



Strong Runs

Wild is the Future

Newsletter of the Native Fish Society

Summer 2009

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Wild steelhead decline

by **Bill Bakke**
Executive Director

Steelhead are locally adapted to their home streams as are salmon. They are place-based animals. Understanding this for both the fish and the habitat is the necessary focus of management. Protecting and continuing the ecological relationships of watersheds is needed to have productive, resilient and abundant wild salmonid populations.

Generally, the requirements of conservation are to secure the abundance of spawners to fully utilize the habitat and the habitat diversity to support the life history needs of each species, spanning from adult spawners, egg incubation through smolt in each stream. If these conditions are not functioning, the only result that can be expected is declining abundance and eventual extinction. Decline and extinction is the result of cutting animals off from their relationships to one another and to their habitats.

Our fish management institutions are focused not on productivity of steelhead but on their production. It is the same industrial model used to make and market brown shoes that delivers salmon and even some steelhead to the industrial food chain where they are marketed as a product. The consequences of this kind of management are loss and degradation of biological diversity, habitat function and decline as the fish and their habitats are exploited.

The growing number of ESA-listed wild steelhead stands as testimony for this conclusion. The 150-year declining trend in abundance of all species is another indicator that fish management institutions have it all wrong. As well intended as they might be, all the plans and policies implemented have failed to reverse this trend.

We are faced with the eventual extinction of wild steelhead, but it does not need to happen. Changing the direction of management and reversing the trend in wild steelhead decline is up to each of us, for we are the voice for conservation and protection. This means we go beyond recreation and embrace a commitment for the future of wild



salmonids and rivers. “Wild is the future!” To be effective we must be knowledgeable, organized and effective advocates.

Some of you reading this will say that hatcheries can sustain the fishery, but you would be wrong. Not only are hatcheries a component of the industrial model that has resulted in the present crisis, they have lulled us into thinking that fish come from hatcheries just as our children believe milk comes from Safeway. Hatcheries are sustained by economic and political agreements. When agreements break down the support for continued hatchery production weakens. It is already happening.

We already know that hatcheries are a deficit program, that is, they cost more to produce a fish for harvest than they provide in economic benefit. We know that hatcheries degrade the fitness and reproductive success of wild populations when hatchery fish

spawn naturally with them. We know that harvesting hatchery fish kills too many wild fish, reducing wild spawner abundance.

We know that wild fish are needed to reboot the hatchery to improve survival and cost effectiveness of hatchery fish. We know that hatcheries have been used to mitigate for degraded and lost habitat and that mitigation has not worked. The simple 150-year-old industrial model of stock and kill has contributed substantially to the demise of the wild runs. Not only have we been remarkably successful in breaking the relationships between these animals to one another and their habitats that have been perfected over millions of years, we have embraced an institutional and political path that will only make it worse.

Hatcheries have pacified us into believing that steelhead and salmon fisheries are sustainable.

Photo of the Nehalem River's Liver Pool in Summer. The Nehalem is the largest of Oregon's North Coast rivers, running 120 miles from its mountain sources to Nehalem Bay. The mainstem Nehalem, often referred to as the South Fork, is an important refuge for wild steelhead, coho and chinook salmon and cutthroat trout. The river's native fish runs currently face many threats to recover, and several recent agency actions are hampering restoration efforts. For more information, see page 8.

Photo by Rob Russell



We have been told that hatcheries are a replacement for rivers and for wild fish, and can even be used to recover wild runs. We know this is not true because evaluation has begun to challenge these established long-held and propagated beliefs. As long as we continue to believe in the hatchery solution the industrial model goes unchallenged and we have the pleasure of continuing to finance it. Hatcheries exist on public funding; we are funding a technology that substantially contributes to the ruin of healthy rivers and wild fish. But it does not need to happen. It is not ordained. We can build a different future for ourselves, for healthy productive rivers and wild steelhead and salmon and once again establish the relationships that sustain all of it. It all depends on taking a stand as many have, thankfully, already done.

What we can do:

- Each of us lives in a watershed. Be a good neighbor and treat it with care and respect.
- Become a steward for your favorite water and get others involved.
- Organize and become effective advocates and join with others that have watershed health and wild fish protection as their primary mission.
- Inform yourself and enjoy the rivers where learning and ideas find fertile ground.
- Push back and offer resistance to those who would degrade both streams and their fish populations.
- Donate funds and time to outfits making a difference for watershed and wild fish protection.

Each watershed has a unique character

and native wild fish that are adapted to it. That is the place to become engaged and make a stand, for they are local, sustainable and productive. It is up to each of us.

The Columbia River Example

- Estimated historic run size of wild steelhead in the Columbia Basin: 2,042,000
 - 1938 to 1960 wild steelhead passage at Bonneville Dam: 3,164,269 divided by 23 years = average/year 137,577
 - 1994 to 2008 wild steelhead passage at Bonneville Dam: 1,108,460 divided by 14 years = average year 79,176
 - The average wild steelhead run size difference or decline between the two periods is 58,401
 - The decline during this period (1938 to 2008) = 58%
 - Columbia River wild steelhead are now 42% of the run occurred from 1938 to 1960
 - Wild steelhead were on average only 24% of the total run (hatchery + wild) from 1994 to 2008
 - The estimated historic run size for wild steelhead in the Columbia Basin is 2,042,000 (Scholz et al. 1985)
 - Average wild steelhead run size (1994 to 2008) = 79,176
 - Wild steelhead run size is now just 3.8% of historic abundance
 - Wild steelhead in the Columbia River have declined by 96.2%
- In 2001 the total steelhead run size (hatchery + wild) was 633,464 and this is 1,408,536 fewer total steelhead than the

historic run size or a decline of 69%. The total steelhead run size in 2001 was a record return since 1938 when steelhead were first counted at Bonneville Dam. Since hatcheries are to mitigate for lost steelhead production capacity in the Columbia River basin it is clear that the mitigation has failed to compensate for the decline.

In 2001 the wild steelhead run size was 149,582 fish, the largest run size since wild steelhead counts were started in 1994. From 1938 to 1960 wild steelhead exceeded the 2001 run size six times (range 151,800 to 260,990). This is further information indicating that wild steelhead abundance in the Columbia River Basin has declined.

Wild steelhead in the Columbia basin have declined by 96.2%. This suggests that hatchery steelhead competition due to residualism throughout the basin along with spawning ground interactions make efficient use of existing habitat by wild steelhead less effective. This, combined with blocked and degraded habitat, such as excessive water temperatures, have reduced wild steelhead reproductive success and productivity.

In 2009, the Washington Department of Fish and Wildlife registered concern over the large return of hatchery steelhead to the Grand Ronde River because it represented a risk to wild steelhead productivity in that basin. The Independent Scientific Advisory Board (ISAB 2001) issued a technical paper that made recommendations for dealing with excess hatchery salmon and steelhead returning to the Columbia River Basin. Their concern was that the large return of hatchery salmonids represented a risk to the wild salmonids in the basin. There is evidence based on genetic evaluation and comparison of hatchery run size to wild steelhead run size in the Snake that hatchery fish are replacing wild steelhead.

In 2008, the Native Fish Society in cooperation with ODFW constructed hatchery fish exclusion weirs on two spawning tributaries of the Deschutes River to prevent hatchery steelhead from spawning in those tributaries.

Stray hatchery steelhead in the Deschutes and other rivers with threatened wild steelhead populations reduce the reproductive fitness of wild steelhead and caused wild steelhead spawning success to decline from cross-breeding between hatchery and wild fish, affecting genetic integrity of these locally adapted populations of wild steelhead.

