

**ASOTIN CREEK MODEL WATERSHED
1997 HABITAT PROJECTS**

ANNUAL PROGRESS REPORT

Project Period:
January 1, 1997 to March 31, 1998

Prepared by:

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Asotin Creek Model Watershed
Asotin County Conservation District
Clarkston, WA 99403

Funded by:

U.S. Department of Energy
Bonneville Power Administration
Anadromous, Resident Fish and Wildlife Implementation
P.O. Box 3621
Portland, OR 97208-3621

Project Numbers: 97-080-00, 97-082-00, 97-086-00, 97-087-00, 97-099-00
Contract Numbers: 97AP36208, 97AP36971, 97AP37439, 97AP37332, 97AP63370

Asotin Creek 1997 Habitat Projects

Abstract - The installation of fish and wildlife restoration projects on Asotin Creek completed in 1997 include: 11 in-stream habitat restoration projects, 3 riparian exclusion fences, 6 riparian fences, 14 sediment basin constructions, 54 sediment basin cleanouts, 1 multi-purpose pond construction, 1,800 ft of terraces, and 1 three month water quality study. In-stream project objectives were to increase the number of large pools with complex fish habitat containing LWD, re-establish the streambank stability, and reduce in-stream temperatures. Most of the projects listed above were cost-share on private land with the landowner paying 50% - 10% of the project costs and signing a ten year maintenance agreement. The District has used many of these projects for tours and workshops for local students. Information and Education for the local public is an important part of the Model Watershed Plan. As we continue to fund projects public involvement and buy-in is an important aspect of our overall goal of watershed health.

1997 BPA Contracts

<u>Contract #</u>	<u>Project #</u>	<u>Project Name</u>
97AP36208	97-080-00	Fifty-four Sediment Basin Cleanouts
97AP36971	97-082-00	Schlee Site #1
97AP36971	97-082-00	Koch Site #2
97AP36971	97-082-00	Blankinship Sites #3 & #4
97AP36971	97-082-00	Hood Site #5
97AP36971	97-082-00	Thiessen Sites #6 & #7
97AP36971	97-082-00	Headgate Park Site #8
97AP36971	97-082-00	Hagenah Sites #10, #11, & #12
97AP36971	97-082-00	Asotin Creek Water Quality Study
97AP36971	97-082-00	Jim Koch Riparian Fencing
97AP36971	97-082-00	Jay Holzmilller Riparian Fencing
97AP37439	97-086-00	C. Johnson Upland Site #2
97AP37439	97-086-00	F. Johnson Upland Site #3
97AP37439	97-086-00	D. Reeves Upland Site #4
97AP37439	97-086-00	D. Forgey Upland Site #5
97AP37332	97-087-00	Lick Creek Water Gap II
97AP63370	97-099-00	G. Thiessen Riparian Fencing
97AP63370	97-099-00	F. Koch Riparian Fencing

ASOTIN CREEK MODEL WATERSHED 1997 HABITAT PROJECTS

The *Asotin Creek Model Watershed Plan* which was printed in 1995, was the first to be developed in Washington which specifically addressed habitat protection and restoration for salmonids. The Plan is consistent with the habitat elements of the “*Strategy for Salmon*” and the draft “*Wild Salmonid Policy*.” The Plan continues to improve on “grass roots” public involvement and interagency cooperation for habitat restoration to offset impacts to fisheries resources in Asotin Creek watershed.

Our mission as stated in the *Asotin Creek Model Watershed Plan* is to “complete and implement an integrated plan for the Asotin Creek watershed that will meet landowner objectives and agency acceptance, in order to protect and enhance all resources bases with concern for long-term sustainability.”

Implementation of the *Asotin Creek Model Watershed Plan* goals and objectives will effectively address habitat restoration for ESA listed weak populations without adversely affecting watershed biological diversity. Objectives of the projects are to restore in-stream habitat diversity and complexity with the addition of large pools containing LWD, enhance riparian vegetation to reduce stream temperatures, improve streambank stability, protect spawning sites from sedimentation, reduce the amount of sediment from the upland through the installation of best management practices, and to improve overall water quality.

Improving and maintaining critical habitat on private property requires cooperation and long-term commitments between landowners, and state and federal agencies to undertake comprehensive watershed management. The District just completed its second year of habitat installation and adaptive management measures are being implemented.

The District circulates *Asotin Creek Model Watershed Newsletter's* every quarter to inform and educate residents of completed and proposed projects. The newsletter has been well accepted and has won first place in the NW Region in 1996 and third place in the nation in 1997. The partnerships that have developed by the District through the use of the *Asotin Creek Model Watershed Newsletter* has enabled habitat to be restored on private property within the watershed. The District is very active with local schools and provides hands-on workshops and tours. Information and Education is an important part of the Model Watershed. Articles, tours, and workshops have been the best way to showcase our successes and mistakes.

The District has partnered with the Natural Resource Conservation Service, WDF&W, USFS, DOE, WSU - Center for Environmental Education and Analytical Lab, Salmon Corps, students, citizens, and local landowners to restore critical habitat for fish and wildlife within the Asotin Creek watershed.

1997 BPA Sediment Basin Cleanouts

Cooperator	# of Basins	Total Costs	BPA Costs	Landowner Costs	Landowner In-kind
Appleford	1	\$830.59	\$636.53	\$194.06	\$150.00
Ausman, B	4	\$4,354.45	\$2,301.83	\$2,052.62 *	\$1,680.00 X
Ausman, K	2	\$2528.28	\$1,920.78	\$607.50	\$150.00
Barkley	2	\$1,593.26	\$1,223.95	\$369.31	\$240.00
Dodd	8	\$9,574.63	\$4,381.07	\$5,193.56 *	\$150.00
Flerchinger	3	\$2,238.98	\$1,715.86	\$523.12	\$150.00
Forgey	7	\$1,828.10	\$1,400.98	\$427.12	\$300.00
Heitstuman	2	\$967.82	\$620.20	\$347.62 *	\$150.00
Johnson	3	\$3,502.91	\$2,684.47	\$818.44	\$150.00
Kurdy	1	\$499.86	\$374.90	\$124.96	\$150.00
Kuther	1	\$674.10	\$516.60	\$157.50	\$150.00
Petty, P	5	\$3,731.63	\$2,859.76	\$871.87	\$240.00
Petty, T	7	\$4,429.80	\$3,394.80	\$1,035.00	\$3,000.00 X
Polumsky	1	\$1,155.60	\$885.60	\$270.00	\$150.00
Reeves	6	\$5,201.56	\$3,987.25	\$1,214.31 *	\$300.00
Rimmelspacher	8	\$1,340.00	\$1,005.00	\$335.00	\$150.00
Scheibe	1	\$1,591.36	\$855.05	\$736.31 *	\$150.00
Totals	62	\$46,042.93	\$30,764.63	\$15,278.30	\$7,410.00

- * Indicates Landowner paid for sediment to be hauled from the basins.
- X Indicates Landowner hauled the sediment while the basin was being cleaned.

