

WASHINGTON MODEL WATERSHED HABITAT PROJECTS

9401800

SHORT DESCRIPTION:

Implement model watershed plans for Asotin Creek, Pataha Creek and Tucannon River. Enhance fish habitat, reduce water temperatures, erosion and sedimentation, enhance and re-establish riparian vegetation, promote cooperation and agreement between landowners and resource agencies.

SPONSOR/CONTRACTOR: N/A

Asotin Conservation District
 Pomeroy Conservation District
 Columbia Conservation District
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 Watershed Coordinators
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SUB-CONTRACTORS:

None at this time.

All the districts are not set up to use E-mail at this time but will be within the next few months.

GOALS

GENERAL:

Supports a healthy Columbia basin, Increases run sizes or populations, Provides needed habitat protection, Adaptive management (research or M&E)

WATERSHED:

Implementation

NPPC PROGRAM MEASURE:

7.7B.3

RELATION TO MEASURE:

The following problems were identified during watershed analysis and addressed in the plans. High stream temperature, lack of resting and rearing pools containing large woody debris, sediment deposition in spawning gravels and high fecal coliform counts. All watersheds implemented projects during the 1996 year which addressed limiting habitat factors for salmon in their watersheds. They are also implementing best management practices on private cropland and rangeland to reduce sediment deposition. Working relationships between Districts and private landowners is the key to the success of these watershed plans. Adaptive management will be used to respond to new technology, changes in societal demands or new legislation. As project components are applied on the ground, they will be monitored for their degree of success so that adjustments, if necessary, can be made to similar projects in the future. Any conflicts will be resolved through the landowner steering committees in conjunction with each Conservation District Board of Supervisors.

OTHER PLANNING DOCUMENTS:

1.1.b.3. Other documents are unavailable for reference.

TARGET STOCK	LIFE STAGE	MGMT CODE (see below)
Snake River Steelhead and Bulltrout (Tucannon River)	Adult and juvenile	P
Snake River Steelhead and Bulltrout (Pataha Creek)	Adult and juvenile	P
Snake River Steelhead and Bulltrout (Asotin Creek)	Adult and juvenile	(P)
Snake River Spring Chinook, Fall Chinook (Tucannon River)	Adult and juvenile	(L)
Snake River Spring Chinook (Pataha Creek)	Adult and juvenile	(L)

Snake River Spring Chinook (Asotin Creek)

Adult and juvenile

(L)

AFFECTED STOCK

Rainbow trout and Rough Fish

BENEFIT OR DETRIMENT

Beneficial

BACKGROUND

STREAM AREA AFFECTED

Stream name:

Asotin Creek
Pataha Creek
Tucannon River

Stream miles affected:

20 miles (Asotin)
40 miles (Pataha)
50 (Tucannon)

Hydro project mitigated:

Mid to lower Snake River Dams (Lower Granite Dam; Asotin Creek)(Lower Monumental; Pataha and Tucannon)

LAND AREA INFORMATION

Subbasin:

Asotin Creek (Asotin)
Tucannon River (Pataha)
Tucannon River (Tucannon)

Land ownership:

Public & Private (Asotin)Public & Private (Pataha)Public & Private (Tucannon)

Acres affected:

60,000 acres approximately affected of 208,260 watershed acres (Asotin)
35,000 acres approximately affected of 118,388 watershed acres (Pataha)
60,000 acres approximately affected of 203,520 watershed acres (Tucannon)

Habitat types:

Upland; wetlands, cropland, rangeland, forestland. Riparian corridor; white fur, ponderosa pine, cottonwoods, alders and willows. Instream; pools, riffles, runs, glides and large woody debris. (Asotin, Pataha, Tucannon)

HISTORY:

To implement habitat restoration and enhancement of projects as developed in the Asotin, Pataha and Tucannon Model Watershed Plans.

BIOLOGICAL RESULTS ACHIEVED:

Data that is currently being collected can only be compared to data that was taken before the plans were developed. We believe that by the year 2000 we should have a reliable database from monitoring and be able to use that data to determine biological results achieved. Our overall goal is to improve fisheries. In years to come, after project implementation is complete, we will be able to assess the effectiveness of the project implementation.

