

Newsletter of the Native Fish Society | Issue 8.1

# STRONG RUNS

Summer 2014





## STRONG RUNS

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# INSIDE THIS ISSUE

DESCHUTES IN DECLINE?	3
SUMMER SNORKELING	4
NICKEL OR WILD SALMON?	5
WILD STEELHEAD PROTECTION	7
LAW.SCIENCE.CONSISTENCY?	9
WILD LANDS GROW WILD FISH	11
WHERE THE RUBBER MEETS THE ROAD	13
WELCOMING NEW BOARD MEMBERS	14
WILD RESURGENCE ON THE EEL RIVER	15

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Native Fish Society is a tax-exempt, non-profit charitable organization.

Find your place on the planet. Dig in and take responsibility from there.  
 ~ Gary Snyder

(Cover) Wild steelhead in the Big Bend Pool  
 Photo: Darcy Bacha



## DESCHUTES IN DECLINE?

WORDS BY MIKE MOODY, EXECUTIVE DIRECTOR

WHILE ON MY ANNUAL MID-MAY TREK TO THE DESCHUTES I had great fun landing a stunning and assertive 18" redside. I caught many other fish, but none quite so memorable.

Also memorable to me, my fishing buddies and our guides, was the scarcity of birds. The usual big ones were evident, such as ospreys, red tail hawks, turkey vultures and Canadian geese. But, noticeably missing were the habitual song and perching birds.

Red wing blackbirds, well known harassers of streamside fishermen, were sporadic. Wrens, sparrows and Bullock's orioles were infrequent. Most apparent was the near-nonexistence of swallows. No cliffs, no barns, no violet-greens. Those familiar with the monolithic rock in front of Dill Island know it always to be plastered with hundreds of swallow nests. Zero nests and not a single swallow in flight. The bird drought continued into the evening with no night hawks and few bats.

These birds share a common characteristic. Each feeds upon the prolific insect populations of the Deschutes. Finding no food, obviously, birds will simply go elsewhere. Numerous guides say they're noticing that the salmon fly hatch is now smaller and earlier in the season. They note some insects have simply disappeared, like PMDs, caddis and some mayflies. Why?

Veterans of the Deschutes claim that over the last few years there has been an appreciable temperature shift in the lower river. They also say they are noticing pervasive growth of a golden brown algae blanketing large swaths of river bottom rocks. Some emphasize that this began soon after temperature changes occurred.

Many of these insects begin their lives and spend their formative years attached to these rocks. It is conceivable alga is hindering oxygen from reaching the rock surfaces, so the insects cannot attach to them.

If correct, the math is simple. No pupa stage leads to no mature stage, which leads to no insects, which leads to no food for birds.....and no food for fish.

Sitting quietly in the corner is the one question no one desires confronting: If these bugs disappear what might

happen to the steelhead, salmon and trout in one of our nation's inarguably premiere fisheries? Huge and varied insect populations are a principle reason the Deschutes enjoys so many fish per mile. People come from all over the world to pay homage to these prolific runs of fish. And, an ample slice of the Central Oregon economy derives its lifeblood from the Deschutes River.

Presently, there are simply too many unanswered questions and too little evidence to yet reach conclusions. While personal and anecdotal observation can sound an early alarm, only with patience and empirical study can we produce credible conclusions and science-based solutions. Without caution we'll never be assured of developing an effective and prudent remedy.

Our colleagues at the recently formed Deschutes River Alliance (DRA) are rapidly moving beyond the anecdotal with scientific studies of key river indicators, precisely what is required to reach credible conclusions and recommendations.

The Native Fish Society has committed to play an active role. We will support science-based conclusions and remedies. We attend every meeting. One of our River Stewards is on the DRA board of directors and our Bill Bakke is a member of their science advisory committee. In addition we have pledged to provide financial support and volunteers.

Personally, I consider the Deschutes River one of Oregon's three queens, joining sisters Rogue and Umpqua. As Oregonians, regardless of where we live or what we do, we cannot allow further decline in the health of this extraordinary river. How we respond to this potential catastrophe will speak volumes about our commitment to the river and to the state we love. It's not hyperbole to say that left unchecked this could become an ecological and economic calamity.

I'm challenging every fish and conservation group to likewise commit resources to confront this challenge.

*Michael Moody*





WORDS BY  
KYLE SMITH  
WILLAMETTE  
VALLEY REGIONAL  
COORDINATOR

(ABOVE)  
Conrad Gowell  
gets eye to eye  
with juvenile  
salmon in a small  
Oregon tributary.

Photo: Ethan  
Barrow

FISHERMEN CAN BE A FUNNY BUNCH. WE SPEND COUNTLESS hours and untold sums of money trying to perfect techniques to catch more fish, or to catch less fish using more difficult techniques. But most of our observations are done from above the water's surface, a world just as foreign to fish as the subsurface realm is to us. Perhaps the most effective way of gaining a better understanding of the needs and preferences of fish is to enter their world, either through subsurface videography or river snorkeling. Anglers have been donning snorkel and mask as far back as Roderick Haig-Brown in the 1960s, and investigating the habitats and behaviors of trout and salmon.

*Using the diver's wet suit, mask, snorkel, flippers and weights, I passed under the surface film in comfort and stayed below it almost as long as I wanted, getting to know the bottom of a river, and sharing in some measure the sensations of the fish that live within it.*  
- Roderick Haig-Brown. "My Query Eye to Eye." Sports Illustrated 19 Oct. 1964

River snorkeling has been gaining popularity in recent years. The Seattle Times ran an article titled "River snorkeling fun, but not for everyone" last year, and both Felt Sole Media/Stoeker Ecological's DamNation and Shane Anderson/North Fork Studio's Wild Reverence showcase river snorkeling as a Lani-level kind of endeavor, or as the ultimate evolution of an angler or fish lover. The increased attention is for good reason, as dipping one's head into the chilly waters of a Northwest river can often have unexpected and sometimes surreal results.

