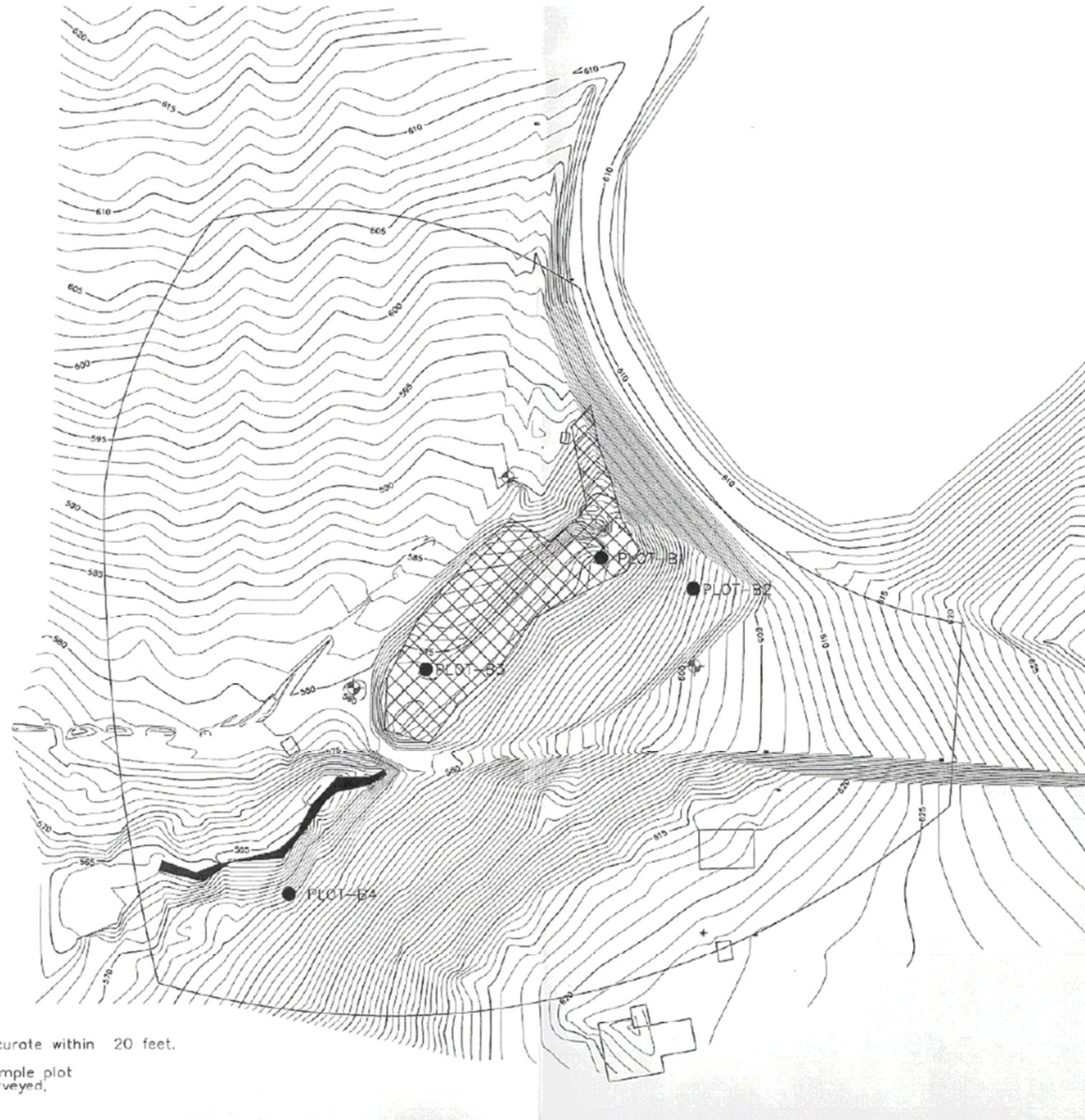


APPENDIX H



LEGEND

-  EXTENT OF ORDINARY HIGH WATER
-  WETLAND
-  WETLAND STUDY BOUNDARY

NOTES

Plot 4 hand mapped on topographic base, accurate within 20 feet.
 Map Accuracy: Jurisdictional boundaries and sample plot locations were professionally surveyed, unless noted otherwise.
 Feature accuracy is 2 inches.



