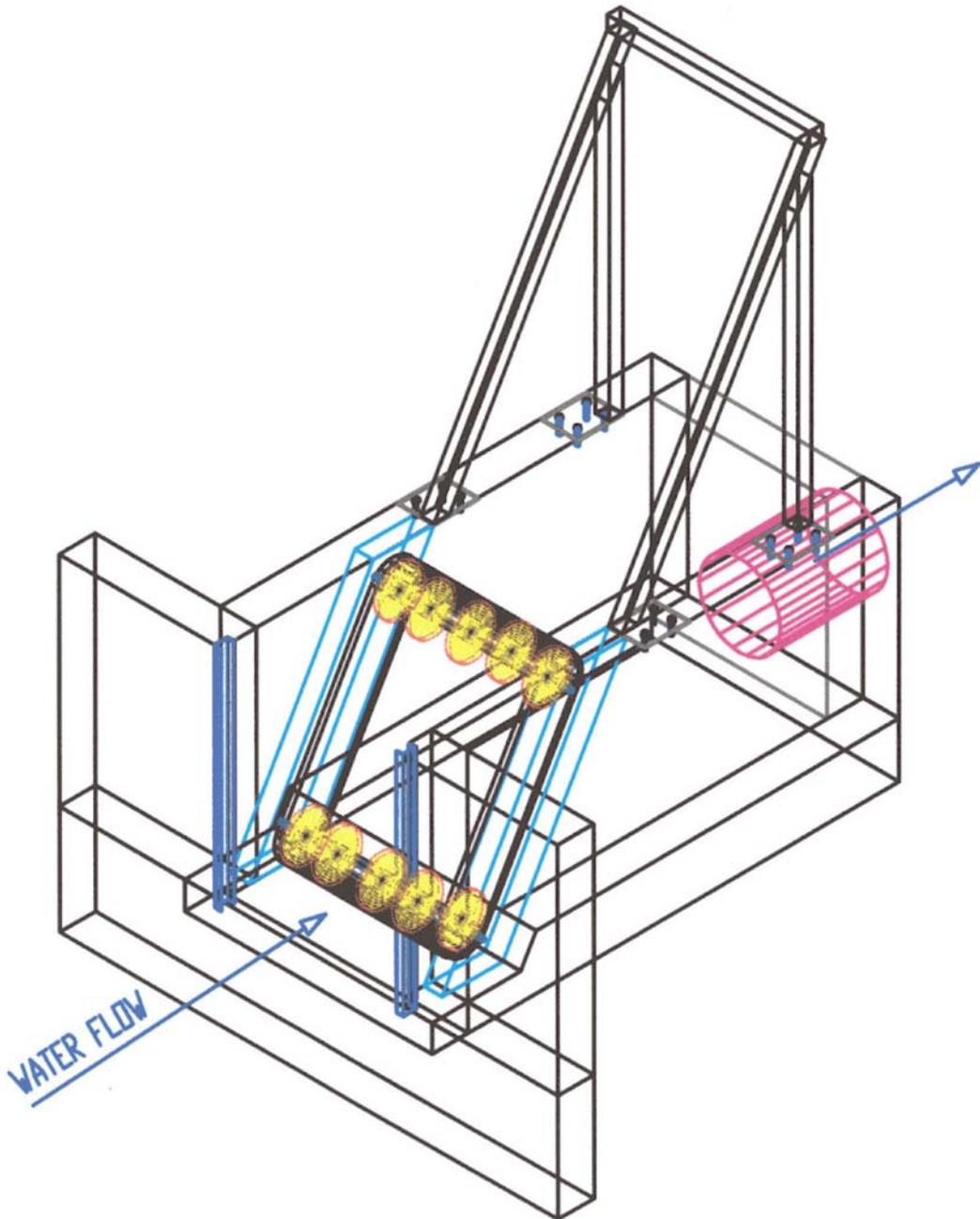
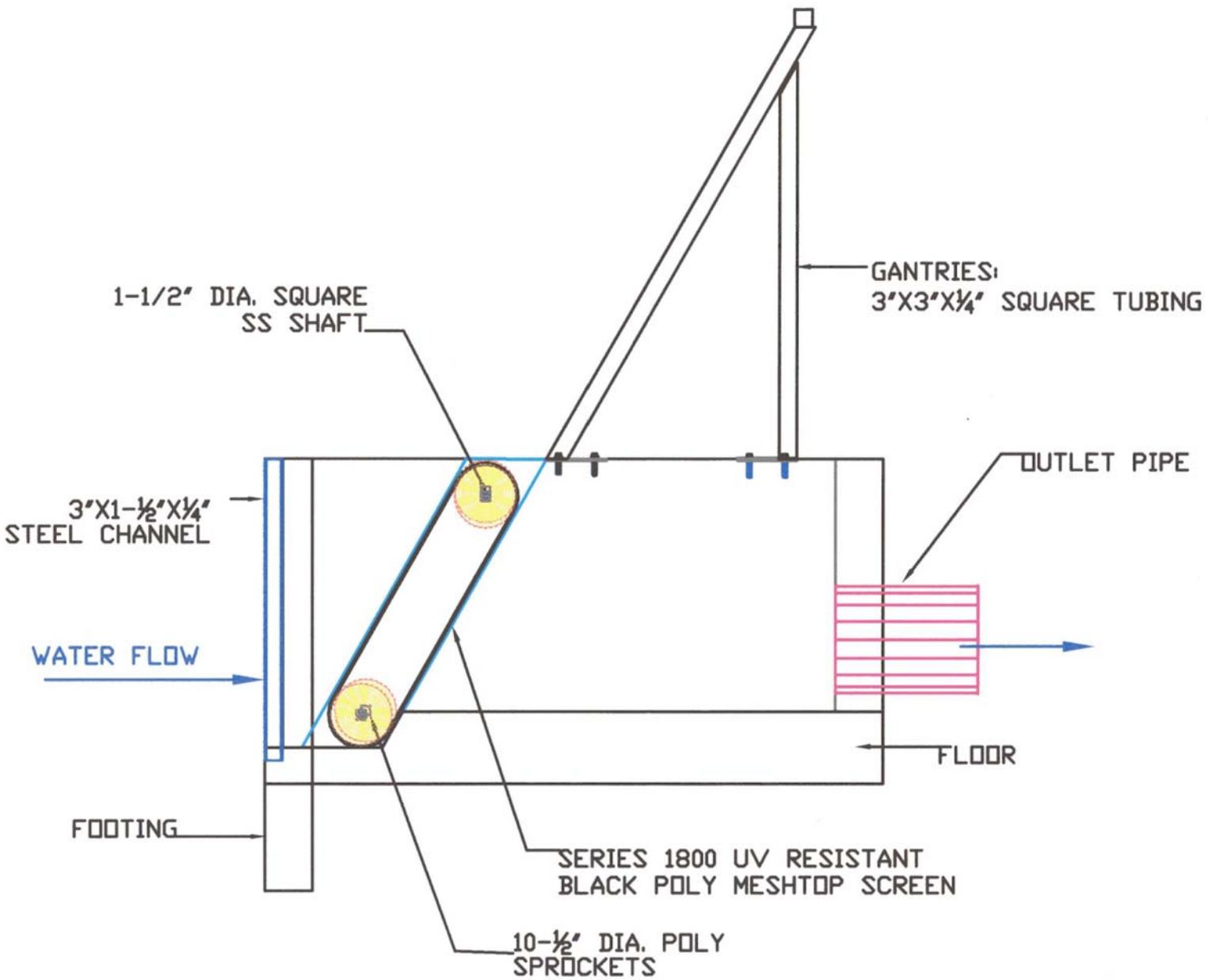


Appendix M Traveling Belt Fish Screen Design



Appendix N
Traveling Belt Fish Screen Design



Appendix O

Environmental Commitments

The following environmental commitments reflect the mitigation measures identified for the proposed action. These items also appear as general mitigation measures in Section 2.2.5 and issue-specific measures throughout Chapter 3.

General program practices to minimize the negative impacts of the proposed action, and to mitigate for unavoidable negative impacts, include:

A. General

1. Obtain all required federal, state and local permits.
2. Design structures and conservation practices in accordance with Natural Resources Conservation Service technical guidelines and accepted engineering practices.
3. Inspect each project site to determine the presence of threatened and endangered plant and animal species and conduct Section 7 consultations as required.
4. Inspect each project site where there is the potential for historic properties or scientifically-important paleontological sites to exist. If they are present, seek to avoid adverse impacts to the resource site. If adverse impacts cannot be avoided, implement appropriate mitigations actions. Resource significance, project impacts, and mitigation treatment will be determined using processes defined in 36 CFR 800.
5. When appropriate, consult with tribes to determine if Indian sacred sites are present. Seek to avoid damage to those that are identified.
6. Provide landowner or other appropriate personnel with operation and maintenance procedures that will produce optimum conservation benefits over the life of the project.

B. Project design

1. Design fish screens and bypass systems at ditches, pumps, and infiltration galleries to meet NMFS criteria (Appendices E and H).
2. Design fishways to meet NMFS criteria (currently unpublished) for upstream passage of juvenile and adult salmonids.
3. Apply the most recent NMFS protocols (currently NMFS 2001) to ensure that water acquisition projects provide streamflows and water depths which improve the protection of listed steelhead and salmon.
4. Seek to design to avoid impacts to National Register-eligible historic properties, scientifically-important paleontological sites, or Indian sacred sites.

C. Construction timing and location

1. Perform in-stream activities within the ODFW guidelines for timing of in-water work, and coordinate with the District Fish Biologist for emergency extensions of the work window, which is:
 - July 15 to August 15 in the Upper John Day (main stem) upstream from John Day, and the Middle Fork and North Fork John Day upstream from the Highway 395 crossings,

- July 15 to August 31 in the remainder of the reaches downstream from John Day and Highway 395, or
 - An alternate work window that may be required by ODFW or NMFS.
2. Time construction to avoid conflicts with bald eagles and other protected wildlife of site-specific concern.
 3. Install fish screens and siphons while diversions are shut down to avoid contact with flowing water during construction.
 4. Avoid demolition of pushup dams while the adjacent pools are harboring adult chinook salmon or steelhead.
 5. Locate infiltration galleries in habitats where salmon and steelhead are not likely to spawn.

D. Construction practices

1. Use appropriate construction methods to isolate in-channel construction areas from flowing water to minimize turbidity and sediment released from site.
2. Insure that petroleum products, chemicals or other harmful materials are not allowed to enter the water.
3. Perform as much machine work as possible from the streambanks to minimize disturbance to the streambed.
4. Minimize disturbance to riparian vegetation.
5. Restore the site to near-original conditions/grade. Remove spoils from the construction area when it is not possible to shape them to near-original conditions.
6. Dispose of construction spoils and waste materials at proper sites away from the stream channel.
7. Use silt screens to minimize the overland flow of fine sediments from construction sites into the stream during precipitation events.
8. Capture salmonids that are inadvertently trapped in sections of ditch or river isolated for construction, and liberate them into adjacent flowing water.
9. If National Register-eligible historic properties, scientifically-important paleontological sites, or Indian sacred sites are present near construction impact areas, implement protective strategies to avoid or minimize damage during construction.

E. Site recovery

1. Stabilize disturbed riparian and streambank soils with native grasses and vegetation, such as willows, red osier dogwood, and cottonwood.
2. Fence riparian areas where existing fences are disturbed by construction, or where fence is required to facilitate vegetation recovery after planting.
3. Vacate construction sites leaving a positive visual impact blending with the natural landscape.

Mitigation measures targeted at specific resources and issues include:

A. Vegetation

Reclamation assisting in directing landowners to the appropriate sources for information and assistance in identifying and controlling noxious weeds. For example, GSWCD has a weed program that landowners can utilize for support with the identification and

control of noxious weeds. GSWCD's program includes a brochure entitled "Weeds of the John Day River Basin."

B. Threatened and Endangered Species

Restrict proposed action construction disturbances (including blasting) on private land within 1/4-mile of: (1) an active bald eagle nest between January 1 through August 31, and (2) an active bald eagle winter roost between November 15 through March 15. For nest trees or roost trees having line-of-sight to the construction disturbance, the restrictive distance is 1/2 mile. The restriction for an individual nest or roost site may be modified in writing by ODFW (a) depending upon the actual dates that bald eagles are present and susceptible to disturbance, or (b) if an applicable incidental take permit has been issued by USFWS. For example, the ODFW may weigh the risk to listed fish species from project work extending past August 31 with the risk to nesting bald eagles from project work beginning before September 1 to determine which, if any, restriction date should be modified.

C. Historic Properties

Anticipated Section 106 Compliance Processes: As indicated at the opening of Section 3.12.1, Section 106 of NHPA requires that Reclamation determine if an implementation action has the potential to impact historic properties, and then address any identified adverse impacts. It is Reclamation's policy to seek to avoid adverse impacts to historic properties that are eligible to the Register. Therefore, when such properties are identified within the potential impact area of an implementation action, Reclamation will seek to either relocate the action to avoid the historic property, or work around the property so that it is protected from damage.

Archeological surveys and tribal consultations to determine if TCPs are present will likely be necessary for many implementation actions. Reclamation anticipates utilizing a phased strategy to address Section 106 requirements. The historic property investigation phases will be refined to mesh with implementation action planning and design phases, as the latter processes become better understood. However, Reclamation anticipates that the typical strategy would be as follows:

1. When a site location has been determined, a Reclamation cultural resources staff person will examine preliminary information to assess if there is the potential for historic properties at the location. This will likely focus on examining photographs and other materials collected by the study team. The assessment will be provided to the Subbasin Liaison to take into consideration when finalizing project locations.
2. If Reclamation's cultural resources staff person has determined there is the potential for historic properties in the area, then historic property data collection could commence. This data collection would typically include an archeological survey of the location and adjacent areas that might be used for staging or other purposes; historic research to determine the age and historic significance of any existing irrigation works that might be altered; and notification to the appropriate tribes and a request that they inform Reclamation of any known archeological sites, TCPs, or Indian sacred sites in the area.

3. If any historic properties were found within the potential impact area, and if it appeared unlikely that the resource site could be protected from damage, then test excavations would be completed to determine eligibility to the Register. Consultations to determine eligibility would occur using processes defined in 36 CFR 800.
4. If a property were eligible to the Register and adverse effects could not be avoided, then mitigation actions would occur consistent with strategies determined during Section 106 consultation. Again, consultation would use processes as defined in 36 CFR 800. These actions would occur only if an action is selected for implementation. Potential mitigation actions are described below.

Mitigation Actions: Where adverse impacts cannot be avoided, the following mitigation actions will be completed:

1. For archeological sites, mitigation typically would consist of archeological excavation. Any recovered artifacts would remain the property of that landowner, to dispose of as they choose. Mitigation actions for TCPs must be tailored to the nature of the resource and the value it represents for the community that identified the TCP. These will be identified in consultation for specific implementation actions. Again, if mitigation actions involved recovery of any materials, they would belong to the landowner.
2. Mitigation for impacts to historic structures or buildings, such as irrigation works, typically involves historic documentation using Historic American Engineering Record or Historic American Buildings Survey standards. Since Reclamation will be implementing actions under this PEA for a 10-year period, and since it is likely that many of the impacted irrigation works would represent similar kinds of historic events, Reclamation would likely seek to programmatically mitigate the impacts. This might consist of basin or region-wide research addressing a larger theme of small, private irrigation systems of the area and how they contributed to area development.

When warranted, mitigation may also include completing interpretive materials for public enjoyment. Since Reclamation's implementation actions would occur on private land, it is likely that any interpretive actions would occur off-site. They would likely consist of educational displays at existing public destination sites, such as local historical societies or BLM or USFS interpretive sites.

D. Paleontological Resources

Anticipated Project-Specific Impact Assessment Processes: It is Reclamation's policy to seek to avoid adverse impacts to scientifically-valuable fossil deposits. Therefore, when such deposits are identified within the potential impact area of an implementation action, Reclamation will seek to either relocate the action to avoid the resource, or to work around the resource location so that it is protected from damage.

