HAZARDOUS SUBSTANCES CERTIFICATION

The City of Lakewood (project sponsor), as the recipient of funding assistance as specified in IAC project agreement # titles does hereby give assurance that it does not know and has no reason to know that any hazardous substance, the release or threatened release of which has resulted in or contributed to the need for remedial action, was released or disposed of, in or at the property or properties that are included in the above-referenced project agreement. The project sponsor further warrants that it has obtained representations and warranties concerning the environmental condition of the property from the seller and has inspected the property to the scope and extent described in the attached Environmental Assessment Report.

Mary Doetsch
Signature

Director
Title

3/10/03
Date
February 14, 2003

Mary Dodsworth
City of Lakewood
6000 Main St.
Lakewood, WA 98499

RE: Environmental Site Assessment-
Property owner: City of Lakewood
Site Address: 8421 Pine St. S, Lakewood
Parcel #: 0320311035

Dear Ms. Dodsworth:

Enclosed, please find the information that you requested through a Site Assessment Information Application for the subject parcel numbers listed above.

The information enclosed is based solely on a search of current records maintained by the Tacoma-Pierce County Health Department (TPCHD). The information provided in this report does not warrant against other conditions present beyond review of the TPCHD records. Other information regarding this site may be available from private individuals, businesses and other government agencies.

If you have any questions regarding this property, please contact me at (253) 798-2855.

Sincerely,

Rob Olsen
Environmental Health Specialist
Environmental Health Program
SITE ASSESSMENT INFORMATION REQUEST REPORT

Applicant: Mary Dodsworth, City of Lakewood
Site Address: 8421 Pine St. S., Lakewood
Parcel #: 0320311035
Property Owner: City of Lakewood

SEARCH CRITERIA WITHIN 1000 FOOT RADIUS OF PROPERTY

UNDERGROUND STORAGE (UST) REMOVALS:
None Listed

SPILL RESPONSE INCIDENT REPORTS:
None Listed

EXISTING/ABANDONED LANDFILLS:

GROUND WATER:
Presumed seasonally high groundwater table is within fifteen (15) feet from ground surface. Regional aquifer generally flows west-northwest.

SOILS INFORMATION:
Spanaway series soils are predominant, consisting of somewhat excessively drained soils that formed in glacial outwash that is mixed in the upper part with volcanic ash. Spanaway soils are on terraces and have slopes of 0 to 6 percent.

POSSIBLE HAZARDOUS MATERIALS STORAGE SITES:
None listed

WATER SUPPLY:
Lakewood Water District
EAGLE TERRITORIES:  Wards Lake Bald Eagle Territory #1348

Applicant
AHBL, Inc.
c/o Mr. David Schroedel
2215 North 30th Street, Suite 300
Tacoma, WA 98403

Property
T20N R03E S31
Wards Lake Park
84th Street South, Tacoma
Pierce County

PENDING ACTIVITY

Develop the existing property into a city park owned and operated by City of Lakewood. Wards Lake Park will consist of a storm pond, lawn area, parking lot, playground, picnic shelter, meadow, forested area, trails, and pond.

BACKGROUND

The Wards Lake Bald Eagle Territory is located within the Wards Lake Park off 84th Street South in Tacoma. Bald eagle activity around Wards Lake was reported to the WDFW for three years prior to nest construction. In 1999, Michelle Tirhi, biologist with the Washington Department of Fish and Wildlife (WDFW), responded to a telephone call reporting a possible nest around Wards Lake. No eagle nest was located at that time. On April 4, 2001, an active bald eagle nest was confirmed within the conifer bluff located south of Wards Lake. The nest is located in the bowl formed by four supporting branches of a dominant Douglas fir tree. The nest is located approximately 15 ft from the top. The UTM coordinates for the nest tree (using CONUS NAD27) are 540008 E 5224898 N. One adult eagle was reported in the nest incubating eggs on 4/4/02.
Bald eagle management plan
Wards Lake Territory #1348
Page 2

The history of the area surrounding the nest tree has been one of conversion from semi-remote timbered land to an increasingly subdivided area where a considerable portion of the suitable bald eagle habitat has been altered by timber clearing and residential development. Fortunately, the bald eagles occupying the territory have exhibited a higher than normal tolerance for human disturbance. The current nest tree is located within 400 feet of several residences; pedestrian trails used by local residents exist directly under the nest tree. The concern of the WDFW is that construction around the active nest may remove important bald eagle habitat. The WDFW is also concerned that construction activities and increased human disturbance during the breeding and nesting season may cause nest failure, reduced productivity, or abandonment of the territory. The intent of this plan is to allow the pending while maintaining the long-term integrity of the eagle territory.

FACTORS CONSIDERED

Landowners goals were considered through a review of the draft Ward’s Lake Park site design plan; a site visit by Michelle Tirhi with AHBL, Inc. personnel; and telephone conversations and message exchange between Michelle Tirhi and Wayne Carlson/David Schroedel, AHBL, Inc.

Bald eagle habitat use was considered by documentation of the territory; current surrounding habitat conditions, current status of the population; and scientific literature concerning bald eagle habitat protection.

CONDITIONS

The bald eagle nesting season is January 1 - August 15

Objective 1: To protect bald eagles and their habitat, including nesting, perching, screening, and foraging trees

1) No conifers or cottonwoods are to be removed within 400 ft of the bald eagle nest tree. Should the applicant need to remove either conifers or cottonwoods, a request, in writing, must be submitted to the WDFW prior to such activity indicating which trees are to be removed and the reason for the removal. The WDFW will work with the applicant to determine a reasonable alternative to tree removal, including redesigning site plans and associated construction activities to retain trees.
2) No major vegetation removal, vegetation alteration, construction activities, nor materials storage shall occur within 400 ft of the bald eagle nest tree. Minor brush clearing shall be allowed to improve the appearance and visibility of the site.

3) All dead trees (snags) shall be retained on the property.

4) From 400 ft to 800 ft, retain all known perch trees and all conifers and cottonwoods ≥ 24 inch dbh. Also retain ≥50% of pre-clearing or pre-construction conifer stand with diameter distributions representative of the original stand (> 6 ft tall). Windowing and low limbing of trees for view is acceptable provided no more than 30% of the live crown is removed.

Objective 2: To protect nesting bald eagles from disturbance and prevent possible abandonment

4) Heavy equipment operation, dredging, clearing, grading, construction, tree cutting, burning, or discharge of firearms, fireworks, or explosives is discouraged from January 1 – July 1 of any given year. If a WDFW representative confirms that breeding has not taken place for any given year, activities can begin after April 1. Site preparation, site clean up, survey activities, and other non-disruptive activities can begin before July 1.

DURATION OF PROTECTION

This Plan applies to the landowner(s) who signs the Plan. If the ownership changes, the new owner must sign the Plan or request a new one to reflect a change in land use. Any other land use proposals within the Wards Lake Bald Eagle Territory, including but not limited to forestry practices, vegetation removal, construction, and changes in major land use activities on the property may be subject to a different set of conditions. It is the landowner’s responsibility to notify the WDFW of any new proposed land use activities.

Since eagles return to the same traditional use areas each year, the conditions of this Plan shall apply indefinitely, unless a breeding territory or communal roost has been unoccupied for 5 consecutive years. If a breeding territory or communal roost has been unoccupied for 5 consecutive years, then the WDFW biologist and the landowner should evaluate the continued need for protection of the bald eagle habitat. Please contact WDFW if the eagles change the location of their nest. Do not assume that the conditions of this Plan no longer apply.
REVIEW AND AMENDMENT

This Plan will be subject to the following review and amendment procedures. The plan may be reviewed periodically by the WDFW and the landowner to determine whether: 1) the Plan requires amendment in response to changing eagle and landowner circumstances; or 2) the terms of the Plan comply with applicable laws and regulations; or 3) the parties to the Plan are complying with its terms.

DANGER TREES

Except for a tree that presents imminent danger to the safety or property of individuals, a report from a professional arborist, indicating the need to remove the tree, shall be submitted to the WDFW before cutting the danger tree.

APPEAL PROCEDURE

In addition to the provisions of WAC 232-12-292(7.1)-(7.3), the landowner may request a formal appeal of Department actions in accordance to the Administrative Procedures Act, Chapter 34.05 RCW, and the Model Rules of Procedure, Chapter 10-08 WAC. Such a request shall be filed with the Department within 20 days of receipt of the contested WDFW decision. The appeal request shall clearly state the relief sought and the grounds for the appeal.

COMPLIANCE

Failure to comply with this Plan constitutes a misdemeanor as set forth in RCW 77.15.130.
In Reply Refer To:
1-3-03-1-0269

Mary Dodsworth
The City of Lakewood
Parks and Recreation Department
6000 Main Street SW
Lakewood, Washington 98499

Dear Ms. Dodsworth:

This letter is in response to your request for informal consultation on the Wards Lake Park project in Lakewood, Pierce County, Washington. Your cover letter and attached Biological Assessment (BA) were dated November 12, 2002, and received in our office on November 18, 2002. You requested U.S. Fish and Wildlife Service concurrence with your determinations of “may affect, not likely to adversely affect” for bald eagles (Haliaeetus leucocephalus) and “no effect” for bull trout (Salvelinus confluentus), as evaluated in accordance with section 7(a)(2) of the Endangered Species Act of 1973, as amended (Act) (16 U.S.C. 1531 et seq.).

We concur with your determinations of “may affect, not likely to adversely affect” for bald eagles and “no effect” for bull trout. This concurrence is based on information provided in the BA and implementation of conservation measures described in the BA.

This concludes informal consultation pursuant to the regulations implementing the Act (50 CFR 402.13). This project should be re-analyzed if new information reveals effects of the action that may affect a listed species or critical habitat in a manner or to an extent not considered in this consultation; if the action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this consultation; and/or if a new species is listed or a critical habitat is designated that may be affected by this project.
Mary Dodsworth

If you have further questions about this letter or your responsibilities under the Act, please contact Tami Black at (360) 753-4322 or John Gretenberger at (360) 753-6044, of this office.

Sincerely,

[Signature]

Ken S. Berg, Manager
Western Washington Fish and Wildlife Office

cc:
HUD, Seattle
NOAA Fisheries, Lacey
WDFW, Region 6 (M. Tirhi)
November 12, 2002

John Grettenberger  
U.S. Fish and Wildlife Service  
510 Desmond Drive SE, Suite 102  
Lacey, WA 98503  

Dear Mr. Grettenberger,

Enclosed for your review and concurrence is a Biological Assessment of a federally-funded project in the City of Lakewood. The City of Lakewood has awarded a CDBG to the City's Parks and Recreation Department to construct a park on the Wards Lake property. The City of Lakewood is proposing to convert an existing, partially degraded 1.87-acre city property into a visually appealing, pedestrian friendly public park around Wards Lake, a small stormwater retention pond in the Chambers-Clover Creek watershed. The park project is funded by the City of Lakewood through Community Development Block Grant (CDBG) funding from the Department of Housing and Urban Development (HUD). The project will significantly improve the recreational amenities and environmental attributes of the site, including a new access road and parking lot, restrooms, playground, picnic area, a canoe launch and fishing pier, walking paths, and landscaping. Construction will begin in July of 2003 and last for four months.

Conservation measures will be implemented to minimize the potential for adverse environmental impacts:

1. Protective buffer zones will be placed around oak trees to protect them from summer irrigation that could lead to root rot.
2. Construction timing and buffer zone to protect the eagles nest located in the southwestern corner of the property.
3. Re-routing walking trails away from the eagles nest to reduce the potential disturbance from pedestrian traffic.
4. Building a new stormwater detention pond to collect runoff from the new impervious surface on site.
5. Routine road, parking lot, and stormwater system cleaning and maintenance will be conducted.

This Biological Assessment is intended to facilitate review of the proposed action and consultation among the responsible parties pursuant to requirements of the Endangered Species Act. In this report, we document and evaluate the direct, indirect, and cumulative effects of the proposed action on species listed under the Endangered Species Act that are known to occur in the project area. Bull trout and bald eagles are listed by USFWS as threatened species under the ESA. Although critical habitat for these species has not been formally designated, the proposed action is evaluated in light of its effects on habitat attributes (e.g., water quality), habitat-forming processes (e.g., runoff and
sediment delivery), and specific habitat types (e.g., nearshore habitat) that affect the abundance, distribution, and long-term viability of listed species.

Wards Lake is a closed system with no inlets or outlets, thus chinook, coho, and bull trout do not use this lake for any type of breeding, rearing, or migrating. Wards Lake is not important to the long-term health and persistence of these anadromous fish species; however, bald eagles use the area extensively for nesting, breeding, and wintering. A nest is located in the southwestern corner of the park property and great precaution has been taken to protect the pair from adverse construction impacts including a bald eagle management plan written by area biologist, Michele Tirhi of Washington Department of Fish and Wildlife (WDFW).

Potential effects of the project on Wards Lake include increased sedimentation; alteration of flows; and minor pollution caused by runoff and construction activities. Groundwater impacts are expected to be minimal. Site preparation and construction will increase noise in the area and potentially adversely affecting the bald eagles.

It is our professional opinion that the potentially adverse impacts of the project will be avoided and/or minimized through the implementation of appropriate BMPs. These benefits will extend directly to bald eagles that reside in the vicinity of the park property.

When potentially adverse impacts are weighed against potential benefits, the overall effect of the project on listed species will be positive, or at worst, inconsequential. Based on the documentation and analysis presented in this Biological Assessment, we conclude the Wards Lake Park Project will have "no effect" on coastal/Puget Sound DPS bull trout and "may affect, but is not likely to adversely affect" bald eagles.

Provided that the City of Lakewood and its contractors implement the project as described in this document, including implementation of appropriate conservation measures and BMPs, we recommend that the project be allowed to proceed without further modification or formal consultation.

If you have any questions, feel free to contact me at 253-983-7795 or Beth Cullen at Steward and Associates, who prepared the BA, at 360-862-1255.

Thank you for your prompt attention to this matter.

Sincerely,

Mary Dodsworth, Director
Parks and Recreation
City of Lakewood
Wards Lake Park Project

Prepared for:

Department of Housing and Urban Development
Office of Community Planning and Development
Washington State Office, Seattle Federal Office Building
909 1st Avenue, Suite 300
Seattle, Washington 98104

and

The City of Lakewood
Parks and Recreation Department
6000 Main Street SW
Lakewood, WA 98499

Prepared by:

Steward and Associates
120 Avenue A, Suite D
Snohomish, WA 98290

November 2002
CONTACTS

Project Title: Wards Lake Park Project

Project Proponent: City of Lakewood
Parks and Recreation
6000 Main Street SW
Lakewood, WA 98499

Contact: Mary Dodsworth
Telephone: (253) 589-2489
Email: mdodsworth@ci.lakewood.wa.us

Project Design and Engineering: AHBL, Inc.
2215 North 30th Street, Suite 300
Tacoma, WA 98403

Contact: Duane Dietz
Telephone: (253) 383-2422
Email: ddietz@ahbl.com

Preparer of Biological Assessment: Steward and Associates
120 Avenue A, Suite D
Snohomish, WA 98290

Contact: Beth Cullen
Telephone: (360) 862-1255
Email: bcullen@stewardandassociates.com
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ACRONYMS

BA – Biological Assessment
BE – Biological Evaluation
BMPs – Best Management Practices
CDBG – Community Development Block Grant
CFR – Code of Federal Regulations
DDT – dichloro-diphenyl-trichloroethane
DPS – Distinct Population Segment
EFH – Essential Fish Habitat
ESA – Endangered Species Act of 1973
ESU – Evolutionarily Significant Unit
FR – Federal Register
HUD – Housing and Urban Development
LF – Length Feet
LWD – Large Woody Debris
NMFS – National Marine Fisheries Service
RM – River Mile
SCS – Soil Conservation Service
SF – Square Feet
USDA – United States Department of Agriculture
USFWS – United States Fish and Wildlife Service
USACE – United States Army Corps of Engineers
WDOE – Washington Department of Ecology
WDF – Washington Department of Fisheries
WDFW – Washington Department of Fish and Wildlife
WDNR – Washington Department of Natural Resources
WDW – Washington Department of Wildlife
WSDOT – Washington State Department of Transportation
Potential effects of the project on Wards Lake include increased sedimentation; alteration of flows; and minor pollution caused by runoff and construction activities. Groundwater impacts are expected to be minimal. Site preparation and construction will increase noise in the area and potentially adversely affecting the bald eagles.

It is our professional opinion that the potentially adverse impacts of the project will be avoided and/or minimized through the implementation of appropriate BMPs. These benefits will extend directly to Wards Lake and the bald eagles that reside in the vicinity of the park property.

When potentially adverse impacts are weighed against potential benefits, the overall effect of the project on listed species will be positive, or at worst, inconsequential. Based on the documentation and analysis presented in this Biological Assessment, we conclude the Wards Lake Park Project will have "no effect" on Puget Sound ESU chinook salmon, will have "no impact on individuals, populations, or habitat" on Puget Sound/Strait of Georgia ESU coho salmon, will have "no effect" on coastal/Puget Sound DPS bull trout, and "may affect, but is not likely to adversely affect" bald eagles.

Provided that the City of Lakewood and its contractors implement the project as described in this document, including implementation of appropriate conservation measures and BMPs, we recommend that the project be allowed to proceed without further modification or formal consultation.
EXECUTIVE SUMMARY

The City of Lakewood is proposing to convert an existing, partially degraded 1.87-acre city property into a visually appealing, pedestrian friendly public park around Wards Lake, a small stormwater retention pond in the Chambers-Clover Creek watershed. The park project is funded by the City of Lakewood through Community Development Block Grant (CDBG) funding from the Department of Housing and Urban Development (HUD). The project will significantly improve the recreational amenities and environmental attributes of the site, including a new access road and parking lot, restrooms, playground, picnic area, a canoe launch and fishing pier, walking paths, and landscaping. Construction will begin in July of 2003 and last for four months.

Conservation measures will be implemented to minimize the potential for adverse environmental impacts:

1. Protective buffer zones will be placed around oak trees to protect them from summer irrigation that could lead to root rot.
2. Construction buffer zone to protect the eagles’ nest located in the southwestern corner of the property.
3. Re-routing walking trails away from the eagle’s nest to reduce the potential disturbance from pedestrian traffic.
4. Building a new stormwater infiltration pond to collect runoff from the new impervious surface on site.
5. Routine road, parking lot, and stormwater system cleaning and maintenance will be conducted.

This Biological Assessment is intended to facilitate review of the proposed action and consultation among the responsible parties pursuant to requirements of the Endangered Species Act. In this report, we document and evaluate the direct, indirect, and cumulative effects of the proposed action on species listed under the Endangered Species Act that are known to occur in the project area. Chinook salmon, bull trout, and bald eagles, all listed as threatened species under the ESA, and coho salmon, which is listed as a candidate species, are considered. Although critical habitat for these species has not been formally designated, the proposed action is evaluated in light of its effects on habitat attributes (e.g., water quality), habitat-forming processes (e.g., runoff and sediment delivery), and specific habitat types (e.g., nearshore habitat) that affect the abundance, distribution, and long-term viability of listed species.

Wards Lake is a closed system with no inlets or outlets, thus chinook, coho, and bull trout do not use this lake for any type of breeding, rearing, or migrating. Wards Lake is not important to the long-term health and persistence of these anadromous fish species; however, bald eagles use the area extensively for nesting, breeding, and wintering. A nest is located in the southwestern corner of the park property and great precaution has been taken to protect the pair from adverse construction impacts including a bald eagle management plan written by area biologist, Michele Tirhi of Washington Department of Fish and Wildlife (WDFW).
1 INTRODUCTION

The City of Lakewood plans to create a park by converting 1.87 acres of undeveloped city property into a park on Wards Lake, south of 84th Street South (Figure 1). The Wards Lake Park Project will beautify and improve the property while providing public access to Wards Lake. The proposed park will feature an access road and parking area, playground, restrooms, picnic shelter, walking trails, and flexible open spaces. An infiltration pond will be constructed to collect and treat runoff from the site.

Under Section 7(a) of the ESA, federal agencies such as HUD are precluded from authorizing, funding, or carrying out activities that are likely to jeopardize the continued existence of a listed species, or destroy or adversely modify critical habitat. If ESA-listed species are present or could conceivably be affected by the proposed activity, as is the case with Wards Lake Park, the federal action agency is required to consult with the NMFS and USFWS. NMFS regulates federally listed threatened and endangered marine wildlife and anadromous fish. USFWS regulates federally listed threatened and endangered terrestrial wildlife, plants, and inland fish stocks. The City has arranged for the preparation of this Biological Assessment (BA), which will be submitted by that agency to the NMFS and USFWS.

Figure 1. Map showing the major thoroughfares and water bodies in the vicinity of the project area

1 Township 20 north, Range 3 east, Section 31
A BA of the potential impacts of federal projects on federally listed and proposed species and designated critical habitat determines whether potential effects necessitate formal consultation. If the BA finds that the project does not pose a threat to the continued existence of the species or its habitat, and the federal service agencies concur, formal consultation is not required. If the BA finds that the project is likely to "adversely affect" a listed species or its habitat, formal consultation is required. Formal consultation results in a Biological Opinion by the NMFS and/or USFWS outlining their assessment of the proposed activity and its likely impact on the listed species. If the opinion is "no jeopardy," the action agency is free to proceed. If the project is likely to jeopardize that species, the Service attempts to identify "reasonable and prudent alternatives" that allow the project, or a modified version, to proceed.

1.1 Project History

The Wards Lake Park Project was conceived to provide Lakewood residents access to fishing and canoeing in Wards Lake. The City acquired the property immediately south of 84th Street South for the purpose of transforming it into a lakeside park. A house and associated structures formerly occupied the site, and although most of the former structures have been removed, some asphalt and organic residue remains.

The City contracted with AHBL Inc. to implement the project and Steward and Associates (S&A) to review the project design and write the BA. Final design plans were drafted on August 30, 2002. Detailed design drawings and a description of the salient features of the project are presented in Section 2.3.

1.2 Species Considered

This BA addresses chinook salmon, bull trout, and bald eagle, which NMFS and USFWS have listed as threatened (Table 1). The effects of the project on coho salmon, which NMFS lists as a candidate species are also considered. These species have been determined to be living in the vicinity of the project area.

Species status information was compiled from the WDFW "Species of Concern" website\(^2\), the NMFS website\(^3\) and via correspondence with personnel from the USFWS, WDFW, and the Natural Heritage Program of the WDNR. Species lists and agency correspondence are attached in Appendix B. Information communicated by state and federal agencies indicated that no endangered species or species proposed for listing are present in the area.

NMFS designated critical habitat for Puget Sound chinook salmon on February 16, 2000 (65 FR 7764), but agreed in March 2002 to rescind the designation for Puget Sound chinook and 18 other west coast salmon and steelhead populations in response to a lawsuit brought against it by the National Association of Home Builders. NMFS is conducting additional studies and is expected to re-designate critical habitat for these species in the near future.

---


\(^3\) NMFS website: [http://www.nwr.noaa.gov](http://www.nwr.noaa.gov)
Table 1. Federally designated species of interest known to occur in the vicinity of the project.

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
<th>Federal Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bald eagle</td>
<td><em>Haliaeetus leucocephalus</em></td>
<td>Threatened</td>
</tr>
<tr>
<td>Bull Trout</td>
<td><em>Salvelinus confluentus</em></td>
<td>Threatened</td>
</tr>
<tr>
<td>Chinook Salmon</td>
<td><em>Oncorhynchus tshawytscha</em></td>
<td>Threatened</td>
</tr>
<tr>
<td>Coho Salmon</td>
<td><em>Oncorhynchus kisutch</em></td>
<td>Candidate</td>
</tr>
</tbody>
</table>

Critical habitat has not been designated for coho salmon, bull trout, or the bald eagle. However, this Biological Assessment explicitly considers the direct, indirect, interrelated, interdependent, and cumulative effects that the proposed action will have on these species. The USFWS has begun a comprehensive, range-wide analysis of critical habitat for bull trout, with a formal determination expected by 2005.

Under the assumption that any future designation of salmonid critical habitat will include areas of the Chambers-Clover Creek system in which the project site is located, we have addressed it in this Biological Assessment.

