

Pataha Creek Model Watershed

Habitat Conservation Projects

Annual Report
1997 - 1998



DOE/BP-37117-1

December 1998

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P.O. Box 3621
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**PATAHA MODEL WATERSHED
1997 HABITAT PROJECTS**

ANNUAL PROGRESS REPORT

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

Prepared by:

Duane Bartels

Pataha Model Watershed
Pomeroy Conservation District
Pomeroy, WA 99347

Funded by:

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

Project Number 97-088-00
Contract Number 97AP37117

Pataha Creek Model Watershed 1997 Project Report Abstract

The projects outlined in detail on the attached project reports are a few of the many projects implemented in the Pataha Creek Model Watershed since it was selected as a model in 1993. Up until this year, demonstration sites using riparian fencing, off site watering facilities, tree and shrub plantings and upland conservation practices were used for information and education and was the main focus of the implementation phase of the watershed plan. These practices are the main focus of the watershed plan to reduce the majority of the sediment entering the stream. However, the watershed stream evaluation team used in the watershed analysis determined that there were problems along the Pataha Creek that needed to be addressed that would add further protection to the banks and therefore a further reduction of sedimentation into the stream.

1997 was the first year where a focused effort was made to work in the channel to stabilize the banks to reduce the sedimentation and create fish habitat in Pataha Creek. These sites are determined to contribute only about 5% of the sediment entering the stream but are tied directly to the restoration of habitat for the Chinook Salmon. Many of these banks need to be addressed because of their locations in conjunction to highways and stream geomorphology along with getting further riparian practices completed on property of a particular landowner. All these projects were made as fish friendly as possible. Root wads and woody debris were incorporated into the rock barbs and vains to create fish habitat that was either destroyed or was not present before the project was built. All the sites were planted with trees and shrubs to add further protection to the site and add the shade and vegetation needed for reducing sediment and lowering water temperature.

The Pataha Creek has Bulltrout in the upper reaches and native and planted rainbow in the mid to upper portion. Suckers, squawfish and shiners inhabit the lower portion because of the higher water temperatures and lack of vegetation. The addition of this habitat directly in the stream and in the riparian zone will improve habitat for the desired fish species. The lower portion of the Pataha Creek could eventually develop into spawning and rearing habitat for Chinook Salmon if some migration barriers are removed and habitat is restored.

Another project implemented this year was an additional off-site watering facility. The project affected the stream and water quality directly by removing livestock from the stream. This reduces direct water quality degradation from the animals. Besides the water facility, a corral system and a highway drainage system was improved. Trees were planted, rock vains and rock vortex weirs installed to add fish habitat. This project became a showcase for the Pataha Model Watershed Project.

The upland projects completed during 1997 were practices that reduce erosion from the cropland. Three-year continuous no-till projects are on schedule and the monitoring of this particular practice is ongoing. Its direct impact on soil erosion along with the economical aspects are being studied. Other practices such as terrace, waterway, sediment basin construction and the installation of strip systems is also taking place.

1997 was a very productive year for the Pataha Creek Model Watershed. All the upland practices that were implemented have helped to reduce erosion from the cropland. This has resulted in a

reduction of sedimentation into the spawning and rearing area of the Fall Chinook salmon located in the lower portion of the Tucannon River. The stream projects have helped in reducing sedimentation and has also improved the riparian zone of desired locations inside the Pataha Creek Watershed.

The following practices were implemented during 1997. This implementation has helped move our program closer to meeting our goals of reducing the sedimentation and stream temperature in the Pataha Watershed to levels that will not adversely affect the spawning and rearing area in the Tucannon River.

