

The logo consists of five stylized blue wavy lines representing water, positioned to the left of the program title.

Yakima Tributary Access & Habitat Program

Annual Report

FY 2012

April 1, 2012 – March 31, 2013

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Conservation and Development Council

Prepared for:

U.S. Department of Energy
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The Yakima Tributary Access and Habitat Program (YTAHP) objectives are to screen surface water diversions, restore fish passage and enhance salmonid habitat. The program focus is on Yakima River Tributaries that historically supported salmonids and on riparian areas where access is restored. YTAHP was formed during 2001 in large part in response to listings of steelhead and bull trout as threatened under the Endangered Species Act to address issues of landowner liability and to support fish resources. Since its inception and first BPA contract in 2002, and early projects in 2003, YTAHP has implemented 133 projects, screened 190 cfs and added 217 miles of rearing and spawning habitat. Over the next 5 years YTAHP plans to implement over 70 projects that meet our objectives to restore salmonid populations.

This report covers program activity for FY 2012 from April 1, 2012 through March 31, 2013 and coincides with the contracting period between the South Central Washington Resource Conservation & Development Council (RC&D) and Bonneville Power Administration (BPA). The YTAHP project number is 2007-398-00 and the contract numbers are 00056617 (capital) and 00056682 (expense).

The funding from BPA supports YTAHP activities described in this report and enables YTAHP to construct *projects* as well as maintain *program* planning and administration, support project development, including planning, design and permitting, and conduct landowner outreach and coordination. Additionally, YTAHP participants may apply to other funding sources to enhance project implementation capabilities. These supplemental sources include WA Salmon Recovery Funding Board, WA Department of Ecology, Community Salmon Funds and other local, state and federal programs.

The RC&D maintains contracts with the following YTAHP participating entities: the Kittitas County Conservation District (KCCD), North Yakima Conservation District (NYCD), Washington Department of Fish and Wildlife (WDFW) and Yakama Nation (YN). These contracts are supported by funding from BPA. Additional YTAHP partners include the Kittitas Conservation Trust (KCT), Mid-Columbia Fisheries Enhancement Group (RFEG) and Benton Conservation District that may or may not have direct contracts for services, but may attend YTAHP meetings, seek permit assistance or offer collaboration on various projects or project elements, such as permits, design or revegetation.

BPA funding for FY12 supported the construction of 10 projects, ongoing riparian vegetation and site maintenance on 17 projects and provided significant work toward project development, permits, design and/or secured funding for an additional 19 projects. The FY12 completed projects saw the screening nearly 30 cfs of diverted surface water and improved screening, habitat and passage in eight streams in the Yakima Basin. YTAHP also leveraged several hundred thousand dollars in funding from other sources committed to project implementation.

The report summary includes links to previous YTAHP Annual Reports, the YTAHP Strategic Plan and YTAHP Biological Monitoring Reports. Below is a list of YTAHP accomplishments for FY12, including constructed projects, and projects receiving ongoing revegetation maintenance or significant planning, design and permitting activity.

Kittitas County - Completed Projects

- 1. Cherry Creek–Jacobs/Nisbet and Sweet Grass Project *modifications*** (River Mile 1.46, 1.75): In 2010, two passage barriers were corrected opening up more than 2 miles of additional stream habitat. During FY11, fish screens were installed with flow measuring devices and piping was installed to decrease conveyance losses. During FY12 modifications: a rock barb was installed to improve sweeping velocity across belt screen(s) and a gantry. The high sediment in this tributary system has proven problematic. (Some work elements may have crossed fiscal years.) KCCD lead.
- 2. Jack Creek Floodplain Restoration Project *continuation*** (RM 0-1.5): Floodplain and riparian restoration through road obliteration, fencing to exclude grazing, large wood placement and planting. Improvement of in-stream habitat through bank regrading, large wood placement, and redirection of flow. Restoration work was accomplished in cooperation with the private landowner and the USDA Forest Service, and through the support of US Fish and Wildlife Service, National Forest Foundation, Overlake Flyfishers Association, WA Dept. of Ecology, WA Salmon Recovery Funding Board, and WA Dept. of Fish and Wildlife. MCFEG.
- 3. Teanaway River–3M Ditch** (RM 7.2): Conversion of 2 of 5 gravity irrigation systems to pump stations, screens, pipelines and power lines to service systems. Project also includes downstream point of diversion transfers and element of trust water. Remaining systems planned for conversion in FY13. KCCD.
- 4. Lower Swauk Restoration** (RM 1-4): Floodplain restoration, large wood replenishment, riparian restoration started in FY 12 and will be completed in FY 13. YN.
- 5. Mercer Creek Diversion Removal:** Abandoned diversion was removed to open up 1.05 miles of habitat. City of Ellensburg (minor YTAHP assistance).

Riparian Revegetation, Weed Management and Other Project Maintenance

- M1. Coleman Creek-Burris** (FY10): Plant management.
- M2. Currier Creek–Ellensburg Water Company Siphon** (FY08): Plant management.
- M3. Jack/Indian Creeks Projects** (FY09): Plant management.
- M4. Swauk Creek Restoration Project** (FY10): Plant management.
- M5. Taneum Creek–Bruton Project** (FY09): Plant management and site monitoring.
- M6. Reecer Creek–Floodplain Restoration Project** (FY10/11) Significant revegetation efforts occurred in FY12, including irrigation of 5,000 native plants, weed management and seeding remaining 52 acres of upland areas to native grasses.
- M7. Teanaway River–Lambert Road** (FY11): Diversion repair of fish passage, revegetation ongoing.
- M8. Swauk Creek–Ranch on Swauk Creek** (FY11): Revegetation management.

M9. Taneum Canal Company (TCC) Fish Screen and Diversion (FY10): After construction, an increased aggradation within the diversion structure was observed. The KCT worked with the TCC and the project engineer (Paul Tapple) to remove several large rocks that were immediately downstream of the diversion to increase stream energy through the structure, and mobilize gravels within the structure during higher flow events. KCT utilized YTAHP for funding, design and permitting (HPA) for the successful maintenance of this project site.

Kittitas Significant Planning, Permitting and/or Engineering

P1. Coleman Creek–Ellensburg Water Company (RM 3.85): Designs at 99% completed for diversion screening and siphoning the canal under the creek to provide for improved fish passage and to protect fish from entrainment in a 15cfs+ diversion. Project requires additional funding to implement, grant application submitted to the WA Department of Ecology; project is on Ecology draft offer list for \$233,149. Construction is expected in FY14 or as funding allows.

