

BPA Instream Habitat Projects Completed within Asotin Creek Watershed

**Final Report
1999 - 2001**



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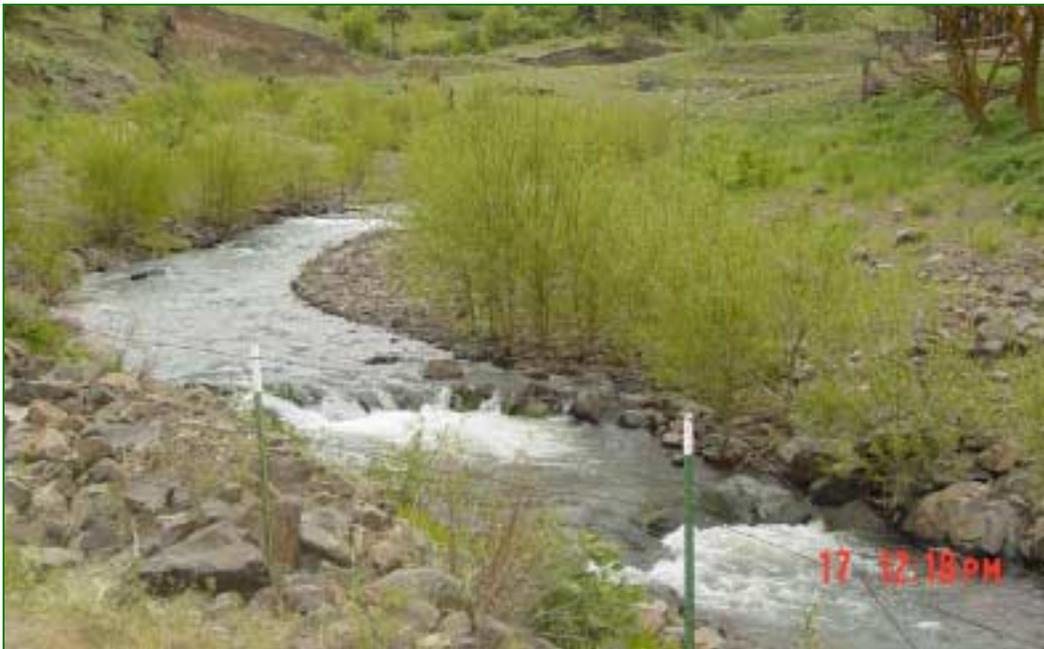
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BPA Instream Habitat Projects Completed within Asotin Creek Watershed

1999 - 2001 Asotin Creek Instream
Final Report of Accomplishments

BPA Project Numbers;

2000-67-00 Asotin Creek Instream Projects



Cooperators:

Bonneville Power Administration
Natural Resource Conservation Service
Washington Department of Fish and Wildlife
Umatilla National Forest Service, Pomeroy Ranger District
Interagency Committee for Outdoor Recreation
Washington State Conservation Commission
Salmon Recovery Funding Board
Nez Perce Salmon Corps.

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Prepared for:

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Abstract

The Asotin County Conservation District (ACCD) is the primary entity coordinating habitat projects on both private and public lands within the Asotin Creek watershed. The watershed covers approximately 325 square miles in the Blue Mountains of southeastern Washington in WRIA 35. According to WDFW's Priority WRIA's by At-Risk Stock Significance Map, it is the highest priority WRIA in southeastern WA. Summer steelhead, bull trout, and Snake River spring chinook salmon which are listed under the Endangered Species Act (ESA), are present in the watershed. WDFW manages it as a Wild Steelhead Reserve, because no hatchery fish have been released here since 1997.

The ACCD has been working with landowners, Bonneville Power Administration (BPA), Washington State Conservation Commission (WCC), Natural Resource Conservation Service (NRCS), Washington Department of Fish and Wildlife (WDFW), U.S. Forest Service, Pomeroy Ranger District (USFS), Nez Perce Tribe (NPT), Department of Ecology (DOE), National Marine Fisheries Service (NMFS), and U.S. Fish and Wildlife Service (USFWS) to address habitat projects in Asotin County. Local students, volunteers and Salmon Corps Members have been instrumental in the success of the Model Watershed Program on Asotin Creek.