<i><u>Practices Installed</u></i>	<i><u>Cost</u></i>	<i><u>Quantity</u></i>
Bank Stabilization Projects	\$46,277.42	1,740 ft.
Buffer Strips (Upland, Riparian)	\$13,615.00	20.5 acres
Clearing and Snagging	\$ 907.33	495 feet.
Critical area seeding	\$ 300.00	3 acres
Demonstration Projects	\$ 4,464.79	2 using solar water pumps
Riparian Fencing	\$11,788.89	8,200 ft.
Grass and Legume planting	\$ 1,344.87	87.9 acres (1,318 tons this year)
Log and root wad harvest	\$14,273.75	Materials for Pataha, Asotin in-stream, bank projects
Monitoring Equipment	\$ 1,405.79	Water sampling
No-till seeding	\$35,428.25	2,056 acres (30,840 tons saved this year)
Off-site Watering	\$21,780.58	4 sites built excluding over 500 head of livestock from direct access to stream
Sediment Basins	\$ 1,649.00	5 basins constructed or cleaned
Stream crossing	\$ 7,456.67	3 sites constructed
Strip cropping	\$ 8,472.66	575 acres (2,875 tons saved this year)
Subsoiling	\$14,166.25	1,417 acres (4251 tons saved this year)
Terraces	\$26,478.53	39,763 feet (902 ton saved this year)
Tree planting	\$ 2,615.73	10,000 whips and rooted stock planted
Grassed Waterways	\$ 2,770.71	6,848 ft. constructed
Log Weirs	\$ 1,436.00	3 weirs constructed for fish habitat

Total	\$216,632.22	

**1997 PATAHA CREEK MODEL WATERSHED PROJECTS
PROJECT REVIEW**

Project Name: Pataha Creek Stream Channel and Cropland Restoration

BPA Project Number: 97-88

BPA Contract Number: 97AP37117

Project Implementor and Address: Pomeroy Conservation District

804 Main P.O. Box 750

Pomeroy, WA 99347

Project Leader(s): Duane Bartels, District Manager

Project Description (Short): Stabilize eroding streambank on south side of stream in conjunction with work completed by Department of Transportation on north side of creek. Also improve in-stream fish habitat.

Location Information:

Site Name (i.e. creek, hatchery): Herman Waldron Bank Stabilization

Subsite Name (i.e. specific location, legal description): SE 1/4 Sec. 33, T12N,Rg 42E

County & State: Garfield County Washington State

Hydrounit Number: 17060107

Quad Map(s): Pomeroy

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)? 3 days

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

Budget: \$20,000

If no, what caused cost overruns?

What was the overall cost of the project? \$6,307.50

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.)?

Two hundred and fifty feet of south stream bank was stabilized using 6 rock barbs with log root wads incorporated into their structures. These structures were in combination with the rock barbs constructed by the Department of Transportation on the north side of the stream. The streambank was sloped on the upper portion of the site and grass and willow whips planted for added site stability.

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?

This project completed two very important purposes. It reduced a direct sediment source into the Pataha Creek and also deterred further highway degradation and possible failure that could have led to complete reconstruction with a much greater impact on the stream. The addition of root wads to the site added additional fish habitat for the resident fish and the plantings of the grass and willow whips will add habitat and stability to the site.

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

The benefits will vary. The bank stabilization structures and root wad placement will deliver immediate benefits while the grass and trees will begin showing benefits this spring and continue for a number of years.

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. Also yearly pictures taken from a fixed point.
On site inspection after high water events to analyze effectiveness of structures.

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

**1997 PATAHA CREEK MODEL WATERSHED PROJECTS
PROJECT REVIEW**

Project Name: Pataha Creek Stream Channel and Cropland Restoration

BPA Project Number: 97-88

BPA Contract Number: 97AP37117

Project Implementor and Address: Pomeroy Conservation District

804 Main P.O. Box 750

Pomeroy, WA 99347

Project Leader(s): Duane Bartels, District Manager

Project Description (Short): Stabilize eroding streambank on north side of stream to reduce potential of destroying bridge and to align stream flow into bridge. Also improve in-stream fish habitat by installing rock vortex weir..

Location Information:

Site Name (i.e. creek, hatchery): Steve Slaybaugh Bank Stabilization

Subsite Name (i.e. specific location, legal description): SE 1/4 Sec. 32, T12N,Rg 42E

County & State: Garfield County Washington State

Hydrounit Number: 17060107

Quad Map(s): Pomeroy

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)? 3 days

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

Budget: \$3,000

If no, what caused cost overruns?

