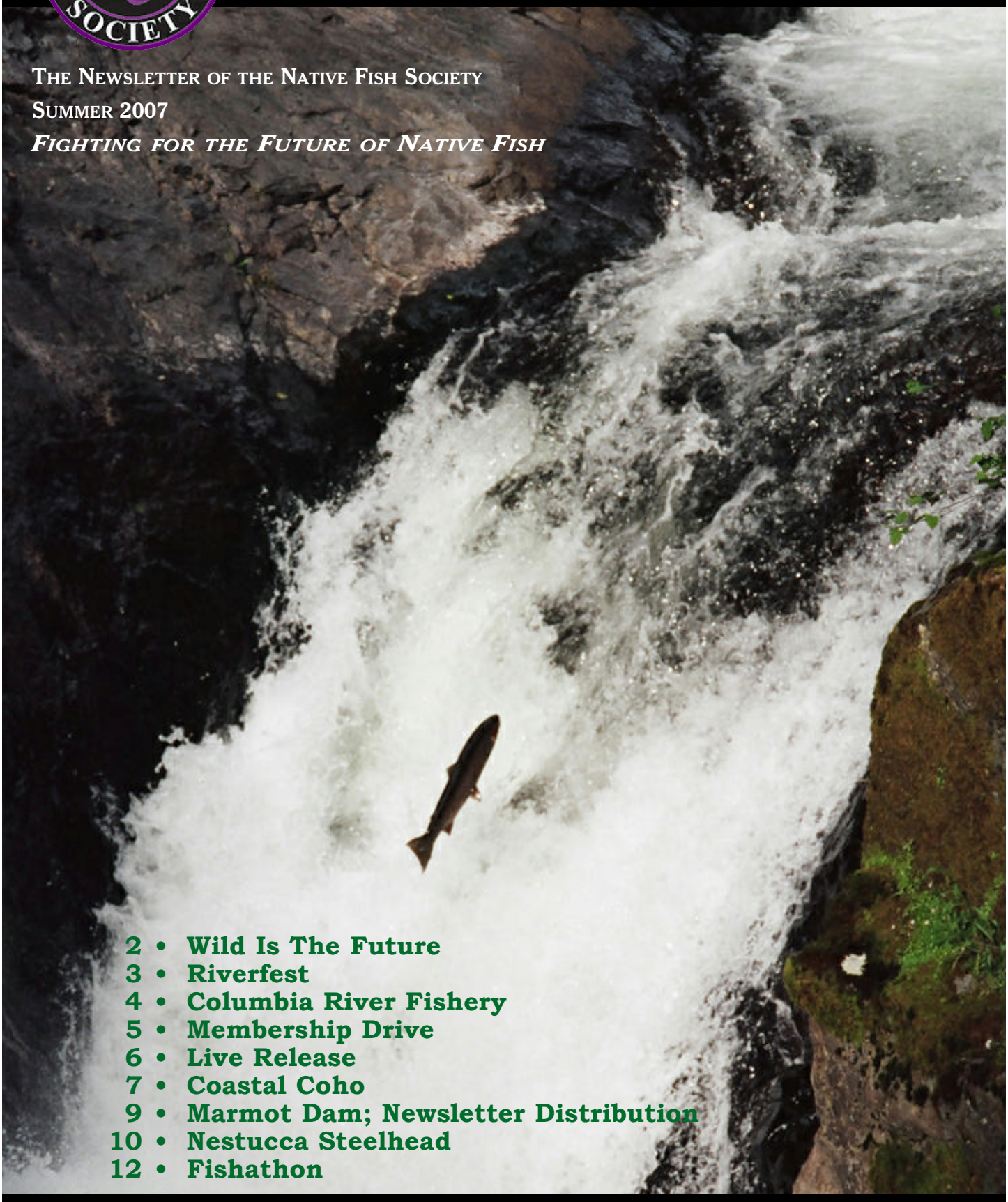
Strong Runs

The Newsletter of the Native Fish Society
Summer 2007

Fighting for the Future of Native Fish



Wild Is The Future

Not All Fish Are Created Equal

by Tim Manion

"The best way to predict the future is to invent it."

If only it were that easy. Securing the future through planning is easier quoted than created. When taking on any complicated and important task, it is best to keep focused on the simple basic goal, otherwise it gets lost amid supportive statistics, detailed logistics and labyrinthine politics. In this regard, the Native Fish Society is no exception. Despite the fact that we have repeatedly demonstrated results-based effectiveness in gathering scientific data and making that data available to the public, organizing and supporting fish conservation measures in the political and judicial arenas, and conducting extensive, detailed field research, the Native Fish Society's simple, single vision for the future remains clear: Wild is the Future.

In an attempt to keep all of us focused on results, the Native Fish Society has initiated a new campaign designed around this basic idea because all of the work we do ultimately comes down to a vision: to make sure that our indigenous fish will be healthy, numerous, and wild for the generations that follow.

Some History

Well over a hundred years ago in the Pacific Northwest, concerned vendors of salmon realized that the natural supply of fish was going to run out. They decided that it would be a good idea to grow their product on a farm, a fish farm, otherwise known as a hatchery, and thus, an industry was forever changed, as was the product itself.

