

**Wild Steelhead Coalition
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The following are talking points for the WDFW SEPA Scoping Meetings regarding the preparation of the State-wide and the Puget Sound Resource Management Plan (s) (RMP) for steelhead. These points can also be used for written comments to WDFW which are due **September 26, 2006.**

1. The Puget Sound Steelhead ESU should be ESA listed to gain maximum habitat protection, stimulate new Federal and State dollars for needed research, and provide a new public focus on wild steelhead problems. The WDFW Steelhead Assessment Paper indicated that 80% of Puget Sound Rivers are either Depressed or Critical and 50% are at a high risk of extinction.

The WDFW response to the NOAA listing was that things are not as bad as NMFS believes. But the WDFW Assessment paper suggests they may, in fact, be worse. The NOAA Biological Review Team (BRT) voted unanimously to recommend listing. These are the science experts on salmonid and their recommendation should be followed if we are sincere about the recovery of steelhead. Some of these rivers have been in a depressed condition for 20 years. Rivers of the Hood Canal are examples of steelhead populations that I fished until 1986 when their runs became depleted. Most other Puget Sound steelhead fishers have experienced similar experiences on their home rivers. The Puyallup and the Nisqually Rivers experienced similar declines beginning in 1990 and most of the other Puget Sound Rivers have declined since that time.

Recovering depleted fish in the face of lost habitat, state and county politics, management and research budget shortages, limited biological and population information, and cyclic environmental dynamics such as low ocean survival is a tough if not impossible task. Wild steelhead, the Washington state fish, deserve every helping hand that help that they can get.

It is imperative that we save and restore wild steelhead habitat. The future of these fish depends on having quality rivers with full ecosystems restored. If Puget Sound steelhead populations are listed, there will clearly be many additional critical habitat designations beyond those that now exist for Chinook salmon in Puget Sound. Much of the steelhead spawning and rearing habitat is higher in the watersheds on Federal lands and those that are not already protected under 4d agreements will receive the needed protection.

WDFW will never have the funds needed to do an adequate job of management and also conduct the research needed to improve steelhead management. In about 1996 the states single steelhead research program (at Snow Creek) that was investigating the life history and management problems of wild steelhead was cut during to the WDG/WDF merger

and was never reinstated. Since that time, the state has basically turned its collective back on wild steelhead problems and concentrated on other species. A listing will provide additional federal funding for the state, the counties and other Federal agencies to conduct needed research and repair degraded habitat. There is a tremendous amount that we need to know about steelhead life history, genetics, population dynamics, habitat changes and hatchery systems impacts and federal dollars are a good source for funding to do that work.

Finally, listing will provide a new public focus on Washington steelhead and their problems. The lack of public awareness of their problems and support for research and habitat protection long been the steelhead's problem: WA residents and our legislature have been more focused on the five other "salmon" species and steelhead have taken a back seat. A listing will help steelhead problems get more attention, from the federal government, sport fishers, WA citizens, and the Washington legislature.

2. The first work of the Puget Sound RMP team should be the development of meaningful goals to rebuild Puget Sound Steelhead stocks and provide for Washington sport fisheries. It has become evident in recent years that fishing every year and during the normal winter months of December through April is more important to sport fishers than a large wild harvest. This should be one of the states goals for sport steelhead fishers: providing for full season opportunity every year, planning for a reasonable harvest of hatchery fish and a limited harvest of wild fish when the populations are strong. Clearly the tribal goal is different, but the states and the tribal goals can be compatible, given proper discussions of ways to meet each governments needs.

3. We need to restore the abundance of wild steelhead, not only at the watershed level, but in every tributary and in each time segment of the run. Recent genetic work has shown that each tributary and each run period may have different populations.

4. The time is past when we can manage at minimum escapement goals. Increasing habitat problems and the ever present changes in ocean and river conditions have produced long dynamic productivity cycles. Managing harvest at the present e-goals means going into the low cycles with the minimum spawning stock. As productivity falls below replacement, stocks will decline and become depressed.

The early modelers of the 1950's told us that managing at maximum harvest rates would mean annual closures in some fisheries due to random variation. Those early modelers of MSH didn't observe or understand natural productivity cycles that can last 10 to 20 years and have great impacts on anadromous fish populations. Long low productivity cycles will mean some stock abundances are driven very low, possibly to functional extinction before the high cycles return. At best, most wild stocks will take a long time to recover and some may never again provide opportunities for sport fishing.

One of the best ways to assure healthy populations and fisheries during the low productivity cycles is to build abundance during the high production periods. The WSC has proposed managing harvest beginning at 150% of the e-goals to build this buffer. At this level, managers should be able to prevent stock depression during the low cycles, retain steelhead resiliency and provide for quick recovery, if necessary, when higher productivity returns.

5. Pre season run estimates should be conservatively planned, including the use historical error estimates, and managers should always err on the side of the fish. Reconstructed runs should include not only the harvest (s) and spawner escapements, but catch and release mortalities, estimates of nonreported harvest, net drop out and marine mammal take.

6. We need to better understand the life history and genetic diversity of wild steelhead as these genetic traits are important to steelhead productivity and resilience. Two genetic traits of steelhead that we are learning more about today are the decline of the early runs and the importance of rainbow trout in producing steelhead. Management should strive to protect all rainbow trout, all resident steelhead (fry, parr, and smolts) from fishing mortality.