The \$6,900 overrun was due to the extra material that needed to be hauled and placed to bring the bank into alignment with the bridge, material from the south side that had to be removed and hauled away to realign the channel and the dumping charge for this material.

What was the overall cost of the project? \$9,920.58

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 hundred feet of stream bank on the north side of the stream was shaped and armored with rock and covered with soil. This will be planted with grass, trees and shrubs during the spring of 1998.

The bridge wing wall was reinforced by placing rock around the footings and along the face of the

wing wall. Two trees and deposited material along the south side of the stream were removed to bring the stream flow back into alignment with the bridge and increase the area of the site which will reduce the damage being done below the bridge. Grass will be planted in the spring of 1998 for added site stability.

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?

This project completed two very important purposes. It reduced a direct sediment source into the Pataha Creek and also deterred further bridge degradation and possible failure that could have led to complete reconstruction with a much greater impact on the stream. The addition of the rock vortex weir added additional fish habitat for the resident fish and the plantings of the grass and willow whips will add habitat and stability to the site.

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

The benefits will vary. The bank stabilization structures and rock weir placement will deliver immediate benefits while the grass and trees will begin showing benefits this spring and continue for a number of years.

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. Also yearly pictures taken from a fixed point.
On site inspection after high water events to analyze effectiveness of structures.

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

**1997 PATAHA CREEK MODEL WATERSHED PROJECTS
PROJECT REVIEW**

Project Name: Pataha Creek Stream Channel and Cropland Restoration

BPA Project Number: 97-88

BPA Contract Number: 97AP37117

Project Implementor and Address: Pomeroy Conservation District

804 Main P.O. Box 750

Pomeroy, WA 99347

Project Leader(s): Duane Bartels, District Manager

Project Description (Short): Stabilize eroding streambank on north side of stream, re-establish geomorphic stability by using root wad revetment and rock vortex weirs, improve in-stream fish habitat.

Location Information:

Site Name (i.e. creek, hatchery): Lower Cole Bank Stabilization

Subsite Name (i.e. specific location, legal description): SW 1/4 Sec. 6, T11N,Rg 43E

County & State: Garfield County Washington State

Hydrounit Number: 17060107

Quad Map(s): Pomeroy

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:

Budget: \$6,000

If no, what caused cost overruns?

What was the overall cost of the project? \$ 4,131.25

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 hundred feet of north stream bank was stabilized using root wad revetment. Two rock vortex weirs were placed at each end of this revetment to add geomorphic stability to the site and also add fish habitat. Trees and shrubs will be planted on the site to provide further stability and fish and wildlife habitat.

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?

This project reduced a direct sediment source into the Pataha Creek and also deterred further highway degradation at the site. The use of root wads at the site added additional fish habitat for the resident fish and possible steelhead that move through the site. The plantings of the grass, trees and shrubs will add habitat and stability to the site.

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

The benefits will vary. The bank stabilization structures and root wad placement will deliver immediate benefits while the grass and trees will begin showing benefits this spring and continue for a number of years.

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. Also yearly pictures taken from a fixed point.
On site inspection after high water events to analyze effectiveness of structures.

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

**1997 PATAHA CREEK MODEL WATERSHED PROJECTS
PROJECT REVIEW**

Project Name: Pataha Creek Stream Channel and Cropland Restoration

BPA Project Number: 97-88

BPA Contract Number: 97AP37117

Project Implementor and Address: Pomeroy Conservation District
804 Main P.O. Box 750
Pomeroy, WA 99347

Project Leader(s): Duane Bartels, District Manager

Project Description (Short): Stabilize eroding streambank on south side of stream. Add fish habitat to this area of stream.

Location Information:

Site Name (i.e. creek, hatchery): Leisure Valley Trailer Court

Subsite Name (i.e. specific location, legal description): SE1/4 Sec.32, T12N,Rg42E

County & State: Garfield County Washington State

Hydrounit Number: 17060107

Quad Map(s): Pomeroy

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: No: X

Budget: \$ 5,100

If no, what caused cost overruns?