1.3 Biological Assessment Guidance Documents

This BA follows protocols established by both federal and state agencies, relying principally on the following documents for guidance:


NMFS. 2001. National Finding for use of Endangered Species Act Section 7 Consultation Process to Complete Essential Fish Habitat Consultations. Silver Spring, Maryland


2 PROPOSED ACTION

2.1 Environmental Baseline

The City of Lakewood is located within Pierce County, Washington. With a population of over 58,740 people in an area of 20 square miles, Lakewood is the 11th largest city in Washington State (WOFM 2002). The area is dominated by residential and commercial land uses. Aside from the commercial and residential disturbance, the project site is very close to McCord Air Force Base and Interstate 5 (I-5). Jets pass directly over the eagles' nest frequently and I-5 generates constant, year round noise from vehicles traveling this major thoroughfare.

The local climate is temperate, with warm, dry summers and moist, mild winters (USDA SCS 1979). Mean annual precipitation averages 35-40 inches, falling mostly as rain between the months of October and March. The mean annual temperature is approximately 51 degrees F.

Area soils are Nisqually loamy sand and characterized as nearly level sandy glacial outwash deposits. Permeability is rapid with slow surface runoff and a slight erosion hazard. Around the project site the soils are characterized as organic and mineral sediments that include peat, muck, silt and clay (AMEC 2001).

2.1.1 Chambers-Clover Creek

The majority of the City lies in the Puget Sound lowlands in the Chambers-Clover Creek watershed (Water Resource Inventory Area [WRIA] 12), which has a drainage area of approximately 144 square miles. The drainage area is bordered by the Puget Sound on the west and the city of Graham on the east. The waters of Point Defiance and the city of Dupont are the northern and southern boundary respectively. The watershed is predominately urbanized with forty-two percent of the land being built up. Land uses include residential, urban, and light industrial activities. Tacoma West and the Clover Creek/Stellicom Lake subbasins are considered the most urbanized (WDOE 1995).

The Clover-Chambers Creek Watershed ranges in altitude from sea level to 600 feet and is comprised of a broad, poorly drained upland drift plain. The drift plain was deposited by glaciers and streams and is composed primarily of thick sequences of low-permeability glacial tills, and higher permeability outwash deposits. Volcanic and sedimentary rocks of Tertiary age underlie the entire watershed, but are deeply buried by the unconsolidated glacial and fluvial sediments (WDOE 1995).

Clover Creek, which is the upper stream segment of the Chambers-Clover Creek system, originates from a underground spring and flows 12.5 miles to Steilacoom Lake. The outlet stream for Steilacoom Lake is referred to as Chambers Creek; it flows approximately three miles before entering Chambers Bay in Puget Sound. Two major tributaries, Flett and Leach Creeks, join Chambers Creek approximately 1.5 miles downstream. A dam at river mile 0.75 creates the Chambers Bay impoundment (WDOE 1995).
Water quality in the Chambers-Clover Creek watershed is degraded in many places; twenty-nine water body segments appear on Washington Department of Ecology's 1998 List of Threatened and Impaired Waterbodies (WDOE 1998). Unmet parameters include excessive water temperature, elevated concentrations of fecal coliform bacteria, low levels of dissolved oxygen, and high levels of chemical contaminants. While the State has not established instream flows for the basin, flows are considered impaired, especially between July and October (WDOE 1995). High temperatures, reduced dissolved oxygen levels, and algal blooms affect many lakes and streams in the Chambers-Clover Creek watershed. Low flows during the summer can exacerbate water quality problems, affecting both summer rearing for all salmonids and upstream migration and spawning for chinook and chum salmon (personal communication, Mark Wicke, Pierce County Conservation District).

In 1997, the Department of Ecology sampled habitat conditions and benthic macroinvertebrates in the Chambers-Clover Creek system at the outlet of Steilacoom Lake (personal communication, Bob Plotnikoff). The habitat in the sampled area is predominately riffles with high levels of sediment and fines in the stream bottom. Ecology staff observed low flows during the sampling period in September. Results from biological monitoring show degraded conditions with a Benthic Index of Biotic Integrity of 15 (lowest possible score 10 and highest score 50) and the collection being dominated by pollution-tolerant species.

WDFW identified fish migration barriers during an evaluation of Chambers-Clover Creek system in 1975 (Pierce County 1997). The survey noted fish-passage restrictions stemming from the Burlington Northern Santa Fe Railroad Bridge that crosses at the mouth of Chambers Bay at approximately river mile (RM) 0.0 and the dam (with spillway and fish ladder) at approximately RM 0.75. Fall chinook, coho, chum, sockeye and pink salmon, as well as winter steelhead and sea-run cutthroat trout migrate through Chambers Bay to upstream spawning areas in the Chambers-Clover Creek watershed. WDFW collects all fish at the dam's trap; chinook are captured as brood stock for the hatchery, while other salmonids and any surplus chinook are passed upstream to spawn naturally.

The Garrison Springs Hatchery south of Chambers Bay continues to release hatchery chum and coho fingerlings into the Chambers Creek system as part of an effort to sustain salmon production in this watershed (Pierce County 1997; Myers et al. 1998). In addition, spring chinook and pink salmon yearlings were released in 1973, and steelhead and cutthroat are planted annually. Sport, commercial, and tribal fisheries in the area target hatchery sockeye, chinook, and coho from July through November, and hatchery chum and steelhead from December through January for.

2.1.2 Site Conditions

The project site occupies 960 feet along the northern shore of Wards Lake. The lake is over 10 acres and is classified as a natural Category II wetland providing "moderate and high value wetland function" (Coot Company 1997). Wards Lake currently serves as a stormwater infiltration pond where water levels are maintained by stormwater runoff and groundwater seepage. An excavated trench from an offsite water tower/pump facility cuts through the property but is not regulated because of its artificial origin.
Grasses, oak trees, dogwoods, evergreens, and other scrub brush are the dominant types of vegetation on the project site (Photos 1 and 2). Wards Lake is located approximately 3 miles east of the Chambers-Clover System and is neither accessible nor capable of supporting anadromous fish. The closest anadromous fish-bearing stream is Flett Creek, approximately 1 mile northwest of the project site. Flett Creek supports chinook, coho, and bull trout.

Wards Lake is situated in a highly urbanized area and experiences heavy pedestrian and vehicle traffic due to the surrounding land uses of residential and commercial structures.

The project site provides suitable habitat for bald eagles and is currently used as a nesting site for one pair of bald eagles as well as a wintering site. The nest is located in a stand of mature conifers in the southwestern corner of the property. Michelle Tirhi, a biologist with WDFW, designed a site-specific bald eagle management plan for the bald eagle nest on site, which is included as Appendix C. The management plan puts forward several objectives to ensure the eagles receive minimal impact exposure both through the construction and through the operation of the park.

Wards Lake does not provide suitable habitat for any other listed or sensitive plant or animal species.

Lakewood residents currently use the area as a recreational spot. People fish in the lake for stocked species; remnants of picnics and parties are seen in the trash littering the ground; and paths created by walkers are well worn throughout the project site (Photo 3 and 4). All these activities suggest this area already is used for recreational pursuits.

2.1.2.1 Environmental Site Assessment and Wetland Delineation and Assessment

AMEC Earth and Environmental Inc. preformed a geotechnical evaluation report for Wards Lake on September 26, 2001. This report described the site surface and soil conditions and procedures for site preparation and construction. No lab analysis was performed for this project.

On June 4, 1999 the Coot Company Wetland and Wildlife Consulting Services preformed a wetland delineation and assessment. A single Class II wetland was found along the eastern half of the property. The system contains four classes, open-water, aquatic bed, emergent, and scrub/shrub. The system provides structural complexity and permanent open-water conditions that provides valuable habitat and water quality functions. The system drains to the north, through a box culvert, to an abandoned borrow pit.
Photos 1 and 2: Typical vegetation dominating Wards Lake and the property around the lake.

Photos 3 and 4: Current uses at the Wards Lake property include trails and fishing.
2.2 Action Area

The proposed project comprises 1.87 acres on the north side of Wards Lake along 84th Street South in the City of Lakewood (Figure 2).

The action area for the project includes the physical space that could plausibly be affected by project activities. The size and shape of the area varies with the type of activity proposed and the species under consideration. For this project, given the nature of the proposed activity and the presence of bald eagles in the vicinity, the action area for terrestrial species was defined as the space within a 1.0-mile radius of the project site. For aquatic species, the action area encompasses all of Wards Lake.

2.3 Project Description

2.3.1 Overview

The final design drawings for the Wards Lake Park have been completed by AHBL Engineers (Figure 3).

Figure 2. Map of the Wards Lake Park project location in the City of Lakewood, Pierce County, Washington.
The proposed park will include a new access road and parking lot, restrooms, playground, picnic area, a canoe launch and fishing pier, walking paths, and landscaping. The park will be accessible by foot and by vehicle from 84th Street South.

A house and associated structures on the property have been demolished. The project will increase impervious surface area by 25,369 square feet. Stormwater runoff from the property currently runs into Wards Lake, but a new stormwater system will collect stormwater runoff and infiltrate the water on site.

The project will proceed in stages beginning with the placement of new and existing utilities under ground below the new roadway, followed by construction of the park amenities and storm drainage system, then road and sidewalk construction. Landscaping of disturbed areas in the park will complete the project.

2.3.2 Utility Work

New sewer and water lines will be brought onto the project site and overhead utility lines will be relocated underground between power poles. Please refer to Figure 3, sheet C2 of the design drawings for the utility layout. The new electrical junction boxes will be constructed with automatic timers, operating only from dawn to dusk and all boxes and outlets will be vandal proof.

Approximately 335 length feet (LF) of 8-inch water main will be placed on site, which will tie into the existing water main along South 84th Street. The water is to be used by the restrooms and fire hydrant, both located south of the parking lot.

Approximately 150 LF of sewer main will run along the western edge of the property along the access road. It will extend from the restrooms and tie into the existing sanitary sewer system used by the residences west of the project site.

All utilities on site that were associated with the existing vacant structures will either be demolished or appropriately capped, abandoned, and the location recorded.

2.3.3 Grading and Excavation Work

Excavation and trenching will be required to cap and abandon all existing utilities as well as place the new utilities. Grading will be necessary to create the new stormwater infiltration pond and conveyance system including catch basins, roof drainage systems, and pipe connections. Replacement of the road and cement sidewalks leading into the park and around the park facilities will require grading. Please refer to Figure 3, sheet C1 of the design drawings for the drainage and grading plan.

Figure 3 (following page). Utilities, excavation and grading, stormwater conveyance, and landscaping design drawings for Wards Lake Park prepared by AHBL Inc.
Approximately 7,300 SF of existing structures have been demolished. The project will require that 67,465 SF around the northern edge of Wards Lake to be cleared and grubbed of scrub brush and grasses. Five trees will be removed from the project site. All five trees are over 100 feet from the Lake and none provided nesting or perching habitat for bald eagles.

2.3.4 Stormwater Conveyance and Treatment

The history of Wards Lake states it was originally a wetland that has more recently been utilized as a stormwater infiltration pond for the surrounding land uses and roads. A 640 LF ditch from a water tower/pump facility is already on site, coming in from the southwestern edge of the property and cutting through the southern section of the project site, discharging directly into Wards Lake.

Figure 3, Sheet C1 shows the plan for the new stormwater treatment system that will be put in place to capture the runoff from the new impervious surface within the project site. The system consists of roof drainages, catch basins, drainage pipes, and a infiltration pond. The catch basins will be placed at the entrance of the parking lot and convey runoff from the sidewalks, parking lot and road into the stormwater infiltration pond. Roof drainages will collect runoff from the new restrooms and picnic shelter and deliver it into the southern side of the infiltration pond.

The stormwater infiltration pond will be constructed in the northern section of the property just east of the parking lot and will infiltrate all stormwater on site. It will be seeded with wetland plants and pollutants from the runoff will be filtered out through biofiltration. Sediment will settle out to the bottom, while water is allowed to infiltrate into the surrounding soils. The new infiltration pond is approximately two feet deep and 140 LF. When the infiltration pond meets maximum capacity there is a drainage connection to Wards Lake and will direct any overflow into the lake. All inlets and outlets for the infiltration pond and Wards Lake will be surrounded by riprap to slow down and disperse the energy of the water reducing erosion and scour. A split rail fence will be placed around the infiltration pond.

2.3.5 Impervious Surface

The project is expected to contribute a total of 25,369 SF of impervious surface including replacing the existing roadway. The site had 7,300 SF of impervious surface in the form of the roadway, homes, and associated structures, 2,500 SF of that has been permanently removed by demolishing the existing structures. A total of 18,069 SF of new or additional impervious surface will be constructed on site in the form of roadway, parking, park facilities, and sidewalks.

The existing 4,800 SF of access road will be removed and repaved within the project site. The new road section leading into the park from South 84th Street will end in a cul-de-sac parking lot, totaling 13,998 SF of impervious surface. The asphalt road will be eight inches of a gravel base, topped with two inches of crushed surfacing top course, and paved with three inches of asphalt concrete pavement, Class B. The orientation of the road will remain essentially the same, but concrete asphalt curbs and sidewalks will lead from the road around
the major park facilities (playground, picnic shelter, and restrooms). Curbs and sidewalks will contribute 1,379 LF and 9,615 SF respectively to the total impervious surface area.

Park facilities will also increase the new impervious surface on site. The restroom will be placed on a 720 SF concrete slab and the picnic shelter will be a low pitch 560 SF structure. Eight new benches will be placed around the park, each bench will be mounted on a 15 SF concrete pad, increasing impervious surface by 120 SF. Four new picnic tables will be placed within the park, each table will be mounted on an approximately 89 SF concrete pad, increasing impervious surface by 356 SF. New park facilities will contribute a total of 1,756 SF to the total impervious surface.

2.3.6 Pervious Surfaces

The trail system in the park will include three different kinds of surfaces, asphalt, woodchips, and gravel as shown in the site plan (Figure 3, Sheet L1). The asphalt walkways will be placed in the northwestern section of the park and are addressed in section 2.3.5. Aside from sidewalks providing access for the disabled to major park facilities, there are pervious paths that provide pedestrian access to the rest of the park; the two path surfaces are gravel and woodchips. The majority of the path system is wood chipped and starts south of the picnic shelter and immediately east of the fishing pier. Woodchips will be four inches deep along these paths and total 11,580 SF; a small bobcat will be used to level the paths and spread the woodchips. The gravel path will extend from the lawn area to the fishing pier. The path will be surfaced with approximately 5,749 SF of gravel. Slight grading may be required to maintain easy pedestrian use, but will likely not require large machinery to perform the task. All paths will be covered first by a heavy-duty weed barrier to keep vegetation from covering the paths.

Two footbridges will be constructed along the wood chipped trails, crossing the swale in the southern section of the project site. Each footbridge will be approximately 20 LF and will not have any support structures within the stormwater drainage ditch. Slight grading may occur to insure the footbridge is flush with the paths creating a seamless transition for the pedestrians.

A 3,430 SF playground area will be constructed north of the picnic shelter. The entire area will be lined with a geotextile fabric to act as a weed barrier and then wood chipped to a depth of 12 inches.

2.3.7 In-water Work

A fishing pier will be constructed in the northern section of the lake and will require two footings to be located in the lake. A canoe launch will also be placed on the northwest edge of Wards Lake. The toe of the launch will be five feet from the minimal highwater mark and sloped to be flush with the gravel path. A geotextile weed barrier will be placed on the bottom of the launch that will be surfaced with gravel. Minor grading will occur to prepare the site. No pile driving is necessary for either of the two structures.
2.3.8 Proposed Landscape Planting Plan

Upon completion of construction, native trees, shrubs, forbs, and grasses described in Table 2 will be planted throughout the entire project area, following the plans developed by AHBL Landscape Architects (Figure 3, Sheet L4). The plans call for 6 inches of imported topsoil amended with a 25% organic mulch for all landscape areas.

Oregon Ashes will be planted along the western border of the park and around the access road and parking area. The Quaking ash will be planted along the south side of the bioswale and along the south side of the playground and the western red cedars will be planted in a cluster along the north side of the bioswale. A lawn will be planted on the northwestern edge of the lake, along the southern and southwestern edge of the bioswale, and on the northern edge of the playground. The lawn seed mix will consist of rye grass blend, florentine creeping fine fescue, and miramar strong creeping red fescue. The meadow will be on the southern edge of the playground and along the oak buffer and will contain discovery hard fescue, bighorn blue fescue, and baby bloomer flower mix. The bioswale planting mix will include discover hard fescue, bighorn blue fescue, and red clover. All new plantings will receive an automatic irrigation system.

2.4 Construction Activities

All materials to be used in the project including: new fill and compost, asphalt, crushed rock, and concrete, will come from off-site commercial sources. All removed materials will be recycled where appropriate.

Construction will require the use of trucks, backhoes, bulldozers, compactors, rollers, paving machines, brush cutter, asphalt and concrete saws, concrete pump trucks, and a small boom truck. The noise generated by this equipment will result in an increase in the ambient noise levels during construction only. All restriction and regulations from permits or imposed by reviewing agencies will be followed.

Construction will occur in phases over a 4-month period (60 calendar days) beginning July 2\textsuperscript{nd} 2003, with construction of the new park facilities and structures taking the complete four months and paving of the drives and parking and landscaping occurring in the last month of construction. The construction will take place on weekdays during the hours of 7am to 5pm.
Table 2.  Trees and shrubs included in Wards Lake planting plan (source: AHBL Landscape Plan)

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
<th>#</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oregon Ashes</td>
<td><em>Fraxinus oregona</em></td>
<td>31</td>
</tr>
<tr>
<td>Quaking Aspen</td>
<td><em>Populus tremuloides</em></td>
<td>19</td>
</tr>
<tr>
<td>Western Red Cedar</td>
<td><em>Thuja plicata</em></td>
<td>7</td>
</tr>
<tr>
<td>Evergreen Bramble</td>
<td><em>Rubus calycinoides</em></td>
<td>1260</td>
</tr>
</tbody>
</table>

The project will entail the following construction activities:

- All appropriate BMPs will be employed;
- Grading and excavating for road, parking lot, utilities, stormwater system, and canoe launch;
- Constructing new restroom structures with concrete pad;
- Constructing picnic shelter;
- Trucking and placing the prefab buildings with cranes onto the new foundations;
- Constructing playground;
- Constructing and surfacing woodchip and gravel walking paths;
- Building stormwater system to channel into stormwater pond;
- Constructing storm drain system;
- Constructing fishing pier;
- Compacting of soils;
- Paving new asphalt road, parking lot, and sidewalks;
- Rototilling and seeding; and
- Restoring disturbed areas with topsoil, mulch, hydrosed, and fertilizer.

2.4.1 Construction BMP's

BMPs prescribed in the Washington State Department of Ecology’s *Stormwater Management Manual for Western Washington* (WDOE 2001) will be explicitly identified in project design and contract documents. BMPs will be utilized to counter any temporary effects of construction and to provide long-term water quality treatment.

No construction work (sawcutting, excavation, etc.) will commence until appropriate erosion control measures are in place and operating in such a manner as to insure that sediment-laden water does not enter the drainage system or nearby waterways. Erosion control measures will include siltation basins, straw bales, catch basin filter fabric bags, silt fences, etc. Stormwater will be channeled to the existing storm system after sediments and pollutants have been removed. The erosion control facilities will be inspected daily; and maintained and modified as necessary to ensure their proper functioning for the duration of the project.
Prior to each workday, all construction equipment, primarily hoses and fuel tanks, will be inspected for petrochemical leaks such as diesel and hydraulic fluids. The contractor's spill prevention plan will be kept on hand at the worksite in the event such leaks are detected.

All work areas will be cleaned and swept free of hazardous materials on a daily basis. A power broom will be used to remove excess dust and/or mud from new and existing paved street surfaces during construction, and again upon completion of work within the area.

All construction materials will be stored in an appropriate containment system, or if this is unavailable, covered with a suitable tarpaulin or plastic covering on a daily basis. In addition, all exposed soils will be covered with plastic on a daily basis to prevent further erosion. All materials and equipment will be stored in an orderly fashion so as to allow ready access, not impede drainage or traffic, and provide protection. Requirements for fire protection will be observed. Materials stored on-site will be checked frequently, daily if necessary, and either rearranged or removed to meet the requirements stated above.

Construction will only take place where appropriate to minimize disturbance. Unless stipulated otherwise in the Landscape Design Plan (Figure 3, Sheet L4), all disturbed native vegetation will be restored. Grass seed, fertilizer, and mulch will be applied on all areas requiring roadside seeding within the project. If a commercial fertilizer is used, it will be premixed prior to bringing it to the job.

Some, but not all, of the foregoing BMPs are shown in the project design drawings (Figure 3). The following construction BMPs will also be implemented (Source: WDOE 2001):

**BMP C101 Preserving Natural Vegetation:** The purpose of preserving natural vegetation is to reduce erosion wherever practicable. Limiting site disturbance is the single most effective method for reducing erosion.

**BMP C121 Mulching:** The purpose of mulching soils is to provide immediate temporary protection from erosion. Mulch also enhances plant establishment by conserving moisture, holding fertilizer, seed, and topsoil in place, and moderating soil temperatures. An enormous variety of mulches exist that can be used.

**BMP C123 Plastic Covering:** Plastic covering provides immediate, short-term erosion protection to slopes and disturbed areas. Due to rapid runoff caused by plastic sheeting, this method shall not be used upslope of areas that might be adversely impacted by concentrated runoff. Such areas include steep and/or unstable slopes. Whenever plastic is used to protect slopes, water collection measures must be installed at the base of the slope. These measures include plastic-covered berms, channels, and pipes used to convey clean rainwater away from bare soil and disturbed areas.

**BMP C120 Temporary and Permanent Seeding:** Seeding is intended to reduce erosion by stabilizing exposed soils. All seeding should be completed by the end of September so that the seeding has enough time to establish. A well-established vegetative cover is one of the most effective methods of reducing erosion.

**BMP C125 Topsoiling:** Topsoiling provides a suitable growth medium for final site stabilization with vegetation. While not a permanent cover practice in itself, topsoiling is an integral component of providing permanent cover in those areas where there is an unsuitable soil surface for plant growth. Native soils and disturbed soils that have been organically amended not only retain much more stormwater, but they
also serve as effective biofilters for urban pollutants and, by supporting more vigorous plant growth, reduce the water, fertilizer and pesticides needed to support installed landscapes. Topsoil does not include any subsoils but only the material from the top several inches including organic debris.

**BMP C150 Materials on Hand:** Quantities of erosion prevention and sediment control materials can be kept on the project site at all times to be used for emergency situations such as unexpected heavy summer rains. Having these materials onsite reduces the time needed to implement BMPs when inspections indicate that existing BMPs are not meeting the Construction Stormwater Pollution Prevention Plan requirements.

**BMP C151 Concrete Handling:** Concrete work can generate process water and slurry that contain fine particles and high pH, both of which can violate water quality standards in the receiving water. The washout from concrete and haul trucks will not take place in an area that is subject to surface water runoff, or within 50 feet of a storm drain, open ditch, or receiving water body. In addition, the concrete washout should be allowed to harden, after which it can be broken up and placed in an appropriate dumpster or disposal site. This BMP is intended to minimize and eliminate concrete process water and slurry from entering waters of the state.

**BMP C152 Sawcutting and Surfacing:** Sawcutting and surfacing operations generate slurry and process water that contain fine particles and high pH (concrete cutting), both of which can violate the water quality standards in the receiving water. This BMP is intended to minimize and eliminate process water and slurry from entering waters of the State.

**BMP C220 Storm Drain Inlet Protection:** The purpose of storm drain inlet protection is to prevent coarse sediment from entering drainage systems prior to permanent stabilization of the disturbed area. This BMP shall be used where storm drain inlets are to be made operational before permanent stabilization of the disturbed drainage area. Protection should be provided for all storm drain inlets down slope and within 500 feet of a disturbed or construction area, unless the runoff that enters the catch basin will be conveyed to a sediment pond or trap. Inlet protection may be used anywhere to protect the drainage system. It is likely that the drainage system will still require cleaning after construction is complete.

**BMP C230 Straw Bale Barrier:** Intercepting and detaining small amounts of sediment from disturbed areas of limited extent to prevent sediment from leaving the site. Straw bales are among the most used and least effective BMPs, particularly as a method to decrease the velocity of sheet flows below disturbed areas subject to sheet and rill erosion. They should only be used as small dams to create sediment traps or as check dams to reduce velocity. The best use of a straw bale is hand spread on the site. Or Brush Barrier: Purpose The purpose of brush barriers is to reduce the transport of coarse sediment from a construction site by providing a temporary physical barrier to sediment and reducing the runoff velocities of overland flow. The project manager needs to decide which of these BMPs are appropriate for this construction site.