Last month, Native Fish Society and the Blueback Chapter of Trout Unlimited together purchased an inventory of wetsuits from Cleanline Surf Shop in Seaside, OR. Thanks to the generosity of Cleanline, we acquired nine shiny new Patagonia R4 suits, hoods, gloves, and booties, along with snorkels and masks that will allow us to ramp up our river snorkeling efforts across the region.

Admittedly, it takes a little cajoling to convince most folks to wriggle into a wetsuit and slide into frigid waters to look at fish. But for anyone who appreciates fish as more than just a target species, river snorkeling offers an unparalleled means for better understanding the habits and habitats that allow for healthy populations of salmon, trout, and steelhead, along with lamprey, dace, shiners, and countless others that inhabit Northwest streams and rivers.

My first river snorkeling experience was just over two years ago, in the Cascade headwaters of the Calapooia River. The Calapooia begins on Tidbits Mountain, the same piece of rock that gives birth to both the South Santiam River and Blue River, a major tributary of the McKenzie. Southeast of Sweet Home, OR, Tidbits is a spectacular place, with views of Mt. Bachelor, the Three Sisters, Mt. Bailey, Mt. Thielson, and a smattering of other Cascade peaks. After the Calapooia's dramatic, cold, and oxygenated descent out of the Cascade Range, the river meets with the low-gradient floor of the Willamette Valley, where sun exposure and low flows can often drive temperatures dangerously high for local salmonids.

It's my hunch that because of the warm summer temperatures in the lower river, the majority of the Calapooia's cutthroat, rainbow, and few Chinook smolts all push high up into the headwaters to seek cooler temperatures and gorge on the river's prolific caddis and Golden Stonefly hatches. What that means to a river snorkeler is fish counts that, by my anecdotal counts, reach well above 3,000 fish per mile, albeit mostly young of the year and one or two year old fish below the 12" mark. Nevertheless, a summer day snorkeling on the Calapooia is an incredible experience that is sure to make a fan out of anyone who hasn't yet donned a wetsuit and mask and risked looking like an injured seal flopping from pool to pool.

These fish aren't spooky like they are when you approach from land, but usually rather curious about the clumsy new intruder in their living room. The amount of life one sees, even in the shallowest pool, is often overwhelming and has certainly changed the way I look at a river from above both as an angler and as a conservationist.

With the newly acquired snorkel inventory, NFS will be offering river snorkeling opportunities throughout the summer and fall in a number of watersheds. On the docket are trips to Oregon's North Fork Siletz, Salmonberry, and Calapooia Rivers with additional opportunities in California's Smith River and the steelhead streams of SW Washington. Formalized data gathering efforts may come in the future as opportunities arise, but for now, providing NFS River Stewards and members the opportunity to see rivers as fish themselves see them is top priority. 

To learn more about river snorkeling opportunities in California, Oregon and Washington contact River Steward Program Director: [mark@nativefishsociety.org](mailto:mark@nativefishsociety.org)



(ABOVE)  
Eye to eye with pink salmon.  
Photo: Conrad Gowell

(BELOW)  
Southern coast water.  
Photo: Ken Anderson

## NICKEL OR WILD SALMON? OPEN PIT THREAT

WORDS BY DAVE LACEY, HUNTER CREEK RIVER STEWARD



SOMETIMES BEING A RIVER STEWARD SIMPLY MEANS SLOWING DOWN THE TRUCK as I meander up the road that follows Hunter Creek into the foothills of the Klamath-Siskiyou Mountains. As I get further from the ocean breeze the creek gets more pristine, a beautiful coastal stream home to wild trout, salmon and steelhead. I slow down and take a long look even during the off-season when nobody is fishing, I just can't help myself. Hunter Creek is my playground, my swimming hole, my church and my home. Living here means I have to help protect it.

Sadly, the Red Flat Nickel Corporation, owned by St. Peter Port Capital of England, has its sights set on mining one of the most biologically diverse places in the United States. One of the proposed mining areas, Red Flat, is nestled on Forest Service lands in the headwaters of Pistol River and Hunter Creek. Both Hunter Creek and Pistol River are free of dams and have no hatchery programs. They are wild like much of the south coast of Oregon. The same mining outfit also has intentions to develop other remote parts of south Curry County including sites in the headwaters of Oregon's Illinois River and Northern California's Smith River.

My community first learned about the plan to mine the Red Flat area in December 2013 when the Forest Service released the mining company's plan of operations. My first step in addressing this threat was to discover how the community felt about the mining industry opening up shop in their backyard – an industry the EPA reports as the most toxic polluter in the country. So I created a petition, put on my walking boots and canvassed Hunter Creek with the help of a friend to talk to the residents that call the watershed home.





Sure enough, over a hundred local residents added their names to the petition including an unlikely signature from a former industrial gold miner from Alaska.

Local opposition to the mining proposal was not too surprising. Folks around here hike, hunt, camp, fish for salmon, steelhead and trout, ride their ATVs, go horseback riding and birding, look for rare and endemic wild flowers and simply enjoy a nice afternoon drive in the surrounding mountains. We all worry about the loss of access that a full scale mining operation would inevitably require as well as the impact to clean water, fish and wildlife habitat and the health of our community situated downstream of an open pit mine.

