U.S. Fish and Wildlife Service - Pacific Region

Columbia River Basin Hatchery Review Team

Columbia River Basin, Lower Columbia Province

Clackamas Watershed

Eagle Creek National Fish Hatchery

Assessments and Recommendations

Final Report, Appendix D:

Complete Text of Comment Letters Received from Stakeholders

July 2007

Appendix D: Complete Text of Comment Letters Received from Stakeholders

Date: March 8, 2007

To: Don Campton
USFWS Hatchery Review Team

From: Todd Alsbury
District Fish Biologist-North Willamette Watershed District
Oregon Department of Fish and Wildlife

Re: ODFW Comments on the *Eagle Creek NFH Assessment and Recommendations*

The Oregon Department of Fish and Wildlife (ODFW) conducted an internal review of the Eagle Creek National Fish Hatchery (ECNFH) Assessment and Recommendations and would like to provide the following comments and supporting information. Please don't hesitate to contact me if you have any questions or need clarification on the comments provided below.

Overall Comments:

ODFW appreciates the thoughtful and thorough review of ECNFH and how programs operated by the hatchery fit within the management of Clackamas River fish populations. We agree with the Hatchery Review Team's suggestion that hatcheries must be viewed as part of the environmental and ecological landscape and are capable of meeting both conservation and harvest goals. ODFW manages the Clackamas Basin for both harvest and conservation of anadromous fish species. The upper basin is considered a sanctuary for wild fish and all hatchery fish are sorted at North Fork Dam preventing them from passing upstream. The lower basin is managed for hatchery fish and the harvest opportunity they provide to the general public. Even though the lower basin is managed for hatchery fish and harvest, we attempt to minimize potential negative interactions by developing acclimation and release strategies that increase return to anglers while limiting stray into areas where naturally produced fish are present. We are currently in the process of developing recovery plans for listed fish species in the Lower Columbia and Willamette rivers and it is likely that management will change in response to the need to recover fish and hopefully get to de-listing.

The Eagle Creek NFH produces winter steelhead and coho for very important recreational fisheries close to the population center of Oregon. We agree with many of the review team's recommendations and assertions regarding potential risk that ECNFH programs pose to natural populations in the Lower Clackamas River (specifically Eagle and Deep creeks), but we disagree as to how much they may be limiting the viability and potential recovery of Clackamas River coho and steelhead as a whole. Many of the recommendations provided by the HRT have merit and deserve further consideration by the co-managers. We look forward to working with you in the near future to develop a coordinated approach to managing hatchery and wild fish in the Clackamas River.

Specific Program Comments (Coho):

Despite not conferring a direct conservation benefit to wild Clackamas coho, Eagle Creek hatchery coho provide an indirect benefit by concentrating a fishery on hatchery origin coho that are both spatially and temporally separated from the majority of natural origin coho spawners in the basin. The segregated coho program effectively isolates hatchery origin spawners to approximately 20% of the total available coho spawning habitat in the basin. The majority of hatchery origin coho spawners are known to spawn several weeks prior to natural origin spawners based on spawning survey data from recent years (see Table 4-Lower Columbia Coho Status Report). This does not mean that hatchery origin coho do not influence wild coho in the Clackamas Basin, but the extent to which they do is uncertain and likely limited to overlap in spawn timing and distribution in Deep and Eagle creeks.

Issue EC1-We do not agree that the program goals should specifically be re-stated to shift the primary purpose of Eagle Creek NFH to coho reintroduction programs in the Upper Columbia and Snake rivers. The primary purpose of the hatchery, which is completely funded through the Mitchell Act, bas been to provide support for sport and commercial fisheries in the Columbia Basin. We do not disagree with the rational for providing support for Upper Columbia and Snake River reintroduction programs, but the primary focus of ECNFH should be to produce fish for Lower Columbia (Young's Bay or similar terminal area) and Clackamas River fisheries.

Issue EC2-We do not support the transfer of up to 700,000 eyed coho eggs to the State of Idaho for its inland reservoir stocking program. The reasons are the same as described above in that wild Clackamas coho should not be subject to risk from coho utilized in this program. In addition, these transfers are not a stated objective of the facility or Mitchell Act program.