In-kind contributions by the landowner are not included in the total cost. Landowner In-kind was determined at \$15.00 per hour and includes: signing up for practices, showing the District and contractor the basins, and time spent while work was being completed. The two landowners in-kind for hauling the sediment was determined at \$30.00 per hour.

Sediment basin cleanouts were cost-share 75% with the landowner paying for the cost to haul the sediment. Landowner participation was strictly on a voluntary basis.

1997 BPA Fish Habitat Restoration Projects

Projects	Total Costs	BPA Costs	Landowner Costs	Landowner In-kind
Schlee #1	\$13,209.42	\$11,913.65	\$1,295.77	\$360.00
Koch #2	\$10,550.40	\$8,479.18	\$2,071.22	\$150.00
Blankinship #3 & 4	\$5,642.65	\$4,319.24	\$1,323.41	\$150.00
Hood #5	\$5,558.20	\$4,265.03	\$1,293.17	\$360.00
Thiessen #6 & #7	\$6,102.95	\$4,827.58	\$1,275.37	\$360.00
Headgate #8	\$10,521.27	\$10,521.27	\$00.00	\$360.00
Hagenah #10, 11, 12	\$4,824.10	\$3,676.19	\$1,147.91	\$480.00
Totals	\$56,408.99	\$48,002.14	\$8,406.85	\$2,220.00

In-kind contributions by the landowner are not included in the total cost. Landowner In-kind was determined at \$15.00 per hour and includes: signing up for the projects, showing the District and the contractors the sites, and time spent while work was being completed. Most of the landowners removed fence to help gain access to the sites. Two of the landowners helped during construction to keep cost down and use available resources to complete the job.

Most of the projects were cost-shared 75%, with higher percentages paid if the projects incorporated large woody debris for fish habitat. Landowner participation was strictly on a voluntary basis. Landowners signed a ten-year maintenance agreement and all projects will be monitored and evaluated for effectiveness.

1997 Riparian Fencing Projects on Asotin Creek

Cooperators	Feet of Fence	Total Cost	BPA Cost
Blankinships, D.	1,425 ft	\$3,142.39	\$3,142.39
Hood, L.	950 ft	\$4,674.07	\$4,674.07
Lick Creek	1,575 ft	\$6,702.83	\$1,702.83
Schlee, D.	250 ft	\$205.57	\$205.57
Thiessen, G.	2,000 ft	\$5,242.61	\$5,242.61
Total	6,200 ft	\$19,967.47	\$14,967.47

**1997 ASOTIN CREEK WATERSHED PROJECTS
PROJECT REVIEW**

Project Name: Asotin Creek Upland Sedimentation Reduction

BPA Project Number: 97-080

BPA Contract Number: 97AP36208

Project Implementor and Address: Asotin County Conservation District
725 6th Street, Suite 102
Clarkston, WA 99403

Project Leader(s): Bradley J. Johnson, District Manager

Project Description (Short): Reduce soil erosion and sedimentation rates to meet water quality standards for turbidity.

Location Information:

Site Name (i.e. creek, hatchery): Asotin Creek Watershed Basin Cleanouts

Subsite Name (i.e. specific location, legal description): Asotin County

County & State: Asotin County, Washington

Hydrounit Number: 17060103040

Quad Map(s): Asotin, Rock Pile Creek, Potter Hill, Harlow Ridge

Site Type Description (See Attachment 1): B, U

Work Type Description (See Attachment 2): N

Is project completed? Yes: No: X

If no, when is the project scheduled to be completed? 12/31/98

If yes, how long did the project take from start to finish (not including ongoing monitoring & evaluation activities)?

Was the project completed within the original budget? Yes: X No

If no, what caused cost overruns?

What was the overall cost of the project? \$27,853.06

What was actually produced/built/accomplished by the project (please quantify if possible-- e.g., 5 miles of fence constructed, 2 miles of streambank stabilized, 20 acres of land acquired, etc.)?

54 sediment basins cleaned out with approximately five hundred fifty cubic yards of dirt removed per pond.

Twenty nine thousand seven hundred total cubic yards of sediment removed.

Are salmon production/supplementation activities planned or currently being implemented in this watershed? Not at this time.

What will be the benefits of the products described above for anadromous fish?

Water quality will be improved in these areas. The capacities of the basins will be improved and sediment and agricultural pollutants (fertilizer, pesticides, etc.) will be reduced and cleaner water will be entering Asotin Creek.

When will these benefits become available (immediately, next summer, 5 years, 10 years)?

Project benefits will vary. The sediment basins benefits will be seen immediately. The basins will filter out sediment, thus cleaner water will enter the stream.

Were monitoring and evaluation activities undertaken in association with the project?

Yes: X **No**

If Yes, list types and duration of monitoring:

ISCO sediment samplers record daily suspended solids.

WSU Creek monitoring to measure monthly flows, fecal coliform levels, ammonia, nitrate, total nitrogen and total phosphorous.

Are “before and after” photographs of the project site available? **Yes:** X
No

**1997 ASOTIN CREEK WATERSHED PROJECTS
PROJECT REVIEW**

Project Name: Asotin Creek Channel and Fish Habitat Restoration

BPA Project Number: 97-82

BPA Contract Number: 97AP36971

Project Implementor and Address: Asotin County Conservation District
725 6th Street, Suite 102
Clarkston, WA 99403

Project Leader(s): Bradley J. Johnson, District Manager

Project Description (Short): Improve in-stream fish habitat, re-establish geomorphic stability of the stream, stabilize streambanks and improve riparian vegetation.