Overwhelming public opposition has led to many local milestones in the fight against this mining threat. One of the first small victories came after I gave a presentation about the mining proposal to our Curry County Board of Commissioners (BOC). In an attempt to protect citizens the Commissioners unanimously passed a resolution against the proposed mining "...If allowed to be developed; the BOC also recognizes there will be serious negative impacts to the surrounding areas, restriction of access to popular recreation areas, degradation of the rare and unique botanical resources, as well as the health risks to the residents and wildlife..."

To keep the ball rolling, Jake Crawford, the NFS Southern District Manager, and I set up a community meeting in Gold Beach to help expose this threat and send more comments to the Forest Service. Concerned citizens and a local reporter came out to learn about the prospective mining, write letters and sign our petition. The reporter followed up the meeting with a couple articles detailing why surface mining would be toxic to our way of life in rural southwestern Oregon.

Another successful effort came through the use of the Native Fish Society's Action Alert system, which generated more than 600 public comments to the Forest Service during their public scoping period. Next, the city of Gold Beach weighed in by restricting the sale of water for mining operations as specified in the company's plan of operations. The Curry County Democrats also got into the mix with their own resolution

against the mining threat. In order to help increase public awareness, Native Fish Society sponsored one of its members, Ken Anderson, who is a professional photographer to film a short documentary about the mining threat. You can see this short film online by visiting <http://bit.ly/huntercreek>.

Now, we are building a region wide coalition to protect the headwaters of the Illinois, Smith, Pistol and Hunter Creek watersheds by writing our congressmen and women, Forest Service supervisors, state legislators, agency heads, the President, anyone who will listen and join us in saying OPEN PIT NICKEL MINES DO NOT BELONG HERE! Will they listen?

We want the government to protect its citizens, the wildlife and the many recreational opportunities within the Hunter Creek and Pistol River watersheds by withdrawing the Red Flat area from mineral extraction. Currently, the antiquated federal Mining Act of 1872 designates mining as the best use of our public lands, but I don't agree with that prioritization. I can think of many more meaningful and less destructive uses of our amazing public lands, can't you? 





# WILD STEELHEAD PROTECTION

LIFE IN A WDFW WILD STEELHEAD GENE BANK WORK GROUP OR HOW WE LEARNED TO LOVE THE SCIENCE & PUT THE RECOVERY OF WILD FISH FIRST

WORDS BY STEVE LENT,  
WASHOUGAL RIVER STEWARD

“Steelhead management shall place the highest priority on the protection of wild steelhead stocks to maintain and restore stocks to healthy levels.”

— Washington Department of Fish and Wildlife (WDFW)

OVER THE PAST SEVERAL MONTHS, I HAVE BEEN REPRESENTING the wild steelhead of Southwest Washington as a member of the most recent WDFW work group tasked with designating a Lower Columbia River tributary as a wild steelhead gene bank. As a relatively new Native Fish Society River Steward on the Washougal River, my initial goal was to do what I could to help build on the protections brokered by Peter Donahower in the previous WDFW work group in the Columbia River Gorge, where the wild summer steelhead run on Wind River was named as an official gene bank.

Peter is the NFS’s Mid-Columbia River Steward Regional Coordinator, one of my dearest friends, and the wild steelhead fanatic who originally roped me into this whole process by having me sit in for him when he couldn’t attend a meeting of that previous work group. For me, that first work group meeting was a bit like peeking behind the curtain of the Great and Powerful Oz.

Up until that point, I honestly looked at the state of wild steelhead management in the Pacific Northwest and sadly lamented the inevitable decline of these majestic fish. The problems facing *Oncorhynchus mykiss* seem daunting — declining wild stocks, hatchery introgression, habitat degradation, hydroelectric dams everywhere you look, poor ocean survival, and a gauntlet of nets up and down the Columbia River, to mention just a few. We live with the reality that five of Washington’s seven distinct population segments of wild *O. mykiss* are federally listed under the Endangered Species Act. Clearly, and by WDFW’s own admission, more than 70 years of wild steelhead “conservation” efforts have not returned the state’s wild steelhead stocks anywhere near their historic numbers.

Having a peek behind the curtain, however, revealed to me the exciting possibility that WDFW is finally beginning to face up to the decades of research confirming the negative impact hatchery steelhead have on wild stocks. Along with increasing pressure from conservation groups and an insistence from the National Marine Fisheries Service (NMFS) that states begin to reduce hatchery impacts on threatened stocks of wild fish, it appears we are finally beginning to see the early stages of a paradigm shift in the management of steelhead fisheries in the Pacific Northwest.

(OPPOSITE ABOVE)  
Chrome mining  
Photo: Ken Anderson

(OPPOSITE BELOW)  
River Steward Dave Lacey at home  
Photo: Ken Anderson

(BELOW)  
Wild East Fork Lewis Steelhead at Lucia Falls  
Photo: The Columbian



And so, when WDFW was set to convene a new work group to tackle choosing a gene bank stock from rivers in the southern end of the Cascade Stratum — the North Fork Lewis River, the East Fork Lewis River, the Washougal River and Salmon Creek — I was ready to get to work. Attending the initial public meeting to discuss the formation of and rationale for the new work group, it became immediately clear that if choosing the Wind River as a gene bank was a skirmish, this new work group was going to be more like Gettysburg. I am in no way trying to diminish the valuable work done on the Wind River, but hatchery operations ceased on the Wind River in 1997. With no on-site hatchery, no hatchery plants, and the Wind already being managed as a Wild Steelhead Sanctuary, it was a fairly logical choice among the rivers in the area.

