

**2002-2003 CONSERVATION AGREEMENT
IN THE LEMHI RIVER BASIN**

SIGNATORIES

ORIGINAL

Idaho Office of Species Conservation
Idaho Department of Water Resources
Idaho Department of Fish and Game
Upper Salmon Basin Watershed Project
Lemhi Irrigation District
Water District 74

Water District 74Q
Water District 74W
Water District 74Z
National Marine Fisheries Service
National Oceanic and Atmospheric Administration
U.S. Fish and Wildlife Service

INTRODUCTION

The National Marine Fisheries Service (NMFS), the U.S. Fish and Wildlife Service (Service), and various Idaho parties have been working to agree on and implement long-term conservation actions needed to minimize the risk of "take" of Endangered Species Act (ESA) listed salmon, bull trout, and steelhead in the Lemhi River. Efforts leading to the appropriate ESA authorization of incidental take continue. The parties have settled on interim flows and other actions that demonstrate both commitment and good faith progress toward reaching the long-term objectives. This agreement is organized around three implementation tiers. Tier I includes past actions taken to conserve species in the Lemhi River Basin. Tier II lists actions that will be taken in 2002 through 2003. Tier III identifies actions that will be addressed in a long-term plan.

AGREEMENT

I. Tier 1: Measures That Have Been Completed To Date

- A. In the mainstem Lemhi River, the Upper Salmon Basin Watershed Project ("Project"), the Idaho Department of Fish and Game ("IDFG"), and cooperating water users have eliminated 17 diversions through consolidation. In the Hayden Creek tributary, these groups have eliminated 3 diversions through consolidation.
- B. Using IDFG's fish screen development shop and NMFS's screening criteria for the last decade, the Project and IDFG have installed new screens or replaced outdated screens for 65 diversions in the mainstem Lemhi River, 7 diversions in Big Springs Creek tributary, and 12 diversions in Hayden Creek tributary. Additionally, the Project and IDFG have installed new screens on 21 pumps in the Lemhi River Basin.
- C. Throughout the Lemhi River Basin, the Project and IDFG have eliminated 19 push-up dams and improved 4 others to allow fish passage.

- D. The Project has installed over 30 miles of fence in the Lemhi River Basin, for two types of projects: (1) riparian grazing systems, which seasonally protect spawning and rearing habitat, and (2) corridor fencing, which provides year-around protection for riparian habitat.
- E. The Project and IDFG have developed passage and rearing habitat for use by resident and anadromous fish by reconnecting Canyon Creek and Pattee Creek tributaries to the Lemhi River and improving access to Agency Creek tributary.
- F. Idaho Department of Environmental Quality ("IDEQ") has developed Total Maximum Daily Loads ("TMDLs") for the Lemhi River Basin.
- G. In June 2000, the Project, IDFG, Idaho Department of Water Resources ("IDWR"), Lemhi Irrigation District and Water District 74 signed a Memorandum of Understanding ("MOU") to provide water flows for passage of anadromous fish in the Lemhi River between the L-6 diversion and the confluence with the Salmon River. Throughout the 2000 irrigation season, the MOU promised to provide for an instream flow of 10 cubic feet per second ("cfs") to aid downstream migration of juvenile fish as well as "fish flushes" of 35 cfs to aid upstream migration of adult fish. The MOU further directed IDFG to carefully monitor water flows and fish movement to determine when water flushes are needed for fish passage in the lower reaches of the Lemhi River. Finally, the MOU embodied a commitment of the Lemhi water users and state resource agencies to establish a long-term agreement to address fish flow management.
- H. In 2001, the Idaho Water Resource Board filed an application for an instream flow water right of 35 cfs in the Lemhi River from the L-6 Diversion to the confluence of the Lemhi River with the Salmon River under Chapter 15, Title 42 of the Idaho Code.
- I. In 2001, the Idaho Water Resource Board appointed a local rental committee to facilitate operation of a water supply bank for the Lemhi River Basin to rent water to maintain flows in the lower Lemhi River.
- J. In 2001, local water users, through rental of water, successfully maintained, in accordance with the 2001 Conservation Agreement, target flows in the Lemhi River from the mouth to one mile below the Leadore Bridge and in Hayden Creek.
- K. In 2001, IDFG inspected seventy-two (72) diversion structures and determined that all structures allowed for adult and juvenile passage during the period of the 2001 Conservation Agreement.
- L. In 2001, IDFG inspected seventy-two (72) screens for compliance with NMFS bypass criteria.
- M. In 2001, the water users and the IDFG coordinated on ramping down water diversions and implemented salvage operations where appropriate.

