Methow River Habitat Project

Methow Restoration Council MIDDLE METHOW NEWS

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Habitat Forum Brings River Community Together at the Grange

On September 20, landowners and the general public were able to meet with representatives of local salmon recovery partners working in the Methow Valley including U.S. Geological Survey, Upper Columbia Salmon Recovery Board , Wild Fish Conservancy, and WA Dept Fish and Wildlife and co-hosted by Methow Salmon Recovery Foundation, US Bureau of Reclamation and Yakama Nation Upper Columbia Habitat Project. The event included opening remarks by Okanogan County Commissioner Bud Hover, followed by presentations from project sponsors working in the Middle Methow Reach of the Methow River, from Winthrop to Twisp.

The forum introduced *The Middle Methow Reach Assessment* recently completed by the US Bureau of Reclamation. The study identified potential projects that would benefit endangered and threatened fish and help increase their productivity. As the first of several outreach efforts, the discussion helped shape the next steps in salmon recovery that the partners envision to develop fish habitat improvements along the Middle Methow Reach. The Reach Assessment recommended key actions that include:

- protecting existing high quality habitat,
- adding log and rock features that make the river habitat more complex,
- improving fish access to side channels and wetlands,
- And improving irrigation efficiencies.

During the evening, the partners outlined the process of defining an implementation effort. Reclamation has contracted with the engineering and stream restoration team at Anchor QEA to provide a suite of site specific habitat improvement options for landowner review based on fish recovery goals. The Yakama Nation has contracted with Interfluve for similar services in the reach downstream from Signal Hill Road/ Hwy 20 intersection.

The event provided landowners a chance to meet local representatives of the organizations engaged in the Middle Methow Fish Habitat Project. Presenters were available after the program to address questions and concerns with participants.

Update From The U.S. Geological Survey

Cold is the operative word these days and its no different for fish here in the Methow. Icy temperatures and fewer warm days have reduced fish movement to a minimum. Fish are "exothermic," meaning their body temperature and metabolism is regulated by the water temperature, and these days that means slow movements, less feeding and reduced growth. Winter resident fish include red-band rainbow trout, westslope cutthroat, bulltrout, many whitefish and a few coho that may still be spawning. Adult salmon have come and gone, along with that pesky steelhead chasing after salmon eggs and invertebrate meals. Although the steelhead have left, for the most part, fisherman can be optimistic in that they will return in the spring. Typically the Methow only sees a quarter of the total spring run in the fall. That means three quarters of the steelhead run won't show up here until spring 2011.Contact: Wesley Tibbits, USGS, Columbia River Research Laboratory, 509-997-0640 ext.268

Photo J Goldberg

"In the end we all chose to be part of the solution rather than just complain about the problem. Folks at the grassroots level got together and said "We will take this on." - Okanogan County Commissioner Bud Hover

For more see inside….

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Comments from Bud Hover:

When I came on as a new county commissioner, the local people were concerned about the way the federal government was implementing the Endangered Species Act for salmon. One of the Nation Marine Fisheries Service employees said 'This is a train coming through. You can either get out of the way or get run over by it.' It was a tough deal. One of the things we were fighting for was to have a voice. What I was fighting against was this heavy-handed approach. They tried that approach in the Methow and it didn't work. In the end we all chose to be part of the solution rather than just complain about the problem. Folks at the grassroots level got together and said "We will take this on."

The thing that makes this all work is that we've got really great support. We try to enlist people. We never try to force anybody. I think we've really achieved something that is incredibly gratifying. As a landowner and farmer, and as a county commissioner, I see the effects of what we are achieving. We are taking a partnership approach to deal with a federal mandate and to bring fish back. We are seeing greater fishing opportunities that help our local economy and have been able to demonstrate to the Ag community that we can have healthy rivers and streams and at the same time increase the bottom line profits of our Ag producers.

Groundwater Plays Key Role in Fish Survival

One of the next steps in identifying potential salmon habitat projects in the Middle Methow Habitat Program will be to identify how water moves through subsurface gravels . Groundwater is an important component of fish habitat. In the side channels and along the mainstem, groundwater helps warm pools in the winter and cool them in the summer.

Groundwater seeps off hillslopes and from springs as well as flowing through the deeper riverbed gravels into existing pools, side-channels and along disconnected floodplain areas that may have habitat improvement potential. Determining the depth and amounts of groundwater lets engineers evaluate the options for various habitat projects and project benefits to fish at different seasons and times during their life cycles.