P2. Coleman Creek–Hanson/Poulsen and Olmstead State Park (RM 2.13, 3.41): Diversion screening, piping, fish passage and riparian enhancements. In coordination with EWC project above. FY13 or as funding allows. Multiple project partners (KCCD, YN, WDFW, WA State Parks). Continued to try to work with landowner/water right holder. Submitted applications for additional funding—particularly for on-farm conservation projects.

P3. Currier Creek–Deneen Project (RM 1.0): Channel modification and significant riparian restoration. Permit level design in preparation; working with landowner on specifics. FY14 (future uncertain).

P4. Reecer Creek–Pautzke Project (RM 1.91, 2.34): Diversion screening and fish passage. Designs in development; potential to consolidate diversions. FY13 or 14.

P5. Teanaway River–3M Ditch (RM 7.2): Gravity diversions to pump screen conversions (4 cfs, 643 AF/yr total), metering, piping, irrigation enhancements, and possibly trusting of conserved water. Water right holders are working on individual plans with a local technical service provider. Point of diversion changes are in process. Two of five projects completed in FY12, remainder planned for FY13.

P6. Teanaway River–Red Bridge Road (RM 4.4): Diversion repair for fish passage. Repair design completed, ongoing work with landowners and permits. Funding secured. Construction anticipated July or August FY13.

P7. Wilson/Naneum Creek Basin–Watershed Prioritization (RM 1.0 and upstream): Facilitating a working group to discuss priorities for project planning purposes in the Wilson/Naneum Basin. Ongoing. An application to the Salmon Recovery Funding Board for a large reach assessment style project is in progress.

P8. Naneum Creek at Poulsen-Fish Screen and Passage (RM 2.72): Work on design for this screen site.

P9. Caribou Creek-Rosbach-Screening and Passage. Design was completed for fish screen and fish passage at this irrigation diversions.

P10. Teanaway Forks Large Wood Trapping (West Fork RM 6, North Fork RM 5 & 6): Preliminary design of structures to trap large wood in order to form pools, capture gravels, and increase floodplain connectivity on forest land without risk to homes or

other infrastructure. Construction planned for FY 15.

P11. Cle Elum River Side-Channel Restoration and ELJs-Phase 2 (RM 5-7): The KCT held two Technical Working Group Meetings to inform stakeholders in the basin of the project design alternatives. This interaction lead to completion of the 60% design package. The KCT made some design team changes to better meet the goals of the project to increase the habitat values of the lower Cle Elum River.

P12. Gold Creek Habitat Improvements: KCT began work on the Habitat Assessment and Hydrologic Analysis planning for this project and preparing for a TWG meeting to address the scope of work of the project engineers and inform of the results of the Data Inventory and Gap Analysis.

P13. Parke Creek-Dodge Consolidation (RM 2.8, 3.0, 3,23) Consolidation of three gravity diversions to a single pumped diversion, removal of existing instream structures and installation of sprinklers. Project coordination, design and permitting. 2013.

Notes:

cfs – Cubic feet per second, measure of water flow in instantaneous volume past a point.

RM - River mile is a measure of distance in miles along a river or stream from its mouth (RM 0.0).

Yakima County – Completed Projects

- 6. Cowiche Creek-Muoth Project (RM 2.0):** Pump screen installed, 0.2 cfs. NYCD project lead.
- 7. South Fork Cowiche Creek-Bell Project (RM 2.45):** Upgrade to compliant screened pump diversion, 0.3 cfs. NYCD lead.
- 8. South Fork Naches-Lewis Ditch (RM 10):** Improved fish passage, instream large woody debris. Riparian revegetation. YN.
- 9. South Fork Naches-Scott Ditch:** Improved passage and diversion screening of 26 cfs. Installation of first “Farmer’s Screen” in Washington State. YN, WDFW.
- 10. Rattlesnake Creek-Melville Project (RM 0.37):** Upgrade to compliant screened pump diversion, 0.04 cfs. NYCD.

Riparian Revegetation, Weed Management and Other Project Maintenance

- M10. Cowiche Creek–CCC/Jennerjohn/Funkhauser (RM 2.1):** Plant maintenance.
- M11. Cowiche Creek–Lamas (RM 3+):** Plant maintenance.
- M12. Cowiche Creek–Cowychee Ditch (RM 12.1):** Plant maintenance.
- M13. North Fork Ahtanum–Gauge Station (RM 4.53):** Plant maintenance.
- M14. Rattlesnake Creek–Boyd Brown Project (FY 09):** Plant/site maintenance.
- M15. Ahtanum Creek-La Salle Project (FY11):** Plant maintenance on 16 acres and 2,900 feet of stream bank.
- M16. Wenas Creek–Comeau Project (FY11):** Plant maintenance.
- M17. Wenas Creek–Frausto Project (FY11):** Plant maintenance.

Yakima Significant Planning, Permitting and/or Engineering

- P14. Ahtanum Creek-Herke Ranch (RM 21.31, 21.81):** Point of diversion consolidation, diversion screening, instream habitat improvement, partial fish passage barrier removal, water metering. Designs near completion and technical workgroup held. Implementation anticipated in FY13 or FY14.
- P15. Cowiche Creek–CWWUA Barrier Removal and Trust Water Project (RM 7.45, 8.6):** Change in point of diversion to Tieton River with water delivery occurring through Yakima Tieton Irrigation District (YTID) infrastructure, trusting of 7.9 cfs of Cowiche Creek water, installation of pipeline for the CWWUA, and water metering. Designs at 95% completion and agreements in preparation. ROEs for water rights finished by WA Department of Ecology. Extensive coordination required between BOR, YTID Board and landowners; NYCD facilitating project. Implementation in FY13-14.

- P16. Cowiche Creek–Nelson Dam/Lower Cowiche Improvements** (RM 0.5): Consolidation and change in point of diversion at lower Cowiche Creek to Naches River at Nelson Dam will facilitate fish passage barrier removal at the mouth of Cowiche Creek. Implementation dependent upon BOR, City of Yakima, Yakima County partners, funding and coordination with other planned vicinity improvements.
- P17. Billy’s Pond Floodplain Restoration-City of Yakima** (RM 0.28): Fish passage through the removal of a perched culvert and replacement bridge for Greenway trail. Project is in conjunction with the City of Yakima’s flood plain enhancement project. FY13.
- P18. Cowiche Creek-Railroad Bridge** (RM 2.8): Fish passage through removal of old decommissioned railroad and large amounts of deposited sediment and debris directly above bridge. Project is associated with stream and floodplain restoration downstream by Yakima County.
- P19. Cowiche Creek Floodplain Restoration Phase 2** (RM 1 – 1.3): Concrete debris and abandoned railroad berm removal along right bank of Cowiche Creek on multiple parcels, placement of wood and rock structures in stream, and revegetation of disturbed areas. Implementation to be staged in FY 13 & 14.
- P11. Britt Pump Screen-Cowiche Creek** (RM 2.8): Water right of 0.1 cfs to be screened with Pump Rite fish screen. FY13.

