

The Upper Willamette Recovery Plan

Oregon Anglers represents sports fishermen on this major undertaking with 2 board members. Bill Sanderson, of the N. Santiam River Guides and the Salem Steelheaders, and Dennis Richey, executive director of OA both sit on the committee. Bruce Harpole of the Oregon Fishing Club is Richey's alternate, and Alan Girod of Mill City is Bill's. The stakeholder group includes representatives from agriculture, commerce, conservation, forestry, local government, tribal, utilities, watershed councils, and of course fishing interests.

The meetings have been on hold for about 9 months because of changes in personnel at ODFW. I spoke with one of the biologists assigned to take over the plan, and he said that the department was getting geared up to resume meetings. (Posted May 5, '08)

At the Tuesday, Sept. 18, 2007 meeting a DRAFT copy of the first 7 chapters was presented and partially explained to the group. Written comments were welcome from the public in addition to the task force members. The document is lengthy and formidable. It can be viewed at <http://www.dfw.state.or.us/fish/esa/upper-willamette/index.asp>.

Oregon Anglers written comments are below:

Sport Fishing Comments on the Draft of the Oregon ESA Recovery Plan For the Upper Willamette River Domain October 25, 2007

I will address primarily limiting factors and management actions. The following comments are drawn on input from several stakeholder groups very familiar with the Willamette Basin: the Mid-Willamette Valley Anglers, the Salem Steelheaders, the Emerald Empire Steelheaders, and the North Santiam River Guides, plus several individual guides and fishermen.

Limiting Factor: Predation and competition of hatchery fish upon wild fish.

Proposed Management Action: Release hatchery smolts at the biologically optimum time.

Recent studies by U.S. Fish and Wildlife biologists showed very little evidence of competition between hatchery and wild steelhead smolts.[1] Even though the hatchery and wild steelhead varied both physiologically and morphologically, with the hatchery fish being larger, no differences were found in wild fish habitat before and after the release of the hatchery smolt. Wild and hatchery fish were seldom found close together, and competition for habitat was not observed.

If the habitat were limited, a prior residence advantage must have allowed wild fish to defeat hatchery fish during competitions for optimal habitat. Hatchery fish were found under surface turbulence, and wild fish were located in deeper water with larger substrate and more cover.

Furthermore, hatchery smolts that were released too early, before "smoltification" or with a low gill Na⁺, K⁺ ATPase level, stayed in the release stream longer.[2] Those who had a higher gill Na⁺, K⁺ ATPase level and were released after the mean date of April 21st migrated immediately causing little

interaction, and were also found to experience a lower level of predation by the Arctic Terns and Double Crested Cormorants in the Columbia estuary.

Therefore, if hatchery steelhead smolt (and most likely Chinook also) were allowed to smoltify, or go through their pre-salt water adaptations before release, not only would they compete with and prey upon wild fish less, but would fall victim to avian predation at a much lower level. I understand that this is not currently the primary consideration in hatchery release dates.

[i] *Comparisons between hatchery and wild steelhead trout (Oncorhynchus mykiss) smolts: physiology and habitat use.* Megan S. Hill, Gayle B. Zydlewski, and William L. Gale. Can. J. Aquat. Sci. **63**: 1627-1638 (2006)

[1][1] *Relationship between smolt gill Na⁺, K⁺ ATPase activity and migration timing to avian predation risk of steelhead trout (Oncorhynchus mykiss) in a large estuary.* Benjamin M. Kennedy, William M. Gale, and Kenneth G. Ostrand. Can. J. Fish. Aquat. Sci. **64**: 1506-1516 (2007).

Limiting Factor: Loss of wetland and side channel Habitat.

Proposed Management Action: Create small side channel streams as has been successfully done on the Clackamas River.

Previous side channels have been blocked off along many of the rivers in the Valley. Identifying and working cooperatively with landowners is one of the key factors in making this successful. Fishing clubs and STEP groups are a resource to utilize where watershed groups are not an option.