Installation of groundwater monitoring wells to record the water level over several seasons is one method proposed in the Middle Methow Reach. A second method known as pump testing, provides instantaneous information most often related to low flow evaluation.

The monitoring wells are installed using a small drill rig or power auger. After drilling a (4) inch PVC pipe is left in the ground to a depth of 14-16 ft. and then the changing groundwater level inside the pipe can be measured and recorded from high water to low flow.

A pump test is accomplished by excavating a hole 12-16 ft. deep and attempting to pump it dry to determine the rate of groundwater re-charge in that area. After the test is completed, usually a day or two, the hole is refilled and the area returned to it's original condition.

2010	2011			2012		
Fall	**Spring**	**summer**	**fall**	**Spring**	**summer**	**fall**
Public presentation of findings, Engineers contracted, Survey work continues, Reach Assessment complete	Design review and landowner comment	Public meeting & alternative review, 30% design, Landowner Agreements in place	Technical review 60 % design, funding solicitation for 2013 construction	Material staging begins, permit complete	Contractor solicitation	F o

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Large Woody Debris, Gravel and the Magic of Willows

After spring floods, trees and other large woody debris (LWD) lay scattered across the active river channel and floodplain. The larger pieces of debris influence the deposition of sediments and other tree debris. As waters recede, bars and islands are exposed. These sites are colonized by pioneer plants. They represent the first stage in the development of vegetated islands that have the potential to increase in size during subsequent floods.

Islands are also eroded during high flow, particularly by lateral channel erosion, and the materials may be reincorporated into new islands downstream. Over time, these islands and bars become vegetated by easily sprouting willows and cottonwoods. These plants act as ecosystem engineers, because the plant structures themselves alter the environmental conditions, trapping sediment and organic debris.

The dynamics of vegetated islands and bars results from the interaction between the river flows and the dominant plants adapted to the harsh flood and drought conditions of the gravel bars and islands. As stable islands form, conditions change more slowly, cottonwoods form a mature canopy and pine seeds take root forming the source of large wood to feed the river in the future.

These processes may help to maintain an island-braided channel system that supports a high habitat diversity. Management of the river to reduce the supply of LWD is likely to result in a loss of the habitat diversity produced by island dynamics. (Adapted from P.J. Edwards et al, *Wetlands Ecology and Management* Volume 7, Number 3, 141-153.

Creating Many Small Habitats in one River Helps Salmon Thrive.

Trout Unlimited Irrigation Efficiency Program Accomplishment summary…...

Methow Salmon Recovery Foundation and the Yakama Nation will be discussing site specific options and alternatives for landowner consideration . We would like each landowner to have access to as much information about the project options, fish habitat needs and watershed functions as possible. Please contact us with any questions or sugges-

2013			2014			2015
Spring	summer	fall	Spring	summer	fall	
all construction initiated n priority site	Beginning of major project construction,		Construction continues		Construction Phase complete.	
s	Revegetation and project maintenance begins in some areas			Riparain Vegetation Maintenance and Monitoring begin		Adaptive Management and Project Monitoring Phase begins

Landowner Participation Is Key to Salmon Recovery

Upcoming events for landowners include:

- **December 2 010-January 2011:** Fish habitat partners discuss options with landowners in specific areas of the reach, as a variety of alternatives are explored. Survey and data collection continues.
- **January 2011:** Test well installation, pump tests and groundwater monitoring in Middle Methow Reach continue.
- **February 2011:** Public Outreach meeting: Open Question and Answer time with Engineers and Fish biologists. Public scopeing for environmental review process.
- **March 2011:** Design at 30 % for technical and landowner review.

Bulltrout, (*Salvelinus confluentus*) require spawning areas with gravel substrates, a cold water tributary or spring nearby, and overhanging vegetation or other protective cover. They migrate towards preferred spawning grounds in early June, begin spawning in early September, with fry emerging in Mid- March.. Some live in the same small area for a lifetime, Other types of bull Trout move up and down the watershed in the mainstem of the river. A third type moves in to larger waterbodies like Lake Pateros at 2-3 years for better feeding opportunities. These fish mature later and grow larger. Larger fish tend to have more eggs. In a tributary of the Methow River, an 11 inch female had 300 eggs while a 23 inch female had 3,000 eggs!


Bull Trout, Photo-USBR

USBR ▪ P.O. Box 918 ▪ Twisp, WA

Middle Methow Habitat Project News

The latest update on habitat projects and fish status in your neighborhood

METHOW SALMON RECOVERY FOUNDATION

YAKAMA NATION

MRC

Methow River Habitat Project