ACKNOWLEDGEMENTS

The successful execution of this project is due in large part to the cooperation and participation of many people, particularly the following:

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Scott Nicolai	Yakama Nation, Yakima/Klickitat Fisheries Project
Louis Musso, III	SCW RC&D Chairman

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LIST of ACRONYMS

ACOE	US Army Corps of Engineers
AID	Ahtanum Irrigation District
BLM	US Bureau of Land Management
BPA	Bonneville Power Administration
BOR	US Bureau of Reclamation
cfs	cubic feet per second
CREP	Conservation Reserve Enhancement Program
CWA	federal Clean Water Act
DAHP	WA Department of Archaeology and Historic Preservation
Ecology	WA Department of Ecology
EPA	US Environmental Protection Agency
EQIP	Environmental Quality Incentives Program (NRCS)
ESA	Endangered Species Act
FRIMA	Fisheries Restoration and Irrigation Mitigation Act
HPA	Hydraulic Project Approval
JARPA	Joint Aquatic Resources Permit Application
KCCD	Kittitas County Conservation District
KCT	Kittitas Conservation Trust
KCWP	Kittitas County Water Purveyors
MCFEG	Middle Columbia Fisheries Enhancement Group
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanographic and Atmospheric Administration
NRCS	Natural Resources Conservation Service
NYCD	North Yakima Conservation District
PI	Fish Passage Priority Index
RC&D	So. Central WA Resource Conservation & Development Council
RFEG	Regional Fisheries Enhancement Group (Mid-Columbia FEG)
SFRB	WA Recreation & Conservation Office Salmon Recovery Funding Board
SEPA	Washington State Environmental Policy Act
SSHEAR	Salmonid Screening, Habitat Enhancement, and Restoration Section
SPI	Screening Priority Index
TWG	Technical Work Group
USFS	United States Forest Service
USFWS	United States Fish & Wildlife Service
WDFW	Washington Department of Fish and Wildlife
WE	Work Element
YTAHP	Yakima Basin Tributary Access and Habitat Program
YN	Yakama Nation

Yakima Tributary Access & Habitat Program

1. INTRODUCTION

The Yakima Tributary Access & Habitat Program (YTAHP) was organized to cooperatively restore salmonid passage to Yakima River tributaries that historically supported salmonids and to improve habitat in areas once access is restored. More specifically, the program screens surface water diversion structures to prevent fish entrainment into artificial waterways; provide for fish passage at man-made barriers, such as diversion dams, culverts, siphons and bridges; enhances in-stream and riparian habitat; and provides information and assistance to landowners interested in contributing to the improvement of water quality, water reliability, fish recovery and riparian habitat.

Beginning around 2000, the idea behind YTAHP developed from a number of groups actively engaged in natural resource management, watershed restoration, irrigation management and/or landowner assistance in the Yakima River Basin. These groups included the Kittitas County Conservation District (KCCD), North Yakima Conservation District (NYCD), Kittitas County Water Purveyors (KCWP), US Bureau of Reclamation (Reclamation, US BOR), Washington Department of Fish and Wildlife (WDFW), Ahtanum Irrigation District (AID) and the South Central Washington Resource Conservation and Development Council (RC&D). The Yakama Nation (YN) also participated in the early stages of the program's development and in fiscal year 2004 the Yakama Nation Safe Passages program was incorporated into YTAHP. Additional funding to help cover the Safe Passages projects was included in the fiscal year 2005 YTAHP budget. The KCWP, BOR and AID are no longer active in the program. Collectively, the WDFW, KCCD, NYCD, YN, RC&D as well as the Mid-Columbia Fisheries Enhancement Group (MCFEG), Kittitas Conservation Trust (KCT) and Department of Ecology (Ecology) are referred to as the YTAHP Core Team.

This report covers YTAHP activities funded entirely or in part by the Bonneville Power Administration (BPA) project #2007-398-00 during FY12 (April 1, 2012 - March. 31, 2013) and emphasizes projects that have been implemented (contract #00046802). During FY12, this project supported the construction of 10 projects, ongoing riparian vegetation and site maintenance on 17 projects and provided significant work toward project development, permits, design and/or secured funding for an additional 19 projects. These projects saw the screening nearly 30 cfs of diverted surface water and improved screening, habitat and passage in eight streams in the Yakima Basin. YTAHP also leveraged several hundred thousand dollars in funding from other sources committed to project implementation.

2. BACKGROUND

The Yakima River is a tributary to the Columbia River and is located in Kittitas, Yakima and Benton Counties in south central Washington. Native salmon populations in the Yakima River Basin have declined from historic levels. The significance of these declines is reflected in listings under the Endangered Species Act (ESA). The Middle Columbia steelhead distinct population segment, which includes the Yakima Basin, was listed by National Marine Fisheries Service [NMFS, or NOAA Fisheries], as threatened under the ESA on March 25, 1999 (64 FR 14517). The U.S. Fish and Wildlife Service (USFWS) listed the Columbia River bull trout distinct population segment, including the Yakima Basin, as threatened on June 10, 1998.

Since these listings, numerous watershed planning and salmon recovery efforts in the Yakima Basin have occurred. Most watershed plans and recovery documents list barrier removal and diversion screening as priorities for fish recovery, including: the Yakima Salmon Recovery Plan, Yakima Limiting Factors Analysis, federal Biological Opinions and the Yakima River Basin Watershed Management Plan. Habitat quality is also identified as a key factor limiting the productivity of these listed species.

Since the early 1980s, there has been a screening program primarily addressing Yakima River mainstem diversions through the Fish Passage and Protective Facilities Program, lead by the US Bureau of Reclamation with BPA Fish and Wildlife Program funding, Phase I (1980s) and Phase II (1990s to 2006). In spite of these significant past efforts, there are still many unscreened diversions and other passage and habitat challenges for fish in the Yakima Basin tributaries. Currently, there may be several hundred complete or partial fish passage barriers remaining in Yakima River tributaries. Many of these barriers are dams and unscreened diversions associated with early water rights and are located on private property.

3. PROGRAM OVERVIEW

The program was created to support salmon recovery efforts by assisting landowners. YTAHP addresses surface water diversion screening, fish passage and riparian habitat in Yakima tributaries (Figure 1) using a well coordinated, prioritized approach. The program is cooperative in nature, engages a dedicated permit specialist and uses the unique role of Conservation Districts to assist property owners, on a voluntary basis, to address needs.