Reclamation anticipates utilizing a phased strategy to determine if paleontological deposits are present and will be unacceptably impacted by implementation action. The assessment will occur in conjunction with Section 106 processes defined in Section 3.12.3. Reclamation anticipates that the typical strategy would be as follows:

1. When a site location has been determined, a Reclamation cultural resources staff person will examine preliminary information to assess if there is the potential for paleontological resources at the location. This examination will likely focus on determining if fossiliferous soil formations outcrop in or near the area. Where they outcrop, the John Day Fossil Beds National Monument will be contacted to determine if they are aware of fossil materials in soils in the potential implementation area. If there are a number of possible project locations in specific reaches of watershed streams, then Reclamation would contract for records research to identify known fossil sites in those reaches.
2. When fossiliferous soils are present, an archeological survey crew would conduct investigations to determine if fossils are present at that location. This crew would be directed to watch for fossil materials while completing the archeological survey. If fossils were noted, they would collect a sample and record the location. The samples would then be provided to a professional paleontologist to assess if they might be scientifically important.
3. If it appears the fossils may be scientifically important and it is unlikely that the resource locality could be protected from damage, then a professional paleontologist would visit the site and conduct necessary actions to clearly assess the value of the fossil resource.
4. If a fossil locality were scientifically important and adverse effects could not be avoided, then mitigation actions would be considered. These actions would occur only if an action has been selected for implementation, consistent with conditions discussed below.

Mitigation Actions: Where adverse impacts cannot be avoided, the following mitigation actions will be completed:

1. Mitigation actions will consist, at a minimum, of detailed recordation of the deposit by a professional paleontologist.
2. Actual excavation of fossil deposits would likely occur only where the landowner has agreed to donate the recovered materials to the John Day Fossil Beds National Monument or other appropriate public institution. In most of those cases, fossil collection would likely be limited to a small representative sample. More extensive, systematic scientific excavation of fossil materials and, when warranted, associated environmental samples, would likely be limited to locations of outstanding scientific value. Mitigation would include analysis of collected samples, cataloging, and minimum preparation for curation.

3. Mitigation might also consist of completing or contributing toward preparation of interpretive materials for public enjoyment. This might particularly be used when landowners will not agree to donate fossil materials to an appropriate institution. Reclamation anticipates that interpretive efforts would contribute to existing efforts at the John Day Fossil Beds National Monument or other existing public interpretive program.

E. Indian Sacred Sites

Although EO 13007 requirements do not apply on non-federal lands, if, in the course of NHPA consultations with tribal staff, Reclamation is informed that an Indian sacred site is present, then Reclamation will consider if it is feasible to avoid or minimize damage to such sites. These protective actions would be implemented only when they would not compromise Reclamation's ability to meet responsibilities under the BiOp in an efficient and cost-effective manner.

Design and other criteria can be modified or augmented as part of consultation on individual, site-specific, in-stream projects. All actions related to the implementation of Action 149 will be conditional to the appropriate criteria developed during forthcoming programmatic and site-specific consultation with NMFS and USFWS.

Appendix P
OWRD Minimum Streamflows and In-stream Water Rights in the Project Area
(All values in cfs)

North Fork John Day Subbasin

Crane Creek RM: @ mouth Certificate: 73272

| Month | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | Jun. | Jul. | Aug. | Sept. |
|-------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Flow | 1.2 | 1.8 | 2.6 | 2.9 | 3.2 | 4.3 | 14.0 | 14.0 | 8.0 | 3.1 | 1.0 | 0.8 |

Trail Creek RM: 2.0 to 0.0 Certificate: 73273

| Month | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | Jun. | Jul. | Aug. | Sept. |
|-------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Flow | 8.5 | 7.8 | 5.6 | 6.1 | 6.0 | 7.3 | 19.6 | 50.0 | 33.0 | 20.3 | 10.2 | 8.3 |

Granite Creek¹ RM: 7.0 to 0.0 Certificate: 59784

| Month | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | Jun. | Jul. | Aug. ² | Sept. ² |
|-------|------|------|------|------|------|------|------|------|------|------|-------------------|--------------------|
| Flow | 30.0 | 30.0 | 55.0 | 55.0 | 55.0 | 71.0 | 71.0 | 71.0 | 55.0 | 30.0 | 30.0/ 71.0 | 71.0/ 30.0 |

North Fork John Day River RM: 112.0 - 101.0 Certificate: 73271

| Month | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | Jun. | Jul. | Aug. | Sept. |
|-------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Flow | 28.2 | 23.5 | 15.7 | 16.7 | 15.4 | 15.8 | 32.7 | 80.0 | 58.0 | 40.0 | 36.3 | 28.6 |

Desolation Creek RM: 21.5 to 0.0 Certificate: 62317

| Month | Oct. | Nov. | Dec. | Jan. | Feb. ² | Mar. | Apr. | May | Jun. | Jul. ² | Aug. ² | Sept. |
|-------|------|------|------|------|-------------------|------|------|------|------|-------------------|-------------------|-------|
| Flow | 12.0 | 12.0 | 30.0 | 50.0 | 50.0/ 60.0 | 60.0 | 60.0 | 60.0 | 50.0 | 30.0/ 12.0 | 12.0/ 30.0 | 30.0 |

Camas Creek RM: 10.8 to 0.0 Certificate: 62320

| Month | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | Jun. | Jul. | Aug. | Sept. |
|-------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| Flow | 67.6 | 86.3 | 105.0 | 112.0 | 135.0 | 163.0 | 300.0 | 300.0 | 200.0 | 150.0 | 69.6 | 58.6 |

Camas Creek RM: 17.9 to 10.8 Certificate: 62319

| Month | Oct. | Nov. | Dec. | Jan. | Feb. ² | Mar. | Apr. | May | Jun. | Jul. ² | Aug. | Sept. |
|-------|------|------|------|------|-------------------|------|------|------|------|-------------------|------|-------|
| Flow | 15.0 | 40.0 | 60.0 | 60.0 | 60.0/ 75.0 | 75.0 | 75.0 | 75.0 | 60.0 | 40.0/ 15.0 | 15.0 | 15.0 |

Camas Creek RM: 23.0 to 17.9 Certificate: 62318

| Month | Oct. | Nov. | Dec. | Jan. | Feb. ² | Mar. | Apr. | May | Jun. | Jul. ² | Aug. | Sept. |
|-------|------|------|------|------|-------------------|------|------|------|------|-------------------|------|-------|
| Flow | 12.0 | 40.0 | 55.0 | 55.0 | 55.0/ 70.0 | 70.0 | 70.0 | 70.0 | 55.0 | 40.0/ 12.0 | 12.0 | 12.0 |

North Fork John Day River RM: 101.0 - 65.4 Certificate: 72646

| Month | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | Jun. | Jul. | Aug. | Sept. |
|-------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| Flow | 67.6 | 86.3 | 105.0 | 112.0 | 135.0 | 163.0 | 300.0 | 300.0 | 200.0 | 150.0 | 69.6 | 58.6 |

Big Wall Creek RM: 15.0 - 4.5 Certificate: 63259

| Month | Oct. | Nov. | Dec. | Jan. | Feb. ² | Mar. | Apr. | May | Jun. | Jul. ² | Aug. | Sept. |
|-------|------|------|------|------|-------------------|------|------|------|------|-------------------|------|-------|
| Flow | 7.0 | 15.0 | 25.0 | 30.0 | 30.0/ 44.0 | 4.0 | 44.0 | 44.0 | 30.0 | 15.0/ 7.0 | 7.0 | 7.0 |

Big Wall Creek RM: 4.5 - 0.0 Certificate: 63257

| Month | Oct. | Nov. | Dec. | Jan. | Feb. ² | Mar. | Apr. | May | Jun. | Jul. ² | Aug. | Sept. |
|-------|------|------|------|------|-------------------|------|------|------|------|-------------------|------|-------|
| Flow | 14.0 | 30.0 | 50.0 | 50.0 | 50.0/ 66.0 | 66.0 | 66.0 | 66.0 | 50.0 | 30.0/ 14.0 | 14.0 | 14.0 |

Cottonwood Creek¹ RM: @ mouth Certificate: 59783

| Month | Oct. | Nov. | Dec. | Jan. | Feb. ² | Mar. | Apr. | May | Jun. | Jul. ² | Aug. | Sept. |
|-------|------|------|------|------|-------------------|------|------|------|------|-------------------|------|-------|
| Flow | 3.0 | 10.0 | 10.0 | 10.0 | 10.0/ 15.0 | 15.0 | 15.0 | 15.0 | 10.0 | 7.0/ 3.0 | 3.0 | 3.0 |

Cottonwood Creek RM: 17.6 to 0.0 Certificate: 63251

| Month | Oct. | Nov. | Dec. | Jan. | Feb. ² | Mar. | Apr. | May | Jun. | Jul. | Aug. | Sept. |
|-------|------|------|------|------|-------------------|------|------|------|------|------|------|-------|
| Flow | 6.0 | 10.0 | 25.0 | 25.0 | 25.0/ 33.0 | 33.0 | 33.0 | 33.0 | 25.0 | 10.0 | 6.0 | 6.0 |

North Fork John Day River¹ RM: 60.2 to 0.0 Certificate: 59792

| Month | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | Jun. | Jul. | Aug. | Sept. |
|-------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Flow | 35.0 | 35.0 | 35.0 | 35.0 | 35.0 | 35.0 | 35.0 | 35.0 | 35.0 | 35.0 | 35.0 | 35.0 |

North Fork John Day River¹ RM: 15.3 - 0.0 Certificate: 66611

| Month | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | Jun. | Jul. | Aug. | Sept. |
|-------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Flow | 55.0 | 55.0 | 55.0 | 55.0 | 55.0 | 55.0 | 55.0 | 55.0 | 55.0 | 55.0 | 55.0 | 55.0 |

North Fork John Day River RM: 15.0 - 0.0 Certificate: 72643

| Month | Oct. | Nov. | Dec. | Jan. | Feb. ² | Mar. | Apr. | May | Jun. | Jul. | Aug. | Sept. |
|-------|-------|-------|-------|-------|-------------------|-------|-------|-------|-------|-------|-------|-------|
| Flow | 168.0 | 235.0 | 235.0 | 235.0 | 235.0/ 380.0 | 380.0 | 380.0 | 380.0 | 235.0 | 175.0 | 157.0 | 140.0 |

Middle Fork John Day Subbasin

Vinegar Creek

RM: 4.0 - 0.0

Certificate: 64192

| Month | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | Jun. | Jul. ² | Aug. | Sept. |
|-------|------|------|------|------|------|------|------|------|------|-------------------|------|-------|
| Flow | 3.0 | 3.0 | 7.0 | 15.0 | 15.0 | 25.0 | 25.0 | 25.0 | 15.0 | 7.0/ 3.0 | 3.0 | 3.0 |

Clear Creek¹

RM: @ mouth

Certificate: 59782

| Month | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | Jun. | Jul. ² | Aug. ² | Sept. ² |
|-------|------|------|------|------|------|------|------|------|------|-------------------|-------------------|--------------------|
| Flow | 10.0 | 10.0 | 10.0 | 18.0 | 18.0 | 25.0 | 25.0 | 25.0 | 18.0 | 10.0/ 4.0 | 4.0/ 25.0 | 25.0/ 10.0 |

Camp Creek

RM: 3.0 - 0.0

Certificate: 63256

| Month | Oct. | Nov. | Dec. | Jan. | Feb. ² | Mar. | Apr. | May | Jun. | Jul. ² | Aug. | Sept. |
|-------|------|------|------|------|-------------------|------|------|------|------|-------------------|------|-------|
| Flow | 7.0 | 15.0 | 35.0 | 35.0 | 35.0/ 48.0 | 48.0 | 48.0 | 48.0 | 35.0 | 15.0/ 7.0 | 7.0 | 7.0 |

Long Creek

RM: 31.2 to 25.6

Certificate: 63254

| Month | Oct. | Nov. | Dec. | Jan. | Feb. ² | Mar. | Apr. | May | Jun. | Jul. ² | Aug. | Sept. |
|-------|------|------|------|------|-------------------|------|------|------|------|-------------------|------|-------|
| Flow | 3.0 | 8.0 | 15.0 | 15.0 | 15.0/ 20.0 | 20.0 | 20.0 | 20.0 | 15.0 | 8.0/ 3.0 | 3.0 | 3.0 |

Long Creek

RM: 25.6 to 0.0

Certificate: 63255

| Month | Oct. | Nov. | Dec. | Jan. | Feb. ² | Mar. | Apr. | May | Jun. | Jul. ² | Aug. | Sept. |
|-------|------|------|------|------|-------------------|------|------|------|------|-------------------|------|-------|
| Flow | 5.0 | 10.0 | 15.0 | 15.0 | 15.0/ 25.0 | 25.0 | 25.0 | 25.0 | 15.0 | 10.0/ 5.0 | 5.0 | 5.0 |

Middle Fork John Day River¹

RM: 14.9 - 0.0

Certificate: 66610

| Month | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | Jun. | Jul. | Aug. | Sept. |
|-------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Flow | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 |

Middle Fork John Day River¹

RM: 10 to 0.0

Certificate: 59789

| Month | Oct. | Nov. | Dec. | Jan. | Feb. ² | Mar. | Apr. | May | Jun. | Jul. ² | Aug. ² | Sept. ² |
|-------|------|------|------|------|-------------------|-------|-------|-------|------|-------------------|-------------------|--------------------|
| Flow | 50.0 | 80.0 | 80.0 | 80.0 | 80.0/ 125.0 | 125.0 | 125.0 | 125.0 | 80.0 | 50.0/ 25.0 | 25.0/ 125.0 | 125.0/ 50.0 |

Upper John Day Subbasin

Indian Creek

RM: 7.0 to 0.0

Certificate: 64193

| Month | Oct. | Nov. | Dec. | Jan. | Feb. ² | Mar. | Apr. | May | Jun. | Jul. ² | Aug. | Sept. |
|-------|------|------|------|------|-------------------|------|------|------|------|-------------------|------|-------|
| Flow | 5.0 | 10.0 | 20.0 | 20.0 | 20.0/ 26.0 | 26.0 | 26.0 | 26.0 | 20.0 | 10.0/ 5.0 | 5.0 | 5.0 |

John Day River¹

RM: 275.7

Certificate: 59788

| Month | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | Jun. | Jul. | Aug. ² | Sept. |
|-------|------|------|------|------|------|------|------|------|------|------|-------------------|-------|
| Flow | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 34.0 | 34.0 | 34.0 | 25.0 | 15.0 | 15.0/ 34.0 | 34.0 |

Canyon Creek¹

RM: 15.3 to 0.0

Certificate: 59781

| Month | Oct. | Nov. | Dec. | Jan. | Feb. ² | Mar. | Apr. | May | Jun. | Jul. ² | Aug. | Sept. |
|-------|------|------|------|------|-------------------|------|------|------|------|-------------------|------|-------|
| Flow | 9.0 | 15.0 | 25.0 | 25.0 | 25.0/ 34.0 | 34.0 | 34.0 | 34.0 | 25.0 | 15.0/ 9.0 | 9.0 | 9.0 |

East Fork Canyon Creek

RM: 8.0 - 1.0

Certificate: 73270

| Month | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | Jun. | Jul. | Aug. | Sept. |
|-------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Flow | 2.7 | 4.1 | 4.7 | 4.8 | 5.8 | 11.9 | 22.0 | 22.0 | 15.0 | 6.6 | 2.6 | 2.1 |

Middle Fork Canyon Creek

RM: 8.0 - 0.0

Certificate: 73269

| Month | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | Jun. | Jul. | Aug. | Sept. |
|-------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Flow | 1.4 | 2.1 | 2.4 | 2.5 | 3.1 | 6.3 | 15.6 | 20.4 | 11.1 | 2.9 | 1.3 | 1.1 |

Beech Creek¹

RM: 11.3 to 0.0

Certificate: 59779

| Month | Oct. | Nov. | Dec. | Jan. | Feb. ² | Mar. | Apr. | May | Jun. | Jul. ² | Aug. | Sept. |
|-------|------|------|------|------|-------------------|------|------|------|------|-------------------|------|-------|
| Flow | 8.0 | 15.0 | 30.0 | 30.0 | 30.0/ 44.0 | 44.0 | 44.0 | 44.0 | 30.0 | 15.0/ 8.0 | 8.0 | 8.0 |

East Fork Beech Creek

RM: 8.0 to 4.0

Certificate: 63252

| Month | Oct. | Nov. | Dec. | Jan. | Feb. ² | Mar. | Apr. | May | Jun. | Jul. ² | Aug. | Sept. |
|-------|------|------|------|------|-------------------|------|------|------|------|-------------------|------|-------|
| Flow | 2.0 | 2.0 | 8.0 | 8.0 | 8.0/ 10.0 | 10.0 | 10.0 | 10.0 | 8.0 | 4.0/ 2.0 | 2.0 | 2.0 |