Part of the goal of cultivating hatchery fish is to maintain abundance and replace wild fish lost to over-fishing as well as those lost to technological progress such as dams and habitat modification. "Mitigation" hatcheries were created to make up for the loss, but they have failed to keep their promise to maintain abundance.

Even if that promise of abundance were kept, the quality of that alleged abundance is demonstrably diminished.

Hatchery Fish Are Not the Same

Fish managers claim that hatchery fish are the same as wild fish and therefore do not cause harm to wild, native populations. However, scientific evaluation of native broodstock hatcheries published in peer-reviewed journals point out the following:

Hatchery Fish:

- Exhibit a 20% lower survivor rate in the first generation than wild fish
- Exhibit a 40% lower survival rate in the second generation than wild fish
- Compete for food and habitat with wild fish
- Exhibit a diminished response to predators

Taken together, scientific evaluations show that native broodstock fish are less fit for survival than wild fish in the natural environment. When reared in hatcheries, individuals lack information about predators, food sources and habitat structure. They have altered morphologies, and undergo genetic changes associated with sampling and selection in the hatchery environment. All of these changes reduce the performance of hatchery-bred salmon in the wild. Consequently, they are not the same as wild fish and cannot serve as a replacement for wild fish. In fact, these studies indicate that in order to improve the performance of hatchery fish, it is necessary to maintain strong, healthy wild fish populations.

We need wild populations to keep hatcheries productive. In 2004, the Technical Review Team for the lower Columbia and Willamette rivers published a status report for salmonids. They find that all spring chinook and winter steelhead populations are at very high risk of extinction and that there are no wild populations that are viable.

Anglers and scientists know that wild and hatchery fish are not the same, yet the federal government is moving to count wild and hatchery fish as a single population, thereby ensuring that threatened salmon and steelhead will not receive the Endangered Species Act protections that they need to survive. Despite the inflated numbers, which remove the salmon from endangered status, the mixing of hatchery salmon populations with wild, native fish reduces abundance, diversity and the overall distribution of all salmonids in the Pacific Northwest. Hatcheries simply cannot replace wild habitat or populations.

To make matters worse, in 2004 the Bush Administration proposed to remove

80% of the critical habitat designation for Endangered Species Act-listed salmonids on the West Coast. In the same year, the federal government, through the NOAA Fisheries, proposed a hatchery policy that includes hatchery salmon as a listed species along with wild salmon. The hatchery salmon would be included in the listing determination, advancing and legitimizing the idea that hatchery and wild salmon are equal and the same.

ODFW has the direction and authority under state law and agency rule to make native wild fish the primary responsibility and mission of the agency's fish management programs. State laws and agency rules have been specifically cited concerning the primacy of wild fish populations. In 1997, the Oregon Department of Justice was asked to confirm the priority of native wild fish for ODFW and the Commission. The conclusion by Cheryl F. Coon, Assistant Attorney General is: *"The Commission's and Department's overriding obligation is to manage to prevent serious depletion of any indigenous species, which thereby enables the Department and Commission to provide optimum recreational and aesthetic benefits."*

More recently, in 2003, the ODFW Commission adopted by rule the Native Fish Conservation Policy which states: *"...conservation of naturally produced native fish species in geographical areas to which they are indigenous is the Department's* ***principle obligation*** *for fish management (OAR 635-007-0504)."* (emphasis added)

However, the institutional changes necessary to accomplish this obligation have not taken place. In order to be consistent with this overriding obligation, the harvest management and hatchery programs must play a supportive, not primary, role to native fish conservation in the state. The Native Fish Society and the conservation community can use this legal mandate to change the institutional organization and commitment of ODFW to follow state law and its own administrative rules.

What Needs To Be Done

1. Re-evaluate the native broodstock hatchery program based on scientific data. Do not expand the native broodstock hatchery program until the agency does an evaluation and holds a public hearing with the commission.
2. Re-organize ODFW's fish division so that natural production is the primary agency responsibility and mission, and place harvest management and hatcheries into support status.

Although the regulatory agencies and government offices have complicated and obscured the classifications, regulations and protections of native fish, the underlying challenge to our wild fish remains: native populations of wild fish are being replaced by a species that will eventually die out. Under current policies, the future for these fish is neither wild nor cultivated. It is nothing.

EVENTS

Enjoy "Riverfest" On The Deschutes

The Oasis Resort and The Maupin Area Chamber of Commerce will be presenting **Riverfest on the Deschutes,** Saturday, September 15, 2007 in Maupin, Oregon, with a river clean-up on Sunday, September 16. This year's festival, celebrating wild fish and wild water on the lower Deschutes River, promises to be bigger and better than even last year's success. The involvement of Oregon Trout, Trout Unlimited, the Deschutes Club, and, of course, the Native Fish Society will provide valuable environmental education.