Participating YTAHP entities funded through Project 2007-398-00 are the South Central Washington Resource Conservation & Development Council (RC&D), Kittitas County Conservation District (KCCD), North Yakima Conservation District (NYCD), Washington State Department of Fish and Wildlife (WDFW) and Yakama Nation (YN). Others working on the YTAHP core team include the Kittitas Conservation Trust (KCT), Mid-Columbia Regional Fisheries Enhancement Group (RFEG), Benton Conservation District (BCD) and WA Department of Ecology. The program participants then work with local, state and federal agencies, landowners, municipalities and non-profits to implement projects. See Table 1. YTAHP Roles and Responsibilities.

3.1. Administration

The RC&D maintains an agreement with BPA and currently administers contracts locally with the KCCD, NYCD, YN, and WDFW to implement YTAHP. The RC&D's mission is to facilitate natural resource and rural economic development projects across the three counties in the Yakima Basin and fits well with YTAHP approach. The RC&D holds contracts with core team members, with each member (KCCD, NYCD, WDFW, YN) vouchering to the RC&D for program related expenses. The RC&D then vouchers to BPA monthly and reimbursements are distributed to each RC&D subcontractor to cover eligible costs.

The RC&D handles grant administration, accounting, invoice voucher preparation, maintaining PICSES inputs, coordinating with BPA Contract Officer on contracting requirements, budget tracking, work element categories, monitoring, project updates; annual reporting and scheduling core team meetings.

3.2. Program Management

The RC&D and core team members jointly manage the program, including program organization, program consistency preparing and updating the YTAHP Strategic Plan, various presentations and outreach, monitoring plan development and implementation, finding and organizing technical support and training, producing the program annual plans and other functions as necessary. The core team includes those entities funded under BPA through the RC&D and others invited to participate, currently the KCT, Mid-Columbia RFEG, BCD, and Ecology.

The original YTAHP Strategic Plan was drafted in 2001 to provide a framework for the Program. The Strategic Plan is considered a work in progress and has been amended periodically (2004, 2007, 2012). The Strategic Plan includes the program scope, organizational structure, communication objectives, stream survey approach, barrier prioritization method, and options for project implementation and funding. As stream survey data is compiled, individual tributary reports are prepared which identify stream conditions and potential projects. Individual projects are initiated as interested landowners approach YTAHP members and project plans are developed that include permit needs, engineered designs, budgets and likely implementation scheduling.

The first BPA support for YTAHP was from the Drought Action Plan in FY02 (see <http://www.nwppc.org/fw/projectselection/actionplan/Default.htm>). Additionally BPA funding has been through the Provincial Review process from FY03 through FY13 and anticipated through FY18 (see <http://www.nwppc.org/fw/program/Default.htm>). Additional funding for project implementation is regularly sought from the WA State Salmon Recovery Funding Board (SRFB), Fisheries Restoration and Irrigation Mitigation Act (FRIMA), DOE Water Infrastructure Program, various USFWS and WDFW programs, Irrigation Efficiencies and other cost share programs through the Natural Resource Conservation Service, Washington State Conservation Commission, and other state and federal programs.

3.3. Project Development & Implementation

To prepare the groundwork for project implementation, initial program steps included an examination of existing stream conditions. Stream assessments were conducted on all or parts of many of the streams in the Yakima River Basin. These stream assessments were generally conducted by conservation district staff walking the streams to identify man-made structures, such as bridges, culverts; canal crossings (siphons) and irrigation diversion structures. These structures were then evaluated for fish passage and diversion fish screening compliance with state and federal criteria.

Once the stream assessments were done and potential projects identified, they were prioritized using an existing protocol (from the WDFW Salmonid Screening, Habitat Enhancement, and Restoration (SSHEAR) Section (now Environmental Restoration Technical Assistance (ERTA), see <http://wdfw.wa.gov/hab/tapps/erta.htm>). High priority passage and screening projects, those with high biologic value for salmon recovery, were targeted for project development. In addition, projects of other priority levels were considered if there was strong landowner support and involvement, readily available funding or opportunities for broad collaboration and long-term benefits. The current program focus is removing barriers on the lower few miles of most tributaries and on several high quality tributaries to their headworks.

Several meetings were held by KCCD and NYCD to share the stream assessment data with local stakeholders (landowners, water right holders, municipalities, special districts) and describe resources available (YTAHP, NRCS, Ecology Water Metering Program) and inquire as to stakeholder's interests as they related to passage, screening, stream habitat and salmon recovery efforts. YTHAP projects were developed by working with landowners expressing interest in diversion screening, dam modification, and riparian habitat enhancement. The YTAHP project sponsor, a core team member, works with project owner on desired outcomes, design needs, funding sources and engages engineers and prepares grant applications. The sponsor also works with the technical workgroup (TWG) and permit specialist on project permitting and design review.

The Conservation Districts frequently act as liaison with regulatory agencies, funding entities, and engineering service providers, for projects, stream assessments and community outreach. The Conservation Districts also assist in coordinating complementary programs such as irrigation efficiencies, environmental quality incentives program (EQIP), conservation reserve and enhancement program (CREP), etc.

3.4. Engineering and Technical Support

A critical component for project development is engineering services including designs and specifications, procurement of materials, and scheduling, contracting and construction oversight. The Washington Conservation Commission cluster engineers provide some design and engineering, job cost estimates, and assistance in the permitting process. In addition, private engineering firms are often hired to perform or supplement this work.

YTAHP recognizes the need for consistent technical review of proposed projects to identify specific goals, objectives and risks and facilitate project development such that the goals are met upon implementation. The technical work group (TWG) consists of project sponsors, agency and/or consulting engineers, the permit coordinator, biologists, and regulators. The TWG will complete and review engineering designs and provide technical assistance on all proposed projects. The TWG provides a consistent review group with common guidelines and engineering standards and includes regulatory agencies to assist in the preparation of permit application packages such that permit review and issuance is rapid and effective. Engineers, fabricators, and biologists from the WDFW, conservation district engineers, consulting engineers, and other stakeholders and regulators will participate in the TWG. In addition, members of the technical work group will facilitate and coordinate biological monitoring for YTAHP projects.

3.5. Regulatory Compliance

YTAHP has developed good working relationships with federal, state and local agencies to obtain the necessary permits and approvals for each project. The YTAHP-dedicated permit specialist (at WDFW) and project sponsor work with appropriate regulatory agencies and local jurisdictions to submit applications for permits or approvals. This includes preparation of permit applications and environmental documents and offering site tours for environmental evaluation purposes. The landowner and their representatives may also participate. The relationships built since YTAHP formally began in 2002 help to develop confidence in the Program and promote responsiveness throughout project permitting and implementation. The cooperative nature of this program and early involvement is intended to accelerate permitting and thereby completion of projects.