Issue EC3- ODFW will defer to NOAA Fisheries for comments related to listing status.

Issue EC4-We support the recommendation to include a minimum of 10% "jack" males among the males spawned at Eagle Creek NFH. It is important to specify that early maturation in "jack" males is a primarily a function of growth rate, not parentage.

Issue EC5-ODFW supports conversion to single pairwise spawning in order to reduce genetic risk from reduced effective population size.

Issue EC6-We support reducing egg-take to that which is necessary to meet stated program objectives. Also, we support reducing egg loading densities to meet established IHOT guidelines. The coho program at Eagle Creek NFH should be sized to collect the appropriate number of adults to produce eggs for upriver reintroduction programs and sport/commercial harvest mitigation programs.

Issue EC7-We support the early transfer of coho destined for the Nez Perce Tribe in order to reduce loading densities in raceways used for rearing Clackamas hatchery coho. The early transfer also may limit potential stray of this release group to lower Columbia tributaries due to fish spending the vast majority of their rearing life history in Eagle Creek.

Issue EC 9- We support the option of transferring some portion of ECNFH coho production to Young's Bay in order to provide for terminal area fisheries in the Lower Columbia. This option may provide an indirect conservation benefit by concentrating commercial fisheries in terminal areas where the majority of natural origin are not found.

Issue EC 10- We support potential future reductions in program size and annual smolt release if evaluations determine that adult return numbers significantly exceed that which is needed to maintain broodstock and provide for sustainable angler harvest. We support re-evaluating the program after three complete generations under the current program of 500,000 in-basin smolt releases.

Issue EC11 to 16- We support all recommendations for infrastructure and operational changes at Eagle Creek NFH that will improve the ability for hatchery personnel to produce healthy fish.

Issue EC17- We support modifying the current method of marking the 25,000 CWT groups released from the facility. The CWT group should be representative of the entire hatchery population, not fish from a single raceway.

Issue EC18- We do not support the continuation of the DIT program for coho at Eagle Creek NFH. Recent information indicates that the usefulness of data collected from DIT fish is limited due to issues related to sample size and statistical significance. Unmarked returns from DIT fish are amplified due to selective fisheries in the Lower Columbia and Clackamas rivers that release DIT fish. This leads to potential mis-identification of fish at sorting facilities and on the spawning grounds which in turn leads to complications with management of hatchery and wild fish populations in the basin.

Comments on recommended alternatives to the current ECNFH coho program

ODFW supports the short term goal of retaining the current program provided the recommendations provided by the HRT are implemented. We encourage discussion between the co-managers in order to resolve some of the differences described above between the HRT recommendations and comments provided by ODFW.

We do not currently support the mid-term goal of converting the current segregated program to an integrated program due several factors, including:

- Current status of Clackamas River coho, which is currently listed as endangered by the State of Oregon and threatened by NOAA Fisheries, may not be able to withstand "mining" of wild adults to maintain an integrated program.
- Past attempts at rearing and releasing "late run" coho did not lead to increased survival versus what would have occurred if the fish were left in the wild to spawn naturally.
- The appropriate donor stock has not been identified. There are significant phenotypic differences between "early" and "late" run coho as well as coho found above and below the North Fork project. We highly suggest a thorough review of the genetic and ecological differences between the two stocks before a potential donor stock is identified in order to determine which is most appropriate for use in lower basin tributaries.
- Conversion to an integrated program would need to consider the effect on a very popular sport fishery as well as commercial fisheries that are geared to harvest fish at a time when the current segregated stock returns (mid-fall). Current angling regulations prevent the retention of coho after October 31 in the lower Clackamas River. A shift to a later returning stock would limit the time these fish are available for harvest or would require adoption of new angling regulations that are designed to reduce risk to wild fish that may be caught and released in fisheries.