East Fork Beech Creek

RM: 4.0 to 0.0

Certificate: 63253

| Month | Oct. | Nov. | Dec. | Jan. | Feb. ² | Mar. | Apr. | May | Jun. | Jul. ² | Aug. | Sept. |
|-------|------|------|------|------|-------------------|------|------|------|------|-------------------|------|-------|
| Flow | 4.0 | 8.0 | 15.0 | 15.0 | 15.0/ 22.0 | 22.0 | 22.0 | 22.0 | 15.0 | 8.0/ 4.0 | 4.0 | 4.0 |

John Day River¹

RM: 251

Certificate: 59787

| Month | Oct. | Nov. | Dec. | Jan. | Feb. ² | Mar. | Apr. | May | Jun. | Jul. ² | Aug. | Sept. |
|-------|------|------|------|------|-------------------|-------|-------|-------|------|-------------------|------|-------|
| Flow | 50.0 | 80.0 | 80.0 | 80.0 | 80.0/ 118.0 | 118.0 | 118.0 | 118.0 | 80.0 | 150.0/ 30.0 | 30.0 | 30.0 |

South Fork John Day River¹ RM: 14.9 to 0.0 Certificate: 59794

| Month | Oct. | Nov. | Dec. | Jan. | Feb. ² | Mar. | Apr. | May | Jun. | Jul. ² | Aug. | Sept. |
|-------|------|------|-------|-------|-------------------|-------|-------|-------|-------|-------------------|------|-------|
| Flow | 25.0 | 50.0 | 100.0 | 100.0 | 100.0/ 133.0 | 133.0 | 133.0 | 133.0 | 100.0 | 50.0/ 25.0 | 25.0 | 25.0 |

Murderers Creek RM: 7.0 - 0.0 Certificate: 63258

| Month | Oct. | Nov. | Dec. | Jan. | Feb. ² | Mar. | Apr. | May | Jun. | Jul. ² | Aug. | Sept. |
|-------|------|------|------|------|-------------------|------|------|------|------|-------------------|------|-------|
| Flow | 8.0 | 8.0 | 15.0 | 30.0 | 30.0/ 41.0 | 41.0 | 41.0 | 41.0 | 30.0 | 15.0/ 8.0 | 8.0 | 8.0 |

John Day River¹ RM: 211.3 Certificate: 59786

| Month | Oct. | Nov. | Dec. | Jan. | Feb. ² | Mar. | Apr. | May | Jun. | Jul. | Aug. | Sept. |
|-------|------|-------|-------|-------|-------------------|-------|-------|-------|-------|------|------|-------|
| Flow | 60.0 | 120.0 | 120.0 | 120.0 | 120.0/ 160.0 | 160.0 | 160.0 | 160.0 | 120.0 | 60.0 | 60.0 | 60.0 |

Rock Creek¹ RM: 5.0 to 0.0 Certificate: 59793

| Month | Oct. | Nov. | Dec. | Jan. | Feb. ² | Mar. | Apr. | May | Jun. | Jul. ² | Aug. | Sept. |
|-------|------|------|------|------|-------------------|------|------|------|------|-------------------|------|-------|
| Flow | 10.0 | 20.0 | 35.0 | 35.0 | 35.0/ 50.0 | 50.0 | 50.0 | 50.0 | 35.0 | 20.0/ 10.0 | 10.0 | 10.0 |

¹ Originally established as minimum streamflows, then converted to in-stream water rights between 1989 and 1991.

² Split streamflow data "x/y" where x = minimum in-stream water right for first half of the month, y = minimum in-stream water right for second half of the month.

Appendix Q

Animal and Plant Species Having Special Protection Status within the Project Area.¹

| SCIENTIFIC NAME | COMMON NAME | PROTECTION STATUS ² | | | | HABITAT |
|-------------------------------------------------------|--------------------------------------------|--------------------------------|--------------------|-----|------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| | | FEDERAL | STATE ³ | BLM | FS | |
| FEDERAL LISTED, PROPOSED, OR CANDIDATE SPECIES | | | | | | |
| <i>Oncorhynchus mykiss</i> | Steelhead, Summer (Mid-Columbia River ESU) | LT | SV | - | - | Cool headwater streams and mainstem rivers, gravel riffles for spawning and feeding, pools for holding and hiding. |
| <i>Salvelinus confluentus</i> | Trout, Bull | LT | SC | - | - | Cold, complex headwater streams and mainstem rivers, deep pools. |
| <i>Haliaeetus leucocephalus</i> | Eagle, Bald | LT | LT | - | - | Nests in a tall open-canopied tree (typically live, but occasionally dead) within 1/2-mile of water body that harbors fish or waterfowl prey. |
| <i>Lynx canadensis</i> | Lynx | LT | - | - | - | Dense boreal forests with meadow, bog, or rock-outcrop openings. |
| <i>Coccyzus americanus</i> | Cuckoo, Yellow-billed | C | SC | - | - | Thick, closed-canopy, riparian forest of cottonwood or willow with a dense shrubby understory. |
| <i>Rana luteiventris</i> | Frog, Columbia Spotted | C | SU | - | M, U | Ponds, springs, marshes, and slow-moving streams having a bottom layer of decaying vegetation. |
| Other AMPHIBIANS | | | | | | |
| <i>Rana pipiens</i> | Frog, Northern Leopard | - | SC | BS | U | Marshes, wet meadows, vegetated irrigation canals, ponds, and reservoirs with quiet or slow-flowing water. |
| <i>Ascaphus truei</i> | Frog, Tailed | SoC | SV | - | - | Clear, cold, fast-flowing permanent streams with riparian vegetation. |
| <i>Bufo boreas</i> | Toad, Western | - | SV | - | - | Forested or non-forested habitats, with loose soil or rodent burrows for daytime hiding places and seasonal water for breeding. |

Animal and Plant Species Having Special Protection Status within the Project Area. ¹

| SCIENTIFIC NAME | COMMON NAME | PROTECTION STATUS ² | | | | HABITAT |
|-----------------------------------|-----------------------------------|--------------------------------|--------------------|-----|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | FEDERAL | STATE ³ | BLM | FS | |
| Other BIRDS | | | | | | |
| <i>Agelaius tricolor</i> | Blackbird, Tricolored | SoC | SP | AS | M | Marshes with emergent vegetation such as cattails, willows, or other tall shrubs in northern Umatilla and Wheeler counties. |
| <i>Dolichonyx oryzivorus</i> | Bobolink | - | SV | - | M | Wet or irrigated meadows, grasslands, pastures, or grain cropland, especially if mowed or grazed to create favorable conditions for small nesting colonies. |
| <i>Bucephala albeola</i> | Bufflehead | - | SU | AS | M | Mountain lakes surrounded by open forest containing snags for cavity-nesting. Uses low elevation lakes in winter. |
| <i>Grus canadensis tabida</i> | Crane, Greater Sandhill | - | SV | - | - | Marshes, wet meadows, lakes with shoreline of emergent vegetation, or drier pastures remote from human intrusion. |
| <i>Falco peregrinus anatum</i> | Falcon, American Peregrine | - | LE | BS | M, U | Nests on the ledge of tall cliffs that overlook open (or patchy forested) areas with an ample supply of bird prey. |
| <i>Empidonax traillii adastus</i> | Flycatcher, Eastern Oregon Willow | SoC | SU | - | - | Thickets of willow or other tall shrubs at the edge of streams, springs, seeps, marshes, or meadows. Less-common in tall shrubs of forest clearings near surface water. |
| <i>Empidonax wrightii</i> | Flycatcher, Gray | - | - | - | M, U | Arid shrublands -- or open forests of ponderosa pine or juniper -- having big sagebrush, bitterbrush, or mountain mahogany. |
| <i>Contopus cooperi</i> | Flycatcher, Olive-sided | SoC | SV | - | - | Open coniferous or deciduous forest with an uneven canopy and tall snags for perching. |

Animal and Plant Species Having Special Protection Status within the Project Area. ¹

| SCIENTIFIC NAME | COMMON NAME | PROTECTION STATUS ² | | | | HABITAT |
|------------------------------------|------------------------|--------------------------------|--------------------|-----|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | FEDERAL | STATE ³ | BLM | FS | |
| <i>Accipiter gentilis</i> | Goshawk, Northern | SoC | SC | BS | - | Coniferous forest or aspen/cottonwood groves with dense canopy cover of mature trees. |
| <i>Buteo regalis</i> | Hawk, Ferruginous | SoC | SC | BS | - | Open juniper woodlands, sagebrush flats, or grasslands with cliff ledge or isolated tree for nest platform. |
| <i>Buteo swainsoni</i> | Hawk, Swainson's | - | SV | - | - | Open juniper woodlands, sagebrush flats, or grasslands with tree for nest platform. |
| <i>Sitta pygmaea</i> | Nuthatch, Pygmy | - | SC/SV ⁴ | BS | - | Open ponderosa pine forest with mature trees and large-diameter decayed snags for its nest or roost cavity. |
| <i>Aegolius funereus</i> | Owl, Boreal | - | SU | - | - | Mountainous high-elevation forest of Engelmann spruce, subalpine fir, Douglas fir, or lodgepole pine with large-diameter snags for nest cavity. |
| <i>Otus flammeolus</i> | Owl, Flammulated | - | SC | BS | - | Open ponderosa pine forest, with large-diameter defective live trees or snags for a nest cavity and grassy openings for foraging. |
| <i>Strix nebulosa</i> | Owl, Great Gray | - | SV | - | - | Mid-elevation, mature forest of mixed conifer species, lodgepole pine, or ponderosa pine with meadows or other forest openings (e.g. clearcuts). |
| <i>Athene cunicularia hypugaea</i> | Owl, Western Burrowing | SoC | SC | BS | - | Sagebrush, grasslands, pastures, or roadsides where vegetation is sparse, terrain is level, and ground squirrel or badger burrows are available for underground nesting. |

Animal and Plant Species Having Special Protection Status within the Project Area. ¹

| SCIENTIFIC NAME | COMMON NAME | PROTECTION STATUS ² | | | | HABITAT |
|-----------------------------------------|---------------------------------|--------------------------------|--------------------|-----|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | FEDERAL | STATE ³ | BLM | FS | |
| <i>Glaucidium gnoma</i> | Pygmy-owl, Northern | - | SC | BS | - | Coniferous or coniferous-deciduous forests having large-diameter defective live trees or snags for a nest cavity. |
| <i>Oreortyx pictus</i> | Quail, Mountain | SoC | SU | - | - | Open ponderosa pine forest with abundant brushy undergrowth, especially shrubs producing berry fruits. |
| <i>Centrocercus urophasianus phaios</i> | Sage-grouse, Western Greater | SoC | SV | BS | M | Shrubland dominated by big sagebrush that covers 15-50% of the ground. Interspersed meadows are extremely valuable as brood-rearing sites. |
| <i>Bartramia longicauda</i> | Sandpiper, Upland | SoC | SC | BS | M, U | For breeding, partially-flooded, high-elevation meadows with grasses, sedges, and forbs often surrounded by sagebrush. Nesting known on private lands of southern Grant and Umatilla Counties. |
| <i>Sphyrapicus thyroideus</i> | Sapsucker, Williamson's | - | SU | - | - | Open high-elevation forest of mature ponderosa pine, lodgepole pine, grand fir, Douglas fir, or aspen with defective live trees or snags for nest cavity. |
| <i>Lanius ludovicianus</i> | Shrike, Loggerhead | - | SV | - | - | Sagebrush and juniper steppe having big sagebrush, bitterbrush, or greasewood of western Grant County and eastern Wheeler County. |
| <i>Riparia riparia</i> | Swallow, Bank | - | SU | - | - | Grassland, pasture, or agricultural areas near surface water, with vertical dirt embankments for its excavated nest burrow. |

Animal and Plant Species Having Special Protection Status within the Project Area. ¹

| SCIENTIFIC NAME | COMMON NAME | PROTECTION STATUS ² | | | | HABITAT |
|------------------------------|--------------------------|--------------------------------|--------------------|-----|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | FEDERAL | STATE ³ | BLM | FS | |
| <i>Picoides arcticus</i> | Woodpecker, Black-backed | - | SC | BS | - | Forest of mature lodgepole pine, ponderosa pine, or occasionally other tree species with defective live trees or snags for its nest cavity. |
| <i>Dryocopus pileatus</i> | Woodpecker, Pileated | - | SV | - | - | Forest of mature Douglas fir, grand fir, or mixed conifers with abundant large snags for its nest cavity and logs for foraging on carpenter ants. |
| <i>Picoides tridactylus</i> | Woodpecker, Three-toed | - | SC | BS | - | High-elevation forest of mature lodgepole pine, grand fir, subalpine fir, or Engelmann spruce with large defective live trees or snags for its nest cavity. |
| <i>Picoides albolarvatus</i> | Woodpecker, White-headed | SoC | SC | BS | - | Forest of mature ponderosa pine or mixed conifers that include ponderosa pine, with large snags for its nest cavity. |
| Other FISH | | | | | | |
| <i>Lampetra tridentata</i> | Lamprey, Pacific | SoC | SV | - | - | Cool mainstem rivers with gravel for spawning and sediment for burrowing. |
| <i>Cottus bairdi</i> spp. | Sculpin, Malheur Mottled | SoC | SC | - | M | Cool, clear streams with moderate to rapid current, and rubble, gravel, or rocky substrate. |
| <i>Cottus marginatus</i> | Sculpin, Margined | SoC | SV | - | U | Deep pools or glides in streams with small gravel or silt substrate and water temperatures preferably below 20° C (68° F). |
| <i>Oncorhynchus mykiss</i> | Trout, Interior Redband | SoC | SV | - | M, U | Cool headwater streams and mainstem rivers, gravel riffles for spawning and feeding, pools for holding and hiding. |

Animal and Plant Species Having Special Protection Status within the Project Area. ¹

| SCIENTIFIC NAME | COMMON NAME | PROTECTION STATUS ² | | | | HABITAT |
|------------------------------------------|-----------------------------|--------------------------------|--------------------|-----|------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| | | FEDERAL | STATE ³ | BLM | FS | |
| <i>Oncorhynchus clarki lewisi</i> | Trout, Westslope Cutthroat | SoC | SV | - | M, U | Cool headwater streams and mainstem rivers, gravel riffles for spawning and feeding, pools for holding and hiding. |
| Other MAMMALS | | | | | | |
| <i>Corynorhinus townsendii palescens</i> | Bat, Pale Western Big-eared | SoC | SC | BS | - | Any vegetation type with rock crevice, bridge, or building for male roosting, and cave or mine for maternity roosting and winter hibernation. |
| <i>Antrozous pallidus pallidus</i> | Bat, Pallid | - | SV | - | - | Open ponderosa pine forest, juniper woodland, or sagebrush with rock crevices, caves, mines, or buildings for roosting. |
| <i>Lasionycteris noctivagans</i> | Bat, Silver-haired | SoC | SU | - | - | Mature or over-mature forest of Douglas fir, grand fir, ponderosa pine, or juniper with loose-barked snags for roosting. |
| <i>Euderma maculatum</i> | Bat, Spotted | SoC | - | AS | - | A wide variety of habitats -- from ponderosa pine forest to desert -- having cliffs or canyon walls with crevices for roosting. |
| <i>Martes pennanti</i> | Fisher | SoC | SC | BS | M | Extensive closed-canopy forest of mature coniferous or deciduous trees with abundant snags and streams in the vicinity. |
| <i>Vulpes velox</i> | Fox, Kit | - | LT | - | - | Arid desert valleys dominated by shadscale, greasewood, or big sagebrush with loose soils to dig burrows for denning. |
| <i>Lepus townsendii</i> | Jackrabbit, White-tailed | - | SU | - | - | Arid bunchgrass areas with few or no shrubs. |
| <i>Martes americana</i> | Marten, American | - | SV | - | - | Closed-canopy forest of mature lodgepole pine, Douglas fir, grand fir with abundant large-diameter snags and logs. |