**BMP C233 Silt Fence:** Use of a silt fence reduces the transport of coarse sediment from a construction site by providing a temporary physical barrier to sediment and reducing the runoff velocities of overland flow. Any concentrated flows must be conveyed through the drainage system to a sediment pond. Silt fences should not be constructed in streams or used in V-shaped ditches. They are not an adequate method of runoff control for anything deeper than sheet or overland flow.
3 STATUS OF THE SPECIES AND CRITICAL HABITAT

3.1 Chinook Salmon

3.1.1 Status

NMFS determined that indigenous chinook populations within the Puget Sound drainage constitute an "evolutionarily significant unit" (ESU); that is, a genetically distinct subset of the biological species (Myers et al. 1998). Following a formal status review, NMFS listed Puget Sound ESU chinook on 24 March 1999 (64 FR 14308) as threatened. Chinook are widely distributed in Puget Sound streams and rivers. Although the total abundance of Puget Sound ESU chinook is relatively high, much of this production is hatchery-derived. Population levels are trending downward, with several local populations exhibiting severe short-term declines (Myers et al. 1998).

Puget Sound chinook populations have declined as a result of loss, damage, or change to their natural environment. Several factors have been implicated: 1) fishing pressure, 2) high temperatures and low dissolved oxygen concentrations, 3) low flows, 4) physical barriers that limit or add stress to migrations, 5) lack of deep holding pools, 6) sedimentation, 7) high turbidity, 8) lack of structure or cover providing habitat, 9) lack of large woody debris, 10) competition, 11) predation, and 12) pollution. Salmonids require adequate substrate, water quality, water quantity, water temperature, water velocity, cover/shelter, food, riparian vegetation, space, and safe passage conditions to survive and thrive. Chinook have proven to be particularly sensitive to loss of spawning and rearing habitat and poor water quality. Chinook are adversely affected by low flows and poor water quality during the summer months. They are also vulnerable to the effects of flooding during the summer. Eggs may be lost by scouring or suffocated by silt deposition (Spence et al. 1996; Myers et al. 1998).

3.1.2 Local Population

Summer- and fall-run chinook use Chambers Creek, Clover Creek, and Spanaway Creek (WDF et al. 1993; Pierce County 1997). Both runs are of mixed genetic origin due to widespread hybridization of indigenous stock with introduced hatchery fish. Between 1959 and 1993, 15.8 million hatchery-reared juvenile chinook were released into the watershed, and most (>99%) of the fish came from Puget Sound hatcheries (Myers et al. 1998).

Natural production in Chambers Creek is sustained by both naturally produced spawners and hatchery strays. Natural spawning has been documented in Chambers and Clover Creek below the confluence of Spanaway Creek however, there is no data on the number of natural spawners that return to the basin on an annual basis (personal communication, Don Nauer, WDFW). Summer chinook adults enter Chambers Creek between June and July and begin spawning in August whereas, fall chinook enter the system between August and September and spawn from late September into November. A fish ladder facilitates passage of adult chinook over the Lake Steilacoom dam and into Clover Creek.
The Puget Sound Technical Recovery Team (TRT) assessed independent populations of chinook salmon in Puget Sound (PSTRT 2001). The TRT concluded that the Chambers Creek watershed is too small to support self-sustaining populations of chinook salmon, but could support spawning and rearing of “spillover” populations from nearby drainages.

Mobrand Biometrics performed Ecosystem Diagnosis and Treatment (EDT) review of the Chambers Creek watershed and provided the results to Pierce County (Mobrand 2001). The EDT review concludes that Chambers Creek could support up to 2,000 chinook spawners.

Although the distribution of adult salmon as they migrate through the Chambers Clover Creek system is unknown, they are highly unlikely to be present in Flett Creek at any time. StreamNet data has no mention of Chinook Salmon in Flett Creek.

3.1.3 Life History

A generalized chinook life history summary is presented in Table 3. Adult chinook return to freshwater to spawn in the late summer and fall, destined for upstream mainstem and tributary spawning areas. “Summer” chinook arrive first, ascending the river in September and early October to spawn. “Fall” chinook return to spawn between September and the end of October or early November.

Chinook fry emerge from the gravel between January and mid-March. Juveniles migrate to the ocean within a few months of emergence, a trait referred to as “ocean type”, or they overwinter in their natal streams and migrate the following spring, in which case they are denoted “stream type” chinook. The majority of Chambers Creek chinook exhibit an ocean-type life history strategy (Healey 1991).

Juvenile chinook feed primarily on zooplankton and secondarily on terrestrial and aquatic insects. Most chinook spend two to four years feeding in the North Pacific before returning to spawn as 3, 4 or 5 year old. Significant portions are thought to spend their entire marine phase in Puget Sound and in the Strait of Georgia. Like other semelparous species of salmon, chinook die after reproduction.

3.1.4 Habitat Use

Chinook require a series of freshwater, estuarine, and marine environments during different phases of their life. Estuaries serve as major migratory routes and provide important salt/fresh water transition habitat where chinook can acclimate before moving from one environment to the other (Williams et al. 1975). Chinook spend a significant amount of time feeding and growing in estuaries and are sensitive to environmental perturbations to those habitats (Healey 1982, Aitkin 1998).
Table 3. General life histories of listed salmonids known to occur in the project vicinity (Source: Spence et al. 1996; Cederholm et al. 2000).

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<thead>
<tr>
<th>Species</th>
<th>Spawning Migration</th>
<th>Spawning Period</th>
<th>Spawning Area</th>
<th>Life History</th>
<th>Most Common Age at Maturity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinook Salmon (ocean)</td>
<td>Summer to fall</td>
<td>Summer to early winter</td>
<td>Large rivers and mainstem areas</td>
<td>2-4 months freshwater, 1-4 years ocean.</td>
<td>4</td>
</tr>
<tr>
<td>Coho Salmon</td>
<td>Fall to early winter</td>
<td>Fall to early winter</td>
<td>Small lowland and headwater streams</td>
<td>1-2 years freshwater, 18 months adult ocean.</td>
<td>3</td>
</tr>
<tr>
<td>Bull Trout</td>
<td>Summer to fall</td>
<td>Fall</td>
<td>Large streams with groundwater infiltration</td>
<td>Juveniles migrate from tributaries to lakes or larger streams at about 2 years, highly variable.</td>
<td>4-9</td>
</tr>
</tbody>
</table>

Chinook favor mainstem rivers and large streams for spawning, but are also locally common in smaller tributaries such as Chambers Creek (WDF et al. 1993). Spawning habitat for chinook typically consists of riffles and the tailouts of pools with clean substrates dominated by cobbles located in the mainstem of rivers and large tributaries. Juvenile chinook fry prefer low-velocity habitats for rearing, primarily along the margins of the slough habitat. Areas and instream structures (e.g., rootwads, large boulders, gravel bars, and side channels) that provide refuge from avian and fish predators are preferred. Fry may also enter smaller tributaries and backwater areas to feed.

Small tributaries that chinook may not use directly, such as Flett Creek, are still important for the survival and reproductive success of chinook (NRC 1996). These tributaries are the source for cool, clean water, nutrients, and organic matter that sustain chinook and other salmonids, contributing to the overall health of the ecosystem.

3.1.5 Critical Habitat

Within the context of the ESA, the term “critical habitat” refers to areas that are considered necessary for the survival and recovery of a threatened or endangered species. NMFS designated critical habitat for the Puget Sound chinook ESU as all marine, estuarine, and river reaches currently accessible to chinook salmon (65 FR 7764, February, 16, 2000). In response to a lawsuit brought against it by the National Association of Home Builders, NMFS agreed to withdraw its critical habitat designations for 19 west coast salmon and steelhead populations, including Puget Sound chinook. NMFS has agreed to conduct more scientific
studies and to analyze the economic impacts of critical habitat designations before re-issuing critical habitat designations.

Chambers-Clover Creek was subsumed under the former critical habitat designation. Although these areas are currently not protected under the critical habitat rule, they remain subject to Essential Fish Habitat provisions of the Sustainable Fisheries Act (formerly, Magnuson-Stevens Act).

3.2 Coho Salmon

3.2.1 Status

Coho populations in Puget Sound, Hood Canal, and the Strait of Georgia form a distinct genetic/ecological cluster relative to populations found elsewhere, and are therefore considered a single ESU by the NMFS (Weitkamp et al. 1995). Coho populations in the northern portion of the Puget Sound/Strait of Georgia ESU have declined significantly from historical levels. However, the abundance of the ESU as a whole is not depressed and recent trends have not been downward. From a consideration of available evidence, NMFS decided to not list the Puget Sound/Strait of Georgia Coho ESU (Weitkamp et al. 1995).

There is, nonetheless, substantial risk of future declines due to several natural and anthropogenic factors. Coho survival is largely dependent on discharge rates and water temperatures; both factors are sensitive to human activities. Other risk factors include widespread and intensive artificial propagation, overfishing, extensive habitat degradation, a recent dramatic decline in adult size, and poor ocean conditions. On the basis of these risk factors, NMFS designated coho salmon a candidate species in 1995 (60 FR 38011). They are included in this BA and in the rare case that they will be listed or proposed for listing prior to completion of the project.

3.2.2 Local Population

Coho stocks in the Chambers Creek watershed are considered by WDFW and NMFS to be of mixed ancestry, with individuals derived from native and non-native parents, hybrids, or a native stock that has undergone substantial genetic alteration. There is no data on the relative proportion or spawning success of wild and hatchery-origin coho in Chambers Creek. Spawning times have not been differentiated (WDF et al. 1993).

Coho salmon are found in all accessible tributaries in the project area, such as Flett Creek. Coho salmon are not found in Wards Lake since there is no stream or any access. An average of 1,152 adult coho returned to Chambers Creek each year between 1965 and 1993. The population is rated as stable or increasing in abundance (WDF et al. 1993).

3.2.3 Life History

Table 3 provides a general summary of coho salmon life history. Coho adults return to the Chambers-Clover Creek basin in September through late December, and spawn from late
October to early January. They typically spawn in low gradient riffles with clean substrates ranging from gravel to cobble size substrate. Fry emerge in spring and rear in freshwater for 12-18 months. Coho juveniles often redistribute from their summer rearing habitats to overwinter in ponds and other off-channel habitats. The seaward migration of coho smolts begins in early April, peaks in May, and continues through June. Coho typically spend 16-20 months rearing in the ocean before returning to freshwater to spawn as three-year-old adults (Cederholm et al. 2000).

The ocean migratory route followed by Puget Sound coho salmon appears to be related to the geographic area of their natal streams. Significant numbers of coho remain in Puget Sound throughout their marine residency. However, as a general rule, coho from streams and hatcheries in Puget Sound are likely to be caught off the coast of Washington and British Columbia (as opposed to Oregon and Alaska), presumably because they spend most of their time in these waters.

3.2.4 Habitat Use

Coho favor smaller tributaries for spawning and rearing. Juveniles prefer low gradient habitats, including pools, off-channel ponds, and tree-lined stream margins and side channels containing significant quantities of large woody debris (Henry 1995). Coho production in freshwater is particularly sensitive to summer base flows and the availability of suitable overwintering habitat.

Juvenile coho establish and defend territories, and feed on macroinvertebrates and terrestrial insects. As smolts, they travel in surface-oriented schools numbering up to several hundred fish. Like chinook, sub-adult coho salmon reside in estuaries and nearshore for significant periods of time, foraging and growing before venturing into open water.

The outmigration of coho begins in early April, peaks in May, and continues through June. Adults return to freshwater after 17-20 months at sea to spawn as three-year-old adults. Coho production in freshwater is particularly sensitive to summer base flows and the availability of suitable overwintering habitat.

3.2.5 Critical Habitat

No critical habitat has been designated or proposed for Puget Sound/Strait of Georgia coho salmon at this time.

3.3 Bull Trout

3.3.1 Status

The native char *Salvelinus confluentus*, commonly referred to as bull trout, was proposed for listing as a threatened species under the ESA by the USFWS on June 10, 1998 (63 FR
USFWS designated bull trout originating in the Coastal/Puget Sound region as a Distinct Population Segment (DPS), a term that is analogous to the ESU appellation used by NMFS for anadromous salmonids. Following the requisite one-year review period, the USFWS listed the Coastal/Puget Sound Bull Trout DPS as a threatened species, effective December 1, 1999 (64 FR 58910).

The USFWS (64 FR 58910) concluded that the listing of bull trout was warranted because:

- populations have declined substantially from historic levels;
- populations are severely fragmented, increasing the probability of local extinction;
- their habitat has been degraded and continues to be threatened by human activities;
- populations have been, and continue to be, impacted by fishing, poaching, and interactions with non-native species, notably brook trout; and
- conservation efforts implemented to date have been insufficient to reverse the decline and bring about recovery.

Because they spend significant portions of their life, and in some cases their entire life, in freshwater, bull trout are particularly vulnerable to modifications or loss of the following habitat characteristics: 1) channel stability, 2) substrate composition, 3) cover, 4) temperature, 5) prey availability, and 6) migratory corridors. The relatively late age at which bull trout become reproductively mature exposes them to increased risk from fishing, competition from non-native fish, and natural and man-made disturbances (Rieman and McIntyre 1993).

### 3.3.2 Local Population

Although bull trout are common in larger Puget Sound river systems, there is no evidence to suggest that they utilize Chambers or Flett Creek. During thirty years of operation, a fish trap operated at the mouth of Chambers Creek has not captured a single specimen. *The 1998 Salmon and Steelhead Stock Inventory Addendum for Char* (WDFW 1998) makes no mention of the Chambers-Clover Creek system. Scientists who work in the watershed have suggested that high water temperatures may be a factor in the apparent absence of bull trout, which have a strong preference for cold water (personal communications with Scott Craig, USFWS). Chambers Creek is the outlet for Steilacoom Lake, which is a shallow lake and frequently reaches high water temperatures (personal communication with Don Nauer, WDFW, and Mark Wicke, WDFW). The basin also lacks other habitat features, including V-shaped valley bottoms, deep pools, frequent log jams and large woody debris, and undercut banks, that are attractive to bull trout (Watson and Hillman 1997).

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4 The systematics of *Salvelinus confluentus* in the Puget Sound region continue to be the subject of controversy. WDFW considers bull trout and Dolly Varden to be the same species for management and regulatory purposes (WDFW 1998). USFWS considers them separate species (USFWS 1998), but is proposing to list Dolly Varden in Washington due to the similar appearance and apparent decline (66 FR 1628). Published research shows the presence of both species in Western Washington (Leary and Allendorf 1997)
3.3.3 Life History

The basic life history of bull trout is summarized in Table 3. Sub-adult and adult bull trout range extensively in freshwater, estuarine, and marine areas around Puget Sound. Bull trout commonly migrate within and between river systems to forage but are thought to return to their natal streams to spawn. Migration to spawning areas and from rearing areas begins as early as late May and continues through the summer into September. Spawning and rearing occurs primarily in 1st to 5th order streams in October and early November. The exact timing of spawning each year can vary depending on water temperatures. Successful spawning and egg incubation of bull trout requires water temperatures of 9°C or less (Goetz 1989; McPhail and Baxter 1996).

In this region, bull trout spawning is limited to low-gradient reaches at higher elevations where cold temperatures prevail throughout the year. Bull trout do not die after spawning; the post-spawn adults of the anadromous life forms quickly disperse downstream into the estuary and nearshore marine areas to forage. Habitat use of this life stage is poorly understood. Bull trout are opportunistic feeders and forage on both fish and benthic invertebrates (WDW 1991). Sub-adult fish often migrate from marine waters to freshwater areas to spend the winter. These fish begin leaving the marine environment in early fall and by early winter have returned to their home river or other nearby system to overwinter.

3.3.4 Habitat Use

We found no information regarding bull trout habitat preferences or use of Chambers – Clover Creek watershed. However, it is generally known that bull trout travel widely and utilize different areas of watersheds as they grow in size. Cold, low-gradient headwater reaches with loose, clean gravels are important for spawning and rearing, while mainstem rivers provide migratory corridors and overwintering habitat. Juvenile bull trout are closely associated with complex habitats, including large woody debris, undercut banks, boulders, and pools. They often conceal themselves behind or under large rocks and wood during the day and move into open water at night (Goetz 1991). Larger bull trout favor large, deep pools with abundant cover and feed on mostly fish, including juvenile salmon, trout, and whitefish. Migrations into and out of saltwater are common.

The life history and habitat preferences of bull trout make them susceptible to the effects of habitat degradation. Adverse impacts to bull trout that accure from development and related land-use activities include elevated stream temperatures, increased sedimentation, removal of large woody debris from streams and riparian areas, and decreased food supply.

3.3.5 Critical Habitat

The USFWS has not identified or proposed critical habitat for the Coastal/Puget Sound Bull Trout DPS.
3.4 Bald Eagles

3.4.1 Status

Responding to a widespread decline in the abundance of the bald eagle, *Haliaeetus leucocephalus*, the USFWS listed the species in 1978 as endangered throughout the lower 48 States except in Michigan, Minnesota, Wisconsin, Washington, and Oregon, where it was designated as threatened (43 FR 6233). In 1995, the USFWS reclassified the bald eagle from endangered to threatened as a result of the significant increase in numbers of nesting pairs, increased productivity and expanded distribution (60 FR 36000).

In 1999, the USFWS proposed that bald eagle populations be removed from the list of threatened species (64 FR 36453). A final rule has not yet been published. Until bald eagles are formally delisted, they must be included in BAs.

The original decline of bald eagles was precipitated by overhunting, lack of suitable habitat, low prey availability, and human disturbances, including the widespread use of dichlorodiphenyl-trichloroethane (DDT) and other organochlorine compounds that disrupted reproduction (64 FR 36453). These factors of decline have ameliorated in recent years, leading to increases in bald eagle abundance and productivity. Numeric delisting goals for the bald eagle, including breeding population abundance and success rates, have been met in Pacific region states since 1995.

3.4.2 Local Population

Bald eagles occur in Pierce County throughout the year as both resident and transient breeding populations. Bald eagles breed during mid- to late winter and nest through mid-August. Over the years, they typically use one of several nests located within an established nesting territory (Stalmaster 1987). The WDFW provided a list of known bald eagle nests in the vicinity of the project (Appendix B).

The closest known bald eagle nest is on the Wards Lake property in a stand of mature conifers located in the southwest corner of the property. The most recent WDFW record is of an adult eagle incubating eggs in the nest during the spring of 2002. The current nest tree is located within 400 feet of several residences; and pedestrian trails used by local residents exist directly under the nest tree (WDFW 2002). There are no other bald eagle nests in the project vicinity however; wintering bald eagles in the area have been noted by WDFW.

3.4.3 Life History

In Washington, breeding territories are found mainly in uneven-aged coniferous stands with old growth components (Anthony et al. 1982). Territories and nests are determined by proximity of water and food availability; suitable trees for nesting, perching, and roosting; and number of breeding aged eagles. Courtship and nest building activities begin in January and February. Bald eagles breed during mid- to late winter and nest through mid-August. Over the years, they typically use one of several nests located within an established nesting territory (Stalmaster 1987).
Breeding pairs of bald eagles mate for life. As they leave there breeding areas, some bald eagles stay in the general vicinity while most migrate for several months and hundreds of miles to their wintering grounds. Young eagles may wander randomly for years before returning to nest in natal areas (Anthony et al. 1982). Egg laying (one to three eggs per clutch) begins in March or early April, and hatching occurs in mid-April or early May. Eaglets usually fledge in mid-July, 10 to 12 weeks after hatching (Anderson et al. 1986).

Eagles are most active and forage during the morning hours. Bald eagles are opportunistic predator-scavengers that consume many different prey species. They eat fish when available, but shift to a variety of other birds, mammals and amphibians, both live and as carrion, when fish are scarce. Some bald eagles stay in the general vicinity of their breeding areas while most migrate for several months and hundreds of miles to their wintering grounds. Wintering bald eagles are found in the area from the end of October until the end of March.

3.4.4 Habitat Use

Bald eagle breeding territories are found mainly in uneven-aged coniferous stands, and usually near large bodies of water. Ideal eagle habitat consists of mature shoreline forests with scattered openings and little human use, near water with abundant fish and waterfowl. Territories are determined by the proximity of water, available food, suitable trees for nesting, perching, and roosting, and the number of breeding-age eagles.

Bald eagles build large stick nests lined with soft materials in large trees. Nests can be up to six feet in diameter and weigh hundreds of pounds. When not incubating their eggs, the birds spend most of the daylight hours perched near their food source. Wintering birds frequently use communal roosts located near major forage areas. Most hunting is done from a perch and most strikes at fish are made within 100 meters of the shoreline. There are indications that some eagles in Washington and other states have become fairly tolerant of human activity near their nests.

3.4.5 Critical Habitat

No critical habitat has been proposed or designated for bald eagles in the project area as of this time.

4 EFFECTS OF THE PROPOSED ACTION

4.1 Effects of the Proposed Action on Habitat Conditions and Natural Processes

One of the greatest long-term threats to the viability of salmon and other aquatic organisms is the continuing loss and degradation of freshwater, estuarine, and marine habitat. Broadly speaking, fish habitat is the geographic area where the species occurs at any time during its life cycle. Habitats can be characterized by various attributes including biological, physical, and chemical parameters, location, and time. Ecologically, salmon distributions and behaviors are controlled or modified by characteristics of habitats that include obvious
structural components (e.g., pools, large woody debris, spawning gravels, and migration barriers) and other factors that may be less obvious to the human eye but are critical nonetheless in determining when and how salmon make use of particular area. Examples include several water quality parameters such as dissolved oxygen, temperature, and turbidity. Because these factors vary both spatially and temporally, habitat use may shift over time and space (NMFS 1998a).

The distribution and quality of habitats used by salmon for spawning, breeding, migration, feeding, growth, and shelter are vulnerable to disturbances caused by human activities and by natural processes. The effects of habitat conditions or change on a species are usually predictable, but they can vary depending on life history stage, abundance of the species, competition from other species, and a host of other ecological factors. Because salmon respond in complex ways to their environment, it is difficult to quantify the effects of proposed actions in biological terms. With the exception of extreme stressors, such as fish passage obstructions and catastrophic contaminant spills, a strict cause-and-effect relationship between an environmental disturbance and salmon viability cannot always be discerned.

For this reason, NMFS has developed a process for evaluating the effects of projects, such as the State Avenue Improvements Project, in terms of their ability to restore, maintain, or degrade aquatic habitat. The process uses a “Matrix of Habitat Pathways and Indicators” — essentially a checklist of key habitat variables known to affect salmon populations and associated ecosystems. The method we use in the following analysis is substantively the same as the habitat evaluation process recommended by NMFS (1998a).

A “Habitat Evaluation Matrix” was constructed to assess the potential effects of the proposed action on listed aquatic species (Table 4). The matrix describes existing conditions and potential effects of the project on important aquatic, riparian, and watershed characteristics (i.e., indicators) relative to existing conditions (baseline). Where potentially significant effects on existing water quality and habitat conditions were noted, consideration was given to the corresponding effect on listed species.
Table 4. Habitat Evaluation Matrix for assessing environmental baseline (existing) conditions and potential project effects on important habitat attributes.

<table>
<thead>
<tr>
<th>Pathway Indicators</th>
<th>Environmental Baseline</th>
<th>Effects of the Action</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Properly Functioning</td>
<td>At Risk</td>
</tr>
<tr>
<td>Water Quality</td>
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<td></td>
</tr>
<tr>
<td>Temperature</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Sediment</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Chemical</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contaminants Nutrients</td>
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<td>X</td>
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<tr>
<td>Habitat Access</td>
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<td></td>
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<tr>
<td>Physical Barriers</td>
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</tr>
<tr>
<td>Habitat Elements</td>
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<td></td>
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<tr>
<td>Substrate</td>
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<td></td>
</tr>
<tr>
<td>Large Woody Debris</td>
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<td>X</td>
</tr>
<tr>
<td>Pool Frequency</td>
<td>X</td>
<td></td>
</tr>
<tr>
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<td>Stream Bank Condition</td>
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<td>Connectivity</td>
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<td>Drainage Network</td>
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<tr>
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<tr>
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</tr>
<tr>
<td>Disturbance History</td>
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<td></td>
</tr>
<tr>
<td>Riparian Reserves</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>
4.1.1 River and Basin Hydrology

4.1.1.1 Peak and Base Flows

The proposed project will increase the sites impervious surface area by approximately 18,069 SF totaling 25,369 SF of impervious surface. Currently, stormwater flows directly into Wards Lake and in most recent history has been utilized as a stormwater infiltration pond. Its hydrology and flow patterns are not expected to change as a result of this project. Stormwater runoff from the new impervious surface will be collected by a new stormwater infiltration pond, but in the instances of high flow will be directed into Wards Lake. Although a slight increase in stormwater flows is expected due to an increase in impervious area, the effect will only occur to Wards Lake, which can easily accommodate the additional runoff.