The Southwest Washington streams below Bonneville, however, have been consistently loaded with hatchery fish for decades. Even those of you not familiar with the Washougal River have probably heard of the famed Skamania Hatchery on the banks of the Washougal's North Fork. The Skamania strain of hatchery fish have infiltrated rivers not only throughout the Pacific Northwest, they were also a major contributing stock used to introduce steelhead to the Great Lakes. Naming the Washougal as a gene bank would require the elimination of this juggernaut of a hatchery — an uphill battle for sure.

Of the other rivers on the table as possible gene banks with this work group, two almost immediately fell away from consideration. The North Fork Lewis River had just been through the federal relicensing process for its 510 megawatt, three-dam hydroelectric project, including a detailed plan to allow for anadromous fish migration past the dams. Since nothing we decided in the work group was going to preempt the feds, the North Fork was off the table.

The smallest of the four rivers in consideration, Salmon Creek, did not meet the minimum abundance and productivity requirements to be considered as a gene bank and was eliminated almost immediately from discussions. It seemed we were down to the East Fork Lewis as the only viable option.

Since the previous Cascade Stratum work group had already recommended gene bank status for the North Fork Toutle/Green River winter run, discussions about the East Fork Lewis were initially focused on designating only the summer run as a gene bank, and even then, only the portion of the river above the barrier at Horseshoe Falls. People from all sides of the issues at hand were passionate and opinionated. Tensions were high



within the group at times, but then something very unexpected happened. As the pro-hatchery vitriol in the public seemed to increase, people inside the group became more moderate. After roughly thirty hours of meetings, compromises were made, minds were opened, and when all was said and done, the inescapable need to protect these fish prevailed.

With the help of fellow wild fish advocates from groups such as the Clark-Skamania Flyfishers, the Wild Steelhead Coalition, and Northwest Wild Fish Rescue, we were ultimately able to persuade the group to name the entire East Fork Lewis as a gene bank river for both the winter and summer runs, eliminating all hatchery steelhead plants. With the exception of a small chum salmon reintroduction program, I am very pleased to report that the East Fork Lewis will be a completely wild salmonid stream for the first time since 1954. Additional protections will also remain for the upper reaches of the Washougal River, which will continue to be managed as a Wild Steelhead Sanctuary.

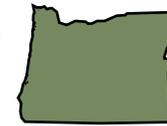
While all of this is great news, what the future truly holds for these gene bank rivers remains to be seen. Although the gene banks are a wonderfully positive step toward recovery, or at the very least protection, of wild steelhead in the Northwest, we can't afford to revel in this victory for too long. The wild fish in the East Fork Lewis, the North Fork Toutle/Green Rivers, and the Wind River are beset on all sides by hatchery strays, militant pro-hatchery angling groups, and state policy makers uninterested in the long-term benefits of wild fish recovery. We must remain vigilant in our support of and our advocacy for wild fish.



(LEFT)  
Steve Lent, at the Vancouver WDFW Public Comment Meeting on the Proposed SW WA Steelhead Gene Banks  
Photo: Mark Sherwood

# law.science.consistency?

words by Bill Bakke, Founder + Director of Science and Conservation

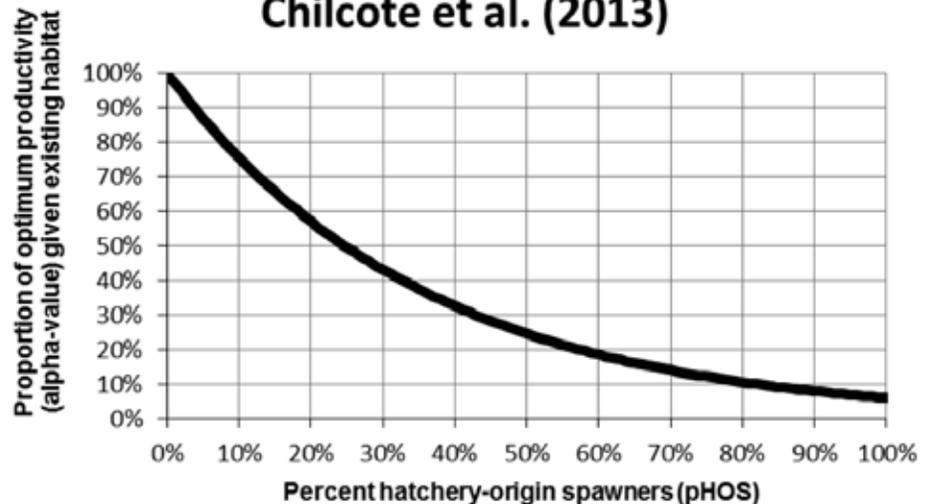


## Is Oregon's Fish Management Consistent with Law and Science?

THIS GRAPHIC ILLUSTRATES THE DECREASE IN PRODUCTIVITY OF WILD SALMONIDS AS THE PROPORTION OF NATURALLY SPAWNING HATCHERY FISH INCREASES.

For example this model shows a 13%, 24%, and 75% reduction in productivity when the proportion of naturally spawning hatchery fish increases from 5%, 10%, and 50% respectively. This model is based on a statistical analysis of 78 Pacific Northwest salmon and steelhead populations. (The authors at the time of publication are biologists for the Oregon Department of Fish and Wildlife)

## Chilcote et al. (2013)



Source: Chilcote, M. W., K. W. Goodson, and M. R. Falcy. 2013. Corrigendum: Reduced recruitment performance in natural populations of anadromous salmonids associated with hatchery-reared fish. *Can. J. Fish. Aquat. Sci.* 70: 1-3

### The Legal Framework For Fish Management In Oregon:

The Oregon Department of Fish and Wildlife's Native Fish Conservation Policy (OAR 635-007-0502) says, "The purpose of this policy is to ensure the conservation and recovery of native fish in Oregon. The policy focuses on naturally produced native fish. This focus is because naturally produced native fish are the primary...foundation for long-term sustainability of native species and hatchery programs."