See Steelhead, Page 15

Bates Park: Fish passage and watershed health before local recreational interests

Oregon Parks and Rec. should remove Bates Dam on Middle Fork John Day's Bridge Creek

by **Jim Myron**
John Day Steward



Photo courtesy Oregon Parks and Recreation

The Oregon Parks and Recreation Department has begun the transition from being primarily an outdoor recreation provider to becoming a recognized leader in the protection and restoration of Oregon's natural, cultural and historic resources. This change has been reflected in the recent acquisition of properties at Wallowa Lake, Beaver Creek, Eight Dollar Mountain, Cougar Valley and Bates Pond. All of these properties were acquired primarily for the protection of their natural and cultural resources.

The crown jewel of all of these new land acquisitions will be the upcoming purchase of the Murtha Ranch on the lower John Day River. That acquisition will test the abilities of the agency in ways not yet contemplated.

The challenge ahead for the agency and the Oregon Parks and Recreation Commission is to develop management plans for these properties that focus on the protection and restoration of the natural and cultural resources of these lands while providing for an acceptable level of recreational use. Many of the decisions ahead will not be easy ones and will require strong leadership and direction from the Commission to carry out.

The Commission currently faces one such difficult decision at Bates Park. Bates Dam and the pond behind it has historically been a barrier to migrating native fish in Bridge Creek. When the dam was built in 1946, it was constructed illegally without a water right and in violation of state law requiring fish passage at artificial barriers. Even though the public paid for a fish ladder to be installed in early 2001, concerns remain about whether fish are migrating up and down the system successfully without significant mortality.

The release of stored water from the pond increases the downstream temperature of Bridge Creek by several degrees in a river system that already violates state water temperature standards. The passage problems coupled with the water temperature violations may be causing the "take" of federally listed steelhead in Bridge Creek.

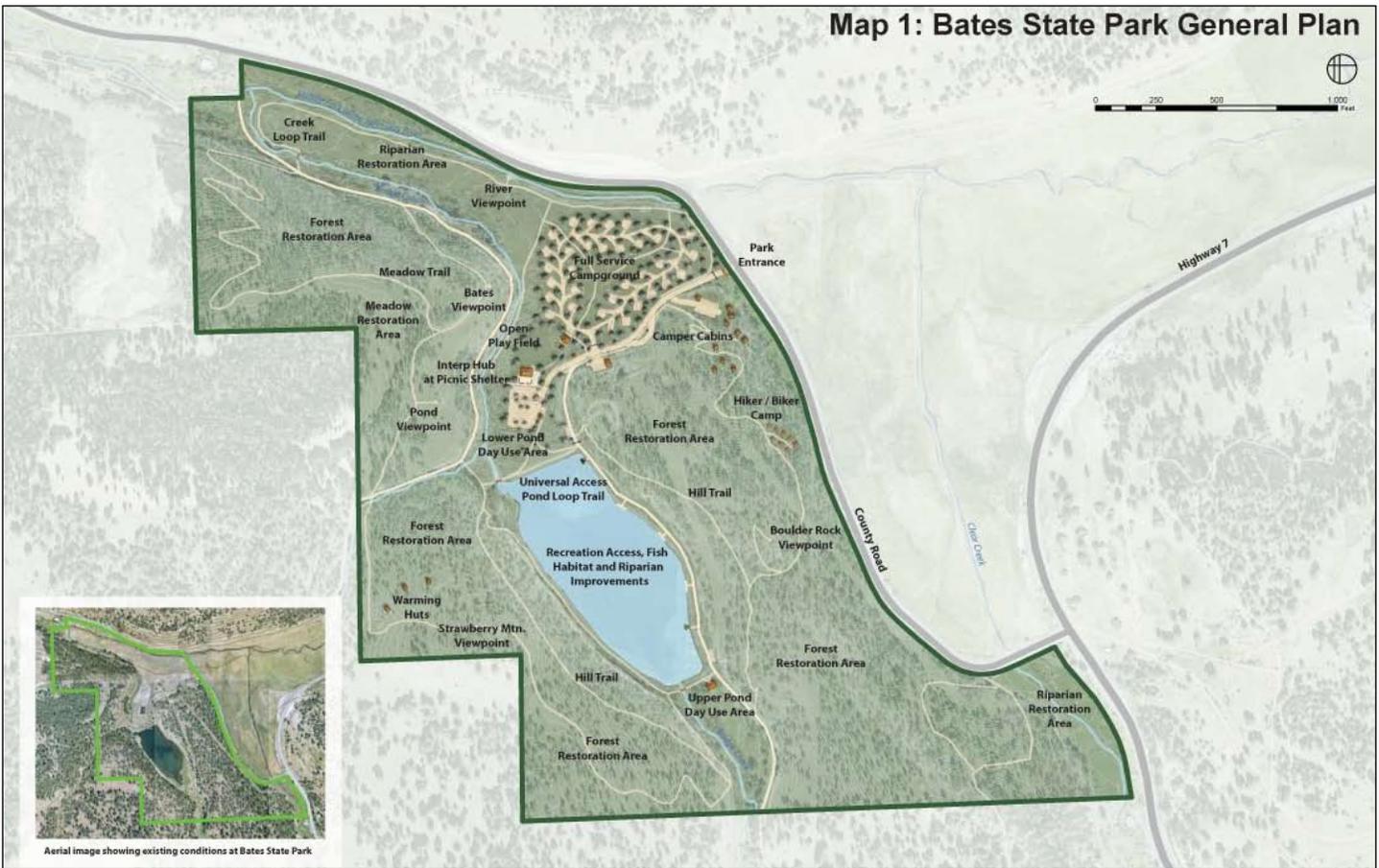
Bates Pond on the Middle Fork John Day's Bridge Creek was purchased by Oregon Parks and Recreation, which developed a draft management plan for Bates Park that places more emphasis on recreation than it does on protection and restoration of native fish. NFS is currently working with the department and its commission to ensure the management plan restores the natural function of the stream.

OPRD has the opportunity to restore currently degraded habitat along the Middle Fork of the John Day River, which flows through the northern portion of the property. When the Bates Mill was built, a dam was constructed on lower Bridge Creek in order to create a log pond for the mill. The dam was built without any consideration for the needs of migrating fish and has blocked fish access to several miles of quality habitat for many decades.

After many years of effort, the public ended up paying for a fish ladder at the dam, but serious consideration was never given to the benefits that the fish would receive if the dam were removed. NFS would like to see a commitment from OPRD to give dam removal the serious consideration it deserves by contracting for a study of the dam that would compare the benefits of dam removal to the continued operation of the fish ladder.

Restoring the natural function and meander of the stream and allowing the native riparian vegetation to recover will not only enhance the public benefits of the park but will also support the recovery of wild salmon, steelhead and bull trout in this area of the river. This work should be accomplished in coordination and cooperation with the upstream and downstream landowners, including the Confederated Tribes of the Warm Springs Indian Reservation, who have already begun restoration activities on their lands.

The primary goal of the Bates Park Master Plan must be to restore lower Bridge Creek to a healthy, functioning stream again while allowing for some public access and use. Habitat and fish passage improvements on lower Bridge Creek through state park lands will be reflected in improved watershed condition and increased fish



Graphic courtesy Oregon Parks and Recreation

Bates Park is in the Middle Fork John Day watershed, which has seen a large amount of fish restoration efforts conducted by agencies, tribes and the public. NFS and the Warm Springs Tribes wrote comments critical of the Bates Park Management Plan as it is written now.

abundance throughout the entire Bridge Creek system.

The current draft of the Bates Park Master Plan fails to adequately address the health of Bridge Creek and its fish and wildlife resources. The plan was written from the past historic perspective of the agency as a recreation provider and not from its evolving role as a natural resource manager. That plan spells out clearly that one of the primary goals for the future management of the park is to retain the dam and pond “due to its strong cultural associations with the former Bates residents and local community and its importance for the setting.”

On the Middle Fork John Day there has been a tremendous amount of effort by many different agencies, tribes and groups to restore the watershed; however, the political will of the local community has been given more consideration than concerns from agencies, tribes and the public about the protection and restoration of federally-listed wild fish in the river.