4.1.1.2 Drainage Network

The proposed project will not affect water conveyance or drainage patterns in the watershed. Runoff patterns on site will remain essentially unchanged.

4.1.2 Water Quality

4.1.2.1 Temperature and Dissolved Oxygen

No change in water temperature or in dissolved oxygen concentrations is expected to result from the proposed project. No vegetation or shade-producing structure that would affect water temperature will be removed. No organic material will be produced that might increase biological oxygen demand in receiving waters. Stormwater from the project will be delivered to a new stormwater infiltration pond on site and only the overflow of the pond will enter Wards Lake.

4.1.2.2 Sediment

There is no instream work proposed in this project, the nearest stream is 1 mile from the project site. A minimal amount of in-water work will be required in Wards Lake to construct the canoe launch and fishing pier, but no listed fish species are present.

Measures to control sediment will be established prior to the start of project construction activities. Erosion control BMPs will be put in place, maintained, and adjusted as necessary to minimize erosion of sediment. There is a potential for sediment to enter into Wards Lake and the new stormwater system if BMPs fail to protect them.

4.1.2.3 Chemical Contaminants and Nutrients

Appropriate BMPs will be in place before, during, and after the construction of the project to prevent any contaminants from entering waterways or other properties. There is a potential for petrochemical contaminants such as diesel and hydraulic fluids to enter Wards Lake from the mechanized equipment being used for the proposed construction activities. A new outfall will be constructed for this project; the surface runoff will be diverted into a infiltration pond.
and in case of a large event the overflow will be discharged into Wards Lake. Pollutants entrained in the water will be effectively removed via natural filtration.

The Contractor will develop and incorporate spill prevention plans into the project design and implementation. The equipment will be checked daily for potential diesel and hydraulic fluid leaks and no vehicle maintenance will occur on the site. The City will also continue to undertake park maintenance and street, parking lot sweeping in the future to remove contaminants.

4.1.3 Channel Characteristics

4.1.3.1 Width/Depth Ratio

The proposed project will not affect width/depth ratios or other channel characteristics in the watershed.

4.1.3.2 Stream Bank Condition

No riparian vegetation along Flett Creek, which is connected to the Chambers-Clover Creek river system will be disturbed or removed from stream banks and associated riparian systems in the watershed.

4.1.3.3 Connectivity

The hydraulic connectivity of surface waters to each other, to groundwater sources, and to the floodplain of this watershed will not be altered by the project.

4.1.4 Habitat Elements

4.1.4.1 Substrate

The substrate composition and texture of nearby surface waters will be unaffected by this project since sediment loading will not increase. There will be construction activities within 500 LF of Wards Lake, but BMPs should minimize the effects of construction. Coarse and suspended sediments will be trapped and removed in the new stormwater detention system.

4.1.4.2 Large Woody Debris (LWD)

Large woody debris is uncommon in the project area, the result of historical logging and urbanization. The proposed project will not affect the recruitment of large woody debris to local waterbodies. The project will require five trees located over 100 feet from the lake to be removed but will include planting approximately 57 trees within the park.
4.1.5 Pool Frequency and Pool Quality

The proposed project will not affect pool frequency in the watershed. There are no inlets or outlets so water and sediment inputs will not disrupt the flow or geomorphology (e.g., pool-riffle structure) of Flett Creek, the closest salmon-bearing stream.

4.1.5.1 Off-Channel Habitat and Refugia

Off-channel habitat and refugia in the watershed will be unaffected by the project.

4.1.6 Habitat Elements

4.1.6.1 Fish Passage Barriers

Wards Lake in recent history has been used as a stormwater infiltration pond and has no connection to any surface waters. The project will have no effect on fish passage and will not create or contribute to any types of barriers to fish in this watershed.

4.1.7 Watershed Conditions

4.1.7.1 Road Density and Location

Roadwork for creating new impervious surface will total 13,998 SF including 4,800 SF of existing asphalt from Pine Street that will be removed and replaced. Road density will increase by 9,198 SF; road location in the watershed will remain the same. Approximately 1,379 LF of curb will be placed along the new asphalt entrance road to the park and parking lot.

4.1.7.2 Disturbance History

Existing baseline conditions reflect past and current commercial and residential activities in the project area. The impacts of project-caused disturbances in the project area are expected to be insignificant. The construction of the park and its associated structures will cause a temporary increase in local disturbances. There may be an increase in foot traffic in the area as many of the improvements are intended to increase the attractiveness of the area to Lakewood residents.

4.1.7.3 Riparian Reserves

The proposed project will not affect riparian reserves in the watershed. Minimal trees and no riparian vegetation will be removed for the project. The project is a mile from the nearest fish-bearing waterbody.
4.2 Effects of the Proposed Action on Listed Species

Project-related effects due to construction, stormwater runoff, and other project elements were evaluated with reference to each listed species and associated critical habitat within the project area. **Direct effects** are the direct or immediate effects that the proposed project may have on the species or its habitat. **Indirect effects** are those caused by or resulting from the proposed action but occur later in time. These include effects resulting from associated development and activities that occur following implementation of the project. **Cumulative effects** are the result of future state, local, or private actions that are reasonably certain to occur in the action area. With respect to listed species, detrimental or **adverse effects** are those that destroy or modify habitat, decrease survival, or otherwise increase the risk of extinction of a species. Conversely, **beneficial effects** are positive outcomes that are expressed directly, indirectly, or cumulatively as a consequence of the project action.

The following sections describe the direct, short-term effects, the indirect and cumulative long-term effects of the project separately for each listed species. Each section concludes with a recommended “effects determination” for the species in question.

4.3 Chinook Salmon

4.3.1 Direct Effects

The project is located within a watershed that supports listed chinook salmon; however, the nearest body of water, Wards Lake, does not support chinook. The nearest fish-bearing stream, Flett Creek, is over a mile away and will receive none of the direct impacts of the construction.

New impervious surface will be created in the form of an asphalt roadway, parking lot, walkways, and park facilities and will increase the quantity and rate at which water, sediment, and water-borne pollutants are delivered to adjacent areas. There is the potential for a greater volume of stormwater to be generated within the project area. The potential for adverse impacts such as increased peak flows, decreased base flows, increased sediment, and increased contaminant levels will be avoided or minimized by the application of BMPs and the new stormwater system. All water and entrained materials running off the roadways and sidewalks will be routed to a stormwater infiltration pond and infiltrated naturally on site. In high flow conditions, overflow will discharge into Wards Lake through a drainage pipe from the infiltration pond.

During construction activities there is the potential for fine, silt-laden sediments and rinse water to enter the city’s stormwater systems resulting from the activities of the proposed project that include: grading and clearing, excavation and asphalt ing, as well as construction of cement slabs or park facilities. There is potential for accidental spills of fuels, oils, chemicals, and concrete leachate used during construction that could enter the stormwater system. Construction vehicles will not receive any maintenance on the project site to prevent any accidental spills. A Spill Prevention Control and Countermeasures Plan will be implemented to manage spills.
The BMPs and protective measures described in Section 2.5 are expected to prevent or minimize any potential adverse impacts such as chemical contamination, increased volume of stormwater, or increased fine sediments caused by the project. BMPs are not 100% effective, especially if they are improperly maintained (Reiser et al. 2000), and may result in increased delivery of nutrients, sediment, and/or other pollutants to Wards Lake. Furthermore, any increase in watershed imperviousness is likely to cause hydrologic and biological impacts of one degree or another but the impact will occur to Wards Lake (Booth 2000).

4.3.1.1 Indirect Effects

This project has the potential to increase the amount of stormwater that enters Wards Lake. However, virtually all stormwater from the new impervious surface will be treated for water quality to remove oils, contaminants, and sediment.

The project is not likely to lead to any further riparian encroachments. It is unlikely that the improvements to the vacant area will encourage further development because the surrounding area is already built out.

The BMPs and protection measures described in section 3.5 are expected to prevent or mitigate for any adverse impacts caused by the project and to adequately protect listed chinook salmon and their habitat. No other actions are contemplated that could conceivably affect chinook salmon. Long-term, indirect impacts related to project activities are expected to be insignificant.

4.3.1.2 Cumulative Effects

Currently there is a significant amount of vehicle and pedestrian traffic in the project area. A new park will probably cause an increase in pedestrian traffic and in vehicular traffic to the area although the number and type of adjacent structures is not likely to change. The proposed action is not expected to precipitate additional development or activity by state or private entities within the project area, nor will it combine with other anthropogenic stresses or processes to produce long-term, cumulative, adverse effects on chinook salmon.

4.3.2 Determination

The project lies within a subbasin that provides habitat for Puget Sound ESU chinook salmon, however the waterbody of concern, Wards Lake, does not provide suitable habitat for chinook. The project will increase the amount of impervious surface by 18,069 SF. However, stormwater and contaminants generated by this project are not likely to affect listed chinook or their habitat. BMPs will prevent and/or mitigate potential short-term impacts caused by construction activities to Wards Lake. There is minimal in-water work planned for this project and most of the construction will occur at least 100 feet from the lake. There are no activities planned that could conceivably result in the incidental take of chinook salmon. The abundance, survival, and distribution of chinook, their prey, and potential predators will not be affected by the project.
systems will improve upon the existing stormwater collection system, intercepting larger quantities of runoff and filtering out contaminants, including sediment and infiltrating the runoff on-site.

We could find no evidence that bull trout reside in the Wards Lake or Chambers-Clover Creek watershed. Since the project is unlikely to result in significant changes in water quality, habitat, or prey species in nearby streams, we conclude that the proposed action will have “no effect” on bull trout.

4.3.5 Bald Eagles

4.3.5.1 Direct Effects

A bald eagle nest is within the project area, and is 560 feet away from the major construction zone. The construction activities that are most likely to disturb the eagles are asphalt cutting and asphalt removal. It is anticipated that the asphalt cutting will only take two hours and the asphalt removal will take a maximum of two days. Heavy machinery that may increase the ambient noise levels will be required through every phase of construction; however, the project site is in close proximity to I-5 and McCord Air Force base, where planes fly over daily.

The construction designs state that heavy machinery will not be allowed within a 400-foot diameter buffer around the nest. During the bid process the contractor will be required to come up with a construction schedule that meets the approval of the WDFW.

A new walking path is proposed 350 east of the eagle nest. Although this is relatively close the nest, it is redirecting pedestrian traffic that currently passes directly underneath the nest and will reduce impacts to the nest. Michelle Tirhi of WDFW anticipates the new walking path will not be a disturbance to bald eagles (personal communication, Michelle Tirhi, WDFW).

No perching, nesting, or roosting habitat will be altered by this project. The increase in ambient noise levels expected during construction is not likely to impact eagles. Juvenile and adult bald eagles are capable of avoiding short-term localized disturbances. The abundance of prey species will not be affected or reduced by the project.

4.3.5.2 Indirect Effects

According to the WDFW biologists, eagles nesting in urban areas tend to be relatively tolerant of human encroachment, but nevertheless seek out nesting sites away from noisy activities and bright lights. The WDFW experts noted that eagles in the vicinity have established relatively stable territories.

The project will cause a change in the amount of human activity. There will be more pedestrian traffic and vehicle traffic, as the park is more appealing to Lakewood residents than its current use. However, the shift in human activity and use patterns in the project area is unlikely to affect bald eagles and their current behavior.
4.3.5.3 Cumulative Effects

The area around Wards Lake is residential and light commercial and is situated in a county that is experiencing substantial population growth. We do not know of any future state, local, or private projects in the vicinity of the project.

4.3.5.4 Determination

The construction activity will follow the Bald Eagle Management Plan developed by WDFW, and begin after July 1, 2003 once the baby has fledged. The construction will last for about four months but will occur outside of the nesting and wintering season. There will be no loss or degradation of eagle habitat as a result of this project. The only activity that will occur within 400 feet of the nest is creating a wood chip-walking path. The abundance of prey species will not be affected or reduced by the project.

Considering the type of human activity and associated impacts the project is likely to produce, and because of the measures taken to protect the existing nest and population, we conclude that this project “may affect, but is not likely to adversely affect” bald eagles.
5 SUMMARY OF DETERMINATIONS

The City of Lakewood proposes to use CDBG funding to transform currently vacant land into a park. This would include the installation of a road, parking lot, restroom, playground, picnic shelter, canoe launch and a series of park trails and entail an increase of 18,069 SF of impervious surface. The project will take approximately four months to complete beginning after July 1, 2003. BMPs will be followed during and after construction to minimize or prevent any adverse impacts of the project. The BMPs will address site preparation and construction activities, materials, and equipment. The project will not involve activities or construction near existing fish-bearing watercourses. A new stormwater drainage system will be installed, consisting of a new stormwater infiltration pond, eliminating sediment, oil, and other contaminants from the runoff generated by the project.

Wards Lake does not support, nor provide suitable habitat for, chinook and coho salmon. Based on our understanding of the proposed action and based on the best scientific information available regarding the current status and requirements of chinook and coho salmon within the project area, we are certain that the project will not modify their abundance, survival, or distribution. We conclude that the project will have “no effect” on local populations of Puget Sound ESU chinook salmon. We also conclude that the project will have "no impact on individuals, populations, or habitat" of Puget Sound/Strait of Georgia ESU coho salmon. This project will not affect the well being of these species or their habitat.

This BA also considers the possible effects of the project on bull trout. We could find no evidence that bull trout reside in Wards Lake. Since juvenile bull trout are not found in the proximity of the project, and other life stages are transitory, the very minor environmental impacts anticipated from the project are not likely to affect the species. Accordingly, we conclude that the proposed project will have “no effect” on Coastal/Puget Sound DPS bull trout.

Due to the occurrence of an eagle nest within the Wards Lake, we gave careful consideration to the potential impacts of the project. After consulting with several experts at state and federal agencies, we determined that the park project would not have an adverse affect on eagles that are currently utilizing the Wards Lake area. The pair is already exposed to high noise levels from McCord Air Force Base and I-5, which suggests that disturbance from the park, will be minimal. The WDFW bald eagle management plan provides guidelines for project construction and park operation to help insure the bald eagles in the area are minimally impacted. Based on these findings, we conclude that the project “may affect, but is not likely to adversely affect” bald eagles.

After careful deliberation, we recommend that the project be allowed to proceed without further modification or formal consultation. It should be noted, however, that proceeding with this project does not constitute an irreversible commitment of resources by the City of Lakewood that would foreclose the formulation or implementation of any reasonable and prudent alternatives, as may be required by NMFS and/or USFWS.
6 REFERENCES


Booth, D.B. 2000. Forest Cover, Impervious Surface Area, and the Mitigation of Urbanization Impacts in King County, Washington. A Report to King County.


7 APPENDICES

7.1 Appendix A. Glossary of Terms

**Action area** - all areas to be affected directly or indirectly by the Service action and not merely the immediate area involved in the action. [50 CFR §402.02]

**Affect/effect** - to affect (a verb) is to bring about a change ("The proposed action is likely to adversely affect piping plovers nesting on the shoreline"). The effect (usually a noun) is the result ("The proposed highway is likely to have the following effects on the Florida scrub jay"). "Affect" appears throughout Section 7 regulations and documents in the phrases "may affect" and "likely to adversely affect." "Effect" appears throughout Section 7 regulations and documents in the phrases "adverse effects," "beneficial effects," "effects of the action," and "no effect." [Proper grammatical usage]

**Biological Assessment** - information prepared by the Service to determine whether a proposed Service action is likely to: (1) adversely affect listed species or designated critical habitat; (2) jeopardize the continued existence of species that are proposed for listing or are candidates for listing; or (3) adversely modify proposed critical habitat. Biological Assessments must be prepared for "major construction activities." The outcome of this Biological Assessment determines whether formal consultation or a conference is necessary. [50 CFR §402.02, 50 CFR §402.12]

**Candidate species** - plant and animal taxa considered for possible addition to the List of Endangered and Threatened Species. These are taxa for which the Service has on file sufficient information on biological vulnerability and threat(s) to support issuance of a proposal to list, but issuance of a proposed rule is currently precluded by higher priority listing actions. [61 FR 7596-7613 (February 28, 1996)]

**Conservation measures** - are actions to benefit or promote the recovery of listed species that are included by the Service as an integral part of the proposed Service action. These conservation measures will be taken by the Service to minimize, or compensate for, project effects on the species under review. These may include actions taken prior to the initiation of consultation, or actions that the Service has committed to complete in a Biological Assessment or similar document.

**Conservation recommendations** - the Services' non-binding suggestions resulting from formal or informal consultation that: (1) identify discretionary measures Service programs can take to minimize or avoid the adverse effects of a proposed action on listed or proposed species, candidate species, or to designated or proposed critical habitat; (2) identify studies, monitoring, or research to develop new information on listed, proposed or candidate species, or to designated or proposed critical habitat; and (3) include suggestions on how the Service can assist species conservation, as part of their action and in furtherance of their authorities under Section 7(a)(1) of the Act. [50 CFR §402.02]
Critical habitat - for listed species consists of: (1) the specific areas within the geographical area occupied by the species at the time it is listed in accordance with the provisions of Section 4 of the Act, on which are found those physical or biological features (constituent elements) (a) essential to the conservation of the species and (b) which may require special management considerations or protection; and (2) specific areas outside the geographical area occupied by the species at the time it is listed in accordance with the provisions of Section 4 of the Act, upon a determination by the Secretary that such areas are essential for the conservation of the species. [ESA §3 (5)(A)] Designated critical habitats are described in 50 CFR §17 and 226.

Cumulative effects - are those effects of future State or private activities, not involving Federal activities that are reasonably certain to occur within the action area of the Service action subject to consultation. [50 CFR §402.02] This definition applies only to Section 7 analyses and should not be confused with the broader use of this term in the National Environmental Policy Act or other environmental laws.

Destruction or adverse modification of critical habitat - a direct or indirect alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of a listed species. Such alterations include, but are not limited to, alterations adversely modifying any of those physical or biological features that were the basis for determining the habitat to be critical. [50 CFR §402.02]

Effects of the action - the direct and indirect effects of a Service action on the species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action. These effects are considered along with the environmental baseline and the predicted cumulative effects to determine the overall effects to the species for purposes of preparing a biological opinion on the proposed action. [50 CFR §402.02] The environmental baseline covers past and present impacts of all Federal actions within the action area. This includes the effects of existing Federal projects that have not yet come in for their Section 7 consultation.

Endangered species - any species that is in danger of extinction throughout all or a significant portion of its range. [ESA §3(6)]

Federal agency - any department, agency, or instrumentality of the United States. [ESA §3(7)]

Fish or wildlife - any member of the animal kingdom, including without limitation any mammal, fish, bird (including any migratory, nonmigratory, or endangered bird for which protection is also afforded by treaty or other international agreement), amphibian, reptile, mollusk, crustacean, arthropod or other invertebrate, and includes any part, product, egg, or offspring thereof, or the dead body or parts thereof. [ESA §3(8)]

Incidental take - take of listed fish and wildlife species that results from, but is not the purpose of, carrying out an otherwise lawful activity conducted by a Federal agency or applicant. [50 CFR §402.02]
Indirect effects - those effects that are caused by or will result from the proposed action and are later in time, but are still reasonably certain to occur. [50 CFR §402.02]

Interdependent actions - actions having no independent utility apart from the proposed action. [50 CFR §402.02]

Interrelated actions - actions that are part of a larger action and depend on the larger action for their justification. [50 CFR §402.02]

Is likely to adversely affect - the appropriate finding in a Biological Assessment (or conclusion during informal consultation) if any adverse effect to listed species may occur as a direct or indirect result of the proposed Service action or its interrelated or interdependent actions, and the effect is not: discountable, insignificant, or beneficial (see definition of "is not likely to adversely affect"). In the event the overall effect of the proposed Service action is beneficial to the listed species, but is also likely to cause some adverse effects, then the proposed Service action "is likely to adversely affect" the listed species. If incidental take is anticipated to occur as a result of the proposed action, an "is likely to adversely affect" determination should be made. An "is likely to adversely affect" determination requires the initiation of formal intra-Service Section 7 consultation. [Clarification of usage]

Is likely to jeopardize proposed or candidate species/adversely modify proposed critical habitat - the appropriate conclusion when the Service identifies situations where the proposed Service action is likely to jeopardize the continued existence of a species proposed for listing or a candidate species, or adversely modify an area proposed for designation as critical habitat. If this conclusion is reached, intra-Service conference is required.

Is not likely to adversely affect - the appropriate conclusion when effects on listed species are expected to be discountable, insignificant, or completely beneficial. Beneficial effects are contemporaneous positive effects without any adverse effects to the species. Insignificant effects relate to the size of the impact and should never reach the scale where take occurs. Discountable effects are those extremely unlikely to occur. Based on best judgment, a person would not: (1) be able to meaningfully measure, detect, or evaluate insignificant effects; or (2) expect discountable effects to occur. [Clarification of usage]

Jeopardize the continued existence of - to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species. [50 CFR §402.02]

Listed species - any species of fish, wildlife or plant that has been determined to be endangered or threatened under Section 4 of the Act. [50 CFR §402.02]

Major construction activity - a construction project (or other undertaking having similar physical effects) that is a major Federal action significantly affecting the quality of the human
environment as referred to in the National Environmental Policy Act (NEPA, 42 U.S.C. 4332(2)(C)) [50 CFR §402.02].

**May affect** - the appropriate conclusion when a proposed action may pose any effects on listed species or designated critical habitat. When the Federal agency proposing the action determines that a "may affect" situation exists, then the Service must then either initiate formal consultation or seek written concurrence from the involved Service programs that the action "is not likely to adversely affect" [see definition above] listed species. [Clarification of usage]

**No effect** - the appropriate conclusion when the Service determines that a proposed Service action will not affect a listed species or designated critical habitat. [Clarification of usage]

**Proposed critical habitat** - habitat proposed in the Federal Register to be designated as critical habitat, or habitat proposed to be added to an existing critical habitat designation, under Section 4 of the Act for any listed or proposed species. [50 CFR §402.02]

**Proposed species** - any species of fish, wildlife or plant that is proposed in the Federal Register to be listed under Section 4 of the Act. [50 CFR §402.02]

**Recovery** - improvement in the status of listed species to the point at which listing is no longer appropriate under the criteria set out in Section 4(a)(1) of the Act. [50 CFR §402.02]

**Section 4** - the Section of the Endangered Species Act of 1973, as amended, outlining procedures and criteria for: (1) identifying and listing threatened and endangered species; (2) identifying, designating, and revising critical habitat; (3) developing and revising recovery plans; and (4) monitoring species removed from the list of threatened or endangered species. [ESA §4]

**Section 7** - the Section of the Endangered Species Act of 1973, as amended, outlining procedures for interagency cooperation to conserve Federally listed species and designated critical habitats. Section 7(a)(1) requires Federal agencies to use their authorities to further the conservation of listed species. Section 7(a)(2) requires Federal agencies to consult with the Services to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Other paragraphs of this Section establish the requirement to conduct conferences on proposed species and candidate species; allow applicants to initiate early consultation; require FWS and NMFS to prepare biological opinions and issue incidental take statements. Section 7 also establishes procedures for seeking exemptions from the requirements of Section 7(a)(2) from the Endangered Species Committee. [ESA §7]

**Section 7 consultation** - the various Section 7 processes, including both consultation and conference if proposed or candidate species are involved. [50 CFR §402]
Species - includes any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish or wildlife that interbreeds when mature. [ESA §3(16)]

Species of Concern – species whose conservation standing is of concern but for which status information is still needed.

Take - to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct. [ESA §3(19)] Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering. Harass is defined by the Service as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering. [50 CFR §17.3]

Threatened species - any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. [ESA §3(20)]

Source: USFWS (1998)
7.2 Appendix B. Agency Correspondence / Species Information
CHINOOK SALMON
Oncorhynchus tshawytscha

LISTING STATUS: CHINOOK

Select an ESU name below to view detailed information about each ESU* - including further links to ESU maps, Federal Register Notices, and Status Reviews.