- N. Dissolved oxygen levels were measured throughout the study period of the 2001 Conservation Agreement.
- O. Temperature data were collected at five sites on the Lemhi River.
- P. In 2001, the local parties and the Bureau of Reclamation began engineering studies necessary to change the points of diversion for approximately 16.5 cfs of water rights from the lower Lemhi River to S-14 on the Salmon River. These studies are expected to be completed in the Spring of 2002.
- Q. In 2001, the remaining unscreened diversion on the East Fork of Hayden Creek was screened.
- R. A structural and biological evaluation of the LBSC 1 diversion structure was completed in 2001.
- S. The L6 headgate was automated to maintain constant flows through the river.
- T. A manager was hired for the Town and Slough canals to regulate diversions in those canals.
- U. IDFG salvaged 648 juvenile and 2 adult chinook salmon. IDFG also salvaged 1,287 rainbow, cutthroat, bull and brook trout. Nongame species salvaged included suckers, sculpin, whitefish and dace.
- V. In 2001, a ramp down procedure was developed for the LHC11 diversion.
- W. One mile of riparian fence was completed on the Lemhi River and approximately one mile of riparian fence was completed on Canyon Creek.
- X. The Project completed the Whitefish ditch structure to provide passage and connection between the Lemhi River and Canyon Creek.

II. Tier 2: Habitat Measures For 2002 and 2003

- A. Established Instream Flows in the Lemhi River and Hayden Creek for the term of the Agreement.
 - 1. The non-Federal parties will maintain at least a 25 cfs average daily flow for 20% of the days between April 15 through June 30 and at least a 35 cfs average daily flow for the remaining days of this period. The ten-year hydrologic record at the L-5 gage shows that the flows below L-6 were 35 cfs or greater more than 80% of the time between April 15th and June 30th. The non-federal parties will be responsible for arranging for assignment of sufficient water to the Lemhi Water Rental Bank to maintain at least a 20 cfs flow in the Lemhi River from the mouth to L-6 during the remainder of the irrigation season. The federal parties shall provide the funds to rent at least 20 cfs for the late summer instream flow.

2. The non-federal parties will maintain at least a 25 cfs average daily flow from one mile below the Leadore Bridge to the L-6 diversion during the irrigation season to be measured at the McFarland Campground.
3. The non-federal parties will maintain a flow of 8 cfs in Hayden Creek.
4. The parties will avoid dropping more than 2 cfs below the target flows noted in paragraphs 1-3.
5. All water rentals will be on a willing lessor basis under state laws and water bank rules.
6. The Bureau of Reclamation will conduct, in conjunction with the local water users, a study to identify potential physical and management solutions to low flow conditions that occur.

B. Other Enhancement Measures

1. The non-federal parties will retain a consultant to assist them in developing a long-term conservation plan consistent with the objectives identified in Tier III. The non-federal parties, the consultant, the State and the federal agencies will meet and mutually agree upon a scope of work. The intent of the parties is to negotiate a long-term conservation plan during the term of this Agreement.
2. The parties will seek to change the points of diversion for approximately 16.5 cfs from the lower Lemhi River to S-14 diversion on the Salmon River, allowing the previously diverted Lemhi River flow to partially satisfy the instream flow created by Idaho Code § 42-1506.
3. Explore the opportunity to restore connectivity to the main-stem Lemhi River for fish populations seasonally or perpetually isolated to tributaries. The following bull trout and cutthroat streams have been identified for possible reconnection:

Hawley Cr. (Upper Salmon Basin Watershed Project)

Bohannon Cr. (IDFG Screen Program)

4. Work with the USFWS during the 2002 field season to identify and pursue additional measures that would enhance habitat primarily for bull trout and other resident fishes.
5. Pursue funding from State, Federal and private sources to complete the experimental design and implement research directed towards understanding fluvial trout movement (bull, cutthroat, and redband/rainbow trout) in the Lemhi and upper Salmon River Basin. This proposed effort, using radio telemetry, would identify primary spawning,

migration, and holding areas for resident fishes in the Lemhi and upper Salmon Basin. Information gathered from this research will guide and help prioritize future habitat enhancement, screening actions, and other recovery measures within the basin.