“OWEB has invested nearly \$6 million in grants in Grant County over the past 10 years. In the Upper Middle Fork John Day, OWEB and other partners are supporting an Intensively Monitored Watershed (IMW) to monitor the results of extensive restoration work,” said Thomas Byler, executive director, Oregon Watershed Enhancement Board, taken from comments to the OPRD. “Bates State Park is located directly in the IMW area and has the potential to influence the many projects designed to improve natural resource conditions within the area, particularly downstream.”

Developing the future management plan for Bates Park can be a turning point as the agency continues evolving into being a credible manager of Oregon’s natural and cultural heritage. The Commission’s role in this process is to provide the vision and leadership

necessary to transition the agency to this new way of doing business. How the Commission deals with the plan for Bates Park will help to determine the agency’s potential as well as respect as a natural resource management agency.

The Commission adopted the master plan for Bates State Park at their meeting Sept. 17 in Enterprise. While not supporting the immediate removal of Bates Dam and Pond, the Commission did approve further study of the issue, which could lead to a final decision on the matter at a later date.

The plan will now be the subject of an administrative rule amendment process by OPRD as well as a land use planning proposal to the Grant County Court for their approval of the planned developments

The Native Fish Society is seeking the necessary funding to complete a comprehensive review of the benefits of dam removal compared to OPRD’s approach of saving the dam and attempting to mitigate for the damage it is doing. NFS remains hopeful that, once all of the facts are known, it will be clear to the Commission and to the Department that the best course of action, now that this property is owned by the public, is to drain the pond, remove the dam and begin the restoration of lower Bridge Creek to a healthy functioning system once again.

“Right now fish do not have unrestricted access to the Bridge Creek watershed,” said Bill Bakke, Native Fish Society executive director. “Removing Bates Pond will improve water quality and open up all of Bridge Creek to steelhead spawning. Without removing the dam and pond, the water quality and fish passage issues will remain unresolved.”

Steward Report

South Umpqua

by Stan Petrowski
South Umpqua River Steward

*I refuse to let my
home waters be a
sacrifice river*



The South Umpqua River is a temperature sensitive river of extremes. At once it is a river of untamed wilderness at its utmost upper reaches and the epitome of domestication as it merges down river with the main stem of the Umpqua Watershed Basin near Roseburg, Ore. United with the Umpqua River it is the longest stretch of river on the West Coast without the impediment of a dam. From the confluence of the North Fork of the the Umpqua River to its remote origins located in the High Cascades of Umpqua National Forest, the South Umpqua River is estimated to be 115 miles long. From the Pacific Ocean to the head waters of Black Rock Creek and Castle Rock Creek near Fish Mountain, 228 miles is traversed.

1.2 million acres of land, made up of 13 fifth field watersheds, feeds over 1,000 miles

of the South Umpqua basin's anadromous salmonid spawning and rearing habitat streams. Hundreds more miles of instream habitat that comprise the river system are occupied by fluvial and resident trout. Although this river's extensive reach spans several unique geological and ecological zones, 39 to 60 inches of rain swell the river each winter. The precipitation of the winter months morphs even the smallest streams feeding the main stem into raging torrents. The summer months, on the other hand, expose long spans of ancient and worn volcanic bedrock because of low river flows. The river lacks a significant Cascade Lake discharge, so temperature extremes due to low flows of summer are another major fish endangering concern.

From ancient times the aboriginal peoples of the South Umpqua Basin depended extensively upon the abundant gift economy of the south Umpqua River. Large year-around villages were sustained by the river's varied aquatic species and fish populations.

So opulent were the resources of the South Umpqua region that it was one of the first to be ruthlessly stripped of its natural and ecological treasures. Large tracts of land were settled and developed. First to be taken were the verdant forests of the river's alluvial flood planes including the desperately needed riparian vegetation that provided the river with cooling shade.

Even up until the late 1980s riparian forests were mined of their large premium quality ancient trees. Both agricultural and logging practices were unsustainable. The quintessential ecological rhythms that derived their aquatic heartbeat from the rich ebb and flow of the South Umpqua River have been fundamentally maligned. Management regimes destabilized a significant majority of the riparian areas feeding the river.



Photo by Amy Rusk

Stan Petrowski, president of the local watershed council and landowner partnership, removes a fish barrier in Elk Creek. These South Umpqua groups are working with beavers to restore flow in several of the drainage's tributaries.

See **South Umpqua**, Page 13

Coming Soon!

An NFS film event
In association with
Jahtrout and Patagonia

WHERE HOPE RESIDES

Directed by Jason Sutton

Produced by Boots Allen

Featuring Lani Waller, Bob Clay and
many more.

Meet the film creators at the showings!

"Where Hope Resides" examines the present state of the fishery on the Skeena River and the many questions it faces. From the perspective of First Nations, commercial, outfitter, environmental, and government interests, the film examines the socioeconomic impact of the declining fish stocks. Presenting the Skeena River as, hopefully, an inspiration and a model of how rivers, fish, and people can co-exist.

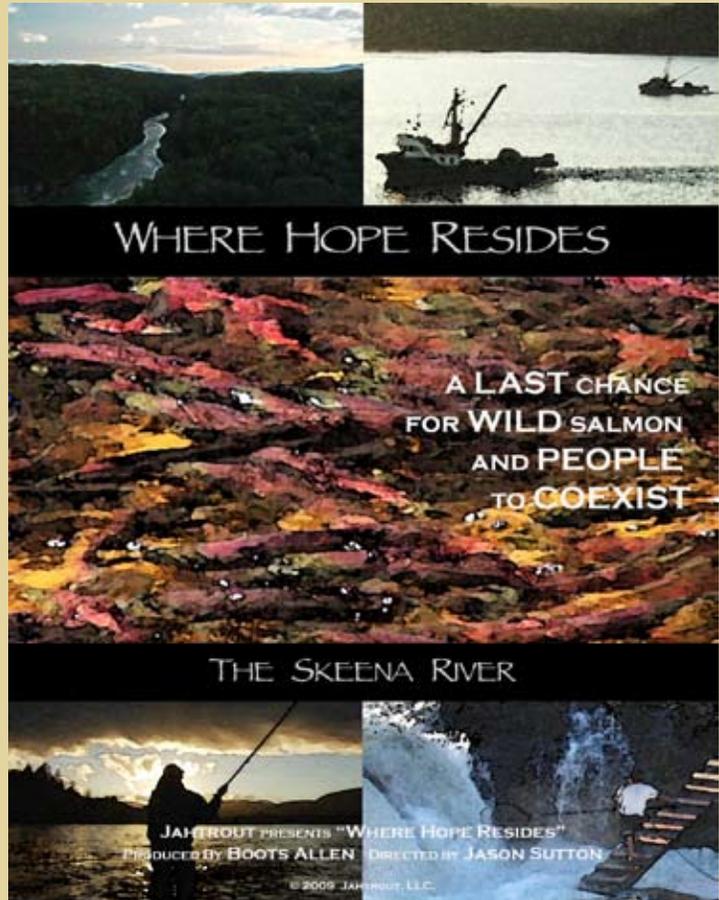
SHOWINGS

Nov. 9 at 6:30 p.m., St. Francis McMenamins, 700 NW Bond. St, Bend, OR.
Sponsored by Native Fish Society and Fly & Field Outfitters

Nov. 10 at 6:30 p.m., Oregon Sierra Club, 1821 SE Ankeny St., Portland, OR. Sponsored by NFS and Oregon Sierra Club

Nov. 12 at 6:30 p.m., David Minor Theater, 180 E. 5th Ave. , Eugene, OR. Sponsored by NFS, The Caddis Fly Shop, and McKenzie-Upper Willamette Trout Unlimited Chapter

Nov. 15 at 6:30 p.m., Ashland Community Center, 59 Winburn Way, Ashland, OR. Sponsored NFS and The Ashland Fly Shop



Check out the trailer at www.wherhoperesidesmovie.com

Nehalem River

A Stewards' view of agency actions that could impede wild fish recovery

by **Russell Bassett**
River Steward Coordinator

The Nehalem River is beloved by many fishermen for its relatively strong runs of wild salmon and steelhead, and while there is a hatchery on the N. Fork Nehalem, the entire mainstem or South Fork is currently managed for wild fish production.