Location Information:

Site Name (i.e. creek, hatchery): Asotin Creek Watershed Blankinship Site #3 and #4

Subsite Name (i.e. specific location, legal description): R44E, T10N, Sec. 35, SW 1/4

County & State: Asotin County, Washington

Hydrounit Number: 17060103040

Quad Map(s): Potter Hill

Site Type Description (See Attachment 1): F, S

Work Type Description (See Attachment 2): B, C

Is project completed? Yes: X No

If no, when is the project scheduled to be completed?

If yes, how long did the project take from start to finish (not including ongoing monitoring & evaluation activities)? 3 days

Was the project completed within the original budget? Yes: X No

If no, what caused cost overruns?

What was the overall cost of the project? \$7,112.64

What was actually produced/built/accomplished by the project (please quantify if possible-- e.g., 5 miles of fence constructed, 2 miles of streambank stabilized, 20 acres of land acquired, etc.)?

Site #3:

Two rock barbs with rootwads and one rock vane.

One hundred twenty-five feet of fence.
Seventy-five feet of erosion control fabric.

Site #4:

Three large rock barbs with rootwads.
One thousand three hundred feet of fence.
Two hundred twenty-five feet of erosion control fabric.

Are salmon production/supplementation activities planned or currently being implemented in this watershed? Not at this time.

What will be the benefits of the products described above for anadromous fish?

Site #3:

Increased resting and rearing areas with the addition of two quality pools with root wads for complex habitat.

Site #4:

Increased resting and rearing areas with the addition of three pools with three root wads for complex habitat.

Both areas have been seeded to grass and fenced to exclude cattle. The sites will be planted to trees and shrubs. The fencing of these sites and the planting of trees and shrubs will help reduce fecal coliform contamination and reduce streambank sloughing. Once the trees mature, they will help shade the Creek thereby reducing water temperature.

When will these benefits become available (immediately, next summer, 5 years, 10 years)?

Project benefits will vary. The riparian area is fenced and tree and shrub plantings are identified for the spring of 1998. Planting benefits will be seen over a longer period of time while habitat structures will have immediate benefits with the addition of pools and large woody debris for resting and rearing areas.

Were monitoring and evaluation activities undertaken in association with the project?

Yes: X No

If Yes, list types and duration of monitoring:

Photo monitoring with before and after pictures and yearly pictures taken from a fixed point.

HOBO temperature meters record daily temperatures.

ISCO sediment samplers record daily suspended solids.

WSU Creek monitoring to measure monthly flows, fecal coliform levels, ammonia, nitrate,

total nitrogen and total phosphorous.

Are "before and after" photographs of the project site available? Yes: X

No

**1997 ASOTIN CREEK WATERSHED PROJECTS
PROJECT REVIEW**

Project Name: Asotin Creek Channel and Fish Habitat Restoration

BPA Project Number: 97-82

BPA Contract Number: 97AP36971

Project Implementor and Address: Asotin County Conservation District
725 6th Street, Suite 102
Clarkston, WA 99403

Project Leader(s): Bradley J. Johnson, District Manager

Project Description (Short): Improve in-stream fish habitat, re-establish geomorphic stability of the stream and improve the riparian vegetation.

Location Information:

Site Name (i.e. creek, hatchery): Asotin Creek Watershed Hagenah Site #10, #11 and #12

Subsite Name (i.e. specific location, legal description): R45E, T10N, Sec. 36, NW 1/2

County & State: Asotin County, Washington

Hydrounit Number: 17060103040

Quad Map(s): Asotin

Site Type Description (See Attachment 1): F, S

Work Type Description (See Attachment 2): C

Is project completed? Yes: X No

If no, when is the project scheduled to be completed?

If yes, how long did the project take from start to finish (not including ongoing monitoring & evaluation activities)? 2 days

Was the project completed within the original budget? Yes: X No

If no, what caused cost overruns?

What was the overall cost of the project? \$3,443.75

What was actually produced/built/accomplished by the project (please quantify if possible-- e.g., 5 miles of fence constructed, 2 miles of streambank stabilized, 20 acres of land acquired, etc.)?

Site #10:

One vortex rock weir and two rock barbs with rootwads.

Site #11:

Two rock barbs with rootwads.

Site #12:

Cabling of rootwads with an existing natural structure.

Are salmon production/supplementation activities planned or currently being implemented in this watershed? Not at this time.

What will be the benefits of the products described above for anadromous fish?

Increased resting and rearing areas with the addition of ten quality pools, eight with rootwads for complex habitat. The area has been seeded to grass and the site will be planted to trees and shrubs in the spring of 1998. Once the trees mature, they will help shade the Creek thereby reducing water temperature.

When will these benefits become available (immediately, next summer, 5 years, 10 years)?

Project benefits will vary. The riparian area is fenced and tree and shrub plantings are identified for the spring of 1998. Planting benefits will be seen over a longer period of time while habitat structures will have immediate benefits with the addition of pools and large woody debris for resting and rearing areas.

Were monitoring and evaluation activities undertaken in association with the project?

Yes: X No

If Yes, list types and duration of monitoring:

Photo monitoring with before and after pictures and yearly pictures taken from a fixed point.

HOBO temperature meters record daily temperatures.

ISCO sediment samplers record daily suspended solids.

WSU Creek monitoring to measure monthly flows, fecal coliform levels, ammonia, nitrate,

total nitrogen and total phosphorous.

Are "before and after" photographs of the project site available? Yes: X

No

**1997 ASOTIN CREEK WATERSHED PROJECTS
PROJECT REVIEW**

Project Name: Asotin Creek Channel and Fish Habitat Restoration

BPA Project Number: 97-82

BPA Contract Number: 97AP36971

Project Implementor and Address: Asotin County Conservation District

725 6th Street, Suite 102

Clarkston, WA 99403

Project Leader(s): Bradley J. Johnson, District Manager

Project Description (Short): Improve in-stream fish habitat, re-establish geomorphic stability of the stream and recovery of the riparian community.

