IDAHO MODEL WATERSHEDS ADMIN/IMPL. SUPPORT 9202603

SHORT DESCRIPTION:
Coordinate implementation of the model watershed plan as developed in November 1995, on the Lemhi, Pahsimeroi, and East Fork of the Salmon River watersheds.

SPONSOR/CONTRACTOR: SCC
Idaho Soil Conservation Commission
Biff Burleigh, Project Specialist
Boise, ID 83720-0083
208/334-0217 bburleig@idl.state.id.us

SUB-CONTRACTORS:
As lead coordinating agency, the SCC is responsible for this project. Compensation will be made to the BLM for providing the Project Coordinator, to the Shoshone-Bannock Tribe for fisheries biologist input to the project, and to a private consulting archaeologist.

GOALS

GENERAL:
Provides needed habitat protection, Program coordination or planning, Basinwide, Education

WATERSHED:
Assessment/action plan development, Coordination, Implementation

ANADROMOUS FISH:
Habitat or tributary passage, Production, O&M

RESIDENT FISH:
Habitat, Production, O&M

WILDLIFE:
Planning/coordination, Habitat, O&M

NPPC PROGRAM MEASURE:
7.7A, 7.7B

RELATION TO MEASURE:
With SCC as lead coordinating agency, project works with the model watershed advisory committee and technical committee and others in continuing CRM approach for watershed activities. Project will continue implementation of on the ground actions to maintain and enhance salmon and steelhead habitat.

TARGET STOCK	LIFE STAGE	MGMT CODE (see below)
Lemhi, Pahsimeroi, E. fork of Salmon Rivers - Bull Trout	Spawning, Incubation, Adult holding, Rearing	N,P,W
Snake River Summer Steelhead	Migration, Spawning, Incubation, Adult holding, Rearing	N,P,S,W
Snake River Spring and Summer Chinook Salmon	Migration, Spawning, Incubation, Adult holding, Rearing	L,N,S,W

AFFECTED STOCK	BENEFIT OR DETRIMENT
All riparian fish and wildlife species	Beneficial

BACKGROUND

STREAM AREA AFFECTED

Stream name:
Lemhi, Pahsimeroi, and East Fork of the Salmon Rivers

Stream miles affected:

LAND AREA INFORMATION

Subbasin:
Salmon River

Land ownership:

150

public and private

Hydro project mitigated:

Cumulative effects of eight Columbia/Snake River dams

Acres affected:

100,000 acres (1.7 million total watershed acres)

Project is an office site only

Habitat types:

Stream/Riparian

HISTORY:

Local involvement for habitat work and recognition for its need were initiated by the Lemhi Irrigation District and Lemhi SWCD. In the late 1980's, habitat protection for salmon and steelhead became a priority natural resource issue, and was made part of the SWCD's five year conservation plan. Financial incentives for habitat actions has come from several sources. BPA has funded the coordination and implementation of some on the ground projects. IDFG has participated through Challenge Grants and the Habitat Improvement Program, the Sho-Ban Tribes have supplied human resources through the Salmon Corps, BOR has instituted a water management demonstration on the Lemhi Basin, and collaborated with NRCS and BPA for a Cooperative River Basin Study. NRCS and IDFG have support staff for engineering and other technical assistance. SCC staff has assisted the Model Watershed Coordinator through administrative and stream inventory work, and multiple agencies have assigned staff to serve on the technical committee.

BIOLOGICAL RESULTS ACHIEVED:

Refer to Habitat project 9401700 and the Fish Passage project 9306200. The biological results are directly related to reducing the limiting factors to anadromous and resident fish habitat and migration passage. Most of the impacts occur in agricultural and irrigated private lands in the upper Salmon River Basin. Measurable outcomes will include positive changes to habitat components (stream substrate, water temp, habitat type composition, bank stability, water quality, etc.) and migration (diversion consolidations, barrier removals, increased instream flows etc.).

PROJECT REPORTS AND PAPERS:

Quarterly reports since inception of project. Model Watershed Plan, developed November 1995. Model Watershed Plan for Lemhi River, Pahsimeroi River, and East Fork of the Salmon River.Stream Habitat Inventory for Lemhi River, Pahsimeroi River, and East Fork of the Salmon River to be completed in 1997.Project Implementation Reports for all projects.Biological Assessments for all projects.