Animal and Plant Species Having Special Protection Status within the Project Area. ¹

| SCIENTIFIC NAME | COMMON NAME | PROTECTION STATUS ² | | | | HABITAT |
|-----------------------------------|-------------------------------|--------------------------------|--------------------|-----|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | FEDERAL | STATE ³ | BLM | FS | |
| <i>Myotis thysanodes</i> | Myotis, Fringed | SoC | SV | - | - | A wide variety of habitats -- forests, or riparian areas within sagebrush shrubland, may be preferred -- having caves or buildings for roosting. |
| <i>Myotis evotis</i> | Myotis, Long-eared | SoC | SU | - | - | Coniferous forest, deciduous forest, or arid shrubland with rock crevices, caves, mines, bridges, hollow trees, or loose bark for roosting. |
| <i>Myotis volans</i> | Myotis, Long-legged | SoC | SU | - | - | Forest of ponderosa pine, lodgepole pine, grand fir, Douglas fir, or riparian deciduous trees with cliff faces, rock outcrops, abandoned buildings, or caves for roosts. |
| <i>Myotis ciliolabrum</i> | Myotis, Western Small-footed | SoC | SU | - | - | Coniferous forest or arid shrubland with rock crevices for roosting, or caves and mines for winter hibernation. |
| <i>Brachylagus idahoensis</i> | Rabbit, Pygmy | SoC | SV | AS | M | Shrubland or juniper woodland with tall (031-35 inches) big sagebrush (028 percent canopy cover) growing on deep (019-21 inches), friable soil for burrow excavation. Historic range was east of line connecting Redmond and Klamath Falls, but is now east of Millican and Paulina. |
| <i>Ovis canadensis canadensis</i> | Sheep, Rocky Mountain Bighorn | - | - | - | U | Open areas on rocky slopes, ridges, rimrocks, cliffs, and canyon walls having adjacent grasslands or meadows with few trees. |
| <i>Gulo gulo luteus</i> | Wolverine, California | SoC | LT | - | M, U | Isolated alpine areas or high-elevation forests. |

Animal and Plant Species Having Special Protection Status within the Project Area. ¹

| SCIENTIFIC NAME | COMMON NAME | PROTECTION STATUS ² | | | | HABITAT |
|-------------------------------------------|---------------------------------|--------------------------------|--------------------|-----|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | FEDERAL | STATE ³ | BLM | FS | |
| Other REPTILES | | | | | | |
| <i>Clemmys marmorata marmorata</i> | Turtle, Northwestern Pond | SoC | SC | - | - | Marshes, sloughs, oxbows, ponds, vernal pools, reservoirs, or slow-water rivers and streams below 2,500' elevation (sometimes up to 4,000'). Single isolated records from the John Day River system in western Grant County. |
| <i>Chrysemys picta</i> | Turtle, Painted | - | SC | BS | U | Still or slow-moving waters with soft substrates, basking sites, and abundant aquatic vegetation. |
| Other PLANTS | | | | | | |
| <i>Achnatherum hendersonii</i> | Ricegrass, Henderson's | - | C | BS | M | Dry, rocky soils in association with <i>Poa secunda</i> , <i>Artemisia rigida</i> , <i>Danthonia unispicata</i> , and <i>Lomatium</i> spp. |
| <i>Achnatherum wallowensis</i> | Ricegrass, Wallowa | SoC | - | BS | M | Scablands with basalt or lithosol soils. |
| <i>Allium robinsonii</i> | Onion, Robinson's | - | - | AS | - | Sand and gravel deposits of river valley benches in association with <i>Artemisia arbuscula</i> and <i>Poa secunda</i> . |
| <i>Astragalus collinus var. laurentii</i> | Milk-vetch, Laurence's | SoC | LT | BS | - | Basaltic grassland and sagebrush desert. |
| <i>Astragalus diaphanus var. diurnus</i> | Milk-vetch, South Fork John Day | - | LT | BS | M | Thin, gravelly soils usually overlaying basalt within open juniper woodlands. |
| <i>Astragalus tegetarioides</i> | Kentrophyta, Bastard | - | C | BS | M | Ponderosa pine forest. |
| <i>Botrychium ascendens</i> | Moonwort, Upward-lobed | SoC | C | - | - | Moist meadows, riparian areas, or moist roadsides. |
| <i>Botrychium crenulatum</i> | Moonwort, Crenulate | SoC | C | - | M, U | Moist meadows, riparian areas, or moist roadsides. |
| <i>Botrychium fenestratum</i> | | - | - | - | U | Moist meadows, riparian areas, or moist roadsides. |

Animal and Plant Species Having Special Protection Status within the Project Area. ¹

| SCIENTIFIC NAME | COMMON NAME | PROTECTION STATUS ² | | | | HABITAT |
|---------------------------------------------------------------|--------------------------------|--------------------------------|--------------------|-----|---------|----------------------------------------------------------------------------------------------------------------------------|
| | | FEDERAL | STATE ³ | BLM | FS | |
| <i>Botrychium lanceolatum</i> <i>ssp. lanceolatum</i> | Grape-fern, Lance-leaved | - | - | - | M, U | Moist meadows, riparian areas, or moist roadsides. |
| <i>Botrychium lunaria</i> | Moonwort | - | - | - | U | Moist meadows, riparian areas, or moist roadsides. |
| <i>Botrychium minganense</i> | Moonwort, Gray | - | - | - | U | Moist meadows, riparian areas, or moist roadsides. |
| <i>Botrychium montanum</i> | Grape-fern, Mountain | - | - | - | U | Moist meadows, riparian areas, or moist roadsides. |
| <i>Botrychium paradoxum</i> | Moonwort, Twin-spike | SoC | C | - | U | Moist meadows, riparian areas, or moist roadsides. |
| <i>Botrychium pedunculatum</i> | Moonwort, Stalked | SoC | C | - | U | Moist meadows, riparian areas, or moist roadsides. |
| <i>Botrychium pinnatum</i> | Grape-fern, Pinnate | - | - | - | M, U | Moist meadows, riparian areas, or moist roadsides. |
| <i>Calochortus longebarbatus</i> <i>var. longebarbatus</i> | Mariposa-lily, Long-bearded | - | - | - | U | Moist meadows or riparian areas in dry forests. |
| <i>Calochortus longebarbatus</i> <i>var. peckii</i> | Mariposa-lily, Peck's | - | C | BS | M | Along dry streambeds, intermittent drainages, or seasonally-wet meadows within ponderosa pine forest and juniper woodland. |
| <i>Calochortus macrocarpus</i> <i>var. maculosus</i> | Mariposa-lily, Green-band | - | - | - | U | Grasslands or ridgetops. |
| <i>Calochortus nitidus</i> | Mariposa-lily, Broad-fruit | - | - | - | U | Grasslands or ridgetops. |
| <i>Camissonia pygmaea</i> | Evening-primrose, Dwarf | - | C | BS | M, U | Sagebrush uplands. |
| <i>Carex backii</i> | Sedge, Back's | - | - | - | M, U | Moist, shady forest or other warm, moist plant associations. |
| <i>Carex crawfordii</i> | Sedge, Crawford's | - | - | - | U | Moist or wet places. |
| <i>Carex eleocharis</i> | Sedge, Involute-leaved | - | - | AS | - | Open, dry to moderately moist, often grassy places. |
| <i>Carex hystericina</i> | Sedge, Porcupine | - | - | AS | U | Wet ground near riparian areas, meadows, or roadside ditches. |

Animal and Plant Species Having Special Protection Status within the Project Area. ¹

| SCIENTIFIC NAME | COMMON NAME | PROTECTION STATUS ² | | | | HABITAT |
|-------------------------------------------|----------------------------|--------------------------------|--------------------|-----|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | FEDERAL | STATE ³ | BLM | FS | |
| <i>Carex interior</i> | Sedge, Inland | - | - | AS | M, U | Swamps, bogs, or other wet places. |
| <i>Carex parryana</i> | Sedge, Idaho | - | - | - | M | Moist meadows or riparian areas. |
| <i>Cymopterus nivalis</i> | Spring-parsley, Snowline | - | - | AS | - | Rocky places at high elevation. |
| <i>Cypripedium fasciculatum</i> | Lady's-slipper, Clustered | SoC | C | - | M, U | Fir or ponderosa pine forest. |
| <i>Dryopteris filix-mas</i> | Fern, Male | - | - | AS | - | Streambanks or moist forest. |
| <i>Erigeron disparipilus</i> | Erigeron, White Cushion | - | - | - | U | Scablands with basalt or lithosol soils. |
| <i>Eriogonum crosbyae</i> | Buckwheat, Crosby's | SoC | LT | - | - | Sparsely-vegetated outcrops of tuffaceous parent material with little soil development -- or deep clay with rhyolite -- within sagebrush at 5,100-6,000' elevation. |
| <i>Eriogonum cusickii</i> | Eriogonum, Cusick's | SoC | C | BS | - | Stony sagebrush desert. |
| <i>Juncus torreyi</i> | Rush, Torrey's | - | - | AS | - | Moist areas at seeps, springs, ponds, or rivers. |
| <i>Leptodactylon pungens ssp.hazeliae</i> | Prickly-phlox, Hazel's | SoC | C | - | U | Basalt cliffs or ridges. |
| <i>Lomatium erythrocarpum</i> | Lomatium, Red-fruited | SoC | LE | - | M | Talus slopes, ridges, or argillite rocky areas. |
| <i>Lomatium ravenii</i> | Lomatium, Raven's | - | - | AS | M | Scablands with lithosol soils. |
| <i>Lomatium salmoniflorum</i> | Lomatium, Salmon River | - | - | - | U | Grasslands or open rocky areas. |
| <i>Luina serpentina</i> | Luina, Colonial | SoC | LT | BS | M | Rocky outcrops or talus slopes, commonly on basalt and marine sediments. |
| <i>Lycopodium complanatum</i> | Cedar, Ground | - | - | - | U | Forests or disturbed areas with decayed logs. |
| <i>Mimulus clivicola</i> | Monkeyflower, Bank | - | - | - | U | Vernal, moist open slopes or draws. |
| <i>Mimulus evanescens</i> | Monkeyflower, Disappearing | SoC | C | BS | M | Meadows, seeps, and riparian or seasonally-moist areas within sagebrush desert. |
| <i>Mimulus jungermannioides</i> | Monkeyflower, Hepatic | - | C | BS | - | Steep-sided canyons with vertical, basalt walls that seep water during much of the year. |

Animal and Plant Species Having Special Protection Status within the Project Area. ¹

| SCIENTIFIC NAME | COMMON NAME | PROTECTION STATUS ² | | | | HABITAT |
|--------------------------------------------------|------------------------|--------------------------------|--------------------|-----|------|------------------------------------------------------------------------------------|
| | | FEDERAL | STATE ³ | BLM | FS | |
| <i>Pellaea bridgesii</i> | Cliffbrake, Bridge's | - | - | - | M | Talus slopes, ridges, or argillite/granite rocky areas. |
| <i>Phacelia minutissima</i> | Phacelia, Dwarf | - | C | - | M, U | Vernal wet seeps, meadow edges, or playas. |
| <i>Phlox multiflora</i> | Phlox, Many-flowered | - | - | - | U | Basalt cliffs or rocky outcrops. |
| <i>Pleuropogon oregonus</i> | Semaphoregrass, Oregon | SoC | LT | - | M | Wet meadows or riparian areas within sagebrush. |
| <i>Rorippa columbiae</i> | Cress, Columbia | - | C | BS | - | Riparian areas with moist, sandy soil. |
| <i>Suksdorfia violacea</i> | Suksdorfia, Violet | - | - | - | U | Moist, mossy cliffs or wet talus slopes. |
| <i>Thelypodium eucosmum</i> | Thelypody, Arrow-leaf | SoC | LT | BS | M, U | Springs, seeps, streambanks, or underneath isolated trees within juniper woodland. |
| <i>Thelypodium howellii</i> ssp. <i>howellii</i> | Thelypody, Howell's | - | - | AS | - | River valleys and moist plains. |
| <i>Trifolium douglasii</i> | Clover, Douglas | SoC | - | - | U | Moist meadows or riparian areas. |
| <i>Trifolium leibergii</i> | Clover, Leiberg's | SoC | C | - | - | Sagebrush desert or ponderosa pine forest. |

¹ Sources:

- (a) Oregon Natural Heritage Program. 2001. *Rare, Endangered and Threatened Plants and Animals of Oregon*. Accessed online at www.abi.org/nhp/us/or/tebook/pdf.
- (b) Hanf, Jan. 2002. *Prineville District 2002 Special Status Animal Species List*. Bureau of Land Management, Prineville, OR 3 pp.
- (c) Bureau of Land Management. 2002. *Prineville District Special Status Plant List, Including Other Plants of Interest*. Accessed online at www.or.blm.gov/prineville/Botany/district_list.htm.
- (d) USDA Forest Service. 2000. *Pacific Northwest Regional Forester's Sensitive Animal List* (updated November 15, 2000).
- (e) USDA Forest Service. 1999. *Pacific Northwest Regional Forester's Sensitive Plant List* (updated April 1999).

- ²
- = No status
 - BA = Bureau of Land Management assessment species
 - BS = Bureau of Land Management sensitive species
 - C = Candidate for listing as endangered or threatened species
 - LE = Listed as endangered species
 - LT = Listed as threatened species
 - M = Forest Service sensitive species on Malheur NF
 - SC = State of Oregon sensitive - critical species
 - SoC = Species of concern
 - SP = State of Oregon sensitive - peripheral species
 - SU = State of Oregon sensitive - unknown species
 - SV = State of Oregon sensitive - vulnerable species
 - U = Forest Service sensitive species on Umatilla NF

- ³ Oregon law, as specified in ORS 496.192 for wildlife and ORS 564.135 for plants, does not require a private landowner to protect *state-listed* species or restrict the use of private land. Because *state-sensitive* species are potentially eligible for state-listing, they are identified for the express purpose of encouraging actions that improve their status and prevent state-listing. Private landowners who voluntarily improve or protect habitat for state-listed or state-sensitive species help society to avoid future restrictions that a federal listing might require by authority of the Endangered Species Act of 1973 (as amended).
- ⁴ SC in Blue Mountain ecoregion/province; SV in High Lava Plains ecoregion/province

Appendix R

Oregon Department of Agriculture-Designated Noxious Weeds Known to Occur in Counties of the Project Area. ¹

| SCIENTIFIC NAME | COMMON NAME | ODA ² DESIGNATION | | | COUNTY ³ | | | |
|-----------------------------------|-----------------------|---------------------------------|---|---|---------------------|---|---|---|
| | | A | B | T | G | M | U | W |
| <i>Agropyron repens</i> | Quackgrass | | • | | | | • | |
| <i>Ambrosia artemisiifolia</i> | Ragweed | | • | | | | • | |
| <i>Anchusa officinalis</i> | Common bugloss | | • | | | | • | |
| <i>Cardaria draba</i> | Whitetop | | • | | • | • | • | • |
| <i>Cardaria pubescens</i> | Hairy whitetop | | • | | | • | • | • |
| <i>Carduus nutans</i> | Musk thistle | | • | | • | • | • | |
| <i>Centaurea diffusa</i> | Diffuse knapweed | | • | | • | • | • | • |
| <i>Centaurea maculosa</i> | Spotted knapweed | | • | • | • | • | • | • |
| <i>Centaurea repens</i> | Russian knapweed | | • | | • | • | • | • |
| <i>Centaurea solstitialis</i> | Yellow starthistle | | • | • | • | • | • | • |
| <i>Centaurea virgata</i> | Squarrose knapweed | • | | • | • | | | |
| <i>Chondrilla juncea</i> | Rush skeletonweed | | • | • | | • | • | |
| <i>Cirsium arvense</i> | Canada thistle | | • | | • | • | • | • |
| <i>Cirsium vulgare</i> | Bull thistle | | • | | • | • | • | • |
| <i>Conium maculatum</i> | Poison hemlock | | • | | • | • | • | • |
| <i>Convolvulus arvensis</i> | Field bindweed | | • | | • | • | • | |
| <i>Crupina vulgaris</i> | Bearded creeper | | • | | | | • | |
| <i>Cynoglossum officinale</i> | Houndstongue | | • | | • | | • | |
| <i>Equisetum telmateia</i> | Giant horsetail | | • | | | | • | |
| <i>Euphorbia esula</i> | Leafy spurge | | • | • | • | | • | • |
| <i>Hemizonia pungens</i> | Spikeweed | | • | | • | • | • | • |
| <i>Hypericum perforatum</i> | St. Johnswort | | • | | • | • | • | • |
| <i>Kochia scoparia</i> | Kochia | | • | | | • | | |
| <i>Lepidium latifolium</i> | Perennial pepperweed | | • | | • | | • | • |
| <i>Linaria dalmatica</i> | Dalmation toadflax | | • | | • | • | • | • |
| <i>Linaria vulgaris</i> | Yellow toadflax | | • | | | • | • | |
| <i>Lythrum salicaria</i> | Purple loosestrife | | • | • | • | • | • | • |
| <i>Onopordum acanthium</i> | Scotch thistle | | • | | • | • | • | • |
| <i>Potentilla recta</i> | Sulfur cinquefoil | | • | | • | • | • | |
| <i>Salvia aethiopsis</i> | Mediterranean sage | | • | | • | | | • |
| <i>Senecio jacobaea</i> | Tansy ragwort | | • | • | • | • | • | • |
| <i>Silybum marianum</i> | Milk thistle | | • | | | | • | |
| <i>Solanum elaeagnifolium</i> | Silverleaf nightshade | • | | | | | • | |
| <i>Sorghum halepense</i> | Johnsongrass | | • | | | • | • | |
| <i>Sphaerophysa salsula</i> | Austrian peaweed | | • | | | • | | |
| <i>Taeniatherum caput-medusae</i> | Medusahead rye | | • | | • | • | • | • |

Oregon Department of Agriculture-Designated Noxious Weeds Known to Occur in Counties of the Project Area. ¹

| SCIENTIFIC NAME | COMMON NAME | ODA ² DESIGNATION | | | COUNTY ³ | | | |
|----------------------------|-----------------|---------------------------------|---|---|---------------------|---|---|---|
| | | A | B | T | G | M | U | W |
| <i>Tribulus terrestris</i> | Puncturevine | | • | | • | • | | • |
| <i>Xanthium spinosum</i> | Spiny cocklebur | | • | | | • | • | • |

¹ Sources:

(a) Oregon Department of Agriculture. 2001. *Oregon Noxious Weed Strategic Plan*.

