

# **Appendix B**

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## **Agency Correspondence**





# United States Department of the Interior



## FISH AND WILDLIFE SERVICE

Oregon Fish and Wildlife Office  
2600 SE 98<sup>th</sup> Avenue, Suite 100  
Portland, Oregon 97266

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

Reply To: 8330.SP07(06)

July 17, 2006

Pete Baki  
Craven Consulting Group  
647 River Hills Drive  
Springfield, OR 97477

Subject: Palmer Creek Water District Improvement Co. Project  
USFWS Reference # FD8EECC0485BBEC9882571AE0074D938

Dear Mr. Pete Baki:

This is in response to your request, dated July 17, 2006, requesting information on listed and proposed endangered and threatened species that may be present within the area of the Palmer Creek Water District Improvement Co. Project in Yamhill County(s). The Fish and Wildlife Service (Service) received your correspondence on July 17, 2006.

We have attached a list (Enclosure A) of threatened and endangered species that may occur within the area of the Palmer Creek Water District Improvement Co. 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.*). U.S. Bureau of Reclamation 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.*, the U.S. Bureau of Reclamation 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 the U.S. Bureau of Reclamation determines, based on the Biological Assessment or evaluation, that threatened and endangered species and/or critical habitat may be affected by the project, the U.S. Bureau of Reclamation is 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, the U.S. Bureau of Reclamation 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, the U.S. Bureau of Reclamation may wish to request technical assistance from this office.

Your interest in endangered species is appreciated. The Service encourages the U.S. Bureau of Reclamation 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 ([http://www.fws.gov/pacific/oregonfwo/EndSpp/EndSpp\\_SpLstReq.html](http://www.fws.gov/pacific/oregonfwo/EndSpp/EndSpp_SpLstReq.html)) for instructions on how to make requests.

Enclosures

EnclosureA: Yamhill COUNTY.PDF

EnclosureB: EnclosureB\_Federal\_Agencies\_Responsibilities.PDF

FEDERAL AGENCIES RESPONSIBILITIES UNDER SECTION 7(a) and (c)  
OF THE ENDANGERED SPECIES ACT**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 FWS when a Federal action may affect a listed endangered or Threatened species to insure 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 they have determined if their action may affect (adversely or beneficially) a listed species; and

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

**SECTION 7(c)-Biological Assessment for Major Construction Projects<sup>1</sup>**

Requires Federal agencies or their designees to prepare a Biological Assessment (BA) for construction projects only. The purpose of the BA is to identify proposed and/or listed species which are/is 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, the accuracy of the species list should be informally verified with our Service. No irreversible commitment of resources is to be made during the BA process which would foreclose reasonable and prudent alternatives to protect endangered species. 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 on-site inspection of the area to be affected by the proposal which may include a detailed survey of the area to determine if any species are present and whether suitable habitat exists for either expanding existing populations or for potential reintroduction of species; (2) review literature and scientific data to determine species distribution(s), habitat needs, and other biological requirements; (3) interview experts including those within FWS, National Marine Fisheries Service, State conservation departments, 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 present in terms of effects to individuals and populations, including consideration of cumulative effects to the species and 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. The BA should conclude whether or not any listed species will be affected. Upon completion, the report should be forwarded to our Portland Office at 2600 SE 98<sup>th</sup> Ave., Suite 100, Portland, Oregon, 97266.

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<sup>1</sup>A construction project (or other undertaking having similar physical impacts) which is a major Federal action significantly affecting the quality of the human environment as referred to in NEPA (42 U.S.C. 4332. (2)c). On projects other than construction, it is suggested that a biological evaluation similar to the biological assessment be undertaken to conserve species influenced by the Endangered Species Act.

**FEDERALLY LISTED THREATENED, ENDANGERED, PROPOSED, CANDIDATE SPECIES AND SPECIES OF CONCERN WHICH MAY OCCUR WITHIN YAMHILL COUNTY, OREGON**

LISTED SPECIES<sup>1/</sup>Birds

Marbled murrelet <sup>2/</sup>	<i>Brachyramphus marmoratus</i>	CH T
Bald eagle <sup>3/</sup>	<i>Haliaeetus leucocephalus</i>	T
Northern spotted owl <sup>4/</sup>	<i>Strix occidentalis caurina</i>	CH T

Fish

Steelhead (Upper Willamette River) <sup>5/</sup>	<i>Oncorhynchus mykiss</i> ssp.	T*
Chinook salmon (Upper Willamette River) <sup>6/</sup>	<i>Oncorhynchus tshawytscha</i>	T*