Location Information:

Site Name (i.e. creek, hatchery): Asotin Creek Watershed Headgate Park Site #8

Subsite Name (i.e. specific location, legal description): R45E, T10N, Sec. 19, SE ¼, Sec. 20,

SW ¼

County & State: Asotin County, Washington

Hydrounit Number: 17060103040

Quad Map(s): Rock Pile Creek

Site Type Description (See Attachment 1): F, S

Work Type Description (See Attachment 2): C

Is project completed? Yes: No:

If no, when is the project scheduled to be completed?

If yes, how long did the project take from start to finish (not including ongoing monitoring & evaluation activities)? 3 days

Was the project completed within the original budget? Yes: No:

If no, what caused cost overruns?

What was the overall cost of the project? \$9,839.50

What was actually produced/built/accomplished by the project (please quantify if possible-- e.g., 5 miles of fence constructed, 2 miles of streambank stabilized, 20 acres of land acquired, etc.)?

Four vortex rock weirs (three with rootwads), two rootwads cabled to basalt cliff into pools, two rootwad barbs, two rock barbs (one with rootwads) and seven logs with rootwads anchored along the streambank with large boulders to help reduce streambank pressure.

Are salmon production/supplementation activities planned or currently being implemented in this watershed? Not at this time.

What will be the benefits of the products described above for anadromous fish?

Increased resting and rearing areas with the addition of ten quality pools, eight with rootwads for complex habitat. The area has been seeded to grass and the site will be planted to trees and shrubs in the spring of 1998. Once the trees mature, they will help shade the Creek thereby reducing water temperature.

When will these benefits become available (immediately, next summer, 5 years, 10 years)?

Project benefits will vary. Tree and shrub plantings are identified for the spring of 1998. Planting benefits will be seen over a longer period of time while habitat structures will have immediate benefits with the addition of pools and large woody debris for resting and rearing areas.

Were monitoring and evaluation activities undertaken in association with the project?

Yes: X No

If Yes, list types and duration of monitoring:

Photo monitoring with before and after pictures and yearly pictures taken from a fixed point.

HOBO temperature meters record daily temperatures.

ISCO sediment samplers record daily suspended solids.

WSU Creek monitoring to measure monthly flows, fecal coliform levels, ammonia, nitrate,

total nitrogen and total phosphorous.

Are “before and after” photographs of the project site available? Yes: X

No

**1997 ASOTIN CREEK WATERSHED PROJECTS
PROJECT REVIEW**

Project Name: Asotin Creek Channel and Fish Habitat Restoration

BPA Project Number: 97-82

BPA Contract Number: 97AP36971

Project Implementor and Address: Asotin County Conservation District
725 6th Street, Suite 102
Clarkston, WA 99403

Project Leader(s): Bradley J. Johnson, District Manager

Project Description (Short): Improve in-stream fish habitat, re-establish geomorphic stability of the stream and recovery of the riparian community.

Location Information:

Site Name (i.e. creek, hatchery): Asotin Creek Watershed Hood Site #5

Subsite Name (i.e. specific location, legal description): R44E, T10N, Sec. 35, NE 1/4

County & State: Asotin County, Washington

Hydrounit Number: 17060103040

Quad Map(s): Rock Pile Creek

Site Type Description (See Attachment 1): A, F, S

Work Type Description (See Attachment 2): B, C

Is project completed? Yes: X No

If no, when is the project scheduled to be completed?

If yes, how long did the project take from start to finish (not including ongoing monitoring & evaluation activities)? 1 week

Was the project completed within the original budget? Yes: No: X

If no, what caused cost overruns?

The riparian exclusion fence built on the lower end of the feedlot along the Creek was overbuilt due to the number of animals kept in this area. It is also hard to dig in this area and the machinery needed to complete the job caused it to come in over budget.

What was the overall cost of the project? \$8,553.60

What was actually produced/built/accomplished by the project (please quantify if possible-- e.g., 5 miles of fence constructed, 2 miles of streambank stabilized, 20 acres of land acquired, etc.)?

One low stage rock barb, one rootwad barb extended into existing pool, three rock barbs and one rock vane with rootwad.
Nine hundred fifty feet of riparian fencing installed.

Are salmon production/supplementation activities planned or currently being implemented in this watershed? Not at this time.

What will be the benefits of the products described above for anadromous fish?

Increased resting and rearing areas with the addition of four quality pools with root wads and woody debris was added to an existing pool for complex habitat. The area has been seeded to grass and fenced to exclude cattle. The site will be planted to trees and shrubs in the spring of 1998. The fencing of this site and the planting of trees and shrubs will help reduce fecal coliform contamination and reduce streambank sloughing. Once the trees mature, they will help shade the Creek thereby reducing water temperature.

When will these benefits become available (immediately, next summer, 5 years, 10 years)?

Project benefits will vary. The riparian area is fenced and tree and shrub plantings are identified for the spring of 1998. Planting benefits will be seen over a longer period of time while habitat structures will have immediate benefits with the addition of pools and large woody debris for resting and rearing areas.

Were monitoring and evaluation activities undertaken in association with the project?

Yes: X No

If Yes, list types and duration of monitoring:

Photo monitoring with before and after pictures and yearly pictures taken from a fixed point.

Scour chains to determine the amount of bedload build up or scour deposition.

HOBO temperature meters record daily temperatures.

ISCO sediment samplers record daily suspended solids.

WSU Creek monitoring to measure monthly flows, fecal coliform levels, ammonia, nitrate,

total nitrogen and total phosphorous.

Are "before and after" photographs of the project site available? Yes: X

No

**1997 ASOTIN CREEK WATERSHED PROJECTS
PROJECT REVIEW**

Project Name: Asotin Creek Channel and Fish Habitat Restoration

BPA Project Number: 97-82

BPA Contract Number: 97AP36971

Project Implementor and Address: Asotin County Conservation District
725 6th Street, Suite 102
Clarkston, WA 99403

Project Leader(s): Bradley J. Johnson, District Manager

Project Description (Short): Improve in-stream fish habitat, re-establish geomorphic stability of the stream and improve the riparian vegetation.

Location Information:

Site Name (i.e. creek, hatchery): Asotin Creek Watershed Koch Site #2

Subsite Name (i.e. specific location, legal description): R44E, T9N, Sec. 3, SW 1/4

County & State: Asotin County, Washington

Hydrounit Number: 17060103040

Quad Map(s): Potter Hill

Site Type Description (See Attachment 1): F, S

Work Type Description (See Attachment 2): C

Is project completed? Yes: X No

If no, when is the project scheduled to be completed?