6. The parties will seek funding and implement the following projects during the term of this Agreement:
 - a. IDFG and the U.S. Bureau of Reclamation will identify and design appropriate diversion structure for L13 and L35A.
 - b. IDFG will pursue final design options for the update of the LBSC 1 diversion.
 - c. The parties will develop and construct alternatives to push-up dams.
7. The parties will seek funding to implement water saving mechanisms in the mainstem Lemhi River below L7, such as conversions from gravity to sprinkler irrigation systems and from surface to groundwater diversion systems, in a manner that will not negatively impact Lemhi River return flows.
8. The Project and the IDFG will pursue the elimination of the L-11 and the L-12 diversion.
9. The Project will pursue installation of two miles of corridor fencing on Lemhi and Big Springs Creek.
10. The Project will continue installation of off stream watering systems for livestock.
11. IDWR and IDFG will draft a written water turn-on and turn-off agreement and ensure water users accomplish the turn-on and turn-off procedures.
12. The parties will meet prior to January 1, 2003 to determine whether the existing near-term measures set forth in paragraphs A. and B. of Tier II are effective and appropriate for implementation in 2003 and whether implementation of other near-term measures is appropriate.
13. IDWR shall ensure that water users below L-6 are diverting in accordance with their entitlements during the irrigation season.
14. The non-federal parties will reset screens prior to the diversion of water into irrigation canals and will leave screens in until diversions are curtailed or until water in the ditches begins to freeze.

C. Planning and Monitoring

1. The parties will implement the Monitoring Plan, attached hereto as Appendix A.
 2. The parties will ensure that all instream structures, such as diversions, road crossings, berms and dams will be designed, constructed and operated so that they are passable by upstream and downstream migrating fish, and screens will be installed, all consistent with the NMFS criteria.
 3. The State will develop with the federal agencies a monitoring plan to determine whether adult salmonids migrate up the Lemhi River from the Salmon River after July 1. IDFG will implement the study and report the findings to the parties annually.
 4. The parties agree to notify NMFS and/or the Fish and Wildlife Service of incidental take of a listed species within 48 hours of discovery of the take.
- D. The flows set forth in this Agreement are based upon the 10 year hydrologic records at L-5. In the event the hydrologic conditions during the term of this Agreement differ materially from the historic record because of events beyond the control of the parties, the parties agree to meet and review the flow provisions of this Agreement.
- E. Any party who believes that a provision of this Agreement is not being met will notify the other parties of the alleged noncompliance. The parties agree to implement a resolution process to address any issues regarding implementation of this Agreement. This requirement shall be satisfied when, upon notification that an issue exists, representatives from each party meet promptly and attempt to resolve the issue.

III. Tier 3: Long Term Conservation Agreement

- A. The parties are negotiating a long-term agreement for the conservation of ESA-listed fish species in the Lemhi River Basin, consistent with the framework set forth below to be completed by December 31, 2003. Measures included in Tier 3 may be completed prior to negotiation of a long-term agreement, should the opportunity arise. The long-term agreement is intended to establish a process for voluntary compliance with the ESA, resulting in appropriate incidental take authorization. Such agreement will address, but not be limited to, the following subjects:
1. Enhancing Instream Flows
 - a. Through the water bank and other mechanisms, the parties will seek to provide sufficient water for flows for appropriate life stages in the Lemhi River Basin without adversely affecting other surface waters that are important for anadromous and resident species.

- b. The parties will identify and implement projects to improve migration, restore connectivity and increase spawning and rearing habitat in the Lemhi River Basin. The projects may include the following:
 - 1. Installation and renovation of fish screens;
 - 2. Construction or replacement of diversion works;
 - 3. Consolidation of diversion works that will enhance flows through stretches of streams that are prone to dewatering or flows insufficient for fish passage;
 - 4. Elimination or modification of upstream and downstream passage obstacles;
 - 5. Conservation easements to reduce water usage, reduce fish loss to diversion, enhance riparian or flood plain values or other purposes; funding will only be used for those projects that will not result in a reduction of the summer flows of the Lemhi River;
 - 6. Negotiation of water sharing and conservation agreements;
 - 7. Seeking legislation to encourage more efficient water diversion practices where such practices will enhance the flow of the Lemhi River.