Invertebrates

Fender's blue butterfly <sup>7/</sup>	<i>Icaricia icarioides fenderi</i>	E
Oregon silverspot butterfly	<i>Speyeria zerene hippolyta</i>	T

Plants

Golden Indian paintbrush <sup>8/</sup>	<i>Castilleja levisecta</i>	T
Willamette daisy <sup>9/</sup>	<i>Erigeron decumbens</i> var. <i>decumbens</i>	E
Howellia	<i>Howellia aquatilis</i>	T
Bradshaw's lomatium	<i>Lomatium bradshawii</i>	E
Kincaid's lupine <sup>10/</sup>	<i>Lupinus sulphureus</i> var. <i>kincaidii</i>	T
Nelson's checker-mallow	<i>Sidalcea nelsoniana</i>	T

PROPOSED SPECIES

None

CANDIDATE SPECIES<sup>11/</sup>Mammals

Pacific fisher <sup>12/</sup>	<i>Martes pennanti pacifica</i>
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Birds

Yellow-billed cuckoo	<i>Coccyzus americanus</i>
Streaked horned lark	<i>Eremophila alpestris strigata</i>

Amphibians and Reptiles

Oregon spotted frog	<i>Rana pretiosa</i>
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SPECIES OF CONCERNMammals

White-footed vole	<i>Arborimus albipes</i>
Red tree vole	<i>Arborimus longicaudus</i>
Pacific western big-eared bat	<i>Corynorhinus townsendii townsendii</i>
Silver-haired bat	<i>Lasiorycteris noctivagans</i>
Long-eared myotis (bat)	<i>Myotis evotis</i>
Fringed myotis (bat)	<i>Myotis thysanodes</i>
Long-legged myotis (bat)	<i>Myotis volans</i>
Yuma myotis (bat)	<i>Myotis yumanensis</i>
Camas pocket gopher	<i>Thomomys bulbivorus</i>

## Birds

Band-tailed pigeon	<i>Columba fasciata</i>
Olive-sided flycatcher	<i>Contopus cooperi</i>
Yellow-breasted chat	<i>Icteria virens</i>
Acorn woodpecker	<i>Melanerpes formicivorus</i>
Lewis' woodpecker	<i>Melanerpes lewis</i>
Mountain quail	<i>Oreortyx pictus</i>
Oregon vesper sparrow	<i>Poocetes gramineus affinis</i>
Purple martin	<i>Progne subis</i>

## Amphibians and Reptiles

Tailed frog	<i>Ascaphus truei</i>
Northwestern pond turtle	<i>Emys marmorata marmorata</i>
Northern red-legged frog	<i>Rana aurora aurora</i>
Southern torrent (seep) salamander	<i>Rhyacotriton variegatus</i>

## Fishes

Pacific lamprey	<i>Lampetra tridentata</i>
Coastal cutthroat trout (Oregon Coast)	<i>Oncorhynchus clarki clarki</i>
Coastal cutthroat trout (Upper Willamette)	<i>Oncorhynchus clarki clarki</i>
Steelhead (Oregon Coast)	<i>Oncorhynchus mykiss ssp.</i>

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## Invertebrates

American acetropis grass bug	<i>Acetropis americana</i>
Oregon giant earthworm	<i>Megascolides (=Driloleirus) macelfreshi</i>

## Plants

Bog anemone	<i>Anemone oregana</i> var. <i>felix</i>
White top aster (Curtus)	<i>Aster curtus</i>
Pale larkspur	<i>Delphinium leucophaeum</i>
Willamette Valley larkspur	<i>Delphinium oreganum</i>
Peacock larkspur	<i>Delphinium pavonaceum</i>
Coast Range fawn-lily	<i>Erythronium elegans</i>
Queen-of-the-forest	<i>Filipendula occidentalis</i>
Henderson's horkelia	<i>Horkelia hendersonii</i>
Thin-leaved peavine	<i>Lathyrus holochlorus</i>

(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

*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.

\* Consultation with NOAA's National Marine Fisheries Service may be required.