On the Olympic Peninsula there is information that shows the early winter runs (December and January) have declined significantly, possibly more than 20%, due to increased fishing pressure starting in the early 1960's for hatchery fish. Early and late runs on the Dean River in BC have been found to be different populations, meaning that the loss of the early runs may have profound genetic and life history impacts on abundance, productivity and resilience. I would suggest reviewing the literature on subject (WDFW, 1996; Royal, 1976; Deshazo, 1985; and WSC,2006) and the wild steelhead landings from Puget Sound rivers from the 1940's and 1950's and compare them to the most recent catch data available to determine what changes occurred in wild steelhead run abundance (s) during these early months. You will find that most rivers had large and significant runs during December and January during those early years.

The literature (see Kostow, 2003) and recent studies on the Olympic Peninsula also indicate that rainbow trout are important in the production of steelhead. On the Olympic Peninsula, 15% of the steelhead spawning interactions included male rainbow trout. (a recent in-press paper by John McMillan). At Snow Creek and Hood River, about 40% of the parents of returning adults were not adults and believed to be juvenile *O. mykiss* (either rainbow trout or young precocious steelhead. Recent evidence also suggests that rainbow trout can provide a reservoir population for helping stock recovery when the anadromous form is depleted. The abundance of fry, parr, smolts and rainbow trout is tightly linked with the natural productivity of steelhead and to their resilience in the face of unfavorable events. There are rivers, as the Cedar, where closures have rebuilt the rainbow trout populations and may not need special attention. But there are indications that most Puget Sound rivers have lost and continue to lose a significant number of their resident forms and need special management action, including summer trout closures,

bait bans, and selective gear fishing to rebuild these populations. The combination of these life history traits suggest we may have lost 20 to 40 % of the productivity of many of our wild steelhead populations due to reductions in these important life history traits

6. Hatchery plants need to be evaluated for their competitive impacts on wild steelhead. WDFW should significantly reduce the hatchery plants on rivers that are making their required escapements and eliminate plants on rivers that have missed escapement for two consecutive years.

The low survival rates (SAR indices) of hatchery steelhead in Puget Sound suggest that WDFW should consider major reductions in hatchery smolt production to help in the rebuilding of wild stocks. Most biologists believe that ocean survival is responsible for much of the decline of steelhead in Puget Sound and Southern British Columbia. This indicates fewer food items for smolts and growing fish and considerable feeding competition between wild and hatchery smolts. Studies in Prince William Sound suggest that hatchery production did not increase total productivity in pink salmon, it only decreased wild fish production.

Reducing the smolt releases will not necessarily mean reduce hatchery productivity as the survival rate may be much higher. Given the large number of steelhead and salmon smolts now released from PS hatcheries, the fact that steelhead hatchery returns are the lowest in the state, (about .4%) and ocean survival is believed to be the major problem for PS steelhead, reducing competition and juvenile biomass may have far reaching effects in improving the productivity of wild and hatchery fish.

7. Existing integrated and wild brood stock hatcheries should be fully evaluated for their impacts on wild steelhead before new hatcheries of this type are planned. This evaluation should include reproductive fitness of the hatchery and wild stocks, the ability of the program to maintain genetic and life history characteristics of the wild population, and in-river and marine competition.

There is considerable interest, hype and political motivation in converting segregated hatcheries to integrated hatcheries. There are studies showing some wild species (especially those with a short in- river time), such as Chum salmon, may increase with this technique but there is very limited information on the values to steelhead. Before we move into the use of integrated techniques statewide, we need to complete a series of research projects on the impacts this hatchery technique will have on wild steelhead reproductive fitness, life history and genetic diversity, and total productivity and resilience. These impacts should be understood well beyond the 2nd generation to assure long term use is not harmful to these traits. There are 14 integrated/conservation hatcheries on line now and several such as the Wynoochee and the Snyder should be good candidates for monitoring and evaluation. New conservation hatcheries, such as the Puyallup, should also be monitored for impacts. Changing over segregated hatcheries to integrated hatcheries should be put on hold until the science is clear on the impacts they will have on wild steelhead.

Segregated hatcheries can be reformed with the recommendations of the HSRG and also re-examined with new genetic techniques for recent impacts on wild fish. Given that these hatcheries have gone through 15 or so generations, recent introgression impacts of the Chambers and Skamania stocks may presently be very low and they may cause fewer impacts on wild fish than integrated hatcheries in later generations.

8. The HSRG recommended wild steelhead zones to preserve population genetics. These zones can also help to determine the true carrying capacity through time and a better understanding of the ecology of all wild fish. These zones should be established for all species of wild salmon and trout.

Research in these reserves will allow us to understand the true ecological interactions and carrying capacity of all wild species with the full compliment of marine derived nutrients. We will also preserve a genetic bank of wild genes for future needs. Infusing integrated hatchery fish of other species into these reserves will reduce most of the benefits to wild steelhead.

9. The Olympic Peninsula (OP) and the South West Washington (SWW) ESU's should be managed conservatively to prevent the declines and listings that we have seen in all other regions of Washington. Graphs of the runs to the OP and SWW ESU's (see WSC, 2006) show abundance cycles that are probably related to marine and freshwater productivity changes. In the past decade, stock health of these rivers was buffered and maintained by large spawning stocks, normally 20% to 100% above their respective escapement goals. During the 1990's these rivers maintained healthy spawning populations due to these buffers during downturns in productivity.

More recently we have seen these rivers managed for harvests that reduces the populations closer to their respective escapement goals (in some cases, such as the Hoh River, spawner abundance has fallen well below the required escapement due to intensive harvest planning). This reduction in annual spawners has set these populations up for potential declines below the minimum required escapements when the productivity again falls. The WDFW has been giving the tribes a major portion of the sport allocation, apparently to stave off foregone opportunity issues. If the sport fishery received its full allocation, any excess fish would escape to the spawning grounds, increasing the spawning population and help to maintain the needed buffer for future declines in productivity.