The purpose of the Native Fish Conservation Policy is consistent with Oregon State Law (ORS 496.012) that mandates that the Oregon Department of Fish and Wildlife, "Prevent the serious depletion of any indigenous species." Therefore, "The Commission's and the Department's overriding obligation is to manage to prevent the serious depletion, which thereby enables the Department and the Commission to provide optimum recreational and aesthetic benefits." (ODOJ letter March 10, 1997) In addition, the Department and Commission "...must manage fish so as to maintain species in an 'optimum level' or restore 'native stocks of salmon and trout' i.e. those that naturally propagate in a given watershed." (ODOJ Letter Dec.2, 2002)

When fish are listed as sensitive, threatened or endangered one can assume that serious depletion is well advanced. **OAR 635-007-0501 (55)** "Serious depletion" means a significant likelihood that the species management unit will become threatened or endangered under either the state or federal Endangered Species Act.

### The Science Framework For Fish Management In Oregon:

The legal framework is consistent with the science going back to the work of Willis Rich in the 1930s when he developed the "Home Stream Theory" and said, "The importance of the fact that the salmon and steelhead return as adults to their home streams and tributaries is obvious; it is essential that each independent, self-perpetuating population of fish be preserved if depletion is to be avoided." (Willis Rich 1948)

Chilcote et al. 2011, 2013: "We found a negative relationship between the reproductive performance in natural populations of steelhead, coho, and Chinook salmon and the proportion of hatchery fish in the spawning population. We used intrinsic productivity as estimated from fitting a variety of recruitment models to abundance data for each population as our indicator of reproductive performance. The magnitude of this negative relationship is such that we predict the recruitment performance for a population comprised entirely of hatchery fish would be 0.128 of that for a population comprised entirely of wild fish. The effect of hatchery fish was the same among all three species. Further, the impact of hatchery fish from 'wild type' hatchery broodstocks was no less adverse than hatchery fish from traditional, domesticated broodstocks. We also found no support for the hypothesis that a population's productivity was affected by the length of exposure to hatchery fish. In most cases, measures that minimize the interactions between wild and hatchery fish will be the best long-term conservation strategy for wild populations."

### Is The Management Framework Consistent With the Legal and Science Frameworks?

Salmon, steelhead and sea-run cutthroat trout are locally adapted to their natal home rivers and this adaptation promotes optimum reproductive success. Adaptation to natal rivers also promotes resiliency through biological diversity, including genetic and life history attributes, that prepare each natural population to cope with both long-term and annual environmental changes.

To be successful salmonid management would establish standards to prevent depletion of native, wild fish in their home streams. This would include adopting objectives for spawner abundance, nutrient enrichment, genetic and life history diversity, productivity and distribution. It would mean controlling the impact of hatchery fish on the reproductive success of wild salmonids; it would include managing harvest to provide spawner timing and abundance, and having habitats that sustain both diversity and productivity.

Over the last 100 years, wild salmonids have been in steep decline. Most wild populations are just 3 to 5 percent of their historic abundance. This record of decline suggests that the management framework in Oregon is not consistent with the best available science or the state and agency legal frameworks. Whenever management actions stray from maintaining the productivity, diversity and abundance of locally adapted salmonids greater risks are imposed.

### River Specific Management: Bringing Fish Management into Compliance with Legal and Science Frameworks.

Based on the fact that salmonids are locally adapted to their natal home streams, the ecological function of each watershed and the estimated reproductive capacity of the watershed by species and race of fish constitute proper salmonid management. To accomplish this, the following actions are necessary:

1. Reconstruct a historical reference for each species in a watershed (their abundance and ecological function) so as to build a context for current native fish status. By doing this the problem of a continuously shifting baseline for salmonids can be avoided. This means that each human generation will be able to work within a historical understanding rather than assume that present conditions are all there ever was.
2. Develop a conceptual framework for wild salmonid management in each watershed based on its ecological function for anadromous and resident fish.
3. Establish spawner abundance by species and race for each watershed based on an estimate of the watershed carrying

capacity including spawning and rearing habitat requirements of each species. An egg deposition objective would be more effective because not all fish are successful spawners and effective spawning is variable. Since each hatchery has an objective for the number of eggs needed to achieve production requirements, it is likewise necessary to establish an egg deposition target by species for each watershed to maintain wild salmonid viability.

4. Establish a nutrient enrichment target for each watershed from naturally spawning salmonids. The purpose is to provide nutrients for aquatic insects, rearing juvenile fish, fertilization for and maintenance of riparian vegetation and a seasonal source of food for wildlife.

5. Establish a watershed management agreement among state, federal, and local governments, including private landowners and the public. The purpose of the agreement is to maintain the reproductive capacity of the watershed for salmonids. Each fish and watershed management plan would serve as a vehicle to establish a watershed agreement initiated by fish managers.

6. Hatcheries would be operated as river specific facilities so that fish and eggs are not transferred among watersheds. Since salmonids are locally adapted, hatcheries would be operated on same biological principle for each species. Each hatchery would be managed by measurable objectives for the purpose of causing limited, measurable, and quantifiable genetic and ecological risk to wild salmonids. Risks to wild salmonids would be quantified and trade-offs explicitly explained. Each hatchery would be evaluated for the cost to produce a fish that contributes to the fishery and for their impact on investments in habitat restoration.

7. Salmon are harvested in many ways throughout their life cycle due to human development of watersheds. Fisheries subtract spawners from the spawning run so regulation by the fishery agencies would not only set objectives regarding catch but an allocation of spawners for each watershed.