The all-day festival will be held in the Oasis Campground from 10:00 a.m. until 9:00 p.m. There will be live music all day long as well as raft trips and hot air balloon rides. Beautiful local scenery can be enjoyed on a 5k and 10k walk/run and while fly casting with professional fly casting experts. A fly casting contest will add to the fishing fun. Local artists will be presenting unique fish and river art, and there will also be a silent quilt auction. **Riverfest** is family friendly, so bring the kids to enjoy the play area, the big bouncy house, and an obstacle course. Plenty of delicious food will be available as well as craft vendors selling their handmade wares. Everyone's welcome—admission is free!

The Columbia River Fishery

Impacts of commercial and recreational fishing on salmon and steelhead in the Columbia River (Part 2)

By Russell Bassett,
NFS Administrative Assistant

(This is the second article in a two-part series, continued from the Spring 2007 edition of Strong Runs.)

Another way of viewing the difference between commercial and recreational fishermen in the Columbia River is to look at the number of people who actually caught fish in the river and the amount of effort/time it took to catch those fish.

There are currently 215 commercial Columbia River gillnet permits issued by Washington and 318 Oregon permits, according to ODFW Columbia River Fisheries Manager John North. In the 2007 spring chinook Columbia River gillnet fishery, an average of 110 boats fished for a total of 30 hours, yet they harvested 2,920 chinook. That number does not include the number of steelhead or wild chinook that were caught, as they had to be returned to the river, even though many were already dead or would die soon.

It's incredibly difficult if not impossible to accurately calculate the effort per fish caught by each recreational angler. The closest one can get to that number is to take ODFW's observed trips divided by total fish harvested, and even then the number is not indicative of the number of fish caught per hour spent fishing by each angler. Suffice to say, however, that it is much, much less than the commercial fisherman. According to North, there were just fewer than 260,000 angler trips that targeted chinook salmon in the main stem of the lower Columbia River in 2006. How many of those were repeat trips and how many people were in each boat is unknown.

So while commercial and recreational fisherman caught roughly the same amount of chinook, there were an estimated 2,364 times more recreational fisherman than commercial fisherman. It's safe to say that the balance is heavily skewed in favor of commercial fisherman when time/effort is calculated in the equation.

Impact On The Economy

Harvesting and canning salmon were historically a large part of the Pacific Northwest's economic development, and today both commercial and recreational fishing play roles in Washington and Oregon's economies. But does commercial or recreational fishing contribute more to the economy? According to the final draft of the 2006 Economic Analysis Study of the Select Areas Fisheries compiled by the Bonneville Power Administration, ODFW and WDFW, the total landed revenue of the lower Columbia River gillnet salmon fishery averaged $2.1 million in the five years ending in 2004. In addition, the local area economic contributions from the fishery were estimated to be $3 million in 2004. The same report argued that Columbia River salmon "gillnet fishery share does not account for other economic activity related and associated with it. This totals $12 million personal income in the local area for the gillnet salmon fishery, other gillnet vessel fisheries, other gillnet permittee West Coast landings, and Alaska fishery participation."

So for arguments sake, let's say the Columbia River gillnetters contribute somewhere between $5 and $16 million annually to the local economy. The same report said that recreational anglers' expenditures per day in the Columbia River averaged $67.10. That figure accounts only for trip expense, not annual equipment costs. The report goes on to say that economic impacts per sport angler per day was $50.09.

"Summing the recreational economic impacts from ocean trips originating in Astoria or Ilwaco, plus the trips whose purpose is to fish the Bouy 10, plus other main stem fisheries below Bonneville Dam, shows recreational fishing contributed $21 million in personal income to the regional economy in 2004," reads the report. This does not count the entire economic impact associated with recreational fishing in the many Columbia tributaries.

Another way to look at it is to figure out how much each group spends on licenses, permits and tag fees. Some of the money generated from those fees goes back to the fisheries through the states or Oregon and Washington.

In Oregon, a resident Columbia River gillnetting boat license is $200. A commercial fishing license is $50 and a crew member license is $85. So let's say that each Oregon Columbia River gillnetter pays $300 annual-

ly in fees, which, with only 311 permits, brings in a paltry $93,300 that goes back to the fishery.

Recreational fishermen, on the other hand, pay $24.75 for an angling permit, plus an additional $21.50 for s salmon and steelhead tag. If you calculate the total number of angling tags purchased—in 2003 there were 261,737 resident tags purchased in Oregon—plus the total number of salmon and steelhead tags purchased—there were 172,299 tags purchased in 1999—you get $10.2 million that recreational anglers put back into the fisheries annually.

That's a very inaccurate way of determining it, as only a fraction of the total number of people who purchased licenses and tags actually fished the Columbia River. A more accurate way is to take the total number of chinook fishing trips in the Columbia River, which in 2006 was 260,000, and multiply that number by the license and tags fee. Figuring it this way, Columbia River sport chinook fisherman give $1.2 million back to the fishery annually through license and tag fees. That's still not a very accurate number, however, as many trips were repeat trips and managers count per boat not number of people in the boat when figuring number of trips.

Despite not having exact numbers, one can clearly see that recreational anglers contribute much more to the local economy and they give back much more financially to the fishery than do commercial fishermen.

Conclusion

It seems clear to me that commercial fishing is more damaging to the runs and contributes less to the local economy than does recreational fishing. What, if anything, should be done about it?

