



THE OSPREY

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Federation of Fly Fishers



Dedicated to the Preservation of Wild Steelhead • Issue No. 57 • MAY 2007

Fish Out of Water Pacific Northwest coldwater fish on the hot seat

by James Schroeder and Patty Glick

— National Wildlife Federation —

Global warming and its potentially dire implications, at long last, seem to have reached the consciousness of the American public. Unlike much of the public, government officials, and politicians, fish conservationists have been concerned for some time about the impacts of global warming on salmon, steelhead and other coldwater fish species.

In this article, James Schroeder, Senior Environmental Policy Specialist, and Patty Glick, Senior Global Warming Specialist, both of the National Wildlife Federation, give us the lowdown on what the threats of a warmer world are to coldwater fish.

Things are heating up for the salmon and steelhead of the Pacific Northwest. Across the region, elevated water temperatures are the single greatest reason for rivers to be listed as “impaired” under the federal Clean Water Act. The causes for this impairment are many. Dams, degraded riparian vegetation, water diversions, development pressures, and other

problems have altered channels and streamflows and are causing our rivers to overheat. Add the predictions from leading climatologists that average temperatures in the region will continue to rise due to human-enhanced glob-

Without a concerted effort to stabilize the climate and restore freshwater habitat, steelhead and salmon will be severely tested.

al warming, and it is not hard to realize that our coldwater fish are in trouble. Without a concerted effort on the part of all stakeholders to work towards a stable climate and to restore degraded freshwater, estuarine, and marine habitats, the resiliency of the salmon

and steelhead of the Pacific Northwest will be severely tested in the decades to come.

Water temperatures are among the most important factors affecting the health of coldwater fish. When rivers and streams get too warm, salmon, steelhead, and trout experience slower growth rates and a greater susceptibility to toxins, parasites, and disease. Areas where the average daily temperature in the warmest summer months is greater than 69.8 degrees Fahrenheit have been found to be the “thermal limit” for most adult salmon, steelhead, and trout species. Research suggests that if global warming trends continue, a temperature increase of 3 degrees Fahrenheit could cause up to 20 percent of the Columbia River Basin and the coastal watersheds of Washington and Oregon to have average August temperatures above 70 degrees Fahrenheit – or above this thermal limit. Scientists can determine this thermal limit for coldwater fish based on average daily air tempera-

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FROM THE PERCH — EDITOR'S MESSAGE

Hot Times Ahead

by Jim Yuskavitch

The hot, sunny days of summer are fast approaching. Here in Central Oregon, where I am based, with thermometer nearing 90 degrees as I write this, those days are already here. It's a time of year that most people look forward to, along with the pleasant weather it brings, as families plan their summer vacations to beach or theme park.

While summer is a favorite time of year for the human species, for fish, especially such coldwater species as steelhead, salmon and trout, summer can be a challenging season to survive. As mountain snowpacks finish their spring melt off, streamflows in the lowlands begin to drop. And as water levels decline, water temperatures goes up. But nature has equipped these fish with survival strategies to cope. Deep pools in river and streams provide havens, while overhanging vegetation casts a cooling shade on the water. When things get too hot, the fish may temporarily move out, either to cooler water upstream at higher elevations or downstream to a larger river with more water flowing in it. These are just some of the ways various species of salmonids survived the trials of the hot season. But things are changing.

As the Earth's climate warms over the decades ahead, caused substantially by human activities and specifically by the release of excessive amounts of carbon dioxide into the atmosphere, coldwater fish species will begin to feel the pinch. Leaner snowpack that melts off more quickly will furnish ever dwindling amounts of water critical to keeping streams at survivable levels and warmer temperatures for fish may become the norm. Even more ominous is the fact that human activities that have damaged river and watershed functions and health will make it that much more difficult for fish to effectively utilize their evolutionary survival strategies.

But, as the authors of this issue's cover story "Fish Out of Water" write, it is not yet too late — there are still many things we can do, ranging from reducing greenhouse gas emissions to restoring habitat. The time for arguing about Global Warming is over. Now it's time for action.



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Back issues of *The Osprey* are now available for downloading from the Federation of Fly Fishers' website.

Available beginning with Issue No. 1, published in January 1987, this archive will prove invaluable for researchers, natural resource managers, wild fish advocates and anyone else with an interest in wild steelhead and salmon.

The back issues may be accessed at:

www.fedflyfishers.org/conOsprey.php

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It has come to our attention that we neglected to mention a number of donors to *The Osprey* in our 2006 Honors List, published in the January 2006 issue. They are:

- The Steamboaters \$500
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Our deepest thanks for your contributions and sincere apologies for our omission.

THE OSPREY



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Submissions may be made electronically or by mail.

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The Federation of Fly Fishers (FFF) supports conservation of all fish in all waters. FFF has a long standing commitment to solving fisheries problems at the grass roots. By charter and inclination, FFF is organized from the bottom up; each of its 360+ clubs, all over North America and the world, is a unique and self-directed group. The grass roots focus reflects the reality that most fisheries solutions must come at that local level.



Global Warming: Are Dams Green?

by Bill Redman

— Steelhead Committee —

In the early spring of this year, I watched a global warming special on the Discovery Channel by Tom Friedman, a New York Times columnist and Pulitzer Prize winning author of *The World Is Flat*. Friedman writes with exceptional depth and breadth, usually about international politics and economics.

This was his first major effort on this subject that I have seen. He interviewed a number of scientists, political leaders, and people involved in various aspects of the energy industry. He discussed climate change; its causes (carbon dioxide emissions into the atmosphere driven by accelerating increases in fossil fuel based energy production); the effects on international affairs and economics; a number of important actions that in total can slow, stop, and maybe even reverse this trend; and how business and government working together can pull it off.

On April 15th, Friedman also wrote extensively in *The New York Times* about global warming. "I want to rename 'green.' I want to rename it geostrategic, geopolitical, geoeconomic, capitalistic and patriotic," he wrote. The rest of the article is all about how the attack on warming can play out, the forces working against solving the problem, and the factors that can breed success.

With the exception of one excerpt in the TV special, I thought both presentations were on the money, tour de force journalism!

The red flag came up when he was talking about the size and location of a huge new Google datacenter that processes the many millions of hits that Google gets every day. Even with current micro technology, datacenters require a lot of electric power. So it is not surprising that the Google processing center is located by one of the lower Columbia River dams, The Dalles Dam as I recall. Google gets its low cost power from the dam by way of the Booneville Power Administration.

This is power that went to an aluminum smelter before the smelter was closed down. Friedman extolled the fact that this hydro power is provided with no carbon dioxide emissions into the atmosphere. He didn't say a word about the environmental downside of dams, especially the impacts on steelhead and salmon stocks from the staircase of dams and associated reservoirs in the Columbia/Snake basin.

This excerpt reminded me of a recent exchange in Seattle. The Seattle City

**Green power
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viewed in the context
of its environmental
consequences.**

Council laid out a plan to reduce global warming by classifying each source of power as green or not, and then setting targets for change. Power from the Columbia system dams was classified as not green, primarily because of the impacts on fish and wildlife. Good on them, I thought. The Seattle Times, which has never quite owned up to the impacts of the dams on the Columbia's sea-run fish stocks, responded with editorial outrage, claiming that hydropower should be classified as green; the reason, no carbon dioxide emissions.

I don't mean to downplay the global warming issue. It is one of the critical issues of our time, one that *The Osprey* first covered in the January 2005 issue, when Dr. Nathan Mantua and Dr. William Pearcy laid out the severe impacts to be expected from climate change on steelhead stocks.

The point is green power generation (in this case hydropower) must be viewed in the context of an environmental consequence of each action. The downside of the dams on migratory salmonid stocks is enormous, and the more dams in a single river, the greater the cumulative impact.

My sense is that the conservation and fishing community has been making some headway slowly on the four lower Snake River dams. However, we should anticipate that the power utilities, large power users, and bargers will push hard on the "reduce global warming with dams" argument. We need to stay the course and respond. New information keeps coming on the true cost of the dams. For example, Lewiston, Idaho is already starting to worry about the possibility that the sediments filling the pool behind Lower Granite Dam will push the water over the top of the levees between Lewiston and the pool.

The climate change debate will surely spread to other watersheds. The four dams on California's Klamath River being targeted for removal could be the next green hydropower battleground. Stay tuned.

P.S. The day after I submitted my first draft of this article, the Sunday, May 13 issue of *The New York Times* published an article (page 20 of the front section), pointing out that cracks have begun to appear among the pro dam forces and giving a balanced view of the arguments pro and con on breaching the four lower Snake River dams. It's worth looking up on the web at:

<http://www.nytimes.com/2007/05/13/us/13dam.html?hp>.