8. Conduct a genetic and life history evaluation of wild salmonids in each watershed to determine substock structure and create a baseline of diversity that can be used to measure changes in characteristics of salmonids in each watershed.

9. Establish and fund an independent scientific team to review state fish and habitat management and make recommendations to improve wild salmonid status and management and the management agencies would be expected to apply those recommendations. The agencies would be required to provide a written response to those recommendations, and that response can include any funding constraints, but not limited to funding issues as the reason for not implementing the recommendations. The Independent Multidiscipline Science Team has provided the state this service and should be continued with secure funding.

10. Performance review of agency leadership would be based, in part, on the implementation of the legal framework to protect native, wild fish and applying best available science to management actions including recommendations from the independent science team. 



(Left)  
Bill Bakke  
Photo:  
Ken Anderson

# wild lands

# grow

# wild fish

WHYCHUS-DESCHUTES  
WILDERNESS PROPOSAL

WHYCHUS-DESCHUTES  
WILDERNESS PROPOSAL

WORDS BY GENA GOODMAN-CAMPBELL  
UPPER DESCHUTES RIVER STEWARD  
PHOTOS BY GENA GOODMAN-CAMPBELL  
& MARK SHERWOOD



“Now that’s a honey-hole right there!”

I heard this exclamation a dozen times as I walked along the lower reaches of Whychus Creek with filmmaker Shane Anderson and Mark Sherwood of the Native Fish Society. Every few minutes, we would stop to gaze into the crystalline water of another deep hole, trying to make out the shape of trout hiding in the shadows. We were trying to catch one of the native redbands in Whychus Creek, or if we were lucky, one of the elusive bull trout that swim in this cool desert stream. Instead of rods, we lugged video cameras down to the creek to catch footage of the wild fish that make their home in the proposed Whychus-Deschutes Wilderness Area.

As one of the Upper Deschutes River Stewards for NFS, this stretch of Whychus Creek right above its confluence with the Deschutes River is my homewaters. If I close my eyes, I can conjure up the golden light angling into the canyon, the sweet smell of bitterbrush in full bloom, and the sound of the creek rushing past. I could probably navigate this trail with my eyes closed, but I don’t often stop to ponder what’s going on underneath the creek’s surface.

“You want to dip this one?” Shane asked, and I climbed down the steep banks, hopped onto a boulder and dunked the camera deep into the swirling water. I could only imagine the scene unfolding beneath the water, and I really wished we had brought the mask and snorkel sitting in our rig back at the trailhead.

The fish habitat provided by the Whychus-Deschutes area is one of the primary reasons why the Native Fish Society supports the efforts of the Oregon Natural Desert Association (where I work full-time) to permanently protect this place as wilderness. Encompassing around 15,000 acres and surrounded by residential and agricultural development, the public lands of Whychus-Deschutes are a last wild refuge for both wildlife and humans in Central Oregon.

Oases in the deep canyons of Whychus-Deschutes provide habitat for wintering mule deer, migrating songbirds and countless other creatures, but the resident fish are the most imperiled. Bull trout occupy just over a quarter of their historic habitat in Oregon, and the bulk of our state’s bull trout population is either extinct or



(ABOVE) Gena with an early salmonfly.

(BELOW) Bull trout love cold, clean water.



(ABOVE) Springtime blooms of balsamroot.

threatened with extinction. According to a 2004 study by Trout Unlimited, 83 percent of the streams where bull trout still have a toehold in Oregon are in watersheds with roadless areas. Preserving these last roadless strongholds, like Whychus-Deschutes, is critical to the survival of bull trout in Oregon.

Many characteristics of the Whychus-Deschutes area combine to make it prime habitat for wild, native fish; chief among them is an unbelievable abundance of springs. Water seeps out of the banks and bubbles up from the ground, recharging the creek. Combined with spawning gravel, deep pools created by logjams, and healthy riparian vegetation, this cool clear water makes Lower Whychus Creek one of the best spawning streams in Central Oregon. Below Alder Springs, where cool water enters the creek at a rate of 60 cubic feet per second, bull trout have survived against the odds in this arid environment.

Whychus-Deschutes lies directly upstream from the impounded waters of Lake Billy Chinook, and is the first suitable spawning habitat that migrating fish reach as they make their way into the Deschutes watershed. Only a handful of steelhead and spring chinook have returned to these waters so far, hardly enough to justify the hundreds of millions of dollars spent on getting them through the Pelton-Round Butte dam complex back into our watershed. But for me, and others who love wild rivers, even a single steelhead returning is reason enough to protect this irreplaceable habitat. Today, Lower Whychus Creek remains miraculously healthy in spite of years of abuse and development upstream. Our goal in protecting this area as wilderness is to keep it healthy and wild, so that when steelhead and salmon do finally make their comeback here, they have a good home to return to.

Shane, Mark and I only planned on a short hike, but as the day grew warmer we made our way to the jaw-dropping canyon where Whychus Creek and the Deschutes River meet. We came to the confluence and faced a wall of spring water pouring out of the cliff face on the opposite bank. The sense of wonder I experience in this place is perhaps the least tangible of the reasons we have for protecting Whychus-Deschutes—but if you've felt it, I hope you too will do everything in your power to make sure that future generations have a chance to experience that same magic. 