There are a myriad of opinions out there on this subject. Many people point to gillnet alternatives like trolling, fish wheels, live traps and pound nets. Others say some of the hundreds of millions of dollars spent annually on salmon recovery should be used to buy out the gillnet permits. Others point to changes in mesh-size regulations. Each of those alternatives has its merits and also its detractions. I am not going to take the time here to discuss each one in detail; however, I will note that a ballot measure has come before Oregon voters three times attempting to outlaw commercial gillnet fishing in the Columbia, and each time the measure failed.

While some conservation groups, most notably the Coastal Conservation Alliance, have called for the end of gillnetting in the Columbia River, the Native Fish Society has not taken that stand. NFS Executive Director Bill Bakke explained that NFS puts the responsibility for commercial over-harvest squarely on management's shoulders.

"There is a problem with any commercial fishery, whether it's troll or net, and that problem is a *management issue.* Fisheries should be managed for maximum spawning escapement to the tributaries, but that is not necessarily how fisheries are being managed." Bakke said. "There is no accounting on whether the fisheries are supporting or impeding the recovery of fish listed through the Endangered Species Act. The Columbia River gillnet fishery should be managed to achieve spawner abundance goals for wild spring chinook and wild winter steelhead for Columbia River tributaries below Bonneville Dam, as well as have a minimum impact on upriver spring chinook," he continued. "We have to define what those abundance goals are on each watershed and manage fisheries to ensure adult escapement each year to reach those tributaries. That hasn't been done. We are essentially managing the Columbia River for hatchery production, not wild conservation and recovery. Hatcheries, not wild populations, are driving fisheries; until we turn that corner, wild fish will continue to be in peril and set up for extinction."

NFS Launches New Membership Drive

The Native Fish Society is seeking to double its membership with a new campaign called "Every Member Get A Member." Existing members will be requested to enlist at least one new member. As an incentive, each member who recruits a new member will be eligible for one of two fishing trips to one of Oregon's beautiful rivers.

"We need to let people know that the Native Fish Society is more than a fishing club. Our membership includes outdoor lovers, ecologists and environmentalists of all stripes," says Tom Derry, NFS Director of Development. People will be more willing to join if they understand that NFS is a local, grass-roots group whose goals are founded on strong science concerning the protection of wild, native fish, which includes an overall concern for the environment.

Members have received a letter containing details on the campaign including tips on how to enlist their friends, co-workers and anyone else they know who is concerned about preserving our northwest icons.

Live Release

"Salmon are too valuable to be caught just once." - Lee Wulff

The Native Fish Society is calling upon all anglers to practice live release angling. Live release protects future stocks of retuning wild salmon and steelhead in our rivers. Effective live release fishing techniques limit fish fighting and handling times, as well as prevent damage to fish skin, scale and slime layers, throat ligaments and gills caused by poor handling techniques.

Playing Wild Fish

A wild fish on the end of that line is under stress and it is important not to play the fish to utter exhaustion. Severe exhaustion reduces the fish's odds of surviving.

Bringing in the Fish

Support the fish underwater in a natural position facing the current, handling it as little as possible. Give it time to recover. The goal is for the fish to swim away on its own. Keep the fish in the water; it needs all the oxygen it can get from the water passing over its gills.

Photographing Wild Fish

1. Have help. Either make settings on the camera before angling or use a point and shoot camera. Give it to your partner before the angling session.

2. Let your partner get into position and tell him/her what you are going to do. Alert your partner before you take the fish out of the water.

3. With wet hands, support the fish under the forward part of its body while keeping it in the water with the fish pointed upstream to help its recovery. Tuck your rod under your arm and transfer your other hand to the base of the tail.

4. Keep the fish in the water as much as possible. After warning your partner, raise the fish out of the water for no more than 10 seconds. Take two pictures.

5. Return the fish to the water, gently release the hook and let the fish swim away from your hands.

6. Put the camera in a safe and dry place.

Removing the Hook

In quiet water, bring the wild fish quickly within reach. Leaving the fish in water and without squeezing it, remove the hook carefully with pliers or thumb and forefinger. If necessary, cut the leader near the fly and spare the fish.

Tools

Barbless hooks or hooks with the barbs pinched are easiest to remove. Flatten barbs with pliers.

Make a Catch and Release Kit

Consider putting together a Catch and Release Kit in a small “mini-pack,” including:

- Small pair of pliers
- A thermometer for water temperature
- A miniature pair of scissors or snips to cut the leader if necessary
- A small point and shoot or throw-away camera to be sure of getting that photograph for the wall at home.

NFS Staff

To fulfill his duties with the National Guard, Russell Bassett is currently serving in Iraq. Russ will return to NFS next year, at the end of his term of duty. During his absence, NFS has hired a new Administrative Assistant.

Tim Manion, our new Administrative Assistant, is extremely pleased to be working for NFS. Tim has an Undergraduate degree in English Education from the University of Wisconsin-Madison and a Master's degree from the University of Wisconsin-Milwaukee,

Tim has worked all over the country from Las Vegas to Miami and plans to stay in Oregon permanently. Tim says, "Why live anywhere else? It's taken me many years to find a place as great as Oregon, and I'm not going anywhere!" In addition to working at NFS, he is also the production manager for the Salem Repertory Theatre.