The overrun was due to added material having to be removed from the site to add stream geomorphic stability to the site. This material was hauled to the dumpsite and dumpage charge was assessed for the material hauled.

What was the overall cost of the project? \$ 6,729.78

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 hundred and fifty feet of stream bank was stabilized using two rock barbs. Material was removed from the terrace portion of this section to allow for energy dissipation on this bend. Root wads were also incorporated into the barbs to add fish habitat and added energy dissipation.

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?

The rock barbs will protect the bank from the direct impact of high flow thus reducing direct sediment loading at this site. The root wads imbedded in the lower portion of the rock barb will create fish habitat. The terrace removal will allow for greater energy dissipation in this area. The grass and shrub planting on the north bank will create both fish and wildlife habitat.

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

The bank stabilization structures and root wad placement will deliver immediate benefits while the grass and trees will begin showing benefits this spring and continue for a number of years.

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. Also yearly pictures taken from a fixed point.
On site inspection after high water events to analyze effectiveness of structures.

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

**1997 PATAHA CREEK MODEL WATERSHED PROJECTS
PROJECT REVIEW**

Project Name: Pataha Creek Stream Channel and Cropland Restoration

BPA Project Number: 97-88

BPA Contract Number: 97AP37117

Project Implementor and Address: Pomeroy Conservation District

804 Main P.O. Box 750

Pomeroy, WA 99347

Project Leader(s): Duane Bartels, District Manager

Project Description (Short): Stabilize two vertical banks using rock barbs. Improve fish habitat by incorporating root wads in rock barbs.

Location Information:

Site Name (i.e. creek, hatchery): Richard Hastings Bank Stabilization

Subsite Name (i.e. specific location, legal description): SW1/4 Sec.15, T12N,Rg40E

County & State: Garfield County Washington State

Hydrounit Number: 17060107

Quad Map(s): Dodge

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)? 3 days

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

Budget: \$8,150

If no, what caused cost overruns?

The overrun was due to the fact that more rock had to be hauled that was not originally designed. The rock had to be moved by excavator to two of the rock barbs that meant more time for equipment rental.

What was the overall cost of the project? \$11,257.50

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.)?

Two hundred and fifty feet of bank was protected using 4 rock barbs. Root wads and woody debris placements were incorporated between and into the barbs.

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?

A tremendous reduction of sediment loading will occur at this site. The banks at this site are almost thirty feet high and they tend to cave into the stream when saturated during the winter and especially during spring runoff. In stream habitat is very limited in this area of the stream and the trees and shrubs that will be planted along with the root wads will improve this habitat for the fish.

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

The benefits will vary. The rock barbs will reduce the sedimentation immediately. The root wads and woody debris placement will also benefit the fish immediately. The shading provided by the grasses, trees and shrubs will be a longer-term benefit.

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. Also yearly pictures taken from a fixed point.
On site inspection after high water events to analyze effectiveness of structures.

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

**1997 PATAHA CREEK MODEL WATERSHED PROJECTS
PROJECT REVIEW**

Project Name: Pataha Creek Stream Channel and Cropland Restoration

BPA Project Number: 97-88

BPA Contract Number: 97AP37117

Project Implementor and Address: Pomeroy Conservation District

804 Main P.O. Box 750

Pomeroy, WA 99347

Project Leader(s): Duane Bartels, District Manager

Project Description (Short): In cooperation with Farm Service Agency, cost share for the development of off-site watering facilities to distribute livestock over the rangeland. Included was a 25% cost share on pipeline, stock tanks, cross fencing, and riparian fencing.

Location Information:

Site Name (i.e. creek, hatchery): DeRuwe Livestock

Subsite Name (i.e. specific location, legal description): all and parts of Sec.8-9, T12N,Rg39E

County & State: Columbia County Washington State

Hydrounit Number: 17060107

Quad Map(s): DeLaney

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

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

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)? 6 months

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

Budget: \$ 8,000

If no, what caused cost overruns?

The overrun was due to actual construction and measurements after completion compared to estimated footage when planned

What was the overall cost of the project? \$10,911.61

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.)?

25% cost share on 17,811 ft. of pipeline. 50% cost share on 7689 ft. of pipeline.