Accessed online June 8, 2002 at

www.oda.state.or.us/Plant/Weed_Control/plan/contents.html.

(b) Rice, P.M. 2002. *INVADERS Database System*. University of Montana, Missoula, MT.

Accessed May 14, 2002 online at www.invader.dbs.umt.edu.

(c) Sheley, R.L., and J.K. Petroff. 1999. *Biology and Management of Noxious Rangeland Weeds*. Oregon State University Press, Corvallis, OR. 438 pp.

² **A** = "A" designated weed has known economic importance and (1) occurs in Oregon in small enough infestations to make eradication/containment possible, or (2) is not known to occur in Oregon but its presence in neighboring states makes future Oregon occurrence seem imminent.

RECOMMENDED ACTION: Intensive control when and where found.

B = "B" designated weed has known economic importance and is regionally abundant but may have limited distribution in some counties.

RECOMMENDED ACTION: Intensive control at the state or county level as determined on a case-by-case basis. Biological control is the main approach where implementation of a fully integrated statewide management plan is not feasible.

T = "T" designated weed is given priority by the State Weed Board for implementing a statewide management plan.

Source: Oregon Department of Agriculture. 2002. *Noxious Weed Policy and Classification System*. Accessed May 14, 2002 online at

www.oda.state.or.us/Plant/weed_control/Weed_Policy.pdf.

³ Only those counties with significant acreage in the project area are included here.

G = Grant County

M = Morrow County

U = Umatilla County

W = Wheeler County

Appendix S

Characteristics of wetlands likely to occur on private lands of the John Day River Basin. ¹

| USFWS NWI CLASS | LAND FORM ³ | WETLAND PLANT ASSOCIATION ⁴ | DOMINANT PLANTS | MEETS CRITERIA FOR JURISDICTIONAL WETLAND ⁶ | | |
|--------------------------------------------------------------|------------------------|----------------------------------------|--------------------------------------------------------------------------------------------------|--------------------------------------------------------|------|------|
| | | | | VEG | SOIL | HYDR |
| Persistent Emergent (map-coded PEM1, or R3/4SB7, or R3/4US5) | BV | Small-fruit Bulrush PA | Small-fruit bulrush, Large-leaf avens, Small-winged sedge, Tall mannagrass | Y | Y | Y |
| | | Torrent Sedge PCT | Torrent sedge, Creeping bentgrass, Field mint, Common willow-herb | Y | ? | ? |
| | BV+NV | Common Horsetail PA | Common horsetail, Field mint, Common monkey-flower, Tall mannagrass | Y | Y | Y |
| | NV | American Speedwell PA | American speedwell, Common monkey-flower, Musk monkey-flower, Fowl bluegrass, Tall mannagrass | Y | ? | ? |
| | | Arrowleaf Groundsel PA | Arrowleaf groundsel, False bugbane, Oak fern, Soft-leaved sedge, Tall mannagrass | Y | ? | ? |
| | | Tall Mannagrass PA | Tall mannagrass, Lady fern, Dewey's sedge, Common horsetail, Stinking currant | Y | Y | Y/N |
| Broad-leaved Deciduous Scrub-Shrub (map-coded PSS1) | BV | Coyote Willow PA | Coyote willow, Common horsetail, Rigid willow, Pacific willow, Creeping bentgrass | Y | ? | Y |
| | | Willow/Mesic Forb PCT | Booth willow, Stinking currant, Mountain alder, Musk monkey-flower, Tall mannagrass | Y | ? | ? |
| | | Rigid Willow PCT | Rigid willow, Pacific willow, Prairie sage, Fowl bluegrass, Creeping bentgrass | Y | ? | ? |
| | | Mountain Alder/Bladder Sedge PA | Mountain alder, Bladder sedge, Aquatic sedge, Woolly sedge, Cusick's sedge | Y | Y/N | Y |
| | | Mountain Alder, Kentucky Bluegrass PCT | Mountain alder, Kentucky bluegrass, Starry false-Solomon's seal, Blue wildrye, Common cowparsnip | Y/N | Y/N | N |

Characteristics of wetlands likely to occur on private lands of the John Day River Basin. ¹

| USFWS NWI CLASS | LAND FORM ³ | WETLAND PLANT ASSOCIATION ⁴ | DOMINANT PLANTS | MEETS CRITERIA FOR JURISDICTIONAL WETLAND ⁶ | | |
|-----------------|------------------------------------------------|--------------------------------------------------|-----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|------|------|
| | | | | VEG | SOIL | HYDR |
| | BV+NV | Mountain Alder - Red-osier Dogwood/Mesic Forb PA | Mountain alder, Red-osier dogwood, Prickly currant, Common snowberry, Enchanter's nightshade | Y | Y/N | Y |
| | | Mountain Alder/ Dewey's Sedge PCT | Mountain alder, Dewey's sedge, Thimbleberry, Nodding fescue, Common horsetail | Y | Y/N | Y/N |
| | | Red-osier Dogwood PA | Red-osier dogwood, Common snowberry, Stinking currant, Rocky Mtn. maple, Tall mannagrass | Y | Y | N |
| | | Black Hawthorn PCT | Black hawthorn, Common snowberry, Alder-leaved buckthorn, Western meadowrue, Enchanter's nightshade | Y/N | Y/N | Y/N |
| | NV | Water Birch/ Mesic Forb PCT | Water birch, Stinking currant, Mountain alder, Common snowberry, Creeping bentgrass | Y | ? | ? |
| | | Mountain Alder-Currants/Mesic Forb PA | Mountain alder, Stinking currant, Prickly currant, Brook saxifrage, Enchanter's nightshade | Y | Y | Y |
| | | Mountain Alder/ Common Horsetail PA | Mountain alder, Common horsetail, Tall mannagrass | Y | N | Y |
| | | Mountain Alder/ Ladyfern PA | Mountain alder, Lady fern, Drooping woodreed, Stinking currant, Prickly currant | Y | Y | Y |
| | | Mountain Alder/ Tall Mannagrass PA | Mountain alder, Tall mannagrass, Stinking currant, Common horsetail | Y | Y | Y |
| | | Sitka Alder/ Drooping Woodreed PA | Sitka alder, Drooping woodreed, Stinking currant, Tall mannagrass, Prickly currant | Y | Y | Y |
| | Broad-leaved Deciduous Forest (map-coded PFO1) | BV | Quaking Aspen/ Kentucky Bluegrass PA | Quaking aspen, Kentucky bluegrass, Woods strawberry, False-hellebore, Common snowberry | Y/N | N |

Characteristics of wetlands likely to occur on private lands of the John Day River Basin. ¹

| USFWS NWI CLASS | LAND FORM ³ | MNF/UNF WETLAND PLANT ASSOCIATION ⁴ | DOMINANT PLANTS | MEETS CRITERIA FOR JURISDICTIONAL WETLAND ⁶ | | |
|-------------------------------------------------|------------------------|--------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|------|------|
| | | | | VEG | SOIL | HYDR |
| | | Quaking Aspen/ Mesic Forb PCT | Quaking aspen, Sweetmarsh butterweed, Starry false-solomon's seal, Prickly currant, Leafy (Meadow) arnica | Y | ? | ? |
| | | Black Cottonwood/ Pacific Willow PA | Black cottonwood, Pacific willow, Creeping bentgrass, Kentucky bluegrass, Rigid willow | Y | Y | Y |
| | | Black Cottonwood/ Mountain Alder- Red-osier Dogwood PA | Black cottonwood, Mountain alder, Red-osier dogwood, False bugbane, Western thimbleberry | Y | Y | Y/N |
| | | Black Cottonwood/ Common Snowberry PCT | Black cottonwood, Common snowberry, Black hawthorn, Kentucky bluegrass, Starry false-solomon's seal | N | N | N |
| | BV+NV | Quaking Aspen/ Common Snowberry PA | Quaking aspen, Common snowberry, Kentucky bluegrass, Blue wildrye, Western blue flag | N | Y/N | Y |
| Needle-leaved Evergreen Forest (map-coded PFO4) | BV | Ponderosa Pine/Kentucky Bluegrass PCT | Ponderosa pine, Kentucky bluegrass, Bearded wheatgrass, Red fescue, Beardless bluebunch | N | ? | ? |
| | | Grand Fir/ Common Snowberry - Floodplain PCT | Common snowberry, Grand fir, Mountain alder, Engelmann spruce, Prickly currant | Y/N | ? | ? |
| | BV+NV | Ponderosa Pine/Common Snowberry - Floodplain PA | Ponderosa pine, Common snowberry, Kentucky bluegrass, Black hawthorn, Starry false-solomon's seal | N | N | N |
| | | Douglas Fir/Common Snowberry - Floodplain PA | Common snowberry, Douglas fir, Elk sedge, Black hawthorn, Blue wildrye | N | N | Y |
| | | NV | Grand Fir/Rocky Mountain Maple - Floodplain PA | Rocky Mtn. maple, Grand fir, Common snowberry, Bald-hip rose, Lewis' mock-orange | Y/N | N |
| | | Grand Fir/ Ladyfern PA | Lady fern, Grand fir, Sitka alder, Alpine mitrewort, Clasp-leaf twistedstalk | Y | N | Y/N |

¹ John Day/Clarno Formation Physiographic Unit and Mesic Forest Zone 1 Physiographic Unit. *Source: Crowe, E.A., and R.R. Clausnitzer. 1997. Mid-Montane Wetland Plant Associations of the Malheur, Umatilla and Wallowa-Whitman National Forests. R6-NR-ECOL-TP-22-97. 299 pp.*

² National Wetland Inventory (NWI) maps are primarily derived from stereoscopic analysis of high altitude aerial photographs, usually without onsite verification. *Source of classifications: Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. FWS/OBS-79/31. 103 pp.*

³ **BV** = Broad or moderately broad valley with low gradient ($\leq 2\%$), where stream channels are of moderately high sinuosity and a pool/riffle bedform with well-developed floodplains.

NV = Narrow "V"-shaped valley with moderate-or-high gradient (2-4%), where stream channels are moderately entrenched, of low sinuosity, and riffle-dominated.

⁴ **MNF** = Malheur National Forest

UNF = Umatilla National Forest

PA = "Plant Association", defined as an assemblage of native vegetation in equilibrium with the environment on a specific fluvial surface.

PCT = "Plant Community Type", defined as a set of plant communities (i.e. assemblage of plants living together and interacting among themselves in a specific location) with similar structure and floristic composition.

⁵ Listed in approximate descending order of aerial coverage.

⁶ *Source: U.S. Army Corps of Engineers. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1. 92 pp. + 4 appendices (Internet version).*

VEG = Hydrophytic vegetation indicators require that more than 50 percent of the dominant species are classified as OBL, FACW, FAC+, or FAC. The "50/20 rule" is the recommended method for selecting dominants when quantitative data are available.

SOIL = Hydric soil indicators are many, including Crowe & Clausnitzer's (1997) description of redoximorphic features (zones of iron and/or manganese concentration/depletion) found within 10" (25 cm) of the ground surface.

HYDR = Wetland hydrology indicators are many, including Crowe & Clausnitzer's (1997) description of a water table within 16" (40 cm) of the ground surface during the plant-growing season. This suggests the site is inundated or saturated at least 12.5% of an average growing season, thereby satisfying the hydrology indicator.

Y = Probable

Y/N = Possible

N = Improbable

? = Data in Crowe & Clausnitzer (1997) not provided.

Appendix T

Fish Life History Charts of North Fork and Middle Fork John Day River

Mouth North Fork John Day River upstream to Camas Creek - Anadromous Species

| Life Stage/Activity/Species | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Upstream Adult Migration | | | | | | | | | | | | |
| Summer Steelhead | X X | X X | X X | X X | X X | X X | | | X X | X X | X X | X X |
| Spring Chinook | | | | X X | X X | | | | | | | |
| Fall Chinook | | | | | | | | | | | | |
| Pacific Lamprey | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Adult Spawning | | | | | | | | | | | | |
| Summer Steelhead | | | X X | X X | X X | X | | | | | | |
| Spring Chinook | | | | | | | | | | | | |
| Fall Chinook | | | | | | | | | | | | |
| Pacific Lamprey | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Adult Holding | | | | | | | | | | | | |
| Summer Steelhead | | | | | | | | | | | | |
| Spring Chinook | | | | | | | | | | | | |
| Fall Chinook | | | | | | | | | | | | |
| Pacific Lamprey | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Egg Incubation through Fry Emergence | | | | | | | | | | | | |
| Summer Steelhead | | | X X | X X | X X | X X | | | | | | |
| Spring Chinook | | | | | | | | | | | | |
| Fall Chinook | | | | | | | | | | | | |
| Pacific Lamprey | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Juvenile Rearing | | | | | | | | | | | | |
| Summer Steelhead | X X | X X | X X | X X | X X | X X | X X | X X | X X | X X | X X | X X |
| Spring Chinook | X X | X X | X X | X X | X X | X X | X X | X X | X X | X X | X X | X X |
| Fall Chinook | | | | | | | | | | | | |
| Pacific Lamprey | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Downstream Juvenile Migration | | | | | | | | | | | | |
| Summer Steelhead | | | | | | | | | | | | |
| Spring Chinook | | | X X | X X | X X | X X | | | | | | |
| Fall Chinook | | | | | | | | | | | | |
| Pacific Lamprey | | | | | | | | | | | | |
| | | | | | | | | | | | | |

Each block represents a two-week time period.

- Represents periods of peak use based on professional opinion.
- Represents lesser level of use based on professional opinion.
- Represents periods of presence - no level of use indicated.
- X Represents periods of use based on reported observation from # 203320.

Streamnet ID # 203320 - Stock Summary Reports for Columbia River Anadromous Salmonids.

Note: Peak use equates to 90% of life stage activity occurring in this time frame. Lesser use equates to 10% of life stage activity occurring in this time frame.

Mouth North Fork John Day River upstream to Camas Creek - Non-Anadromous

| Life Stage/Activity/Species | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Adult Fluvial/Adfluvial Migration | | | | | | | | | | | | |
| Bull Trout Fluvial, sub-adults | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Red Band Trout Fluvial | | | | | | | ■ | ■ | ■ | ■ | ■ | ■ |
| Westslope Cutthroat Trout | | | | | | | | | | | | ■ |
| Adult/Sub-Adult Rearing | | | | | | | | | | | | |
| Bull Trout Fluvial | | | | | | | | | | | | |
| Red Band Trout Fluvial | | | | | | | | | | | | |
| Westslope Cutthroat Trout Fluvial | | | | | | | | | | | | |
| Adult Spawning | | | | | | | | | | | | |
| Bull Trout Fluvial | | | | | | | | | ■ | ■ | ■ | |
| Red Band Trout Fluvial | | | | ■ | ■ | ■ | ■ | | | | | |
| Westslope Cutthroat Trout Fluvial | | | | | | | | | | | | |
| Egg Incubation through Fry Emergence | | | | | | | | | | | | |
| Bull Trout Fluvial | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | ■ | ■ | ■ | ■ |
| Red Band Trout Fluvial | | | ■ | ■ | ■ | ■ | ■ | | | | | |
| Westslope Cutthroat Trout Fluvial | | | | | | | ■ | | | | | |
| Juvenile Rearing | | | | | | | | | | | | |
| Bull Trout Fluvial | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Red Band Trout Fluvial | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Westslope Cutthroat Trout Fluvial | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Juvenile Migration | | | | | | | | | | | | |
| Bull Trout Fluvial | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Red Band Trout Fluvial | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Westslope Cutthroat Trout Fluvial | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |

Each block represents a two-week time period.