ADAPTIVE MANAGEMENT IMPLICATIONS:

Interest in salmon recovery in the model watershed area resulted in many initial habitat maintenance and enhancement actions. However, the key to the effectiveness of these multiple actions has been the coordination of local watershed interests. This project has demonstrated that coordination of activities to address identified objectives will ensure implementation in an orderly, as opposed to sporadic manner. This orderly progress in achieving the goal of the model watershed has been essential in keeping local interest in completing the project. The information program component of the model watershed is important in conveying the project successes both locally and regionally, to meet the intent of a "model" watershed.

PURPOSE AND METHODS

SPECIFIC MEASUREABLE OBJECTIVES:

a. Develop partnerships and coordinate activities in implementing the five objectives listed in the model watershed plan: Accomplish the following over 75% of the project area in five years: - Increase instream flows during critical fish migration periods- Reduce the number of physical barriers hindering fish migrations- Develop new rearing and resting pools- Establish riparian vegetation along critical habitat areas to provide cover and reduce water temperatures- Reduce sediment levels within spawning gravelsb. Assist SWCDs with liaison and treatment planning with operators of critical private land, administration of land treatment contracts with private interests, and technical assistance for pasture and hayland planning.

BIOLOGICAL NEED:

The underlying need for the project is to provide a coordination of activities and efforts to implement the model watershed action plan. This plan addresses five major habitat problems: - low stream flows- physical barriers to migration (irrigation diversions)- lack of quality spawning and rearing habitat- high water temperatures- sedimentation of spawning gravelsThis project affects all

life stages of anadromous and resident fish.

HYPOTHESIS TO BE TESTED:
N/A Project is for coordination

ALTERNATIVE APPROACHES:
Project implementation without coordination of activities and funding sources would lead to a fragmented approach to treatment and which would likely ignore the prioritization developed in the plan.

JUSTIFICATION FOR PLANNING:
Project coordination is necessary to bring together and synchronize the many individual actions and funding sources required to implement on the ground actions specified in the model watershed plan. Project will fund one coordinator to carry out priorities of an advisory committee, technical committee, and the Lemhi and Custer SWCDs.

METHODS:
The Coordinator is responsible for prioritizing and implementing on-the-ground projects. The model watershed process entails: - prioritization of projects- submiting proposals for funding- review by both the technical committee and advisory committee- project design using engineering and/or planning technical assistance- project/practice implementation- evaluation of installation integrety and monitoring of biological results.

PLANNED ACTIVITIES

SCHEDULE:

Planning Phase **Start** April 1997 **End** December 2001 **Subcontractor**

Task November 1992 - November 1995 Fish Habitat maintenance and enhancement project planning Site specific project planning based on the Model Watershed Plan 1995- Initiate planning activities with owners and operators of pasture and hayland which are critical in terms of fish habitat- Develop land treatment contracts with participants and begin implementation of practicesApril 1997 - December 2001- Complete planning and development of 30-50 land treatment contracts and begin implementation (practice installation)- O&M begins on individual contracts from three to five years following contract implementation. For contracts developed in 1997, O&M could begin by 1999. Passage Enhancement: May 1997 - 2001Initiate contact between Project Coordinator, staff, irrigators, and irrigation districts to seek opportunities for consolidation of diversions. The purpose of these consolidations is to enhance irrigation water management and to thereby improve stream flows. May 1998 to November 2001 - Continue with negotiations and work on consolidations, and complete related work in the Pahsimeroi and East Fork of the Salmon River drainages.

Implementation Phase **Start** May 1996 **End** Dec. 2001 **Subcontractor**

Task Fish habitat maintenance and enhancement- SWCDs hire pasture and hayland specialist- Initiate planning activities with owners and operators of pasture and hayland which are critical in terms of fish habitat- Develop land treatment contracts with participants and begin implementation of practices- Complete development of 30-50 land treatment contracts and begin implementation (practice installation). Diversions and fish screening -
Project Coordinator will initiate contact between the staff, irrigators, and irrigation districts to seek opportunities for consolidation of diversions. The purpose of these consolidatins is to enhance irrigation water management and thereby improve stream flows. Consolidation work will be completed in 1997 in the Lemhi drainage.- Continue with negotiations and work on habitat enhancement, fish passage enhancement and related work in the Pahsimeroi and East Fork of the Salmon River drainages.