25% cost share on 6 stock tanks. 25% cost share on 3547 feet of cross fencing

75% cost share on 1145 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?

The benefit will be removal of livestock from Pataha Creek. This area of the stream has been heavily overgrazed over the years because the livestock basically camped out in the riparian zone and removed all the grass, shrubs and trees. This area has become a heat sink for the stream causing higher temperatures going into the Tucannon River. Additional plantings and livestock exclusion will lead to shading of the stream and additional habitat for fish coming into this area from the Tucannon River.

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

The benefits will vary. Immediate benefits are removal of livestock from the riparian zone. Long term benefits will be the restoration of the grasses, trees and shrubs along the stream.

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

Yes: X **No:**

If yes, list types and duration of monitoring:

On site inspection after high water events to analyze effectiveness of plantings and regrowth of existing vegetation..

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

**1997 PATAHA CREEK MODEL WATERSHED PROJECTS
PROJECT REVIEW**

Project Name: Pataha Creek Stream Channel and Cropland Restoration

BPA Project Number: 97-88

BPA Contract Number: 97AP37117

Project Implementor and Address: Pomeroy Conservation District

804 Main P.O. Box 750

Pomeroy, WA 99347

Project Leader(s): Duane Bartels, District Manager

Project Description (Short): Develop off-site watering facility, Fence livestock away from Pataha Creek, Move drainage channel away from livestock wintering area.

Location Information:

Site Name (i.e. creek, hatchery): Ledgerwood Farms (Hopkins site)

Subsite Name (i.e. specific location, legal description): SE1/4 Sec.34, T11N,Rg 41 E

County & State: Garfield County Washington State

Hydrounit Number: 17060107

Quad Map(s): Zumwalt

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

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

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)?

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

Budget: \$ 9,000

If no, what caused cost overruns?

A small overrun did occur due to actual costs incurred.

What was the overall cost of the project? \$ 9,724.42

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.)?

850 feet of riparian fencing, 150 feet of drainage relocation, 1 off-site watering facility, 2 rock vanes, 1 rock vortex weir.

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?

The major benefit will be the removal of livestock from the creek thus improving the quality of water leaving this area.

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

An immediate benefit will be better water quality. Longer-term benefits will be shading provided by the tree plantings and grass regrowth.

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. Also yearly pictures taken from a fixed point.
On site inspection after high water events to analyze effectiveness of structures.

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

**1997 PATAHA CREEK MODEL WATERSHED PROJECTS
PROJECT REVIEW**

Project Name: Pataha Creek Stream Channel and Cropland Restoration

BPA Project Number: 97-88

BPA Contract Number: 97AP37117

Project Implementor and Address: Pomeroy Conservation District

804 Main P.O. Box 750

Pomeroy, WA 99347

Project Leader(s): Duane Bartels, District Manager

Project Description (Short): Bank stabilization using rock barb.

Location Information:

Site Name (i.e. creek, hatchery): Donley Hereford Ranch Bihmaier Spring

Subsite Name (i.e. specific location, legal description): NW1/4 Sec.3, T11N,Rg42E

County & State: Garfield County Washington State

Hydrounit Number: 17060107

Quad Map(s): Pomeroy

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)? 1 day

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

Budget: \$ 2,000

If no, what caused cost overruns?

The small overrun was due to actual construction costs with more rock required than what was initially planned.

What was the overall cost of the project? \$ 2,343.75

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.)?

80 ft. bank stabilization using 2 rock barbs, sloping of bank with armoring on very bottom using rock. Upper portion seeded to grass.

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?

Bihmaier springs is a year round spring which provides over 50% of the flow to the Pataha during the summer months. It is a cool water temperature spring and any practices to reduce direct siltation and increase shading and bank stability will benefit all fish.

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

The rock barbs will benefit the water quality immediately. The grass seeding will benefit beginning the spring of 1998 when it starts providing stability to the bank.

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

Yes: No:

If yes, list types and duration of monitoring:

Photo monitoring with before and after pictures. Also yearly pictures taken from a fixed point.
On site inspection after high water events to analyze effectiveness of structures.