There may be opportunities to shift toward an integrated program while minimizing risks to the wild population while actually improving angler opportunity and success. We are interested in discussing

options to integrate naturally produced fish and possibly shift run-timing later in the fall when water temperature in the Clackamas is lower resulting in increased angler catch.

We do not support the optional mid-term goal of transferring the entire ECNFH coho production to terminal area fisheries in the lower Columbia. This would completely eliminate any sport angling benefit that is currently provided by ECNFH coho. We do support transfer of some portion of production to terminal fisheries because there may be opportunities to convey a conservation benefit to all Lower Columbia coho by reducing catch of wild fish in commercial fisheries that do not concentrate in terminal areas.

We do not support the optional long term goal of terminating the existing coho program and using ECNFH to support regional conservation and recovery programs at this time. There may be opportunities to provide support in recovery of other streams within the Clackamas/Lower Willamette, but we feel that can occur while maintaining regionally important sport fisheries.

Specific Program Comments (Steelhead):

The ECNFH winter steelhead program provides a popular fishery in the Lower Clackamas River and Eagle Creek at a time when there are few opportunities for salmon or steelhead harvest in any Portland/METRO area stream. ODFW chose to move away from a segregated hatchery program toward an integrated program that significantly altered the return timing of winter steelhead from Clackamas Hatchery. We made this decision with the understanding that ECNFH steelhead would continue to provide opportunity during early winter months, prior to the return of Clackamas Hatchery winter steelhead which now start to return in late February/early March. Many of the recommendations provided by the HRT would essentially eliminate an important sport fishery and leave a gap of 3-4 months when few fish are available for harvest.

Issue EC21- We support clearly defining program goals and emphasizing intended harvest benefits the program will provide while segregating returning adults to minimize adverse impacts to native Clackamas River steelhead.

Issue EC22- We support keeping the hatchery trap open as long as needed to effectively remove hatchery origin spawners so they don't end up spawning in the wild. The trap should be closed when natural origin spawners exceed hatchery origin spawners entering the trap. Trapped natural origin spawners should be re-located a sufficient distance downstream to reduce risk of spawning with late returning hatchery origin spawners.

Issue EC23- We support continuing to spawn 350 adults per year provided surplus eggs are discarded proportionally among all families beginning at the green egg stage (see Issue EC26a). Broodstock collection should continue to concentrate on early returning fish in order to maintain sufficient temporal separation between hatchery and natural origin spawners.

Issue EC 24- We support spawning one male and one female pairwise in a single bucket in order to reduce genetic risk posed by spawning two males in a single bucket. Spawning protocols should not lead to reduced effective population size.

Issue EC25- We support exploring alternatives to remove hatchery origin spawners that do not enter the trap. Alternatives may include modifications to the existing ladder, alternative release strategies for coho, and possible use of other traps at the lower and middle falls for sorting of hatchery and wild fish.

Issue EC27(Migration time)- We support continuation of monitoring and evaluation that is looking at potential genetic and ecological interactions between hatchery and wild steelhead (and coho) in Eagle Creek.

Issue EC28- We support implementation of a long-term monitoring program to assess the potential risk that ECNFH steelhead pose to natural origin steelhead in Eagle Creek and the lower Clackamas River. The potential risk posed by ECNFH steelhead needs to be considered in relation to naturally produced steelhead in Eagle Creek, adjacent tributaries, and the Clackamas River as a whole. There is limited evidence from spawning surveys and dam counts that ECNFH steelhead are found in tributaries other than Deep and Eagle creeks. These two tributaries make up less than 15 % of the available steelhead spawning habitat in the Clackamas River basin.

Comments on recommended alternatives to the current ECNFH steelhead program

ODFW supports the short-term goal of continuing the current program with full implementation of all program specific recommendations. We also support the continuation of genetic and ecological studies to better understand the risks posed by the ECNFH steelhead program on naturally produced fish in the Lower Clackamas basin and tributaries. We are currently conducting spawning surveys in the lower basin and tributaries in order to assess performance of our integrated winter steelhead program and would be very interested in combining our efforts to better evaluate the potential risk posed by both winter steelhead programs.