Fish out of Water

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tures because air and water temperatures are correlated. Based on recent global warming projections, this 3 degree rise in temperature is possible by the 2040s.

It is important to realize, however, that global warming doesn't just mean rising air and water temperatures. Scientists project that, unless we significantly reduce the carbon emissions that are causing global warming, the Pacific Northwest could also face significantly less winter snow accumulation, earlier peak spring stream flows, and lower summer stream flows — all within a few decades. Overall, scientists believe that global warming trends will cause a substantial decline in snow accumulation in the Northwest in the coming decades, especially in the warmer parts of the Northwest such as the west slopes of the Cascades, the Olympics, and the coastal range. Already, peak snow accumulation and snowmelt-derived streamflow across the region are occurring several weeks earlier than in past decades. With continued warming, climate models predict the Pacific Northwest could see an additional 50 percent decline in average snowpack in the next 45 to 75 years, significantly reducing the primary source of water for the region during the summer months, and causing extreme low flows, if not drought, in our major rivers. Conditions resulting from this change in precipitation pattern are likely to be more winter flooding as rain falls instead of snow, earlier spring snowmelt, earlier peak streamflows, lower summer stream flows, and higher average summer water temperatures.

Consider the impact of all these factors on coldwater fish.

As adult salmon and steelhead swim upstream toward their spawning grounds, lower-than-normal summer flows would make their rivers and streams harder to negotiate. Small blockages or falls may yield miles of upstream spawning habitat inaccessible, where, in the past, adequate flows allowed full passage. Strandings could become more common. Warmer water temperatures may stress returning spawners, reducing their fecundity.

The productivity of high quality spawning grounds could plummet. Excessively high flows in winter, which can result from rapid melting of snowpack, increased rain-on-snow events, or increased rainfall, can scour the gravel beds that the fish use as nesting sites, washing away the incubating eggs. Too little water after spawning, a real problem for spring and summer runs, can destroy eggs as well. Outmigrating juvenile fish will have a harder time heading out to the ocean as the timing of peak flows and spring freshets is changed. Once smolts arrive in our rivers' estuaries, possibly weeks earlier than usual, food availability may be scarce if estuarine food-web processes are not in sync with upland watershed processes.

The worst hit will be fish in rivers that already face significant challenges, such as those in the Columbia, Snake, Deschutes and Klamath basins. People have damaged or altered the natural function of many of our rivers so severely that their natural inhabitants are struggling to survive. Many stocks of salmon and steelhead that once flourished in these rivers are already extinct or so depleted that they are near extinction. Global warming, and the increased stressors that accompany our slowly warming region, will exacerbate the many human-caused impacts to these imperiled populations.

In these heavily altered systems, groundwater withdrawals and water diversions for irrigation, urban consumption, and hydroelectric power generation have reduced total annual streamflows and lessened the seasonal variability of flows. Dams and reservoirs provide continual water supply for electricity generation and irrigation, but they also disrupt flow patterns in the rivers and create warmer water conditions harmful to coldwater fish. Dams also present significant obstacles

for anadromous fish passage and often block access to high quality spawning grounds. Throughout the Columbia and Snake River system, an estimated 55 percent of the total area and 33 percent of the total stream miles are no longer accessible to anadromous salmonids because of the prevalence of hydroelectric dams. The Columbia River, once the most productive salmon basin in the world, is also the most hydroelectrically developed river system in the world. Not surprisingly, fish and dams do not always mix well and the Columbia has seen a steady decline in its salmon and steelhead in the past century. Today, thirteen of the seventeen populations of Columbia River salmonids are listed as threatened or endangered under the federal Endangered Species Act. Four main dams on the lower Snake River have been identified as the primary factor in the decline of salmon in that basin. Today, Snake River coho salmon are extinct, and sockeye, Chinook, and steelhead are listed as threatened or endangered.

The Klamath River was once the third most productive salmon and steelhead river on the Pacific coast. However, due to habitat loss from agricultural conversion and dams, the Klamath fall Chinook have declined to less than 8 percent of historic numbers, while coho have slipped to just 1 to 2 percent of historic populations, prompting their listing as endangered.



A warmer climate will leave less, and warmer, water for fish and people alike. Photograph by Jim Yuskavitch

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The Deschutes River in Oregon is renowned for its wild rainbow trout, called “redsidés” because of their unusually prominent red stripe. The Deschutes is susceptible to high temperatures and low summer flows that are severely reduced by drawdowns for irrigation. Dam development has also restricted the ability of wild steelhead, Chinook, and sockeye to spawn in the upper reaches of the river. Continued demands on water for irrigation, hydroelectric dams, and altered flows have plagued the Klamath and Deschutes in recent years. Along with the heavily dammed Columbia and Snake rivers, the Klamath and Deschutes rivers will likely see pressures on their salmon only increase with continued global warming.

What is bad for cold-water fish will be bad for other wildlife — and people, too. According to the U.S. Fish and Wildlife Service (FWS), nearly two million people flock to the clean, cold rivers and lakes in Oregon, Washington and Idaho each year to fish. In 2001, these anglers spent \$1.76 billion on equipment, travel costs, and other fishing-related goods and services, supporting tens of thousands of jobs.

The continuing decline of wild salmon, steelhead, and trout in the Northwest is a sign that the region’s rivers are in trouble. In general, strategies to protect the fish have been reactive rather than proactive, focusing on problems once they have become critical instead of looking for viable solutions at the early warning signs. Solving these serious problems now calls for a forward-looking, holistic plan, but success is possible if we seize the opportunities at hand. We should redouble efforts to restore the most degraded rivers and bring wild salmon, steelhead, and trout back to healthy populations by removing unnecessary and harmful dams, restoring riparian areas, protecting and restoring instream flows, and preserving the genetic diversity among species. Specifically, such a strategy should strive to restore free-flowing rivers and estuaries throughout the Pacific Northwest so that our iconic salmon, steelhead and trout have the best chance at surviving in the face of

global warming.

Additionally, we also must ensure that currently healthy rivers remain that way, since it is much harder to restore natural systems than it is to protect their integrity. Pristine rivers and river reaches, such as the Queets, Hoh, and upper Skagit rivers in Washington; the Sandy River in Oregon; and the Salmon River in Idaho, offer some of the best remaining habitat for fish and wildlife. Protection of this habitat will be critical while the region works to restore lost and degraded habitat elsewhere. The looming threat of global warming provides

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added impetus for the protections that we already know are necessary to ensure healthy, resilient species and habitat.

Furthermore, the region and nation can and must do more to minimize the impact of global warming altogether by reducing the pollution that is causing it. Numerous studies show that we can significantly lower global warming pollution using readily available technologies to improve energy efficiency, generate electricity with environmentally-sustainable resources, and provide cleaner transportation options. There are also opportunities to protect and enhance the ability of natural systems such as forests and wetlands to capture and store carbon dioxide from the atmosphere, while at the same time improving habitat for fish and wildlife.

Together, these strategies will take the region’s prized fish, wildlife and people off the hot seat, and help ensure our children and theirs will have the same opportunities to hunt, fish, and otherwise enjoy the natural world that we have grown to know and love.

Five things you can do to fight global warming

1. Conserve water by turning on the tap only when you need it and converting to water-efficient faucets and shower heads.

2. Improve the overall energy efficiency of your home through actions such as improving insulation, reducing unnecessary energy usage, replacing the most frequently used light bulbs in your house with energy-saving compact fluorescent bulbs.

3. Meet your transportation requirements by considering the cleanest, most efficient automotive model, such as a hybrid vehicle, that suits your needs; use public transportation when possible; and regularly check your car’s tire pressure — poorly inflated tires waste gas and cause extra pollution.

4. Volunteer with a local conservation group to help restore rivers and other habitats, including replanting native trees.

5. Contact your representative in Congress and encourage government to enact policies that reduce global warming pollution and promote a clean, sustainable energy future. Your vote counts!

Remember: With a long-term vision and a commitment to seeking solutions, we can protect the fish, the wildlife, and the natural heritage of the Pacific Northwest.

For more information about global warming and Pacific Northwest rivers and fish, read *Fish Out of Water* at www.nwf.org/fishoutofwater, and for more information on these and other strategies to protect wildlife for our children’s future, visit www.nwf.org/globalwarming.