Scale: 1 inch = 100 feet

Prepared for FEMA

by **URS**
 Portland, OR 97201

December 2005

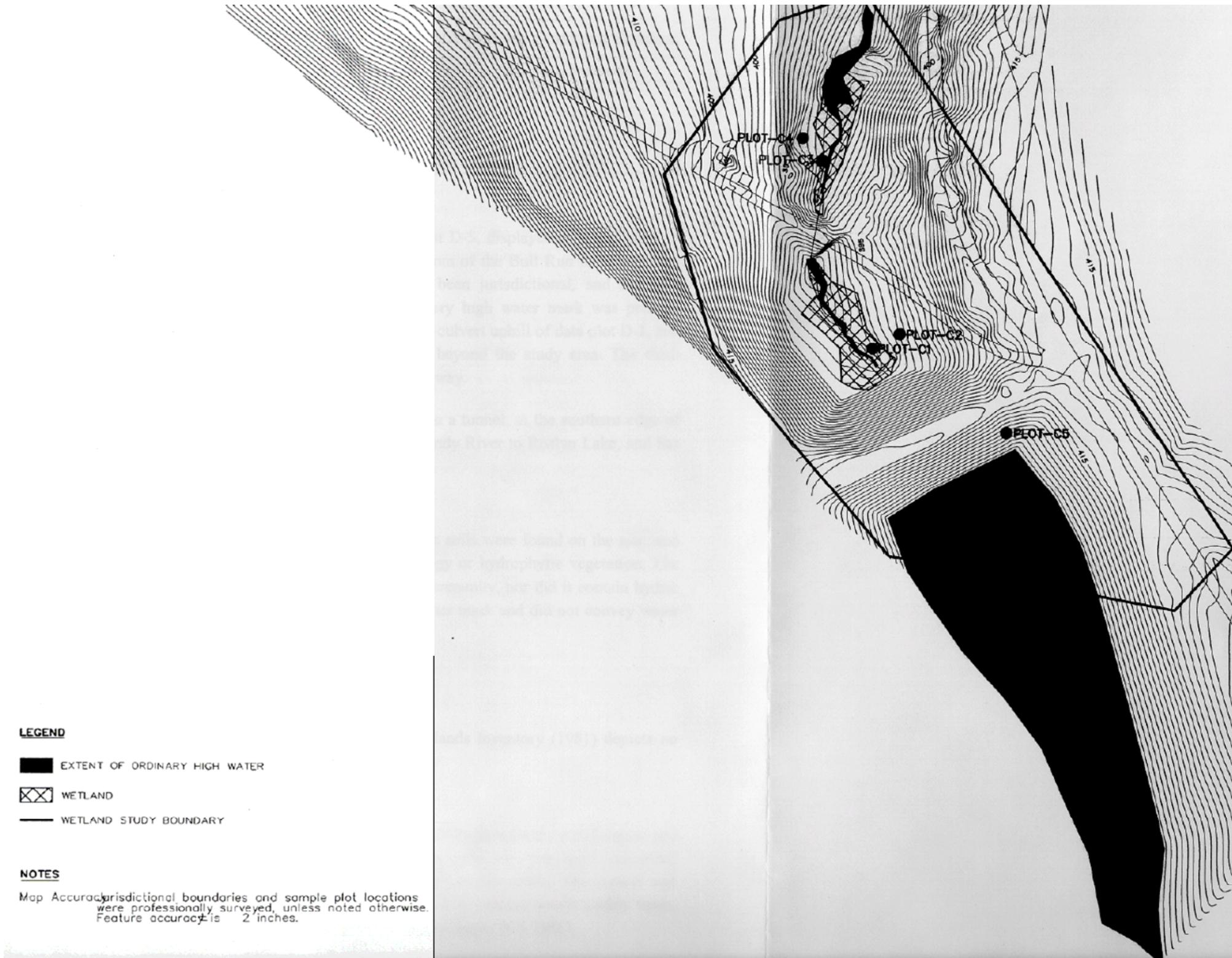
URS Project #15702306

Bull Run Watershed Conduit Trestles Retrofit Project
 Sandy, Oregon

WETLAND DELINEATION AT SESTER'S POND

APPENDIX H

APPENDIX I



Scale: 1 inch = 100 feet

Prepared for FEMA

by **URS**
 Portland, OR 97201

December 2005

Bull Run Watershed Conduit Trestles Retrofit Project
 Sandy, Oregon

APPENDIX I

URS Project #15702306

WETLAND DELINEATION AT DIACK'S POND

APPENDIX J



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Oregon Fish and Wildlife Office
2600 SE 98th Avenue, Suite 100
Portland, Oregon 97266