Coastal Coho Salmon Conservation Management History

The Oregon Department of Fish and Wildlife is responsible under state law to prevent the serious depletion of indigenous species. In an opinion in 1997, the Oregon Department of Justice confirmed this (see page 3). Therefore conservation and preservation of wild salmonids is an indisputable principle that informs all programs, plans and projects that ODFW carries out. In doing so, ODFW provides the wise stewardship the public depends upon.

The 83 year decline in Oregon coastal coho salmon and the ESA-listings of most sea-run salmonids testifies to a very different reality. The following is a brief recounting of the agency's coho planning programs, culminating in the most recent federal court recommendation to list the coastal coho as a threatened species.

Effective salmonid management takes into account habitat protection and fish abundance, diversity, distribution and productivity. ODFW has no legal authority over habitat; it can only advise land and water management agencies about those measures that would protect state waters for native fish. However, ODFW does have authority over hatchery production and harvest fisheries, both of which can contribute to the decline of wild native salmonids. In the following review, I focus on ODFW's planning and policy development to protect coastal coho salmon, pointing out problems that ODFW staff have recognized and to illustrate a deep seated institutional bias for utilization over conservation. To bring these dual purposes into balance will take leadership which the agency has not had for over 20 years. As former Chief of the U.S. Forest Service Jack Ward Thomas once said, a good agency "tells the truth and follows the law."

1980

"An escapement goal of 200,000 adult coho is recommended."

"Basin escapement goals should be based on 40 adults per mile of habitat (20 females per mile assuming a 1:1 sex ratio)…

"Ultimately it will be necessary to establish an escapement goal for each river basin. These basin escapement goals will provide salmon managers with a reference framework to assess the distribution of the coast-wide escapement."

"The stock-recruitment and the progeny-catch method indicates that the escapement for the coast should be about 200,000 adults, which would equate to a peak count of 20-25 adults on the standard ODFW index. The smolt production method indicates that we need a total (not peak) of about 20 females for each mile of spawning stream. This information greatly facilitates the evaluation of spawning escapement in individual streams or basins."

Beidler, W.M., T.E. Nickelson, and A.M. McGie. 1980. Escapement Goals For Coho Salmon in Coastal Oregon Streams. Information Report Series, Fisheries, Number 80-10. Oregon Department of Fish and Wildlife.

1982

In 1982, ODFW adopted its first species plan, the coho salmon management plan. Faced with declining coho salmon runs and fisheries, the agency was anxious to figure out what to do. An estimate of adult coho production from 1965 to 1976 was 2.5 million fish and it decreased to about 1.4 million from 1977-1980, a loss of about 1.1 million adults. "Wild coho production in Oregon coastal streams dropped from an average level of 677,000 adults during 1965-1976 to 433,000 during 1977-1980, a loss of 244,000 wild adults."

Protecting wild spawners at low numbers is essential to maintaining viable runs.

The plan states that "the optimum spawning escapement (naturally reproducing spawners) is estimated to be about 200,000 wild coho salmon in coastal watersheds. An estimated 45,000 additional jacks will be produced bringing the total average annual escapement to about 245,000 fish. The total escapement goal is allocated among the individual watersheds…"

"Ocean harvest will be regulated to achieve the optimum annual escapement of wild spawners to the production areas, but not on the basis of an individual system." (page II.G-4) The agency ignores the recommendation of its own biologists in 1980 to set stream specific spawner abundance goals and until management goals based on spawner abundance are adopted by watershed, the agency will continue to stand in the way of salmon recovery. On harvest, they adopted the theory of management by exploitation rate rather than spawner abundance, ignoring the reality that exploitation

rate management provides fewer spawners at low run sizes than large ones. Protecting wild spawners at low numbers is essential to maintaining viable runs. These two factors show very clearly that ODFW's management principle is based on harvest rather than conservation and the resulting pattern has been reduced productivity of salmon, endangered status, and closed fisheries.

After the conclusion of the 1982 coho planning effort, Jim Lichatowich, Assistant Chief of Fisheries, sent a memo to staff (1983) saying, "It is becoming clear to me that one of the most serious of the problems our agency faces is the inadequacy of our planning... We cannot ignore the mega problems clearly outlined in our future. We must anticipate them and develop the policies which will guide our tactical and operational plans for the future." He concluded "...not to respond to our planning shortfall is a shortsighted approach which will bear bitter fruit in the future for not only our organization but more importantly for the resource and the public who depends on us to be wise stewards of that resource."

ODFW. 1981. Comprehensive plan for production and management of Oregon's anadromous salmon and trout. Part I General Considerations. Part II Coho Salmon Plan. Technical Draft.

ODFW. 1982. Comprehensive plan for production and management of Oregon's anadromous salmon and trout. Part II coho salmon plan.