We do not support the long-term goal of terminating the current winter steelhead program and focusing the hatchery of production of coho salmon. We agree that continuation and possible expansion of the current M&E program in Eagle Creek is very important to answering the question of how much ECNFH steelhead may be limiting the productivity of naturally produced steelhead in the lower basin and tributaries.

We caution using the comparison between the past summer steelhead program in the upper basin and its effect on productivity of wild winter steelhead. The summer steelhead program in the upper basin was large in comparison to the ECNFH winter steelhead program and resulted in significant competition between early spawning summer run juveniles and the smaller, later spawning wild winter steelhead. The situation in Eagle Creek is not the same and even though ECNFH steelhead return and spawn several weeks prior to naturally produced steelhead, there is limited evidence of direct competition between both stocks. Research is currently underway to attempt to answer that question and we suggest a thorough review of all available information before making assumptions.

Thank you for the opportunity to comment!

To: FWS Hatchery Review Team

From: Rich Turner
Salmon Recovery Division, Hatchery and Inland Fisheries Branch
NOAA Fisheries

Date: January 29, 2007

RE: Comments to Eagle Creek NFH Assessment and Recommendations

After reviewing the draft Eagle Creek National Fish Hatchery (NFH) Assessment and Recommendations I have a few comments and suggestions.

General Comments:
The conclusion that I reached after reading the summary section was that there were substantial risks to listed salmon and steelhead from the coho and the winter steelhead programs. However, the risks from genetic and ecological impacts on listed fish identified in the summary section were not supported by the data presented in the main report.

I can support the recommendations and recommended short and long-term alternatives for the coho salmon program. The current program has remained a well segregated program and provides benefits to sport and commercial fisheries, but as identified in the report it currently does not provide any conservation benefit to the Clackamas River coho population. The recommended alternatives propose that the program be shifted to an integrated program using the "late-run" coho from the North Fork trap, I have a few concerns with this approach:

- "Late-run" coho from the upper watershed are probably not appropriate for release into the lower basin, a stock that represents the timing and genetics of natural-origin coho returning to the lower Clackamas River tributaries would be more appropriate.
- ODFW tried to rear "late-run" coho during a period of low abundance in the late 1990's and had poor success. They concluded that more coho would have been produced if they had been left to spawn naturally then using then as broodstock (Chilcote 2002 attached).
- Shifting to a "late-run" timed broodstock would severely reduce or eliminate the sport fishery in the Clackamas River that targets these coho from August to October. Using "late-run" coho would essentially limit fishing to the last week in October. Currently the river is closed to salmon harvest after November 1st to protect late returning coho destined for above North Fork Dam.

If the current coho program is to be changed to an integrated program, genetic analysis of the coho now spawning in the lower Clackamas River tributaries (Clear Creek, Deep Creek, and the North Fork Eagle Creek) should be completed to see if there are differences between these groups and the early timed coho returning to above the North Fork Dam. When a genetically appropriate source for the broodstock is identified, the program should be developed to focus efforts on providing returning adults to Clackamas River during the October to November

period. Coho salmon returning to the basin during this period will increase the abundance of what is believed to be the historic run-timing of the Clackamas River coho population. This change will still provide a conservation benefit by increasing abundance during this time period, and will provide coho for harvest in the sport and commercial fisheries. The fisheries may also be improved by having coho salmon return when water conditions in the Clackamas River are more conducive to sport harvest.

I cannot support the recommended alternative for the Eagle Creek NFH winter steelhead program. The current program is well segregated from the natural-origin late winter steelhead population in the Clackamas River and those spawning in the North Fork Eagle Creek. This conclusion is supported by the genetic data cited in the draft, and by the fact that very few Eagle Creek winter steelhead are encountered at the North Fork trap. Eagle Creek winter steelhead are also segregated temporally from late-run winter steelhead. This separation will be reinforced further if the hatchery shifts all egg takes to before March 1 from the current March 31 cut-off (EC22).