* An Evolutionarily Significant Unit or "ESU" is a distinctive group of Pacific salmon, steelhead, or sea-run cutthroat trout.

ESU Name
Sacramento River Winter-run
Snake River Fall-run
Deschutes River Summer/Fall-run
Snake River Spring/Summer-run
Central Valley Spring-run
Central Valley Fall and Late Fall-run
Southern Oregon and Northern California Coastal
California Coastal
Puget Sound
Lower Columbia River
Upper Willamette River
Upper Columbia River Spring-run
Upper Klamath-Trinity Rivers
Oregon Coast
Washington Coast
Mid-Columbia River Spring-run
Upper Columbia River Summer/Fall-run

Status
Endangered
Threatened
Not Warranted
Threatened
Threatened
Candidate/Not Warranted
Not Warranted
Threatened
Threatened
Threatened
Endangered
Not Warranted
Not Warranted
Not Warranted
Not Warranted

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Updated April 18, 2000

http://www.nwr.noaa.gov/1salmon/salmesa/chinswit.htm

11/8/02
**Coho Salmon**
*Oncorhynchus kisutch*

**Listing Status: Coho**

Select an ESU name below to view detailed information about each ESU* - including further links to ESU maps, Federal Register Notices, and Status Reviews.

*An Evolutionarily Significant Unit or "ESU" is a distinctive group of Pacific salmon, steelhead, or sea-run cutthroat trout.*

<table>
<thead>
<tr>
<th>ESU Name</th>
<th>Status</th>
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<td>Threatened</td>
</tr>
<tr>
<td>Southern Oregon/Northern California Coasts</td>
<td>Threatened</td>
</tr>
<tr>
<td>Oregon Coast</td>
<td>Threatened</td>
</tr>
<tr>
<td>Puget Sound/Strait of Georgia</td>
<td>Candidate</td>
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<tr>
<td>Lower Columbia River/Southwest</td>
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*Updated December 26, 2001*

http://www.nwr.noaa.gov/lsalmon/salmesa/cohoswit.htm 11/8/02
Dear Species List Requester:

We (U.S. Fish and Wildlife Service) are providing the information you requested to assist your determination of possible impacts of a proposed project to species of Federal concern. Attachment A includes the listed threatened and endangered species, species proposed for listing, candidate species, and/or species of concern that may be within the area of your proposed project.

Any Federal agency, currently or in the future, that provides funding, permitting, licensing, or other authorization for this project must assure that its responsibilities under section 7(a)(2) of the Endangered Species Act of 1973, as amended (Act), are met. Attachment B outlines the responsibilities of Federal agencies for consulting or conferencing with us.

If both listed and proposed species occur in the vicinity of a project that meets the requirements of a major Federal action (i.e., "major construction activity"), impacts to both listed and proposed species must be considered in a biological assessment (BA) (section 7(c); see Attachment B). Although the Federal agency is not required, under section 7(c), to address impacts to proposed species if listed species are not known to occur in the project area, it may be in the Federal agency’s best interest to address impacts to proposed species. The listing process may be completed within a year, and information gathered on a proposed species could be used to address consultation needs should the species be listed. However, if the proposed action is likely to jeopardize the continued existence of a proposed species, or result in the destruction or adverse modification of proposed critical habitat, a formal conference with us is required by the Act (section 7(a)(4)). The results of the BA will determine if conferencing is required.

The Federal agency is responsible for making a determination of the effects of the project on listed species and/or critical habitat. For a Federal agency determination that a listed species or critical habitat is likely to be affected (adversely or beneficially) by the project, you should request section 7 consultation through this office. For a "not likely to adversely affect" determination, you should request our concurrence through the informal consultation process.

Candidate species and species of concern are those species whose conservation status is of concern to us, but for which additional information is needed. Candidate species are included as an advance notice to Federal agencies of species that may be proposed and listed in the future. Conservation measures for candidate species and species of concern are voluntary but recommended. Protection provided to these species now may preclude possible listing in the future.
For other federally listed species that may occur in the vicinity of your project, contact the National Marine Fisheries Service (NOAA Fisheries) at (360) 753-9530 to request a list of species under their jurisdiction. For wetland permit requirements, contact the Seattle District of the U.S. Army Corps of Engineers for Federal permit requirements and the Washington State Department of Ecology for State permit requirements.

Thank you for your assistance in protecting listed threatened and endangered species and other species of Federal concern. If you have additional questions, please contact Yvonne Dettlaff (360) 753-9582.

Sincerely,

[Signature]

Ken S. Berg, Manager
Western Washington Fish and Wildlife Office

Enclosure(s)
LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES, CRITICAL HABITAT, CANDIDATE SPECIES, AND SPECIES OF CONCERN THAT MAY OCCUR IN THE VICINITY OF THE PROPOSED
CITY OF LAKEWOOD WARDS LAKE PARK FACILITY CONSTRUCTION
PROJECT
IN PIERCE COUNTY, WASHINGTON

(T20N R03E S31)

FWS REF: 1-3-02-SP-1753

LISTED

There is one bald eagle (*Haliaeetus leucocephalus*) nesting territory located in the vicinity of the project at T20N R03E S31. Nesting activities occur from January 1 through August 15.

Wintering bald eagles may occur in the vicinity of the project. Wintering activities occur from October 31 through March 31.

Bull trout (*Salvelinus confluentus*) may occur in the vicinity of the project.

Major concerns that should be addressed in your biological assessment of the project impacts to listed species include:

1. Level of use of the project area by listed species;
2. Effect of the project on listed species’ primary food stocks, prey species, and foraging areas in all areas influenced by the project; and
3. Impacts from project construction (i.e., habitat loss, increased noise levels, increased human activity) that may result in disturbance to listed species and/or their avoidance of the project area.

PROPOSED

None
CANDIDATE

None

CRITICAL HABITAT

None

SPECIES OF CONCERN

The following species of concern have been documented in the county where the project is located. These species or their habitat could be located on or near the project site. Species in bold were specific occurrences located on the database within a 1-mile radius of the project site.

California wolverine (Gulo gulo luteus)
Cascades frog (Rana cascadae)
Fender’s solipiperlan stonefly (Soliperla fenderi)
Long-eared myotis (Myotis evotis)
Long-legged myotis (Myotis volans)
Northern goshawk (Accipiter gentilis)
Northwestern pond turtle (Clemmys marmorata marmorata)
Olive-sided flycatcher (Contopus cooperi)
Oregon vesper sparrow (Pooectetes gramineus affinis)
Pacific fisher (Martes pennanti pacifica)
Pacific lamprey (Lampetra tridentata)
Pacific Townsend’s big-eared bat (Corynorhinus townsendii townsendii)
Peregrine falcon (Falco peregrinus)
River lamprey (Lampetra ayresi)
Slender-billed, white breasted nuthatch (Sitta carolinensis aculeata)
Tailed frog (Asaphus truei)
Valley silverspot (Speyeria zerene bremeri)
Western gray squirrel (Sciurus griseus griseus)
Western toad (Bufo boreas)
Van Dyke’s salamander (Plethodon vandykei)
Aster curtus (white-top aster)
Castilleja cryptantha (obscure Indian paintbrush)
Cypripedium fasciculatum (clustered lady’s slipper)
ATTACHMENT B

FEDERAL AGENCIES’ RESPONSIBILITIES UNDER SECTIONS 7(a) AND 7(c) OF THE ENDANGERED SPECIES ACT OF 1973, AS AMENDED

SECTION 7(a) - Consultation/Conference

Requires:
1. Federal agencies to utilize their authorities to carry out programs to conserve endangered and threatened species;

2. Consultation with the U.S. Fish and Wildlife Service (FWS) when a Federal action may affect a listed endangered or threatened species to ensure that any action authorized, funded, or carried out by a Federal agency is not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat. The process is initiated by the Federal agency after it has determined if its action may affect (adversely or beneficially) a listed species; and

3. Conference with the FWS when a Federal action is likely to jeopardize the continued existence of a proposed species or result in destruction or an adverse modification of proposed critical habitat.

SECTION 7(c) - Biological Assessment for Construction Projects *

Requires Federal agencies or their designees to prepare a Biological Assessment (BA) for construction projects only. The purpose of the BA is to identify any proposed and/or listed species that is/are likely to be affected by a construction project. The process is initiated by a Federal agency in requesting a list of proposed and listed threatened and endangered species (list attached). The BA should be completed within 180 days after its initiation (or within such a time period as is mutually agreeable). If the BA is not initiated within 90 days of receipt of the species list, please verify the accuracy of the list with the Service. No irreversible commitment of resources is to be made during the BA process which would result in violation of the requirements under Section 7(a) of the Act. Planning, design, and administrative actions may be taken; however, no construction may begin.

To complete the BA, your agency or its designee should (1) conduct an onsite inspection of the area to be affected by the proposal, which may include a detailed survey of the area to determine if the species is present and whether suitable habitat exists for either expanding the existing population or potential reintroduction of the species; (2) review literature and scientific data to determine species distribution, habitat needs, and other biological requirements; (3) interview experts including those within the FWS, National Marine Fisheries Service, state conservation department, universities, and others who may have data not yet published in scientific literature; (4) review and analyze the effects of the proposal on the species in terms of individuals and populations, including consideration of cumulative effects of the proposal on the species and its habitat; (5) analyze alternative actions that may provide conservation measures; and (6) prepare a report documenting the results, including a discussion of study methods used, any problems encountered, and other relevant information. Upon completion, the report should be forwarded to our Endangered Species Division, 510 Desmond Drive SE, Suite 102, Lacey, WA 98503-1273.

* "Construction project" means any major Federal action which significantly affects the quality of the human environment (requiring an EIS), designed primarily to result in the building or erection of human-made structures such as dams, buildings, roads, pipelines, channels, and the like. This includes Federal action such as permits, grants, licenses, or other forms of Federal authorization or approval which may result in construction.
State of Washington
DEPARTMENT OF FISH AND WILDLIFE
Mailing Address: 600 Capitol Way N, Olympia, WA 98501-1091 - (360) 902-2200; TDD (360) 902-2207
Main Office Location: Natural Resources Building, 1111 Washington Street SE, Olympia, WA

Date: JUL 31 2022

Dear Habitats and Species Requester:

Enclosed are the habitats and species products you requested from the Washington Department of Fish and Wildlife (WDFW). This package may also contain documentation to help you understand and use these products.

These products only include information that WDFW maintains in a computer database. They are not an attempt to provide you with an official agency response as to the impacts of your project on fish and wildlife, nor are they designed to provide you with guidance on interpreting this information and determining how to proceed in consideration of fish and wildlife. These products only document the location of important fish and wildlife resources to the best of our knowledge. It is important to note that habitats or species may occur on the ground in areas not currently known to WDFW biologists, or in areas for which comprehensive surveys have not been conducted. Site-specific surveys are frequently necessary to rule out the presence of priority habitats or species.

Your project may require further field inspection or you may need to contact our field biologists or others in WDFW to assist you in interpreting and applying this information. Generally, for assistance on a specific project, you should contact the WDFW Habitat Program Manager for your county and ask for the area habitat biologist for your project area. Refer to the enclosed directory for those contacts.

Please note that sections potentially impacted by spotted owl management concerns are displayed on the 1:24,000 scale standard map products. If specific details on spotted owl site centers are required they must be requested separately.

These products are designed for users external to the forest practice permit process and as such does not reflect all the information pertinent to forest practice review. The Forest Practice Rules adopted August 22, 1997 by the Forest Practice Board and administered by the Washington Department of Natural Resources require forest practice applications to be screened against marbled murrelet detection areas and detection sections. Marbled murrelet detection locations are included in the standard priority habitats and species products, but the detection areas and detection sections are not included. If your project is affected by Forest Practice Regulations, you should specially request murrelet detection areas.

WDFW updates this information as additional data become available. Because fish and wildlife species are mobile and because habitats and species information changes, project reviews for fish and wildlife should not rest solely on mapped information. Instead, they should also consider new information gathered from current field investigations. Remember, habitats and species information can only show that a species or habitat type is present, they cannot show that a species or habitat type is not present. These products should not be used for future projects. Please obtain updates rather than use outdated information.

August 2000
Because of the high volume of requests for information that WDFW receives, we need to charge for these products to recover some of our costs. Enclosed is an invoice itemizing the costs for your request and instructions for submitting payment. Please note that sensitive information (e.g., threatened and/or endangered species) may be included in this request. These species are vulnerable to disturbances and harassment. In order to protect the viability of these species we request that you not disseminate the information as to their whereabouts. Please refer to these species presence in general terms. For example: "A Peregrine Falcon is located within two miles of the project area".

If your request required a sensitive Fish and Wildlife Information Release Memorandum of Understanding (MOU) and you or your organization has one on file, please refer to that document for conditions regarding release of this information.

For more information on WDFW you may visit our web site at www.wa.gov/wdfw or visit the Priority Habitats and Species site at www.wa.gov/wdfw/hab/phspage.htm.

For information on the state's endangered, threatened, and sensitive plants as well as high quality wetland and terrestrial ecosystems, please contact the Washington Department of Natural Resources, Natural Heritage Program at PO Box 47014, Olympia Washington 98504-7014, by phone (360)902-1667 or visit the web site at www.wa.gov/dnr/htdocs/frr/hp/wanhp.html.

If you have any questions or problems with the information you received please call me at (360) 902-2543 or fax (360) 902-2946.

Sincerely,

[Signature]

Lori Guggenmos, GIS Programmer
Priority Habitats and Species

Enclosures
## PHS Polygon Form List - Cross Reference Report

IN THE VICINITY OF T20R03E SECTION 31

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## PHS Polygon - Species and Habitat List

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<td>902,061</td>
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<td>UNOS</td>
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<tr>
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<td>YES</td>
<td>WAPO*</td>
<td>RLC</td>
<td>REGULAR LARGE CONCENTRATION</td>
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<td>WETLANDS</td>
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Form number 900000 indicates presence of PHS is unknown or the area was not mapped. Form numbers 909998, 909997, or 909996 indicate compilation errors.

YES under the 'PRIORITY' column indicates that the species or habitat is considered a priority and is on the Priority Habitats and Species List and/or the Species of Concern List.

## Wildlife Heritage Point - Species List and Report

IN THE VICINITY OF T20R03E SECTION 31

<table>
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<tr>
<th>QUADRT</th>
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<tr>
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<td>YES</td>
<td>SCORI</td>
<td>WESTERN GRAY SQUIRREL</td>
<td>I0</td>
</tr>
<tr>
<td>4712224033</td>
<td>YES</td>
<td>HALE</td>
<td>BALD EAGLE</td>
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</table>

YES under the 'PRIORITY' column indicates that the species or habitat is considered a priority and is on the Priority Habitats and Species List and/or the Species of Concern List.
WASHINGTON DEPARTMENT OF FISH AND WILDLIFE
REGIONAL HABITAT PROGRAM MANAGER CONTACTS

For assistance with Priority Habitats and Species Information contact a regional habitat program manager and they will direct your questions to a biologist.

County project is in...

Asotin, Columbia, Ferry, Garfield Lincoln,
Pend Oreille, Spokane, Stevens, Walla Walla,
Whitman

Adams, Chelan, Douglas, Grant, Okanogan

Benton, Franklin, Kittitas, Yakima

Island, King, San Juan, Skagit, Snohomish,
Whatcom

Clark, Cowlitz, Klickitat, Lewis, Skamania,
Wahkiakum

Clallam, Grays Harbor, Jefferson, Kitsap, Mason,
Pacific, Pierce, Thurston

Contact...

Kevin Robinette
8702 North Division Street
Spokane, WA 99218-1199
Phone: (509) 456-4082

Tracy Lloyd
1550 Alder Street NW
Ephrata, WA 98823-9699
Phone: (509) 754-4624

Ted Clausing
1701 24th Avenue
Yakima, WA 98902-5720
Phone: (509) 575-2740

Deborah Cornett
16018 Mill Creek Blvd.
Mill Creek, WA 98012-1296
Phone: (425) 775-1311

Steve Manlow
2108 Grand Blvd.
Vancouver, WA 98661
Phone: (360) 696-6211

Sue Patnude
48 Devonshire Road
Montesano, WA 98563-9618
Phone: (360) 249-4628

August 2000
Western Gray Squirrel: Possible sighting in classic mature white oak stand just S of intersection Steele & 112th, part of Clover Creek wetland.

Bald Eagle: Nest in dominant 170 ft tall Douglas Fir. Obvious leader on top with 4 branches pointing E. Nest about 15 ft down from top.

Note:
If known occurrences of spotted owls and marbled murrelets exist they will be displayed on the accompanying map, however, detailed information for them are not included in this report.
form: 902,057 species/habitat: UNOS species use: season: accuracy: 1
sitename: TACOMA PARKS
general description:
TACOMA PUBLIC PARKS

source: DNR ORTHO MAP 1984
date: 84 code: GSMA
synopsis:
OPEN SPACE PARKS PROVIDING REFUGE FOR URBAN WILDLIFE

source: NAUER, DON NUMEROUS DRIVE BY VISITS
date: 12 90 code: DRIVE
synopsis:

form: 902,061 species/habitat: UNOS species use: season: accuracy: 1
sitename: PIERCE COUNTY CANDIDATE OPEN SPACE AREAS
general description:
NATURALLY VEGETATED LAND AREAS IN PIERCE COUNTY WHICH SHOULD BE CONSIDERED FOR CONSERVATION AND NATURAL AREA PROTECTION. SOME ARE UNDEVELOPED STEEP SLOPES COVERED WITH NATIVE VEGETATION AND SERVE AS HIGH QUALITY WILDLIFE HABITAT.

source: DNR ORTHOPHOTO MAPS
date: 90 code: ORTHO
synopsis:
ORTHOPHOTO MAPS WERE USED TO DELINEATE BOUNDARIES IN MOST CASES.

source: DNR ORTHOPHOTO MAPS, 1984
date: 84 code: ORTHO
synopsis:
DETERMINED USE AND VEGETATION TYPES DESIGNATION.

source: KEN KILDAHL, WDFW; PERSONAL OBSERVATIONS
date: 05 91 code: PROF
synopsis:
ENFORCEMENT OFFICER KILDAHL HAS WORKED IN THIS AREA FOR MORE THAN 15 YEARS. HAS PERSONALLY VISITED MOST OF THESE AREAS.

form: 902,562 species/habitat: WAFO species use: SLC season: WS P accuracy: 1
sitename: PIERCE CO. LARGE WATERFOWL AREAS, NON-AGRICULTURAL
general description:
LARGE REGULAR WATERFOWL CONCENTRATION AREAS, NON AGRICULTURAL IN PIERCE COUNTY.

source: DNR ORTHOPHOTO MAPS, 1984
date: 84 code: ORTHO
synopsis:
PHOTOS INDICATE BASIC VEGETATION AND LAND USE.

source: NAUER, DON KILDAHL, KEN DILLMAN, LOU WIL; FIELD OBSERVATIONS
date: 04 91 code: PROF
synopsis:
NATURALLY VEGETATED WETLANDS SEASONALLY SUPPORTING LARGE WATERFOWL CONCENTRATION S.
form: 902,593 species/habitat: WET  species use:  season:  accuracy: 1
sitename: CHAMBERS CREEK WETLANDS
gen. description: WETLANDS ASSOCIATED WITH CHAMBERS CREEK DRAINAGE

source: DNR ORTHOPHOTO MAPS, 1984
date:  84  code: ORTHO
synopsis: OBTAINED ADDITIONAL LAND USE AND VEGETATION DATA

source: NATIONAL WETLAND INVENTORY 1988
date:  88  code: GSNAP
synopsis: DELINEATED WETLAND BOUNDARIES

source: NAUER, DON AND DILMAN, LOU WDW FIELD OBSERVATIONS
date:  05  91  code: PROF
synopsis: LOCAL KNOWLEDGE FROM SITE VISITS DETERMINED LAND USE AND VEGETATION TYPES
The fish information in this report only includes information that Washington Department of Fish and Wildlife (WDFW) maintains in a central computer database. This information only documents the location of important fish resources to the best of our knowledge. It is not a complete inventory of the fish species in the state. Fish are identified as priority by WDFW if they meet one of three criterion as listed in the Priority Habitats and Species List. The list is available by contacting WDFW Priority Habitats and Species section at (360)902-2543 or it is available on our website at http://www.wa.gov/wdfw/hab/phspage.htm. To insure appropriate use of this information users are encouraged to consult with WDFW biologists.
July 24, 2002

Nikki Dictson
Steward and Associates
120 Avenue A – Ste D
Snohomish WA 98290

SUBJECT: Biological Assessments for HUD Construction Projects, Lakewood:
Placement of Modular Building for Communities & Schools (T19N R02E
S11) and Construct City Park Facility at Wards Lake (T20N R03E S31)

We’ve searched the Natural Heritage Information System for information on rare plants, select
rare animal species, and high quality wetland and terrestrial ecosystems in the vicinity of your
project. A summary of this information, and corresponding materials, are enclosed. In your
planning, please consider protection of these significant natural features. Please contact us for
consultation on projects that may have an effect on these rare species or high-quality ecosystems.

The information provided by the Washington Natural Heritage Program is based solely on
existing information in the database. There may be significant natural features in your study area
of which we are not aware. These data are being provided to you for informational and planning
purposes only - the Natural Heritage Program has no regulatory authority. This information is
for your use only for environmental assessment and is not to be redistributed.

The Washington Natural Heritage Program is responsible for information on the state’s rare
plants as well as high quality ecosystems. We have begun to add to our database information on
selected groups of animals of conservation concern, such as freshwater mussels, butterflies and
bats. However, to ensure that you receive information on all animal species of concern, please
contact Priority Habitats and Species, Washington Department of Fish and Wildlife, 600 Capitol
Way N, Olympia, WA 98501-1091, or by phone (360) 902-2543.

If you have internet access, please visit our website for more information. Lists of rare plants and
their status, as well as rare plant fact sheets, are available for download from the site. You will
find us listed under Programs & Topics on the WA DNR homepage at www.wa.gov/dnr. Please
call me at (360) 902-1667 if you have any questions, or by E-Mail: sandra.moody@wadnr.gov.

Sincerely,

Sandy Swope Moody, Environmental Review Coordinator
Washington Natural Heritage Program

Enclosures
WASHINGTON NATURAL HERITAGE INFORMATION SYSTEM
ENDANGERED, THREATENED AND SENSITIVE PLANTS,
SELECT RARE ANIMAL SPECIES,
HIGH QUALITY WETLAND ECOSYSTEMS AND HIGH QUALITY TERRESTRIAL ECOSYSTEMS
IN THE VICINITY OF LAKewood HUD PROJECTS: MODULAR BLDG FOR COMMUNITIES &
SCHOOLS; AND CITY PARK FACILITY CONSTRUCTION AT WARD LAKE
REQUESTED BY STEWARD AND ASSOCIATES

Data Current as of July 2002
Page 1 of 1

<table>
<thead>
<tr>
<th>TOWNSHIP, RANGE AND SECTION</th>
<th>ELEMENT NAME</th>
<th>STATE STATUS</th>
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<td>T19N R02E S14 N2</td>
<td>Lathyrus torreyi</td>
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<td>SC</td>
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<td>(Torrey's peavine)</td>
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<tr>
<td>T19N R03E S06 NWofE</td>
<td>Aster curtus</td>
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<tr>
<td></td>
<td>(white-top aster)</td>
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</tbody>
</table>
FEDERAL STATUS DEFINITIONS: (Note: Federally listed plant species are subject to the US Endangered Species Act.)

LE = Listed Endangered: Any taxon that is in danger of extinction throughout all or a significant portion of its range and that has been formally listed as such in the Federal Register under the Federal Endangered Species Act.

LT = Listed Threatened: Any taxon that is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and that has been formally listed as such in the Federal Register under the Federal Endangered Species Act.

PE = Proposed Endangered: Any taxon that is in danger of extinction throughout all or a significant portion of its range and that has been proposed for listing as such in the Federal Register under the Federal Endangered Species Act.

PT = Proposed Threatened: Any taxon that is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and that has been proposed for listing as such in the Federal Register under the Federal Endangered Species Act.

C = Candidate species: Taxa for which current information indicates the probable appropriateness of listing as Endangered or Threatened and that has been published in the Federal Register as a candidate for listing under the Federal Endangered Species Act.