Phone: (503)231-6179 FAX: (503)231-6195

Reply To: 8330.SP09(05)

September 8, 2005

Bridget Canty
URS Corp.
111 SW Columbia, Suite 1500
Portland, OR 97201

Subject: Conduit Trestles at Diack's and Sester's Pond Project Project
USFWS Reference # 1-7-05-SP-0679

Dear Ms. Bridget Canty:

This is in response to your request, dated September 8, 2005, requesting information on listed and proposed endangered and threatened species that may be present within the area of the Conduit Trestles at Diack's and Sester's Pond Project Project in Multnomah County(s). The Fish and Wildlife Service (Service) received your correspondence on September 8, 2005.

We have attached a list (Enclosure A) of threatened and endangered species that may occur within the area of the Conduit Trestles at Diack's and Sester's Pond Project Project. The list fulfills the requirement of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). Federal Emergency Management Agency requirements under the Act are outlined in Enclosure B.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems on which they depend may be conserved. Under section 7(a)(1) and 7(a)(2) of the Act and pursuant to 50 CFR 402 *et seq.*, Federal Emergency Management Agency is required to utilize their authorities to carry out programs which further species conservation and to determine whether projects may affect threatened and endangered species, and/or critical habitat. A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) which are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (NEPA) (42 U.S.C. 4332 (2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to the Biological Assessment be prepared to determine whether they may affect listed and proposed species. Recommended contents of a Biological Assessment are described in Enclosure B, as well as 50 CFR 402.12.

If Federal Emergency Management Agency determines, based on the Biological Assessment or evaluation, that threatened and endangered species and/or critical habitat may be affected by the project, Federal Emergency Management Agency required to consult with the Service following the requirements of 50 CFR 402 which implement the Act.

Enclosure A includes a list of candidate species under review for listing. The list reflects changes to the candidate species list published May 11, 2005, in the Federal Register (Vol. 69, No. 86, 24876) and the addition of "species of concern." Candidate species have no protection under the Act but are included for consideration as it is possible candidates could be listed prior

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to project completion. Species of concern are those taxa whose conservation status is of concern to the Service (many previously known as Category 2 candidates), but for which further information is still needed.

If a proposed project may affect only candidate species or species of concern, Federal Emergency Management Agency is not required to perform a Biological Assessment or evaluation or consult with the Service. However, the Service recommends minimizing impacts to these species to the extent possible in order to prevent potential future conflicts. Therefore, if early evaluation of the project indicates that it is likely to adversely impact a candidate species or species of concern, Federal Emergency Management Agency may wish to request technical assistance from this office.

Your interest in endangered species is appreciated. The Service encourages Federal Emergency Management Agency to investigate opportunities for incorporating conservation of threatened and endangered species into project planning processes as a means of complying with the Act. If you have questions regarding your responsibilities under the Act, please contact Kevin Maurice at (503) 231-6179. All correspondence should include the above referenced file number. For questions regarding salmon and steelhead trout, please contact NOAA Fisheries Service, 525 NE Oregon Street, Suite 500, Portland, Oregon 97232, (503) 230-5400.

For future species list requests, please visit our website (<https://fw1oso2.r1.fws.gov/intranet/splr.nsf/Request?OpenForm>) for instructions on how to make requests.

Enclosures

EnclosureA: Multnomah COUNTY.PDF

EnclosureB: EnclosureB_Federal_Agencies_Responsibilities.PDF

FEDERALLY LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES,
CANDIDATE SPECIES AND SPECIES OF CONCERN THAT MAY OCCUR
IN MULTNOMAH COUNTY

