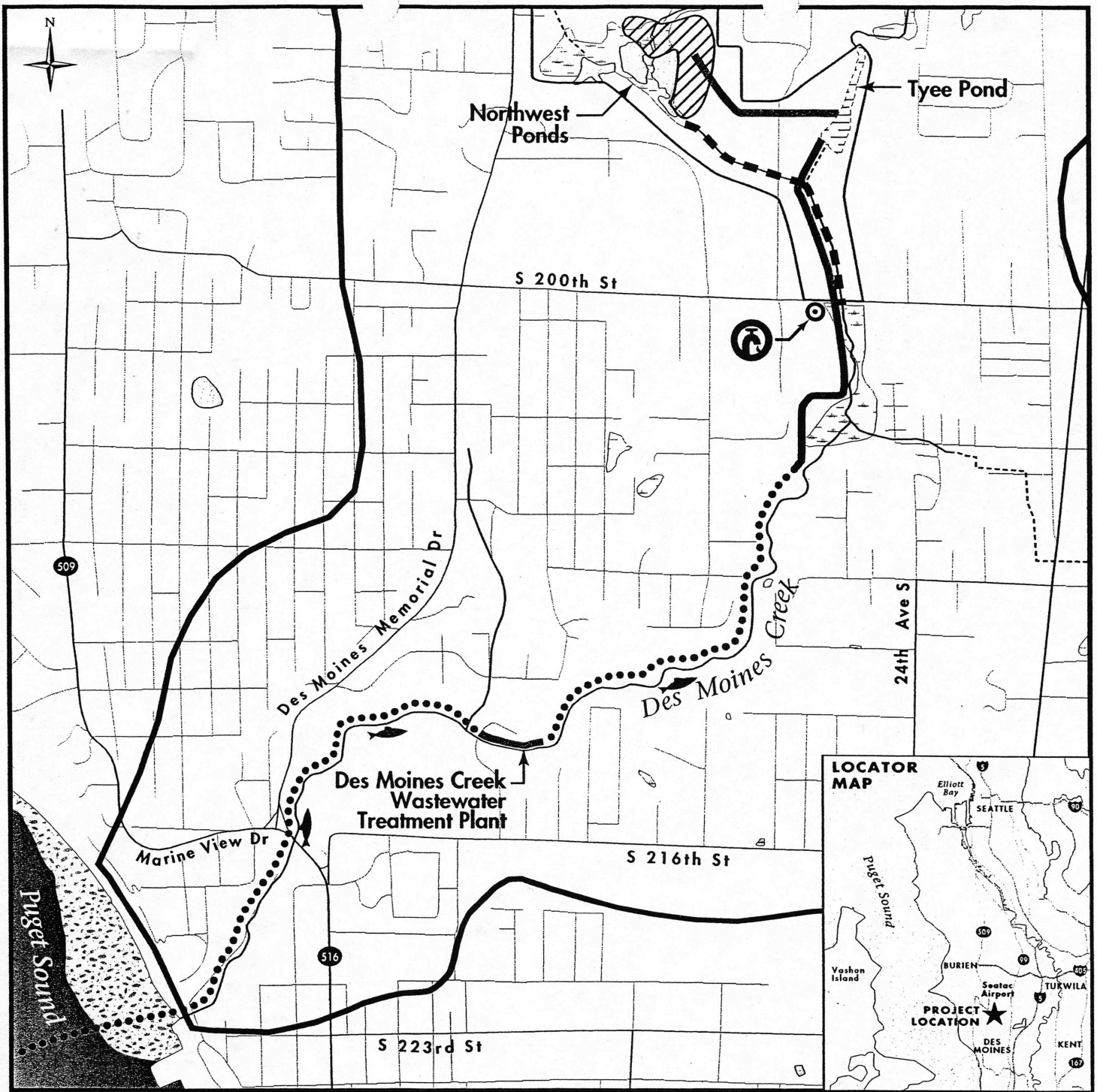

Bob Olander
City Manager

TH/bc
cc: Timothy Heydon, Public Works Director

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The Waterland City
Printed on Recycled Paper

ATTACHMENT 8.15


















DES MOINES CREEK BASIN

Capital Improvement Project Sites




June 2002

-  Basin Boundary
-  Stream
-  Piped Stream
-  Lake or Open Water
-  Wetland
-  R/D Facility
-  Shoreline
-  Project Site
-  Pond Excavation Area
-  Flow Bypass Pipe:
New Pipe
-  Reused Pipe
-  Stream Channel Reconstruction
Reach Zone 3
-  Low Flow Augmentation Facility

-  Fish Passage Improvement
at Marine View Drive
-  Fish Habitat Improvement
Zones 1 and 2

ATTACHMENT 9

 **King County**
Department of
Natural Resources and Parks
Water and Land Resources Division