The Nehalem's wild fish runs are under a lot of pressure from warming temperatures, unfavorable ocean conditions, and loss of habitat, among others. Rather than making conditions more favorable for wild fish restoration, Oregon's agencies are actually making recovery more difficult by ramping up timber production, opening up new harvest opportunities, and exploring new hatchery programs.

One can view the Nehalem as a microcosm of the problems faced by wild salmonids in Oregon, and the failure of regulatory agencies to overcome those problems. This article outlines some of those issues, and showcases NFS Stewards' efforts to protect and restore Nehalem wild fish runs.

Timber harvest

The Nehalem is nourished by the Tillamook and Clatsop State Forests. Much of the river, including its two main tributaries, the N. Fork and Salmonberry rivers, flow through state-regulated forest land. Unfortunately for the Nehalem and the other watersheds in these forests, the State of Oregon is currently in the process of changing its Forest Management Plan to place more emphasis on timber production than the environmental and recreational benefits provided by forests. And wild, native salmonids will suffer for it.

The Oregon Board of Forestry (BOF) voted on June 3 to increase timber harvest in state forests from 50 to 70 percent. They again voted on Sept. 9 to fast track those changes to their own Forest Management Plan (FMP) and are currently in the process of changing the definition of Greatest Permanent Value (GPV) to make timber harvest the top priority.

The BOF, which has controlling timber interests, is rejecting its own mission and vision in favor of increased degradation of state-owned forests and watersheds.

"It is the Mission of the Oregon Board of Forestry to... lead Oregon in implementing policies and programs that promote environmentally, economically, and socially sustainable management of Oregon's 28 million acres of public and private forests. To achieve our mission, it is the Vision of the Board of Forestry that Oregon will have ... healthy forests providing a sustainable flow of environmental, economic, and social outputs and benefits; public



Nehalem River photo by Rob Russell

and private landowners willingly making investments to create healthy forests ... citizens who understand, accept, and support sustainable forestry."

In writing at least, sustainability and healthy forests are major priorities and values of the BOF, but in reality, the BOF has made timber harvest its top priority and value.

Covering more than 500,000 square miles on Oregon's North Coast, the Clatsop and Tillamook Forests are still recovering from unsustainable logging practices and massive logging-caused fires that occurred in the mid-20th Century, and several watersheds in these forests have recently lost whole year classes of fish due to landslides caused by timber-cutting.

"There has been considerable habitat loss due to siltation from slides, particularly in the Salmonberry, South Fork of the Kilchis, and North Fork of the Wilson," said Rob Russell, NFS Nehalem River Steward. "In all those cases, there has been significant siltation and bedload shift that has resulted in the wiping out of spawning for a given season or multiple seasons."

NFS Salmonberry River Stewards Ian Fergusson and Joyce Sherman have documented the damage to the Salmonberry caused by timber harvest and other land use practices.

"The 2007 storm caused tremendous damage to the river," Fergusson said. "Logging roads on steep headwalls failed, sending massive debris torrents down key tributaries, stripping them of riparian vegetation for up to two miles. Portions were scoured to bedrock. Stream channels were simplified. The mainstem suffered straightening of the channel, deep scouring, and loss of deep pools. The spawning gravel is filled with fine sediment that will persist for years. Summer water temperatures have increased. The river can heal, if nature is allowed to run its course, but the greatest challenge now facing the Salmonberry is land use: specifically, timber harvest. The watershed is nearly all forestland, a mix of private industrial timberland and Tillamook State Forest. The trees that grew up after



Photo by Joyce Sherman

Logging-caused landslides that occurred during the 2007 flood severely degraded the Salmonberry River, an important wild steelhead spawning tributary of the Nehalem.

the Tillamook Burn are now being harvested. Harvest and road construction have increased dramatically in the last decade. The pressure on the watershed will only increase.”

Exacerbating the forestland management-related problems of the Salmonberry was the presence of the Port of Tillamook Bay Railroad. The railroad grade fill constricted the natural channel, greatly increased the erosive power of the river and contributed much of fine sediment that silted spawning beds and filled in pools.

The Board’s own Forest Management Plan, which was adopted in 2001, allows for the “sustainable” harvest of up to 140-150 million board feet of timber per year. In reality, harvest rates from 2002 to 2008 have bounced between 175 and 225 million board feet. The Board has rejected its own sustainability guideline in favor of a non-sustainable focus on timber harvest, and is now trying to change the FMP and the definition of Greatest Permanent Value to complement its desire to ramp up timber production.

“I consider that decision a clear indication that the state forester and the board are unfit stewards of our forests,” Russell said. “They have gone back on the promise of Greatest Permanent Value that places equal weight on environmental, social and economic benefits of forests. They are working with the timber industry to redefine what GPV is. We need stewards on the Board of Forestry rather than people who want to swing the pendulum back to the Stone Age. It has taken us many years of effort to get to a place where the state protects clean water and wildlife and other uses of forest rather than timber harvest, and now we are heading back the other direction, which is unconscionable and goes against what Oregonians want.”

Sustainability doesn’t just apply to the number of trees cut or not cut. It’s not just an equation of one tree in, one tree out. Sustainability is a much broader concept that also applies to sustaining the many other values associated with forests, such as salmon and steelhead runs, recreation, watershed health, and clean water. The board’s own scientific review of the current direction to the Oregon Department of Forestry to increase clear-cutting in state forests said this revision would result in a low probability of enhancing watershed and hydrological function.

The BOF could lead Oregon in a direction that results in sustainable timber harvest, recreation, and watershed health, but the board has moved farther away from sustainability and healthy forests, and made salmon anchor habitats less likely to be permanent anytime before new board appointments.

NFS has joined with a coalition of fishing and conservation groups that include the Sierra Club, Wild Salmon Center, Northwest Steelheaders, and the Northwest Guides and Anglers Association, among others, in an attempt to try and stop this latest effort by the state to ramp up timber production. Crag Law Center filed a petition of reconsideration on our behalf against the Board of Forestry’s June 3rd decision to increase clear-cutting. The petition states that the board is in violation of their obligation under Oregon Administrative Rule to enhance watershed function. So far the board has not responded to our petition, and we are prepared to take next steps as needed. The Nehalem and the many other watersheds that flow through state lands deserve nothing less.

“If we had mandatory buffer zones that are equal to that in federal forests, the rivers of the Tillamook and Clatsop forests could repair themselves very fast,” said Russell, who has guided on these rivers for decades. “Until our state is held to the same standards as federal, these lands are just being thrown to the wolves. If you look at the vast majority of state-owned timber land in the lower 48 states, there are representative areas that are protected so our children and grandchildren can at least have some pieces left, but if you look at the northwest corner of Oregon there is no protection, no preservation, no valuable areas that are being protected. We now have clear maps of what critical areas of habitat need to be protected, and none of these are protected. If you are an Oregonian who values salmon and steelhead, this should make you angry enough to do something about it.”

The 2004 comments to the Oregon Board of Forestry of Michael Gearheard of the Environmental Protection Agency clearly outline the problems associated with Oregon forest practices. These comments were made even before the BOF decided to ramp up timber production.

“Studies conducted in Oregon of current forest practices indicate that existing forestry rule best management practices do not consistently meet water quality standards or fully provide riparian functions important to water quality and fish,” Gearheard said. “EPA has also independently assessed the Oregon Department of Forestry’s Shade Study data, TMDLs, and the broader body of science related to forestry in the Pacific Northwest and concluded that water quality is not fully protected under Oregon’s existing forest practices. It is our position that protecting water quality and meeting salmon recovery goals on ... forest lands in Oregon will require changes to State Forest Practices.