Limiting Factor: Smolt migration mortality.

Proposed Management Action: Examine some of the smaller, but deadly, man made obstacles and make the minor adjustments that may make a significant difference in smolt mortality.

The diversion for the Salem water intake is a good example of an innocuous looking downstream passage obstacle. However the water spills over the lip down upon a flat concrete surface, which causes considerable immediate and delayed mortality of Steelhead and Chinook smolts. Spillways that direct the flow outward would reduce this mortality.

Limiting Factor: Smolt mortality passing through hydro-power turbines.

Proposed Management Action: Smolts are not “chopped up” going through the turbine blades as many believe, but are exposed to the “bends” going from 2 gravities of pressure to 0 gravities, due to inefficient blade cavitation. Turbine blades can be redesigned to more efficiently produce more power and substantially decrease smolt mortality. This was proposed 15 years ago by a biologist from a local PUD, but was condemned by the FISHERIES DELEGATION because it could cut off some of the funding that they wanted to do habitat restoration. It is time to promote this course of action.

Limiting Factor: Water levels for smolt downstream migration spills are high, causing redds created at these high levels to be dewatered when spill is cut back.

Proposed Management Action: Experimentation should be allowed to save some spill water and thus moderate stream levels so redds can be saved until fry can emerge. There is only so much water. We can conserve, but can't invent more. So we need to look realistically at flow demands. Where lack of current in the thalweg of impoundments cause migrating smolts to get lost or be delayed, flow velocity enhancement should be explored. The use of underwater venturies or eductors can be placed strategically to create a current for migrants to follow. [3]

Limiting Factor: Summer Steelhead affecting spawning of wild Winter Steelhead by interbreeding.

Proposed Management Action: Further objective studies are needed to verify alleged negative effects.

The study that is the basis of this claim is from the Clackamas River by ODFW's Katherine Kostow. She documented a decline in wild Winter Steelhead populations when hatchery Summer Steelhead were introduced and some strayed onto the spawning grounds. Then when hatchery stocks were removed at dam overpasses and not allowed access upriver the population of the winter stocks increased. In fact there is a very small overlap of winter vs. summer stocks in spawn time. But the main factor calling for a better study is that she did not take into consideration that there were very poor ocean conditions when the summers were introduced, and all stocks were suffering. And conversely, when the summers were kept off the spawning grounds, there was a huge upswing in all basin stocks due to the very good ocean conditions.

Limiting Factor: Harvest management/ a failing policy.

Many streams were closed to sports fishing to give salmon and steelhead a chance to spawn. Also the stocking of trout and hatchery salmonoids was terminated in many streams. The trouble is that the 2 actions were not coordinated.

I will use the Little North Fork of the Santiam River as an example. This small stream runs from Opal Lake over 20 miles to the North Santiam, about 1 mile upstream from the Mehama / Lyons Bridge. It was home to a small run of wild Spring Chinook and a decent wild run of early Winter Steelhead. All trout and hatchery steelhead stocking was ceased. Today fishing is allowed on the steelhead even though there is no retention allowed. Many locals fish for and retain these wild fish, particularly on private property. There are no trout in the river during the summer, but fishermen are constantly pursuing trout, and killing many juvenile steelhead and salmon. The mortality rate has become so severe that very few juvenile are spotted in the lower river anymore.

Proposed Management Action: Reduce mortality where there is no retention of fish possible.

We propose that the river be closed to all fishing to see if that helps bring back the wild stocks. It may be too late. After 8 years we propose that if stocks have not rebounded, trout and hatchery steelhead be once again stocked and fishing be reopened. Or if there are too few wild returnees to seed a comeback, start planting it again now.

This is but one example of doing something half-assed without following up on the consequences.

[3]Natural Solutions, PO Box 1236, Helena MT 59624

Submitted by,

Dennis Richey, [Oregon Anglers](#)