



Salmon Creek Project

The Bonneville Power Administration (BPA) proposes to fund activities that would restore sufficient water flows to Salmon Creek, a tributary of the Okanogan River, and rehabilitate its streambed as necessary to provide adequate passage for summer steelhead (*Oncorhynchus mykiss*) and possibly spring chinook (*O. tshawytscha*). The Upper Columbia River steelhead Evolutionarily Significant Unit (ESU) is listed as endangered under the Endangered Species Act (ESA). While an Upper Columbia River spring chinook ESU has also been listed, the Okanogan River and its tributaries were not included as part of this ESU because spring chinook are considered to be extirpated (locally extinct) from this watershed.

Both steelhead and spring chinook are known to have historically occurred in Salmon Creek. However, habitat for these species in Salmon Creek was greatly affected in the early 1900s by the construction of two dams: Conconully Dam, constructed by the U.S. Bureau of Reclamation (BOR) on the upper reaches of Salmon Creek in 1910, and the Okanogan Irrigation District (OID) diversion dam on the lower reaches of Salmon Creek in 1916. Since these facilities were constructed, the lower 4.3 miles of Salmon Creek downstream from the OID diversion dam has been (and continues to be) typically dewatered under normal irrigation operations, except during high runoff years that result in uncontrolled spill at the reservoirs and diversion dam. In addition, channel geometry, streambank stability, and riparian and aquatic habitat values of the lower 4.3 miles of Salmon Creek have been adversely affected in the last 80 years by a variety of conditions, including altered streamflow regimes, adjacent land uses that have altered vegetation and sediment production, and direct manipulation of streambanks and riparian vegetation.

These conditions have significantly degraded the lower 4.3 miles of Salmon Creek and deposited substantial sediments at the mouth of the creek, which has largely precluded fish migration into Salmon Creek from the Okanogan River. Summer steelhead now rarely use Salmon Creek, although this species is occasionally observed in the creek during high water years, and WDFW has been stocking the creek with steelhead hatchery smolts for several years.

Underlying Need for Action

The OID is the prime user of water in Salmon Creek for the irrigation of 5031 acres of agriculture land owned by its 617 members and has a keen interest in protecting its withdrawal water right in Salmon Creek. The District also recognizes that the listing of the Upper Columbia River ESU summer steelhead as endangered under the ESA by NOAA Fisheries created an obligation to comply with the ESA. The OID has a need to investigate opportunities to enhance or restore summer steelhead runs while retaining and protecting its existing water rights to assure viable District operations. The Colville Confederated Tribe's (CCT) interest in pursuing restoration of anadromous fish runs in the Okanogan and Columbia Rivers has given rise to a unique opportunity for the CCT and OID to pursue a joint study of this project. A cooperative approach will help to avoid expensive litigation over ESA compliance.

BPA's need for action arises primarily from its statutory obligations. BPA is responsible for protecting and conserving listed threatened and endangered species under the ESA of 1973, as amended. By funding a project that would increase endangered summer steelhead use of Salmon Creek, the proposed project would assist BPA in fulfilling its responsibilities under the ESA.

The proposed action also is needed to allow BPA to meet its obligations under the Pacific Northwest Electric Power Planning and Conservation Act (Northwest Power Act) as managed by the Northwest Power and Conservation Council (Council). This project was proposed to the Council by a partnership between the CCT and OID. BPA's funding of this project would assist BPA in meeting its need to take the Council's program into account to the fullest extent practicable. In addition, the Northwest Power Act requires BPA to undertake its mitigation and enhancement responsibilities in a manner that provides "equitable treatment" for fish with the other purposes for which the system is operated.

BPA recognizes that a trust responsibility derives from the historical relationship between the Federal government and the Tribes as expressed in Treaties, statutes, Executive Orders, and Federal Indian case law. BPA and the CCT will work cooperatively to arrive at an understanding of how the trust responsibility applies to the proposed actions.