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

**1997 PATAHA CREEK MODEL WATERSHED PROJECTS
PROJECT REVIEW**

Project Name: Pataha Creek Stream Channel and Cropland Restoration

BPA Project Number: 97-88

BPA Contract Number: 97AP37117

Project Implementor and Address: Pomeroy Conservation District
804 Main P.O. Box 750
Pomeroy, WA 99347

Project Leader(s): Duane Bartels, District Manager

Project Description (Short): Riparian buffer strip, 80 ft. by 2000 ft. = 3.67 acres

Department of Fish and Wildlife funded fencing. We funded additional bank stabilization projects at two sites along Pataha Creek.

Location Information:

Site Name (i.e. creek, hatchery): Herman Land Co. (Herres Land Co.)

Subsite Name (i.e. specific location, legal description): SE1/4 Sec.31, T12N,Rg41E

County & State: Garfield County Washington State

Hydrounit Number: 17060107

Quad Map(s): Zumwalt

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

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

Budget: \$ 6,000

If no, what caused cost overruns?

What was the overall cost of the project? \$ 3,882

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.)?

2000 ft. of riparian fencing was constructed on north side of this area riparian area. An 80-ft by 2000-ft. area inside the banks of the Pataha Creek was designated as a buffer strip. Two sites had bank stabilization completed using rock and log 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?

This riparian area will benefit from complete livestock exclusion. This will allow for grass, shrub and tree regeneration that will provide shading for this area. This will lead to reduced water temperature in this area. Fish habitat will be restored. Bank stabilization will reduce the amount of sedimentation entering the stream.

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

The benefits of the riparian buffer strip will begin in the spring of 1998. The benefits of the bank stabilization projects are immediate.

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

Yes: X **No:**

If yes, list types and duration of monitoring:

Yearly pictures taken from a fixed point.

On site inspection after high water events to analyze effectiveness of structures.

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

**1997 PATAHA CREEK MODEL WATERSHED PROJECTS
PROJECT REVIEW**

Project Name: Pataha Creek Stream Channel and Cropland Restoration

BPA Project Number: 97-88

BPA Contract Number: 97AP37117

Project Implementor and Address: Pomeroy Conservation District
804 Main P.O. Box 750
Pomeroy, WA 99347

Project Leader(s): Duane Bartels, District Manager

Project Description (Short): No-till seeding of 128 acres

Location Information:

Site Name (i.e. creek, hatchery): Gary Houser farm

Subsite Name (i.e. specific location, legal description): NW&SW1/4 Sec.4,T10N,R42E

County & State: Garfield County Washington State

Hydrounit Number: 17060107

Quad Map(s): Pomeroy

Site Type Description (See Attachment 1): U

Work Type Description (See Attachment 2): O

Is project completed? Yes: No: X

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

This project is set up on a 3-year program where the same ground will be seeded using the no-till practice for 3 consecutive crop years. This is only the 1st year of this time period.

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

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

Budget: \$ 10,125

If no, what caused cost overruns?

What was the overall cost of the project? this years portion \$2,880

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 hundred and twenty eight acres was no-till seeded into chemical fallow.

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?

By using this practice the erosion rate was lowered by 75% over the erosion that could have occurred on conventionally farmed cropland. This in turn reduced the sediment delivered into the Pataha Creek and onto the Tucannon River. Reducing the amount of sediment going into the Tucannon will improve the survivability of the Fall Chinook redds.

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

The benefits are immediate. Every pound of soil that is not washed from the cropland will benefit the fish in the streams and rivers.

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

Yes: No:

If yes, list types and duration of monitoring:

Photo monitoring with before and after pictures. Also yearly pictures taken from a fixed point.
On site inspection after erosion event to analyze effectiveness of practice.

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

**1997 PATAHA CREEK MODEL WATERSHED PROJECTS
PROJECT REVIEW**

Project Name: Pataha Creek Stream Channel and Cropland Restoration

BPA Project Number: 97-88

BPA Contract Number: 97AP37117

Project Implementor and Address: Pomeroy Conservation District

804 Main P.O. Box 750

Pomeroy, WA 99347

Project Leader(s): Duane Bartels, District Manager

Project Description (Short): Establish 5.33 acres of riparian buffer strip inside riparian zone to restore and enhance habitat for fish.