There are ecological risks associated with the release of winter steelhead into Eagle Creek from competition, predation, and residualized hatchery steelhead. The impacts are primarily isolated to Eagle Creek below the hatchery and to a lesser degree the lower Clackamas River below the mouth of Eagle Creek. These impacts are being addressed at the hatchery by producing actively migrating smolts, proper conditioning, size at release, and volitional release strategies. However there are still some uncertainties as to how well these actions are addressing these risks, and that is why I support the continued monitoring and evaluation activities that are being conducted in the basin. If the monitoring and evaluation activities find that these effects pose a substantial risk to the Clackamas River winter steelhead than further changes to the program will be made.

The Eagle Creek NFH winter steelhead program is important to the region because it provides the only fishery in the Clackamas River during a period from December to February. During this period other fisheries are closed (i.e. coho), and it occurs before the late-run hatchery steelhead and spring Chinook salmon become available. The Eagle Creek NFH winter steelhead provide a benefit to fishers from the Portland Metropolitan area and support local fishing guides.

It should also be noted that these programs are funded through the Mitchell Act to mitigate for lost production resulting from federal hydroelectric and water resource development in the Columbia River basin. This mitigation is to provide for lost production for harvest, which has been identified as one of the primary purposes for the programs at Eagle Creek NFH. Changes in these programs that result in reduce harvest opportunities do not necessarily support Mitchell Act mitigation objectives.

NFS

NATIVEFISHSOCIETY

Conserving biological diversity of native fish and protecting their habitats

February 23, 2007

U.S. Fish and Wildlife Service
Attn: Science and Hatchery Reform
Pacific Regional Fishery Resources
911 N.E. 11th Avenue
Portland, Oregon 97232

RE: Comments on Eagle Creek National Fish Hatchery Reform

The Native Fish Society would like to thank you for providing a science review of the Eagle Creek NFH. The review was clearly stated, understandable, well organized and successfully raised numerous important questions and issues regarding conservation of ESA listed steelhead and coho. I also thank you for providing a public meeting to discuss the review so that all of us could hear the comments of the various interest groups involved.

Comments on Eagle Creek National Fish Hatchery Operations:

Eagle Creek Hatchery Operation Findings:

- This hatchery was authorized by the Mitchell Act in 1938 to "assist with conservation of fishery resources in the Columbia River Basin." (USFWS 2007)

- Eagle Creek NFH began operation in 1956 with the "primary purpose to support commercial and recreational fisheries." (USFWS 2007)

- Maintenance costs to fix the hatchery would cost about $5 million. Additional costs associated with security, water disinfection, and more staff, were not displayed, but would be in addition to the deferred maintenance costs (USFWS 2007)

- There is no funding to support the 5-year monitoring and evaluation program proposed by the review team (USFWS 2007).

Comments:

The Mitchell Act authorization and purpose was to "assist with conservation of fishery resources in the Columbia River Basin" yet the "primary purpose of this hatchery is to "support commercial and recreational fisheries." The hatchery review report does not indicate when or how the shift occurred from its authorized purpose of "conservation" to its primary purpose "to support…fisheries." This shift appears to be a significant amendment of Congressional authorization for this hatchery. The review report should document this shift and explain how it took place. I have tried to determine the origins of this change between authorizations and function but have been unable to locate any documents that speak to this apparent amendment. Please address this substantive change in the hatchery review document.

Funding requirements to fix the hatchery and to add needed staffing and infrastructure are in excess of five million dollars. Funding for Mitchell Act hatcheries has been flat or declining for a few years and it appears that additional funding is unlikely given the direction of the federal budget. It is therefore, unlikely that additional funding will be available for upgrades and for monitoring and evaluation plans recommended by the review team to determine the impact of hatchery steelhead and coho on ESA-listed wild steelhead and coho in the Clackamas River Basin.

Comments on Hatchery Winter Steelhead Management:

Steelhead Findings:

- Wild steelhead in the lower Columbia River Evolutionarily Significant Unit (ESU) are not viable according to the Biological Review Team (BRT) review in 2005 (BRT 2005). "A large majority (over 73%) of the BRT votes for this ESU fell in the 'likely to become 'endangered' category. All the major risk factors identified by previous BRTs still remain. Most populations are at relatively low abundance and those with adequate data for modeling are estimated to have a relatively high extinction probability" (NOAA 2005 page 303).