Two Management Strategies for Washington Steelhead Compared

by Richard Burge

— *Wild Steelhead Coalition* —

In this special report, Richard Burge, of the Wild Steelhead Coalition, compares and analyzes steelhead management plans, one developed by the Coalition and the other by Washington Department of Fish and Wildlife. He is retired from the Washington Department of Fish and Wildlife and co-author of the "The Status of Wild Steelhead and Their Management in Western Washington: Strategies for Conservation and Recreation" with Nate Mantua, Jack Berryman and Larry Doyle

You can learn more about the Wild Steelhead Coalition on their Web site at www.wildsteelheadcoalition.com.

On April 6, 2007, the Washington Department of Fish & Wildlife (WDFW) released a draft steelhead management plan, "Statewide Steelhead Plan, Volume 1. Statewide Policies, Strategies and Actions" to an ad hoc committee of stakeholders for review. In May 2006 the Wild Steelhead Coalition (Coalition) made available its white paper, "Status of Wild Steelhead and their Management in Western Washington: *Strategies for Conservation and Recreation*." This article is a review and comparison of the management strategies contained in those two documents, with recommendations for improvements in the clarity and the conservation measures in the WDFW plan.

The Present WDFW Management Program

WDFW and the Washington Indian Tribes have been wedded to an aggressive and often failing management policy of Maximum Sustaining Harvest (MSH) for wild salmonids since a few years after the Boldt decision of 1974. Since 1985, MSH management models used for wild steelhead have been

based on several fundamental flaws in the MSH concepts including the invalid assumptions of a static environment, inaccurate estimates of the upcoming run sizes, and the theory of compensation: an expectation that productivity will improve and repopulate rivers when the spawning stock is low that has not played out for many severely depleted populations in recent decades. Under MSH guidelines, life history and genetic diversity and spatial (river) distribution have too often been ignored in favor of

Harvest rates imposed on Washington steelhead stocks by an aggressive management system have trumped conservation concerns.

absolute modeled numbers that have set minimal spawner escapement needs and maximized the number of harvestable fish.

The Puget Sound and coastal Washington salmon and steelhead hatchery system has more than 100 facilities operated by the state and tribes. The program has been more concerned with producing salmon and steelhead for harvest than on the harm the hatchery fish can do to wild fish genetics and production.

In general, the harvest rates imposed on Washington steelhead stocks by an aggressive management system have trumped conservation concerns and spawner needs, and the result has been devastating. Five of the seven populations, called Distinct Population

Segments (DPSs) by NOAA Fisheries, of wild steelhead in Washington are now listed as Threatened under the Endangered Species Act (ESA) by NOAA Fisheries. The remaining two populations, Olympic Peninsula and Southwest Washington DPSs, are classified by the state as healthy even though their abundances are far below historical levels. These stocks are often compromised by the state giving the coastal tribes a fair portion of the sport 50% share and agreeing to escapement goals lower than those recommended by WDFW biologists in 1985.

In 2002, sport fishers, alarmed at the disappearing wild runs, began a series of efforts to get the Washington Fish and Wildlife Commission (Commission) to eliminate the sport harvest of wild steelhead statewide to help prevent further declines of these runs. The Commission, after holding a well-attended hearing on steelhead, responded by reducing the season limit from a potential of 30 wild fish per season to five, a temporary placebo thrown to a concerned sport community. WDFW records later revealed that only 1% of the sport fishers harvested more than five wild fish, indicating that the reduced limit would have little effect on the total harvest.

In 2004, after seeing data on the declining and depleted wild steelhead runs presented to them by the Coalition, the Commission showed a renewed concern for wild steelhead stocks and imposed a two-year moratorium on the harvest of wild steelhead. Politics soon stirred the pot with harvest supporters claiming foul play to the adoption of the harvest moratorium, and the Commission held another well-attended hearing, with support overwhelmingly in favor of the moratorium. The Commission eventually voted to eliminate the moratorium and limit the killing of wild steelhead to

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one fish per angler per year.

The WDFW Steelhead Science Paper

WDFW recognized it could no longer ignore the declining wild steelhead runs or the sport fishers' concerns and announced in early 2004 that it would write a new Steelhead Management Plan. The plan was to be preceded by a science paper (the draft titled "*Oncorhynchus mykiss: Assessment of Washington State's Anadromous Populations and Programs*") that would "lay the foundation for the development of improved management plans...that assure the productivity of Washington's steelhead for future generations." That science paper, after more than two years in writing and undergoing three drafts with critical reviews by stakeholders, was put on the back burner when WDFW decided in mid-2006 that it was past time to begin the writing of its new plans. WDFW was especially interested in completing a new Puget Sound Regional Plan to avoid an upcoming ESA listing by convincing NOAA Fisheries that Puget Sound Steelhead were already recovering. However, Puget Sound Steelhead were listed as Threatened on May 7, 2007.

WDFW Statewide and Regional Management Plans

WDFW has prepared a draft Statewide Steelhead Plan, an umbrella document that will go through the State Environmental Policy Act process and be completed as an Environmental Impact Statement (EIS). This Plan will guide the development of both Regional and Watershed Plans. Watershed Plans will be prepared over the next five years, with those in ESA listed or State classified critical areas given first priority and completed within two years. When all watershed plans for a WDFW Region are completed, they will be rolled up as the Regional Plan. When completed, the statewide plan and regional plans will become the Department's steelhead management policies and strategies and difficult to change unless: (1) a change is request-

ed by the Commission, (2) new major management science becomes available, or (3) a policy decision is made by the WDFW Director.

Wild Steelhead Coalition Plan

The Coalition's publication included a status review of the wild stocks in western Washington Rivers and a review of the scientific and modeling problems associated with MSH theory and management. The publication included an adaptive wild steelhead management plan designed to recover depleted stocks, rebuild stocks to their

and restoration of these stocks to healthy levels." The Department's section on fishery management starts with the following Policy Statement: "Fisheries will be managed to promote achievement of region-wide conservation and recovery goals through the protection and restoration of the diversity, spatial structure, abundance and productivity of wild steelhead stocks... Within the constraints of the natural production policy and tribal harvest-sharing obligations, the Department will strive to provide diverse recreational fishing opportunities."



An angler casts for winter run steelhead on Washington's Skykomish River. Photograph by Jim Yuskavitch.

potential abundance levels and provide sustained recreational fishing opportunities.

To provide a comparison of these two plans, I have elected to use the following categories: Fisheries/Harvest Management; Diversity; Hatcheries; and Habitat.

Fisheries/Harvest Management

WDFW Plan:

The WDFW Natural Production Policy states that "*Steelhead management shall place the highest priority on the protection of wild steelhead stocks*

For wild stocks important for recovery and conservation, escapement objectives will follow these guidelines: "For ESA-listed and State classified Critical or Depressed stocks, WDFW will promote a trend of increasing numbers of wild spawning steelhead through a series of interim, increasing escapement objectives. For state Healthy stocks, WDFW will maintain stocks with an escapement objective at least, if not more than, the number of wild spawners associated with Maximum Sustained Harvest." The Department will further account for all sources of fishery related mortality,

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provide diverse fishing opportunities (harvest and catch and release) and adaptively manage fisheries to assure plans are responsive to variable productivity, regional recovery and conservation goals, and that economic and cultural benefits are maximized.

Coalition Plan: The Coalition suggested that wild steelhead need a more conservative management policy than MSH to allow stocks to recover and sustain themselves under the many management, political, biological and environmental problems and variables of the 21st century. The Coalition stated that: “(1) unpredictable atmospheric and oceanic cycles can produce large swings in productivity that can not be forecast; (2) impending run sizes can not be accurately determined; (3) the theory of compensation (high replacement rates at low stock levels) is flawed; (4) lost diversity will take multiple generations to recover; and (5) riverine nutrient levels have been greatly reduced.” These problems are all large obstacles to the recovery and maintenance of healthy runs using MSH models.

The Coalition therefore developed an adaptive management program by modifying the usage of MSH parameters and developing a Harvest Impact Model with the following criteria:

1. “The total run size and the pre-season planning should include all harvest impacts (harvest, wild steelhead release (WSR) mortality, net drop out mortalities, marine mammal take from nets, illegal harvest estimates, etc). Allow a maximum 10% total sport and tribal harvest impact at run levels below 150% of the escapement goal.

2. Pre-season run forecasts should be adjusted downward based on the historical forecast error for each specific stock. No fishery, directed or incidental, should be planned or allowed when MSH-defined spawner escapement is projected to fall below 100% of the goal.

3. For runs predicted between 100% and 120% of the MSH defined escapement goal, allow only Wild Steelhead Release (WSR) fisheries and selective

gear.