WDFW is the lead for completing environmental and cultural resource permit application packages. The WDFW permit specialist works with regulatory entities, namely BPA, NOAA Fisheries, USFWS, WA Department of Archaeology and Historic Preservation (DAHP), USACOE, Ecology, local governments, and others as appropriate.

Permits and approvals may include Joint Aquatic Resource Permit Application (JARPA) which includes the WDFW Hydraulic Permit Approval (HPA), US ACOE Grading Permit (Clean Water Act § 404) and Ecology Water Quality Certification (CWA § 401), and Shorelines Management Act Critical Areas (local jurisdiction); and State Environmental Policy Act (SEPA) environmental checklist; Cultural Resources concurrence (DAHP); and for ESA Section 7 consultation the National Environmental Policy Act (NEPA checklist), NOAA and USFWS issuance of or concurrence with a Biological Opinion, and National Historic Preservation Act § 106 consultation.

3.6. Monitoring

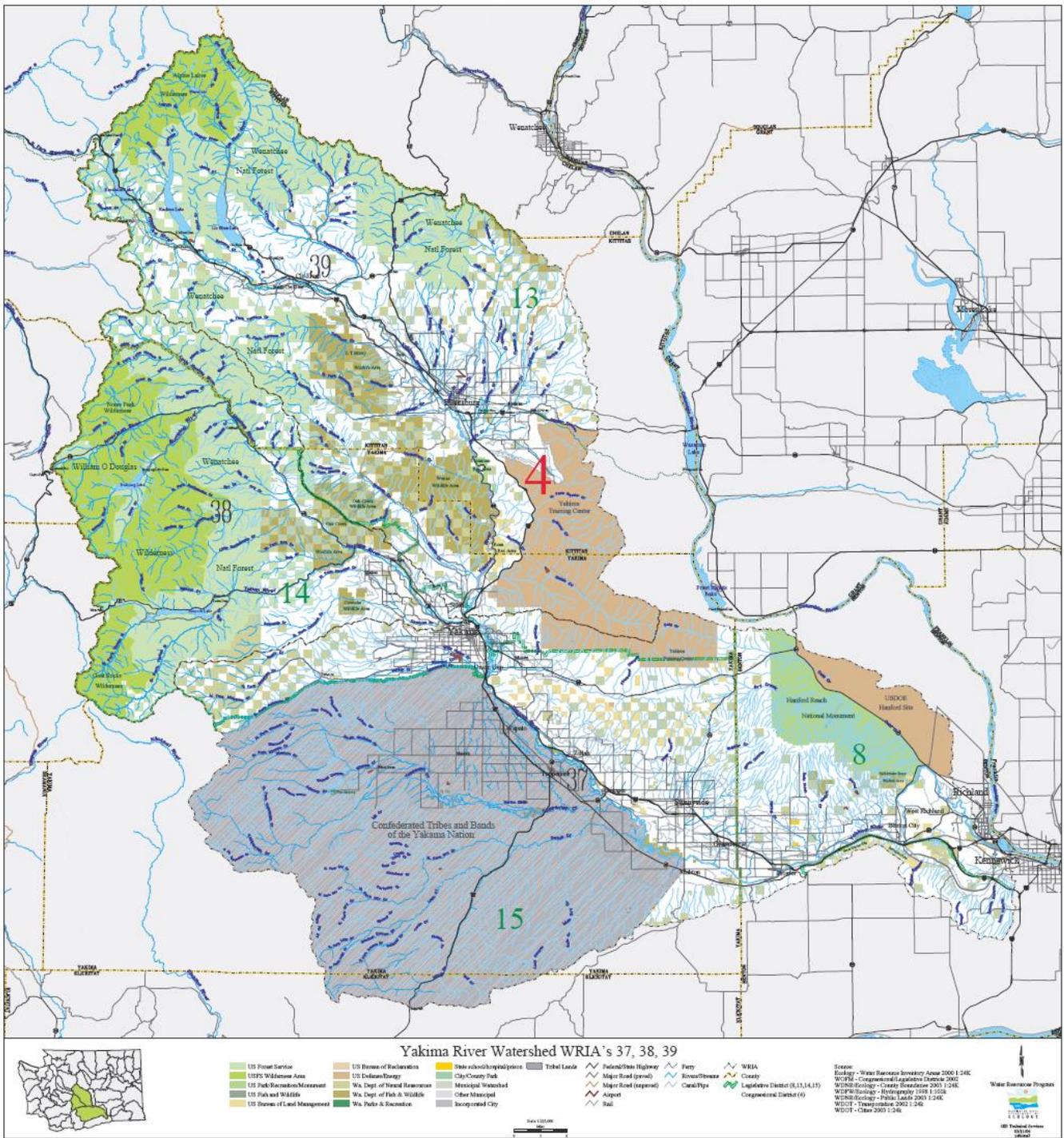
YTAHP uses three types of monitoring to assist in targeting program activities: program progress, project implementation, and project effectiveness. First, the core team regularly examines the progress of the Program to determine if changes are needed to improve organization, facilitate project development, and modify outreach, etc. Second, the project sponsor and permit lead determine whether projects are being implemented as designed and in conformance with permit conditions. Third is the biological monitoring of the fisheries resource prior to and after project implementation with respect to species presence, abundance, and diversity above and below project sites. Completed projects are assessed for their effectiveness in achieving intended goals.

Over time, ongoing biological monitoring will determine if implementation of projects is protecting existing fishery resources, and/or expanding fish distribution into desired tributaries. YTAHP intends to work with other basin fisheries programs and experts in determining the effectiveness of salmon recovery efforts basin wide. The coordination of monitoring efforts across programs would also reduce duplication and provide a more comprehensive picture of the effects of fish recovery efforts in the Yakima Basin.

Table 1. Yakima Tributary Access & Habitat Program Roles and Responsibilities.

Team	Membership	Responsibilities
Administration	RC&D	Grant administration, accounting, invoice preparation, coordinating with BPA and core team on budget tracking and project updates for grantor(s), BPA reporting
Program Management (Core Team)	RC&D WDFW KCCD NYCD YN KCT YBJB Ecology MCFEG YN	Program organization and schedules, assigning tasks and tracking progress, program consistency, forming partnerships, updating Strategic Plan, producing applications for funding, finding and organizing technical support, producing the program annual plans, and other functions as necessary. Open invitation to BPA to attend and participate. USFWS attends semi-regularly.
Project Sponsors	Core Team	Plan and coordinate projects, facilitate landowner and community involvement and outreach, oversee project management
Technical Work Group (TWG)	WDFW NOAA USFWS YN KCCD US ACOE NYCD Ecology BPA YBJB KCT Local Governments DAHP	The technical work group (TWG) provides the engineering, biological, and fabrication technical assistance. The permitting coordinator (housed at WDFW) participates with the TWG as well. Entities participation varies as appropriate for the needs of each project.