If yes, how long did the project take from start to finish (not including ongoing monitoring & evaluation activities)? 4 days

Was the project completed within the original budget? Yes: X No

If no, what caused cost overruns?

What was the overall cost of the project? \$8,284.86

What was actually produced/built/accomplished by the project (please quantify if possible-- e.g., 5 miles of fence constructed, 2 miles of streambank stabilized, 20 acres of land acquired, etc.)?

Two hundred ninety foot rootwad revetment with sixteen rootwads.
One rock vane with rootwad cabled to boulder in pool below structure and three rock
barbs with
rootwads anchored into the structures and extending into the pools.

Are salmon production/supplementation activities planned or currently being implemented in this watershed? Not at this time.

What will be the benefits of the products described above for anadromous fish?

Increased resting and rearing areas with the addition of four quality pools with root wads for complex habitat were created. The area has been seeded to grass and trees and shrubs will be planted in the spring of 1998. Once the trees mature, they will help shade the Creek thereby reducing water temperature.

When will these benefits become available (immediately, next summer, 5 years, 10 years)?

Project benefits will vary. Tree and shrub plantings are identified for the spring of 1998. Planting benefits will be seen over a longer period of time while habitat structures will have immediate benefits with the addition of pools and large woody debris for resting and rearing areas.

Were monitoring and evaluation activities undertaken in association with the project?

Yes: X No

If Yes, list types and duration of monitoring:

Photo monitoring with before and after pictures and yearly pictures taken from a fixed point.
HOBO temperature meters record daily temperatures.
ISCO sediment samplers record daily suspended solids.
WSU Creek monitoring to measure monthly flows, fecal coliform levels, ammonia, nitrate,
total nitrogen and total phosphorous.

Are "before and after" photographs of the project site available? Yes: X

No

**1997 ASOTIN CREEK WATERSHED PROJECTS
PROJECT REVIEW**

Project Name: Asotin Creek Channel and Fish Habitat Restoration

BPA Project Number: 97-82

BPA Contract Number: 97AP36971

Project Implementor and Address: Asotin County Conservation District
725 6th Street, Suite 102
Clarkston, WA 99403

Project Leader(s): Bradley J. Johnson, District Manager

Project Description (Short): Implement bioengineering techniques to stabilize the streambank along portions of Asotin Creek.

Location Information:

Site Name (i.e. creek, hatchery): Asotin Creek Watershed Streambank Stabilization
Proj. #11

Subsite Name (i.e. specific location, legal description): R44E, T10N, Sec. 35, SW 1/4

County & State: Asotin County, Washington

Hydrounit Number: 17060103040

Quad Map(s): Potter Hill

Site Type Description (See Attachment 1): F, S

Work Type Description (See Attachment 2): C

Is project completed? Yes: No: X

12/31/98

If yes, how long did the project take from start to finish (not including ongoing monitoring & evaluation activities)?

Was the project completed within the original budget? Yes: X No

If no, what caused cost overruns?

What was the overall cost of the project? \$251.48

What was actually produced/built/accomplished by the project (please quantify if possible-- e.g., 5 miles of fence constructed, 2 miles of streambank stabilized, 20 acres of land acquired, etc.)?

Two hundred twenty-five feet of erosion control fabric at Blankinship Site #4.
Seventy-five feet of erosion control fabric at Blankinship Site #3.
Grass was seeded and trees and shrubs will be planted in spring of 1998.

Are salmon production/supplementation activities planned or currently being implemented in this watershed? Not at this time.

What will be the benefits of the products described above for anadromous fish?

Increased riparian shading and reduced sediment delivered to the Creek.

When will these benefits become available (immediately, next summer, 5 years, 10 years)?

Project benefits will vary. Tree and shrub plantings are identified for the spring of 1998. Planting benefits will be seen over a longer period of time while erosion control matting will help immediately and after the grass grows for permanent cover.

Were monitoring and evaluation activities undertaken in association with the project?

Yes: X No

If Yes, list types and duration of monitoring:

Photo monitoring with before and after pictures and yearly pictures taken from a fixed point.

HOBO temperature meters record daily temperatures.

ISCO sediment samplers record daily suspended solids.

WSU Creek monitoring to measure monthly flows, fecal coliform levels, ammonia, nitrate,

total nitrogen and total phosphorous.

Are “before and after” photographs of the project site available? Yes: X

No

**1997 ASOTIN CREEK WATERSHED PROJECTS
PROJECT REVIEW**

Project Name: Asotin Creek Channel and Fish Habitat Restoration

BPA Project Number: 97-82

BPA Contract Number: 97AP36971

Project Implementor and Address: Asotin County Conservation District
725 6th Street, Suite 102
Clarkston, WA 99403

Project Leader(s): Bradley J. Johnson, District Manager

Project Description (Short): Improve in-stream fish habitat, re-establish geomorphic stability of the stream and recovery of the riparian community.

Location Information:

Site Name (i.e. creek, hatchery): Asotin Creek Watershed Thiessen Site #6 and #7

Subsite Name (i.e. specific location, legal description): R44E, T10N, Sec. 25, SW 1/4

County & State: Asotin County, Washington

Hydrounit Number: 17060103040

Quad Map(s): Rock Pile Creek

Site Type Description (See Attachment 1): F, S

Work Type Description (See Attachment 2): B, C

Is project completed? Yes: X No

If no, when is the project scheduled to be completed?

If yes, how long did the project take from start to finish (not including ongoing monitoring & evaluation activities)? 1 week

Was the project completed within the original budget? Yes: X No

If no, what caused cost overruns?

What was the overall cost of the project? \$5,807.68

What was actually produced/built/accomplished by the project (please quantify if possible-- e.g., 5 miles of fence constructed, 2 miles of streambank stabilized, 20 acres of land acquired, etc.)?

Site #6:

One vortex rock weir with root wad.

Two thousand feet of riparian fence installed.

Site #7:

One rock barb with rootwad, two low stage rock barbs with rootwads and one large woody debris placement.