4. For runs predicted between 120% and 150% of the MSH defined escapement goal, allow WSR sport fisheries.

5. For run-sizes predicted to be above 150% of the escapement goal, allow a cumulative 50% harvest impact of the segment of the run above 150%.

6. Allow only barbless hooks in all sport fisheries to decrease the mortality rate of hooked and released fish.”

The Coalition further emphasized offering fisheries that focus on Maximum Sustained Recreation (MSR) benefits rather than Maximum

Wild steelhead may recover with the WDFW plan during high productivity periods but will quickly decline when productivity is low.

Sustained Harvest for wild steelhead. This will maximize angler opportunities to fish for, rather than shorter opportunities to harvest, wild steelhead. It will further increase the abundance of wild spawners and help buffer stocks against downturns in productivity.

Recommendation: The WDFW Plan has taken a major step forward by stating that natural production is the highest priority of steelhead management. However, the Coalition's Plan comes much closer to fulfilling this new priority by recommending an escapement/harvest plan that is considerably more adaptive and conservative than MSH management.

Wild steelhead may recover with the WDFW plan during periods of high productivity but will also quickly decline in abundance during low productivity cycles. MSH harvest planning is designed to remove all fish

above the defined escapement goal, and the stock is set up to decline quickly below those minimum requirements when productivity falls below replacement. Because marine survival appears to follow 10 to 20 year cycles, harvest management at MSH escapement goals, or even at levels that are 10 to 20% higher, will mean sport and tribal fisheries may be closed as often as they are open, and for long periods of time.

Stocks will also not be afforded the ability to recover to near-historical levels under MSH management. Escapement planning should be modified with significant buffers above the MSH defined escapement to allow stocks to rebuild to near-historic levels of abundance, diversity, productivity and spatial structure and regain their resilience to weather long periods of low productivity.

The Coalition's recommendation to emphasize higher escapements (150%) and Maximum Sustained Recreation (MSR) is more responsive to placing highest priority on natural production. It also responds to the dramatic change in angling preferences during the last 50 years from harvest to catch and release of wild fish.

Long term goals that are suggested in the WDFW plan should be designed to recover stocks to near-historical population levels. These historical abundances have not been considered or determined at this time by WDFW, yet for many populations they may be more than 10 times the present stock abundances.

Wild Salmonid Management Areas (the Hatchery Scientific Review Group recommended Wild Steelhead Management Areas) and ecosystem management should be established in all major river basins to preserve wild fish genetics (the WDFW Wild Stock Gene Bank), protect rainbow trout and all juvenile wild salmonids, and reduce impacts on spawning wild fish. These areas can easily be established in the watershed above locations where hatchery fish are released and assure that both the diversity of fish and habitats found in a river basin are covered. Wild Fish Release (WFR) and selective gear use in these areas would allow WDFW to continue the existing fisheries in these areas when annual runs

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are projected to be above their needed spawner escapements.

The Department should take a leadership role in requiring live release of non-target salmonids, especially of ESA listed or state classified depressed and critical species, in the sport, commercial and tribal fisheries. This should include fisheries where wild fish are a significant by-catch, such as listed steelhead in the commercial Columbia spring Chinook fishery.

Foregone opportunity should be eliminated from all WDFW and tribal discussions of wild steelhead. If one side wants to reduce or eliminate harvest, using their fish for other purposes such as conservation, the other should not be able to claim any part of that 50% share.

Life History and Genetic Diversity

WDFW Plan: The Natural Production strategy includes the following statements. Protect and restore the diversity of wild stocks. Evaluate and modify management actions to promote local adaptation, increase and maintain the diversity within and among stocks, and sustain and maximize the long-term productivity of wild stocks. A few specific diversity strategies are found throughout the plan and include:

(1) *“Protect juvenile steelhead and resident rainbow trout by closing fisheries during the smolt migration period and through the use of minimum fish size, gear restrictions and bag limits; (2) negotiate with action agencies to improve upstream and downstream survival of steelhead, including kelts, through hydro facilities; and (3) develop Regional Management Plans that identify the expected trajectory for the diversity, spatial structure, productivity and abundance of each wild stock.”*

Coalition Plan: The Coalition identified life history and genetic diversity as being as important as abundance in maintaining healthy and resilient wild steelhead populations. The Coalition Plan specifically recommended:

(1) *“Recovering seasonal runs: All Western Washington Rivers should be regulated by WFR and barbless hooks for wild steelhead during December and January to rebuild these once*

large and important runs; (2) Rainbow Trout: All rivers with wild steelhead runs should be closed to the harvest of rainbow trout unless research has shown they are not involved in specific rivers in spawning interactions with wild steelhead. Only selective gear and WFR should be allowed during directed fisheries on rainbow trout. Every management option should be used to minimize the hooking mortality of steelhead parr, smolts and rainbow trout; (3) In addition, the Coalition recommends rebuilding all tributary and mainstream runs that have been reduced due to harvest, habitat changes and other factors.”

WDFW should take a leadership role in requiring the release of non-target salmonids, especially ESA-listed, critical and sensitive species.

Recommendations: Although I have stated that the WDFW plan is a change in WDFW policy as it places natural production as its highest priority in management, the plan remains too general to direct the development of Regional Plans. WDFW must be more specific throughout the plan and state the important parameters that should be addressed in Watershed Plans. For example, the important life history and genetic diversity traits of wild steelhead that need rebuilding and/or monitoring should be included in the WDFW plan with suggested methods for determining their original levels, their recovery trajectories, and monitoring programs to assure maintenance of their recovered levels.

A short list of these diversity traits includes: natural abundance of rainbow trout; historical strength of each segment of the run during the winter and summer season; natural riverine abundance of kelts; historical abun-

dance of runs to each tributary and to the main stream; abundance or relative abundance of smolts; number of spawning adults by month; ratio of males to females in anadromous spawning population, including the ratio during each segment of the run; and ratios of year classes in the nursery and spawning populations.

WDFW should analyze the change in seasonal winter runs, by river, and design management strategies to recover runs that have declined during specific months/periods. The Coalition found a marked decrease in the December and January runs when comparing landing data in the 1950's to recent data. WDFW should develop improved strategies to protect rainbow trout and juvenile salmonids from direct or indirect fishing mortality.

Hatcheries

WDFW Plan: The Plan states: *“select the hatchery type (integrated or segregated) based on watershed goals and objectives and a scientific assessment of the potential risks and benefits of each program. Maintain at-risk stocks by implementing programs such as kelt reconditioning and hatchery conservation programs. Assess the benefits and risks of current programs, including economic benefits, relative to the diversity, spatial structure, abundance and productivity of wild stocks. Monitor, evaluate and adapt each program and develop a process for making revisions as needed. Establish a network of Wild Stock Gene Banks with one for each major population in rivers that do not have releases of hatchery origin steelhead.”*

Integrated programs implemented to enhance harvest opportunities will achieve a Proportionate of Natural Influence (PNI) equal to or greater than 0.70 on average and use brood stock indigenous to the watershed. Segregated programs used to enhance harvest opportunities will result in a gene flow rate of less than 2% from hatchery to wild stocks and use brood stock that originated from releases of juveniles in that watershed.”

Coalition Plan: The Plan says: *“Implement the HSRG principles and*

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recommendations including: (1) develop a robust system of monitoring and evaluation of hatchery performance, (2) adaptively manage hatcheries based on monitoring findings, (3) establish wild steelhead management zones where hatchery fish are not planted, (4) make a clear distinction and practice between segregated and integrated programs. Hatchery steelhead smolts should not be released in rivers falling below their respective escapement goals for more than two years.

“Before new integrated hatcheries are planned, existing integrated hatcheries should be fully evaluated for their impacts on wild steelhead, including changes in fitness and diversity, and competition with wild smolts.

“Implement hatchery evaluation experiments related to selected hatchery closures and unsupplemented reference streams, as recommended by the Hatchery Scientific Review Group (HSRG), Independent Scientific Advisory Board (ISAB), and the Salmon Recovery Science Review Panel (SRSRP). Study the productivity of marine waters to assure hatcheries do not release excess smolts when productivity is low, and create excessive competition with wild fish, decreasing their growth and survival.”

Recommendations: Segregated, Integrated and Conservation hatcheries must be fully monitored and evaluated for their short and long term impacts on wild stocks, including reproductive fitness, life history and genetic diversity and gene flow. This should include operational hatcheries that conform to the HSRG recommendations.