ACCD began coordinating habitat projects in 1995 with the help of BPA funding. Approximately two hundred seventy-six projects have been implemented as of 1999. The Washington State Legislature was successful in securing funding for endangered salmon and steelhead recovery throughout the State in 1998. While these issues were new to most of the State, southeastern Washington had been dealing with endangered fall and spring chinook salmon since 1994.

The *Asotin Creek In-Stream Habitat Project* teamed BPA and Governor's Salmon Recovery Funding on four instream habitat projects in the Asotin Creek Watershed. These projects provide complex instream habitat for steelhead, bull trout and spring chinook in the stream. 38 pools were created as a result of these instream projects with 860 ft of LWD utilized for habitat.

Acknowledgements

We express our appreciation to the Bonneville Power Administration for funding considerations. We would especially like to recognize Mark Shaw for his unending commitment to contracts and questions. Jim Schroeder and Courtney B. Smith of the Clarkston NRCS Field Office, Bill Broughton of the Washington State Conservation Commission, Cheryl Sonnen and the Asotin County Conservation District Board of Supervisors for their support and guidance. We also thank Rick Stauty of the Pomeroy NRCS Field Office, Steve Martin and Tom Schirm from Washington Department of Fish and Wildlife (WDFW), Del Groat of the Umatilla National Forest Service – Pomeroy Ranger District, and Rick Edwards of the National Marine Fisheries Service (NMFS) for their recommendations and cooperation in these instream habitat projects.

Special thanks to the Asotin County Commissioners and participating landowners for their input and cooperation.

Thanks to Latah Tree Farms for their long hours and minimal impact of our natural resources during instream habitat projects; and to the Nez Perce Salmon Corps for their labor and commitment to protecting and restoring Asotin Creek watershed habitat.

These projects were a cooperative effort between many different agencies and private landowners. Without the commitment and dedication of all these individuals, our projects would not be as successful. We appreciate everyone's hard work and look forward to continuing working together on habitat projects in Asotin County.

Asotin Creek Watershed History

Asotin Creek, a tributary to the Snake River at (Rm) 145 drains approximately 325 square miles of Asotin and Garfield Counties. Headwaters originate in the Blue Mountains (6,200 ft) and flow east into the Snake River (800 ft) at Asotin, WA. Located in WRIA # 35, the highest priority WRIA in southeastern Washington according to WDFW's "At-Risk Stock Significance Map," Asotin Creek is part of the Governor's Snake River Salmon Recovery Region.

Asotin Creek remains an important Snake River tributary for anadromous salmonid production in Washington and has been given the distinction of a reserve for Wild Steelhead under current WDFW management policy. Charley Creek, an upper tributary, historically has some of the highest densities of juvenile steelhead in southeastern Washington according to WDFW fisheries surveys.

ESA listed stocks of summer steelhead, bull trout and spring chinook along with resident rainbow trout utilize the watershed. Indigenous anadromous fish species most actively targeted for management are summer steelhead, bull trout, and spring chinook salmon. The goals for these species are to restore sustainable, naturally producing populations to support tribal and non-tribal harvest and cultural and economical practices while protecting the biological integrity and genetic diversity of these species in the watershed. The broad general strategies used to achieve the habitat objectives include protecting and restoring prioritized habitat through the use of in-stream, riparian and upland best management practices.

The *Asotin Creek Model Watershed Plan (Plan)* was printed in 1995. It was the first BPA funded Model Watershed Plan completed in Washington that deals specifically with watershed restoration and protection focused on fish habitat restoration. Anadromous salmonid production in Asotin Creek is impacted by high summer stream temperatures, sediment deposition, turbidity, loss of riparian vegetation and lack of suitable resting and rearing pool habitat as recognized by the *Plan*. Decreasing stream water temperatures and increasing complex resting and rearing pools are goals identified in the *Plan*. The [Asotin Creek Instream Habitat Projects](#) were identified and proposed for funding by ACCD as a means to achieve these goals.

Successful completion of past BPA, SRFB and WCC habitat projects and working relationships with watershed residents and interested parties have resulted in projects being completed to address factors limiting salmonids. Fencing and alternative water developments have been completed to reduce direct animal impacts to the stream and riparian planting projects have been identified as a high priority.

