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November, 2007 Newsletter

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Congratulations to Richard Potenski of Woodland, winner of the October membership meeting \$100 gift certificate door prize

Hatchery Reform:

On November 9th, Officers of Fish First and CCA met with several biologists who participated in the independent Hatchery Scientific Review Group (HSRG) that created objectives for hatchery reform in the state of Washington.

This process was started years ago by Senator Slade Gorton. The torch for reform is now carried by Representative Norm Dicks. The goals for hatchery reform are:

- to help conserve naturally spawning populations
- to support sustainable fisheries

The group made a list of 13 recommendations. At the top of the list was the recommendation that populations of fish spawning in our streams be managed to maximize the number of wild fish spawning with wild fish. The reason that this is at the top of the list is that they believe it is will be the most effective action in restoring naturally spawning populations. They believe that hatchery fish should never be more than 50% of the population on spawning beds and for critical populations never more than 30%. There are many ways to do this. Hatchery fish can be removed from the system. They can be segregated from wild fish in the system. Another potential solution is to use wild brood stock in hatcheries so if the hatchery and wild fish do spawn together, the reproductive success will not be impacted. A recent study on Hood River has shown that raising wild brood stock for one generation in the hatchery does not compromise their reproductive success. Oregon has embraced this philosophy and has been using it successfully for several years.

There was also concern from the group that politicians and special interests are using habitat and hydro issues to mask the more serious issues of hatcheries and harvest. There was great support for selective harvest. Now that Representative Dicks has mandated mass-marking for all hatchery fish, selective harvest is a possibility. BPA has been interested in funding research on selective harvest technology but Washington and Oregon are unwilling. The Colville Tribe, however, is willing. They are currently testing weirs, beach seines and fish wheels. The biologists believe the next step is to actually prove that some of these technologies work.

As the meeting wrapped up, it was noted that many of the hatchery managers do not understand the importance of preserving spawning habitat in the river for wild fish. The group agreed to work with CCA in preparing a government relations agenda.

Cedar Creek Success

Fish First and several landowners met with WDFW to discuss the current status of the Coho run in Cedar Creek. FF has restored significant habitat in this creek, annually seeds it with salmon carcasses and hatches Coho eggs (420,000 in 2007) in remote site incubators (RSI). These eggs are obtained from unclipped coho that return to the hatchery. All RSI eggs are Otolith marked so migrating smolt can be identified as Remote Site Incubator smolt or wild smolt from the gravel. Neither of these categories have any clipped fins.

Cedar Creek has a waterfall and fish ladder at the Grist Mill. Fish migrate through the ladder and directly over the falls. The ratio is dependent on water level and temperature but to date is not accurately known. WDFW has installed a Resistance Board Weir below pigeon springs. Fish passing through the ladder at the Grist Mill are tagged and then at the next trap tagged and un-tagged fish are counted and the ratio is determined. There were a number of issues including sabotage with the weir last year, and as a result for a significant part of the run, the weir was not fishing. Improvements have been made and with some luck, useful data will be gathered next year.

Before release, from the Lewis Hatchery complex, Coded Wire Tagged (CWT), (I included the number of CWT'ed fish from the Lewis Hatchery complex that were released in 2005). Coho that are commercially and sport caught in the ocean and Columbia River as well as in the tributaries are checked for tags and data is reported to WDFW. CWT's are also recovered on the spawning grounds.

Lewis Hatchery Complex Coho Release 2005

<u>Run Timing</u>	<u>Tag Code</u>	<u>Brood Year</u>	<u>Migration Year</u>	<u>External marks</u>	<u># Fish Released</u>
<u>Early</u>	<u>631982</u>	<u>2003</u>	<u>2005</u>	<u>AD clip</u>	<u>68908</u>
<u>Early</u>	<u>631984</u>	<u>2003</u>	<u>2005</u>	<u>Non- AD clip</u>	<u>71255</u>
<u>Late</u>	<u>631983</u>	<u>2003</u>	<u>2005</u>	<u>AD clip</u>	<u>62444</u>
<u>Late</u>	<u>631985</u>	<u>2003</u>	<u>2005</u>	<u>Non-Ad clip</u>	<u>62408</u>

As you can see, the Ad clip group is similar in size to the non- Ad clip group. To date, only small numbers of the Cedar Cr. tagged fish have been caught in the nonselective fisheries. This is due to the timing of the late stock Coho. The lower Columbia Commercial fisheries are at the tail end of the "early" and the front end of the "late" Coho. These fisheries are sampled pretty intensely by ODFW and WDFW.