WDFW needs to study the rate and impacts of introgression and gene flow from segregated hatchery programs on wild fish as it occurs today. HSRG recommendations should be implemented for all segregated programs.

WDFW has indicated they plan to achieve a 0.70 PNI on average for integrated hatcheries. The HSRG recommended the PNI for integrated programs be 0.85 and higher with less than 15% of the natural spawning stock composed of hatchery stock. Even 0.85 may be too high a risk (too

low a PNI) for wild steelhead, given their large suite of life history and genetic traits. Impacting even a few of these traits from hatchery domestication may depress the reproductive fitness, productivity and resilience of wild populations. Until multi generational studies are completed to understand the impacts of integrated programs at several levels of PNI, it would be scientifically advisable to

Conservation hatcheries should not be planned or implemented unless the extinction risk to a stock is significant.

maintain a PNI well above 0.90 with less than 10% of the natural spawning stock composed of hatchery fish. In addition, no integrated or segregated steelhead hatchery program should be designed to purposely allow returning hatchery recruits to spawn in the wild.

Conservation hatcheries should not

be planned or implemented unless the stock is at a significant risk of extinction and should follow the guidelines recommended by the HSRG.

Habitat

WDFW Plan: WDFW's plan for habitat protection and restoration includes encouraging local problem solving, providing technical expertise, providing internet tabular and map-based habitat information, and promotion of an ALL-H Strategy ecosystem approach to link hatchery, habitat, hydro and harvest management. WDFW will promote funding for habitat restoration, implement nutrient enhancement and develop a Climate Response Plan.

Coalition Plan: The Coalition does not have a section on habitat per se in their Plan.

Recommendations: The WDFW plan reads more like an agency that will follow other agencies' and organizations' habitat work rather than taking a strong lead in the necessary directions of habitat recovery. The WDFW legislative mandate is to... “preserve, protect, perpetuate, and manage the wildlife and food fish, game fish and

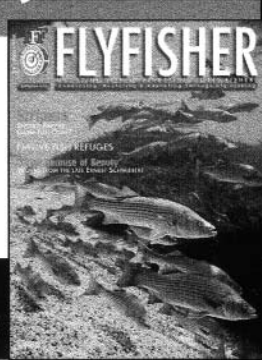
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shellfish in state waters and offshore waters.” This mandate should be recognized as inclusive of all protective functions of the wild fish including habitat protection and recovery.

The WDFW and other appropriate state agencies should initiate an investigation of the historical condition of wild salmonid watershed habitat before old growth logging, farming diversions, and stream side development, and then initiate comprehensive

ue to decline.

WDFW needs to be more aggressively protective of habitat by using its Hydraulic Project Approval (HPA) statutory authority [Editor’s Note: Anyone involved in construction or other work projects in or near streams and water bodies needs approval from WDFW], where it exists, to stop habitat destruction, and where it doesn’t exist, to persuade other agencies that have that authority to do so.

actions and details that must be addressed in the Watershed Plans.

As the Statewide Steelhead Plan goes through further drafts, it will be reviewed by the Washington Fish & Wildlife Commission and passed through the State EIS process. Wild steelhead activists must participate in these processes to assure that needed additional conservation measures are included and that the plan does not stray from its present scientific standards due to political tinkering.

When the Statewide Plan is completed, the Watershed Plan process will begin and angler/conservationists must stay involved in the planning meetings for the development of those documents. The Watershed Plans will be the real test of how future steelhead management is designed and implemented. It is in these plans that we will see how WDFW managers propose to recover and monitor wild steelhead life history and genetic diversity, rebuild their abundance using adaptive and conservative MSH reference points, reform hatcheries to reduce their present impacts on wild fish, and provide new programs to recover and protect all wild salmonid watersheds.

We all have to remember that wild fish don’t have an ability to influence these plans. They don’t vote, they can’t speak out, and there are developers and habitat users that want you to think they aren’t even valid Washington residents. If wild steelhead populations are to become healthy and prosperous again, and further stock declines are to be prevented, we are the ones that will have to ramrod the necessary measures into state politics. We cannot expect the federal and the state agencies will do this without our continuous pressure.



A sound steelhead management plan that puts conservation ahead of harvest is key to ensuring the long-term survival of wild Washington steelhead that inhabit rivers such as the Quinault. Photograph by Jim Yuskavitch

new programs to recover, to as similar a state as possible, those conditions. It is clear that Washington’s watersheds no longer store as much of the winter precipitation nor disperse it during the summer as they did in the 1800s, and this trend has accelerated in the last 50 years. Today’s large floods cause heavy watershed erosion, remove stream corridor vegetation and soils, deposit sand and mud on the spawning beds, wash out important in-river habitat, channelize rivers and scour out recently deposited salmon eggs. **Without major actions to restore complete Washington watersheds, Washington wild salmonids will contin-**

Final Comments

WDFW has made an excellent start in developing the type of management concepts and systems for wild steelhead that are needed to prevent further declines and initiate the recovery process toward historical levels. However, the plan does not include many of the details, parameters or management changes needed to sustain wild runs. This plan is one of the most important documents that will be prepared by the agency to manage steelhead for several decades. It should be comprehensive in recommending all the specific concepts,



Saving Southern Steelhead

What's at stake at Malibu Creek

By Jim Edmondson

— California Trout —

Author Jim Edmondson recently retired after 25 years with California Trout. He was the organization's Southern California Manager. Learn more about California Trout at www.caltrout.org.

Southern California steelhead, those populations from Santa Barbara County south to the Mexican border, have a unique life history, adaptation to a semi-arid climate, and geographically located at the periphery of the species' Pacific range. This delineates them from all other California steelhead populations. Since the post-World War II era, Southern California's steelhead have declined the most of all of California's distinct populations, with less than 500 adults.

What is at Stake

Conservation biologists are increasingly recognizing that protecting genetic diversity within species is amongst the most important reasons for conserving them. Genetic diversity is needed to enable species to adapt to environmental change, and the adaptability represented by genetic diversity can be of immense value to humans. This relationship is especially easy to see in steelhead in that what is happening to Southern California steelhead is a precursor to what could happen to northern populations. These populations have adapted to the often-harsh conditions that naturally exist there: warm water; fluctuating flows; extended droughts; extreme seasonality of suitable habitats. They are valuable not only because they can survive in the increasingly stressed habitat of Southern California, but also because they may be needed to maintain steelhead in more northern areas.

Global warming is occurring so rapidly that many steelhead populations in California, Oregon and

Washington will not be able to adapt through local genetic changes; they will need genes from populations already adapted to warmer conditions. Southern California steelhead are a reservoir of such valuable genetic material. Losing these steelhead is thus like throwing out a valuable insurance policy for fisheries in Oregon, Washington, and the balance of California.

For these reasons, recovering Southern California steelhead, in the State of California's view, "... will be the highest priority for DFG [California Department of Fish and Game] steelhead management."

Beyond these profound biological motives, Southern California is today what much of California will become as a result of its continuing population growth. The region and its steelhead provide a laboratory for testing the political will at all levels, i.e. government and citizens, to strike a new paradigm in ecosystem management for California's future of healthy environments and sustainable local communities. In the short term, the region has played a critical role as its citizens have consistently provided the votes supporting close to \$6 billion in state bonds for ecosystem protection over the past four years. By providing some example of the benefits of these votes and taxpayer encumbrances through local recovery investments, the political will to support future bond or other funding mechanisms is enhanced.

What's Up At Malibu Creek

Rindge Dam is located on Malibu Creek, in Los Angeles County, California, approximately 2.6 miles upstream from its mouth on the Pacific Ocean. The dam is a 102-foot high and 140-foot wide steel-reinforced concrete arch dam with a reservoir now completely filled with sediment.

According to the California Department of Fish and Game, the dam is the major obstacle to restoring the creek's federally endangered steelhead population, which faces "pending extinction." An evaluation of alternative measures for removing or modifying the dam is the subject of an ongoing Malibu Creek Environmental Restoration study by the US Army Corps of Engineers (Corps), in partnership with the dam owner, the California Department of Parks and Recreation (State Parks).

Rindge Dam and Sediment-filled Reservoir

Completed in 1926, Rindge Dam was built for agricultural water supply and originally impounded 574 acre-feet (AF) of water with the spillway gates raised. It was owned by the Rindge family and operated by the Marblehead Land Company from 1933 to 1966. Upon completion of the dam, the reservoir rapidly filled with sediments, capturing approximately 70% of Malibu Creek's annual sediment transport. Storms in the late 1930s damaged the spillway gates, reducing the maximum storage capacity of the reservoir to 475 AF. By 1940, about half of the reservoir capacity (200 to 250 AF) had been displaced by sediments, and by 1945 84% (400 AF) of the original reservoir capacity was filled with sediment. The reservoir was completely filled with sediment by 1955. In the early 1960s water deliveries stopped. The California Department of Water Resources decommissioned the dam in 1967. The dam now impounds approximately 800,000 cubic yards of sediment with the majority of this suitable for nourishing the eroding beaches of the Santa Monica Bay.