<sup>1/</sup> 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

<sup>2/</sup> Federal Register Vol. 57, No. 45328, October 1, 1992, Final Rule - Marbled Murrelet

<sup>3/</sup> Federal Register Vol. 60, No. 133, July 12, 1995, - Final Rule - Bald Eagle

<sup>4/</sup> Federal Register Vol. 57, No. 10, January 15, 1992, Final Rule - Critical Habitat for the Northern Spotted Owl

<sup>5/</sup> Federal Register Vol. 64, No. 57, March 25, 1999, Final Rule - Middle Columbia and Upper Willamette River Steelhead

<sup>6/</sup> Federal Register Vol. 64, No. 56, March 24, 1999, Final Rule - West Coast Chinook Salmon

<sup>7/</sup> Federal Register Vol. 65, No. 16, January 25, 2000, Final Rule - *Erigeron decumbens* var. *decumbens*, *Lupinus sulphureus* ssp. *lincaidii*, and Fender's blue butterfly

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- <sup>8/</sup> *Federal Register Vol. 62, No. 112, June 11, 1997, Final Rule - Castilleja levisecta*
- <sup>9/</sup> *Federal Register Vol. 65, No. 16, January 25, 2000, Final Rule - Erigeron decumbens var. decumbens, Lupinus sulphureus ssp. lincaidii, and Fender's blue butterfly*
- <sup>10/</sup> *Federal Register Vol. 65, No. 16, January 25, 2000, Final Rule - Erigeron decumbens var. decumbens, Lupinus sulphureus ssp. lincaidii, and Fender's blue butterfly*
- <sup>11/</sup> *Federal Register Vol. 69, No. 86, May 4, 2004, Notice of Review - Candidate or Proposed Animals and Plants*
- <sup>12/</sup> *Federal Register Vol. 69, No. 68, April 8, 2004, 12-Month Finding for a Petition to List the West Coast Distinct Population Segment of the Fisher*





UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL MARINE FISHERIES SERVICE  
PORTLAND OFFICE  
1201 NE Lloyd Boulevard, Suite 1100  
PORTLAND, OREGON 97232-1274

F/NWR5

December 2, 2005

Richard E. Craven  
Craven Consulting Group  
9170 SW Elrose Court  
Tigard, OR 97224

RE: Palmer Creek Water District Proposal of 9/26/2005

Dear Mr. Craven:

On September 26, 2005, you emailed the National Marine Fisheries Service (NMFS) a proposal for screening the Palmer Creek Water District diversion on the Willamette River at about river mile 140, right bank.

Our understandings, according to your letter and drawings:

- The proposed fish screen and pump station will have a maximum capacity of 50 cfs.
- An ISI<sup>1</sup> submerged mechanically-cleaned drum screen is proposed.
- Each drum cylinder will be 60" diameter x 66" in length, yielding approximately 172 square feet of screen area.
- The screen will be 0.068" wedge-wire.

Our conclusions:

- The proposed fish screen design concept is acceptable. Please contact Ben Meyer, Willamette Basin Habitat Branch Chief (503-230-5425; [ben.meyer@noaa.gov](mailto:ben.meyer@noaa.gov)) regarding other possible requirements.
- We recommend that an environmentally gentle hydraulic oil such as Chevron Clarity<sup>2</sup> (or one similar) be employed. Hydraulic oil was not specified, except as "food grade". Clarity is superior environmentally and operationally, and is cheaper than food grade vegetable oils.
- The clearance above and below the screen does not meet the usual NMFS' criteria. We are accepting it in this case because we believe that this design is the most appropriate for this site because it has the least riparian impact.

<sup>1</sup> <http://www.intakescreensinc.com/>

<sup>2</sup> <http://www.chevron.com/products/prodserv/natl/powergeneration/content/prodspecs.shtm#hydraulic>



- The dead-end slough will not generate sweeping flows at the pump screen, which we normally desire to help cleanse the screen. Nevertheless, we accept the proposed design in the slough for the following reasons:
  - The US Bureau of Reclamation's (USBR) December 4, 2003, assessment of inlet channel approach velocity was quite informative and useful. The USBR's calculations indicate that average water velocity induced by the pumps into the inlet would be small, approximately 0.21 fps toward the pumps at lowest water levels. The fish should be able to contend with this amount.
  - The nominal average approach velocity at the screen face will be  $157 \text{ ft}^2/50 \text{ ft}^3/\text{sec} = 0.31 \text{ fps}$ . This is considerably safer for the fish than NMFS' customary criteria velocity of 0.4 fps, which will make it relatively easier for fish to avoid this screen.
  - Continued employment of a trashboom will keep trash from the screen. (This was not included in the plans, but needs to continue to be employed).

You will be required to demonstrate that the screen meets velocity criteria of less than 0.4 maximum after construction, including documenting the approach velocity of the screen with acoustic velocimeters or similarly accurate devices.

Please continue to keep John Johnson (503-231-2110; john.k.johnson@noaa.gov) of my staff informed regarding the progress of this project.