LISTED SPECIES^{1/}Mammals

Columbian white-tailed deer *Odocoileus virginianus leucurus* E

Birds

Bald eagle^{2/} *Haliaeetus leucocephalus* T

Northern spotted owl^{3/} *Strix occidentalis caurina* CH T

Fish

Chum salmon (Lower Columbia River)^{4/} *Oncorhynchus keta* **T

Steelhead (Middle Columbia River)^{5/} *Oncorhynchus mykiss* **T

Steelhead (Upper Willamette River)^{5/} *Oncorhynchus mykiss* **T

Steelhead (Lower Columbia River)^{6/} *Oncorhynchus mykiss* **T

Steelhead (Upper Columbia River)^{7/} *Oncorhynchus mykiss* ** E

Steelhead (Snake River Basin)^{7/} *Oncorhynchus mykiss* ** T

Sockeye salmon *Oncorhynchus nerka* CH **E

Salmon River tributary to the Snake River, Idaho

Chinook salmon *Oncorhynchus tshawytscha* CH **T

Fall runs in the Snake River

Chinook salmon *Oncorhynchus tshawytscha* CH **T

Spring/summer runs in the Snake River

Chinook salmon (Lower Columbia River)^{8/} *Oncorhynchus tshawytscha* **T

Chinook salmon (Upper Willamette River)^{8/} *Oncorhynchus tshawytscha* **T

Chinook salmon (Upper Columbia River)^{8/} *Oncorhynchus tshawytscha* ** E

Bull trout (Columbia River pop)^{9/} *Salvelinus confluentus* CH T

Plants

Golden paintbrush^{10/} *Castilleja levisecta* T

Howellia *Howellia aquatilis* T

Bradshaw's lomatium *Lomatium bradshawii* E

PROPOSED SPECIES

None

CANDIDATE SPECIES^{12/}Birds

Yellow-billed cuckoo^{13/} *Coccyzus americanus*

Streaked horned lark *Eremophila alpestris strigata*

Amphibians and Reptiles

Oregon spotted frog *Rana pretiosa*

Fish

Coho salmon (Lower Columbia River)^{14/} *Oncorhynchus kisutch* **CF

SPECIES OF CONCERN

Mammals

Red tree vole
Pacific western big-eared bat
Silver-haired bat
Long-eared myotis (bat)
Fringed myotis (bat)
Long-legged myotis (bat)
Yuma myotis (bat)
Camas pocket gopher

Arborimus longicaudus
Corynorhinus townsendii townsendii
Lasionycteris noctivagans
Myotis evotis
Myotis thysanodes
Myotis volans
Myotis yumanensis
Thomomys bulbivorus

Birds

Northern goshawk
Tricolored blackbird
Band-tailed pigeon
Olive-sided flycatcher
Harlequin duck
Yellow-breasted chat
Lewis' woodpecker
Mountain quail
Oregon vesper sparrow
Purple martin

Accipiter gentilis
Agelaius tricolor
Columba fasciata
Contopus cooperi borealis
Histrionicus histrionicus
Icteria virens
Melanerpes lewis
Oreortyx pictus
Pooecetes gramineus affinis
Progne subis

Amphibians and Reptiles

Tailed frog
Oregon slender salamander
Northwestern pond turtle
Larch Mountain salamander
Northern red-legged frog
Cascades frog

Ascaphus truei
Batrachoseps wrighti
Emys marmorata marmorata
Plethodon larselli
Rana aurora aurora
Rana cascadae

Fish

Green sturgeon
Pacific lamprey

Acipenser medirostris
Lampetra tridentata

Invertebrates

Mt. Hood primitive brachycentrid caddisfly
Columbia pebblesnail
Columbia Gorge neothremman caddisfly
Wahkeena Falls flightless stonefly

Eobrachycentrus gelidae
Fluminicola fuscus
Neothremma andersoni
Zapada wahkeena

Plants

Howell's bentgrass
Cliff paintbrush
Cold-water corydalis
Pale larkspur
Peacock larkspur
Howell's daisy
Oregon daisy
Barrett's penstemon
Oregon sullivantia

Agrostis howellii
Castilleja rupicola
Corydalis aquae-gelidae
Delphinium leucophaeum
Delphinium pavonaceum
Erigeron howellii
Erigeron oreganus
Penstemon barrettiae
Sullivantia oregana

(E) - Listed Endangered

(T) - Listed Threatened

(CH) - Critical Habitat has been designated for this species

(PE) - Proposed Endangered

(PT) - Proposed Threatened

(PCH) - Critical Habitat has been proposed for this species

(S) - Suspected

(D) - Documented

Species of Concern - Taxa whose conservation status is of concern to the Service (many previously known as Category 2 candidates), but for which further information is still needed.