2007

The 1982 Coho Plan goal was for 200,000 wild spawners in Oregon coastal watersheds. From 1990-2004 the number ranged from 16,500 to 231,400 for an average wild spawner abundance of 74,800. Recognizing a problem, the ODFW designed a new Coho Salmon Plan adopted in 2007.

The salmon will tell us if we are being effective...

In this plan ODFW amended the spawner abundance goal for wild coho from the 40 fish per mile (1982 Coho Plan) to a novel and untested level of just *five coho per mile* to maintain viable populations of wild naturally spawning coho salmon. Rather than a spawner abundance goal of 200,000 wild coho, the new ODFW plan proposed a 25,000 goal. The reasoning for this amendment was not stated, but the justification for it is that the wild coho did not go extinct at low run size therefore they cannot go extinct. This novel spawner abundance goal was the subject of considerable controversy and was not accepted by scientists representing the National Marine Fisheries Service Science Center nor a state panel, the Independent Multidisciplinary Science Team. However, the NMFS agreed with the ODFW assessment and decided to not list the Oregon coastal coho salmon as a threatened species.

Conservation groups, including NFS, took NMFS to court for failure to list Oregon coastal coho as a federally protected species under the ESA. The NMFS decision to not protect coho salmon was based on the ODFW assessment, so the court reviewed the ODFW coho plan and the NMFS decision, finding that "...the NMFS's determination not to list the Oregon Coastal coho salmon is arbitrary, capricious, contrary to the best available science, and a violation of the ESA...NMFS should be ordered to issue a new final listing rule consistent with the ESA..."

Even though the public sought and got a favorable federal court decision, the fact remains that ODFW planning and policy fails to reverse the decline of wild coho salmon.

The public relies upon state government to protect common property resources such as salmonids. State law is clear that the purpose of ODFW is to prevent the serious depletion of indigenous species, and, in fact it is the "overriding obligation" of the agency. In the last 83 years the pattern of decline has been set and the logical outcome is the eventual extinction of wild native coho salmon and the public benefits they provide.

To change this institutional pattern requires leadership and a strong commitment to conservation. ODFW cannot do this task on its own. It requires steadfast commitment from the Oregon Legislature and the Governor as well, for ODFW does not have authority over the land and water management agencies that control the health and productivity of salmonid habitat. In order for all responsible parties to take the necessary action depends upon a public that insists that it be so. The salmon will tell us if we are being effective; right now they are making the unambiguous statement that we are failing.

Bill Bakke

Farewell to Marmot Dam
by Greg Nolan, NFS Intern

Just over a century ago, the Sandy River was an untamed, free-flowing stream flourishing with wild steelhead, chinook and coho salmon. Oregonians fished and relaxed along the stream with their families on summer days. Continued migration to Portland brought an increase in population. As the population and economy grew, so did the demand for power and electricity. The Mt. Hood Company built the Bull Run Powerhouse in 1906 in order to draw power from the Little Sandy River. In 1913, Marmot Dam was constructed out of wood as a major extension of the Bull Run Hydro Project. The dam stood approximately 50 feet high and became the main power supply for the Bull Run Powerhouse. In 1989, the wooden dam was replaced with concrete.

The Sandy River was once home to what many believe to be one of the strongest coho salmon and winter steelhead runs on the West Coast. Marmot Dam was a major contributor to the wild fish's decrease in numbers; it wasn't until 1951 that fish screens were added to assist the migration of wild winter steelhead and coho salmon. Wild salmon and steelhead continue to return to the Sandy River, although their numbers have dropped drastically—so significantly that they are now listed as endangered species under the U.S. Endangered Species Act.

Marmot Dam is no longer cost effective; it brings in far less power than other major dams within the region. PGE is constructing an environmentally friendly wind power farm in Sherman County (Klondike II and Biglow Canyon). Accordingly, in 1999 PGE decided to decommission Marmot and schedule it for demolition, with benefits to both people and wildlife as PGE is donating approximately 1,500 acres to the Western Rivers Conservancy and returning the water rights to the State of Oregon, which will help to ensure maximum benefits for people and salmonids.

In early July, construction crews began to build a cofferdam compiled mainly of sediment and soil just behind Marmot Dam in order to provide a dry and safe work area for the demolition crew. The top of Marmot was loosened by a synchronized explosion, and demolition will be done by large pneumatic hammers connected to front-end loaders. After the destruction of Marmot Dam is complete, construction crews will extend the temporary sediment dam across the Sandy to block off the bypass channel. PGE is hoping that the high water flows in the fall will wash the temporary earthen dam downstream, returning the Sandy to a free flowing river.

Of major concern is that the thousands of tons of sediment, which has gathered against Marmot Dam over the past century, will wash downstream and smother everything in its path, including plant life and a whole brood year of wild fall salmon. NFS requested that a fall chinook rescue program be initiated in the fall of 2007. A small collection of spawners will attempt to avoid loss of the entire brood year. However, it is believed that this collection is perhaps too small. Other concerns include the temporary cofferdam and sediment behind it. There is a chance that the sediment will not be washed away, which could create a migration barrier to fish. It is also possible that the sediment from both Marmot Dam and the temporary dams may block the Sandy River from flowing freely, leading to local flooding and property damage. Plans exist to deal with these problems; however, these solutions could be dangerous and risky to both the workers and fish. Marmot Dam is the largest dam removal project in the West, and much will be learned about how to do it while protecting established fish and property values.