1996 was the first year of habitat project implementation. First year projects are currently being evaluated for effectiveness.

PROJECT REPORTS AND PAPERS:

Project statement of work and implementation reports. Final draft of the Asotin Creek Model Watershed Plan has been submitted. Drafts of the Tucannon River and Pataha Creek Watershed Plans are expected in the spring of 1997. Quarterly reports will be sent to concerned parties documenting project activity.

ADAPTIVE MANAGEMENT IMPLICATIONS:

The watersheds have previously received grant funding to accomplish established goals and have administered all projects within budget and in a timely manner. Past administration shows project management capability. Communication and relationships are in great working order between District personnel, cooperating agencies, and landowner cooperators ensuring successful administration.

PURPOSE AND METHODS

SPECIFIC MEASUREABLE OBJECTIVES:

Our goals and objectives include decreasing water temperatures, reducing sedimentation delivered to the stream, lowering fecal coliform levels, increasing spawning availability, and increasing available fish habitat.

CRITICAL UNCERTAINTIES:

Sources of funding are uncertain at this time. If project implementation is started and then funding is ceased this could cause problems. The timeliness of obtaining permits is also a concern. Improved coordination between the permitting and designing process will ensure proper design and implementation and that projects are completed within the work windows identified through the permitting authorization. Landowner buy-in is also critical to the success of these projects. The landowner must be willing to cooperate and agree to maintenance standards while still feeling that he is benefiting from the proposed practice. These are all factors that will take continued determination and commitment. We will work to the best of our ability to ensure that project implementation is a success.

BIOLOGICAL NEED:

These watersheds have been significantly impacted by human activities and catastrophic natural events, such as floods and droughts. Only remnant salmon and trout populations use these waters as compared to earlier years. To increase salmonid productivity it will require enhancement and restoration of fish habitat and riparian corridor. The barriers include high stream temperatures, lack of quality resting and rearing pools, sediment deposition in spawning gravels, and high fecal coliform levels.

HYPOTHESIS TO BE TESTED:

Our primary goal is to enhance and restore habitat for fisheries. We have many practices to install to reach this goal. Initial success will be measured on the number of practices installed.

ALTERNATIVE APPROACHES:

Project success is crucial and relies on district coordination and cooperative efforts to address landowner concerns and agency acceptance. Biological objectives are more easily accomplished through a voluntary approach in comparison to the alternative of regulatory agency directives.

JUSTIFICATION FOR PLANNING:

N/A Implementation of BMP's on Asotin Creek, Pataha Creek and the Tucannon River are a primary focus for this project.

METHODS:

We will be implementing different types of biological engineering designs. We plan to use root wads, large woody debris placement, point barbs, off-site watering devices, planting trees for stabilization of eroding banks, and off-channel rearing ponds. Additional upland BMP practices will be installed to reduce erosion and therefore sediment entering the streams. Monitoring and evaluation will be compared to data collected in recent surveys. At the present time, current laws prohibit the reintroduction of fish into any of these streams.

In 1996, the three watersheds installed root wads, root wad revetments, rock barbs, rock vortex weirs, log weirs, log barbs, off channel rearing sites, off site watering facilities, upland BMP practices and streambank stabilization through vegetative plantings and bio engineering.

PLANNED ACTIVITIES

SCHEDULE:

Planning Phase **Start** 1995 **End** on-going **Subcontractor**

- Task** Asotin Creek Model Watershed Plan was completed in 1995
- Pataha Creek Model Watershed Plan is currently in the draft stage and will be completed in the spring of 1997. Tucannon Model Watershed Plan is currently in the draft stage and will be completed in the spring of 1997.
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Assumed historic status of utilization and conservation potential:

Historically, Spring Chinook Salmon were present in Asotin Creek and the Tucannon River. The Tucannon River still supports a small run of Salmon but the fish returning to Asotin Creek have reached low levels of returning spawners. Historically, sufficient habitat was available throughout the watersheds but many factors have contributed to the reduction of available habitat.

