



Model Watershed News

"To Enhance, Protect and Restore Fish Habitat"

NEWS ABOUT RESTORING FISH IN CENTRAL IDAHO

SUMMER 2000

Irrigators Unite on Lemhi River

In the face of criticism and legal threats from National Marine Fisheries Service (NMFS), Irrigation District 74 and the Lemhi Irrigation District have taken a pro-active stance to ensure that the Lemhi River will not dry-up at the L-6 diversion near the 28 Club.

At the end of June, these irrigation districts, Idaho Department of Water Resources (IDWR), Idaho Department of Fish and Game (IDFG), and the Model Watershed Project (MWP), signed a Memorandum of Understanding (MOU) that offers a temporary solution to get us through this low-water year.

This isn't the first time that these irrigation districts have stepped up to the plate. In 1992 the *Irrigators Plan to Improve Fish Passage on the Lemhi River* was adopted. This agreement opened the door for numerous projects that have improved water delivery while sustaining fish migration and enhancing habitat.

The MOU concurs that from July through mid-September, 10 cfs will remain in this section of river channel. These flows come from willing landowners that don't want to see this stretch of river dry.

An extensive monitoring plan has been implemented and the river is observed every day to document flows, monitor fish, and look for any barriers that could impede passage. Weekly status reports are submitted to the Boise office of NMFS and the signatories.

Blair Piippo, IDFG Fisheries Technician, directs the monitoring effort. He is assisted by Marvin Hansen, MWP aide. You can encounter one of these individuals every day on this section of river.



Blair Piippo and David Doolaage place geotech coffer dams

Another person that makes this effort function is the water master of Water District 74, Rick Sager. Each morning he logs on to the United States Geographical Survey's web site at <http://idaho.usgs.gov> to see what the river flows were during the night. His first stop in his rounds is to visit the L-6 diversion and make sure the Obermeyer Dam is functioning properly.

Since the Lemhi River is in regulation and early water rights take priority over later ones, some irrigators are not receiving water. He acknowledges that what he is doing doesn't win any popularity contests, but he does his best to allocate the water throughout the system.

There were two sites identified as possible barriers to fish. These were not irrigation diversions, just natural bars through the river. Allen Bradbury, MWP Project Planner, investigated the possibility of placing temporary water-filled Cofferdams in the river bed to concentrate and direct flows to one bank, thereby decreasing channel width and increasing water depth for fish passage.

With Bradbury's planning and efforts and funding from the Lemhi Soil and Water Conservation District, three of these innovative geo-tech tubes were placed in the river on August 1 and 2. Results were immediate and the possibilities of using these tubes in other areas are unlimited.

Keep in mind that this is only a short-term fix to assist fish passage in this low-water year, but these structures are easily installed and removed and can be stored for use at a later date at other sites.

This MOU does not replace the voluntary agreement signed in 1993 that increases water flows by bypassing a portion of decreed irrigation water during a twelve hour period. If the MWP's monitoring crew and technical team determines that there are fish stranded or unable to proceed through the river system, they may call for a "flush." At that time, the wheels would be put in motion and contacts made to ask signatories of the 1993 agreement to bypass a portion of their irrigation water for a pre-determined twelve hour period.

Is Your Stream Healthy ?

A stream is simply a reflection of a watershed. If the watershed is unhealthy, the stream will be unhealthy as well. Sometimes solving a stream problem can be as simple as a management change in the uplands.

What is affecting your stream: urban runoff, cropland, roads, grazing, or stream diversions?

Is your streamside vegetation thick, diverse, vigorous, and native to this area? Does the water flow out onto the floodplain every couple of years?

Does more than 50% of the streambank length have trees and shrubs to filter pollutants, shade the water, and provide fish habitat?

Is the stream stable with little (less than 10%) or no bank erosion?

If your answers are “yes,” then you probably have a healthy stream – read on to find out how to maintain your stream. Even one “no” answer can indicate an unhealthy stream – read on to find out what you can do to improve your stream.

First, get to know your stream. Familiarize yourself with its combination of characteristics. Take a walk along, or maybe even in, your stream.

Next, assess your stream and streamside area. Find healthy stream reaches and locate historic photos and information. Identify problem areas and list land use needs and objectives. Are they compatible with stream needs?

Prioritize problems to address. Determine which problems can realistically be corrected by your actions, and which problems need the help of your neighbors and community while evaluating a range of treatment alternatives.

Establish your realistic project goals. If you include measurable standards and a workable time frame, you can better gauge your success. For example, you can aim to increase native streambank vegetation by 50 trees and 100 shrubs in two years.

Develop and implement a work plan and determine what permits are needed. If necessary, seek qualified technical assistance from the Natural Resources Conservation Service, Idaho Dept. of Fish

and Game, the Model Watershed or contractors to assist you.

Monitor the restoration at the end of every summer. Take pictures before and after your restoration and share your observations with the public and stream management professionals so we all learn how to manage and restore streams successfully.