*This September, local conservation groups are hosting several public sessions around Central Oregon to build a homegrown proposal for permanent protection of Whychus-Deschutes—stay tuned to Redd It for details on meeting times and locations.*



# WHERE THE RUBBER MEETS THE ROAD

OREGON'S COASTAL MANAGEMENT PLAN:  
IMPLEMENTATION IS NOW THE HIGHER CALLING

WORDS BY PETER TRONQUET, BOARD MEMBER +  
ROGUE, ILLINOIS & UMPQUA RIVER STEWARD

When the Oregon Fish and Wildlife Commission approved a comprehensive salmon management plan this month called the Coastal Management Plan, or CMP, an underlying assumption is that hatchery fish pose ecological and genetic risks to wild fish. With that in mind, it is safe to say that the unanimous vote reflected the economic importance of hatchery programs to coastal communities from Port Orford to Seaside. Yet amid the noise of the long-running hatchery vs. wild fish debate, it's easy to forget that wild salmon are also a boon to coastal economies. Whether the CMP secures a future for the six species of wild salmonids occupying many of the same river basins as the hatchery fish - fall and spring Chinook, winter and summer steelhead, coho and coastal cutthroat trout - will depend almost entirely on the successful implementation of the plan.

The Oregon Department of Fish and Wildlife and public stakeholder groups developed the CMP over the last two years. None of the species is listed under the Endangered Species Act and ODFW consequently accepted greater risk to wild populations throughout the planning process. To expedite, the agency restricted public comment to hatchery and harvest decisions. In response, two wild salmon advocacy groups, the Steamboaters and the Native Fish Society, hired an independent science panel to review ODFW's science.

We asked the panel to determine if the plan met the criteria of the Native Fish Conservation Policy, the administrative rule that protects Oregon's wild salmon from "serious depletion." ODFW was candid about the assumptions and uncertainties in the CMP but defended the plan by explaining that wild fish management decisions must often go forward based on incomplete historical data. Most disturbing is the fact that the agency cannot currently quantify the impact of hatchery programs on wild fish genetics (the CMP identifies 37 hatchery programs releasing almost 6.4 million fish annually). The science panel challenged the CMP assumption that most wild populations were healthy. Although there are exceptions, it is their opinion that the plan fails to

prioritize management actions that will protect and restore wild salmon abundance and distribution.

ODFW used a "portfolio" approach, analogous to an investment portfolio, to balance risk to wild populations from hatchery program overlap. In a place like Alaska's Bristol Bay, a benchmark for sustainable management of salmon fisheries, portfolio management means that the biological diversity and resilience of wild sockeye stocks allows managers to develop harvest plans that pose little risk to the productivity of wild populations. In Oregon, where the influence of hatchery fish may reduce diversity, portfolio management further elevates risk.

One of the goals of the Native Fish Conservation Policy is to preserve the genetic options of wild populations. The CMP moves in that direction by establishing Wild Fish Emphasis Areas, specific geographical areas where hatchery fish are not released and the risk of hatchery fish spawning with wild fish is minimal. We see conservation value in reducing the hatchery footprint whenever possible. However, the NFCP requires that wild populations be protected in all rivers, including those that are managed primarily for hatchery programs. There can be no sacrifice of wild fish populations.

Wild stocks are as important to coastal economies as hatchery programs. More than 80 percent of fall Chinook harvested along the Oregon Coast are wild stocks. The CMP describes an extensive monitoring plan but lacks the budget to fully implement it. Without a robust monitoring plan, which collects data on such metrics as spawner abundance and the percentage of hatchery fish spawning with wild fish, data collection becomes haphazard and management accountability is compromised. Individual wild populations may slip undetected down a path toward extinction.

Crafting the CMP was a worthy accomplishment. Implementation is now the higher calling. 

(Above)  
Oregon Coast  
Photo: Conrad Gowell

Dan Callaghan's photography captured the soul of the North Umpqua. As part of Dan's legacy, he entrusted the Native Fish Society with the protection of that soul. Help us protect your homewaters.



JOHN EUSTICE

Dan Callaghan

By designating the Native Fish Society as a beneficiary of your estate you join a growing number of like-minded visionaries creating a visible legacy that confirms your enduring commitment to restoring wild, native fish to their homewaters.

Small estate or large estate, philanthropic-minded people can reduce taxes and leave more for both family members and the Native Fish Society.

For more information about planning a bequest to Native Fish Society, please contact Executive Director, Mike Moody: (503) 496-0807 or [mike@nativefishsociety.org](mailto:mike@nativefishsociety.org).

## welcoming new board members

NATIVE FISH SOCIETY, BOARD OF DIRECTORS

### Julie Kiel

Julie received her B.A. in History from the University of Minnesota in 1980 and her J.D. from Northwestern School of Law of Lewis & Clark College in 1983.

Julie recently left PGE after 29 years of employment there. For most of that time, she worked in hydro licensing and project development. She is a past president of both the National Hydropower Association and the Northwest Hydroelectric Association.

Julie's interest in serving on the NFS board is to apply her expertise in balancing natural resource management and development within a new, wild fish centric, forum.



### Paul Fortino

Paul received his B.B.A. in Business Administration from the University of Michigan in 1967 and his J.D. from the University of Notre Dame School of Law in 1975.

Paul served in the U.S. Navy from 1967-1980. In 1980, Paul started with the Perkins Coie law firm in Seattle, WA. In 1983, he opened the Perkins Coie office in Portland, where he worked for 30 years until his retirement in 2013.

Paul served as a Director at Oregon Trout and continues to serve on the Board of Directors for the Freshwater Trust. He joins the NFS Board of Directors looking forward to the opportunity to get closer to wild fish and wild fish issues.