Wild coho harvest and ESA status review

Oregon Coastal Natural Coho (OCN) are having a relatively good run year, enough so that ODFW drew up a Fishery Management and Evaluation Plan to allow the limited direct harvest of OCN in four coastal rivers, including the Nehalem.

NFS adamantly opposed this harvest, writing several comments to both ODFW and National Marine Fisheries Service explaining why a harvest should not take place on these Endangered Species Act-listed fish. Despite our efforts, NMFS agreed to the harvest, which began on Sept. 1.

“Prudent management requires extreme caution and conservative assumptions,” Fergusson said. “The over-arching principle should be to take actions that are likely to contribute to recovery of the ESU, and avoid actions that might hamper recovery.”

NFS has documented evidence that ODFW informed the public as early as Aug. 27 that the fishery was approved, even though NMFS did not sign the documentation to give ESA coverage to the fishery until the day the fishery opened.

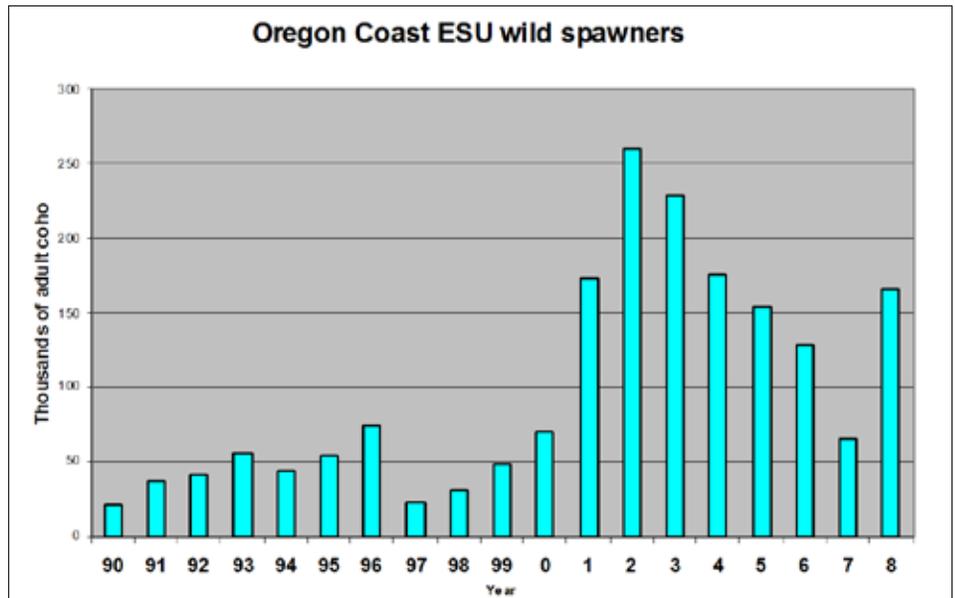
“This is illegal nine ways to Sunday,” said Kaitlin Lovell, NFS board member and lawyer. “It’s pre-decisional, arbitrary and capricious, far from best available science, never mind irresponsibly leaving each and every one of those fisherman catching a wild coho liable for direct take under the ESA which, clearly, NOAA won’t enforce.”

In addition, NFS believes NMFS gave backroom approval to ODFW for the fishery. At the June 5 ODFW Commission meeting the agency staff rolled out their proposal to conduct a kill fishery on ESA-listed coastal coho salmon. Two people attending that meeting said staff suggested they would get ESA clearance from NOAA Fisheries to conduct the fishery. This was later confirmed in conversation with ODFW staff.

“In an e-mail from the NMFS regional administrator, I was told that NMFS doesn’t publish proposals in the Federal Register that are not within possibility,” said Bill Bakke, NFS executive director. “This approach is suspect because it presumes a conclusion, leaving the burden of proof for the public to convince NMFS to not approve a proposal. ODFW staff presented their proposal for commission approval prior to a NMFS notice to the public in the Federal Register, which occurred on June 17. So there is also a timing problem.”

Included in the many concerns NFS has with this direct fishery an ESA-listed OCN (see Spring 2009 Strong Runs for more detailed info), is that this fishery will likely adversely affect Nehalem fall chinook.

“A few anglers, myself included, argued at the ODFW Commission meeting that the potential impacts of the coho fishery on fall chinook escapement were too great to risk,” said Russell. “Even if all 2,000 kings spawned successfully, they could not adequately seed the gravel of a 120-mile-long river with over 100 tributaries and documented spawning activity from reach-of-tide to the headwaters. The department openly denied any risk to chinook, while at the very same time admitting they had no idea what angling mortality might be for kings in the coho fishery. This led the Commission to open and expand the Nehalem coho fishery. So not only are coho at risk, but the severely depressed chinook run is certain to suffer even more under these



Graph from ODFW Coastal Coho FMEP

A recent resurgence of Oregon Coastal Natural Coho occurred in large part due to a reduction in harvest and hatchery smolt releases. ODFW saw this resurgence as an opportunity to open a direct harvest on these ESA-listed salmon. The limited fishery opened on Sept. 1, several hours before the Natural Marine Fisheries document granting ESA clearance was signed.

misguided regulations. All in the name of preserving opportunity over conservation of the North Coast’s greatest wild chinook population.”

NFS is looking into what next steps to take and plans to meet with NMFS to discuss the fishery.

Following right on the heels of the new OCN harvest is the ESA-status review of this population. NFS wrote comments to NMFS requesting the fish remain listed, and mid-Oregon Coast Steward Paul Engelmeyer and presented to the Biological Review Team on Sept. 14 in Corvallis.

The new in-river harvest on OCN and the increase to timber production on state lands, are new threats to OCN that coupled with the current threats make de-listing inappropriate and potentially dangerous to OCN recovery.

“The Native Fish Society has no knowledge of credible information that would warrant a change in the conservation status of Oregon Coast Coho from threatened under the federal Endangered Species Act,” said Engelmeyer. “In fact, we believe there is significant information that indicates some management measures on agricultural as well as Oregon state forestlands remain inadequate and fail to protect water quality and habitat conditions essential for coho. Because forest practices have such a direct and important affect on water quality and salmonid spawning and rearing habitat, forest practice rules must play significant role in the recovery of our salmonid species.”

Fall chinook closure and possible artificial supplementation

Fall chinook escapement for the Nehalem River this year is expected to be only 2,100 fish, only a third of the target and just a fraction of the recent peak of more than 20,000 in 2002. ODFW fish biologists have acknowledged that the run could even be half of what is expected. Due to the low numbers of forecasted returners, ODFW closed the Nehalem fall chinook fishery, which has created a small but vocal backlash by the local public.

Oregon Sen. Betsy Johnson, acting on calls from her constituents, encouraged ODFW to hold a public meeting to discuss the closure, and about 100 people attended the July meeting in Manzanita, including many fishermen and businessmen who were angered by the closure.

“The group blamed cormorants, seals, an overpopulation of chinook-eating cutthroat trout, guides, lack of hatch boxes and hatchery production, and ODFW for not preventing the decline and for lack of any warning that these restrictive measures were planned,” said NFS Lower Columbia Tributaries Steward Walt Weber, who attended the meeting. “Sen. Johnson was particularly focused on ODFW initiating timely contact to establish a hatchbox program.”

In response to the local public outcry, NFS sent the following letter to ODFW N.

Coast District staff, ODFW home office leadership and Sen. Johnson.

The Native Fish Society would like to thank you for closing the fall chinook fishery on the Nehalem River. With escapement expected to be around 2,000 fish, this was the right call.