Fish need clean, cold water, riffles, and deep pools to meet their food and cover needs at different stages of their lives. The rocks found in riffle areas churn the water, which adds oxygen and carries insects to the fish hiding behind rocks or under overhanging banks. Deep pools provide the coldest, most oxygenated water in the summer and are least likely to freeze in the winter.

Vegetation hanging over the water plus large wood in the stream provides appropriate cover for fish to hide under. It also breaks up the stream flow allowing fish to rest in areas of slower-moving water.

For a healthy stream, consider protecting the corridor and associated wetlands from land use activities to give them a break. This is called “passive restoration.”

Leave large pieces of wood in the stream channel that will not increase flooding. Maintain fences and practice appropriate grazing management. Protect water quality by keeping a wide vegetated buffer next to the stream.

Good luck with your efforts. For further information, contact the Model Watershed Office at 208-756-6322.

“We will always do the rational thing, but only after exhausting all other alternatives.”

John Maynard Keynes

Stream Scenes



Challis High School's Envirothon Team training on the Pahsimeroi River



Allen Bradbury explains functions of aquatic insects to Challis Elementary students



Cinnamon Robinson and Jenny Brower Prepare for Idaho Envirothon competition



Chinook salmon building a redd (nest) on the Lemhi River near Leadore

Monitoring Smolts on The Lemhi River

By Katie Slavin

Idaho Department of Fish and Game screw traps play an important role in monitoring the out-migration of chinook salmon smolts to the ocean. The screw trap in this area is located near the mouth of Hayden Creek, on the Lemhi River. Every day between the months of March and December (ice builds up on the trap, during the winter months so the trap is removed) this site is checked by Fish and Game Personnel.

I had the opportunity to accompany Scott Struhs when he made his daily trip last spring. It was a mild day, but some trips aren't as pleasant. But come rain,

then placed in fresh water that is being aerated with a small pump. It just takes a moment for them to regain their mobility.

On the day that I visited the site, 20 smolts were caught and implanted. There were three fish that had been caught the previous day and already had a tag. A mathematical equation was developed to estimate populations using numbers of fish tagged and fish recaptured. From this equation, they estimate an outmigrant population for the upper Lemhi River. This estimate is also used to determine spawning success.

The fish are then released upstream from the trap. The smolts that had been recaptured are released down-stream from the trap so they will not be captured for a third time.

It takes about 5-12 days for these fish



Checking the trap for smolts

wind, snow, or sun, the four-inch fish held in the box at the trap are netted and implanted with a Passive Integrated Transponder (PIT) tag.

This is done in a small building next to the stream. The fish are first anesthetized and when they become docile are gently caught by hand and a small staple-sized PIT-tag implanted with a # 12 needle just behind the left pectoral fin. They are also measured and this information recorded in a data base. Each tag is unique and identifies an individual fish.



PIT-tagging a smolt

These tags are readable by detectors (similar to a price scanner at a grocery store) at other sites downstream. They are



Struhs releases tagged smolts

to pass through the juvenile collection facility at Lower Granite Dam 400 miles downstream. Approximately 0.01% of our fish that migrate out as smolts will return as adults. In 1998 an estimated 40,000 juvenile chinook left the Lemhi River and hopefully, 40 will return between the years of 2001 and 2002.

Advisory Committee Works for YOU

The 16-member Advisory Committee for the Model Watershed was formed in 1993, just after our office was opened. Members included two people from each watershed, plus representatives from federal and state agencies and major industries.

As our workload and priorities have evolved, the Advisory Committee has been instrumental in giving us direction and guidelines. Although they may only meet two or three times a year, the phone lines are always open, and advise is sought on a regular basis.

If you have concerns or ideas about projects in your watershed, this is an invitation to become involved in the process. As natural attrition has reduced the number of people now active on this committee, new members are welcome.

Advisory Committee Members

- Betty Baker East Fork Landowner
- Doug Baker East Fork Landowner
- Chad Colter Shoshone Bannock Tribes
- Jim Downton Pahsimeroi Landowner
- Trent Jones Nature Conservancy
- Mike Larkin Idaho Fish and Game
- Bob Loucks U of I Extension System
- Bruce L. Mulkey Lemhi Soil Conservation Dist.
- V. Don Olson Lemhi Landowner
- Ted O'Neal Custer Soil Conservation Dist.
- Glenn Seaburg U. S. Forest Service
- Jude Trapani Bureau of Land Management
- Scott Turner Trout Unlimited

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206 Van Dreff, Suite A
Salmon, Idaho 83467
Phone 208-756-6322
FAX 208-756-6376

e-mail: mws@salmoninternet.com
web site: www.modelwatershed.org

Staff

- John Folsom Project Coordinator
- Allen Bradbury Project Planner
- Katie Slavin Office Manager

Coordinated by

Idaho Soil Conservation Commission
Custer Soil & Water Conservation District
Lemhi Soil & Water Conservation District