SC = Species of Concern: Species whose conservation standing is of concern but for which status information is still needed. Species of concern lists are not published in the Federal Register.

Animal:
NL = Not Listed: Used for populations or subspecies within a taxon that are not federally listed, when other populations or subspecies of that same taxon are listed.

STATE STATUS DEFINITIONS: (Note: The state ESA does not include provisions to list or protect rare plant species – the state rare plant list is advisory only.)

E = Endangered: Any taxon in danger of becoming extinct or extirpated from Washington within the foreseeable future if factors contributing to its decline continue. Populations of these taxa are at critically low levels or their habitats have been degraded or depleted to a significant degree.

T = Threatened: Any taxon likely to become Endangered in Washington within the foreseeable future if factors contributing to its population decline or habitat degradation or loss continue.

S = Sensitive: Any taxon that is vulnerable or declining and could become Endangered or Threatened in the state without active management or removal of threats.

Animal:
C = Candidate: Taxa under review for listing.

M = Monitor: Taxa of potential concern.

NL = Not Listed: Used for populations or subspecies within a taxon that have no state status, when other populations or subspecies within that same taxon are listed.

Vascular Plant:
X = Possibly Extinct or Extirpated from Washington: Based on recent field searches, a number of plant taxa are considered to be possibly extinct or extirpated from Washington. Taxa in this group are all high priorities for field investigations. If found, they will be assigned one of the above status categories.

R = Review: Taxa of potential concern, but for which no status has yet been assigned.
   Group 1 = Taxa in need of additional field work before a status can be assigned.
   Group 2 = Taxa with unresolved taxonomic questions.

W = Watch: Taxa more abundant and/or less threatened in Washington than previously assumed.

Non-Vascular Plant:
P = Priority: At this time, there is insufficient information to assign a statewide status to the non-vascular taxa. For now, the lichen and macrofungi lists have been divided into two priority groups based on criteria of occurrence pattern, vulnerability, threats, degree of protection, and taxonomy.
7.3 Appendix C. Michele Tirhi of WDFW Bald Eagle Management Plan
April 30, 2002

Mr. David Schroedel
Consulting Planner
2215 North 30th Street, Suite 300
Tacoma, WA 98403

Mr. Schroedel:

Enclosed you will find a Draft Bald Eagle Site Management Plan (Plan) for your review. If you find the Plan satisfactory, please sign and return the entire original copy of the Plan to the regional office at Washington Department of Fish and Wildlife, 48-B Devonshire Rd., Montesano, WA 98563-9618 for the additional signature from the Regional Manager. A copy of the signed original Plan will be returned to you from the regional office in Montesano. If you wish to have a copy sent to a permitting agency (e.g. Department of Natural Resources or County/City Planning Department), please include a note containing name and address with your request when you return the original Plan.

The bald eagle is both a state and federal threatened species. The protection of nesting, roosting, and foraging habitat is critical to delisting eagles from threatened status in this state. The primary threats to bald eagles in Washington today are habitat degradation and human disturbance due to a rapidly expanding human population. You will find more information on this subject in the enclosed handout titled “Management Recommendations for Priority Species”.

The Bald Eagle Protection Rules (WAC 232-12-292), also enclosed, and enabling legislation (RCW 77.12.655) were enacted to provide a means of protecting bald eagle habitat including nest trees, communal roost trees, screening habitat, foraging areas, and perch trees. These rules direct the Washington Department of Fish and Wildlife to develop site specific management plans to protect important eagle habitat components impacted by land use actions. The federal Endangered Species Act also protects the bald eagle.

Thank you for your assistance in protecting our national bird, a symbol of freedom and the beauty of our diverse wildlife legacy.

Sincerely,

Michelle Tirhi
Urban Wildlife Biologist, South Puget Sound

[Signature]
EAGLE TERRITORIES:  Wards Lake Bald Eagle Territory #1348

Applicant
AHBL, Inc.
c/o Mr. David Schroedel
2215 North 30th Street, Suite 300
Tacoma, WA  98403

Property
T20N R03E S31
Wards Lake Park
84th Street South, Tacoma
Pierce County

PENDING ACTIVITY

Develop the existing property into a city park owned and operated by City of Lakewood. Wards Lake Park will consist of a storm pond, lawn area, parking lot, playground, picnic shelter, meadow, forested area, trails, and pond.

BACKGROUND

The Wards Lake Bald Eagle Territory is located within the Wards Lake Park off 84th Street South in Tacoma. Bald eagle activity around Wards Lake was reported to the WDFW for three years prior to nest construction. In 1999, Michelle Tirhi, biologist with the Washington Department of Fish and Wildlife (WDFW), responded to a telephone call reporting a possible nest around Wards Lake. No eagle nest was located at that time. On April 4, 2001, an active bald eagle nest was confirmed within the conifer bluff located south of Wards Lake. The nest is located in the bowl formed by four supporting branches of a dominant Douglas fir tree. The nest is located approximately 15 feet from the top. The UTM coordinates for the nest tree (using CONUS NAD27) are 540008 E 5224898 N. One adult eagle was reported in the nest incubating eggs on 4/4/02.
The history of the area surrounding the nest tree has been one of conversion from semi-remote timbered land to an increasingly subdivided area where a considerable portion of the suitable bald eagle habitat has been altered by timber clearing and residential development. Fortunately, the bald eagles occupying the territory have exhibited a higher than normal tolerance for human disturbance. The current nest tree is located within 400 feet of several residences; pedestrian trails used by local residents exist directly under the nest tree. The concern of the WDFW is that construction around the active nest may remove important bald eagle habitat. The WDFW is also concerned that construction activities and increased human disturbance during the breeding and nesting season may cause nest failure, reduced productivity, or abandonment of the territory. The intent of this plan is to allow the pending while maintaining the long-term integrity of the eagle territory.

FACTORS CONSIDERED

Landowners goals were considered through a review of the draft Ward’s Lake Park site design plan; a site visit by Michelle Tirhi with AHBL, Inc. personnel; and telephone conversations and message exchange between Michelle Tirhi and Wayne Carlson/David Schroedel, AHBL, Inc.

Bald eagle habitat use was considered by documentation of the territory; current surrounding habitat conditions, current status of the population; and scientific literature concerning bald eagle habitat protection.

CONDITIONS

The bald eagle nesting season is January 1 - August 15

Objective 1: To protect bald eagles and their habitat, including nesting, perching, screening, and foraging trees

1) No conifers or cottonwoods are to be removed within 400 ft of the bald eagle nest tree. Should the applicant need to remove either conifers or cottonwoods, a request, in writing, must be submitted to the WDFW prior to such activity indicating which trees are to be removed and the reason for the removal. The WDFW will work with the applicant to determine a reasonable alternative to tree removal, including redesigning site plans and associated construction activities to retain trees.
2) No major vegetation removal, vegetation alteration, construction activities, nor materials storage shall occur within 400 ft of the bald eagle nest tree. Minor brush clearing shall be allowed to improve the appearance and visibility of the site.

3) All dead trees (snags) shall be retained on the property.

4) From 400 ft to 800 ft, retain all known perch trees and all conifers and cottonwoods ≥ 24 inch dbh. Also retain ≥50% of pre-clearing or pre-construction conifer stand with diameter distributions representative of the original stand (> 6 ft tall). Windowing and low limbing of trees for view is acceptable provided no more than 30% of the live crown is removed.

Objective 2: To protect nesting bald eagles from disturbance and prevent possible abandonment

4) Heavy equipment operation, dredging, clearing, grading, construction, tree cutting, burning, or discharge of firearms, fireworks, or explosives is discouraged from January 1 – July 1 of any given year. If a WDFW representative confirms that breeding has not taken place for any given year, activities can begin after April 1. Site preparation, site clean up, survey activities, and other non-disruptive activities can begin before July 1.

DURATION OF PROTECTION

This Plan applies to the landowner(s) who signs the Plan. If the ownership changes, the new owner must sign the Plan or request a new one to reflect a change in land use. Any other land use proposals within the Wards Lake Bald Eagle Territory, including but not limited to forestry practices, vegetation removal, construction, and changes in major land use activities on the property may be subject to a different set of conditions. It is the landowner’s responsibility to notify the WDFW of any new proposed land use activities.

Since eagles return to the same traditional use areas each year, the conditions of this Plan shall apply indefinitely, unless a breeding territory or communal roost has been unoccupied for 5 consecutive years. If a breeding territory or communal roost has been unoccupied for 5 consecutive years, then the WDFW biologist and the landowner should evaluate the continued need for protection of the bald eagle habitat. Please contact WDFW if the eagles change the location of their nest. Do not assume that the conditions of this Plan no longer apply.
REVIEW AND AMENDMENT

This Plan will be subject to the following review and amendment procedures. The plan may be reviewed periodically by the WDFW and the landowner to determine whether: 1) the Plan requires amendment in response to changing eagle and landowner circumstances; or 2) the terms of the Plan comply with applicable laws and regulations; or 3) the parties to the Plan are complying with its terms.

DANGER TREES

Except for a tree that presents imminent danger to the safety or property of individuals, a report from a professional arborist, indicating the need to remove the tree, shall be submitted to the WDFW before cutting the danger tree.

APPEAL PROCEDURE

In addition to the provisions of WAC 232-12-292(7.1)-(7.3), the landowner may request a formal appeal of Department actions in accordance to the Administrative Procedures Act, Chapter 34.05 RCW, and the Model Rules of Procedure, Chapter 10-08 WAC. Such a request shall be filed with the Department within 20 days of receipt of the contested WDFW decision. The appeal request shall clearly state the relief sought and the grounds for the appeal.

COMPLIANCE

Failure to comply with this Plan constitutes a misdemeanor as set forth in RCW 77.15.130.
GENERAL PROJECT INFORMATION

<table>
<thead>
<tr>
<th>1. Project Name</th>
<th>9. Part 58 Environmental Determination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wards Lake Park Development</td>
<td>EA – FONSI</td>
</tr>
<tr>
<td>2. Project Coordinator</td>
<td>10. Project Street Address</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Subgrantee</td>
<td>11. Project City and Zip</td>
</tr>
<tr>
<td>City of Lakewood Parks &amp; Recreation Dept.</td>
<td>Lakewood, WA 98499</td>
</tr>
<tr>
<td>4. Subgrantee Contact and Phone</td>
<td>12. Section</td>
</tr>
<tr>
<td>Mary Dodsworth</td>
<td>NE Qtr Section 31</td>
</tr>
<tr>
<td>(253)589-2489</td>
<td></td>
</tr>
<tr>
<td>5. Consultant</td>
<td>13. Range</td>
</tr>
<tr>
<td>Steward &amp; Assoc.</td>
<td>20 North</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Consultant Contact and Phone</td>
<td>14. Township</td>
</tr>
<tr>
<td>120 Avenue A, Ste. D</td>
<td>20 North</td>
</tr>
<tr>
<td>Snohomish, WA 98290</td>
<td></td>
</tr>
<tr>
<td>7. Subgrantee Name and Address</td>
<td>15. Proximity to Water</td>
</tr>
<tr>
<td>City of Lakewood Parks &amp; Recreation Dept.</td>
<td>□ &lt; 300 feet from water body</td>
</tr>
<tr>
<td>6000 Main Street SW</td>
<td>☑ &gt; 300 feet from water body</td>
</tr>
<tr>
<td>Lakewood, WA 98499</td>
<td></td>
</tr>
<tr>
<td>8. Potential Species Impact (if any)</td>
<td>16. Name of Nearest Water Body</td>
</tr>
<tr>
<td></td>
<td>Wards Lake</td>
</tr>
</tbody>
</table>

PROJECT DESCRIPTION

Please provide a brief description of the physical project. Follow the directions listed on page 3. Use additional paper, if needed, and attach to these forms.

Development of a 20-acre park in the primarily residential neighborhood of Oakwood (CT 71804) by improving access including 11,580 square feet of pathways for pedestrians, 23,613 square feet of asphalt paving for cars and school buses, parking facilities, paths, installation of a Sierra II prefabricated restroom facility and installation of a permanent structure play toy with geo-textile fabric under wood play chips fall material. Service area is comprised of 61.02% low- to moderate-income residents.

BY INITIAL ANALYSIS, THIS PROJECT HAS BEEN DETERMINED TO:

- ☐ HAVE NO EFFECT
- ☑ MAY AFFECT, a professional biological evaluation is required to determine effect.
CITY OF LAKEWOOD
EVALUATION OF CDBG & HOME PHYSICAL ACTIVITIES FOR
ENDANGERED SPECIES IMPACT

INTRODUCTION

All City of Lakewood projects that are funded by a Community Development Block Grant and
HOME Investment Partnership Act Grant from the U. S. Department of Housing and Urban
Development, are required, as specified in Section 7 of the Endangered Species Act to be
evaluated to determine the impacts (if any) of the project or action on endangered and
threatened species. Projects funded by the City of Lakewood using federal dollars are subject to
Section 7 requirements.

The following procedure should be utilized to evaluate whether such City of Lakewood projects
can be determined as “No Effect” or “May Effect” upon listed endangered species. Projects that
“May Effect” listed species require the completion of an analysis of potential impacts to listed
species, usually through the preparation of a biological assessment.

This procedure will provide required documentation for a determination of “no effects” and
identifies activities that will not harm species listed as threatened or endangered. All City of
Lakewood physical improvement activities must be evaluated as part of the environmental
assessment responsibilities required by part 58 of HUD regulations. Projects that are designated
as “May Effect” will be required to be more fully evaluated.

QUALIFICATIONS FOR “NO EFFECTS” DETERMINATION

Five categories of physical activities that are addressed in the following checklist are:

☐ Those activities which are classified as Exempt under 24 CFR Part 58.34 or which are
  classified as Categorically Excluded and may subsequently be moved to Exempt status under
  24 CFR Part 58.35(b).
☐ Acquisition of Property
☐ Interior Rehabilitation
☐ Exterior Rehabilitation – site is greater than 300 feet from any waterbody
☐ Exterior Rehabilitation – site is less than 300 feet from any waterbody

To determine whether a proposed project qualifies as “no effects” the project must meet the
requirements described on page 4. If the project does not meet the requirements listed on page
4, the project DOES NOT QUALIFY for the determination of “no effects.” The project requires
further evaluation.

If the project requires the permits listed on page 4, the project DOES NOT QUALIFY for the
determination of “no effects.” The project is subject to Section 7 requirements.
CITY OF LAKEWOOD
EVALUATION OF CDBG & HOME PHYSICAL ACTIVITIES FOR
ENDANGERED SPECIES IMPACT

If the proposed project meets the requirements listed on page 4 and does not require the permits listed on page 4, please complete the following checklist. Check all boxes that apply.

INSTRUCTIONS

☐ For projects that have been determined to be EXEMPT under 24 CFR Part 58.34, or CATEGORICALLY EXCLUDED which may be moved to EXEMPT under 24 CFR Part 58.35(b), check this box.

☐ For projects engaging in ACQUISITION and/or any INTERIOR REHABILITATION ACTIVITIES but no EXTERNAL CONSTRUCTION/REHABILITATION ACTIVITIES, check this box and complete the following:

- Page 1 – “General Project Information” – complete boxes 1-15
- Page 1 – “Project Description” – briefly describe the activities you will be engaging in and when they will occur.
- Page 4 – “Requirements to Qualify for a ‘No Effects Determination’”
- Page 5 – “Acquisition”
- Page 5 – “Interior Rehabilitation Activities”

☐ For projects engaging in any EXTERIOR CONSTRUCTION/REHABILITATION ACTIVITIES, check this box and complete the following:

- Page 1 – “General Project Information” – complete boxes 1-15
- Page 1 – “Project Description” –
  1. Briefly describe the activities you will be engaging in and when they will occur.
  2. Describe the project area and existing site conditions in or near the project area.
  3. Describe general construction methods and sequencing (including temporary or permanent access, staging areas, stock piles, etc.).
- Page 4 – “Requirements to Qualify for a ‘No Effects Determination’”
- Page 6 or 7 – “Exterior Construction/Rehabilitation Activities”

Completed forms will be reviewed by the City’s Environmental Officer to confirm that the project will have no impacts on listed species.

Completed “No Effects” checklist and supporting documentation is to be placed in the environmental review file for each project.
CITY OF LAKEWOOD
EVALUATION OF CDBG & HOME PHYSICAL ACTIVITIES FOR
ENDANGERED SPECIES IMPACT

REQUIREMENTS TO QUALIFY FOR A “NO EFFECT” DETERMINATION

1. PERMIT THRESHOLD

Projects requiring the following State, Federal, City of Lakewood or equivalent local permits “may effect” listed species and will require further evaluation.

- Clearing And Grading Permit
- Floodplain Development Permit
- Demolition Permit
- Shoreline Substantial Development Permit
- Coastal Zone Management Certification
- Hydraulic Project Approval
- Underground Storage Tank Notification Requirement – (notification of new tank installation)
- U.S. Army Corps of Engineers Individual or Nationwide 404 Permit or Section 10 Permit
- Water Quality Certification (401)

2. SPECIFIC REQUIREMENTS

Projects that do not require the above permits must meet the following criteria for use of the “no effects” checklist.

- Project has been determined to be Exempt under 58.34 or Categorically Excluded that may be moved to Exempt under 58.35(b).
- No additional stormwater run-off will be generated or conveyed to drainage ditches or receiving water bodies.
- Staging area (parking/storage of equipment and materials) will:
  - Be located on a paved or gravel surface or surface stabilized to prevent erosion and tracking mud.
  - Prevent stormwater from running on to an area storing liquid materials, erodible materials, pesticides, fertilizers and other potential contaminants by covering building, landscaping and waste materials.
  - Prevent stormwater from running on to an area storing liquid materials erodible materials, pesticides and fertilizers, building, landscaping and waste materials by use of a curb, berm, or dike.
  - Use appropriate stormwaster runoff control mechanisms.
- No heavy mechanical disturbance to soils or vegetation will be made to the site.
- No riparian vegetation will be removed from the site.
- All construction, demolition, dangerous wastes and hazardous wastes will be managed in accordance with appropriate local regulations and disposed of at a certified solid waste or hazardous waste facility.

Additional requirements are described for each type of activity and proximity of the project to water. These requirements must be met, in addition to the above requirements, for an activity to qualify as having “no effects” on listed species.

3. PROJECTS THAT “MAY AFFECT” LISTED SPECIES

If your project: a) does not meet the requirements specified above and does not meet additional requirements described below or b) requires any of the above listed permits, the project “may affect” listed species and requires additional evaluation and analysis of potential impacts to listed species.
CITY OF LAKEWOOD
EVALUATION OF CDBG & HOME PHYSICAL ACTIVITIES FOR ENDANGERED SPECIES IMPACT

ACTIVITIES

1. ACQUISITION

<table>
<thead>
<tr>
<th>Check all that apply</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Property acquisition only.</td>
<td></td>
</tr>
<tr>
<td>☐ Acquisition of an existing building and associated site.</td>
<td></td>
</tr>
<tr>
<td>☐ Acquisition of an existing building and associated site and rehabilitation activities.</td>
<td></td>
</tr>
</tbody>
</table>

2. INTERIOR REHABILITATION ACTIVITIES

<table>
<thead>
<tr>
<th>Check all that apply</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Weatherization:</strong></td>
<td></td>
</tr>
<tr>
<td>☐ New windows</td>
<td></td>
</tr>
<tr>
<td>☐ New doors</td>
<td></td>
</tr>
<tr>
<td>☐ Insulation</td>
<td></td>
</tr>
<tr>
<td>☐ Ventilation</td>
<td></td>
</tr>
<tr>
<td><strong>Structural:</strong></td>
<td></td>
</tr>
<tr>
<td>☐ Interior wall removal</td>
<td></td>
</tr>
<tr>
<td>☐ Interior wall replacement</td>
<td></td>
</tr>
<tr>
<td>☐ Foundation work (inside existing foundation)</td>
<td></td>
</tr>
<tr>
<td><strong>Plumbing:</strong></td>
<td></td>
</tr>
<tr>
<td>☐ Replumb internal fixtures/pipes</td>
<td></td>
</tr>
<tr>
<td>☐ Update kitchen, bath or laundry</td>
<td></td>
</tr>
<tr>
<td>☐ Update existing equipment</td>
<td></td>
</tr>
<tr>
<td>☐ Add new kitchen, bath or laundry</td>
<td></td>
</tr>
<tr>
<td><strong>Cosmetic:</strong></td>
<td></td>
</tr>
<tr>
<td>☐ Painting</td>
<td></td>
</tr>
<tr>
<td>☐ Resurface floors (carpet, vinyl, etc.)</td>
<td></td>
</tr>
<tr>
<td>☐ Repair drywall</td>
<td></td>
</tr>
<tr>
<td>☐ Repair mill work</td>
<td></td>
</tr>
<tr>
<td><strong>Replacements:</strong></td>
<td></td>
</tr>
<tr>
<td>☐ Appliances</td>
<td></td>
</tr>
<tr>
<td>☐ Cabinets</td>
<td></td>
</tr>
<tr>
<td>☐ Mechanical Equipment</td>
<td></td>
</tr>
<tr>
<td><strong>Abatement:</strong></td>
<td></td>
</tr>
<tr>
<td>☐ Remove asbestos</td>
<td></td>
</tr>
<tr>
<td>☐ Encapsulate asbestos</td>
<td></td>
</tr>
<tr>
<td>☐ Encapsulate lead-based paint</td>
<td></td>
</tr>
<tr>
<td><strong>Electrical:</strong></td>
<td></td>
</tr>
<tr>
<td>☐ Rewire</td>
<td></td>
</tr>
<tr>
<td>☐ Add new service</td>
<td></td>
</tr>
</tbody>
</table>
CITY OF LAKEWOOD
EVALUATION OF CDBG & HOME PHYSICAL ACTIVITIES FOR
ENDANGERED SPECIES IMPACT

3. EXTERIOR CONSTRUCTION/REHABILITATION ACTIVITIES
   (Site is located greater than 300 feet from any waterbody)

Additional requirements to qualify for a “no effects” determination
☒ Include a site plan with project area clearly identified.
☒ Include an area map with approximate location of property circled.
☒ Include a design sketch of activity (if available).

<table>
<thead>
<tr>
<th>Check all that apply</th>
<th>Roof:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Replace</td>
</tr>
</tbody>
</table>

|                      | Cosmetic: |
|                      | Painting |

<table>
<thead>
<tr>
<th>Structural:</th>
<th>Siding:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resize/replace windows</td>
<td>Replace</td>
</tr>
<tr>
<td>Repair exterior walls</td>
<td>Repair</td>
</tr>
<tr>
<td>Add new windows or doors</td>
<td>Re-side over existing siding</td>
</tr>
<tr>
<td>Foundation work – minor improvements</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Landscaping:</th>
<th>Impervious Surface – Repair and Improvements:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Patching, resurfacing, or resealing</td>
</tr>
<tr>
<td>New plantings</td>
<td>New minor improvements</td>
</tr>
<tr>
<td>Repair fencing</td>
<td>- Handicap access ramps</td>
</tr>
<tr>
<td>Replace fencing</td>
<td>- Single parking space</td>
</tr>
<tr>
<td>New fencing</td>
<td>- Single family driveway</td>
</tr>
<tr>
<td>Repair play area</td>
<td>- Single family sidewalk</td>
</tr>
<tr>
<td>New play area</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Drainage: Existing Onsite Detention or existing connection to storm sewer</th>
<th>Oil Tank Decommissioning:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repair existing</td>
<td>Closed in place according to the</td>
</tr>
<tr>
<td>Replace existing</td>
<td>Uniform Fire Code Section</td>
</tr>
<tr>
<td></td>
<td>7902.1.7.2.3.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sewer/Septic:</th>
<th>Water line:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repair</td>
<td>Repair</td>
</tr>
<tr>
<td>Replace</td>
<td>Replace</td>
</tr>
</tbody>
</table>
4. EXTERIOR CONSTRUCTION/REHABILITATION ACTIVITIES

(Site is located less than 300 feet from any waterbody)

N/A

Additional requirements to qualify for a “no effects” determination

- Include a site plan with project area clearly identified.
- Include an area map with approximate location of property circled.
- Include a design sketch of activity (if available).

