

Yakima River Basin Water Enhancement Project (YRBWEP)

Legislative History

- P.L. 96-162 Feasibility Study, December 28, 1979
- P.L. 98-381 Section 109 of Hoover Power Plant Act of 1984, August 17, 1984
- P.L. 103-434 Title XII Yakima River Basin Water Enhancement Project, October 31, 1994, as amended by P.L. 105-62, October 13, 1997, and P.L. 106-372, October 27, 2000

Purposes of YRBWEP

- To protect, mitigate, and enhance fish and wildlife through improved water management; improved instream flows; improved water quality; protection, creation and enhancement of wetlands; and by other appropriate means of habitat improvement
- To improve the reliability of water supply for irrigation
- To authorize a Yakima River Basin water conservation program
- To provide for implementation by the Yakama Nation of an irrigation demonstration project, Wapato Irrigation Project improvements and a Toppenish Creek Corridor enhancement project

YRBWEP Accomplishments

• Diversion Reductions

- Sunnyside Valley Irrigation District (Phase I) – installed 30 automated check structures and built three reregulation reservoirs resulting in 19,450 acre-feet (54cfs) of water left in the Yakima River for the 2014 irrigation season (@ \$28.5 million in YRBWEP funds FY04-FY12) [Most of this water, 17,078 acre-feet, is available for target flow enhancement in the 2012 irrigation season.]
- SDBOC Phase I Diversion Reduction Agreement - Gives Reclamation control of 9,712 acre-feet (27cfs) to enhance Yakima River instream flows. (@ \$8.0 million in YRBWEP funds FY10-FY13) [7,563 acre-feet of this water is applied to target flows already in the 2012 irrigation season.]
- Benton Irrigation District - converting from open canal and laterals to a new pumping plant and pressurized pipe system; created a downstream change in the point of diversion; will keep 21,000 acre-feet (58cfs) in a 72 mile stretch of the Yakima River and will reduce overall diversions by about 5,500 acre-feet (15cfs) at the completion of the project in 2014. (@ \$22.2 million in YRBWEP funds; FY09-FY13)
- Sunnyside Valley Irrigation District (Phase II ARRA) – converting from open lateral to a closed piped system; will reduce diversions by over 3,810 acre-feet (11cfs) in the Yakima River (@ \$21.4 million in American Recovery and Restoration Act (ARRA) funds). The project includes installing nearly 49 miles of pipeline to irrigate 11,800 acres. [3,404 acre-feet of this water is applied to target flows already in the 2012 irrigation season.] ARRA

funds were spent in February 2012 and SVID agreed to fund the remaining \$2.7M without cost share.

- Sunnyside Valley Irrigation District (Phase II B) – Five year three-party agreement between Reclamation, Ecology and SDBOC to begin a 20 year project converting 65 open ditch laterals to a closed piped system; will reduce diversions by over 13,130 acre-feet (36cfs) in the Yakima River (@ \$52.0 million in YRBWEP funds)
- YRBWEP funds used to purchase the power water right formerly owned by Pacific Corps; power plant was decommissioned resulting in 260,000 acre-feet (360cfs) of water being left in a critical reach of the Naches River.
- YRBWEP funds used to purchase land and water in locations throughout the basin resulting in an additional 5,000 acre-feet of water being left in the Yakima River and some of its tributaries.

- **Land/Habitat Restoration**

- Land Acquisition - YRBWEP funds used to purchase almost 2,000 acres of ecologically significant lands for restoration. Lands are being restored to native grasses, forbs, trees, and shrubs; on some lands levees will be set back and side channels established or reinvigorated to restore the natural floodplain of the Yakima River.
- KOA levee setback and Greenway high water terracing – A 2012 emergency funding grant from Army Corps allowed Yakima County to coordinate levee setback on the former KOA property purchased by YRBWEP coupled with levee removal and creation of high water terraces on the Greenway Property north of the Terrace Heights bridge – both projects were completed February 2012. Levee setback south of Hwy 24 is anticipated in the near future allowing Reclamation's 600 acres to interact with the Yakima River.
- Schaake Restoration – 285 acres near Ellensburg along the Yakima River. Restoration of former spray fields and feedlots; native vegetation re-establishment. Phase I Report of Habitat Enhancement Designs was completed in 2010. Beginning Phase II in 2012. This restoration project will include levee setback, side channel establishment, and side channel reinvigoration for improved fish and wildlife habitat and flood control.