- Wild steelhead run size past North Fork Dam has declined from 1,000 to 2,000 adults to 500 from 1978 to 2001 (NOAA 2005 page 225), suggesting that wild steelhead have suffered a substantial decline in numbers of spawners the last two decades.

- Eagle Creek steelhead are not included in the lower Columbia River steelhead ESU/DPS (USFWS 2007).

- The review team (USFWS) is "concerned about the genetic and ecological risks posed by the current out-of-basin non-DPS steelhead program to ESA listed natural populations of salmon and steelhead in the Clackamas River." The review team concluded that "…genetic and ecological risks… could be significant…" (USFWS 2007).

- The Eagle Creek Hatchery steelhead are managed as a "segregated harvest program" (USFWS 2007), and only hatchery-origin adults are used for broodstock (USFWS 2007).

- The steelhead hatchery stock was initiated in 1956 from non-DPS Big Creek Hatchery steelhead stock (USFWS 2007), a stock that has been cultivated for approximately 17 generations in Eagle Creek Hatchery.

- Survival evaluation of wild and hatchery summer steelhead in Hood River showed that Skamania Hatchery summer steelhead survival was only 17% of that for wild summer steelhead (Kostow 2004). The Skamania Hatchery summer steelhead program was begun in 1957, so the generations in cultivation are the same as for Eagle Creek Hatchery steelhead, approximately 17 generations. It is then likely that the Eagle Creek Hatchery steelhead survival is poor to the adult stage even though they can spawn naturally. Introgression between naturally spawning wild and hatchery steelhead may be a factor in the decline of Clackamas Basin wild winter steelhead.

- Lower Columbia River steelhead were listed in 1998 (nine years ago) as a federally protected species under the Endangered Species Act (NOAA 2005).

- The purpose for the Eagle Creek Hatchery steelhead program is to provide a sport fishery in the Clackamas River for early-run winter steelhead (USFWS 2007).

- Early-run wild steelhead stage in the lower Clackamas River before moving into spawning tributaries in the late winter and spring (February to June). These early-run steelhead are exposed to an intense sport fishery for several months prior to moving into tributaries (Douglas Cramer, PGE fish biologist, personal communication). Early-run wild steelhead may be subject to over exploitation in a fishery targeted on early-run hatchery steelhead from Eagle Creek Hatchery.

- The USFWS review team recommended completion of on-going studies to determine if genetic and/or ecological risks are significant and impede recovery of ESA listed populations in the Clackamas (USFWS 2007).

- Lower Columbia River wild steelhead were listed as a threatened species in 1998. If there is a five year delay to complete studies on wild and hatchery fish interaction, it will be at least 14 years before the recognized impacts to ESA-listed steelhead are addressed. To some, this delay is unacceptable given the status of the wild steelhead and the likely effect of continuing the release of non-DPS steelhead in the basin.

- "The review team concluded that the Eagle Creek NFH needs to support hatchery programs that are consistent with conservation and recovery goals for native fish species in the Clackamas River while…continuing to provide harvest benefits where possible." (USFWS 2007)

- The review team "…further concluded that development of a native Clackamas River steelhead broodstock at the Eagle Creek NFH is not desirable because of (a) culture difficulties of rearing 'late-run' native winter steelhead" at the hatchery and "(b) ODFW has already developed a native 'late-run' Clackamas River steelhead program."

- "It is critically important we maintain sport fisheries and harvest in the Clackamas River for people in this area. But we do support movement to integrated hatchery programs while being opposed to programs that do not have sport fishing benefits." (Todd Alsbury, ODFW district fish biologist, comment at the public hearing)

Comments on Eagle Creek NFH Steelhead Management:

Eagle Creek NFH is presently releasing non-DPS steelhead into the Clackamas River Basin. The native, wild steelhead in the Clackamas River were listed as a threatened species in 1998. The BRT has stated there are no wild, native steelhead in the lower Columbia River ESU/DPS that are viable and, furthermore, the majority of the BRT in their 2005 status review said that this ESU fell in the "likely to become endangered" category. One of the reasons for this conclusion is the large releases of hatchery fish into the streams of this ESU/DPS.