Sincerely,



Keith Kirkendall, Chief  
FERC & Water Diversions Branch  
Hydropower Division

Enclosures



# Oregon

Theodore R. Kulongoski, Governor

## Department of Fish and Wildlife

Fish Division  
3406 Cherry Avenue NE  
Salem, OR 97303  
(503) 947-6200  
Fax (503) 947-6202  
TTY (503) 947-6339  
www.dfw.state.or.us



9 Dec 2005

Richard E. Craven  
Craven Consulting Group  
9170 SW Elrose Court  
Tigard, OR 97224

Re: Palmer Creek Water District Improvement Company Fish Screen

Dear Richard,

I have reviewed the design for the proposed fish screen at the Dayton Pump Station on Palmer Creek near river mile 73.4 on the Willamette River. This design was submitted to my office via your e-mail on 27 Sep 2005. The proposed fish screen facility is characterized as a slant retrievable intake screen, sized for up to 50 cfs.

The location of the Dayton Pump Station (on a backwater of the Willamette River) presents challenges for a reliable water intake that consistently protects fish. The challenges include widely varying river stages, with consequent changes in channel configurations, and inadequate sweeping velocities to move juvenile fish and water-borne debris away from the screen. Still, after consideration of numerous alternative fish screening concepts for this site, this proposal addresses the issues and constraints well. Screen area and calculated approach velocities are acceptable, and the absence of sweeping velocity may be compensated by regular removal and inspection of the screen by means of the retrieval track and mechanisms. Continued use of a floating trash barrier device will also be beneficial. Consequently, the proposed, retrievable, wedge wire T-Screen is approved for use at the Dayton Pump Station water intake.

Please proceed with detailed designs for this important fish passage facility. Keep me posted as your plans progress

Thank you for your efforts to protect fish.

Michael B Lambert  
Lead Fish Passage Engineer  
Fish Screening & Passage Program

cc: Steve Mamoyac  
Bob Hair  
Bernie Kepshire  
Jon Bartch  
John Johnson

**Main Identity**

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**From:** <Larry\_Rasmussen@fws.gov>  
**To:** "Richard Craven" <richard.craven@verizon.net>  
**Sent:** Wednesday, August 02, 2006 11:35 AM  
**Attach:** DaytonPumps1.TIF; Dayton Pumps.pdf  
**Subject:** Proposed new fish screen at Dayton Pump Station

Richard-

We have reviewed the Palmer Creek Water District's proposed fish screen plans for the Dayton pump station. The Fish and Wildlife Service concurs with the Oregon Department of Fish and Wildlife and the National Marine Service (letters attached) that the proposed design is acceptable. The site presents significant challenges to achieve fish protection and we believe the proposed design with the reduced approach velocity will provide adequate protection.

Larry

(See attached file: DaytonPumps1.TIF)(See attached file: Dayton Pumps.pdf)

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Larry Rasmussen  
U.S. Fish and Wildlife Service  
Oregon State Office  
2600 S.E. 98th, Suite 100  
Portland, OR 97266  
(503) 231-6179

8/2/2006



# Oregon

Theodore R. Kulongoski, Governor

## Parks and Recreation Department

State Historic Preservation Office

725 Summer St. NE, Suite C

Salem, OR 97301-1271

(503) 986-0707

FAX (503) 986-0793

[www.hcd.state.or.us](http://www.hcd.state.or.us)

July 13, 2006

Mr. Steven Highland  
Craven Consulting Group  
3930 NW Witham Hill Dr No 252  
Corvallis, OR 97330

RE: SHPO Case No. 06-1642  
Palmer Ranch Project  
6S 3W 59, Dayton Yamhill County

Dear Steven:

Our office recently received your report about the project referenced above. I have reviewed your report and agree that the project will have no affect on any known cultural resources. No further archaeological research is needed with this project.

Please be aware, however, that if during development activities you or your staff encounters any cultural material (i.e., historic or prehistoric), all activities should cease immediately and an archaeologist should be contacted to evaluate the discovery. Under state law (ORS 358.905-955) it is a Class B misdemeanor to impact an archaeological site on public or private land in Oregon. Impacts to Native American graves and cultural items are considered a Class C felony (ORS 97.740-760). If you have any questions regarding any future discovery or my letter, feel free to contact our office at your convenience.