Based on the comments at the public meeting held in Manzanita, we understand that you have faced a strong local outcry against the closure and want you to know that there are also many of us who support you in this closure. While Manzanita is a local community near the Nehalem River, the Nehalem is a river of statewide value and importance. It would be inappropriate for ODFW to craft a chinook rebuilding plan based solely on the input of local interests and leave out others that also have a concern for this river and its fishery.

We urge you to not participate in any "band-aid" fishery fixes. Killing or hazing cormorants, sea lions and other wildlife are not appropriate answers to fish conservation/fishery questions. Killing wild cutthroat trout as a means to improve the salmon fishery is ridiculous and deplorable. Opening a directed kill fishery on remnant populations of ESA-listed fish such as wild coho is also not a conservation solution. Reducing kill fisheries is an important ingredient of successful salmonid recovery.

In addition, we urge you not to adopt a new hatchery program to recover the fishery. If the costs associated with a new hatchery program were put into habitat and angler education, you could likely expand the fishery with wild fish. One need only look at the increase in wild spawning coho to see the improvements to wild fish runs that can be achieved by reducing harvest and hatchery releases. Those reductions along with improved ocean conditions have led to this year's increase of Oregon Coastal Natural Coho.

Hatchery production, hatchboxes or streamside incubators are not the answer, and we urge you not to move to this type of program.

Further angling restrictions, habitat improvements and protections, and angler education should be undertaken before moving to hatchery supplementation.

"I view the coho fishery as a desperate attempt to make the emergency chinook closures and restrictions up and down the Oregon Coast more palatable to the angling public," said Weber, a former ODFW N. Coast district biologist.

ODFW North Coast staff held another

meeting on Sept. 10 to discuss, among other things, the possibility of STEP hatchbox program on the Nehalem.

"Artificial supplementation for Nehalem fall chinook is not going to happen. Over my dead body will that happen," said Russell. "Supplementation will not solve any problems, but it does create the risk of problems that would lead to further degradation of the run. We know hatchery programs degrade wild runs, and until we know how to keep that from happening, our fish managers should be prohibited from having hatchery programs where there are healthy wild runs. Anything else, especially in the name of recreation, frankly, I think, is illegal under the Endangered Species Act."

Capture and mark study

Because of its relatively strong wild runs, the Nehalem, like the Siletz, is a study river of the Pacific Salmon Commission, who recently funded a capture and mark study of Nehalem fall chinook.

NFS has several concerns with this study. Most notably, we are concerned about the mortality caused by the tangle net capture method.

The mortality rates documented in these studies on the Rogue and Umpqua are alarming, as is the evidence provided by fishermen the last time this type of study was conducted on the Nehalem.

"ODFW feels obliged to conduct these tag and capture studies on the Nehalem and Siletz with no regard for the risks that those studies are going to impose on these micro returns that come back," Russell said. "My position is that ODFW is making decisions based on faulty data regarding the risk of mortality for chinook salmon from these studies. When they did this type of study in the past, the ODFW crews claimed near zero mortality, but anglers on these rivers saw dead fish everywhere. ODFW believes next to no risk, but I know that is not true.

"This is not the year to do this study," Russell continued. "I would not be so opposed to it if we had a strong run, but this year we hardly have any fall chinook. Stewardship of the fish has to take precedence over political wrangling. These Nehalem and Siletz fish need to be left alone at least until we get up to minimum escapement."

Another concern NFS has with this study is the increased risk of problems associated with *ceratomyxa shasta*, a parasite present in the Nehalem that can be harmful to salmonids.

The cause of *ceratomyxa shasta* infection is still unknown. It infects fish that come into contact with it and the disease is expressed in warmer water temperatures. Rivers with *ceratomyxa s.* have native fish populations that are resistant to infection. The Nehalem is one of a few coastal rivers that has *ceratomyxa* and it is believed that historically it came from the Columbia when the two basins were connected. An early and important study was done on infection in the Nehalem when transplanted fish were released into the upper main-stem (Fish Hawk Creek) Some of these fish survived and spawned with wild native fish and the result has been a lowered resistance to *ceratomyxa* in the native population. One contributing factor in decline of Nehalem chinook and coho could be the result of a warming trend (climate change) low flows and higher more prolonged elevated water temperatures that may cause even the resistant native salmonids to have less resistance to this disease.

Call to Action

The Nehalem wild fish runs face many obstacles to restoration, and rather than acting to remove these obstacles, recent actions by state agencies are actually making life more difficult for the fish.

"I view this combination of denials, premeditated impacts, and collusion with the sportfishing and timber industries as a crime against Oregonians and the planet," Russell said. "At the very least the Nehalem will stand as one of the greatest management blunders in Oregon's modern history."

Unless we as a public stand up and demand our public officials put conservation first, wild fish runs will continue to decline. The Nehalem needs your help! You can make a difference for wild, native fish.

Governor Kulongoski, who appoints the Board of Forestry, has backed its decisions. Now he needs to hear from you. Please tell him you oppose increased logging in Oregon's state forests and also oppose revision of the greatest permanent value rule. Tell him you support, instead, strong protections for watersheds and wildlife, including protection of salmon anchor habitats and protection of permanent areas of conservation, as well as the appointment of a more balanced board that includes conservationists and scientists.

Please visit http://governor.oregon.gov/Gov/contact_us.shtml to contact Gov. Kulongoski.

In addition ODFW and NMFS need to hear from people who place wild fish natural production over harvest opportunity. Please tell our fish managers that you want harvest fisheries managed so that spawner abundance goals are set and achieved, and tell them that hatcheries should be managed so that they do not endanger the reproductive fitness of wild salmonids.

Contact the ODFW Commission at odfw.commission@state.or.us and ODFW Director Roy Elicker at roy.ellicker@state.or.us. Contact Rob Walton, NMFS assistant regional administrator, at rob.walton@noaa.gov.

Q and A with Chris Knutsen, ODFW North Coast District Biologist

Q: Is ODFW considering hatchery supplementation to improve the Nehalem River fall chinook run:?

A: No. When we meet in Manzanita after the closure of the fall chinook fishery, lots of folks wanted more hatchery production, and many mentioned hatchboxes. We said that if they would bring forth a proposal through the STEP program, we would look at it and review it. Sen. Johnson asked to organize a meeting, so we are meeting Thursday (Sept. 10) to talk about the STEP Program, layout the status of Nehalem chinook, and look at limiting factors. We are not considering artificial propagation at this time. The Legislature can get into the biological mix and can dictate what we do, but where it goes from here, I'm not sure. If folks want to bring propagation proposals they certainly can, we will evaluate them on their biology. I personally don't think we need artificial propagation for the Nehalem. There are many other issues we need to address over time.

Q: If ODFW is looking at artificial supplementation for the Nehalem, what is the duration of this experiment? When will it begin and will it end when healthy wild populations are restored? Will the proposed artificial production program be evaluated to determine its cost benefit and biological impact on wild salmonids?

A: Nothing has been proposed and we will not propose a program at this meeting. We will try and dispel any myths that we can. If artificial supplementation occurs it will be through the STEP program. There is growing public interest in hatchboxes. The public is looking for something to believe in and some would like to explore these hatchboxes.

Q: What is the scientific basis for supporting the use of artificial culture technology for rebuilding wild chinook in the Nehalem basin?

A: We have STEP hatchboxes in the Tillamook and Nestucca basins. There is not a good scientific body of work that documents survival rates of unfed fry compared to smolts out of a hatchery program. There was a study that showed smolts survived at a rate of 30 percent more than unfed fry.

Q: What are the risks of the various options the department proposes and how will these risks be evaluated and controlled?