O&M Phase **Start** May 1999 **End** Dec. 2004 **Subcontractor**

Task Operation and maintenance on participant (landowner) contracts will begin from three to five years following contract implementation. For contracts developed in 1997, O&M could begin by 1999.

CONSTRAINTS OR FACTORS THAT MAY CAUSE SCHEDULE OR BUDGET CHANGES:
A. Inability or noncommital of agencies to assist with technical assistance or project implementation
B. Landowner reluctance to implement treatment strategies on private land

C. Funding interruptions could cause loss of current momentum for implementing action to assist habitat maintenance and enhancement.

OUTCOMES, MONITORING AND EVALUATION

SUMMARY OF EXPECTED OUTCOMES

Expected performance of target population or quality change in land area affected:
Coordination of actions and funding sources will provide for implementation of the fish habitat maintenance and enhancement and diversions and fish screening components of the action plan, enabling focused, intensive treatment to be applied to improve the quality and quantity of streamside vegetative cover on 75 percent of the priority stream segments listed in the model watershed plan. The accrued benefits would be enhanced spawning and rearing habitat on approximately 60 miles of stream in the Lemhi, Pahsimeroi and East Fork of the Salmon River watersheds.

Present utilization and convservation potential of target population or area:
Approximately 1% of the 1960-65 chinook redds are present in the Model Watershed area.

Assumed historic status of utilization and conservation potential:
1960-65 average salmon redds
Lemhi River 1200
Pahsimeroi 700
E. Fork Salmon River 775

Long term expected utilization and conservation potential for target population or habitat:
Restore redd count to 1960-65 levels (above)

Contribution toward long-term goal:
Maintenance and enhancement of habitat for Snake River spring and summer chinook salmon, and Lemhi, Pahsimeroi, and E. Fork of the Salmon River steelhead, and bull trout through the following actions:
- increase instream flows during critical fish migration periods
- reduce the number of physical barriers hindering fish migratins
- develop new rearing and resting pools
- establish riparian vegetation along critical habitat areas to provide cover and reduce water temperatures
- reduce sediment levels within spawning gravels.

Indirect biological or environmental changes:
Improvement in habitat will provide support for all riparian-dependent fish and wildlife species.

Physical products:
Maintenance and enhancement of fisheries habitat on 60 miles of stream in the Lemhi, Pahsimeroi, and East Fork of the Salmon River watersheds.

Environmental attributes affected by the project:
Increased water flows during critical fish migration periods, reduced number of physical barriers to migration, reduced water temperatures, enhancement and protection of riparian vegetation, and reduced sedimentation of spawning gravels.

Changes assumed or expected for affected environmental attributes:
Changes will occur at the rate of streamside revegetation and hydrologic modification.

Measure of attribute changes:
Sedimentation will be reduced corresponding to streambank stabilization on 60 miles of stream. No figures are available.

Assessment of effects on project outcomes of critical uncertainty:
Monitoring will be completed on all of the treated stream miles and partially on the untreated but influenced segmentsincluding photo-documentation of riparian habitat, stream habitat type changes, water temperature, substrate conditions and streambank stability.

Information products:
Quarterly reports, monitoring reports, newsletters, news articles, project area tours, videos.

Coordination outcomes:
Coordination supports a locally based advisory committee with representatives of the affected private, state, and federal land managers, along with a technical advisory committee to help guide the implementation of the watershed plan. A work plan has been written to guide the project development.

July 1, 1993: In cooperation with Bureau of Reclamation, complete plan and develop MOU to implement a strategy dealing with dewatering of Lemhi River.
October 1, 1993: `Recommend strategy for identification of procedures to develop a prioritized water conservation plan
December 1, 1993 - March 1995: Develop and implement the BOR Irrigation Plan. Project currently out for bid.