- Represents periods of peak use based on professional opinion.
- Represents lesser level of use based on professional opinion.
- Represents periods of presence - no level of use indicated.

Note: Peak use equates to 90% of life stage activity occurring in this time frame. Lesser use equates to 10% of life stage activity occurring in this time frame.

North Fork John Day R. above Camas Creek - Anadromous Species

| Life Stage/Activity/Species | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---------------------------------------------|-----|-----|-----|-------|----------------|-----|-----|-----|-----|-----|-----|-----|
| Upstream Adult Migration | | | | | | | | | | | | |
| Summer Steelhead | X X | X X | X X | X X | X X | | | | | | | |
| Spring Chinook | | | | | X X | | | | | | | |
| Adult Holding | | | | | | | | | | | | |
| Summer Steelhead | | | | | Not applicable | | | | | | | |
| Spring Chinook | | | | | | X X | X X | X X | | | | |
| Adult Spawning | | | | | | | | | | | | |
| Summer Steelhead | | | | X X X | X X X | | | | | | | |
| Spring Chinook | | | | | | | | | X X | | | |
| Egg Incubation through Fry Emergence | | | | | | | | | | | | |
| Summer Steelhead | | | | | X X | X X | X | | | | | |
| Spring Chinook | X X | X X | X X | X X | | | | | X X | X X | X X | X X |
| Juvenile Rearing | | | | | | | | | | | | |
| Summer Steelhead | X X | X X | X X | X X | X X | X X | X X | X X | X X | X X | X X | X X |
| Spring Chinook | X X | X X | X X | X X | X X | X X | X X | X X | X X | X X | X X | X X |
| Downstream Juvenile Migration | | | | | | | | | | | | |
| Summer Steelhead | | | | X X | X X | X X | | | | | | |
| Spring Chinook | | | | X X | X X | X X | | | | | | |

Each block represents a two-week time period.

-  Represents periods of peak use based on professional opinion.
-  Represents lesser level of use based on professional opinion.
-  Represents periods of presence - no level of use indicated.
- X Represents periods of use based on reported observation from # 203320, # 51857 and/or # 51333.

Streamnet ID # 51857 - John Day Basin Spring Chinook Salmon Escapement and Productivity Monitoring Annual Progress Report.

Streamnet ID # 51333 - Annual Progress Report: Spring Chinook Studies in the John Day River.

Streamnet ID # 203320 - Stock Summary Reports for Columbia River Anadromous Salmonids.

Note: Primary source of information is document # 203320.

Note: Peak use equates to 90% of life stage activity occurring in this time frame. Lesser use equates to 10% of life stage activity occurring in this time frame.

North Fork John Day R. above Camas Creek - Non-Anadromous Species

| Life Stage/Activity/Species | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|-----|----------------|-----|-----|-----|-----|-----|-----|-----|
| Adult Fluvial/Adfluvial Migration Bull Trout Fluvial, sub-adults Red Band Trout Fluvial Westslope Cutthroat Trout | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Adult/Sub-Adult Rearing Bull Trout Fluvial Red Band Trout Fluvial Westslope Cutthroat Trout Fluvial | | | | | Not applicable | | | | | | | |
| Adult Spawning Bull Trout Fluvial Red Band Trout Fluvial Westslope Cutthroat Trout Fluvial | | | | ■ | ■ | ■ | | | ■ | ■ | ■ | |
| Egg Incubation through Fry Emergence Bull Trout Fluvial Red Band Trout Fluvial Westslope Cutthroat Trout Fluvial | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | ■ | ■ | ■ | ■ |
| Juvenile Rearing Bull Trout Fluvial Red Band Trout Fluvial Westslope Cutthroat Trout Fluvial | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Juvenile Migration Bull Trout Fluvial Red Band Trout Fluvial Westslope Cutthroat Trout Fluvial | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| <p>Each block represents a two-week time period.</p> <p>■ Represents periods of peak use based on professional opinion. ■ Represents lesser level of use based on professional opinion. ■ Represents periods of presence - no level of use indicated.</p> | | | | | | | | | | | | |

Note: Peak use equates to 90% of life stage activity occurring in this time frame. Lesser use equates to 10% of life stage activity occurring in this time frame.

Mouth Middle Fork John Day River upstream to US Highway 395 - Anadromous Species

| Life Stage/Activity/Species | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---------------------------------------------|-----|-----|-----|-----|-----------------------|-----|-----|-----------------------|-----|-----|-----|-----|
| Upstream Adult Migration | | | | | | | | | | | | |
| Summer Steelhead | X X | X X | X X | | | | | | X X | X X | X X | X X |
| Spring Chinook | | | | X X | X X | | | | | | | |
| Pacific Lamprey | | | | | | | | Need more information | | | | |
| Adult Spawning | | | | | | | | | | | | |
| Summer Steelhead | | | | X X | X X | X | | | | | | |
| Spring Chinook | | | | | Likely no use | | | | | | | |
| Pacific Lamprey | | | | | | | | | | | | |
| Adult Holding | | | | | | | | | | | | |
| Summer Steelhead | | | | | Not applicable | | | | | | | |
| Spring Chinook | | | | | Need more information | | | | | | | |
| Pacific Lamprey | | | | | Not applicable | | | | | | | |
| Egg Incubation through Fry Emergence | | | | | | | | | | | | |
| Summer Steelhead | | | X X | X X | X X | X X | | | | | | |
| Spring Chinook | | | | | Likely no use | | | | | | | |
| Pacific Lamprey | | | | | Not applicable | | | | | | | |
| Juvenile Rearing | | | | | | | | | | | | |
| Summer Steelhead | X X | X X | X X | X X | X X | X X | X X | X X | X X | X X | X X | X X |
| Spring Chinook | X X | X X | X X | X X | X X | X X | X X | X X | X X | X X | X X | X X |
| Pacific Lamprey | | | | | | | | | | | | |
| Downstream Juvenile Migration | | | | | | | | | | | | |
| Summer Steelhead | | | | X X | X X | X X | | | | | | |
| Spring Chinook | | | | X X | X X | X X | | | | | | |
| Pacific Lamprey | | | | | | | | Need more information | | | | |

Each block represents a two-week time period.

 Represents periods of peak use based on professional opinion.

 Represents lesser level of use based on professional opinion.

 Represents periods of presence - no level of use indicated.

X Represents periods of use based on reported observation from # 203320.

Streamnet ID # 203320 - Stock Summary Reports for Columbia River Anadromous Salmonids.

Note: Peak use equates to 90% of life stage activity occurring in this time frame. Lesser use equates to 10% of life stage activity occurring in this time frame.

Mouth Middle Fork John Day River upstream to US Highway 395 - Non-Anadromous Species

| Life Stage/Activity/Species | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---------------------------------------------|-----|-----|--------------------------------------|-----|----------------|-----|-----|-----|-----|-----|-----|-----|
| Adult Fluvial/Adfluvial Migration | | | | | | | | | | | | |
| Bull Trout, sub-adults | | | No documented use - needs more study | | | | | | | | | |
| Red Band Trout Fluvial | | | | | | | | | | | | |
| Adult Spawning | | | | | | | | | | | | |
| Bull Trout Fluvial | | | | | Likely no use | | | | | | | |
| Red Band Trout Fluvial | | | | | | | | | | | | |
| Adult/Sub-Adult Rearing | | | | | | | | | | | | |
| Bull Trout Fluvial | | | | | Not applicable | | | | | | | |
| Red Band Trout Fluvial | | | | | Not applicable | | | | | | | |
| Egg Incubation through Fry Emergence | | | | | | | | | | | | |
| Bull Trout Fluvial | | | | | Likely no use | | | | | | | |
| Red Band Trout Fluvial | | | | | | | | | | | | |
| Juvenile Rearing | | | | | | | | | | | | |
| Bull Trout Fluvial | | | | | Likely no use | | | | | | | |
| Red Band Trout Fluvial | | | | | | | | | | | | |
| Juvenile Migration | | | | | | | | | | | | |
| Bull Trout Fluvial | | | | | Likely no use | | | | | | | |
| Red Band Trout Fluvial | | | | | | | | | | | | |

Each block represents a two-week time period.

- Represents periods of peak use based on professional opinion.
- Represents lesser level of use based on professional opinion.
- Represents periods of presence - no level of use indicated.

Note: Peak use equates to 90% of life stage activity occurring in this time frame. Lesser use equates to 10% of life stage activity occurring in this time frame.

Middle Fork John Day River above US Highway 395 - Anadromous Species

| Life Stage/Activity/Species | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---------------------------------------------|-----|-----|-----|-------|-----------------------|-----|-----|-----|-----|-----|-----|-----|
| Upstream Adult Migration | | | | | | | | | | | | |
| Summer Steelhead | | X X | X X | X X | | | | | | | | |
| Spring Chinook | | | | | X X | | | | | | | |
| Lamprey | | | | | Need more information | | | | | | | |
| Adult Holding | | | | | | | | | | | | |
| Summer Steelhead | | | | | | | | | | | | |
| Spring Chinook | | | | | | X X | X X | X X | | | | |
| Lamprey | | | | | | | | | | | | |
| Adult Spawning | | | | | | | | | | | | |
| Summer Steelhead | | | | X X X | X X X | | | | | | | |
| Spring Chinook | | | | | | | | | X X | | | |
| Lamprey | | | | | Need more information | | | | | | | |
| Egg Incubation through Fry Emergence | | | | | | | | | | | | |
| Summer Steelhead | | | | X X | X X | X X | X | | | | | |
| Spring Chinook | X X | X X | X X | | | | | | | X X | X X | X X |
| Lamprey | | | | | Need more information | | | | | | | |
| Juvenile Rearing | | | | | | | | | | | | |
| Summer Steelhead | X X | X X | X X | X X | X X | X X | X X | X X | X X | X X | X X | X X |
| Spring Chinook | X X | X X | X X | X X | X X | X X | X X | X X | X X | X X | X X | X X |
| Lamprey | | | | | Need more information | | | | | | | |
| Downstream Juvenile Migration | | | | | | | | | | | | |
| Summer Steelhead | | | | | X X | X X | | | | | | |
| Spring Chinook | | | X X | X X | X X | X X | | | | | | |
| Lamprey | | | | | Need more information | | | | | | | |

Each block represents a two-week time period.

- Represents periods of peak use based on professional opinion.
- Represents lesser level of use based on professional opinion.
- Represents periods of presence - no level of use indicated.
- X Represents periods of use based on reported observation from # 203320.

Streamnet ID # 203320 - Stock Summary Reports for Columbia River Anadromous Salmonids.

Note: Peak use equates to 90% of life stage activity occurring in this time frame. Lesser use equates to 10% of life stage activity occurring in this time frame.

Middle Fork John Day River above US Highway 395 - Non-Anadromous

| Life Stage/Activity/Species | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Adult Fluvial/Adfluvial Migration | | | | | | | | | | | | |
| Bull Trout Fluvial, sub-adults | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Red Band Trout Fluvial | | | | | | | ■ | | | | | |
| Adult/Sub-Adult Rearing | | | | | | | | | | | | |
| Bull Trout Fluvial | | | | | | | | | | | | |
| Red Band Trout Fluvial | | | | | | | | | | | | |
| Adult Spawning | | | | | | | | | | | | |
| Bull Trout Fluvial | | | | | | | | | | | | |
| Red Band Trout Fluvial | | | | ■ | ■ | ■ | ■ | | | ■ | ■ | |
| Egg Incubation through Fry Emergence | | | | | | | | | | | | |
| Bull Trout Fluvial | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | | ■ | ■ | ■ |
| Red Band Trout Fluvial | | | ■ | ■ | ■ | ■ | ■ | | | | | |
| Juvenile Rearing | | | | | | | | | | | | |
| Bull Trout Fluvial | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Red Band Trout Fluvial | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Juvenile Migration | | | | | | | | | | | | |
| Bull Trout Fluvial | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Red Band Trout Fluvial | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| <p>Each block represents a two-week time period.</p> <p>■ Represents periods of peak use based on professional opinion. ■ Represents lesser level of use based on professional opinion. ■ Represents periods of presence - no level of use indicated.</p> | | | | | | | | | | | | |

Note: Peak use equates to 90% of life stage activity occurring in this time frame. Lesser use equates to 10% of life stage activity occurring in this time frame.

Appendix U

NMFS' Listed and Proposed Species List



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
525 NE Oregon Street
PORTLAND, OREGON 97232-2737

Refer to:
OHB2002-0110-SL

May 31, 2002

Mr. Ronald J. Eggers, Area Manager
U.S. Department of the Interior
Bureau of Reclamation
Pacific Northwest Region
Lower Columbia Area Office
825 NE Multnomah Street, Suite 1110
Portland, OR 97232-2135

JUN - 4 2002
6500 KRB 6/12

Re: Request for Updated Species List for Federal Columbia River Power System's Offsite Mitigation, Habitat Improvement Activities in the John Day Basin, Oregon

Dear Mr. Eggers:

The National Marine Fisheries Service (NMFS) has received your April 18, 2002, letter requesting an updated list of threatened and endangered anadromous fish species which may be affected by Federal Columbia River Power System's Offsite Mitigation, Habitat Improvement Activities in the John Day River Basin, Oregon. We have enclosed a list of those anadromous fish species that are listed as endangered or threatened under the Endangered Species Act (ESA), those that are proposed for listing, and those that are candidates for listing in Oregon. This inventory includes only the species under NMFS' jurisdiction occurring in the Pacific Northwest. The U.S. Fish and Wildlife Service should be contacted regarding the presence of species falling under its jurisdiction.

Available information indicates that twelve ESA-listed anadromous fish species are known to be present within or downstream from the proposed action.

- Snake River (SR) fall chinook salmon (*Onchorynchus tshawytscha*)
- SR spring/summer chinook salmon (*O. tshawytscha*)
- Upper Columbia River spring chinook salmon (*O. tshawytscha*)
- Lower Columbia River chinook salmon (*O. tshawytscha*)
- Upper Willamette River chinook salmon (*O. tshawytscha*)
- SR sockeye salmon (*O. nerka*)
- SR Basin steelhead (*O. mykiss*)
- Lower Columbia River steelhead (*O. mykiss*)
- Middle Columbia River steelhead (*O. mykiss*)
- Upper Columbia River steelhead (*O. mykiss*)
- Upper Willamette River steelhead (*O. mykiss*)
- Columbia River chum salmon (*O. keta*)



Enclosure

Endangered, Threatened, Proposed, and Candidate Species That Occur under National Marine Fisheries Service Jurisdiction in Oregon

(T=threatened, E=endangered, CH=critical habitat)

Listed Species:

Coho Salmon (*Oncorhynchus kisutch*)

- S. Oregon/N. California Coasts Evolutionarily Significant Unit(ESU)(T)
- Oregon Coast ESU (T)

Chinook Salmon (*O. tshawytscha*)

- Snake River Fall-run ESU (T)(CH)
- Snake River Spring/Summer-run ESU (T)(CH)
- Lower Columbia River ESU (T)(CH)
- Upper Willamette River ESU (T)(CH)
- Upper Columbia River Spring-run ESU (E)(CH)

Chum Salmon (*O. keta*)

- Columbia River ESU (T)(CH)

Sockeye Salmon (*O. nerka*)

- Snake River ESU (E)(CH)

Steelhead (*O. mykiss*)

- Upper Columbia River ESU (E)(CH)
- Snake River Basin ESU (T)(CH)
- Lower Columbia River ESU (T)(CH)
- Upper Willamette River ESU (T)(CH)
- Middle Columbia River ESU (T)(CH)

Proposed for Listing:

- None

Candidates for Listing:

- Coho Salmon (*O. kisutch*)
Lower Columbia River/SW Washington ESU
- Steelhead (*O. mykiss*)
Oregon Coast ESU

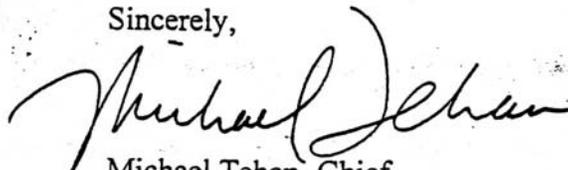
In addition, habitat in and along the length of the Columbia River has been designated as critical habitat for SR chinook salmon. Additional information on listed species' distribution, copies of Federal Register documents designating listed species status, and links to various ESA consultation policies and tools may be found on our web site at: www.nwr.noaa.gov. For information on the ESA section 7 consultation process, please refer to the ESA section 7 implementing regulations, 50 CFR Part 402.