Approximately 40,700 Coho smolt left Cedar Creek in 2007. The ratio of RSI/wild fish has not been determined for 2007 but in 2006, it was 17%. This number exceeds the smolt generation capacity as modeled by the EDT. WDFW believes that the habitat restoration, nutrient enhancement and egg incubation is having a significant impact on the Cedar Creek Coho run although one cannot separate out the contribution of each action. Wild Coho in Cedar Creek are growing at a rate that matches those in the hatchery indicating excellent nutrient availability and quality habitat. Low summer flows are currently believed to be the limiting factor for the size of the runs.

Currently, only wild steelhead are passed beyond the Grist Mill but both wild and hatchery Coho are allowed. WDFW suggested that a possible next step is to only allow non-Adipose clipped Coho past the Grist Mill.

Issues identified by WDFW on Cedar Creek are the escapement of warm water species like bass and bullheads from ponds near the creek, the effect of ponds on warming the water, and damage to the riparian zone by cattle.

Fish First receives Fish and Wildlife Permits

Gary Loomis says FF received its permits for eggs, fish for net pens and fish carcasses for nutrient enhancement from Washington Dept of Fish and Wildlife on November 15th. With these permits we can continue these programs for the benefit of the Fish he said.

How-To Fact Sheet from Fish First

Nutrient Enhancement: Carcass Analogs

Many Fish First members are familiar with stream nutrient enhancement using carcasses of spawned out salmon. Fewer are familiar with the technology of carcass analogs which are being used for nutrient enhancement in streams. This article presents an overview of nutrient enhancement and then basic information on carcass analogs for nutrient enhancement.

AN OVERVIEW

Historically, large numbers of salmon returned to birthing rivers to spawn. Their eggs and carcasses provide are directly eaten by fish (and invertebrates). Young salmon are also likely indirect beneficiaries of increased primary production and insect abundance associated with salmon carcasses.²

But dwindling salmon returns directly relates to lower numbers of nutrients which causes a vicious cycle of salmon decline.

Coho salmon spawn in late fall, typically October-December. As they die, their decomposing bodies fill the stream, generating a nutrient-rich environment. The eggs they've just laid and fertilized will hatch within 30-90 days, and the newborn fish will eventually rely on the nutrients provided by that decomposition to survive.

To supplement natural nutrients, additional nutrients are manually added to the stream using one of two sources—either actual salmon carcasses, or carcass analogs—pelletized fishmeal.

Analogs are processed fishmeal pasteurized and sterilized to minimize the likelihood of spreading disease. They're designed to dissolve over time when placed in a stream.

The benefits are many. Because they are compact and mess-free, analogs can be easily distributed. A handful of volunteers can carry analogs to remote stream sites in backpacks where a truck full of decomposing salmon carcasses cannot, or they can be dropped by helicopter into more remote locations.

They have a much longer shelf life and don't need to be frozen. They take up much less storage space. Once distributed in a stream, they don't attract animals or create a smell. And they begin to break down almost immediately.

To create analogs, fish carcasses are boiled down in a pressure-cooker and compacted into a rigid thumb-sized pellet—small enough to be trapped by rocks but large enough to not sink beneath substrate, out of reach of fish.

The high temperatures of the “cooking” process destroy harmful microorganisms and diseases. This means any species of fish can be used, as can fish from any watershed, without risk of transporting disease between watersheds.

Therefore, abundant sources of marine-derived nutrients are available, including waste from commercial fishing. This expands the potential for sourcing, and can even be combined with a nuisance fish kill program to remove harmful, non-native fish from a watershed while restoring wild salmon stocks.

Check with fish and wildlife biologists in your region to see if analogs are permitted. They can also point you toward providers. One such provider is Bio Oregon. It's also possible to acquire the equipment needed to manufacture analogs and make them yourself.