(CF) - *Candidate: National Marine Fisheries Service designation for any species being considered by the Secretary for listing for endangered or threatened species, but not yet the subject of a proposed rule.*

*** Consultation with National Marine Fisheries Service may be required.*

^{1/} *U. S. Department of Interior, Fish and Wildlife Service, October 31, 2000, Endangered and Threatened Wildlife and Plants, 50 CFR 17.11 and 17.12*

^{2/} *Federal Register Vol. 60, No. 133, July 12, 1995 - Final Rule - Bald Eagle*

^{3/} *Federal Register Vol. 57, No. 10, January 15, 1992, Final Rule-Critical Habitat for the Northern Spotted Owl*

^{4/} *Federal Register Vol. 64, No. 57, March 25, 1999, Final Rule - Columbia River Chum Salmon*

^{5/} *Federal Register Vol. 64, No. 57, March 25, 1999, Final Rule - Middle Columbia and Upper Willamette River Steelhead*

^{6/} *Federal Register Vol. 63, No. 53, March 19, 1998, Final Rule-West Coast Steelhead*

^{7/} *Federal Register Vol. 62, No. 159, August 18, 1997, Final Rule-Upper Columbia and Snake River Steelhead*

^{8/} *Federal Register Vol. 64, No. 56, March 24, 1999, Final Rule - West Coast Chinook Salmon*

^{9/} *Federal Register Vol. 63, No. 111, June 10, 1998, Final Rule-Columbia River and Klamath River Bull Trout*

^{10/} *Federal Register Vol. 62, No. 112, June 11, 1997, Final Rule-Castilleja levisecta*

^{11/} *Federal Register Vol. 65, No. 16, January 25, 2000, Final Rule-Erigeron decumbens var. decumbens, Lupinus sulphureus ssp. kincaidii and Fender's blue butterfly*

^{12/} *Federal Register Vol. 69, No. 86, May 4, 2004, Notice of Review - Candidate or Proposed Animals and Plants*

^{13/} *Federal Register Vol. 66, No. 143, July 25, 2001, 12-Month Finding for a Petition To List the Yellow-billed Cuckoo*

^{14/} *Federal Register Vol. 62, No. 87, May 6, 1997, Final Rule-Coho Salmon*

APPENDIX K

**OREGON INVENTORY OF HISTORIC PROPERTIES
SECTION 106 DOCUMENTATION FORM**

Agency/Project: FEMA/ Bull Run Water System, Seismic Upgrade for Conduits and Trestles at Diack's & Sester's Ponds

Street Address: Diack's Pond-Near 35649 SE Lusted Rd
Sester's Pond - Near 33304 SE Lusted Rd

City, County: Boring and Gresham, Multnomah County, OR

USGS Quad Name: Damascus
Township: 1S Range: R3E S16 (Sester's Pond) TL #:N/A
Township: 1S Range: R3E S22 (Diack's Pond) TL #: N/A

District, Grouping or Ensemble? Potential District
Name: Bull Run Water System Historic District

Current Use: Industry: Water Works

Date of Construction: 1895, 1911, 1925, 1953

Architectural Classification/Resource Type: N/A
Municipal Water System

Alterations & Dates: Conduit #1 Replaced (1952-53)
Addition of Bull Run Dam #2 (1962)

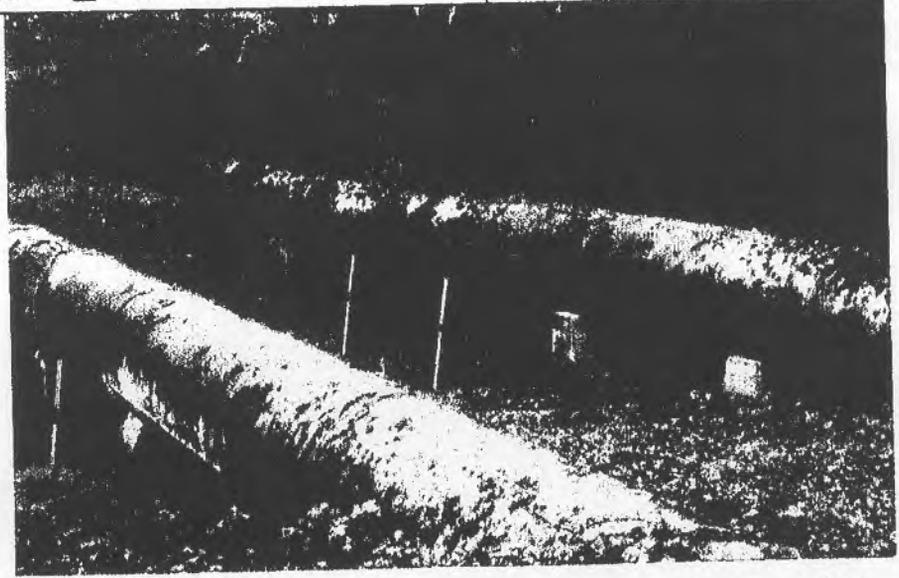
Window Type & Material:
NA

Exterior Surface Materials:
Primary: Steel
Secondary: Concrete
Decorative: NA

Roof Type & Material:
NA

Condition:
 Excellent Good Fair Poor

Integrity:
 Excellent Good Fair Poor



Steel conduits # 2 (left) and #3 (right) on concrete & steel trestles at Diack's Pond.