2. Other Enhancement Measures

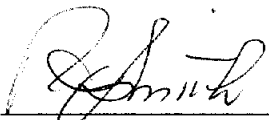
- a. Restore/enhance riparian vegetation.
- b. Install riparian fencing and/or special grazing systems for critical riparian habitat.
- c. Utilize water gaps or off-stream watering to distribute livestock use.
- d. Identify and replace the headgates and diversion structures as needed.
- e. Pursue implementation of TMDLs with Idaho Soil Conservation Commission, IDEQ, and other responsible agencies.
- f. Investigate projects to reestablish more natural stream morphology, such as: connecting streams to their floodplains; re-opening previously closed flood channels; and allowing natural stream-shaping functions to occur where practicable.


3. Planning and Monitoring
 - a. Monitor instream passage effectiveness, including whether negotiated flow targets and habitat improvement measures are achieved.
 - b. Continue ongoing watershed planning.
 - c. Provide funding for adult passage monitoring (perhaps with new technology) in lower Lemhi River.
 - d. Ensure water is being diverted in accordance with Idaho law.
 - e. Sampling regimes and monitoring stations will be designed and maintained to research and validate flow, habitat, and fish survival relationships and the success of protection measures.
- B. The parties will conduct the following analysis to the extent necessary to support development of the long-term agreement:
 1. Hydrological analysis (water quantity and quality, water use, data gaps).
 2. Fish habitat assessment.
 3. Fish passage barrier assessment.
 4. Fish screen and passage assessment.
 5. Instream flow requirements.
 6. Identify and prioritize critical low water areas related to water diversion.
 7. Fish population response.
- C. The parties will develop the following processes to the extent necessary to support development of the long-term agreement:
 1. Schedule and work plan for Lemhi River Basin planning.
 2. Composition and procedures of committee that develops the agreement/plan and technical groups.
 3. Process to allow participation by interest groups.
 4. Dispute resolution mechanisms.

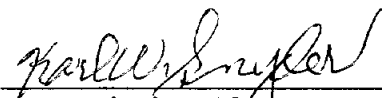
IV. ENFORCEMENT DISCRETION. It is the responsibility of the Service, and the National Oceanic and Atmospheric Administration (“NOAA”) and NMFS to investigate and take appropriate enforcement action with respect to potential violations of the ESA. Based on the commitments described in this memorandum, including the parties’ commitment to secure appropriate authorization for any incidental take of ESA-listed species that may occur, enforcement action is not the preferred course in this instance. However, if water use or any other activity intended to be covered by this memorandum results in a potential “take” of listed species, the Service and NMFS will investigate and document the apparent violation.


The Service and NOAA and NMFS will exercise their enforcement discretion relative to initiating prosecution if measures identified in Tier 2 are implemented as discussed in this Agreement. This exercise of enforcement discretion will apply to the diversion activities of water users exercising otherwise lawful rights within the boundaries of the Lemhi River Basin, and shall not apply to any intentional “take” of ESA-listed species.