Additional information on ESA-listed species' distribution, copies of Federal Register documents designating listed species status, and links to various ESA consultation policies and tools may be found on our web site at: www.nwr.noaa.gov. For information on the ESA section 7 consultation process, please refer to the ESA section 7 implementing regulations, 50 CFR Part 402.

In addition, please be aware that the Magnuson-Stevens Fishery Conservation and Management Act (MSA), as amended by the Sustainable Fisheries Act (SFA) of 1996 (Public Law 104-297), requires Federal agencies to consult with NMFS on activities that may adversely affect designated essential fish habitat (EFH). All accessible habitat in the John Day River and Columbia River has been designated as EFH for chinook salmon.

This letter constitutes the required notification of the presence of federally-listed threatened or endangered species or critical habitat under NMFS' jurisdiction in the area that may be affected by the proposed project. Questions regarding this letter should be directed to Brett Farman, of my staff, at 541.975.1835 ext. 228.

Sincerely,



Michael Tehan, Chief
Oregon State Branch
Habitat Conservation Division

Enclosure (1)

cc: Karen Blakney, BOR
Jennifer O'Reilly, USFWS
Tim Unterwegner, ODFW

Appendix V
USFWS' Listed and Proposed Species List

10/23/02 WED 10:18 FAX 5032316195

FWS-OSO

002



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Oregon Fish and Wildlife Office
2600 S.E. 98th Avenue, Suite 100
Portland, Oregon 97266
(503) 231-6179 FAX: (503) 231-6195

Reply To: 8330.6291(02)
File Name: Sp629.wpd
TS Number: 02-4911

May 17, 2002

Ronald Eggers
U.S. Bureau of Reclamation
825 NE Multnomah Street, Suite 1110
Portland, OR 97232-2135

Subject: Offsite-Mitigation and Habitat Improvement Activities in the
John Day Basin Project
USFWS Reference # (1-7-02-SP-629)

Dear Mr. Eggers:

This is in response to your memorandum, dated April 19, 2002, requesting information on listed and proposed endangered and threatened species that may be present within the area of the Offsite-Mitigation and Habitat Improvement Activities in the John Day Basin Project in Sherman County. The U.S. Fish and Wildlife Service (Service) received your correspondence on April 19, 2002.

We have attached a list (Attachment A) of threatened and endangered species that may occur within the area of the Offsite-Mitigation and Habitat Improvement Activities in the John Day Basin 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 (BR) requirements under the Act are outlined in Attachment 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.*, BR 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 Attachment B, as well as 50 CFR 402.12.

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

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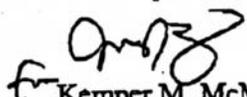
2

Attachment A includes a list of candidate species under review for listing. The list reflects changes to the candidate species list published October 30, 2001, in the Federal Register (Vol. 66, No. 210, 54808) 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 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, BR is not required to perform a Biological Assessment or evaluation or consult with the Service. However, the Service recommends addressing potential impacts to these species in order to prevent future conflicts. Therefore, if early evaluation of the project indicates that it is likely to adversely impact a candidate species or species of concern, BR may wish to request technical assistance from this office.

Your interest in endangered species is appreciated. The Service encourages BR 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 Stacy Sroufe at (503) 231-6179. All correspondence should include the above referenced file number. For questions regarding salmon and steelhead trout, please contact National Marine Fisheries Service, 525 NE Oregon Street, Suite 500, Portland, Oregon 97232, (503) 230-5400.

Sincerely,


Kemper M. McMaster
State Supervisor

Attachments
1-7-02-SP-629

cc: OFWO-ES
ODFW (nongame)

ATTACHMENT A

FEDERALLY LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES,
 CANDIDATE SPECIES AND SPECIES OF CONCERN THAT MAY OCCUR WITHIN THE
 AREA OF THE OFFSITE-MITIGATION AND HABITAT IMPROVEMENT ACTIVITIES IN
 THE JOHN DAY BASIN PROJECT
 1-7-02-SP-629

LISTED SPECIES^{1/}MammalsCanada lynx^{2/}*Felis lynx canadensis*

T

BirdsBald eagle^{3/}*Haliaeetus leucocephalus*

T

FishSteelhead (Middle Columbia River)^{4/}*Oncorhynchus mykiss*

T**

Bull trout (Columbia River Basin)^{5/}*Salvelinus confluentus*

T

PROPOSED SPECIES

None

CANDIDATE SPECIES^{6/}Birds

Yellow-billed cuckoo

*Coccyzus americanus*Amphibians and Reptiles

Columbia spotted frog

*Rana luteiventris*SPECIES OF CONCERNMammals

Pygmy rabbit

Brachylagus idahoensis

Pale western big-eared bat

Corynorhinus townsendii pallescens

Spotted bat

Euderma maculatum

California wolverine

Gulo gulo luteus

Silver-haired bat

Lasionycteris noctivagans

Pacific fisher

Martes pennanti pacifica

Small-footed myotis (bat)

Myotis ciliolabrum

Long-eared myotis (bat)

Myotis evotis

Fringed myotis (bat)

Myotis thysanodes

Long-legged myotis (bat)

Myotis volans

Yuma myotis (bat)

Myotis yumanensis

California bighorn

Ovis canadensis californiana

Preble's shrew

Sorex preblei

Birds

Northern goshawk
 Upland sandpiper
 Ferruginous hawk
 Greater sage-grouse
 Black tern
 Olive-sided flycatcher
 Willow flycatcher
 Yellow-breasted chat
 Lewis' woodpecker
 Mountain quail
 White-headed woodpecker

Accipiter gentilis
Bartramia longicauda
Buteo regalis
Centrocercus urophasianus
Chlidonias niger
Contopus cooperi
Empidonax trailli adastus
Icteria virens
Melanerpes lewis
Oreortyx pictus
Picoides albolarvatus

Amphibians and Reptiles

Northern sagebrush lizard

Sceloporus graciosus graciosus

Fishes

Malheur mottled sculpin
 Pacific lamprey
 Westslope cutthroat trout
 Interior redband trout

Cottus bairdi ssp.
Lampetra tridentata
Oncorhynchus clarki lewisi
Oncorhynchus mykiss gibbsi

Invertebrates

California floater (mussel)
 Lynn's clubtail dragonfly

Anodonta californiensis
Gomphus lynnae

Plants

Wallowa ricegrass
 Upward-lobed moonwort
 Crenulate grape-fern
 Twin spike moonwort
 Stalked moonwort
 Colonial luina
 Disappearing monkeyflower
 Little mousetail
 Oregon semaphore grass
 Arrow-leaf thelypody
 Douglas clover

Achnatherum wallowaensis
Botrychium ascendens
Botrychium crenulatum
Botrychium paradoxum
Botrychium pedunculatum
Luina serpentina
Mimulus evanescens
Myosurus minimus ssp. *apus* (= var. *sessiliflorus*)
Pleuropogon oregonus
Thelypodium eucosmum
Trifolium douglasii

(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.

- 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*
- Federal Register Vol. 65, No. 58, Mar 24, 2000, Final Rule - Canada lynx*
- Federal Register Vol. 60, No. 133, July 12, 1995 - Final Rule - Bald Eagle*
- Federal Register Vol. 64, No. 57, March 25, 1999, Final Rule - Middle Columbia and Upper Willamette River Steelhead*
- Federal Register Vol. 63, No. 111, June 10, 1998, Final Rule - Columbia River and Klamath River Bull Trout*
- Federal Register Vol. 66, No. 210, October 30, 2001, Notice of Review - Candidate or Proposed Animals and Plants*

ATTACHMENT B

**FEDERAL AGENCIES RESPONSIBILITIES UNDER SECTION 7(a) and (c)
OF THE ENDANGERED SPECIES ACT**

SECTION 7(a)-Consultation/Conference**Requires:**

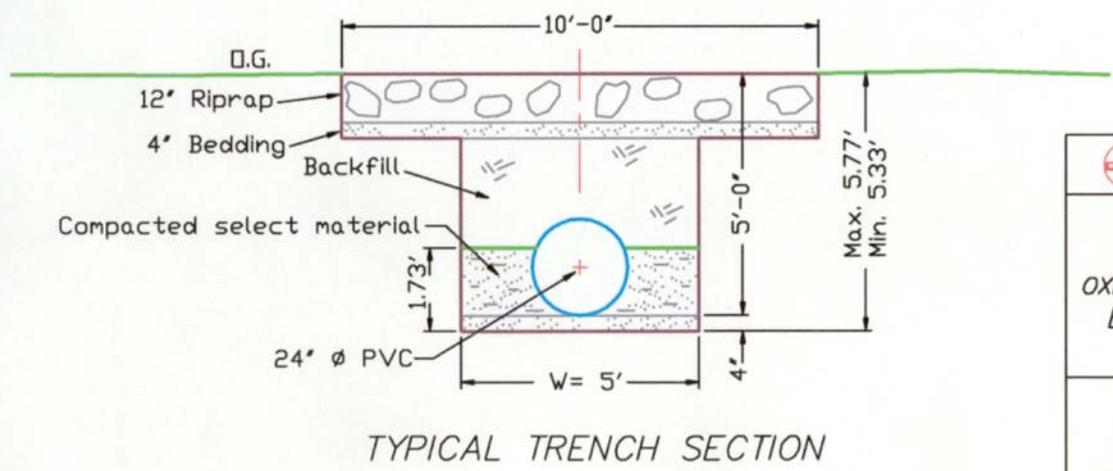
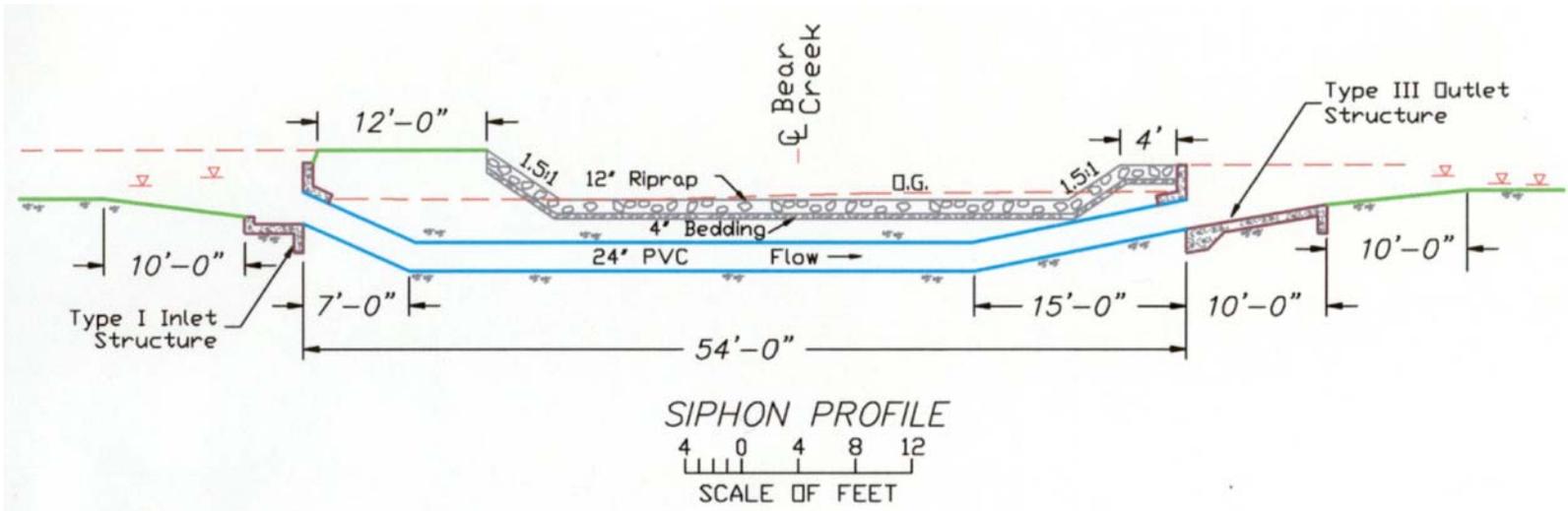
- 1) Federal agencies to utilize their authorities to carry out programs to conserve endangered and threatened species;
- 2) Consultation with FWS when a Federal action may affect a listed endangered or threatened species to insure that any action authorized, funded or carried out by a Federal agency 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 Projects¹

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 the species is present and whether suitable habitat exists for either expanding the existing population or for 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 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 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. The BA should conclude whether or not a listed species will be affected. Upon completion, the report should be forwarded to our Portland Office.

¹A 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.



| | |
|------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|
|  ALWAYS THINK SAFETY | |
| UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION OXBOW RANCH – JOHN DAY – OREGON BEAR CREEK – SIPHON SITE SIPHON DESIGN | |
| DESIGNED <u>Eugene Humbles</u> DRAWN <u>GFGrooms</u> PROGRAM MANAGER | |
| CADD SYSTEM AUTOCAD2002 BOISE, IDAHO | CADD FILENAME SIPHONDESIGN.DWG Feb. 2003 |

Appendix X

Comment Letters and Reclamation Responses



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
525 NE Oregon Street
PORTLAND, OREGON 97232-2737

Refer to:
OHB2002-0334-CL

January 22, 2003

Ms. Karen Blakney
Bureau of Reclamation
Pacific Northwest Region
Lower Columbia Area Office
825 NE Multnomah Street, Suite 1100
Portland, OR 97232-2135

Dear Ms. Blakney:

Thank you for the opportunity to review the Bureau of Reclamation's (BOR) "Programmatic Environmental Assessment" (PEA). The PEA covers implementation of the reasonable and prudent alternative (RPA) #149 fish habitat improvement measures from the December 2000 National Marine Fisheries Service (NOAA Fisheries) biological opinion on the Federal Columbia River Power System (FCRPS) in three John Day River subbasins within the Mid-Columbia River (MCR) steelhead (*Oncorhynchus mykiss*) evolutionarily significant unit (ESU). The PEA has been prepared in accordance with the National Environmental Policy Act (NEPA). Because NOAA Fisheries has no regulatory authority over NEPA compliance, the comments below are directed toward subsequent Endangered Species Act (ESA) section 7 compliance.

Overall, the proposed action and associated activities comport with the requirements of the FCRPS 2000 RPA #149. However, we would like to see additional detail and specificity in: (1) The description of the proposed activities; and (2) the environmental consequences of the proposed activities (*i.e.*, the proposed action impact on the MCR steelhead ESU).

We note that the environmental assessment is a programmatic assessment under NEPA. If the BOR intends to use the final PEA as a biological assessment (BA) to meet the requirements of a subsequent ESA section 7 consultation, we suggest that it specifically address the following issues:

1. How would the issues of instream flow be handled? If multiple diversion improvements or replacements are planned in a given watershed, the potential effect of these diversion replacements or improvements on flow need to be addressed.
2. Regarding the replacement of push-up dams (*i.e.*, diversion replacements or improvements), how would the new diversion structures be appropriately sized, ensure fish passage for all life stages, be screened, and allow for water use measurement?



3. Designs for infiltration galleries are not developed to the level of reliability needed to support their use programmatically under section 7 of the ESA. We suggest removing that activity from any incoming programmatic BA, and analyzing infiltration galleries under individual ESA section 7 consultations until guidelines for the construction, maintenance, and operation of infiltration galleries are available. We would like to work with your engineers and other specialists to develop such guidelines.
4. Improving water transmission and irrigation efficiencies (*i.e.*, reducing seepage and evaporation losses) as a strategy for increasing stream flows was not considered in the PEA. The BOR is uniquely qualified in this area, and we believe that BOR could significantly improve stream flows by helping irrigators to reduce unnecessary transmission and application losses.

Regulations implementing the Magnuson-Stevens Act (MSA) at 50 CFR Part 600 Subpart K require the BOR to consult on activities that may adversely affect essential fish habitat (EFH) designated in Federal fishery management plans. The proposed project area has been designated as EFH for chinook salmon (*O. tshawytscha*). MSA consultation requirements can be satisfied using ESA procedures if your BA has a section identified as an EFH Assessment that included the following analyses: (1) Effects of the proposed project on EFH, the managed species, and associated species, such as major prey species, including affected life history stages; (2) the BOR's views regarding the effects of the action on EFH; and (3) proposed mitigation, if applicable. Please be sure to include an EFH assessment in the BA for the proposed activities.