On March 16, 1999 the National Marine Fisheries Service (NMFS) listed seven additional salmon species as Threatened under the federal Endangered Species Act, bringing the total statewide listings to sixteen. Spring chinook were listed in 1992, steelhead in 1997 and bull trout in 1998, all of which occur in Asotin Creek. The new listings in March did not affect ACCD projects as much as other areas of the state. The ACCD has been working with the NMFS and USFWS to obtain permits for its BPA In-Stream Habitat Projects. Biological Assessments were submitted for and approved through this process and the ACCD has developed a good working relationship with the landowners, federal and state agencies, and tribes.

NMFS believes that any successful recovery strategy must demonstrate:

- Substantive protective and conservation elements.
- A high degree of certainty that it will be implemented.
- A comprehensive monitoring program.
- A recognition of the need for partnerships between federal, state, local and tribal governments.

The ACCD supports this approach, however local citizens and landowners need to be recognized as partners by all government agencies. Without cooperation and partnerships at the local level this process will not be successful.

In April of 2002 the NMFS released their **Interim Abundance and Productivity Targets for Pacific Salmon and Steelhead Listed under the Endangered Species Act in the Interior Columbia Basin. Interim Objectives – Snake River Steelhead ESU for Asotin Creek Interim Abundance Targets of 400**. This provides a preliminary and general sense of ESA recovery objectives currently under development. These interim targets are only a starting point. NMFS will replace these targets with scientifically more rigorous and comprehensive recovery goals using viability criteria developed through the Interior Columbia Technical Recovery Team (TRT) process that commenced in October, 2001 (according to a letter from Bob Lohn of NMFS to Larry Cassidy of the NWPPC).

The projects in this report have been completed to help reduce direct impacts to salmonid bearing streams in the Asotin Creek watershed. Riparian planting, fencing, and alternative water developments on private property inform and educate local individuals on the importance of healthy riparian areas and how it impacts anadromous salmonid production.

1999 Asotin Creek Instream Habitat Projects

<i>Projects</i>	<i>BPA Costs</i>	<i>Early Action</i>	<i>Total Costs</i>	<i># of Pools</i>
Breakwater #2	\$6,213.58	\$3,096.25	\$9,309.83	8
Heitstuman #3	\$3,627.54	\$2,261.34	\$5,888.88	2
Theissen #5	\$10,440.96	\$4,258.50	\$14,699.46	16
Jungert #6	\$3,044.85	\$2,335.18	\$5,380.03	9
Schlee #7	\$3,586.93	00.00	\$3,586.93	1
Koch #8	\$3,067.95	00.00	\$3,067.95	2
Northfork *	00.00	00.00	\$18,000.00 *	36 *
<i>Totals</i>	<i>\$29,981.81</i>	<i>\$11,951.27</i>	<i>\$41,933.08</i>	<i>38</i>

* Umatilla National Forest – Pomeroy Ranger District Project, not added to totals

Total Structures

Large Root Wads (LWD) – 23, Feet of LWD – 860 ft
 3 Boulder Clusters – 5, J Hook Rock Vanes – 9, Vortex Rock Weirs – 1
 Total Stream Feet – 1,145 ft, Total Pools – 38

2000 -2001 Asotin Creek Instream Habitat Projects

<i>Projects</i>	<i>2000 BPA</i>	<i>2001 BPA</i>	<i># of Pools</i>
Staging Materials	\$6,213.58	\$6,660	---
Charley Creek	---	\$4,301	8
Theissen O&M	---	\$5,000	---
<i>Totals</i>	<i>\$6,154.14</i>	<i>\$15,961</i>	<i>8</i>