Location Information:

Site Name (i.e. creek, hatchery): Kenneth Ledgerwood

Subsite Name (i.e. specific location, legal description):SE1/4 Sec.7, T11N,R43E

County & State: Garfield County Washington State

Hydrounit Number: 17060107

Quad Map(s): Alpowa Ridge

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

Work Type Description (See Attachment 2): 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)? 1 day

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

Budget: \$ 2,665

If no, what caused cost overruns?

What was the overall cost of the project? \$ 2,665

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.)?

5.33 acres of riparian buffer strip located inside the stream corridor.

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?

The benefits will be an area of over 3000-ft. long by 80 ft. wide along the edge of the stream on both sides that will have absolutely no human activity. The area will regenerate and provide shading of the stream and habitat for the fish and wildlife.

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

The benefits will become immediately. Within one year a tremendous amount of regrowth will take place.

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

Yes: X No:

If yes, list types and duration of monitoring:

Yearly pictures taken from a fixed point.

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

**1997 PATAHA CREEK MODEL WATERSHED PROJECTS
PROJECT REVIEW**

Project Name: Pataha Creek Stream Channel and Cropland Restoration

BPA Project Number: 97-88

BPA Contract Number: 97AP37117

Project Implementor and Address: Pomeroy Conservation District

804 Main P.O. Box 750

Pomeroy, WA 99347

Project Leader(s): Duane Bartels, District Manager

Project Description (Short): Cut and haul logs, root wads and other woody materials for use in bio-engineered stream projects in the Pataha and Asotin Creek Model Watershed Projects.

Location Information:

Site Name (i.e. creek, hatchery): USFS Seed Nursery on National Forest Development Rd. 020

Subsite Name (i.e. specific location, legal description):NW1/4 Sec.10, T10N,R42E

County & State: Garfield County Washington State

Hydrounit Number: 17060107

Quad Map(s): Pickham Butte

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 months

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

Budget: \$ 11,000

If no, what caused cost overruns?

The cost overrun was the added expense incurred in locating, loading and hauling the root wads needed in the majority of the in-stream projects. The projects called for different sized root wads and locating and hauling them led to additional time on the part of the contractor.

What was the overall cost of the project? \$ 14,043.75

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.)?

All of the woody material, root wads and logs needed for the instream projects in both the Pataha Creek and Asotin Creek Model Watershed projects was obtained through this project with material left over for some of the projects that will be installed this coming year.

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?

The benefit of this project was the fact that the necessary materials was obtained through this project to add fish habitat to the instream structures that were built in both watersheds.

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

The benefits became available immediately when used in the structures.

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

Yes: **No:** X

If yes, list types and duration of monitoring:

Photos were taken during this project. This project was simply obtaining materials and no further monitoring was felt necessary. The materials themselves will be monitored at the particular sites where they were used.

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

**1997 PATAHA CREEK MODEL WATERSHED PROJECTS
PROJECT REVIEW**

Project Name: Pataha Creek Stream Channel and Cropland Restoration

BPA Project Number: 97-88

BPA Contract Number: 97AP37117

Project Implementor and Address: Pomeroy Conservation District

804 Main P.O. Box 750

Pomeroy, WA 99347

Project Leader(s): Duane Bartels, District Manager

Project Description (Short): Rebuild gradient and level terraces that are over ten years old. These terraces have filled in over the years and were brought back to NRCS standards and specifications.

Location Information:

Site Name (i.e. creek, hatchery): Bingman Farms (Keatts and Bob's place)

Subsite Name (i.e. specific location, legal description): SE1/4 Sec.22 & SW1/4 Sec.21, T11N, R42E

County & State: Garfield County Washington State

Hydrounit Number: 17060107

Quad Map(s): Pomeroy

Site Type Description (See Attachment 1): S

Work Type Description (See Attachment 2): 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)? 3 days

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

Budget: \$ 7,700

If no, what caused cost overruns?