Preliminary National Register Findings:

National Register listed Potentially Eligible: Individually As part of District
 Not Eligible: In current state Irretrievable Integrity loss Lacks Distinction Not 50 Years

State Historic Preservation Office Comments:

Concur Do Not Concur:
 Potentially Eligible Individually Potentially Eligible As part of District Not Eligible

Signed *Nick Rametta* Date 12-2-05
Comments:

**OREGON INVENTORY OF HISTORIC PROPERTIES
SECTION 106 LEVEL OF EFFECT FORM**

Agency/Project: FEMA/ Bull Run Water System, Seismic Upgrade for Conduits and Trestles at Diack's & Sester's Ponds	
Property Name: Bull Run Water System, Diack's & Sester's Ponds Conduits	
Street Address: Diack's Pond-Near 35649 SE Lusted Rd Sester's Pond - Near 33304 SE Lusted Rd	City, County: Boring and Gresham, Multnomah Co. OR
Preliminary Finding of Effect: <input type="checkbox"/> No Historic Properties Affected <input checked="" type="checkbox"/> No Historic Properties Adversely Affected <input type="checkbox"/> Historic Properties Adversely Affected	
State Historic Preservation Office Comments: <input checked="" type="checkbox"/> Concur <input type="checkbox"/> Do Not Concur: <input type="checkbox"/> No Historic Properties Affected <input type="checkbox"/> No Historic Properties Adversely Affected <input type="checkbox"/> Historic Properties Adversely Affected	
Signed: <u><i>Rich Ramsey</i></u>	Date: <u>12-2-05</u>
Comments:	

Provide written description of the project, and its potential effects on the subject property per 36 CFR 800. Include maps, drawings, and photographs as necessary to effectively describe and discuss the project. Use continuation sheets as needed.

SUMMARY
 The City of Portland Bureau of Water Works, located in Portland, Oregon has applied for a Federal Emergency Management Agency (FEMA) Pre-Disaster Grant to mitigate the possible affects of an earthquake on three of the major conduits that transport water along the Bull Run Water System to more than 800,000 Portland residents. The City of Portland and the FEMA are providing funding for the project.

This statement of finding discusses the effect of the proposed conduit rerouting and seismic reinforcement project at Diack's and Sester's ponds, a part of the Portland's Bull Run Water System Historic District located in Multnomah and Clackamas counties. The Portland's Bull Run Water System Historic District was determined eligible for the National Register of Historic Places by FEMA. The State Historic Preservation Office (SHPO) has concurred with the determination of eligibility through the Section 106 documentation process.

It is the finding of the FEMA that the project has no adverse effect on the historic district as a whole. This statement of finding is made pursuant to the requirements of the National Historic Preservation Act of 1966 (36CFR800), Executive Order 11593, and the National Environmental Policy Act.

PROJECT DESCRIPTION
 The purpose of the proposed Bull Run Water System conduit rerouting and reinforcement project at Diack's and Sester's ponds is to improve the stability of the conduits and trestles in case of an earthquake or flooding. The Bull Run Water System is in a high seismic hazard area (Zone A-Figure 1). Various studies have identified major seismic vulnerabilities in the Portland water system. The damage to the pipeline from an earthquake would result in the loss of water to the thousands of people who are served by the water system. Other current problems with the pipelines include erosion and scouring of the support trestles, and inadequate foundation footings.

This proposed project includes seismic upgrades at two locations, Diack's and Sester's ponds, where conduits cross stream channels on trestles. These two locations are especially vulnerable because of their siting and exposure. The following is a description of the two locations and the proposed mitigation at each site.

Diack's Pond
 Diack's Pond is located on the property of Sam Diack, immediately downhill from the Portland Water Bureau's Lusted Hill facility and downstream of a non-engineered dam. Conduits #2 (1911), #3 (1925), and #4 (1953) are parallel to each other at this location and are supported on trestles that pass above ground over the stream channels. The steel conduits have exposed lengths of about 30 feet for each pipe. The support trestles and footings of these pipelines show signs of failure due to scour problems and erosion. If the adjacent dam would fail due to an earthquake, or flooding & overtopping, the three conduits would fail simultaneously. This location represents the only place on the Bull Run pipeline corridor where three conduits are co-located. The above ground pipes are also vulnerable to vandalism.