<table>
<thead>
<tr>
<th>Check all that apply</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roof:</td>
</tr>
<tr>
<td>☐ Replace</td>
</tr>
<tr>
<td>☐ Repair</td>
</tr>
<tr>
<td>Siding:</td>
</tr>
<tr>
<td>☐ Replace</td>
</tr>
<tr>
<td>☐ Repair</td>
</tr>
<tr>
<td>☐ Re-side over existing</td>
</tr>
<tr>
<td>Structural:</td>
</tr>
<tr>
<td>☐ Resize/replace windows</td>
</tr>
<tr>
<td>☐ Repair exterior walls</td>
</tr>
<tr>
<td>☐ New windows or doors</td>
</tr>
<tr>
<td>Cosmetic:</td>
</tr>
<tr>
<td>☐ Brush/Roller Painting</td>
</tr>
<tr>
<td>☐ Spray Painting - Only when no wind is present</td>
</tr>
<tr>
<td>Landscaping in existing areas only:</td>
</tr>
<tr>
<td>☐ New plantings - Native plants only</td>
</tr>
<tr>
<td>☐ Repair fencing</td>
</tr>
<tr>
<td>☐ Replace fencing – Excluding bulkheads</td>
</tr>
<tr>
<td>☐ New fencing</td>
</tr>
<tr>
<td>☐ Repair play area</td>
</tr>
<tr>
<td>☐ New play area</td>
</tr>
<tr>
<td>Oil Tank Decommissioning:</td>
</tr>
<tr>
<td>☐ Closed in place pursuant to appropriate regulations.</td>
</tr>
</tbody>
</table>

Completed by: [Signature]  Date: _____________________

Approved by: [Signature]  Date: _____________________

Environmental Official
MR D SCOTT ROHLFS  
CITY MANAGER  
CITY OF LAKEWOOD  
6000 MAIN STREET SW  
LAKEWOOD WA 98499

Dr. Mr. Rohlf's:

SUBJECT: Approval of Request for Release of Funds

We have received the city of Lakewood's Request for Release of Funds and Certification with your signature dated May 25, 2002. In accordance with HUD's Environmental Review Procedures at 24 CFR Part 58, the release of funds is hereby approved. The specific projects covered by this approval are listed on the enclosed Authority to Use Grant Funds, form HUD-7015.16. The city is hereby authorized to incur grant costs for these projects, provided there are no other grant conditions that must be removed or cleared. Specifically, for the projects contained in Lakewood's 2002 Action Plan, no costs may be incurred until July 1, 2002, the start date of the city's 2002 program year.

If you have any questions, please contact David Foster at 220-5150, ext. 3612.

Sincerely,

Donald A. Phillips  
Deputy Director  
Office of Community Planning  
and Development

Enclosure
We received your Request for Release of Funds and Certification, form HUD 7015.15 on: June 3, 2002

Your Request was for HUD/State Identification Number: B-00-MC-53-0016

All objections, if received, have been considered. And the minimum waiting period has transpired.

You are hereby authorized to use the funds provided to you for the above HUD/State Identification number.

File this form for proper record keeping, audit, and inspection purposes.

This Release of Funds authorizes funds for the following projects:

- Wards Lake Park Development
- Low Income Area Lighting
- Lincoln Blvd./Chicago Traffic Circle
- San Francisco Avenue Sidewalks
- Harry Todd Park Improvements
- Major Home Repair
- Paint Tacoma Beautiful
- Minor Home Repair
- Brookridge Apts. Renovations
- Transitional Housing-Hipkins Road
- Community Center Improvements
- Housing Rehabilitation
- LASA 95th Street Property Acquisition

Typed Name and Title of Authorizing Officer
John W. Peters
Director, Office of CPD

Signature of Authorizing Officer

Date Signed
6-26-02

HUDForms version(electronic) Previous edition usable until supply is exhausted
form HUD-7015.16 (2/94)
ref. Handbook 6513.01
AFFIDAVIT OF PUBLICATION
STATE OF WASHINGTON
COUNTY OF PIERCE

I, Meshell Seek, being first duly sworn, on oath, says that she is the legal clerk of The News Tribune, a daily newspaper, published in Tacoma, Pierce County, Washington, and of general circulation in said state, and having a daily circulation of over 145,982 copies. That said newspaper is now and at all times hereinafter mentioned as a legal newspaper as defined by the laws of the state, duly approved by the Superior Court of Pierce County, Washington. That the advertisement, of which the attached is a printed copy as it was published in the regular issue of said newspaper, was published 1 time(s), commencing on the 16th day of May 2002, and ending on the 16th day of May 2002.

Ad number S4277955000

Meshell Seek
Subscribed to and sworn before me on this 21st day of May 2002

Kara Jean Hendley
Notary public in and for the state of Washington, residing in Pierce County.
950 So. State St. WA 98411
Notary commission expires 05-01-04
Part 1. Program Description and Request for Release of Funds

1. Program Title(s) **Joint Tacoma & Lakewood Consolidated FY 2002 Annual Action Plan & FY 2000 Consolidated Annual Action Plan Amendment**

4. OMB Catalog Number(s)

---

6. For information about this request, contact (name & phone number)

   Alice M. Bush (253) 589-2489

8. HUD or State Agency and office unit to receive request

   US Dept. of Housing & Urban Development
   Office of Community Planning & Dev.
   909 First Ave., Ste. 300 Seattle, WA 98104

---

10. Location (Street address, city, county, State)

City of Lakewood
6000 Main Street SW
Lakewood, WA 98499

---

11. Program Activity/Project Description

    **Community Development Block Grant**

    City of Lakewood
    City of Lakewood
    City of Lakewood
    City of Lakewood
    City of Lakewood
    City of Lakewood
    Associated Ministries
    City of Lakewood
    Pierce County Housing Authority
    Lakewood Area Shelter Association
    Tillicum Community Center

    **HOME Consortium (Lakewood's portion)**
    City of Lakewood - Housing Rehabilitation
    Lakewood Area Shelter Association - 95th Street property acquisition

    Wards Lake Park Development
    Low Income Area Lighting
    Lincoln Blvd./Chicago Traffic Circle
    San Francisco Avenue Sidewalks
    Harry Todd Park Improvements
    Major Home Repair
    Paint Pierce Beautiful
    Minor Home Repair
    Brookridge Apts. Renovations
    Transitional Housing-Hipkins Road
    Community Center Improvements
DETERMINATION OF EXEMPTION

It is the finding of the City of Lakewood, Washington, that the following activities approved for funding under the State-administered CDBG program are exempt from environmental requirements of NEPA and the environmental requirements of related federal authorities, in that the activities are defined as exempt under Section 58.34 of the Environmental Review Procedures for Title I Community Development Block Grant Programs and/or Title II of the Cranston-Gonzalez National Affordable Housing Act (HOME), P.L. 101-625, as amended:

☐ Check applicable activities

☐ Environmental and other studies, resource identification, and the development of plans and strategies.

☐ Information and financial services.

☐ Administrative and management activities.
  (CDBG Administration, $179,400)

☒ Public services that will not have a physical impact or result in any physical changes, including but not limited to services concerned with employment, crime prevention, child care, health, drug abuse, education, counseling, energy conservation and welfare or recreational needs.
  (Fair Housing Counseling, $30,000)

☐ Inspections and testing of properties for hazards or defects.

☐ Purchase of insurance.

☐ Purchase of tools.

☒ Engineering or design costs.
  (Clover Park Technical College Child Development Center, $75,000)

☐ Technical assistance and training.

☐ Assistance of temporary or permanent improvements that do not alter environmental conditions and are limited to protection, repair or restoration activities necessary only to control or arrest the effects from disasters, imminent threats or physical deterioration.

☐ Payment of principal and interest on loans made or obligation guaranteed by HUD.
FINDING OF EXEMPTION OF CATEGORICAL EXCLUDED ACTIVITIES NOT SUBJECT TO CFR 58.5

It is the finding of the City of Lakewood, Washington that the following activities approved for funding under the State-administered CDBG program are categorically excluded but not subject to CFR 58.5 therefore exempt from environmental requirements of NEPA and the environmental requirements of related federal authorities as defined under Section 58.5 of the Environmental Review Procedures for Title I Community Development Block Grant Programs and/or Title II of the Cranston-Gonzalez National Affordable Housing Act (HOME), P.L. 101-625, as amended:

(Check applicable activities)

☐ Tenant-based rental assistance.

☐ Supportive services including, but not limited to, health care, housing services, permanent housing replacement, day care, nutritional services, short-term payments for rent/mortgage/utility costs, and assistance in gaining access to local, State, and federal government benefits and services.

☒ Operating costs including maintenance, security, operation, utilities, furnishings, equipment, supplies, staff training and recruitment and other incidental costs.
  (Tillicum Community Center Operations, $60,000)
  (Tillicum Community Center ADA Automatic Door Openers, $4,000)

☐ Economic development activities, including but not limited to equipment purchase, inventory financing, interest subsidy, operating expenses and similar costs not associated with construction or expansion of existing operations.

☒ Activities to assist home ownership of existing “or new dwelling units not assisted with federal funds” including closing costs and down payment assistance to home buyers, interest buydowns and similar activities that result in the transfer of title to a property.
  (Down Payment Assistance, $50,000)

☐ Affordable housing pre-development costs including legal, consulting, developer and other costs related to obtaining site options, project financing, administrative costs and fees for loan commitments, zoning approvals, and other related activities which do not have a physical impact.
## CITY OF LAKEWOOD
## FY 2002 CDBG PROPOSED USE OF FUNDS

<table>
<thead>
<tr>
<th>Local Code</th>
<th>AGENCY</th>
<th>PROJECT</th>
<th>RECOMMENDED AMOUNT</th>
<th>RECOMMENDED ALTERNATES</th>
<th>REPROGRAMMED FY 2000*</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002-01</td>
<td>City of Lakewood</td>
<td>Physical Improvements</td>
<td>Harry Todd Park Improvements</td>
<td>$60,000.00</td>
<td>$60,000.00</td>
<td>$60,000.00</td>
</tr>
<tr>
<td>2002-02</td>
<td>City of Lakewood</td>
<td></td>
<td>Wards Lake Park Development</td>
<td>$11,722.00</td>
<td><strong>$97,354.00</strong></td>
<td>$109,078.00</td>
</tr>
<tr>
<td>2002-03</td>
<td>City of Lakewood</td>
<td></td>
<td>Streetlighting in Low-Income Areas</td>
<td>$60,000.00</td>
<td>$60,000.00</td>
<td>$60,000.00</td>
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<tr>
<td>2002-04</td>
<td>City of Lakewood</td>
<td></td>
<td>San Francisco Ave Sidewalks (Lincoln to Bridgpt)</td>
<td>$109,400.00</td>
<td>$109,400.00</td>
<td>$109,400.00</td>
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<tr>
<td>2002-05</td>
<td>City of Lakewood</td>
<td></td>
<td>Traffic Circles Lincoln Blvd. &amp; Chicago</td>
<td>$18,000.00</td>
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<tr>
<td>2002-06</td>
<td>Clover Park Technical College</td>
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<td>Child Development Center Design</td>
<td>$75,000.00</td>
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<td>2002-07</td>
<td>Lakewood Area Shelter Association</td>
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<td>Transitional Housing - 9106 Hipkins Road</td>
<td>$29,760.00</td>
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<td>2002-08</td>
<td>Pierce County Housing Authority</td>
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<td>Brookridge Apartments Renovations</td>
<td>$75,900.00</td>
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<td>2002-09</td>
<td>Tillicum Community Center</td>
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<td>ADA Automatic Door Openers</td>
<td>$4,000.00</td>
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<td></td>
<td>City of Lakewood</td>
<td></td>
<td>59th Avenue Sidewalks</td>
<td>-</td>
<td>Alt. 1 - $111,500</td>
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<tr>
<td></td>
<td>City of Lakewood</td>
<td></td>
<td>148th Street Street Improvements</td>
<td>-</td>
<td>Alt. 2 - $205,000</td>
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<td></td>
<td>Communities in Schools</td>
<td></td>
<td>Springbrook Community Center</td>
<td>$ -</td>
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<td>$ -</td>
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<td></td>
<td>Community Health Care</td>
<td></td>
<td>Adult Dental Clinic</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
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<td></td>
<td>Emergency Food Network</td>
<td></td>
<td>The Freezer Project</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
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<td></td>
<td>Franciscan Health System</td>
<td></td>
<td>Community of Care Equipment</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
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<td></td>
<td>Lakewood Area Shelter</td>
<td></td>
<td>Transitional Housing, 6519 95th SW</td>
<td>See HOME</td>
<td>$ -</td>
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<tr>
<td></td>
<td>Lakewood Family YMCA</td>
<td></td>
<td>Teen Center</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
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<tr>
<td></td>
<td>Pierce County Housing Authority</td>
<td></td>
<td>Lakewood Village Apartments Playground Equip</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
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<td></td>
<td><strong>Subtotal - Physical Improvements</strong></td>
<td></td>
<td></td>
<td>$443,782.00</td>
<td><strong>$541,136.00</strong></td>
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<td>2002-10</td>
<td>Associated Ministries</td>
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<td>Paint Pierce Beautiful - House Painting</td>
<td>$3,500.00</td>
<td>$3,500.00</td>
<td>$3,500.00</td>
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<td>2002-11</td>
<td>City of Lakewood</td>
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<td>Minor Home Repair</td>
<td>$56,189.00</td>
<td>$14,000.00</td>
<td>$70,189.00</td>
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<td>2002-12</td>
<td>City of Lakewood</td>
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<td>Major Home Repair</td>
<td>$56,189.00</td>
<td>$12,605.17</td>
<td>$68,794.17</td>
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<td>2002-13</td>
<td>City of Lakewood</td>
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<td>Down Payment Assistance</td>
<td>$50,000.00</td>
<td>$50,000.00</td>
<td>$50,000.00</td>
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<td></td>
<td><strong>Subtotal - Housing</strong></td>
<td></td>
<td></td>
<td>$165,878.00</td>
<td>$192,483.17</td>
<td>$192,483.17</td>
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<td>2002-14</td>
<td>Tillicum Community Center</td>
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<td>Tillicum Comm Center Services/Operations</td>
<td>$60,000.00</td>
<td>$60,000.00</td>
<td>$60,000.00</td>
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<td>2002-15</td>
<td>City of Lakewood</td>
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<td>Fair Housing Counseling</td>
<td>$30,000.00</td>
<td>$30,000.00</td>
<td>$30,000.00</td>
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<td></td>
<td><strong>Subtotal - Public Svcs.</strong></td>
<td></td>
<td></td>
<td>$90,000.00</td>
<td>$90,000.00</td>
<td>$90,000.00</td>
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<tr>
<td>2% CONTINGENCY</td>
<td>Contingency</td>
<td></td>
<td>Contingency</td>
<td>$17,940.00</td>
<td>$17,940.00</td>
<td>$17,940.00</td>
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<tr>
<td></td>
<td><strong>Subtotal - Contingency</strong></td>
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<td></td>
<td>$17,940.00</td>
<td>$17,940.00</td>
<td>$17,940.00</td>
</tr>
<tr>
<td>20% ADMIN</td>
<td>Administration</td>
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<td>Administration</td>
<td>$179,400.00</td>
<td>$179,400.00</td>
<td>$179,400.00</td>
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<td></td>
<td><strong>Subtotal - Admin.</strong></td>
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<td></td>
<td>$179,400.00</td>
<td>$179,400.00</td>
<td>$179,400.00</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>$897,000.00</strong></td>
<td><strong>$123,959.17</strong></td>
<td><strong>$1,020,959.17</strong></td>
</tr>
</tbody>
</table>

*See Chapter 5 FY 2000 Annual Action Plan Amendments

Lakewood Annual Action Plan

20
CITY OF LAKEWOOD
NOTICE TO THE PUBLIC OF INTENT TO REQUEST RELEASE OF FUNDS AND NOTICE OF FINDING OF NO SIGNIFICANT IMPACT ON THE ENVIRONMENT

TO ALL INTERESTED AGENCIES, GROUPS, AND PERSONS:

NOTICE OF INTENT TO REQUEST RELEASE OF FUNDS

On or about May 16, 2002, the City of Lakewood will request the US Department of Housing and Urban Development to release Federal Funds under the Housing and Community Development Act of 1974. Community Development Block Grant Program Year 2002 funds in the amount of $897,000 are being requested. HOME Investment Partnership Act (HOME) Consortium Program Year 2002 funds in the amount of $493,907 (Lakewood’s portion) are also being requested.

COMBINED LIST OF PROJECTS

Projects found to have No Significant Impact on the Environment (FONSI):

<table>
<thead>
<tr>
<th>Applicant/ Location</th>
<th>Project / Description</th>
<th>CDBG Amount</th>
<th>HOME Amount</th>
<th>Reprogrammed FY 2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Lakewood</td>
<td>Wards Lake Park Develop</td>
<td>$11,722</td>
<td>$0</td>
<td>$97,354</td>
</tr>
<tr>
<td></td>
<td>Construct paths, play equipment and restroom in low income neighborhood park.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>City of Lakewood</td>
<td>Low Income Area Lighting</td>
<td>$60,000</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td></td>
<td>Construct streetlights to increase public safety in low-income residential neighborhoods</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>City of Lakewood</td>
<td>Lincoln Blvd./Chicago Traffic Circle</td>
<td>$18,000</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td></td>
<td>Construct a traffic circle in the intersection of Lincoln Blvd. and Chicago Avenue SW. Project is in a low income residential neighborhood.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>City of Lakewood</td>
<td>San Francisco Ave. Sidewalks</td>
<td>$109,400</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td></td>
<td>Construct curbs, gutters, sidewalks, and street lights on the south side of San Francisco Avenue from Bridgeport Way to Lincoln Blvd. and on the south side of Lincoln Ave. from San Francisco to Chicago Ave. Project is located in a low income residential neighborhood.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Subtotal $199,122 $0 $97,354
Projects found to be categorically excluded (24 CFR 58.35) from the National Environmental Policy Act (NEPA) because of the nature of the project:

<table>
<thead>
<tr>
<th>Applicant/Location</th>
<th>Project / Description</th>
<th>CDBG Amount</th>
<th>HOME Amount</th>
<th>Reprogrammed FY 2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Lakewood</td>
<td>Harry Todd Park Improvements</td>
<td>$ 60,000</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td></td>
<td>Renovate picnic area, picnic shelter and basketball court in low-income neighborhood park.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Associated Ministries</td>
<td>Paint Pierce Beautiful</td>
<td>$ 3,500</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td></td>
<td>Provides for administration of a volunteer paint program for low income seniors/disabled persons who cannot maintain their homes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>City of Lakewood</td>
<td>Minor Home Repair</td>
<td>$ 56,189</td>
<td>$0</td>
<td>$14,000</td>
</tr>
<tr>
<td></td>
<td>Provide minor home repairs and weatherization repair assistance to low income homeowners.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>City of Lakewood</td>
<td>Major Home Repair</td>
<td>$ 56,189</td>
<td>$0</td>
<td>$12,605.17</td>
</tr>
<tr>
<td></td>
<td>Provide major home repairs which include roofing, architectural barrier removal, plumbing, electrical, etc. for low-income homeowners.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pierce County Housing Authority</td>
<td>Brookridge Apts Renovations</td>
<td>$ 75,900</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td></td>
<td>Renovate up to 3 PCHA owned and operated apartment buildings including roof, gutters, downspouts, decks and railings.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lakewood Area Shelter Assoc.</td>
<td>Transitional Housing- Hipkins Rd.</td>
<td>$ 29,760</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td></td>
<td>Renovate a single family home into a duplex to provide emergency and transitional shelters for the homeless.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lakewood Area Shelter Assoc.</td>
<td>Transitional Housing - 95th St.</td>
<td>$0</td>
<td>$168,000</td>
<td>$0</td>
</tr>
<tr>
<td></td>
<td>Acquisition of property for emergency and transitional shelter for the homeless.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tillicum Community Center</td>
<td>Community Center Improvements</td>
<td>$ 4,000</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td></td>
<td>Install automatic door openers for ADA access to a community center serving low-income residents.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>City of Lakewood &amp;/or TCRA</td>
<td>Housing Rehabilitation</td>
<td>$0</td>
<td>$276,516</td>
<td>$0</td>
</tr>
<tr>
<td></td>
<td>Provide low interest loans to low-income homeowners for major housing rehabs.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subtotal</td>
<td></td>
<td>$285,538</td>
<td>$444,516</td>
<td>$26,605.17</td>
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</tbody>
</table>

Projects found to be categorically excluded (58.35) from the National Environmental Policy Act (NEPA) and not subject to statutory review under 24 CFR Section 58.5 because of the nature of the project:

<table>
<thead>
<tr>
<th>Applicant/Location</th>
<th>Project / Description</th>
<th>CDBG Amount</th>
<th>HOME Amount</th>
<th>Reprogrammed FY 2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Lakewood</td>
<td>Down Payment Assistance</td>
<td>$ 30,000</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td></td>
<td>Provides down payment assistance to low income home buyers.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Tillicum Comm. Center  
*Tillicum Comm. Center Operations*  
Provides operations of the center for senior meal site, food bank, clothing exchange, senior transportation.

Subtotal  
$110,000  
$0  
$0

Projects exempt (24 CFR 58.34) from the request for release of funds requirements included in the City of Lakewood 2002 Community Development Block Grant program Environmental Record:

**Applicant/ Location**  
**Clover Park Tech. College**

**Project / Description**  
Child Development Center  
Provide design to construct a child development center for low-moderate income residents.

**City of Lakewood**

**CDBG Administration**  
Administration cost to support overall program management, coordination, monitoring and evaluation managed by the City of Lakewood General Services Department.

**City of Lakewood**

**Fair Housing Counseling**  
Provide assistance in fair housing counseling, education and outreach to approximately 200 individuals.

**City of Tacoma (HOME Consortium Lead Entity)**

**HOME Administration**

Subtotal  
$284,400  
$49,391  
$0

Projects which have not been reviewed for environmental impacts at this time because locations are not known:

**Applicant/ Location**  
**City of Lakewood**

**Project / Description**  
CDBG Contingency Fund  
Funding supports unanticipated costs associated with the implementation of the CDBG program

Subtotal  
$17,940  
$0  
$0

Further environmental review of the specific projects included in this category will be conducted when individual project sites are selected. The review of these projects will include the laws and authorities listed under 24 CFR 58.5.

**TOTAL**

$897,000  
$493,907  
$123,959.17

***

The City of Lakewood will undertake the above referenced projects with CDBG and HOME funds from the Department of Housing and Urban Development (HUD) under the National Affordable Housing Act of 1990. The City of Lakewood is certifying to HUD that the City of Lakewood and Mr. David Bugher, in his official
capacity as Certifying Officer, consent to accept the jurisdiction of the Federal Courts if an action is brought to enforce responsibilities in relation to environmental reviews, decision making, and action; and that these responsibilities have been satisfied. The legal effect of the certification is that upon HUD approval, the City of Lakewood may use the funds, and HUD will have satisfied its responsibilities under the National Environmental Policy Act of 1969 and the related laws and authorities. HUD will accept an objection to its approval of the release of funds and acceptance of the certification only if it is on one of the following bases:

a) that the certification was not in fact executed by the chief executive officer or other officer of applicant approved by HUD; or
b) that applicant’s environmental review for the project omitted a required decision, finding, or step applicable to the project in the Environmental Review Process.

c) other specific grounds in HUD regulations at 24 CFR Part 58.75

Objections must be prepared and submitted in accordance with the required procedure (24 CFR Part 58), and may be addressed to U.S Dept. of Housing and Urban Development, Washington State Office, Office of Community Planning and Development, 909 First Avenue, Suite 300, Seattle, WA 98104-1000. No objection received after May 31, 2002 will be considered by HUD.

Notice of FONSI

The City of Lakewood also gives notice it has been determined that the above referenced projects which are subject to environmental review under NEPA will not significantly affect the quality of the human environment and accordingly, the City Lakewood has decided not to prepare an Environmental Impact Statement under the National Environmental Policy Act of 1969 (NEPA, 42 USC 4321).

An Environmental Review Record respecting the referenced project which more fully sets forth the reasons why such statement is not required has been prepared by the City of Lakewood, and is available for public review and copying during the weekday hours of 8:30 AM to 5PM in the Community Development Department, City of Lakewood, 6000 Main Street, Lakewood, WA 98499.

No further environmental review of the listed projects is proposed prior to the release of Federal funds.