Are salmon production/supplementation activities planned or currently being implemented in this watershed? Not at this time.

What will be the benefits of the products described above for anadromous fish?

Increased resting and rearing areas with the addition of five quality pools with vortex rock weir with rootwad, rock barbs with rootwads and woody debris placement for complex habitat. The area has been seeded to grass and fenced to exclude cattle. The site will be planted to trees and shrubs in the spring of 1998. The fencing of this site and the planting of trees and shrubs will help reduce fecal coliform contamination and reduce streambank sloughing. Once the trees mature, they will help shade the Creek thereby reducing water temperature.

When will these benefits become available (immediately, next summer, 5 years, 10 years)?

Project benefits will vary. The riparian area is fenced and tree and shrub plantings are identified for the spring of 1998. Planting benefits will be seen over a longer period of time while habitat structures will have immediate benefits with the addition of pools and large woody debris for resting and rearing areas.

Were monitoring and evaluation activities undertaken in association with the project?

Yes: X No

If Yes, list types and duration of monitoring:

Photo monitoring with before and after pictures and yearly pictures taken from a fixed point.

HOBO temperature meters record daily temperatures.

ISCO sediment samplers record daily suspended solids.

WSU Creek monitoring to measure monthly flows, fecal coliform levels, ammonia, nitrate,

total nitrogen and total phosphorous.

Are "before and after" photographs of the project site available? Yes: X

No

**1997 ASOTIN CREEK WATERSHED PROJECTS
PROJECT REVIEW**

Project Name: Asotin Creek Channel and Fish Habitat Restoration

BPA Project Number: 97-82

BPA Contract Number: 97AP36971

Project Implementor and Address: Asotin County Conservation District
725 6th Street, Suite 102
Clarkston, WA 99403

Project Leader(s): Bradley J. Johnson, District Manager

Project Description (Short): Improve in-stream fish habitat, re-establish geomorphic stability of the stream and establish a riparian plant community.

Location Information:

Site Name (i.e. creek, hatchery): Asotin Creek Watershed Schlee Site #1

Subsite Name (i.e. specific location, legal description): R44E, T9N, Sec. 34, NE 1/4

County & State: Asotin County, Washington

Hydrounit Number: 17060103040

Quad Map(s): Harlow Ridge

Site Type Description (See Attachment 1): A, F, S

Work Type Description (See Attachment 2): B, C

Is project completed? Yes: X No

If no, when is the project scheduled to be completed?

If yes, how long did the project take from start to finish (not including ongoing monitoring & evaluation activities)? 1 week

Was the project completed within the original budget? Yes: X No

If no, what caused cost overruns?

What was the overall cost of the project? \$11,867.55

What was actually produced/built/accomplished by the project (please quantify if possible-- e.g., 5 miles of fence constructed, 2 miles of streambank stabilized, 20 acres of land acquired, etc.)?

One vortex rock weir and two rock barbs installed on upper portion of site.
Five hundred fifty feet of existing stream channel increased to six hundred thirty-five feet
of
meander reconstruction with five vortex rock weirs, four rock barbs with root wads, six
log spurs
and one log barb.
Two hundred fifty feet of riparian fence installed.

Are salmon production/supplementation activities planned or currently being implemented in this watershed? Not at this time.

What will be the benefits of the products described above for anadromous fish?

Increased resting and rearing areas with the addition of fifteen quality pools, four with root wads for complex habitat and seven with woody debris in the form of logs. The area has been seeded to grass and fenced to exclude cattle. The site will be planted to trees and shrubs. The fencing of this site and the planting of trees and shrubs will help reduce fecal coliform contamination and reduce streambank sloughing. Once the trees mature, they will help shade the Creek thereby reducing water temperature.

When will these benefits become available (immediately, next summer, 5 years, 10 years)?

Project benefits will vary. The riparian area is fenced and tree and shrub plantings are identified for the spring of 1998. Planting benefits will be seen over a longer period of time while habitat structures will have immediate benefits with the addition of pools and large woody debris for resting and rearing areas.

Were monitoring and evaluation activities undertaken in association with the project?

Yes: X No

If Yes, list types and duration of monitoring:

Photo monitoring with before and after pictures and yearly pictures taken from a fixed point.

Scour chains to determine the amount of bedload build up or scour deposition.

HOBO temperature meters record daily temperatures.

WSU Creek monitoring to measure monthly flows, fecal coliform levels, ammonia, nitrate,

total nitrogen and total phosphorous.

Are "before and after" photographs of the project site available? Yes: X

No

**1997 ASOTIN CREEK WATERSHED PROJECTS
PROJECT REVIEW**

Project Name: Asotin Watershed Upland BMPs

BPA Project Number: 97-86

BPA Contract Number: 97AP37439

Project Implementor and Address: Asotin County Conservation District
725 6th Street, Suite 102
Clarkston, WA 99403

Project Leader(s): Bradley J. Johnson, District Manager

Project Description (Short): Reduce soil erosion and sedimentation rates to meet water quality standards for turbidity.

Location Information:

Site Name (i.e. creek, hatchery): Asotin Creek Watershed Dean Forgey Upland Site #5
Subsite Name (i.e. specific location, legal description): R45E, T8N, Sec. 15, Sec. 27,
Sec. 28
County & State: Asotin County, Washington
Hydrounit Number: 17060103040
Quad Map(s): Anatone

Site Type Description (See Attachment 1): B, U

Work Type Description (See Attachment 2): N

Is project completed? Yes: X No

If no, when is the project scheduled to be completed?

If yes, how long did the project take from start to finish (not including ongoing monitoring & evaluation activities)? 1 week

Was the project completed within the original budget? Yes: X No

If no, what caused cost overruns?

What was the overall cost of the project? \$1,980

What was actually produced/built/accomplished by the project (please quantify if possible-- e.g., 5 miles of fence constructed, 2 miles of streambank stabilized, 20 acres of land acquired, etc.)?

Two thousand six hundred forty cubic yards of dirt moved to install ten sediment basins.

Are salmon production/supplementation activities planned or currently being implemented in this watershed? Not at this time.

What will be the benefits of the products described above for anadromous fish?

Water quality will be improved in this area. Sediment and agricultural pollutants (fertilizer, pesticides, etc.) will be reduced and cleaner water will be entering Asotin Creek.