August 1, 1993: Organize model watershed Advisory and Technical committees.
December 1, 1993: Recommendations from steering committee on actions for fisheries/watershed projects.
April - June 1994: Complete stream inventory using interagency teams for occupied spring chinook habitat in all three rivers. Approximately 110 miles inventoried. Reports written and sent to BPA and CIS.
April 1994: Completed outline of MWS plan and began compiling existing information for three watersheds.
December 1994: 1st Draft of MWS plans.
April 1995: 2nd Draft of MWS plans.

4/93 - Present: Cooperation with Idaho Department of Fish and Game and Lemhi Irrigation District to improve Lemhi summer instream flows, reduce fish passeage problems, and juvenile loss at irrigation diversions. Developed stable diversion design with positive flow controls to allow for better water management. Developed proposal for Lemhi River Flow Model.

July 1995 - April 1996: Developed long term agreements for habitat enhancement and restoration with landowners on priority stream reaches.

July 1995: Complete Draft Monitoring and Evaluation report.

Lemhi Fish flow agreement with Lemhi River irrigators. Implemented in 1995.
Screening prioritization report.Quarterly Newsletters, Poster Display and numerous presentations at professional and civic/school meetings.
Regional Salmon Symposium in April 1994.
FY96:
1. Completed Model Watershed Plan
2. Coordinated Bureau of Reclamation Irrigation Diversion Consolidation/Elimination Program
   - L4 elimination
   - L6, L7 consolidations under construction
   - L5 elimination (NRCS and BOR project)
3. Pahsimeroi River Habitat Improvement
   - Parkinson Irrigation Project (restoration of passage to 7 miles of stream) under construction
   - Dowton/Chewning riparian exclusion fencing, 1 mile of stream
   - Lower Pahsimeroi riparian exclusion fencing, 1.5 miles near Pahsimeroi hatchery
4. Lemhi River Habitat Projects
   - Merrill Beyler riparian exclusion fencing, 12K feet of fence on 1 1/2 miles of river
   - Kelley Thomas riparian exclusion fence, 1 1/2 miles of river
5. Hatch Box Program in cooperation with IDFG, Shoshone Bannock Tribes and Trout Unlimited
   - 80K steelhead eggs into hatch boxes

- four sites, Squaw Creek x 2 boxes, Hayden Creek x 2 boxes, Morgan Creek x 1 box, Indian Creek x 1 box.

6. Coordination with IDFG irrigation screening program
   - 4 consolidation sites (site 1, 3 to 1 diversion; site 2, 9 diversions to 4 40 screens installed
7. Technical Information transfer
   - Paper at NACD national meeting in Alaska
   - Paper at Idaho Conservation League - Public Lands Conference
   - Presentation to Idaho Falls Rotary Club
   - Presentation to Montana Bull Trout Committee

8. Sponsored two coordination meetings among agency heads to review model watershed progress, identify human and financial needs to provide watershed treatment, and to explore feasibility of expanding the effort to the entire Salmon River subbasin.

MONITORING APPROACH

The Model Watershed Plan will be the guiding document for the coordination effort. The advisory committee and the technical committee will continue to assist and guide the Project Coordinator and staff to implement the plan's actions according to the priorities in the plan.

Provisions to monitor population status or habitat quality:

Monitoring of habitat will continue throughout the project duration to measure sediment levels in stream substrates, water temperatures, stream flows, streambank stability, water quality, and stream/riparian habitat.

Data analysis and evaluation:

Monitoring reports will be completed to evaluate effectiveness of the habitat enhancement and fish passage enhancement projects.

Information feed back to management decisions:

Information will be presented to the model watershed advisory committee and technical advisory committee for management decisions.

Critical uncertainties affecting project's outcomes:

Establishment and maintanence of good working relationships with the local landowners, county commissioners and the various agencies and groups participating is crucial to the continuation of this effort. If the project funding is proposed without the coordination aspect, the gains to fish and wildlife habitats will most likely fail. The emphasis must be kept to on-the-ground enhancment projects but also must be carried out in a coordinated and systematic way to efficiently utilize the funding.

EVALUATION

Achievement of the five project goals of increasing instream flows, reducing barriers to fish migrations, developing new rearing and resting pools, establishing riparian vegetation in critical habitat areas, and reducing sediment levels in spawning gravels.