Figure 1. Map of Yakima River Basin



4. SCOPE of WORK, WORK ELEMENTS and ACCOMPLISHMENTS

The Scope of Work during the April 2012 through March 2013 period for the Yakima Tributary Access and Habitat Program is generally to improve fish access, protect fish from entrainment in diversion and improve habitat. Specific project level objectives are proposed annually by name and creek for a variety of passage barrier removals, diversion screening and riparian enhancements.

To meet this scope and objectives, numerous work elements (WE) were implemented for the program administration, project management, project design and permitting and habitat improvements were pursued. (For a further description of work elements, see: <http://efw.bpa.gov/contractors/statementsofwork.aspx>.)

General Work Elements to Identify Projects

Coordination (Project, Agency, Landowners) YTAHP core team members participate in community education, landowner outreach and project coordination efforts. Many of the barriers to fish passage, surface water diversions, and/or riparian habitat are on private property. YTAHP projects are voluntary, meaning they are only done with a willing landowner. The Conservation Districts, particularly, have long histories of working with the private landowners. The cooperative relationships they have with landowners and the trust they have developed enable them to engage landowners about YTAHP objectives and their potential participation in restoration efforts. This YTAHP outreach reaches thousands of people annually through news articles and presentations, tours, conferences and fairs. In addition, YTAHP frequently acts as liaison between landowners and agencies during project development.

Produce Inventory or Assessment (Stream Surveys) Early on YTAHP conducted stream surveys to prepare an inventory of existing conditions, including locations of diversions, barriers, culverts, etc. By 2004 more than 240 miles of stream were surveyed following the WDFW-SSHEAR protocol. Much of the priority tributaries have been surveyed, however there may be additional survey work on specific reaches as needed or as landowner approvals are granted. Updates to these surveys are planned.

Identify, Prioritize, and Select Potential Projects The Stream Surveys provide data which can be used to assist in prioritizing projects. Using the data collected, projects are given PI and/or SPI numbers. The WDFW SSHEAR process uses a Fish Passage Priority Index (PI) model to consolidate the many factors which affect project feasibility into a manageable framework. The Screening Priority Index (SPI) model was created to consolidate the many variables relevant to water diversions. Potential projects are discussed by the YTAHP core team and the Technical Work Group (consulting engineers, agency experts). PI and SPI scores are given considerable weight but practical considerations, such as landowner willingness, are also included in the selection process. Projects with a high potential benefit to fish passage, screening, and/or habitat enhancement, which also have a potential for implementation are selected for further development through the engineering and permitting phase.

Work Elements to Develop Projects

Engineering Engineered designs are developed in-house at the Conservation Districts or through consulting engineers contracted through YTAHP. One or more conceptual designs are prepared and presented to the TWG for critical input. A preferred design is

then pursued for the project and used for permitting and budgeting purposes. Project engineering can be a lengthy process. Many federal and state agencies have an interest in the design of the project and the construction methods used so there are often several iterations of the design to meet regulatory criteria.

Permitting Almost every project requires numerous permits or approvals from several local, state and federal agencies and jurisdictions. YTAHP is structured so that these agencies are involved early on in project design. A primary purpose of the YTAHP process is that projects are designed and constructed in conformance with agency regulations and the best available science. Even with early involvement by the reviewing agencies it generally takes four to six months or longer to complete the permitting process.

Pump Screens The installation of a pump screen is a relatively simple project but it does entail evaluating the irrigators' needs, pumping equipment water source and obtaining the necessary permits and authorizations. YTAHP partners general work with the Walla Walla Community College Water Management and Irrigation Technology instructors and students to do this evaluation and specify the type of pump screen needed.

Work Elements to Construct Projects

Install Fish Screens, Remove Barriers, Increase Instream Habitat, Plant Vegetation

During this reporting period 12 projects were constructed, 13 projects received vegetation management and an additional 20 projects received significant planning, design and/or secured funding, including some or all of these work elements:

Increase Instream Habitat Complexity	Install Fence
Realign, Connect and/or Create Channel	Plant Vegetation
Install Fish Screen	Install Well
Remove/Install Diversion	Remove/Modify Dam
Install Flow Measuring Device	Install Pipeline
Install Sprinkler	Enhance Floodplain
Create, Restore and/or Enhance Wetland	Install Fish Passage Structure
Install Siphon	Conduct Pre-acquisition Activities

List of Accomplishments

Below is a list of YTAHP accomplishments for fiscal year 2012:

FY12 YTAHP Accomplishments

April 2012 through March 2013

Project No. 2007-398-00

Contracts No. 00056617 (Capital); Contract No. 00056682 (Expense)

Kittitas County - Completed Projects

- 1. Cherry Creek–Jacobs/Nisbet and Sweet Grass Project *modifications*** (River Mile 1.46, 1.75): In 2010, two passage barriers were corrected opening up more than 2 miles of additional stream habitat. During FY11, fish screens were installed with flow measuring devices and piping was installed to decrease conveyance losses. During FY12 modifications: a rock barb was installed to improve sweeping velocity across belt screen(s) and a gantry. The high sediment in this tributary system has proven problematic. (Some work elements may have crossed fiscal years.) KCCD lead.
- 2. Jack Creek Floodplain Restoration Project *continuation*** (RM 0-1.5): Floodplain and riparian restoration through road obliteration, fencing to exclude grazing, large wood placement and planting. Improvement of in-stream habitat through bank regrading, large wood placement, and redirection of flow. Restoration work was accomplished in cooperation with the private landowner and the USDA Forest Service, and through the support of US Fish and Wildlife Service, National Forest Foundation, Overlake Flyfishers Association, WA Dept. of Ecology, WA Salmon Recovery Funding Board, and WA Dept. of Fish and Wildlife. MCFEG.
- 3. Teanaway River–3M Ditch** (RM 7.2): Conversion of 2 of 5 gravity irrigation systems to pump stations, screens, pipelines and power lines to service systems. Project also includes downstream point of diversion transfers and element of trust water. Remaining systems planned for conversion in FY13. KCCD.
- 4. Lower Swauk Restoration** (RM 1-4): Floodplain restoration, large wood replenishment, riparian restoration started in FY 12 and will be completed in FY 13. YN.
- 5. Mercer Creek Diversion Removal:** Abandoned diversion was removed to open up 1.05 miles of habitat. City of Ellensburg (minor YTAHP assistance).