When will these benefits become available (immediately, next summer, 5 years, 10 years)?

Project benefits will vary. The sediment basins benefits will be seen immediately. The basins will filter out sediment, thus cleaner water will enter the stream.

Were monitoring and evaluation activities undertaken in association with the project?

Yes: X No

If Yes, list types and duration of monitoring:

ISCO sediment samplers record daily suspended solids.
WSU Creek monitoring to measure monthly flows, fecal coliform levels, ammonia, nitrate,
total nitrogen and total phosphorous.

Are “before and after” photographs of the project site available? Yes: X
No

**1997 ASOTIN CREEK WATERSHED PROJECTS
PROJECT REVIEW**

Project Name: Asotin Watershed Upland BMPs

BPA Project Number: 97-86

BPA Contract Number: 97AP37439

Project Implementor and Address: Asotin County Conservation District
725 6th Street, Suite 102
Clarkston, WA 99403

Project Leader(s): Bradley J. Johnson, District Manager

Project Description (Short): Reduce soil erosion and sedimentation rates to meet water quality standards for turbidity.

Location Information:

Site Name (i.e. creek, hatchery): Asotin Creek Watershed Frank Johnson Upland Site #3

Subsite Name (i.e. specific location, legal description): R45E, T8N, Sec. 7

County & State: Asotin County, Washington

Hydrounit Number: 17060103040

Quad Map(s): Anatone

Site Type Description (See Attachment 1): B, U

Work Type Description (See Attachment 2): N

Is project completed? Yes: X No

If no, when is the project scheduled to be completed?

If yes, how long did the project take from start to finish (not including ongoing monitoring & evaluation activities)? 3 days

Was the project completed within the original budget? Yes: X No

If no, what caused cost overruns?

What was the overall cost of the project? \$609

What was actually produced/built/accomplished by the project (please quantify if possible-- e.g., 5 miles of fence constructed, 2 miles of streambank stabilized, 20 acres of land acquired, etc.)?

Six hundred fifty cubic yards of dirt moved to install one sediment basin.

**1997 ASOTIN CREEK WATERSHED PROJECTS
PROJECT REVIEW**

Project Name: Asotin Watershed Upland BMPs

BPA Project Number: 97-86

BPA Contract Number: 97AP37439

Project Implementor and Address: Asotin County Conservation District
725 6th Street, Suite 102
Clarkston, WA 99403

Project Leader(s): Bradley J. Johnson, District Manager

Project Description (Short): Reduce soil erosion and sedimentation rates to meet water quality standards for turbidity.

Location Information:

Site Name (i.e. creek, hatchery): Asotin Creek Watershed Carroll Johnson Site #2

Subsite Name (i.e. specific location, legal description): R44E, T9N, Sec. 36

County & State: Asotin County, Washington

Hydrounit Number: 17060103040

Quad Map(s): Harlow Ridge

Site Type Description (See Attachment 1): B, U

Work Type Description (See Attachment 2): N

Is project completed? Yes: X No

If no, when is the project scheduled to be completed?

If yes, how long did the project take from start to finish (not including ongoing monitoring & evaluation activities)? 2 days

Was the project completed within the original budget? Yes: X No

If no, what caused cost overruns?

What was the overall cost of the project? \$1,287.45

What was actually produced/built/accomplished by the project (please quantify if possible-- e.g., 5 miles of fence constructed, 2 miles of streambank stabilized, 20 acres of land acquired, etc.)?

One thousand eight hundred sixty feet of terraces installed.

One thousand forty-three cubic yards of dirt moved to build one sediment basin.

Are salmon production/supplementation activities planned or currently being implemented in this watershed? Not at this time.

What will be the benefits of the products described above for anadromous fish?

Water quality will be improved in this area. Sediment and agricultural pollutants (fertilizer, pesticides, etc.) will be reduced and cleaner water will be entering Asotin Creek.

When will these benefits become available (immediately, next summer, 5 years, 10 years)?

Project benefits will vary. The sediment basin benefits will be seen immediately. The basin will filter out sediment, thus cleaner water will enter the stream. The terraces should also have immediate benefits, sending water to sediment basins and slowing the overground travel.

Were monitoring and evaluation activities undertaken in association with the project?

Yes: X No

If Yes, list types and duration of monitoring:

ISCO sediment samplers record daily suspended solids.
WSU Creek monitoring to measure monthly flows, fecal coliform levels, ammonia, nitrate,
total nitrogen and total phosphorous.

Are “before and after” photographs of the project site available? Yes: X

No

**1997 ASOTIN CREEK WATERSHED PROJECTS
PROJECT REVIEW**

Project Name: Asotin Watershed Upland BMPs

BPA Project Number: 97-86

BPA Contract Number: 97AP37439

Project Implementor and Address: Asotin County Conservation District
725 6th Street, Suite 102
Clarkston, WA 99403

Project Leader(s): Bradley J. Johnson, District Manager

Project Description (Short): Reduce soil erosion and sedimentation rates to meet water quality standards for turbidity.

Location Information:

Site Name (i.e. creek, hatchery): Asotin Creek Watershed Dean Reeves Upland Site #4

Subsite Name (i.e. specific location, legal description): R45E, T8N, Sec. 7, NW ¼

County & State: Asotin County, Washington

Hydrounit Number: 17060103040

Quad Map(s): Harlow Ridge

Site Type Description (See Attachment 1): B, U

Work Type Description (See Attachment 2): N

Is project completed? Yes: X No

If no, when is the project scheduled to be completed?

If yes, how long did the project take from start to finish (not including ongoing monitoring & evaluation activities)? 1 week

Was the project completed within the original budget? Yes: No: X

If no, what caused cost overruns? The largest sediment basin was overbuilt and, due to a large spring above the pond, it was wet and muddy.

What was the overall cost of the project? \$3,615.85

What was actually produced/built/accomplished by the project (please quantify if possible-- e.g., 5 miles of fence constructed, 2 miles of streambank stabilized, 20 acres of land acquired, etc.)?

Two thousand five hundred thirty-six cubic yards of dirt moved on sediment basin.
Eight hundred sixty-one cubic yards of dirt moved on sediment basin.
One thousand one hundred seventy-five cubic yards of dirt moved on multipurpose pond.