Long term expected utilization and conservation potential for target population or habitat:

To restore and enhance habitat to a level to sustain increased populations of adults and juvenile salmonoids.

Contribution toward long-term goal:

Sustainable habitat for Spring Chinook, Bull Trout, Summer Steelhead and also Tucannon River, Fall Chinook.

Indirect biological or environmental changes:

Ultimately, if all the enhancement and restoration goals can be met, the watersheds ecosystems will be improved.

Physical products:

Specific measurable objectives began in 1996 with the implementation of habitat enhancement projects in all three watersheds. (Asotin Creek; 7 BPA early action projects with the following habitat implementation: 13 root wads, 10 rock barbs, 8 boulder placements, 4 log barbs, 3 large woody debris placement and 3 vortex rock weirs) (Pataha Creek; 9 BPA early action projects: 2 off-site watering facilities, 3 stream bank stabilization projects, 1.5 miles riparian fencing, 15.2 acres riparian buffer strip, 1 fish passage removal and 1 stream crossing improvement) (Tucannon River; 7 BPA early action projects: 8 rock vortex weirs, 8 rock barbs, 81 root wad/revetments for streambank stabilization fish enhancement and 1 sediment basin repair).

Environmental attributes affected by the project:

Implementation of BMP's resulted in the following: reduced sedimentation , reduced water temperature, enhanced instream fish habitat.

Changes assumed or expected for affected environmental attributes:

Expected near and long term changes have not significantly impacted the watersheds. Continued protection and enhancement measures must be implemented in larger numbers than previously done to positively impact our habitat enhancement goals.

Measure of attribute changes:

Individual watershed habitat enhancement goals for 1996 Early Action projects were met as identified in 101G. Currently we are identifying 1997 habitat enhancement goals for each watershed. All Districts currently have identified O&M costs from 1996 projects which impact available funding for new enhancement projects for 1997 and beyond.

Assessment of effects on project outcomes of critical uncertainty:

Habitat enhancement projects are new to Southeastern Washington. Landowner acceptance on private property will be the key to the success of the implementation of the watershed plan goals. Once we have landowner participation, we need to have the commitment of long term funding to cost-share on approved BMP's.

Information products:

Summary of expected outcomes are on a site by site basis. Each watershed is unique and has certain qualities that affect project implementation. Monitoring through temperature, sedimentation, flows, total suspended solids and fecal coliforms we can determine overall water quality. Evaluations of projects through photo documentation, modeling guidelines, on site evaluations and documented results can be used for public information and education.

Coordination outcomes:

Improved cooperation between Conservation Districts, Technical Advisory Committee, Landowner/steering Committee and landowners/operators enhances the implementation of individual watershed plans.

MONITORING APPROACH

We will be experimenting with many different types of biological engineering designs. We will also be implementing approved BMP's on upland and forestland. We plan to use root wads, large woody debris placement, point barbs, rock barbs, vortex rock weirs, off-site watering devices, planting trees for stabilization of eroding banks, and off-channel rearing ponds. Upland and forest practices will be measured by reduced soil erosion and sedimentation reaching the streams. Monitoring and evaluation will be compared to data collected in recent surveys.

Provisions to monitor population status or habitat quality:

The Conservation Districts involved in the three model watersheds are in cooperation with the Washington Department of Fish & Wildlife, US Forest Service and the NRCS to monitor the status of the target stock, the availability or quality of habitat and success of the projects implemented.

Data analysis and evaluation:

The Conservation Districts in cooperation with the model watershed technical advisory committees will act as a gathering and dissemination group for data collected regarding water quality and habitat.

Information feed back to management decisions:

Information will be made available to the management agencies for review and input for modification. Requested project modification will be reviewed by Conservation District Supervisors, Model Watershed Technical Advisory and Landowner Steering Committees for project modification implementation.

Critical uncertainties affecting project's outcomes:

Natural disasters impact the ability to predict project's outcomes. Landowner acceptance of habitat projects utilizing bio-engineering techniques, vegetation development and large woody debris introduction are new management techniques that are meeting resistance by landowners due to historical rock/hardface control measure usage. An extensive information and education program must be maintained to keep landowners and public informed on status of implemented projects. Committed long term funding allows Districts to work with landowners to develop long term implementation plans allowing for increased landowner cooperation and implementation of habitat projects on private property. This action would allow the landowner to financially plan and implement a long term commitment.