(ABOVE LEFT)

Wading out on the N. Umpqua  
Photo: Dan Callaghan

# WILD RESURGENCE ON THE EEL RIVER



words & photos by Jake Crawford,  
Southern District Manager

THE EEL RIVER IS CALIFORNIA'S THIRD LARGEST WATERSHED AND HOME to three fish species: chinook salmon, coho salmon, and steelhead currently listed as threatened under the Endangered Species Act. Its headwaters begin in California's rugged coastal mountains and flow northwest, where the river empties into the Pacific Ocean 13 miles south of Eureka, CA. The vast Eel watershed once contained the third largest run of salmon and steelhead in California, collectively totaling over a million fish returning annually. However, catastrophic flooding in 1955 and 1964, combined with a history of habitat degradation, non-native species introduction, hatchery programs, legal and illegal water withdrawals dramatically decreased the Eel's salmon and steelhead populations, which now represent just 1% of historical abundance. Despite the many threats this watershed has endured a recent resurgence in its wild salmon and steelhead populations gives hope for the Eel's recovery.

In some regards, California is ahead of Oregon and Washington by not basing the Eel's recovery on hatchery supplementation. Instead, the California Department of Fish and Wildlife (CDFW) relies upon progressive fishing regulations to protect its vulnerable populations. There is no hatchery on the Eel, and in 2007 a conscious, science-based decision was made to discontinue planting hatchery fish indefinitely. Notwithstanding the occasional stray from the neighboring rivers, there remain no hatchery fish in the system and CDFW still provides fishing opportunity by managing a catch-and-release fishery with only artificial flies and lures and single-point barbless hooks during species-specific time periods, when flows remain adequate. Through these management actions, CDFW has placed a priority on the recovery of wild fish in the Eel, while allowing anglers to participate in the fishery by directly managing two of the four factors leading to the decline of wild fish (Hatchery, Harvest, Habitat, and Hydro).

The greatest remaining challenge for wild salmonids in the Eel River is the lack of water; an issue that will only be exacerbated with drought conditions in a changing climate. Legal water withdrawals through the Potter Valley Project, diverts water from the upper river into the neighboring Russian River, and illegal water withdrawals from intense marijuana cultivation continue to stymie recovery efforts basin-wide. Unless both the legal and illegal water withdrawals are resolved together, recovery efforts on the Eel will continue to be hindered by the lack of available cold water.



(TOP) Mainstem Eel River (Bottom) Middle Fork Eel River

Other notable challenges include juvenile predation by non-native Pikeminnow, sedimentation build-up from past flooding and current dams, and habitat degradation from a history of logging and land use changes in the lower river.

Native Fish Society is committed to the recovery of wild, native fish across the Pacific Northwest including watersheds in Northern California like the Eel. Many hard-working government agencies, groups and individuals are currently involved with recovery efforts on the Eel, and we are committed to working with these groups to help rebuild self-sustaining populations of wild, native fish. In May, I organized a meeting with numerous local stakeholders near the Middle Fork of the Eel to discuss how NFS could be effective in the recovery efforts currently going on throughout the river. The results of this meeting were clear. The River Steward Program is adeptly suited to help recovery efforts with our boots-on-the-ground approach to wild, native fish recovery and protection. Currently, we have two River Stewards in the lower river, Sal Steinberg on the Van Duzen and Dustin Revel on the lower Eel, who are working with the current recovery efforts and will continue to be engaged with the other area stakeholders. 

*Stay tuned for more information about NFS efforts on the Eel River, and if you live in the watershed and want to be involved with wild fish recovery please contact Jake at [jake@nativefishsociety.org](mailto:jake@nativefishsociety.org).*



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(BELOW) Release. Photo: Darcy Bacha

# GIVE BACK TO YOUR HOMEWATERS

## 1. Make a special donation.

Your generosity ensures that a strong science-based voice exists for wild, native fish.

[nativefishsociety.org](http://nativefishsociety.org)

## 2. Become a River Steward.

Interested in making a lasting difference in your homewaters?

Contact:

Mark Sherwood

503.496.0807

## 3. Stay connected.

Sign up for Action Alerts and connect with NFS on Facebook, Twitter, & Instagram.

[nativefishsociety.org](http://nativefishsociety.org)

## 4. Become a member.

Join the over 700 members pledging annually to protect wild, native fish.

[nativefishsociety.org](http://nativefishsociety.org)

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Let them know you value clean cold water and wild, native fish!

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## 6. Read the science.

Free to the public, the NFS website offers hundreds of peer-reviewed science docs.

[nativefishsociety.org](http://nativefishsociety.org)

## RIVER STEWARDS + REGIONAL COORDINATORS

- |  |  |   |  |
|--|--|---|--|
| <b>Christie Adelsberger,</b><br>Sprague & Lost                   | <b>Ian Fergusson,</b> Salmonberry                | <b>Yancy Lind,</b> Upper Deschutes                      | <b>Jake Robinson,</b> Coos Bay                               |
| <b>Ryan Allred,</b> Klamath                                      | <b>Sean Flaherty,</b> Gig Harbor                 | <b>Matt Lund,</b> Siletz                                | <b>Brent Ross,</b> McKenzie                                  |
| <b>John Appleton,</b> Grand Ronde                                | <b>David Gee,</b> Hood                           | <b>Kent MacIntosh,</b> Nestucca                         | <b>Mark Schmidt,</b> Molalla                                 |
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| <b>Scott Baumer,</b> Hood, 15 Mile                               | <b>Coast Regional Coordinator</b>                | <b>Crystal McMahan,</b> Sycan                           | <b>Eric Shoemaker,</b> Necanicum                             |
| <b>Duncan Berry,</b> Salmon                                      | <b>Ryan Haseman,</b> S. Puget Sound              | <b>Matt McQueen,</b> Klickitat                          | <b>Jason Small,</b> S. Puget Sound                           |
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| <b>Tom Derry,</b> Molalla  | <b>Ken Johnson,</b> Skagit                       | <b>David Moryc,</b> Sandy                               | <b>Keith Stonebraker,</b> Clearwater                         |
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