SIGNATURES

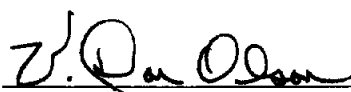

Lemhi Irrigation District

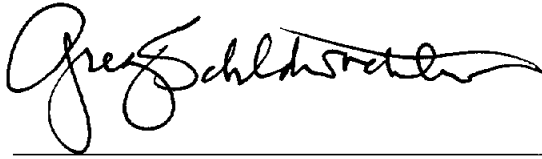

Water District 74


Water District 74Q

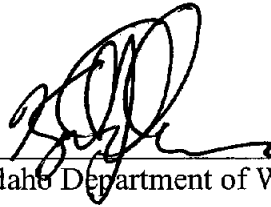

Water District 74Z


Water District 74W

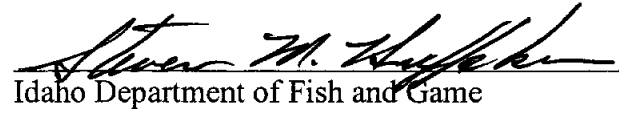

Upper Salmon Basin Watershed Project



Idaho Office of Species Conservation



Idaho Department of Water Resources




Idaho Department of Fish and Game



National Oceanic and Atmospheric
Administration



U.S. Fish and Wildlife Service



National Marine Fisheries Service

Date of last signature: May 15, 2002

2002 Lemhi River Monitoring Plan

Purpose: Monitor the implementation and effectiveness of actions identified in Tier II, and obtain information that will be used in Tier III, of the 2002-2003 Conservation Agreement In The Lemhi River Basin. Sampling regimes and monitoring stations will be designed and maintained to research and validate flow, habitat, and fish passage relationships and the efficacy of existing and proposed protection measures. Information gathered will be used to develop the 2003 monitoring plan, the long-term conservation agreement, and other watershed planning efforts.

Tier II Implementation Monitoring - to determine how frequently flow targets are achieved. Primary responsibility for this phase of monitoring belongs to IDWR.

- I. Determine if flow targets are being met.
 - A. Monitor flows at the L-5 gauge at least daily.
 - B. Measure flows at the following gage stations:
 1. Steel Bridge
 2. McFarland Campground
 3. Hayden Creek
 4. L-1
 5. Barrack's Lane
 6. Lemhi at Lemhi
- II. The parties will ensure that measuring devices are functioning properly on a weekly basis.

Tier II Effectiveness Monitoring - to determine if conservation measures identified in Tier II protect salmonids and their habitat. Responsibility for this phase of the monitoring plan belongs to IDFG, NMFS, USFWS, Water District 74 water master, individual water users, and MWP, as noted in parenthesis.

- I. Water temperature (IDFG).
 - A. Water temperature will be monitored at nine sites throughout the irrigation season using HOBOS. At least 12 measurements will be made daily at regular intervals. The HOBOS will be checked during other monitoring to ensure that they are submerged. Temperature monitoring locations are:
 1. McFarland Campground
 2. Above L-7
 3. Below L-6

4. Above L-3A
5. Below L-3A
6. Above L-3
7. Below L-3
8. In the Lemhi River near the mouth
9. In the Salmon River just downstream from the confluence of the Lemhi and Salmon Rivers.

II. Critical reach mapping (IDFG, NMFS).

- A. Critical reaches below L-6 will be identified by walking the river bed from L-6 to the mouth during Summer 2002, when flows are 20 cfs as measured at the L-5 gauge. If flows do not reach 20 cfs in Summer 2002, then sites will be identified during the lowest flow recorded in Summer 2002.
- B. Critical reaches identified as described in A will be mapped during Summer 2002, when flows are 20 cfs as measured at the L-5 gauge. If flows do not reach 20 cfs in Summer 2002, then sites will be identified during the lowest flow recorded in Summer 2002. Mapping will consist of at least six transects, one at the upstream end of the critical reach, one at the downstream end, and four evenly spaced in between. Elevation and water depth will be measured at least ten points along each transect. Transects will extend to the normal high water elevations on each bank. A Wolman pebble count will be made at each critical reach so resistance coefficient can be calculated.
- C. Water depths will be measured along each transect described in B two times between the initial mapping described in B and the end of the irrigation season. One of the measurements will be taken when flows at the L-5 gauge are at least 35 cfs and one will be taken when flows are at least 50 cfs.

III. Monitoring for stranded salmonids in irrigation ditches (IDFG, IDWR, NMFS, USFWS, Water District 74 water master, Individual water users).

- A. Irrigation ditches will be visually monitored for stranded juvenile salmonids at least daily during ramp down at the end of the irrigation season. Special emphasis will be placed on irrigation ditches identified by 2001 monitoring as having the potential for stranding juvenile salmonids, irrigation ditches in which juvenile salmonids were salvaged above or below screens, and irrigation ditches where mortality of juvenile salmonids was documented in 2001. IDFG fisheries or NMFS personnel will be contacted if stranded fishes are sighted (Attachment 1).

- B. Irrigation ditches turned off for any reason prior to the end of the irrigation season

will be visually monitored for evidence of stranded fishes at least daily during ramp down. The water master should contact IDFG as soon as it is known that any irrigation ditch identified as requiring special emphasis in A, will be turned off. IDFG will be contacted if stranded fishes are sighted.