A: A potential obvious risk is that since we have limited rearing habitat -- 70 percent of estuary habitat has been lost -- the biggest risk is putting in too many juveniles and we have competition for limited resources. If you use out of basin stock, there is a potentially huge risk of hatchery integration on wild fish. Literature for sub-yearling chinook is as not as clear as it is for steelhead

and coho that rear for over a year. We just don't know as much with fall chinook that out migrate quickly. Risks will depend on the number of fish we are talking about. If you wanted to raise 100,000 hatchbox eggs, where would you get eggs? Would you mine from a wild population that is already depressed? I am very opposed to hatchery releases on the mainstem Nehalem. We have that managed for wild fish, and I'd like to see it stay that way. I wouldn't consider anything outside the N. Fork Nehalem. We would evaluate in a management context. With the Nehalem being an escapement indicator stock under the Pacific Salmon Treaty, it is a main driver stock when determining abundance of Coastal fall chinook. The river has very little historical hatchery influence, so a new hatchery program doesn't fit very well. In management context, the Nehalem is very important to wild fish management.

Q: What is the historic trend in chinook productivity in the Nehalem and what was done to reverse that trend?

A: The historic trend is up and down. We had one of the largest runs ever in 2002. Abundance was up around 20,000 wild adults returning. Previous peak was back in the mid-80s. The problem with the Nehalem is that it has been going down every year since 2002, and the 2009 forecast is for only 2,100 adults, where as other Coastal basins actually went up a bit. We have been below escapement for three years. Coast-wide the last few years we had really crappy ocean conditions. Pretty much everything in 2005 didn't survive, and since Nehalem fall chinook are three and four year classes, we are seeing the results. The Nehalem, even more so than other basins, has seen 100-year flooding events several times recently, and there could be more sedimentation from these events. Excluding the last few years, the run has been fairly stable and I expect it to bounce back with improved ocean conditions."

Q: Do you think the research conducted on wild and hatchery steelhead interactions in the Hood River is applicable to any hatchbox program?

A: The study creates cause for concern with all hatchery programs in general, especially in terms of interactions with wild fish. As far as sub-yearlings compared to smolts, the Hood River study doesn't really apply. It's extremely difficult to evaluate those, because they are extremely difficult to mark. We would do odelith marks, which are very expensive to do.

Q: Do you consider current bycatch mortality from other fisheries acceptable for recovering fall chinook? Do we need to revisit the Pacific Salmon Treaty negotiations and recent decisions for their affect on the Coastal chinook populations?

A: I haven't heard much recently that gives me cause for concern with bycatch. My biggest concern is the interception of Oregon fish in the Alaskan and Canadian fisheries. Those fisheries harvest 30 percent of our fish on the average. Might even be a little bit higher. Our director sits on the panel of Pacific Salmon Treaty negotiations and from where I sit, he is doing a great job.

Q: The status of summer chinook populations appear to be extremely low, but there is little data to support this condition. What are the plans to determine accurate population levels and to recover these unique fish?

See Nehalem, Page 15

South Umpqua, from Page 6

The tributaries of the river have been seriously incised because of extensive mechanical disturbance and woody debris removal. Vast quantities of spawning grade aggregate materials were swept all the way downriver into the Umpqua Coastal Estuary. The deep pools born of natural stream complexity have vanished leaving in their wake the raw hostile simplicity of volcanic bed rock. These changes in channel conditions have threatened every native fish species of the system.

The summer steelhead run of the South



Photo by Julie Edmonds

Helicopters were used for a large wood emplacement project at Singing Falls. The 2006 project included 260 pieces of large wood and ten rock weirs to create habitat for native fish and improve flow.

Umpqua River is now extinct. The chinook and coho salmon runs are on the brink of collapse. As recent as the 1960's, hundreds of thousands of lamprey spawned in the system. In the last 20 years lamprey numbers have dropped to near zero. Anecdotal evidence and traditional ecological knowledge claim that chum salmon utilized reaches of this river system for spawning also. History is all that remains of their presence in the basin.

Efforts to compensate for the travesty of the failing native fish runs by planting hatchery reared steelhead and coho salmon have only added to the elements impairing wild fish recovery efforts. Exotic and predatory smallmouth bass take an extensive toll on young salmonids, lamprey larva and the now endangered South Umpqua chub.

The economic benefits of marketing the South Umpqua River as world class trophy bass fishing river have eclipsed the ecological importance of the keystone native fish species. Salmon populations have been decimated by this exotic invasive predatory fish. Prime salmon spawning habitat and the river system itself is being placed in jeopardy due to an attempt to pass a three foot diameter natural gas transport pipe line in two locations through the very bedrock layer of the river.

One of the oldest operating smolt traps in the State of Oregon is stationed in the South Umpqua River. The upper regions of the South Umpqua have supported up to 70,000 salmonid smolts as recently as the early 1990s. That figure dropped to as low as 15,000 by the mid 1990s, indicating a radical systemic collapse of river ecology supporting wild steelhead, coho and chinook populations.

The entire South Umpqua basin is labeled a key watershed under the Northwest Forest Plan. The river itself is contained in the Upper Umpqua ESU (Environmentally Sensitive Unit) and plays a strategic role in the Oregon Coastal Recovery Domain. The local citizen-based watershed councils are addressing man-made barriers of salmonid migrations to spawning grounds and smolt migrations to the estuary. Large woody debris and stabilizing boulder structures are gradually being replaced in the river system tributaries to rebuild the complexity of aquatic habitat, retain spawning gravels and provide fish refugia during the winter months. Utilization of another keystone species, the beaver, is being integrated into the basin's restoration project plans. Beavers

Native fish species known to inhabit the South Umpqua River prior to European contact

- Steelhead (*oncorhynchus mykiss*) (anadromous, fluvial and resident) (summer and winter runs)
- Coho salmon (*oncorhynchus kisutch*) (anadromous)
- Chinook (*oncorhynchus tshawytscha*) (anadromous) (spring and fall runs)
- Chum salmon (*oncorhynchus keta*) (anadromous)
- Cutthroat trout (*oncorhynchus clarkii*) (anadromous, fluvial and resident)
- Western brook lamprey (*lampetra richardsonii*)
- Pacific lamprey (*lampetra tridentata*)
- Umpqua dace (*rhyinichthis evermanni*)
- Sculpin (*cottus sp.*)
- Redside shiner (*richardsonius balteatus*)
- Largescale sucker (*catostomus marchochellus*)
- Umpqua pikeminnow (*ptychoncheilus oregonensis*)
- Umpqua Chub (*oregonichthys kalawatseti*)

were an essential component contributing to perennial stream flows historically characteristics of the region and abundant fish populations.

To quantify restoration project successes, extensive temperature, water quality, water flow rates and fish counts are being monitored. Grassroots efforts to halt the degrading wild fish runs and rectify the wrongs are growing. Landowners are participating in riparian planting regimes to attract beavers, supply shade and replenish large wood for future utilization by the river system.

The South Umpqua River system is resilient. We refuse to accept it as an industrial or politically-motivated natural resource sacrifice zone. The "people of place" are taking responsibility and ownership of the stewardship mentality needed to adapt and reverse the tide. Every helping hand is vigorously welcomed.

Thank you for your support!

Our work to conserve, protect and restore native fish of the Pacific Northwest is made possible by the generous support of our members and donors. The following are a short of list of accomplishments made in the first half of 2009 thanks to your generous support. Thank you!!!

Developed draft recovery plan through participation in the public advisory committee for Oregon's South Coast Fall Chinook Conservation Plan, working to sustain and protect nine populations of wild, native fall Chinook, including five Rogue River populations.

Mounted a strong defense of the Metolius River and support of legislation to prohibit large destination resorts in the basin. A bill to protect the Metolius that we supported was passed by the Oregon Legislature and signed into law earlier this year.

Created recovery actions for Molalla River spring Chinook salmon and winter steelhead in cooperation with NMFS, ODFW and a private fisheries consultant that will be incorporated in the Upper Willamette Recovery Plan.