New Distribution Method For Newsletter

With continuing concern for environmental sustainability, as well as using our members' donations wisely, the Native Fish Society will be mailing a printed, hard copy of the newsletter *only* to those members who specifically request it.

"Starting with the Winter issue, the NFS Newsletter will be e-mailed to all of our members and will still be available on-line at the NFS website," said Bill Bakke, Executive Director. "We need to be true to our overall stewardship of the environment as well as responsible to our members and the donations they trust us with."

If you still want to receive a printed copy in the mail, please call Tim at 503-977-3133 or e-mail him at tim@nativefishsociety.org. The change will begin with the Winter issue, so be sure to let us know if you still want to receive a hard copy in the mail.

Nestucca Steelhead Management
By Les Helgeson

Nestucca steelhead have faced many challenges for survival. The first recorded natural disaster occurred in 1860. A devastating wildfire burned over 95% of existing old growth forest along the mid/north coast, leaving a barren and unforgiving landscape. Fire once again decimated the Nestucca watershed in 1911. In the 1920's, settlers arrived in pursuit of gold and cinnabar, which marked the beginning of instream habitat destruction in earnest.

These new arrivals also initiated the first efforts at fish stocking, particularly cutthroat trout above natural barriers. Cedar Creek hatchery opened in 1914 and was purchased by the state in 1925. Release records are not available prior to 1948 when 344,000 fry/fingerlings were released, but winter steelhead may have been released prior to then.

Another fish stocking project was implemented in the 1920's when a Portland fishing club acquired rights to Meadow Lake in the Nestucca headwaters. The lower end of the large wetland was dammed with a timber structure, creating a shallow lake ideal for planting brown trout. The lake was a popular destination for wealthy Portland anglers until the Columbus Day storm caused the aging dam to break in 1962. The massive flood that ensued during high water conditions destroyed much of the mainstem salmonid habitat of the Nestucca.

1965 marked the beginning of an introduced run of summer steelhead with the release of 50,000 smolts in addition to 99,000 winters. The rearing of fry to smolts in coastal hatcheries at this time was made possible by the development of pelletized food. Hatcheries became the focus of ODFW's management strategy with promises of robust and virtually inexhaustible fisheries.

At about the same time forestry practices changed, with clear-cut logging becoming the norm. By the 1970's concern that streamside harvest was adversely affecting fish populations caused a token Forest Practices Act to become law. Unfortunately, the act did little to protect critical ecosystem functions, and streamside logging, along with expanding agricultural activities, continued to extract a toll on salmonids. In response, ODFW increased its smolt stocking program to nearly 150,000 winter steelhead and 100,000 summers while encouraging anglers and industrial operators to implement stream cleaning activities to facilitate fish passage. Instream structure was eliminated with the result being a steady decline in wild salmonid production and nearly complete reliance on hatchery programs to sustain existing fisheries.

The early 1990's marked a record low for wild Nestucca winter steelhead. The wild population was thought to have plummeted to roughly 400 fish; anecdotal observations indicated this was probably not incorrect. Mounting public pressure from conservation groups, along with statewide budget woes, led to significant angling regulation changes and modifications to hatchery practices. The Department was forced to initiate a fin-clip only rule, thereby protecting wild steelhead from harvest. Substantial trout stocking was eliminated, along with a change in take restrictions from six to 12 inches, thereby eliminating the harvest of numerous wild steelhead and sea-run cutthroat pre-smolts. Wildlife officers had observed that nearly 40% of the catch they routinely checked was juvenile steelhead. A catch and release rule was established for trout in order to protect decimated sea-run cutthroat populations.

Concurrently, ODFW adopted a Wild Fish Management Policy thanks to steadfast efforts by Bill Bakke. One important outcome of this policy resulted in the reduction of hatchery smolt releases to 100,000 winter steelhead and 70,000 summers. Release sites were also changed from system wide to lower river only. The stage was set for a gradual recovery of wild steelhead.

Two other important developments contributed to a dramatic turnaround for the Nestucca wild steelhead population. First, the so-called Forest Plan afforded critical protection for all salmonid habitats on Federal lands. Two-thirds of the Nestucca watershed is under Forest Service and Bureau of Land Management ownership.

Both agencies have engaged in many habitat recovery projects, significantly diminishing harmful timber harvest activities. In addition, the State of Oregon adopted the Oregon Plan which, although coho-centric, provided incentives for voluntary salmonid habitat recovery efforts on private lands.

By 2001 it was apparent that collective efforts by the public to ensure recovery of the wild Nestucca steelhead population were surprisingly successful. A winter steelhead redd survey revealed a spawning population estimate of 10,152 adults (Susac and Jacobs, 2001). The survey was done in response to concerns about a new hatchery broodstock program, which proposed to use wild fish as a panacea for perceived deficiencies in the existing stock of Alsea River origin. The new program was touted by ODFW as a way to expand fishing opportunities by extending the seasonal run of hatchery fish from three weeks to three months or more.