What was the overall cost of the project? \$ 4,247.33

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.)?

9,631 ft. of gradient and level terrace were rebuilt back to NRCS Standards and Specifications.

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?

The benefit of this project is that additional or reconstructed upland conservation practices are placed on the ground to reduce the amount of erosion and resulting sedimentation entering the Pataha Creek and Tucannon River. This in turn reduces the amount of silt covering Fall Chinook redds in the lower portion of the Tucannon River.

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

The benefits became available immediately.

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

Yes: X

No:

If yes, list types and duration of monitoring:

Photos were taken after completion of this project. The effectiveness of this project will be evaluated each season and additional or alternative practices added if determined as necessary.

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

**1997 PATAHA CREEK MODEL WATERSHED PROJECTS
PROJECT REVIEW**

Project Name: Pataha Creek Stream Channel and Cropland Restoration

BPA Project Number: 97-88

BPA Contract Number: 97AP37117

Project Implementor and Address: Pomeroy Conservation District

804 Main P.O. Box 750

Pomeroy, WA 99347

Project Leader(s): Duane Bartels, District Manager

Project Description (Short): Stabilize three bank sites to reduce further erosion and sedimentation into the Pataha Creek.

Location Information:

Site Name (i.e. creek, hatchery): Andrew Herres

Subsite Name (i.e. specific location, legal description): SW1/4 Sec.35, T12N,R41E

County & State: Garfield County Washington State

Hydrounit Number: 17060107

Quad Map(s): Pomeroy

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

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

Is project completed? Yes: No: X

If no, when is the project scheduled to be completed? The total project consists of fencing the riparian zone, establishing a riparian zone and improving fish habitat. The only portion of this project that was completed during the fall of 1997. The fencing, riparian buffer and fish habitat will be completed during 1998.

If yes, how long did the project take from start to finish (not including ongoing monitoring & evaluation activities)? 1 day for this portion of the project.

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

Budget: \$ 14,835

If no, what caused cost overruns?

What was the overall cost of the project? \$ 1,531.25

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.)?

Three-bank stabilization site were completed using rock barbs.

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?

The benefits of this project are the reduced sedimentation of the stream from these three sites. Good fish habitat exists in this area so no further habitat was added to the structures.

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

The benefits became available immediately.

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

Yes: X **No:**

If yes, list types and duration of monitoring:

Photos were taken during this project. On going inspections will be made after high water events to analyze the effectiveness of the structures.

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

**1997 PATAHA CREEK MODEL WATERSHED PROJECTS
PROJECT REVIEW**

Project Name: Pataha Creek Stream Channel and Cropland Restoration

BPA Project Number: 97-88

BPA Contract Number: 97AP37117

Project Implementor and Address: Pomeroy Conservation District

804 Main P.O. Box 750

Pomeroy, WA 99347

Project Leader(s): Duane Bartels, District Manager

Project Description (Short):No-till 88.7 acres

Location Information:

Site Name (i.e. creek, hatchery): Bert and David Slaybaugh's

Subsite Name (i.e. specific location, legal description):SE1/4 & NE1/4 Sec.22, T11N,R41E

County & State: Garfield County Washington State

Hydrounit Number: 17060107

Quad Map(s): Zumwalt

Site Type Description (See Attachment 1): U

Work Type Description (See Attachment 2): O

Is project completed? Yes: No: X

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

This is the first year of a three-year schedule for no tilling of this 88.7 acres.

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

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

Budget: \$ 5,988

If no, what caused cost overruns?

What was the overall cost of the project? \$ 1,995.75

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.)?

88.7 acres was no-till seeded into chemical fallow.

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?

By using this practice the erosion rate was lowered by 75% over the erosion that could have occurred on conventionally farmed cropland. This in turn reduced the sediment delivered into the Pataha Creek and the Tucannon River. Reducing the amount of sediment going into the Tucannon will improve the survivability of the Fall Chinook redds.

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

The benefits are immediate.

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

Yes: No:

If yes, list types and duration of monitoring:

Photos were taken during this project.

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