Reviewed new policy, commenting at the local, state and federal levels to encourage the legislature and agencies to make natural production, wild spawner abundance and water quality their top priorities. Comments made so far in 2009 include the Upper Willamette Recovery Plan, SAFE for Salmon proposal, Pacific Fishery Management Council Lower Columbia Chinook harvest, Mitchell Hatchery Environmental Impact Statement, Oregon Department of Fish and Wildlife Fishery Management and Evaluation Plan for Coastal Coho, Washington Department of Fish and Wildlife Hatchery and Fishery Reform Policy, Oregon Coastal Coho Endangered Species Act Status Review, N. Umpqua Tioga Bridge Environmental Assessment, ODFW fee increase, ODFW budget cuts, Oregon Parks and Recreation Department Bates Park Master Plan, and National Marine Fisheries Service Guidance for Monitoring Recovery of Pacific Northwest Salmon and Steelhead, among others.

2009 was the first year of excluding hatchery steelhead from Bakeoven and Buck Hollow Creeks, important summer steelhead spawning tributaries of the Deschutes River. In cooperation with ODFW and the Oregon Wildlife Heritage Foundation, NFS is placing another hatchery fish exclusion weir near the mouth of Trout Creek, replacing the current faulty weir that is more than six miles from the mouth. The new weir is scheduled to be emplaced by December.

In cooperation with the Molalla River Alliance, had bills introduced in the U.S. House and Senate to designate 21 miles of the Upper Molalla River as Wild and Scenic.

Testified 38 times on 25 different bills before the Oregon Legislature, helping to secure funding for marine reserves, invasive species check stations, and emergency response against invasive species. Other legislative victories include reporting on global warming, scaling back of field burning, pesticide reporting system update, increased penalties for killing wildlife, increased cost recovery from water user groups to fund Water Resources work, and creation of a plan for green jobs development, among several others.

Placed temperature monitoring devices on the Salmonberry and Molalla rivers. Conducted winter steelhead spawning surveys of the Molalla and Salmonberry rivers. Began nutrient enhancement on the Molalla River.

Placed Angler Education signs on the John Day, Molalla, and Salmon rivers. Encouraged ODFW to conduct more live release education.

2009 ongoing projects and campaigns

Develop detailed threats assessment of the Upper Deschutes Basin	Remove the use of bait on the John Day River	Encourage the public to get involved in the agency policy process
Keep the ESA listing of Oregon Coastal Coho	No kill of wild, native steelhead region-wide.	Keep the public informed of current threats to native fish restoration and encourage the public to take action against these threats.
Stop increased timber harvest in Oregon State Forests	Stop the increase of triploid trout stockings in Oregon's flowing waters	Remove harvest limits on invasive species where they compete with native species
Get wild fish advocates on advisory boards	Protect important spawning and rearing habitat through public ownership.	Reduce mortality caused by sport and commercial fisheries
Ensure Native Fish Conservation Plans are implemented and enforced	Stop the LNG pipelines	Hatchery reform that ensures hatcheries do not impede wild recovery
Keep catch and release regulations for N. Umpqua wild winter steelhead	Get Wild and Scenic River Status for the Molalla, Lewis, Green, and Cispus rivers	

Steelhead, from Page 3

In addition, naturally spawning hatchery fish pose an ecological impact on wild steelhead because hatchery juveniles compete for food, rearing space, are predators on wild juveniles and attract predators that respond to the high density of hatchery fish.

Given the scientific evaluation of hatchery impacts on wild steelhead reproductive success, it is reasonable to conclude that hatcheries are limiting the abundance and productivity of wild steelhead in the Columbia River basin. It is also a reasonable conclusion that hatchery steelhead are a barrier to wild steelhead recovery under the ESA in the basin, which renders remaining good habitat relatively unproductive.

This unquantified effect on wild steelhead is not being adequately addressed by the states, tribes and federal agencies responsible for wild steelhead management and recovery in the basin.

These agencies point out the habitat issues affecting steelhead but have been reluctant to deal effectively with the risk hatcheries impose on wild steelhead because hatcheries are considered a mitigation for habitat degradation, rather than being an equivalent to habitat degradation, and represent a major stream of public funds to these agencies.

In 2002, the Independent Economic Evaluation Board (IEAB) conducted an economic evaluation of selected hatcheries in the Columbia River basin. Irrigon Hatchery produces steelhead for release above Bonneville Dam and the IEAB notes that each Irrigon Hatch-

ery steelhead that is harvested costs \$453. Not only are hatchery steelhead expensive, and most hatchery programs produce fish that cost more than the benefits they provide, the public is subsidizing commercial and sport fisheries with artificially propagated fish that reduce the reproductive success of wild steelhead.

Hatchery steelhead have a competitive advantage over wild steelhead because each year millions are released and when these smolts enter a productive ocean environment survival is high and the production of abundant spawners takes place in a single generation. On the other hand wild steelhead smolt production is relatively small compared to hatchery smolt releases, and it takes a few generations of high survival to substantially increase wild spawner abundance and generate more smolts and surviving spawners.

Because hatchery steelhead can take immediate advantage of a productive ocean, hatchery spawners increase the number of naturally reproducing hatchery strays throughout the Columbia River basin. This has a dampening effect on wild steelhead smolt production making it more difficult to generate the smolts needed to increase wild spawner abundance during a favorable ocean environment.

At this time there is no effective way to reduce stray rates and preclude the genetic and ecological effect of naturally spawning hatchery steelhead.

If hatchery steelhead management continues to remain unaffected by ESA protection of wild steelhead, recovery is not likely to take place.

Nehalem, from Page 12

A: Starting this year, we have money through the Pacific Salmon Commission to do a capture and mark study. We will mark the fish and track them on the spawning grounds. Currently we don't have a diagnostic way of determining between summer and fall runs. We know areas where summer chinook spawn, specifically the Rock Creek area. We are collecting genetic samples, a minimum of 100 samples, and we will analyze those. Do we have two genetically different runs? I think we'll find that we do. Then we can look at catching in the Bay. That's where we can start characterizing where the harvest is. Think we will get a good handle with summers in term of population size.

Q: We do not understand the objective of tangle-netting chinook in tidewater and marking all captures with an identical opercula punch. We understand that a similar tangle-netting program was conducted on the Rogue River that resulted in considerable mortality. Would funds spent on this program be better off spent on habitat improvements?

A: The study will involve research crews from Corvallis setting up weirs and tangle-

netting the fish. They have set criteria in terms of water conditions. When temperatures exceeds 65 degrees, they will not be handling the fish. I have confidence in these guys. Reports of mortality last time when this on the Nehalem were exaggerated. We need to have good information to make sound fishery management decision. The Pacific Salmon Commission wanted very precise estimates of escapement. They said you guys are close but not quite there so they funded this mark-recapture study.

Q: What are top five threats to wild salmonid recovery in the Nehalem?

A: The top five are lack of estuary and rearing habitat, excessive temperature, spawning ground gravel quality and redd stability, predation remains a threat, but that's likely because habitat is much less complex then it was historically. Ocean productivity is, of course, the population driver. My feelings are that despite all the threats and limiting factors, the Nehalem is still a productive basin for wild fall chinook. It was just over a (chinook) generation ago that we had records fall chinook runs. I think we will get out of this hole, just not as quickly as we like.

Q: We understand that you have faced

threats regarding the fall chinook closure. How do you deal with the public pressure?

A: I sleep fine at night. There is a lot of emotion surrounding this issue. Fishermen in general can be very passionate. The business owners are impacted economically, and you feel for them, that they have suffered tough times like this. The only thing I would do differently is communicate the direction of the agency up front. In retrospect we could have done it a month earlier. If a tough decision needs to be made for conservation, I don't mind pushing for it. Same thing for a new harvest opportunity.

Conservation for Clunkers

Got an old car that didn't meet the Cash for Clunkers criteria? Consider donating it to the Native Fish Society.

Put that old gas guzzler to good use protecting and restoring native fish runs in the Pacific Northwest.

For more information, please contact the NFS Molalla Office at 503-829-6202 or nativefishsociety@molalla.net.



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