EVALUATION

Landowner and public understanding of bio-engineering techniques is necessary. Details of plans, implementation and evaluation of projects must be made available for landowners and other interested parties. Newsletters and tours of project sites must be used.

Projects are implemented to increase large pool habitat relating to anadromous fisheries needs, reduce stream temperatures, reduce sedimentation and fecal coliform levels in the watersheds.

Incorporating new information regarding uncertainties:

Through mutual agreement through adaptive management process between all concerned entities.

Increasing public awareness of F&W activities:

Publication of Model Watershed Newsletters and newspaper articles along with project tours, school involvement in educational projects and presentations, volunteer group involvement in project implementation and other sources of communication are tools that will be used to increase public awareness.

RELATIONSHIPS

RELATED BPA PROJECT

9202602 Washington State Conservation Commission;
COMPETITIVE GRANT, WATER QUALITY GRANT,
MODEL WATERSHED GRANT (all three watersheds)

RELATIONSHIP

Cost-share: (Competitive Grant) Administrative: (Water Quality Grant & Model Watershed Grant)

RELATED NON-BPA PROJECT

Washington State Conservation Commission;
COMPETITIVE GRANT, WATER QUALITY GRANT,
MODEL WATERSHED GRANT (all three watersheds)

RELATIONSHIP

Cost-share: (Competitive Grant) Administrative: (Water
Quality Grant & Model Watershed Grant)

OPPORTUNITIES FOR COOPERATION:

Each District began their planning by involving the community. They formed a landowner based committee, known as the Landowner Steering Committee (LSC), to represent the views and needs of the community. They also established a Technical Advisory Committee (TAC) to assist the LSC with meeting their goals. The TAC consists of personnel from the following agencies: USDA NRCS, USFS, WDFW, WDOE, WDNR, WSU CES, BPA, Inland Power and Light and Clearwater Power Company. Development of working relationship with Nez Perce and Umatilla Tribes.

The three Districts that are involved in these three model watersheds have been working closely together sharing ideas and information on projects. The three Districts may enter into a contract together to hire an individual to do project and water monitoring.

COSTS AND FTE

1997 Planned: \$579,000

FUTURE FUNDING NEEDS:

PAST OBLIGATIONS (incl. 1997 if done):

<u>FY</u>	<u>\$ NEED</u>	<u>% PLAN</u>	<u>% IMPLEMENT</u>	<u>% O AND M</u>
1998	\$650,000	10%	70%	20%
1999	\$700,000	10%	70%	20%
2000	\$700,000	10%	65%	25%
2001	\$750,000	10%	60%	30%
2002	\$800,000	10%	60%	30%

<u>FY</u>	<u>OTHER FUNDING SOURCE</u>	<u>AMOUNT</u>	<u>IN-KIND VALUE</u>
1998	NRCS assistance (engineering, planning assistance)	3 in watersheds	\$200,000
1999	NRCS assistance (engineering, planning assistance)	3 in watersheds	\$200,000
2000	NRCS assistance (engineering, planning assistance)	3 in watersheds	\$200,000
2001	NRCS assistance (engineering, planning assistance)		\$200,000
2002	NRCS assistance (engineering, planning assistance)		\$200,000

OTHER NON-FINANCIAL SUPPORTERS:

Area Schools, Washington State Department of Fish and Wildlife, County Commissioners, Universities and group and individual volunteers.

LONGER TERM COSTS: \$800,000.00 for continued implementation and O&M.

1997 OVERHEAD PERCENT: N/A The project money is divided between planning, implementation and O&M.

HOW DOES PERCENTAGE APPLY TO DIRECT COSTS:

N/A Same as 115

CONTRACTOR FTE:

None. This is strictly a project implementation grant with all money being cost-shared on BMP implementation. Administrative costs are incurred under project #9202602.

SUBCONTRACTOR FTE: None