Incorporating new information regarding uncertainties:

Information will be presented to the advisory committee, technical advisory committee, and the Lemhi and Custer SWCDs by the Project Coordinator. Significant project decisions will come through the model watershed advisory committee.

Increasing public awareness of F&W activities:

The project is already noted region-wide as a successful example of local involvement in addressing fish and wildlife concerns. Project coordination does include an effective information component. The information program utilizes newsletters, displays, and frequent tours to inform the public of on the ground treatment achieved through cooperation among individuals and groups.

RELATIONSHIPS

RELATED BPA PROJECT	RELATIONSHIP

9306200 Salmon River Anadromous Fish Passage Enhancement, Lemhi and Custer Soil Conservation Districts	Fish ladder on Lemhi River to connect dewatered section
9600600 Early Action Funding, FY96, Lemhi and Custer SWCDs. Diversion Consolidation Program Upper Salmon River	Provided initial funding for model watershed high priority habitat activities. Consolidation and screening of diversions on Salmon River is an important component of fish production and complements the model watershed action plan.
9401500 Idaho Fish Screening Improvement, IDFG	Reduces fish mortality to irrigation diversions
9401700 Idaho Model Watershed Habitat Projects, Lemhi and Custer SWCDs	Implements high priority actions identified in the watershed plan with emphasis on cost-sharing with land operators for maintenance and enhancement of stream side cover

RELATED NON-BPA PROJECT	**RELATIONSHIP**
US. Bureau of Reclamation	Consolidation of irrigation diversions, and enhancement of stream flows through irrigation water management
Idaho State Agricultural Water Quality Program	Provides cost-sharing to land operators for application of agricultural Best Management Practices relative to treatment of critical pasture and hayland identified in model watershed plan.

OPPORTUNITIES FOR COOPERATION:

Project will assure ongoing cooperation among the advisory committee with other watershed stakeholders. The advisory committee consists of interests representing private landowners, the Lemhi Irrigation District, Lemhi and Custer SWCDs, Shoshone-Bannock Tribes, Cooperative Extension Service, USFS, IDFG, and other interests such as NMFS, USFWS, BPA, BLM, and IDL.The Lemhi and Custer SWCDs have applied to the Idaho State Agricultural Water Quality Program for funds to implement pasture and hayland treatment on the Lemhi and Pahsimeroi River watersheds. This action would supplement the Idaho model watershed habitat projects, number 9401700, and accelerate implementation of priority action items in the model watershed plan.

COSTS AND FTE

1997 Planned: $136,567

FUTURE FUNDING NEEDS:

FY	$ NEED	% PLAN	% IMPLEMENT	% O AND M
1998	$152,000	40%	40%	20%
1999	$160,000	40%	40%	20%
2000	$160,000	35%	35%	30%
2001	$160,000	25%	45%	30%
2002	$160,000	25%	45%	30%

PAST OBLIGATIONS (incl. 1997 if done):

FY	OBLIGATED
1992	$141,145
1993	$153,445
1995	$220,648
1996	$141,800
1997	$138,667
TOTAL:	$795,705

Note: Data are past obligations, or amounts committed by year, not amounts billed. Does not include data for related projects.

FY	OTHER FUNDING SOURCE	AMOUNT	IN-KIND VALUE
1998	Potential Idaho State Agricultural Water Quality Program	$100,000	$34,000
	USFWS Partners for Wildlife Project		$10,000
1999	Potential Idaho State Agricultural Water Quality Program	$100,000	$34,000
	USFWS Partners for Wildlife Project		$10,000

2000	Potential Idaho State Agricultural Water Quality Program USFWS Partners for Wildlife Project	$100,000	$34,000 $10,000
2001	Potential Idaho State Agricultural Water Quality Program USFWS Partners for Wildlife Project	$100,000	$34,000 $10,000
2002	Potential Idaho State Agricultural Water Quality Program USFWS Partners for Wildlife Project	$100,000	$34,000 $10,000

1997 OVERHEAD PERCENT: 10%

HOW DOES PERCENTAGE APPLY TO DIRECT COSTS:
Total direct project costs

CONTRACTOR FTE: 1 Project Coordinator1 part time, temporary secretary/information specialist