Rindge Dam provides no flood storage, no hydroelectric generation, and no water supply. Thus the dam is obso-

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lete, providing no beneficial functions, and has been a barrier to the upstream migration of fish for over seventy-five years.

Malibu Creek currently supports a small run of steelhead within the Southern California Distinct Population Segment, a biological unit of steelhead that was listed as endangered under the federal Endangered Species Act in August 1997. The pre-dam population was estimated at 1,000 returning adult steelhead that was comprised entirely of a wild, self-sustaining population. The stream also supported a popular recreational fishery frequented by legendary movie stars such as Clark Gable.

Steelhead runs in Malibu Creek are now greatly reduced from historic levels. The population is estimated to be in the dozens. Given this decline, their current high risk of extinction, and the desire to recover steelhead populations, potential opportunities for achieving significant enhancements to steelhead habitat must be evaluated. The evaluation of alternatives for addressing the ecological damage caused by Rindge Dam provides an important opportunity to achieve potential long-term enhancements, recovery of steelhead in the Malibu Creek, and ultimately contribute to achieving the goal of the Endangered Species Act – to de-list the species

Benefits of Dam Removal

Both National Marine Fisheries Service (NMFS) and California Department of Fish and Game (DFG) have cited barriers to upstream habitat as a major factor in steelhead decline. Like most dams, Rindge Dam and its impoundment significantly affect stream habitat for steelhead and other aquatic species by fragmenting habitat and disrupting ecosystem function. It also has reduced the flow of sediment downstream to replenish in-stream gravels and beach sand. Resource agencies and the public generally agree that steelhead would benefit if Rindge Dam and all of its impounded sediment were removed. However sediment removal is a costly and complex issue. If not handled properly, dam removal can pose a substantial though temporary risk result-

ing from the downstream movement of sediment and the associated potential for increased flooding or damage to existing habitat. In an analogous case, removal of San Clemente Dam on the Carmel River, NMFS determined the short-term risk to federally listed steelhead from dam removal was outweighed by the long-term permanent benefits.

The 2.6-mile stream reach from Malibu Lagoon to Rindge Dam contains some spawning and rearing habitat in the gorge just downstream of the dam, with good cover and appropriate stream morphology. Studies have identified availability of adequate summer habitat as a limiting factor for the production of juvenile steelhead in the Malibu Creek. Such habitat is normally found in the headwaters of coastal streams, not in the lowermost mainstem reach as now in Malibu Creek.



Rindge Dam and sediment-filled reservoir. Photo courtesy California Trout

Research concluded that major benefits for recovery could be realized by providing access above Rindge Dam, potentially tripling the existing population. The assessment of these stream reaches found that over 86% of the potential spawning habitat and 65% of the potential rearing habitat lie above Rindge Dam. If steelhead gained access to this habitat, spawning and rearing habitat would increase 590% and 180%, respectively, over what is currently available to steelhead. For this reason the *Steelhead Restoration and Management Plan for California* concluded that removing Rindge Dam is the key to Malibu Creek steelhead recovery.

Government Assessments to Remove the Dam

In 1995 the U.S. Bureau of Reclamation conducted a reconnais-

sance study to determine federal interest in the restoration of Malibu Creek. While not an in-depth analysis, the Bureau study determined removing the dam had benefits, was possible, and suggested the sediments be excavated and trucked from the site. Since this 1995 study, new information has surfaced that is relevant to current steelhead recovery planning for Malibu Creek:

Malibu Creek steelhead are tolerant of high sediment loads in the stream, and such events following large wildfires in the watershed do not degrade the species or the creek's vegetation and instream habitat. Water quality monitoring in the upper sections of Malibu Creek demonstrates good conditions for steelhead once they arrive.

Traffic restrictions and increasing congestion on Malibu Canyon Road may render infeasible the Bureau of Reclamation's recommendation to excavate the sediment behind the dam and transport it elsewhere by trucks. According to the National Marine Fisheries Service, removing the sediment-filled San Clemente Dam on the Carmel River — a circumstance almost identical to Rindge Dam on Malibu Creek — would provide long-term benefits that outweigh the short-term risks.

In 2000, the U.S. Army Corps of Engineers began exploring ways to address fish passage issues by launching the *Malibu Creek Environmental Restoration Feasibility Study*, in partnership with California Department of Parks and Recreation. The Corps project is a comprehensive evaluation due to be completed in 2007 and will ultimately determine the decision to remove Rindge Dam or allow it to remain in place. Local advocates have been working with both the Corps and State Parks over the past six years to encourage local, state and federal agencies to build partnerships and involve the public in alternatives analysis and decision-making. If these recommendations are followed, a "win-win" dam removal project may be realized through partnerships with local, county, state and federal agencies dedicated to recovering the fish, enhancing the beaches with the sediment trapped behind the dam, and protecting the area's economy so dependent on tourism.



A Local View of Salmon and Steelhead Conservation in the John Day Basin

By Shaun W. Robertson

— John Day Basin Trust —

Shaun Robertson, Executive Director of the John Day Basin Trust, pens an essay describing the philosophy of steelhead and salmon restoration in Oregon's John Day Basin from the viewpoint of locals who are working to conserve this great Western watershed. Robertson notes that, "The opinions expressed herein are those of the author exclusively and not necessarily representative of the JDBT Board of Directors or its partners and supporters."

I grew up fishing the John Day River. So did my dad and his dad before him. My grandfather learned to fish from the Umatilla Indians who still came each year to our family homestead on the North Fork of the John Day to spend the summer on Rudio Mountain trading for buck hides from which they made moccasins. Great-grandfather practiced the more traditional method of pitchforking steelhead and salmon from the small streams and irrigation ditches on and around the ranch. The five generations of Robertsons raised in this basin have witnessed tremendous change; the replacement of horse-drawn farm equipment with 150 horsepower tractors, ranchland property values going from \$2.50/acre to over \$3,500/acre, and wild anadromous fish returning from the brink of extinction.

The last, truly great year for summer steelhead that my father remembers was 1964. Punch cards had space for twenty fish and he filled up two, still managing to somehow finish his sophomore year as an all-star pitcher for Mount Vernon High School. These were the years that, at least during steelhead season, when the four o'clock mill whistle blew, instead of heading to the bar, the workers would race to their trucks to grab an Eagle Claw rod out of the gun rack and head to the mill diversion. For those of us who fished through the desperate and

desolate times of the 1970s, it's hard to believe the fables of shoulder-to-shoulder, combat fishing on the upper John Day. The end of 1964, though, was the beginning of two decades of tough years for the rivers and streams of our basin. Christmas and New Year's of that same year delivered back-to-back 100-year flood events that scoured the river from its headwaters above Prairie City to below McDonald Ferry. The following year, the U.S. Army Corps of Engineers brought out bulldozers and washer-boarded, channelized, and diked the river along hundreds of sites and an unreported num-

It is often difficult for outsiders to consider the scope of the fishery problem in the John Day basin.

ber of river miles so that the \$6 million in flood losses would never be repeated. By 1968, the John Day Dam was operational and various government agencies and landowners were wrapping up programs directed towards clearing riparian vegetation with herbicide and filling wetlands using equipment made readily available after World War II.

Fishing the John Day in the "tween" years was a labor of love. While fishermen on other rivers measured their catch rates in terms of hours per fish, I measured mine by years per fish. During the decade of the '70s, I never landed a steelhead, other than incidentally during the trout season, which used to open the first of April when the steelhead were spawning, and we were forced to use worms for bait since we

couldn't catch enough hens for eggs. In those days, just hearing about a fish caught was about as rare as seeing a cougar. From grade school on, my best friend and I fished old Fenwick glass fly rods for all of our trout, but never would have even considered using them for steelhead. The last spring Chinook that I hooked was above Picture Gorge on the mainstem while fishing for trout and that season was formally closed in 1976.