The Department was also convinced that it was better to have hatchery stock of wild origin interbreeding with wild fish, although the 2001 redd survey revealed an existing stray rate of only four percent—well within wild fish management guidelines. The redd survey was implemented as the result of a successful legal appeal, given the Department had no idea what the status of the existing population was when proposing the broodstock concept. Were there even enough adults to "mine" for broodstock? What would the biological and ecological implications be? What impacts, if any, would occur to the fishery? Questions remained unanswered as the Department transitioned to its latest and greatest cure since advocating stream cleaning projects in the 1970's.

In 2005, winter steelhead redd surveys revealed an estimated spawning population decline to 4,190 adults (Susac, 2005). Reports for 2006 and 2007 are not yet available but informal communication with ODFW indicates continued lackluster performance. It may be reasonable to conclude that the removal of 73 steelhead for brood purposes has had negligible impact on overall population status although the release of wild origin smolts has become cause for concern. Studies by Hulett et al (2004) indicate a substantial increase in residualism, thereby increasing instream predation on all salmonids including wild juvenile steelhead that emerge in early summer. Residual smolts are undoubtedly having some impact on wild fish populations. Wild fish are not adapted to the existing hatchery environment so it is unlikely that this experimental broodstock program will be successful without major (and expensive) changes to hatchery structures themselves.

Another significant impact to wild steelhead is that a handful of unscrupulous guides actively promoted fishing spawning redds in the mainstem, retaining "keeper" broodstock fish. Spawning surveys reveal that roughly 40% of steelhead spawning occurs in the mainstem Nestucca. ODFW also instituted a "net and release" program in many Nestucca tributaries in order to estimate stray rates, thus subjecting spawning wild steelhead to additional handling stress.

While the Department denies the broodstock program is having a significant impact on wild fish populations, anglers have since seen a particularly significant decline in their catch of hatchery fish. As part of the original appeal settlement, ODFW agreed to implement a statistical creel survey in order to compare the performance of the existing Alsea stock vs. the wild broodstock component (each 50% of releases). Hatchery returns (unpublished ODFW data, January 2005) have also proved to be a valuable yardstick for comparison. It is clear that there are overwhelming problems with the broodstock fish.

A healthy wild steelhead population is comprised of a diverse pedigree with juveniles rearing in fresh water for anywhere from two to five years (NOAA, 1996, status report). Alternatively, existing hatchery fish have been bred and conditioned to rear in fresh water for one year much as cattle are bred. One would expect a healthy wild broodstock to perform poorly in an antiquated hatchery environment, and this is what appears to be occurring with the Nestucca winter steelhead.

As an example, for the 2004 return year 2,082 Alsea stock returned (post harvest) to the Cedar Creek Hatchery. This compares with an average hatchery return of 2,653 adults from 2000-2004. In 2005, the first year of broodstock returns (from the release of 50,000 Alsea and 50,000 broodstock smolts) the Alsea component plummeted to 730 fish and only 31 broodstock returns were collected. The same proportion is reflected in unpublished creel surveys while the catch (and release) of wild fish is overwhelming in comparison.

Creel and return data since 2005 have proven difficult to obtain. ODFW has yet to have the raw data statistically analyzed. While absolute numbers may change as a result of the analysis, it is unlikely the proportional returns will change.

NATIVE FISH SOCIETY

Fighting for the Future of Native Fish

PO Box 19570
Portland, OR 97280
www.nativefish society.org

Executive Director:
Bill Bakke
bmbakke@qwest.net
(503) 977-0287

Administrative Assistant:
Tim Manion
tim@nativefish society.org
(503) 977-3133

Newsletter Editor:
Joyce Sherman
rivergraphics@ spiritone.com
(503) 244-4109

2007 "Fish-A-Thon" A Huge Success

A small, but enthusiastic group of anglers entered the 2007 Fish-A-Thon last June with over $2,800 in pledges to NFS. Jon Bowers collected the most, with over $1,500 in collected pledges, and Andy Vershaw came in second with over $750. The 2007 Fish-A-Thon took on national proportions with participants from Virginia (Kenyon Larson) and Washington (Jeff Westerlund) bringing in over $400 combined.

The Fish-A-Thon asked participants to register for the event in advance and then collect pledges for NFS. Between June 1-July 1, within a 48 hour window, participants caught and released as many native fish as they could. Participants asked their friends, family and co-workers to pledge a donation to NFS either on a fixed or per-species basis, or specialty pledges, including pledges for size of fish, numbers of hours fished, or number of steelhead spawning pairs photographed, to name a few. Any combination of pledge types could be used, including a cap on the total pledge. Anyone who pledged $50 or more had the option of joining the NFS.

"I had a terrific time with this fish-a-thon," Jeff Westerlund said. "I didn't gather as many pledges as I had hoped but am hoping to do better next year! It certainly seems worthwhile on my end."

The awards banquet was held August 8. With only five participants this year bringing in almost $3,000 from 85 individual anglers, the Fish-A-Thon shows the potential for being even more successful in 2008.

Native Fish Society
PO Box 19570
Portland, OR 97280

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