All interested agencies, groups and persons disagreeing with this decision are invited to submit written comments for consideration by the City of Lakewood to the Lakewood Community Development Department Office. Such written comments should be received at the address listed above on or before May 31, 2002. All such comments so received will be considered, and the City will not request release of Federal funds or take any administrative action on the referenced prior to the date specified above.

[Signature]
David Bugher
Certifying Officer

May 15, 2002
Date
Environmental Assessment

**Statutory Checklist**

Project Name and Identification No.: **Wards Lake Park Development 2002-02**

<table>
<thead>
<tr>
<th>Area of Statutory-Regulatory Compliance</th>
<th>Not Applicable to This Project</th>
<th>Consultation Required*</th>
<th>Review Required*</th>
<th>Permits Required*</th>
<th>Determination of Consistency, Approvals, Permits Obtained</th>
<th>Conditions and/or Mitigation Actions Required*</th>
<th>Provide compliance documentation</th>
<th>Additional material may be attached</th>
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<tr>
<td>Historic Properties</td>
<td>X</td>
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<td>National Historic Pres. Act of 1966, Sec 106</td>
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<tr>
<td>Floodplain Management</td>
<td>X</td>
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<td>Flood Disaster Protection Act of 1973</td>
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<tr>
<td>Wetlands Protection</td>
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<td>Executive Order 11990</td>
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<td>Noise</td>
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<td>HUD Regulation (24CFR Part 51, Subpart B)</td>
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<td>Manmade Hazards</td>
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<td>HU D Regulation (24CFR Part 51, Subpart C)</td>
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<td>Thermal/Explosive Hazards</td>
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<td>HUD Regulation (24CFR Part 51, Subpart D)</td>
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<td>Airport Clear Zones</td>
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<tr>
<td>Air Quality</td>
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<td></td>
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<td>Clean Air Act of 1970 as Amended</td>
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<tr>
<td>Water Quality-Aquifers</td>
<td>X</td>
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<td></td>
<td></td>
<td></td>
<td>Federal Water Pollution Control Act as Amended</td>
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</tr>
<tr>
<td>Coastal Areas</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Coastal Zone Management Act of 1972 as Amended</td>
<td></td>
</tr>
<tr>
<td>Coastal Zone Management</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Does not apply in Washington</td>
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<tr>
<td>Coastal Barrier Resources</td>
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<td></td>
<td></td>
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<tr>
<td>Endangered Species</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Endangered Species Act of 1973 as Amended</td>
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<tr>
<td>Farmlands Protection</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td>Farmlands Protection Policy Act of 1981</td>
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<tr>
<td>Wild and Scenic Rivers</td>
<td>X</td>
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<td></td>
<td>Wild &amp; Scenic Rivers Act of 1968 as Amended</td>
<td></td>
</tr>
</tbody>
</table>
## Statutory Checklist

Permits, Licenses, Forms of Compliances Under Other Laws (Federal, State and Local Laws)

Project Name and Identification No.: **Wards Lake Park Development** 2002-02

<table>
<thead>
<tr>
<th>OTHER AREAS OF STATUTORY AND REGULATORY COMPLIANCE APPLICABLE TO PROJECT</th>
<th>Not Applicable to This Project</th>
<th>Consultation Required</th>
<th>Review Required</th>
<th>Permits Required</th>
<th>Determination of Consistency, Permits Obtained</th>
<th>Conditions and/or Mitigation Actions Required</th>
<th>Provide compliance documentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Quality</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>See Water Quality-Aquifers</td>
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<td>Solid Waste Disposal</td>
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<td>Solid Waste Disposal Act as Amended</td>
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<td>Fish and Wildlife</td>
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<td>State or Local Statutes</td>
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<td>X</td>
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<td>City of Lakewood Business License</td>
</tr>
</tbody>
</table>

### DATA SOURCES AND DOCUMENTATION

**Historic Properties**

The project site is not located within any historic district and does not affect any structure on, or eligible for the National Register of Historic Places.

**Floodplain Management**

Portions of the project site are located in a Zone A (100 yr.) floodplain. See Flood Insurance Rate Map 530138-0311C. The proposed action will not occur within the 100-year floodplain.

**Wetlands Protection**

Portions of the project site are adjacent to a Wards Lake, a Type 3 wetland. The project consists of siting a 180 square foot prefabricated restroom, improved footpaths, and playground equipment. The park development is occurring in order to protect the wetland areas. No development or construction is proposed within the wetland buffer.

**Noise**

The project will not generate any noise.

**Manmade Hazards**

- Thermal Explosive: The project is for development of a community park and will not pose a thermal or explosive hazard.

- Airport Clear Zone: The project is not located within any airport clear zone. The proposed project is located in the Accident Potential Zone II (APZ II), but not within the airport clear zone. The proposed development of the property is consistent with the JLUS and AICUZ policies for properties in APZ II, as delineated by the McChord Air Force Base AICUZ study. The proposed project also meets the population intensity limits of 50 persons per acre required by the Lakewood Land Use and Development Code.

**Air Quality**

The proposed project will not result in any air pollution impacts.

**Water Quality-Aquifers**

The proposed project will not result in any impacts on aquifers. There will be no discharges of substances into the ground.

**Coastal Areas**

The project site is not located in a coastal area.

**Endangered Species**

The proposed development of the subject property for passive park purposes will protect the wildlife habitat functions of the site. The site
does support a Bald Eagle habitat in the southwestern corner of the property and it is expected that individual birds sometimes utilize Ward’s Lake for foraging opportunities. The proposed development will help preserve the site for use by eagles by maintaining a 400’ buffer from the eagle’s nest. The project will not have an impact on any endangered species.

<table>
<thead>
<tr>
<th>Farmlands Protection</th>
<th>The project site is located in an urban area and will not affect farmlands.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wild and Scenic Rivers</td>
<td>The project site is located in an urban area and is not in the vicinity of any Wild and Scenic River. The nearest Wild and Scenic River is the Skagit River, located approximately 100 miles to the north.</td>
</tr>
<tr>
<td>Water Quality</td>
<td>The project is for improvements to a community park. All runoff will continue to be infiltrated into adjacent soils before reaching any surface waters. The project will not have any adverse effect on water quality.</td>
</tr>
<tr>
<td>Solid Waste Disposal</td>
<td>The project will not generate any solid waste or affect any solid waste facilities.</td>
</tr>
<tr>
<td>Fish and Wildlife</td>
<td>The project site does not support and is not in the vicinity of any wildlife habitat. All runoff will be infiltrated into adjacent soils before reaching any surface waters.</td>
</tr>
<tr>
<td>State and Local Statues</td>
<td>The project will comply with all state and local regulations, including State Environmental Protection</td>
</tr>
</tbody>
</table>

Prepared By

Dan Penrose

Title

Associate Planner

Date

4-30-02
<table>
<thead>
<tr>
<th>Impact Categories</th>
<th>No Impact Anticipated</th>
<th>Potentially Beneficial</th>
<th>Potentially Adverse Requires Documentation Only</th>
<th>Potentially Adverse Requires More Study</th>
<th>Needs Mitigation</th>
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<th>Source or Documentation</th>
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<tr>
<td><strong>Land Development</strong></td>
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# Environmental Assessment Checklist

(continued, page 2)

**Project Name:** WARDS LAKE PARK DEVELOPMENT  
**Identification Number:** 2002-02

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<tr>
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<th>Needs Mitigation</th>
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## ENVIRONMENTAL ASSESSMENT CHECKLIST

(continued, page 4)

**Project Name**  WARDS LAKE PARK DEVELOPMENT  
**Identification Number**  2002-02

<table>
<thead>
<tr>
<th>Impact Categories</th>
<th>No Impact Anticipated</th>
<th>Potentially Beneficial</th>
<th>Potentially Adverse Requires Documentation Only</th>
<th>Potentially Adverse Requires More Study</th>
<th>Needs Mitigation</th>
<th>Requires Project Modifications</th>
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<td>Surface Water</td>
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<td>FLOOD INSURANCE RATE MAP, 530138-0311C</td>
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<td>Wetlands</td>
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<td>LAKEWOOD CRITICAL AREAS MAP, SITE VISIT, WETLAND DELINEATION</td>
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<td>Unique Natural Features and Agricultural Lands</td>
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<td>Vegetation and Wildlife</td>
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<td>SITE VISIT, WARDS LAKE MASTER PLAN, FOREST PROTECTION PLAN</td>
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</table>
| **ENVIRONMENTAL ASSESSMENT CHECKLIST**  
(continued, page 5) |
<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>Summary of Environmental Conditions</strong></td>
</tr>
<tr>
<td>-------------------------------------------------------------</td>
</tr>
<tr>
<td>The subject property is a 20-acre project located in a low-income neighborhood. The site is relatively flat, with a gradual slope down to Wards Lake, and a small ridge of approximately 30 feet of the southern portion of the property. The southern portion of the site contains several large stands of trees, including Garry Oaks. The proposed development of the subject property for passive park purposes will protect the existing wetland, trees and wildlife habitat functions of the site.</td>
</tr>
<tr>
<td>-------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Alternatives Considered</strong></td>
</tr>
<tr>
<td>-------------------------------------------------------------</td>
</tr>
<tr>
<td>The alternative considered was to leave the site in its existing condition, where it currently serves as a site for illegal dumping, alcohol consumption and drug activity. Other alternatives considered included the developing the park for more active uses like a small playfield, or the expanded use of play equipment for children.</td>
</tr>
<tr>
<td>-------------------------------------------------------------</td>
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</tbody>
</table>
| **Additional Studies Performed**  
(Attach Study or Summary) |
<table>
<thead>
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<tbody>
<tr>
<td>Attached as part of the Environmental Record is the Wards Lake Master Plan, the Forest Protect Plan, Wetland Delineation, Geotechnical Review, and the Health Department Hazardous Substance Review</td>
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<tr>
<td>-------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Mitigation Measures Needed</strong></td>
</tr>
<tr>
<td>-------------------------------------------------------------</td>
</tr>
<tr>
<td>None</td>
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<td>-------------------------------------------------------------</td>
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**Environmental Assessment Checklist (Continued)**
(continued, page 6)

<table>
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<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
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</thead>
<tbody>
<tr>
<td>1. Is project in compliance with applicable laws and regulations?</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>2. Is an EIS required?</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>3. A Finding of No Significant Impact (FONSI) can be made.</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>4. Project will not significantly affect the quality of the human environment.</td>
<td>☒</td>
<td>☐</td>
</tr>
</tbody>
</table>

**Basic Reasons Supporting Decision***
This project creates an area that can fully function as a community park facility while providing space for a wide range of passive recreation, healthy exercise, educational trek to view local plants and wildlife. This development can be completed in a manner that will not result in a significant impact on the quality of the human environment, and in fact improves the quality of the environment.

---

<table>
<thead>
<tr>
<th>Dan Penrose</th>
<th>Associate Planner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prepared By</td>
<td>Title</td>
</tr>
<tr>
<td>Signature of Preparer</td>
<td>Date</td>
</tr>
<tr>
<td>☑</td>
<td>4-30-02</td>
</tr>
</tbody>
</table>

*Identify the major reasons for the decision of "No Significant Impact". These are to be included in the environmental public notice. (See next page for "sample reasons).
WARDS LAKE PARK

Inventory Date: February 2005

Due to budget constraints, trees for this location are summarized. However; ten trees were inventoried in the high use areas of the park and information for these can be found on the Tree Condition Summary Sheets.

Inventory Summary

<table>
<thead>
<tr>
<th>Species</th>
<th>Level 1 Removal</th>
<th>Level 2 Removal</th>
<th>Level 3 Removal</th>
<th>Level 1 Remedial</th>
<th>Level 2 Remedial</th>
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<td>Big leaf maple</td>
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<td>Garry oak</td>
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<td>2</td>
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Total Estimated Cost for Wards Lake Park: $5,292.50
Costs have been estimated for the oak groves.

Tree Description

This park is comprised of a variety of planted and native tree species. Two small groves of native Garry oak have been naturally established here. One grove is located in the northeast corner of the park and consists of approximately 41 trees. The other is located south of the playground equipment and consists of approximately 65 trees.

The oak groves are in good to fair condition, displaying normal growth and vigor. It is estimated these trees are approximately 40 to 50 years in age.

A small group of 5 Atlas cedars are located near the entrance, which were planted several years. These trees are in fair condition. All of them have developed significant structural defects over the years, because they were planted too close together. However; hazard potential is low and no remedial action is called for at this time.

Several trees have been recently planted at this park. These have been established near the entrance, adjacent to the parking lot and around the playground. All of these appear to be in good condition.

This park also is comprised of a large area of native growth. Tree species in these areas are made up of big leaf maple, willow, black cottonwood and cascar. The majority of these are young trees, approximately 15 to 20 years in age, with scattered mature native specimens.
The majority of the oak trees are infected with what is commonly referred to as the "oak apple gall". This is evidenced by the light brown to black colored balls attached to the branches and twigs of the trees. Wasps that lay their eggs on the leaves of the oak trees cause these galls. These galls do not harm the trees, although heavy infestations can cause the trees to shed their leaves prematurely in the fall.

Focus Areas
The two willows located on the lake shore are in fair to poor condition. Both of these have suffered a large amount of storm damage in recent years. Due to the high use around these trees, crown cleaning is recommended.

The oak groves also require some remedial action. In the grove south of the playground, two older dead trees were identified which should be removed within a year. The majority of the oak trees inspected have a high concentration of deadwood within their crowns. We recommend that this deadwood be removed at Level 2 or 3, dependant on the amount and size of dead branches. This pruning method will decrease the potential of branch or whole tree failure and help to preserve tree health.

Management Recommendations
For the recently planted trees, pruning for structure is critical at the earliest stages of development. Proper pruning is essential in developing a tree with a strong structure and desirable form. Trees that receive the appropriate pruning measures while they are young will require little corrective pruning when they mature. Good pruning techniques remove structurally weak branches while maintaining the natural form of the tree.

An excellent source for information on proper pruning techniques can be found at the International Society of Arboriculture website: isa-arbor.com.

Crown cleaning to remove dead, dying, diseased, broken and weakly attached branches should become part of annual park maintenance. All of the trees within striking distance of the road should be monitored yearly for signs of decline. Monitoring should be visual except when indicators of disease are not clear; then increment boring may be called for.

No planting recommendations are suggested for this park, due to the lack of available space and the number of recently planted trees.
VI. TREE MANAGEMENT RECOMMENDATIONS

The breadth of condition indicators is difficult to summarize in a single document. Reference is made to "Evaluation of Hazard Trees in Urban Areas", Metheny and Clark, ISA for a broad description. Indicators more applicable to Pacific Northwest trees are listed.

Condition Indicators

Trees in urban and park environments in the Pacific Northwest are vulnerable to a number of diseases. Identification of specific pathogens is best left to pathologists or specially trained arborists. However, many of the consequences of pathogen invasion are similar, ie. decayed wood leading to increasing susceptibility to wind-fall or tree mortality. Some of the most common visible indicators are listed here:

✓ Appearance of fungal fruiting bodies which will appear as small "shelves" on the bole and branches or mushroom-like growths near the base of the tree. Some of these "mushrooms" are difficult to detect and may appear only in bark crevices or may show up a few feet away from the tree on the ground. Reference is made to "Common Tree Diseases of British Columbia", Allen and Morrison et.al, Natural Resources Canada and "Diseases of Pacific Coast Conifers, USDA Publication No. 521.

✓ Dead or soft flaky wood in cavities or under the bark. At times, the only indicator of decay is the sound of the tree. Suspicious trees can be tapped with a hammer to detect a hollow sound.

✓ The appearance of yellow or orange needles other than near the stem. This is often the first sign of root disease. Discolored needles of conifers on inner branches are normal as the tree sloughs off unneeded or non-functioning parts. However discolored new growth could lead to a shut down of the tree's photosynthetic capabilities, leading to mortality.

✓ Leaning stems, extraordinary bark flaking, stem swelling or any other abnormalities on the bole.

✓ Extraordinary cone production. This is often a physiologic response to extreme stress.

✓ Insect entry holes. These are about the size of a pencil lead and probably are accompanied by "sawdust". Insects in the Pacific Northwest typically do not attack trees unless the trees are already stressed or weakened. This comment does not apply to newly introduced boring insects.

✓ Premature leaf-fall or the appearance of dead limb tips. This is often the result of root dysfunction.

✓ Droopy top or thinning crown. This is often the result of root dysfunction.

✓ In Western red cedar, reddish and shiny bark is often an indicator of heartwood disease.
Pruning Instructions

Tree pruning is the subject of textbooks. References are provided rather than an attempt in this report to describe good practice.


Plant Amnesty, Various Brochures. 906 NW 87th St., Seattle, WA 98117

Tree Removals

Tree removals are often the subject of heated discussions. Responsible tree owners must weigh the value of standing trees against the liability and maintenance consequences of poor conditions. The inventory lists trees that should be immediately removed by priority and condition. When other suspect trees are found, they should be inspected by an Arborist. Using the guides above, maintenance crews will have good evidence to make the call to an Arborist who may be able to explain the symptoms to concerned citizens.

Removals can be ameliorated by reasoned replacements. This compromise between aesthetics and potential liability must be considered.

Planting Instructions

Trees planted in city landscapes have a life span of about 15 years (Informal Arborist List-Serve survey.) This comment applies mostly to hybrids or imported trees suitable for small spaces. Our native trees and some imported trees such as chestnut, beech and elm can survive to maturity at 100 or more years. Therefore, good planting practices and good tree choices are important.

Planting spacing should allow for some mortality. Typically, trees up to about 5 feet in height can be acquired locally. These can be handled by most people or with the use of a hand truck or dolly. Planting in groups of five with trees about 8-feet apart should result in an informal forested appearance. As the trees mature, some thinning out of the weaker ones will occur naturally or can be easily done by hand. Since the trees are locally available, plantings can be staggered over time to coincide with large tree removals. Transplanting of small trees from other areas within the city is a reasonable activity if the work is timely and carefully done. Temporary fencing is recommended to protect the trees from theft or from kid activities that might pull the trees over and upset rooting progress during the first two years after establishment.

Planting of native shrubs under groups of trees is recommended. This can reduce the incidents of trampling over the root zone and thus the increased incidents of pathogen infection. Another benefit to shrub planting is to protect planted trees by limiting activity by park users or maintenance work too close to young seedlings. Finally, shrub plantings will reduce the need for mowing and leaf pickup by machinery, which compacts soil and damages root crowns.

With both trees and shrubs, post-planting maintenance should be limited. Fertilizer applications and pruning are not necessary. These activities can actually lead to the
need for more care and maintenance, not less. The healthy trees and shrubs will survive and flourish without external care, resulting in strong plants. Timing of planting is essential to good plant survival. Tree planting in late February, March and April is recommended.

Trees and shrubs purchased in bare root form, either bagged or truly bare root are less expensive than those purchased in containers. Containerized plants are easier to plant, however root balls should be gently pulled apart before planting.

Space: Studies have shown that a typical street tree needs at least 400 cubic feet of unobstructed growing medium for good root growth.

Planting Hole: dig a hole about twice the diameter of the root system.

Planting depth: should be the same as from the nursery or so that the root flare is visible but not exposed.

Soil: Do not amend the soil or replace the native soil with prepared soil mixes. Exceptions to this are when the entire soil volume is removed or the native soil is of such quality (for instance gravel or clay) that it is unsuitable. Then, prepared mixes of soil with a 50/50 solid to pore space ratio are suitable. Commercial mixes such as "5 Way" may be suitable if they are properly aged and meet the porosity requirements.

Mulch: A 2-4 inch (not more) covering of organic mulch that does not include chemically treated material should be spread over the roots but not touching the tree bole base. Trees fare best when lawn is kept away from the trunk, 12-inches or more.

Water the new plants immediately after installation. However, repeated watering is generally not recommended since this can create a dependent situation and lead to weaker plants than those allowed to survive on their own. Watering requirements can by lessened by following proper planting procedures.

Some mortality (perhaps 15-percent) can be expected.

Construction Protections

Reference “Trees and Development”, Metheny and Clark, ISA. for more information.

Ideally, no activity should occur within the root zone of any tree. This zone typically extends a foot for each inch of diameter, or in most cases well beyond the “dripline” or length of the limbs often to five feet outside the “dripline”.

If construction activities within or over the root zones is unavoidable then the following precautions should be taken.

a.) During dry season operations to prevent compaction, an 18-inch layer of porous material should be spread over the root systems if heavy equipment is operated over that zone.

b.) During wet season operations, metal plates capable of supporting the equipment should be placed over the protection layer.
c.) Tunneling of utilities is preferred over to trenching if they are to be within the root zones.

d.) Paving over root zones should be done with care to prevent excavation below 12 inches. Paving stones and porous underlayment should be used if possible.

e.) Any roots cut or broken should be cut smoothly and any roots over 2" in diameter covered with wet fabric until back fill can be placed.

f.) Protective fencing should be installed no closer than the "dripline" of each tree but preferably at a distance of one foot per inch of diameter to prevent inadvertent compaction. For instance, a 30-inch tree may have roots that extend 30 feet from the tree.

g.) Because of previous topping activities, some trees have poor limb attachments. As these trees age, upper crown thinning may become necessary to reduce the wind sail effect and prevent these trees from breaking out. This is applicable in clearing operations.

h.) Lower limbs can be removed during construction for clearance of buildings or equipment. Limb removals should be limited to less than 50% of the existing condition, leaving at least a 30% green crown to total height ratio.

i.) Before excavation, final plans should be reviewed by an Arborist. At any time during the construction excavations, an Arborist should be on site to monitor root disturbance and to perform root pruning.

VII. Conclusion

Anecdotal and poll studies have shown that trees:

- Shade and Cool
- Abate Noise
- Reduce Stress
- Clean Air
- Break the wind

And

- Improve Property Values

Improperly selected trees can block signage, impair utilities above and below ground, disrupt auto sight lines and create trip hazards on side walks.
As an example of tree value, a 14-inch diameter tree with normal growth patterns and no hazard-producing condition is valued at $2,000 to $4,000 by International Society of Arboriculture guidelines. Larger trees can have exponentially greater values.

The goal of this inventory is to establish the basis for continued improvement of trees and the attributes they contribute to the community. The management recommendations listed are the first step toward meeting that goal.

The key to good tree management is not only found in taking the first steps, but in follow-up activities. Starting with high priority actions now, continuing with recommended management and systematic inspections over time with follow-up remediation, the City of Lakewood will create a most pleasant community atmosphere.
Addendum I

Glossary of Arboricultural Terms

ANSI  American National Standards Institute
Bole  The trunk or main stem of the tree
Cambium  Layer of living cells between bark and wood
Canker  Disease caused swelling or lesion on the bark or from the cambium
Cavity  An open wound, often the result of decay, resulting in a hollow.
Canopy  The overhead branches and leaves
Coniferous  Trees that do not lose their needles or leaves at one time.
Conk  Fungal fruiting body
Crown  Parts of the tree above the main stem or trunk, including leaves, branches and scaffolds.
Cruise  Method of estimating the volume of merchantable forest products
Decay  Process of degradation of woody tissues by fungi or bacteria through decomposition of cellulose or lignin.
Defect  Structural imperfection. Latent defect refers to a defect not immediately discoverable by the exercise of ordinary and reasonable care. Patent defect could be recognized upon reasonably careful inspection or through the use of ordinary diligence and care.
DBH  Diameter at Breast Height (4.5-feet above mean ground level)
Deciduous  Trees that lose their needles or leaves seasonally
Drill testing  Boring with a hollow bit from which a sample of wood can be extracted.
Included bark  Pattern of development at branch junctions where bark is turned inward rather than pushed out.
Increment borer  Device used to take pencil-sized cores of wood from the stem or root of a tree.
Indigenous  Native to a specified area or region – not introduced.
Live Crown Ratio  The percentage of live crown to total height.
Native  Tree species naturally occurring in the region – not introduced.
Addendum I

**Glossary of Arboricultural Terms**

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Planted</td>
<td>Tree that has been established by planting -- generally but not limited to species not native to the region.</td>
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<tr>
<td>Root Stock:</td>
<td>The stem or root onto which another plant part is grafted.</td>
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<tr>
<td>Scaffold Limb</td>
<td>Primary branch</td>
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<tr>
<td>Strength Loss</td>
<td>Percentage of wood that does not support the tree.</td>
</tr>
<tr>
<td>Strength Loss Additions</td>
<td>Subjective conditions that could lead to increased strength loss.</td>
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