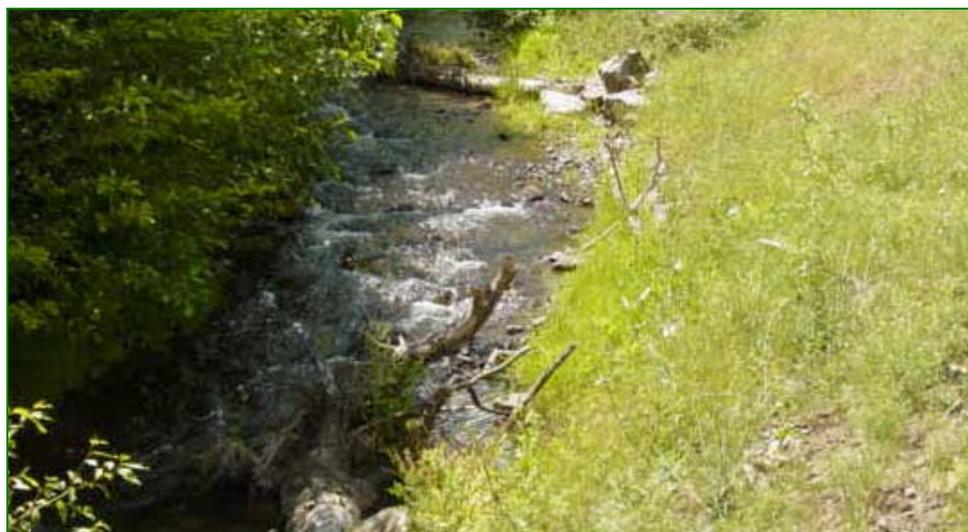
Charley Creek Instream Project



Pre-construction photo, limited pocket water behind small rocks



Rootwads with large boulders forming J-Hook Rootwad structures



Two logs with rootwads to help form pools and provide cover

Thiessen Instream Project



Thiessen project post O&M



Project following one run-off event after O&M

Koch Meander Reconstruction Project



Project site prior to Construction



Meanders beginning to be formed



Koch Meander Reconstruction Project Completed

Koch Meander Reconstruction Project



October, 1998 completed project



December, 1998 (3 times bankfull flows)



September, 1999 two J-hooked rock vanes installed to maintain meanders

Koch Meander Reconstruction Project



Koch Meander Spring of 2002

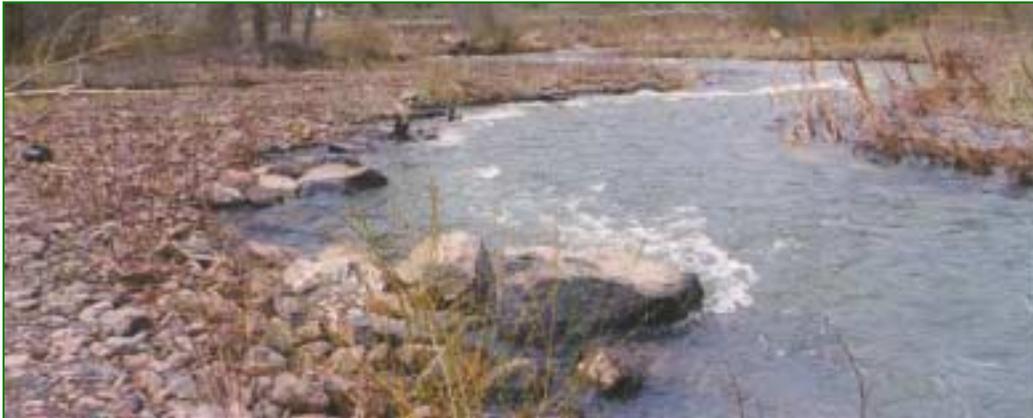


Early Summer 2002 Willows, Cottonwoods and Ponderosa Pine doing well

Koch Meander Reconstruction Project



Deposition in meander bend, width-to-depth ratio too wide 3/16/99



Width-to-depth ratio reduced w/functioning pointbar on opposite side



Willows thriving, width-to-depth-ratio functioning on Koch Meander

Koch Meander Reconstruction Project



Koch Project Prior to Meander Reconstruction



Post Meander Reconstruction



Stream channel length, pool habitat and flood plain connectivity have been restored

Schlee Meander Reconstruction Project



Schlee's Meander Reconstruction Project. 9/24/97



Completed Meander Reconstruction Project. 10/1/97

Schlee Meander Reconstruction Project



Schlee project following two runoff seasons, headcut extending to first vortex



Vortex rock weir installed below to stop headcut

Schlee Meander Reconstruction Projects



Schlee Meander Spring 2002



Early Summer 2002 Schlee Meander with willows thriving

Schlee Meander Reconstruction Project



Schlee Project following year after Meander Reconstruction Completed



Schlee Meander Reconstruction Project Currently (Four growing Seasons later)