Again, we thank you for the opportunity to review and respond to the draft NEPA EA and hope that our comments are helpful. NOAA Fisheries looks forward to working with the BOR during the development of the draft BA for the proposed activities. As part of the consultation process, we would be happy to review and provide comments on a draft BA as soon as one is available. Please address any further comments regarding your proposed activities associated with implementation of the FCRPS December 2000 Biological Opinion RPA #149 to Nora Berwick of my staff in the Oregon Habitat Branch at 503.231.6887, or by e-mail at: nora.berwick@noaa.gov.

Sincerely,



Michael Tehan
Chief, Oregon Habitat Branch

cc: Jerry Cordova, USFWS
Chris Furey, USFWS
Nancy Gilbert, USFWS
Gary Miller, USFWS



United States Department of the Interior

BUREAU OF RECLAMATION
Pacific Northwest Region
Lower Columbia Area Office
825 NE Multnomah Street, Suite 1110
Portland, Oregon 97232-2135

REPLY REFER TO:

PN-3420
ENV-1.10

MAR 10 2003

Ms. Nora Berwick
United States Department of Commerce
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Oregon Habitat Branch
525 N.E. Oregon Street
Portland, OR 97232-2737

Subject: Review Comments on "Programmatic Environmental Assessment for Implementation of Action 149 Fish Habitat Improvement Measures from the December 2000 National Marine Fisheries Service Biological Opinion of the Federal Columbia River Power System in Three John Day Subbasins in the Mid-Columbia River Steelhead Evolutionary Significant Unit in Central Oregon"

Dear Ms. Berwick:

The biological opinion for the Federal Columbia River Power System issued by the National Marine Fisheries Service in December 2000, directs the Bureau of Reclamation to engage in certain forms of fish habitat improvement activities in the Middle Fork, North Fork, and Upper Mainstem of the John Day River subbasins. As part of implementing activities associated with this biological opinion, and in compliance with the National Environmental Policy Act (NEPA), Reclamation prepared a draft programmatic Environmental Assessment (EA) concerning this habitat improvement program and requested Public comment during December 2002 and January 2003.

We appreciate your response and your comments were considered in the final preparation of the programmatic EA which is scheduled for publication this spring.

In summary, Reclamation does not intend to use the programmatic EA as a biological assessment to meet the subsequent ESA section 7 consultation at this time. However, we did address several of your comments.

1. All instream flow issues will be handled in accordance with Oregon State Water Law. In order to comply with Oregon State Water Law, headgates will be sized to permit the full rate of diversion of the associated water rights unless the water right holder **willingly** chooses to abandon or sell a portion of his water right for instream uses. The combination of a new diversion with properly functioning headgate and measurement structures will expedite regulation by the Watermaster, therefore ensuring that the water right rate and duty is adhered to.

2. All new diversions will be appropriately designed in accordance with applicable acceptable fish passage criteria for all life stages. As part of the overall project to replace a diversion, Reclamation will coordinate with Oregon Department of Fish and Wildlife's John Day Screen Shop to ensure that a fish screen is in place that meets applicable acceptable screen criteria. Headgates will be sized to the appropriate delivery rate in accordance with Oregon State Water Law. Water measurement devices will be appurtenant features of all of our designs as needed.

3. At this time we are including infiltration galleries in the programmatic EA. We appreciate your offer to work with us to develop guidelines. We would greatly welcome this opportunity and plan to supplement the EA with these guidelines as they become available.

4. Improving water transmission and irrigation efficiencies (water conservation) was not considered as a strategy at this time as it is outside the scope as agreed to by your Regional Administrator and our Regional Director. These activities may be addressed indirectly or under other programs within Reclamation or other agencies.

Again we would like to thank you for your comments and greatly appreciate your offer to work with us on infiltration gallery guidelines. Please advise us on whom to contact to discuss how to set this process in motion.

Printed and CD copies of the final programmatic EA will be forwarded to you after it is published.

If you have questions concerning Reclamation's habitat improvement program in the John Day River subbasins or this particular NEPA compliance activity, you may contact Ms. Blakney at 503.872.2798.

Sincerely,



Ronald J. Eggers
Area Manager

cc: PN-3400, PN-1720, PN-3420



OREGON DEPARTMENT OF FISH & WILDLIFE -- MEMORANDUM

DATE: 1/7/03

TO: Ms. Karen Blakney

FROM: Steve Allen, Manager John Day Screen Shop

SUBJ: Comments on "Programmatic Environmental Assessment"

We only reviewed the screening and passage portion and found a couple of minor corrections, as follows:

Page 1-10 Third paragraph; We are now at approximately 150 screens that do not meet current NMFS criteria.

Page 1-12 Fifth paragraph; No one at this facility is aware of the Forest Service staff ever replacing a screen in the Middle Fork area, without involvement of the ODFW Screens Crew.

Page 2-14 First paragraph; There are three examples of screening irrigation return flow in the John Day Basin. 1) John Day River irrigation flow screened with a rotary drum prior to entering Riley Creek. 2) John Day River irrigation flow siphoned under Laycock Creek prior to intersecting creek. 3. John Day River irrigation flow siphoned under Bear Creek, prior to intersecting creek.

Where irrigation flows cross over tributaries NMFS prefers the use of siphons so there is not an interchange of water, several of this type need to be addressed. When irrigation return flows end at a stream and do not continue on, then the use of a physical barrier is needed, we are aware of a couple of this type and they need to be addressed.



IN REPLY REFER TO:

United States Department of the Interior

BUREAU OF RECLAMATION
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PN-3420
ENV-1.10

MAR 12 2003

Mr. Steve Allen
Manager
John Day Screen Shop
Oregon Department of Fish and Wildlife
P.O. Box 515
John Day, OR 97845

Dear Mr. Allen:

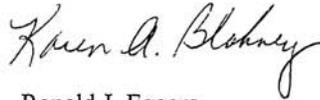
Thank you for your response to the Draft Programmatic Environmental Assessment for Implementation of Action 149 Fish Habitat Improvement Measures for the December 2000 National Marine Fisheries Services Biological Opinion of the Federal Columbia River Power System in Three John Day Subbasins in the Mid-Columbia River Steelhead Evolutionarily Significant Unit in Central Oregon. We sincerely appreciate you taking the time to review the document and provide us feedback.

As a result of your comments we are making the following changes to the document:

- 1) Draft Page 1-10 third paragraph: We are changing the document to note that there are approximately 150 screens that do not meet current NMFS criteria.
- 2) Draft Page 1-12 fifth paragraph: We have contacted the U.S. Forest Service and have learned that all fish screens installed on the Malheur N.F. was installed by the Oregon Department of Fish and Wildlife with cooperation of the Malheur N.F. We will clarify this in the final report.
- 3) Draft page 2-14 first paragraph: We are incorporating a discussion on siphons into the document.

Again, thank you for commenting on the Draft Programmatic Environmental Assessment. Your comments will result in an improved final document. A copy of the final document will be delivered to you when it is complete.

Sincerely,



for

Ronald J. Eggers
Area Manager

cc: PN-3400, PN-3420, PN-1720

NORTH FORK JOHN DAY WATERSHED COUNCIL

P. O. Box 95

• MONUMENT, OREGON 97864

• (541) 934-2141

• FAX (541) 934-2312

January 10th, 2003

Dear Ms. Blakney,

I write on behalf of the North Fork John Day Watershed Council, a locally-based organization that is striving to improve watershed conditions in the North and Middle Fork sub-basins of the John Day River. We are glad to have the Bureau of Reclamation as a partner in our efforts, and applaud your commitment to running a voluntary program that builds on the many existing watershed improvement programs in the basin. We also have some concerns about the program that is laid out in the draft environmental assessment for implementation of RPA Action 149 in the John Day Basin.

The BOR's plans for mitigation actions under RPA Action 149 have been the subject of discussion at several of our recent meetings. The topic that has received the most attention is the proposal to address low-flow problems through the purchase of water rights for transfer to in-stream use. Our council membership is diverse, and member's opinions about the purchase of water for transfer to in-stream use vary widely. Some members actively promote such transfers. Others have mixed feelings, and some are adamantly opposed to the concept. Yet all council members present at the most recent meeting at which the BOR program was discussed agreed that BOR's narrow interpretation of how to address flow problems greatly reduces the potential effectiveness of its program.

RPA Action 149 instructs the BOR to "address all flow problems." There are many possible approaches to improving stream flows in the region. Irrigation systems can be made more efficient so that conserved water can be kept in-stream. Riparian improvement projects can enhance critical late-season flows by retaining spring runoff for release in the late summer and fall. Upland vegetation management projects can increase water yields. Yet BOR has unfortunately chosen to limit itself to using a single tool—the purchase of water rights for transfer to in-stream use. While there will be occasions when this tool can be put to use, they will be limited at best. Unless BOR broadens its perspective, far more opportunities for flow enhancement will be forgone.

We hope that the BOR will reconsider its narrow interpretation of RPA Action 149 and instead bring to the basin a full toolbox that can, when all the tools in it are used in combination, make real progress towards meeting both BOR's mandate under the FCRPS Biological Opinion, and the North Fork Watershed Council's vision of a John Day Basin in which healthy runs of native fish coexist with vibrant local communities.

Sincerely,



Alexander Conley
Coordinator
North Fork John Day Watershed Council



United States Department of the Interior

BUREAU OF RECLAMATION
Pacific Northwest Region
Lower Columbia Area Office
825 NE Multnomah Street, Suite 1110
Portland, Oregon 97232-2135

IN REPLY REFER TO:

PN-3420
ENV-1.10

MAR 12 2003

Mr. Alexander Conley, Coordinator
North Fork John Day Watershed Council
P.O. Box 95
Monument, OR 97864

Dear Mr. Conley:

Thank you for your response to the Draft Programmatic Environmental Assessment for Implementation of Action 149 Fish Habitat Improvement Measures for the December 2000 National Marine Fisheries Services Biological Opinion of the Federal Columbia River Power System in Three John Day Subbasins in the Mid-Columbia River Steelhead Evolutionarily Significant Unit in Central Oregon. We sincerely appreciate you and the Watershed Council taking the time to review the document and provide us feedback.

We understand the concerns of the North Fork John Day Watershed Council regarding the narrow interpretation of RPA Action 149 which was used for this Programmatic EA. We recognize there are other projects which may be warranted which do not fit the scope of this Programmatic EA. Such projects, if later considered, will require a supplemental or separate Environmental Assessment to deal with the site specific issues of these projects.

We applaud the North Fork Watershed Council for their vision of a John Day Basin in which healthy runs of native fish coexist with vibrant local communities. We trust that this Programmatic Environmental Assessment will assist in turning this vision into reality.

Again, thank you for commenting on the Draft Programmatic Environmental Assessment.

Sincerely,


for Ronald J. Eggers
Area Manager

cc: PN-3400, PN-3420, PN-1720

Comments received from John Morris 1/24/03 (hand carried)

Comments concerning Programmatic Environmental Assessment for Implementation of Action 149 Fish Habitat Measures

The assessment is well thought out and analyzed. The comments are not directly related to the analysis but are more geared to fully identifying environmental conditions and facts.

Item 1. 1.4.2 paragraph 2. I feel that environmental litigation has heavily influenced the availability of forest products that would help the economy. Although the Malheur NF, in all likelihood, could not sustain the near 200 MBF harvested in the late 1980s to 1992, the threat of litigation reduced the volume sold from a high 94.4 MBF in 1998 to a low of 2.6 MBF in 2002. Factors such as "Pacfish" and roadless areas withdrawn from Management Area 1-2 reduced potential harvest acres. These were in direct response to litigation threats.

Item 2. 1.5 paragraph 1. Recent redd counts are the highest since redd counts began in 1959. I would agree that historically there were considerably more fish but it must be recognized activities that caused degradation of aquatic habitat are being considered and discontinued along with restoration efforts and improved management. Lets not keep beating ourselves up over things our ancestors did and take credit for recognizing problem area and making improvements that have helped increase runs.

One thing that is absent in this overview is the invasion of juniper and the subsequent reduction of capture, storage and safe release of precipitation. The effects of fire suppression and juniper encroachment and the effects on water yield are well documented in case studies throughout the John Day and other basins.

Item 3. 1.5 paragraph 5. Typically diversion dams are not required prior to July 1 because of adequate snow melt. By the time diversion dams are needed in the mainstem, smolt migration has diminished, water temperatures have increased and rearing is primarily in the tributaries. Although spawning does occur in the mainstem, the majority of spawning occurs in tributaries and alevins have emerged from the gravel by July. Oregon Dept. of Fish and Wildlife instream work period begins July 15 with the assumption all alevins will be out of the gravel.

Item 4. 2.1 paragraph 2. "resolve streamflow issues" What are these issues? Antidotal information from a mid 1860s shepherders diary at Calarno indicates "the river has enough water to provide water for the bands a few more days", indicating flows have periodically been low. (Contact Arleigh Isley, Canyon County, Or. For reference). Is the goal to increase flows? If so, should not all aspects that affect flows be addressed, i.e. juniper encroachment, rural development, wells, etc.? Year to year there is only so much water in the basin. Purchasing water for instream purposes does not increase the overall water in the basin, it only changes the use of the existing water. The necessary flow needs to be quantified rather than an unidentified quantity.

Item 5. 2.2.3.1 #2 The "reach served" needs to be identified prior to purchase or lease so interested stakeholders are informed of potential impacts.

Item 6. 2.2.3 #4 The cancellation process needs to be more clearly defined. If a water right is

cancelled does it need to be applied for with the effective date the same as the application date or is the priority date the same as the cancelled right?



IN REPLY REFER TO:

United States Department of the Interior

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PN-3420
ENV-1.10

MAR 12 2003

Mr. John Morris
P.O. Box 669
John Day, OR 97845

Dear Mr. Morris:

Thank you for your response to the Draft Programmatic Environmental Assessment for Implementation of Action 149 Fish Habitat Improvement Measures for the December 2000 National Marine Fisheries Services Biological Opinion of the Federal Columbia River Power System in Three John Day Subbasins in the Mid-Columbia River Steelhead Evolutionarily Significant Unit in Central Oregon. We sincerely appreciate you taking the time to review the document and provide us feedback.

The final document will incorporate many of your suggested changes. Following is a recap of your comments and how we will address them in the Programmatic Environmental Assessment.

Item 1 (Section 1.4.2 paragraph 2): We agree that the environmental litigation has greatly decreased the availability of forest products and has had substantial negative impacts on the local economy. To address this issue we are adding environmental litigation as a factor that has had an impact on the local economy.

Item 2 (Section 1.5 paragraph 1): We agree with your comments that there has been a recognition of many activities that degrade aquatic habitat and many of these practices are being discontinued, and a great deal of restoration effort is taking place. To address this issue we are revising this paragraph to emphasize the efforts that have been made to date to address the degradation of aquatic habitat.

We acknowledge your concerns regarding the invasion of juniper and the subsequent reduction of capture, storage and release of water. This issue was raised in the scoping process and was determined to be outside the scope of this Programmatic Environmental Assessment. See page 1-4.

Item 3 (Section 1.5 paragraph 5): Your comments to this paragraph point out that push-up dams are often put in during periods when smolt migration has diminished, water temperatures have increased and rearing is primarily in tributaries. We have modified this paragraph to clarify the timing and the impacts from construction and maintenance of push up dams.

Item 4 (Section 2.1 paragraph 2): We are making a number of changes to this paragraph to address the issues you have raised. We are also noting that Reclamation is initiating Instream Flow Incremental Methodology to help identify habitat flow relationships.

Item 5 (Section 2.2.3.1 #2): In this item you comment that the "reach served" needs to be identified prior to purchase or lease so interested stakeholders are informed of potential impacts. We are addressing this by noting the Oregon Water Resource Department process shall be followed which includes notifying interested stakeholders and informing them of potential impacts.

Item 6 (Section 2.2.3 #4): You point out the need to clearly define the cancellation process. We will revise the report to make it clear that when a water right is cancelled, any new water right filed will also be assigned a current date.

Again, thank you for commenting on the Draft Programmatic Environmental Assessment. Your comments will result in an improved final document. A copy of the final document will be delivered to you when it is completed.

Sincerely,



for Ronald J. Eggers
Area Manager

cc: PN-3400, PN-3420, PN-1720