Riparian Revegetation, Weed Management and Other Project Maintenance

- M1. Coleman Creek-Burris** (FY10): Plant management.
- M2. Currier Creek–Ellensburg Water Company Siphon** (FY08): Plant management.
- M3. Jack/Indian Creeks Projects** (FY09): Plant management.
- M4. Swauk Creek Restoration Project** (FY10): Plant management.
- M5. Taneum Creek–Bruton Project** (FY09): Plant management and site monitoring.
- M6. Reecer Creek–Floodplain Restoration Project** (FY10/11) Significant revegetation efforts occurred in FY12, including irrigation of 5,000 native plants, weed management and seeding remaining 52 acres of upland areas to native grasses.
- M7. Teanaway River–Lambert Road** (FY11): Diversion repair of fish passage, revegetation ongoing.
- M8. Swauk Creek–Ranch on Swauk Creek** (FY11): Revegetation management.

M9. Taneum Canal Company (TCC) Fish Screen and Diversion (FY10): After construction, an increased aggradation within the diversion structure was observed. The KCT worked with the TCC and the project engineer (Paul Tapple) to remove several large rocks that were immediately downstream of the diversion to increase stream energy through the structure, and mobilize gravels within the structure during higher flow events. KCT utilized YTAHP for funding, design and permitting (HPA) for the successful maintenance of this project site.

Kittitas Significant Planning, Permitting and/or Engineering

P1. Coleman Creek–Ellensburg Water Company (RM 3.85): Designs at 99% completed for diversion screening and siphoning the canal under the creek to provide for improved fish passage and to protect fish from entrainment in a 15cfs+ diversion. Project requires additional funding to implement, grant application submitted to the WA Department of Ecology; project is on Ecology draft offer list for \$233,149. Construction is expected in FY14 or as funding allows.

P2. Coleman Creek–Hanson/Poulsen and Olmstead State Park (RM 2.13, 3.41): Diversion screening, piping, fish passage and riparian enhancements. In coordination with EWC project above. FY13 or as funding allows. Multiple project partners (KCCD, YN, WDFW, WA State Parks). Continued to try to work with landowner/water right holder. Submitted applications for additional funding—particularly for on-farm conservation projects.

P3. Currier Creek–Deneen Project (RM 1.0): Channel modification and significant riparian restoration. Permit level design in preparation; working with landowner on specifics. FY14 (future uncertain).

P4. Reecer Creek–Pautzke Project (RM 1.91, 2.34): Diversion screening and fish passage. Designs in development; potential to consolidate diversions. FY13 or 14.

P5. Teanaway River–3M Ditch (RM 7.2): Gravity diversions to pump screen conversions (4 cfs, 643 AF/yr total), metering, piping, irrigation enhancements, and possibly trusting of conserved water. Water right holders are working on individual plans with a local technical service provider. Point of diversion changes are in process. Two of five projects completed in FY12, remainder planned for FY13.

P6. Teanaway River–Red Bridge Road (RM 4.4): Diversion repair for fish passage. Repair design completed, ongoing work with landowners and permits. Funding secured. Construction anticipated July or August FY13.

P7. Wilson/Naneum Creek Basin–Watershed Prioritization (RM 1.0 and upstream): Facilitating a working group to discuss priorities for project planning purposes in the Wilson/Naneum Basin. Ongoing. An application to the Salmon Recovery Funding Board for a large reach assessment style project is in progress.

P8. Naneum Creek at Poulsen-Fish Screen and Passage (RM 2.72): Work on design for this screen site.

P9. Caribou Creek-Rosbach-Screening and Passage. Design was completed for fish screen and fish passage at this irrigation diversions.

P10. Teanaway Forks Large Wood Trapping (West Fork RM 6, North Fork RM 5 & 6): Preliminary design of structures to trap large wood in order to form pools, capture

gravels, and increase floodplain connectivity on forest land without risk to homes or other infrastructure. Construction planned for FY 15.

P11. Cle Elum River Side-Channel Restoration and ELJs-Phase 2 (RM 5-7): The KCT held two Technical Working Group Meetings to inform stakeholders in the basin of the project design alternatives. This interaction led to completion of the 60% design package. The KCT made some design team changes to better meet the goals of the project to increase the habitat values of the lower Cle Elum River.

P12. Gold Creek Habitat Improvements: KCT began work on the Habitat Assessment and Hydrologic Analysis planning for this project and preparing for a TWG meeting to address the scope of work of the project engineers and inform of the results of the Data Inventory and Gap Analysis.

P13. Parke Creek-Dodge Consolidation (RM 2.8, 3.0, 3,23) Consolidation of three gravity diversions to a single pumped diversion, removal of existing instream structures and installation of sprinklers. Project coordination, design and permitting. 2013.

Yakima County – Completed Projects

6. Cowiche Creek-Muoth Project (RM 2.0): Pump screen installed, 0.2 cfs. NYCD project lead.

7. South Fork Cowiche Creek-Bell Project (RM 2.45): Upgrade to compliant screened pump diversion, 0.3 cfs. NYCD lead.

8. South Fork Naches-Lewis Ditch (RM 10): Improved fish passage, instream large woody debris. Riparian revegetation. YN.

9. South Fork Naches-Scott Ditch: Improved passage and diversion screening of 26 cfs. Installation of first “Farmer’s Screen” in Washington State. YN, WDFW.

10. Rattlesnake Creek-Melville Project (RM 0.37): Upgrade to compliant screened pump diversion, 0.04 cfs. NYCD.

Riparian Revegetation, Weed Management and Other Project Maintenance

M10. Cowiche Creek–CCC/Jennerjohn/Funkhauser (RM 2.1): Plant maintenance.

M11. Cowiche Creek–Lamas (RM 3+): Plant maintenance.

M12. Cowiche Creek–Cowychee Ditch (RM 12.1): Plant maintenance.

M13. North Fork Ahtanum–Gauge Station (RM 4.53): Plant maintenance.

M14. Rattlesnake Creek–Boyd Brown Project (FY 09): Plant/site maintenance.

M15. Ahtanum Creek-La Salle Project (FY11): Plant maintenance on 16 acres and 2,900 feet of stream bank.

M16. Wenas Creek–Comeau Project (FY11): Plant maintenance.

M17. Wenas Creek–Frausto Project (FY11): Plant maintenance.