Purposes

BPA has identified the following purposes (i.e., goals or objectives) for the proposed action:

- Provide adequate passage in Salmon Creek for summer steelhead.
- Protect the ability of the OID to provide water delivery to its users.
- Maximize efficiency in water use.
- Achieve administrative efficiency and cost-effectiveness.
- Avoid or minimize adverse environmental impacts.
- Achieve local community and landowner acceptance and support.

Alternatives

Four alternatives have been developed to address the purpose for the project. These alternatives are analyzed in a Draft Environmental Impact Statement (DEIS) that will soon be released to the public. The Bureau of Reclamation is a cooperating agency on the DEIS, since they own many of the facilities that are proposed for alteration.

Alternative 1 is the preferred alternative of the OID and CCT. This alternative would implement the following actions to allow Salmon Creek streamflows to remain in the creek and improve anadromous fish passage:

- Construction of a new 80 cfs pump station for the OID utilizing water from the Okanogan River, including construction of approximately 2 miles of new pipeline from the new pump station to the OID main canal.
- Replace the Salmon Lake feeder canal and headgate with a combination of buried pipeline and embedded pipeline in the canal to increase flow capability from 30 cfs to 90 cfs.
- Remove the alluvial fan at the mouth of Salmon Creek, which is impeding fish passage. Approximately 530 feet of the channel would be excavated. Excavation of the gravel and cobble deposits would require an excavator and/or backhoe within the dry channel and off road dump trucks to transport excavated sediment to an adjacent staging area.

Alternative 2 would implement the following actions to allow Salmon Creek streamflows to remain in the creek and improve anadromous fish passage:

- Upgrade the existing OID Shellrock pumping plant to allow more water to be pumped from the Okanogan River. There are options on the sizing of new pumps dependent on further design of the upgrade.

- Build a new pipeline from Shellrock to a sediment basin in the main canal to lessen the amount of sediment delivered in the water to Diversion 4 users.
- Replace the Salmon Lake feeder canal and headgate with a combination of buried pipeline and embedded pipeline in the canal to increase flow capability from 30 cfs to 90 cfs.
- Stream rehabilitation in the lower 4.3 miles of Salmon Creek, including a combination of site-specific treatment of eroding stream banks, constructing a low-flow channel, floodplain reconnection, and reestablishing riparian vegetation. Full channel rehabilitation would modify the lower channel shape and size and decrease the minimum streamflow required for adequate fish passage.

Alternative 3 would involve:

- Purchase 5100 acre-feet of OID water rights for Salmon Creek to allow the water that is subject to these rights to remain in Salmon Creek.
- Replace the Salmon Lake feeder canal and headgate with a combination of buried pipeline and embedded pipeline in the canal to increase flow capability from 30 cfs to 90 cfs.
- No rehabilitation of the lower 4.3 miles of Salmon Creek.

Alternative 4 is the No Action Alternative. Under the No Action Alternative:

- No flows would be provided for steelhead or chinook passage in lower Salmon Creek. The lower creek would continue to be dewatered in most years, and OID would continue to divert its irrigation water supply under existing water claims from its existing diversion dam at RM 4.3 on Salmon Creek, supplemented in dry years by pumping from the Okanogan River at Shellrock.
- The Lower Salmon Creek channel would not be rehabilitated and neither steelhead nor chinook salmon would be able to pass through the lower 4.3 miles of Salmon Creek in most years to reach the high quality habitat in middle reach of Salmon Creek. No additional infrastructure improvements, including the Salmon Lake feeder canal are expected to be undertaken.

Schedule

The DEIS will be released to the public at the end of August/early September. A comment period will run until the middle of October. The Northwest Power and Conservation Council (Council) will review the project and make recommendations on whether to continue to fund the project this winter.

Questions or Comments

You may contact the project environmental lead, Don Rose, toll-free at 1-800-282-3713 or at 503-230-3796, or send an email to drose@bpa.gov. You may also contact Hilary Lyman, project manager, at 509-996-2486, or via email at hilary@methow.com.