- **Tributary Enhancement**

- Bruton Fish Passage – Multi-partnership effort to increase flows and fish passage in Taneum Creek. Bruton diversion dam was removed which opened up 30 miles of critical habitat. Area was identified by NOAA and YN as a very critical reach for steelhead.
- Taneum Canal Company Diversion – Kittitas Conservation Trust sponsored the removal of the Taneum Canal diversion dam on Reclamation's Heart K property and replacement with a new diversion and adjacent roughened channel to improve migration to upstream habitat on Taneum Creek.

- Monitoring of Tributary Enhancement – YRBWEP staff (USFWS liaison) worked with WDFW and YN to develop PIT tag monitoring sites to monitor fish use of Taneum Creek following the implementation of enhancement measures.

- **Yakama Nation**

- Wapato Irrigation Project - YRBWEP funds (@\$6.1 M FY05-FY11) have been granted to the YN for construction of ramp flume measuring devices in the WIP canals and drains and installation of flow monitoring equipment to provide for improved management of irrigation water.
- Toppenish Creek Corridor Enhancement Plan - YRBWEP funds (@\$815K FY05-FY11) have been granted to the YN for the Toppenish Creek Corridor Enhancement Plan to identify measures to integrate management of agricultural, fish, wildlife, and cultural resources to meet tribal objectives. The Toppenish Creek Corridor Enhancement Plan is expected to be completed in spring 2012.

Out Year Projects

- **Diversion Reductions**

- Roza Irrigation District – construction of reregulation reservoir and conversion from open lateral to closed pipe system; project is still being designed so diversion reductions and costs are still estimates (estimate up to 10,000 acre-feet in diversion reductions and possibly about \$27 million in YRBWEP funds).
- Kennewick Irrigation District – project is still being planned but will likely include a downstream change in point of diversion, electrification of a pumping plant, construction of 4 reregulation reservoirs and conversion of open laterals to a closed pipe system; no firm acre-feet of conserved water or cost data are available yet.

- **Land/Habitat Restoration**

- Gap to Gap reach – cooperative effort with Yakima County, Yakama Nation, US Army Corps of Engineers, Washington State Department of Transportation, and others to set back levees along the Yakima River, restore the natural floodplain and reduce risk of damaging floods. YRBWEP funds have been used to buy land, reduce weeds and restore natural vegetation. Other entities are contributing funds to move levees. Most of the YRBWEP funds for land acquisition in this reach have been expended.
- Schaake – Moving into Phase II of Habitat Enhancement Design for restoration of former spray fields and feedlots; work will include levee setback, floodplain restoration, side channel development and restoration, and native vegetation re-establishment. Phase two will determine preferred alternatives and design.
- Wenas – ongoing vegetative restoration. Since thousands of trees and shrubs were planted in 2003 approximately 25 beaver dams (counted in 2010) have been built allowing the creek to return to a more natural condition.

- Heart K – ongoing vegetation restoration. Enclosures will be constructed to prevent the overgrazing from elk in meadows and riparian areas. These enclosures will stay in place until adequate tree and shrub habitat has been restored.
- **Yakama Nation**
 - WIP implementation (Satus) – construction of pumping plant, pressurized pipe delivery system and measuring devices; costs may be up to \$5 million per year.
 - Toppenish Creek – construction to separate creek from irrigation canals and restore floodplain habitat; planning work in process so no estimate yet on costs.
 - Demonstration Project – still in beginning stages to improve irrigation efficiencies; will apply for a planning grant in FY12 or FY13.
- **Cle Elum fish passage**
 - Future construction of permanent upstream and downstream fish passage; @ \$96 million estimate.
- **Tributaries**
 - Working with local, state, and federal partners to develop tributary enhancement plans identifying projects in other tributaries such as Manastash and Cowiche creeks.
- **Wapatox Canal**
 - Reclamation owns and maintains this late 1800s canal to deliver water to Lower and Upper Wapatox water users. Original wood stave pipe; YRBWEP plans to address critical restoration needs beginning in 2013 to significantly reduce chance for failure that could damage orchards and interrupt ability to deliver water. Eventual piping or relining of the system will result in additional diversion reductions of up to 13,000 acre-feet (30 cfs).

YRBWEP Budget

- YRBWEP budget has averaged @ \$11.5 million/year for past 5 years

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