- C. The L-3 diversion will be visually monitored for presence of adult chinook salmon during the first half of the 2002 irrigation season.
- IV. Adult weir counts - If flows permit, a fish weir and video camera will be installed on July 1, 2002, near the mouth of the Lemhi River and will be maintained through September 1, 2002. IDFG will coordinate with the other parties to maximize availability of labor for weir maintenance (IDFG).
- V. Snorkel surveys - There will be one snorkel survey between July 1 and July 21, 2002, and one between July 22 and August 15, 2002, in pool habitat between the L-6 diversion and the mouth to determine presence / absence of adult chinook salmon (IDFG, NMFS).

Tier III Monitoring - to gather information that will be used in a long-term plan. Responsibility for this phase of monitoring belongs to IDFG, NMFS, USFWS, OSC, Lemhi Water District, BOR (through the BOR MOU). Responsible parties in parenthesis.

- I. IDFG will operate a screw trap in the Lemhi River near Hayden Creek (IDFG).
- II. There will be a PIT tag scanner installed to detect PIT tagged juvenile salmonids moving through the L-6 bypass system. Equipment is not likely to be available until after July 1, 2002 (IDFG).
- III. At least one return flow ditch will be selected for analysis (IDFG, NMFS).
 - A. Evaluate quality of juvenile salmonid side channel habitat in the return flow ditch.
 - 1. A Hankin and Reeves (USFS), or a R1-R4 (USFS) stream habitat survey.
 - 2. Temperature - a HOBO will be placed near the mouth if one is available. If not, measure afternoon air and water temperatures during stream habitat and snorkel surveys.
 - B. A one or two person snorkel survey will be conducted to determine presence / absence / numbers of juvenile salmonids in the return flow ditch.
 - C. Evaluate risks to juvenile salmonids utilizing side channel habitat in the return flow ditch, i.e., entrainment in unscreened later channels, possibility of stranding when irrigation is turned off, etc.

- D. Propose solutions that will minimize risks without measurably decreasing juvenile salmonid side-channel habitat
- E. It is anticipated that side channel habitat will not extend more than 100 meters from the mainstem Lemhi River and sampling will not require more than two days.

IV. Development of Lemhi River water balance model (USBR).

- A. A water balance model for the main stem of the Lemhi River will be developed by USBR in cooperation with IDWR. The model will represent inflow at Leadore and major tributaries and ground water inflows based on USGS estimates and data; locations and capacities of diversions and return flows, irrigated areas, and crop consumptive use obtained from IDWR sources; and will represent diversions and return flows based on watermaster records.
 - 1. The model will be used to demonstrate how the first diversions of the spring runoff can be sequenced to maintain a target flow of 25 cfs or more at the L5 gage during the spring runoff period. Completion of this part is expected by December, 2002.
 - 2. The model can be used to represent streamflow conditions in the mainstem of the Lemhi River between Leadore and the mouth for normal and/or dry water supply years as determined from available historical stream flow records and in accordance with water rights and priorities provided by IDWR. This part can begin in 2003. Completion is dependent on the complexity of the scenario and status of required data.

V. PHABSIM studies

- A. River reaches upstream from L-6 will be evaluated using information developed in IV (A) and other available flow studies to determine which ones are most likely to be flow limited. Reaches in which salmonid populations are most likely to be limited by low flows will be addressed in V (B), and/or in the long term conservation plan.
- B. If resources are available, PHABSIM studies will be initiated on river reaches identified in A (Lemhi Water District, possibly NMFS).

Reporting requirements - to keep all parties informed with respect to progress of monitoring.

- I. Monthly activities reports - Activity reports will be completed and e-mailed to NMFS (Boise), USFWS (Boise), IDFG (Boise), and IDFG (Salmon) monthly. Activity reports will consist of:

- A. List of activities completed and dates completed.
 - B. If expected activities were not completed, a narrative statement describing reasons for failure to complete.
 - C. List of ongoing activities.
 - D. The IDFG biologist will respond to data requests.
- II. Report writing - The draft monitoring report will be completed by December 1, 2002 and be reviewed by the NMFS and USFWS biologist assigned to the Lemhi Agreement and by the IDFG Salmon Region fisheries biologist. The final report will be completed by February 1, 2003.
- III. Representatives from all parties in the Agreement will meet and develop a monitoring plan for the 2003 irrigation season prior to April 1, 2003.