It's often difficult for outsiders to consider the scope of the fishery problem in the John Day, a basin in excess of 8,000 square miles of dirt and more than 8,000 miles of river, streams and creeks. When only 500 adult fish return to a system, as did frequently in my youth, and with hundreds of miles of fishable mainstem it's nearly impossible to solve the cascading problems of finding places that fish will hold, being there when the fish are, putting something in their way that they will take and then having it taken. A few folks kept at it, but mostly people left for other waters, changed out the line on their DAM Quick reels for stuff more suitable to fish the incredible smallmouth bass fishery emerging on the lower river, or abandoned fishing altogether. Slowly, the local hardware stores and mom-and-pop groceries stocked more Rapalas and Rooster Tails than Oakie Drifters and Steelheads by Bud.

Conservation during these years was at least as trying. The national forests had ramped up timber harvests and were now cutting up to 80% of the watershed in some areas, frequently including streamside vegetation in their harvest plans. Cattlemen still ran the local government, controlled many federal programs, and regularly settled disputes with both fists and guns. Ecological successes were few and far between, but a group of local agencies and landowners started a conservation program that, now looking back over

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thirty-five years, may well have been one of the most visionary in the northwest.

Mention the John Day in a group of conservationists or biologists and you are likely to hear such exclamations as “second longest, undammed river in the lower 48” or “last remaining, entirely wild run of salmon and steelhead in the northwest.” It’s a river of superlatives and, although some folks would like the public to believe otherwise, its distinguishing characteristics didn’t happen by default or happenstance. But they also didn’t happen easily. As one of my friends, a thirty year veteran biologist in the John Day, is fond of saying; “there was a lot of hide laid on these rocks to get where we are now.” The greater struggle and strain made the achievements more meaningful, and regardless of the inherent conflict of conservation in the early program days, it was very easily a simpler time. The issues were straightforward and when you went out to a ranch for a conversation on riparian restoration, you knew you were going to have to earn the opportunity to stay on that property or be invited back. The stakes were high, and every local biologist who also had kids in the schools and 4-H or tried to eat dinner out once in a while with their family without getting harassed, knew it. But something worked and worked remarkably well.

The spring season that used to be so sporadic — with the river crystal clear and no fish one day, then, with just a little bit of rain would be rolling mud and logs the next — stabilized. Drift boats, which were relatively unknown out here to that point, started popping up faster than the Portland urbanites’ Grant County second homes do today. Spawning ground counts that used to take mere hours to complete alone, now took full days with teams of biologists due to the increase in redds and carcasses to process. For the first time in my life I measured my catch first by days per fish and eventually hours, and we filled up punch cards again. Instead of tackleboxes full of rubber worms for smallmouth in the lower river, people were talking about the

new pirate wee warts and glow-in-dark corkies. And a couple of us were holding secret conventions to tie up green butt skunks and Christmas trees. Of course, the better things got, the more we were discovered.

Like Christian missionaries to the African jungle, people came creeping in, a trickle at first and then nearly the proverbial flood. Not only to build big fancy homes overlooking the river or smack dab in the middle of big game

own enjoyment from ranching as a lifestyle and others who desire to exploit the current condition of our destabilized socio-cultural and economic environment.

Along with the developers, speculators, and other monied outside interests, nearly every conservation and environmental acronym in Oregon, and often from farther afield, now wants to play in the John Day. But frequently their approach threatens the



The waters of the John Day basin hold some of the best wild steelhead populations in Oregon. Photograph by Jim Yuskavitch

winter range, but also to buy working ranches and large tracts of former commercial timberland for speculation and development. And the more notoriety and success that our local conservation programs garnered, the more we began attracting the attention of outside conservation interests; frequently interests with more money and driving ambition than purity of mission or common sense. These groups looked around the dismal, success-deprived landscape of Oregon, saw what wasn’t messed up and wanted to become attached to a winner. Now our conservation issues have become inherently more complex, and it isn’t necessarily the cows and chainsaws that threaten the watershed. It’s people — those who want to extract their

delicate balance that local folks have worked for over thirty years to create. They dilute the limited amounts of precious resources available for crucial conservation work, confuse landowners with their mixed, irrational, and frequently illogical conclusions, while exploiting the groundwork laid by those that paid the price before. In their rush to achieve something, anything in such a critical area and with such a notoriously hostile environment to outsiders, they commonly overpromote success and misrepresent achievement as part of their marketing and development schemes. Their sometimes misguided approaches lead to such diversions as purchases of land under the guise of salmonid restora-

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tion, isolated by miles from good habitat, promotion of salmon refuges that don't actually support salmon, and the acquisition of poor quality water merely to add it to other poor quality water. All the while they assert in front of funding agencies, foundations, major donors, and the public such incongruous conclusions as 'the John Day is a degraded cesspool, but we need your money to support our litigation to save it since it's the last, best place in Oregon.'

I had a conversation not long ago with the president of a major conservation organization. This gentleman was trying to convince me, as many others also have, that we absolutely need a salmon refuge in the John Day, that a refuge is what will save salmon in the John Day. After listening to his argument I stated my opposition to a salmon refuge of the type he was contemplating, thinking that I was representing a substantive basis of why a designated refuge was unnecessary, how it would interfere with current conservation measures, and why it would threaten conservation of the high priority areas where we need to achieve sustainable salmon recovery. He was relentless, however, and continued to press for the final solution that would get him a salmon refuge out here, one at any cost and without



Conservation easements and acquisitions are a cornerstone of the John Day basin restoration plan, conducted with sensitivity to the local culture and economy.

Photo by Shaun Robertson.

regard to its actual value or integrity. Finally, somewhat out of exasperation but mostly by way of trying to make a point regarding conservation in rural communities like ours, I said to the expert, "if you want a salmon refuge in the John Day, come build us a school." My response, however, was met with complete silence and obvious, total bewilderment on his part. Finally, he

remarked, 'what does a school have to do with a salmon refuge, we're about wild salmon not about people' or something to that effect.

He was right of course. Salmon and schools have nothing in common, at least from the perspective of how he is required to run his organization successfully. He, like so many others in the salmon conservation industry today, measures success by the amount of money brought in for "salmon conservation" (even if the money raised doesn't effectively achieve conservation or is not sustainable) and the amount of land conserved for salmon (even if those lands don't support salmon). Like a cancer spreading across the landscape, the traditional "bucks and acres" mentality that pervades in the non-profit world has entered a basin where conservation was historically built around local interests, passion, and a meaningful drive to make the area a better place. While some organizations and agencies are looking for something, anything here into which they can dump their dollars simply to claim association with the John Day, the local soil and water conservation districts, grass roots land trusts, district fish and wildlife offices, watershed councils, collaborative groups,



To be successful, habitat restoration projects in the John Day basin often need a buy-off from local residents. Photo by Shaun Robertson.


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and local governments (those that are actually on the front lines of salmon conservation) are holding bake sales and car washes to raise amounts that these other organizations (the stand-up salmon philosophers) are spending annually on coffee and doughnuts.

Our local organizations may not have the resources of outside nonprofit corporations and supposed service agencies, but we do understand the simple principles of being successful with salmon conservation in rural communities. We don't question the relationships between strong schools and effective, sustainable and meaningful recovery; and we get what it means to "network" in the community by having kids in 4-H and little league, to sit on the planning commission or to help rebuild our neighbor's burned down barn. We get it because it's more than just a job or a fundraising tool. To us, a working landscape has substance and meaning beyond its use as the latest promotional buzzword. It's our life and if we screw up here, we don't just have the luxury of switching to another basin.

Regardless of what transpires next in this basin and whatever the future evolution of conservation holds, our community will persist. Not just in the context of our socio-economic and cultural resources, but also within and part of our natural world. We'll persist not only because that's what history demonstrates, but also because you cannot drive people away from things that they hold truly dear. We believe this to be our basin, our river, and our fish and we are immensely proud of our achievements with all. Because of these beliefs, and in spite of the threats to our livelihoods, the lack of resources, and the changing nature of the landscape, we will continue to create a wonderful place for our salmon and steelhead to return. We will do so through locally designed, substantive and sustainable, innovative programs that are also meaningful to people's lives. I'll believe those measures to be successful if, 35 years from now, we witness healthy, vibrant communities with sustained socio-economic, cultural and natural resource systems — and our children and grandchildren pursuing productive populations of wild salmon and steelhead. 

Puget Sound Steelhead Receive ESA Protection

On May 7, NOAA Fisheries announced that it would designate Puget Sound steelhead as "threatened" under the Endangered Species Act. According to an agency fact sheet, this includes all winter and summer run steelhead "from the river basins of the Strait of Juan de Fuca, Puget Sound and Hood Canal, Washington, bounded to the west by the Elwha River and to the north by the Nooksack River and Dakota Creek (inclusive)."