Are salmon production/supplementation activities planned or currently being implemented in this watershed? Not at this time.

What will be the benefits of the products described above for anadromous fish?

Water quality will be improved in this area. Sediment and agricultural pollutants (fertilizer, pesticides, etc.) will be reduced and cleaner water will be entering Asotin Creek.

When will these benefits become available (immediately, next summer, 5 years, 10 years)?

Project benefits will vary. The sediment basin and multipurpose pond benefits will be seen immediately. The basins will filter out sediment, thus cleaner water will enter the stream.

Were monitoring and evaluation activities undertaken in association with the project?

Yes: X No

If Yes, list types and duration of monitoring:

ISCO sediment samplers record daily suspended solids.
WSU Creek monitoring to measure monthly flows, fecal coliform levels, ammonia, nitrate,
total nitrogen and total phosphorous.

Are “before and after” photographs of the project site available? Yes: X
No

**1997 ASOTIN CREEK WATERSHED PROJECTS
PROJECT REVIEW**

Project Name: Lick Creek Water Gap II

BPA Project Number: 97-87

BPA Contract Number: 97AP37332

Project Implementor and Address: Asotin County Conservation District
725 6th Street, Suite 102
Clarkston, WA 99403

Project Leader(s): Bradley J. Johnson, District Manager

Project Description (Short): Improve in-stream fish habitat, re-establish geomorphic stability of the stream and establish a riparian plant community according to the Asotin Creek Model Watershed Plan.

Location Information:

Site Name (i.e. creek, hatchery): Asotin Creek Watershed Lick Creek Water Gap II

Subsite Name (i.e. specific location, legal description): R43E, T10N, Sec. 15, SW 1/4

County & State: Asotin County, Washington

Hydrounit Number: 17060103040

Quad Map(s): Peola

Site Type Description (See Attachment 1): F, S

Work Type Description (See Attachment 2): B, C

Is project completed? Yes: No:

If no, when is the project scheduled to be completed?

If yes, how long did the project take from start to finish (not including ongoing monitoring & evaluation activities)? 4 days

Was the project completed within the original budget? Yes: No:

If no, what caused cost overruns?

What was the overall cost of the project?
\$1,702.83 BPA
\$5,000.00 USFS
\$6,702.83 Total Cost

What was actually produced/built/accomplished by the project (please quantify if possible--e.g., 5 miles of fence constructed, 2 miles of streambank stabilized, 20 acres of land acquired, etc.)?

One thousand five hundred seventy-five feet of exclusion fence constructed on Forest Service property.

Are salmon production/supplementation activities planned or currently being implemented in this watershed? Not at this time.

What will be the benefits of the products described above for anadromous fish?

Stabilized streambanks, increased riparian vegetation and reduced fecal coliform levels. The overall water quality will be improved.

When will these benefits become available (immediately, next summer, 5 years, 10 years)?

Project benefits will vary. The riparian area is fenced and plantings are identified for the spring of 1998. Planting benefits will be seen over long periods of time. Fecal coliform contamination and bank sloughing benefits will be seen immediately.

Were monitoring and evaluation activities undertaken in association with the project?

Yes: X No

If Yes, list types and duration of monitoring:

Photo monitoring with before and after pictures and yearly pictures taken from a fixed point.

HOB0 temperature meters record daily temperatures.

ISCO sediment samplers record daily suspended solids.

WSU Creek monitoring to measure monthly flows, fecal coliform levels, ammonia, nitrate,

total nitrogen and total phosphorous.

Are "before and after" photographs of the project site available? Yes: X

No

**1997 ASOTIN CREEK WATERSHED PROJECTS
PROJECT REVIEW**

Project Name: Asotin Creek Riparian Fencing/Rock Blasting

BPA Project Number: 97-99

BPA Contract Number: 97AP63370

Project Implementor and Address: Asotin County Conservation District

725 6th Street, Suite 102

Clarkston, WA 99403

Project Leader(s): Bradley J. Johnson, District Manager

Project Description (Short): Install riparian fence along Asotin Creek to reduce direct animal pressure on the streambanks and also reduce the amount of fecal coliform levels entering Asotin Creek.

Location Information:

Site Name (i.e. creek, hatchery): Asotin Creek Watershed Gene Thiessen Fencing

Subsite Name (i.e. specific location, legal description): R44E, T10N, Sec. 25, SW 1/4

County & State: Asotin County, Washington

Hydrounit Number: 17060103040

Quad Map(s): Rock Pile Creek

Site Type Description (See Attachment 1): F, S

Work Type Description (See Attachment 2): B, O

Is project completed? Yes: X No

If no, when is the project scheduled to be completed?

If yes, how long did the project take from start to finish (not including ongoing monitoring & evaluation activities)? 8 days

Was the project completed within the original budget? Yes: No: X

If no, what caused cost overruns? The rental equipment needed to dig corner posts and drive steel fence posts into frozen ground.

What was the overall cost of the project? \$3,018.00

What was actually produced/built/accomplished by the project (please quantify if possible--e.g., 5 miles of fence constructed, 2 miles of streambank stabilized, 20 acres of land acquired, etc.)?

Two thousand feet of riparian fencing.

Are salmon production/supplementation activities planned or currently being implemented in this watershed? Not at this time.

What will be the benefits of the products described above for anadromous fish?

Stabilized streambanks, increased riparian vegetation and reduced fecal coliform levels.
The overall water quality will be improved.

When will these benefits become available (immediately, next summer, 5 years, 10 years)?

Project benefits will vary. The riparian area is fenced and plantings are identified for the spring of 1998. Planting benefits will be seen over long periods of time. Fecal coliform contamination and bank sloughing benefits will be seen immediately.

Were monitoring and evaluation activities undertaken in association with the project?

Yes: X No

If Yes, list types and duration of monitoring:

Photo monitoring with before and after pictures and yearly pictures taken from a fixed point.

HOBOT temperature meters record daily temperatures.

ISCO sediment samplers record daily suspended solids.

WSU Creek monitoring to measure monthly flows, fecal coliform levels, ammonia, nitrate,

total nitrogen and total phosphorous.

Are "before and after" photographs of the project site available? Yes: X

No