Yakima Significant Planning, Permitting and/or Engineering

- P14. Ahtanum Creek-Herke Ranch** (RM 21.31, 21.81): Point of diversion consolidation, diversion screening, instream habitat improvement, partial fish passage barrier removal, water metering. Designs near completion and technical workgroup held. Implementation anticipated in FY13 or FY14.
- P15. Cowiche Creek–CWWUA Barrier Removal and Trust Water Project** (RM 7.45, 8.6): Change in point of diversion to Tieton River with water delivery occurring through Yakima Tieton Irrigation District (YTID) infrastructure, trusting of 7.9 cfs of Cowiche Creek water, installation of pipeline for the CCWUA, and water metering. Designs at 95% completion and agreements in preparation. ROEs for water rights finished by WA Department of Ecology. Extensive coordination required between BOR, YTID Board and landowners; NYCD facilitating project. Implementation in FY13-14.
- P16. Cowiche Creek–Nelson Dam/Lower Cowiche Improvements** (RM 0.5): Consolidation and change in point of diversion at lower Cowiche Creek to Naches River at Nelson Dam will facilitate fish passage barrier removal at the mouth of Cowiche Creek. Implementation dependent upon BOR, City of Yakima, Yakima County partners, funding and coordination with other planned vicinity improvements.
- P17. Billy’s Pond Floodplain Restoration-City of Yakima** (RM 0.28): Fish passage through the removal of a perched culvert and replacement bridge for Greenway trail. Project is in conjunction with the City of Yakima’s flood plain enhancement project. FY13.
- P18. Cowiche Creek-Railroad Bridge** (RM 2.8): Fish passage through removal of old decommissioned railroad and large amounts of deposited sediment and debris directly above bridge. Project is associated with stream and floodplain restoration downstream by Yakima County.
- P19. Cowiche Creek Floodplain Restoration Phase 2** (RM 1 – 1.3): Concrete debris and abandoned railroad berm removal along right bank of Cowiche Creek on multiple parcels, placement of wood and rock structures in stream, and revegetation of disturbed areas. Implementation to be staged in FY 13 & 14.
- P11. Britt Pump Screen-Cowiche Creek** (RM 2.8): Water right of 0.1 cfs to be screened with Pump Rite fish screen. FY13.

Notes:

cfs – Cubic feet per second, measure of water flow in instantaneous volume past a point.

RM - River mile is a measure of distance in miles along a river or stream from its mouth (RM 0.0).

5. SUMMARY

Overall, the Yakima Tributary Access and Habitat Program has and will continue to address specific goals of the Yakima Sub-basin Plan and has achieved important enhancements that support aquatic species, particularly resident and anadromous fish, including ESA listed species. The involvement of local conservation and irrigation entities as well as communication with local elected representatives has broadened the awareness of the program and enhanced its ability to achieve its objectives. In addition, the program accomplishments will leverage subsequent work through the engineering designs, procured materials and general cost share that this program has provided. Additional grant applications have been and will continue to be made to further support program objectives.

BPA funding for FY12 supported the construction of 10 projects, ongoing riparian vegetation and site maintenance on 17 projects and provided significant work toward project development, permits, design and/or secured funding for an additional 19 projects. The FY12 completed projects saw the screening nearly 30 cfs of diverted surface water and improved screening, habitat and passage in eight streams in the Yakima Basin. YTAHP also leveraged several hundred thousand dollars in funding from other sources committed to project implementation.

Future work under YTAHP may include: installation of properly screened diversions (both pump and gravity), removal of various fish passage barriers, improvement of habitat with fencing, planting of vegetation and installation of bridges for livestock crossing, stabilizing stream banks to reduce erosion, and various on-farm irrigation improvements. The program will also supplement work done under other local, state and federal programs that support water conservation and habitat projects. Completion of another year's effort has strengthened opportunities for working on the private lands in two counties which will be vital to future efforts by YTAHP and others to protect and enhance Yakima River Basin habitat. It is again important to emphasize that this work is done on a voluntary basis and shows substantial support by the private landowners for pursuing projects of this type. Such support is essential to maximize future salmonid recovery efforts.

Public information on YTAHP can be found at the following Internet websites.

BPA publications (use S Central Washington RC&D in primary author box):

<http://www.cbfish.org/Report.mvc/SearchPublications/SearchByTextAndAuthorAndDate/Index.aspx> or at <http://www.efw.bpa.gov/searchpublications/>.

SCW RC&D YTAHP website: <http://scwrcd.org/ytahp.html>.

KCCD YTAHP website: <http://kccd.net/YTAHP.htm>.

NYCD YTAHP website: <http://northyakimacd.wordpress.com/projects-and-program/yakima-tributary-access-habitat-program-ytahp/>.

REFERENCES

- Biological Opinion, Reinitiation of Consultation on Operation of the Federal Columbia River Power System, Endangered Species Act-Section 7 Consultation. National Marine Fisheries Service, December 21, 2000.
- Limiting Habitat Factors, Yakima River Watershed, Final Report. Washington State Conservation Commission, December 2001.
- 2007 YTAHP Biological Monitoring Report, Yakima Tributary Access & Habitat Program, Washington Department of Fish and Wildlife, 2007. See http://www.kccd.net/Current_Projects/YTAHP/YTAHP.htm
- Yakima River Basin - Watershed Assessment. Tri-County Water Resources Agency, June 2000.
- Yakima Subbasin Summary (draft). Northwest Power Planning Council, August 3, 2001. See <http://www.nwppc.org/fw/subbasinplanning/yakima/plan/>
- YTAHP Strategic Plan, Yakima Tributary Access & Habitat Program. 2002, updated 2007. See http://www.kccd.net/Current_Projects/YTAHP/YTAHP.htm

YTAHP Web Resources:

- SCW RC&D Council, YTAHP: <http://scwrcd.org/ytahp.html>
- NYCD, YTAHP: <http://northyakimacd.wordpress.com/projects-and-program/yakima-tributary-access-habitat-program-ytahp/>
- KCCD, YTAHP: <http://kccd.net/YTAHP.htm>
- MCFEG: <http://midcolumbiarfeg.com/>
- KCT: <http://kittitasconservationtrust.org/>
- WDFW, Salmon and Steelhead Conservation:
<http://wdfw.wa.gov/conservation/salmon/>
- YN Fisheries: <http://host119.yakama.com/>
- WA State JARPA (e-permitting):
http://www.epermitting.wa.gov/site/alias__resourcecenter/jarpa_process_overview/9979/process_overview.aspx

APPENDIX

Yakima Tributary Access & Habitat Program

FY12 Project Photos

Yakima County Project Images



Nile Creek–Matson Project (RM 1.35): Point of diversion consolidation and move to new pumping station with fish screen on the Naches River. Install boom, pad, pump, 10" Riverscreen and installation of ~3,200 ft of pressurized irrigation pipe from new pumping station to reregulating pond. 3.7 cfs of Nile Creek left instream to benefit flow. NYCD.

Left: Placing Matson Riverscreen.

Right: Installed Riverscreen.



Ahtanum Creek-La Salle Project (FY11): Plant maintenance on 16 acres and 2,900 feet of stream bank.

Wenas Creek–Comeau Project (FY11): Plant maintenance.



Cherry Creek Plant Maintenance, Weirs visible.



Cherry Creek Plant Maintenance.



Cherry Creek Rock Barb Placement.



Cherry Creek Rock Barb Installed.



Coleman Creek Plant Maintenance.