This is the second time NOAA Fisheries considered Puget Sound steelhead for ESA protection. During a 1996 review of West Coast steelhead, the agency ruled against listing Puget Sound steelhead. However, in 2005, Olympia, Washington resident and retired Washington Department of Fish and Wildlife fisheries biologist Sam Wright submitted a petition requesting another review of these stocks. This time, NOAA Fisheries found that Puget Sound steelhead, which include more than 50 stocks of summer and winter run fish, are "likely to become endangered in the foreseeable future throughout all of their range."

The ESA listing will become effective 30 days after the notice is published in the Federal Register.

Steelhead Sculpture Auction at FFF Conclave Proceeds to benefit *The Osprey*

The Osprey will celebrate its 20th Anniversary with a benefit auction item at the Federation of Fly Fishers 42nd Annual International Show & Conclave, July 31 – August 4, 2007 in Livingston, Montana.

Wildlife artist Hank George of Redding, California will create a truly lifelike trophy steelhead carving for auction with proceeds to support continued publication of *The Osprey*. The successful auction winner will be able to choose from the example on display in Livingston or have the artist recreate a lifelike trophy replica from a photo and description provided by the angler. Color scheme and position can be discussed at the time of order.

A recognized wildlife artist, Hank's unique and beautifully wrought pieces are carved from kiln-dried western sugar pine, sealed with acrylic undercoats and paints applied by a combination of hand and airbrush. Variations of light, distance, and movement, along with natural iridescence, give wild steelhead the ability to go from completely camouflaged to a stunning array of color on the move. His sculptures represent these qualities and knowledge of his subjects.

Be on the lookout for this one-of-a-kind item at the Conclave. For more information on Wildlife Artist Hank George contact Norm Ploss at ndeanploss@aol.com.



Fish Passage Center Survives Upstream Battle

By Therese Wells

— Save Our Wild Salmon —

Author Therese Wells is the Communications Director for Save Our Wild Salmon. You can find out more about this organization at www.wild-salmon.org.

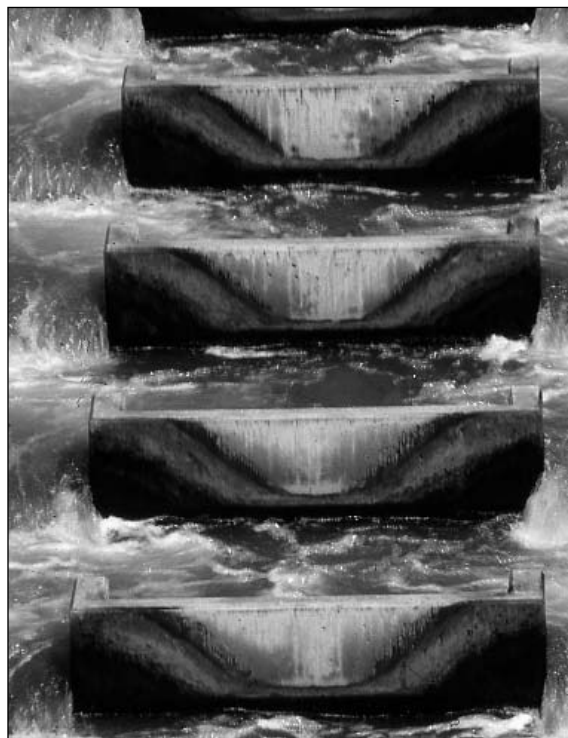
Salmon recovery and sound science won a major victory in federal court in January, when a U.S. federal appeals court ordered the Bonneville Power Association to continue funding the Fish Passage Center, an independent agency that collects and provides unbiased scientific information about endangered salmon and other fish in the Columbia River Basin.

The ruling by the 9th U.S. Circuit Court of Appeals, which found that BPA illegally discontinued funding the Portland, Ore.-based Fish Passage Center and ordered it reinstated, was widely applauded by the broad-based coalition of fishing businesses, conservation groups and Indian tribes that fought its politically motivated dismantling. In its ruling, the three-judge panel wrote that BPA lacked “a rational basis for its decision” and termed the agency’s action “arbitrary, capricious and contrary to law.”

Created by the Northwest Power and Conservation Council under the authority of the Northwest Power Act, the FPC has been collecting, analyzing and providing unbiased scientific information about salmon and steelhead in the Columbia and Snake rivers for the past 20 years. The FPC’s work is considered critical to the Pacific Northwest in developing scientifically supported plans for the operation of the federal hydrosystem on the Columbia and Snake rivers. It is the only agency in the Northwest that has the history, independence, expertise, and ability to provide the region – particularly its fishery managers – with the information needed to make real-

time decisions on what’s required to protect imperiled salmon populations in the Columbia River Basin.

The Fish Passage Center’s objective documentation of the severe harm caused by the federal hydro system to endangered salmon and steelhead in the Columbia-Snake basin has been a primary source of information for fed-



Fish ladder at Little Goose Dam, Snake River, Washington. Photograph by Jim Yuskavitch.

eral Judge James Redden, who oversees the protection of endangered salmon in the Columbia, as well as for fish management agencies in Oregon, Washington and Idaho.

When data from the Fish Passage Center, which consistently showed that dams kill fish, figured in a 2005 U.S. district court order directing BPA to spill water over the dams in order to aid migrating salmon, rather than running the water through turbines to gen-

erate additional electricity revenue, Idaho Sen. Larry Craig (R-ID) inserted a provision in a spending bill directing Bonneville to eliminate the center’s \$1.3 million budget.

In early 2006, based solely on Senator Craig’s language, BPA moved to eliminate funding for the FPC and transferred its functions to other entities despite objections from the fishing community, the states of Idaho, Washington, and Oregon, the lower Columbia River Treaty tribes, and the U.S. Fish and Wildlife Service. This decision to cut off funding for the FPC effectively stripped Northwest state and tribal fisheries managers of their access to sound salmon science and hindered their ability to participate on equal footing with federal agencies in regional salmon recovery efforts, including the current court-ordered rewrite of the 2005 Biological Opinion (also known as the federal Salmon Plan) for the Columbia and Snake rivers.

A broad-based coalition of tribes, fishermen and conservation groups, including Northwest Environmental Defense Center, the Public Employees for Environmental Responsibility, the Northwest Sportfishing Industry Association, and the Confederated Tribes and Bands of the Yakima Indian Nation, turned to the courts to seek reinstatement of funding and overturn a decision they say was politically and economically motivated. A federal court order kept the Fish Passage Center operational while the Court considered the case.

On January 24, 2007, the 9th Circuit ruled unanimously in favor of the tribal and fishing interests, and against BPA. “The Ninth Circuit held BPA accountable,” said Stephanie Parent of the Pacific Environmental Advocacy Center (PEAC), who filed the petition

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on behalf of the groups. “Not only does BPA have a duty to fish, it has a duty to the public to engage in good government.”

The 9th Circuit’s decision means that the FPC is securely back in business. The Pacific Northwest states, tribes and federal fishery managers continue to have a reliable place to get sound, independent science on which to base their decisions affecting salmon management and river flows needed by migrating salmon.

“With this ruling, law and science have trumped politics,” said Liz Hamilton, executive director of the Northwest Sportfishing Industry Association, and one of the plaintiffs in the case. “For now, at least, the science of salmon remains uncorrupted, despite attempts by this administration to subvert science, silence the messengers, and discredit data that doesn’t fit its objectives.”

The enthusiasm of Hamilton and others in the fishing community, however, is tempered by suspect changes to the oversight board of the Fish Passage Center recommended by the Northwest Power and Conservation Council.

The Power Council, which oversees regional energy and conservation policy, said the oversight board, which is now charged with conducting an “annual review” of the performance of the Fish Passage Center, will be reconfigured to consist of one member or representative from the Council who will serve as chairman; two members of American Indian tribes in the Columbia River Basin; two representatives from state fish and wildlife agencies; and two members from the scientific community, including one designated by NOAA Fisheries, the federal agency in charge of salmon recovery. There are legitimate concerns that by installing a council member (Bruce Measure of Montana) as chair of the oversight board, and eliminating the board’s public representatives, the council is seeking to institute mechanisms that make it more difficult for the Fish Passage Center to independently carry out its long-standing job on behalf of the fish agencies and Tribes, and the fishing publics.



Accurate fish counts and other data provided by the Fish Passage Center are vital to the recovery of wild salmonids within the Columbia River basin, such as this Deschutes River wild fall Chinook salmon. Photograph by Jim Yuskavitch



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