METHODS

Analogues can be distributed by hand, or dropped from a helicopter in more remote locations. While they have a much longer shelf life than carcasses, and require less storage space, they can mold when exposed to moisture. For this reason it's probably best to purchase only what you think you'll need.

TIMELINE AND PRACTICES

Analogues, like carcasses, should be distributed at the same time as the spawn, in October-December. If remote incubators (egg boxes) are being used, care should be taken to ensure sufficient analogues distributed in the area of the egg boxes—10 to 20 per week, about 100 yards upstream.

Typically distribution sites should be spaced throughout the spawning areas of a stream to ensure that nutrients are adequately dispersed.

Distribute analogues upstream of target sites rather than downstream. Spread them out so single spots are not overwhelmed.

ADDITIONAL CONCERNS

Analogues are new enough that the technology is evolving, and monitoring and

evaluations still taking place. At this stage, however, they appear promising as a more convenient method of nutrient enhancement.

Preliminary results of a study that used analogs in Yakima River tributaries found that "...the analogs probably reproduced both of the major food pathways that salmon carcasses produce: direct consumption and food chain enhancement. Trout and salmon fed directly on the carcass analogs during the late summer and presumably benefited from the increased invertebrate biomass later in the year."

They've been in use for some time in Canada with good results, though their use is still relatively rare in the United States.

Other How-To Fact Sheets will be in following issues of the Fish First Newsletter.

Lend a Hand: Nutrient Enhancement

Project Manager Dan Balch says there is a need for more hands for nutrient enhancement work. Dan's phone is 360-225-7388. Please volunteer by calling Dan.

Nutrient Enhancement: Every Tuesday at the Lewis River Hatchery beginning between 9:30 and 10 a.m. Anyone interested is welcome. No special skills are required. This effort will go until January 1st.

Gary Loomis Recognized for FF and other work

Fish First founder Gary Loomis was recently recognized by IGFA and in an Oregonian column by writer Bill Monroe. In a November 5th article Gary was recognized as the founder and head cheerleader of both Fish First and CCA in the Pacific Northwest. The work of FF is recognized but as Gary points out in the article, Fish First and similar organizations "can't possibly recover more fish than they (gill netters and other commercial fishermen) can harvest. We have no control over our fisheries right now." CCA with chapters forming in Oregon, Washington and Idaho is seen by Loomis as a single-purpose advocacy group to change that. Fish First was the initiator of CCA in the NW and strongly supports it as the mission of the two organizations is complementary. You can read the entire Oregonian

article on the internet here:

<http://www.oregonlive.com/oregonian/stories/index.ssf?/base/sports/1194233144161630.xml&coll=7>

FF urges all its members to join CCA NW. To join you can get there via the Internet: www.CCAPNW.org Click on the fish at the bottom of the page. No Internet access? Most members carry application forms with them or stop in at G Loomis on downriver road in Woodland at the front desk or write CCA, 6919 Portwest, Suite 100, Houston TX 77024.

FF members know there isn't a harder working person for the fish than Loomis and this fact was recognized recently by the International Game Fish Association IGFA which inducted Gary into the IGFA Hall of Fame October 20th this year. He is the 70th person since the 1800s that has been so honored. Other honorees include Ernest Hemmingway and Zane Grey.

Loomis also is featured in the December issue of Outdoor Life as a recipient of their first annual award for those who have had the greatest impact on hunting and fishing.

Loomis was also one of nine people present October 20th when President Bush signed an executive order making Striped Bass and Redfish Sport Fish and removing them from the commercial fishing category. According to Loomis, six of the nine present were CCA officers including Walter Fondren III Chairman of CCA.

General Membership Meetings 2007-2008

Always on 3rd Thursday 7 p.m.,

Oak Tree Restaurant, Woodland, WA

at Exit 21 off I-5

Meeting Dates:

December 20, 2007 at Woodland Middle School on Park St.

January 17, 2008

February 21, 2008

March 20, 2008

April 17, 2008

May 15, 2008

On the Internet: www.fishfirst.org

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