Dennis Griffin, Ph.D., RPA  
State Archaeologist  
(503) 986-0674  
[dennis.griffin@state.or.us](mailto:dennis.griffin@state.or.us)





**Table B1. Threatened and endangered species of vegetation, fish, wildlife, and invertebrates**

Species	Federal Status	Critical Habitat Designated?	Habitat Requirements	Habitat Present in Project Area?	Anticipated Impacts
Bradshaw's Lomatium ( <i>Lomatium bradshawii</i> )	Listed Endangered October 31, 1988	No	Wet, open areas of Willamette Valley.	Possible in service area, but not at the irrigation intake	None. Irrigation would be confined to presently farmed lands. No appropriate habitat on riprap slope at intake where fish screen would be installed.
Howellia ( <i>Howellia aquatilis</i> )	Listed Threatened July 14, 1994	No	Rooted in shallow ponds, floats under or near water surface.	Possible in service area, but not at the irrigation intake	None. Irrigation would be confined to presently farmed lands. No appropriate habitat on riprap slope at intake where fish screen would be installed.
Nelson's checker-mallow ( <i>Sidalcea nelsoniana</i> )	Listed Threatened September 30, 1998	No	Endemic to Willamette Valley and adjacent Coast Range.	Possible in service area, but not at the irrigation intake	None. Irrigation would be confined to presently farmed lands. No appropriate habitat on riprap slope at intake where fish screen would be installed.
Golden Indian paintbrush ( <i>Castilleja levisecta</i> )	Listed Threatened June 11, 1997	No	Once prolific in Willamette Valley in Linn, Marion, and Multnomah Counties.	Unlikely	None. Species thought to be extinct in Oregon. Project area outside of historical range. If present, unlikely to be affected since irrigation would be confined to presently irrigated lands.
Willamette daisy ( <i>Erigeron decumbens var. decumbens</i> )	Listed Endangered January 25, 1990	No	Heavy soils on native Willamette Valley prairies, grassland.	Possible in service area, but not at the irrigation intake	None. Irrigation would be confined to presently farmed lands. No appropriate habitat on riprap slope at intake where fish screen would be installed.
Kincaid's lupine ( <i>Kincaidii sulphureus</i> )	Listed Threatened January 25, 2000	No	Willamette Valley	Possible in service area, but not at the irrigation intake	None. Irrigation would be confined to presently farmed lands. No appropriate habitat on riprap slope at intake where fish screen would be installed.
<b>Species</b>	<b>Federal Status</b>	<b>Critical Habitat Designated?</b>	<b>Habitat Requirements</b>	<b>Habitat Present in Project</b>	<b>Anticipated Impacts</b>

Species	Federal Status	Critical Habitat Designated?	Habitat Requirements	Habitat Present in Project Area?	Anticipated Impacts
				Area?	
Upper Willamette River Chinook ( <i>Oncorhynchus tshawytscha</i> )	Listed Threatened March 24, 1999	Yes January 2, 2005	Cool, flowing, well-aerated water with refugia in mainstem rivers, tributaries, backwaters, and sloughs.	Likely	None. Proposed contract would not alter habitat for this species. Screening of diversions under the proposed contract will reduce or avoid take of this species.
Upper Willamette River Steelhead ( <i>Oncorhynchus mykiss</i> )	Listed Threatened March 25, 1999	Yes September 2, 2005	Cool, flowing, well-aerated water with refugia in mainstem rivers, tributaries, backwaters, and sloughs.	Likely	None. Proposed contract would not alter habitat for this species. Screening of diversions under the proposed contract will reduce or avoid take of this species.
Bald eagle ( <i>Haliaeetus leucocephalus</i> )	Listed Threatened July 12, 1995	No	Near water bodies with nearby roost trees.	Possible in service area, but not at the irrigation intake	None. Proposed project would not alter habitat requirements for this species. Fish screen installation would occur in the late fall after typical nesting activities for bald eagle.
Northern Spotted Owl <i>Strix occidentalis caurina</i>	Listed Threatened June 26, 1990	Yes January 15, 1992	Mainly old growth/second growth forests with closed canopy.	No	None. Proposed project would not alter habitat requirements for this species.
Marbled Murrelet <i>Brachyramphus marmoratus</i>	Listed Threatened October 1, 1992	Yes June 24, 1996	Mainly along the Oregon Coast area in Oregon near old growth timber.	No	None. Proposed project would not alter habitat requirements for this species.
Fenders blue butterfly <i>Icaricia icarioides fenderi</i>	Listed Threatened January 25, 2000	No	Associated with lupines in low elevation, open habitats.	Possible in service area, but not at the irrigation intake	None. No new lands are to be brought into farming by the PCWD which might remove lupine plant species.
Oregon Silverspot Butterfly <i>Speyeria zerene hippolyta</i>	Listed Threatened October 15, 1980	Yes October 15, 1980	Central Oregon Coast in Oregon	No	None



TAKE OUT

