

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 – Completed

- Sunnyside Valley Irrigation District (Phase I) – installed 30 automated check structures and built three reregulation reservoirs resulting in 19,450 acre-feet / yr. of water left in the Yakima River (@ \$28.5 million in YRBWEP funds FY04-FY12)
- SDBOC Phase I Diversion Reduction Agreement - Gives Reclamation control of 9,712 acre-feet / yr. to enhance Yakima River instream flows. (@ \$8.0 million in YRBWEP funds FY10-FY13)
- Benton Irrigation District – converted open canal and laterals to a new pumping plant and pressurized pipe system; created a downstream change in the point of diversion; keeping 21,000 acre-feet / yr. in a 72 mile stretch of the Yakima River and reduced overall diversions by 4,346 acre-feet / yr. (@ \$22.2 million in YRBWEP funds; FY09-FY13)
- Sunnyside Valley Irrigation District (Phase II ARRA) – converted nearly 49 miles of open laterals to a closed piped system; reducing diversions by 3,810 acre-feet / yr. in the Yakima River and providing 2,710 acre-feet / yr. for improved reliability of irrigation supplies. (@ \$21.4 million in American Recovery and Restoration Act (ARRA) funds).

- 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.
- **Diversions Reductions – Ongoing**
 - Sunnyside Valley Irrigation District (Phase IIB) – 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 in the Yakima River and provide 6,565 acre-feet / yr. for improved reliability of irrigation supplies. (@ \$52.0 million in YRBWEP funds)
 - Roza Irrigation District Reregulating Reservoir – Seven year three-party agreement between Reclamation, Ecology and Roza ID to construct a reregulation reservoir; construction is estimated to be completed in 2016 with funding through 2019; will reduce diversions by 5,523 acre-feet in the Yakima River and provide 2,761 acre feet for improved reliability of irrigation supplies. (\$26 million in YRBWEP funds).
 - Wapatox Canal - Reclamation owns and maintains this late 1800s canal to deliver water to Lower and Upper Wapatox water users. YRBWEP and Ecology funds were used to purchase the power water right formerly owned by Pacific Corps resulting in 260,000 acre-feet of water being left in a critical reach of the Naches River. Improvements continue to be made to the Wapatox Canal to maximize instream flow use and reduce chance for failure that could damage orchards and interrupt ability to deliver water. Eventual resolution could result in additional diversion reductions of up to 13,000 acre-feet / yr.
- **Diversions Reductions – Feasibility Studies – Completed**
 - Kittitas Reclamation District – Feasibility investigations on piping open ditch laterals, construction of two re-regulation reservoirs, and automation of select facilities. Estimate 48,500 acre feet / yr. conserved water and total implementation cost of \$37.0M (1998 cost est).
- **Diversions Reductions – Feasibility Studies – Ongoing**
 - Union Gap Irrigation District - Feasibility Study of water conservation measures including piping of the Fowler Ditch Company main canal and UGID main canal, construction of a booster pump station and reregulation reservoir, and automation of operational spills. Estimate 7,388 acre-feet / yr. conserved water and total implementation cost of \$30.5M (1998 cost est.)
 - Selah-Moxee Irrigation District - Feasibility Study of water conservation measures including canal lining and piping projects and automation of operational spills. Estimate 8,820 acre-feet / yr. conserved water and total implementation cost of \$26.5M. (2004 est.)

- **Land/Habitat Restoration - Ongoing**

- Land Acquisition - YRBWEP funds used to purchase nearly 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.
- Gap to Gap Restoration – 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. This is a 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.

- 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 2011. Phase II to select preferred alternative and design is expected to be completed in 2016 with implementation following. This restoration project will include levee setback, side channel establishment, and side channel reinvigoration for improved fish and wildlife habitat and flood control.
- 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.

- **Tributary Enhancement – Completed**

- Taneum Creek - 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.

- Cowiche Creek Water Exchange – Participation by Cowiche Creek Water Users Association, the Yakima Tieton Irrigation District, North Yakima Conservation District, Washington Water Project Trout Unlimited, Salmon Recovery Funding Board, Ecology, Reclamation, and others to exchange Cowiche Creek water rights for new Tieton River water rights in order to enhance flows and remove fish barriers in Cowiche Creek. Opened up 25 miles identified by NOAA and YN as critical habitat for steelhead.

- **Tributary Enhancement – Ongoing**

- Manastash Creek Enhancement – KRD 13.8 lateral and Reed Ditch piping project; implemented with WA State Integrated Plan funding and Reclamation additional capability funding was completed in 2014. Additional enhancement efforts are continuing.
- Tributary Monitoring – YRBWEP staff (USFWS liaison) continues to maintain PIT tag sites to monitor fish use of Taneum Creek following the implementation of enhancement measures.
- Tributary Planning –
 - Reclamation has entered into a three party agreement with Kittitas County and Ecology to complete a comprehensive planning study on the Naneum-Wilson-Cherry Creek Watershed.
 - In coordination with other stakeholders YRBWEP continues to develop tributary planning on Manastash, Cowiche, Ahtanum and other basin tributaries.

- **Yakama Nation – Completed**

- Wapato Irrigation Project - YRBWEP funds (@\$6.1 M FY05-FY11) have been granted to the YN for data collection and 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 – Draft - 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.

- **Yakama Nation - Future Projects**

- WIP implementation (Satus) – construction of pumping plant, pressurized pipe delivery system and measuring devices; there are no cost estimates on this project.

- Toppenish Creek Corridor Enhancement – 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; no timeline for implementation.
- **Cle Elum fish passage**
 - Future construction of permanent downstream fish passage; EIS / design being developed under Yakima Basin Integrated Plan.

YRBWEP Budget

- YRBWEP budget has averaged @ \$9.8 million/year for past 10 years

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