The USFWS review team also recognized and is "concerned about the genetic and ecological risks posed by the current out-of-basin non-DPS steelhead program to ESA listed natural populations of salmon and steelhead in the Clackamas River." The review team concluded that "…genetic and ecological risks… could be significant…"

Given the fact that the Eagle Creek Hatchery steelhead are a non-native population and in recognition of the findings provided by the BRT and the review team, termination of the hatchery steelhead program at Eagle Creek NFH is recommended by the Native Fish Society. The continued release of these fish is inconsistent with conservation and recovery of ESA listed winter steelhead in the lower Columbia River ESU/DPS and the Clackamas River. Delaying by five years a decision to terminate this program in order to gather more information is unacceptable based upon what is already known and on the lack of funding to carry out the studies. This delay would mean that at least 14 years will have passed since the wild steelhead were listed as a threatened species before the agencies with management authority take action to correct an obvious problem.

Even though ODFW wants to maintain a sport fishery and harvest early-run Eagle Creek hatchery stock, the ESA is a legal obligation, and management must be consistent with federal law. I am sure that the Forest Service would like to cut trees as they did before the spotted owl was listed, but in fact they cannot. The same legal mandate exists for the U.S. Fish and Wildlife Service to terminate harmful hatchery practices that impede the recovery of ESA listed steelhead and salmon. Under § 7(a)(2) of the ESA, any action "authorized, funded, or carried out" by a federal agency must not jeopardize a listed species or modify its critical habitat.

Comments on Eagle Creek National Fish Hatchery Coho Salmon Program:

Eagle Creek Hatchery Coho Salmon Findings:

- Wild native coho salmon in the Clackamas River are listed as an endangered species under Oregon law (1999) and listed as a federally protected species by NMFS (2005) under the Endangered Species Act.

- The Eagle Creek Hatchery coho stock is a blend of non-native stocks from Sandy River, Toutle River, and Big Creek. These fish have been cultivated since the 1950s for approximately 17 generations in Eagle Creek Hatchery. Even though these hatchery coho are included in the lower Columbia River ESU, they have diverged from the wild form during years of artificial breeding and are non-native to the Clackamas River. It is likely that these fish pose a significant risk to ESA listed wild coho in the lower Columbia River and the Clackamas River.

- ODFW recommended that Big Creek Hatchery coho and coho from Sandy Hatchery, and Eagle Creek NFH be excluded from the lower Columbia River coho salmon ESU citing these "…broodstocks propagated at the Oregon

hatchery facilities should not be regarded as part of the ESU as all are long-term domesticated broodstocks, all have incorporated various levels of out-of-basin (but within ESU) stocks and all are managed for isolation between the hatchery stocks and any local natural coho populations (FR Vol. 70. No. 123/ Tuesday, June 28, 2005). In the same Federal Register document NMFS disagreed with ODFW saying "…these hatchery coho programs represent the existing local spawning populations, and they also represent a large proportion of the remaining genetic material for many of the smaller tributaries within the ESU." However, NMFS did not specifically include Eagle Creek NFH and Big Creek Hatchery in this conclusion (even though NMFS did name specific hatcheries that would be included in the ESU), so it is assumed that the coho from these hatcheries are not part of the lower Columbia River coho ESU.

- The hatchery produces 700,000 eggs for Idaho, 500,000 smolts for release into Eagle Creek, and 700,000 eggs and 1.5 million juveniles to the tribes for release into upper Columbia tributaries. (USFWS 2007)

- The hatchery broodstock objective is 3,000 adults, but in 2006 over 16,000 coho adults returned to the hatchery. Excess fish are distributed to tribes and food banks, but none are used for stream enrichment to support the productivity of the river for wild native salmon and steelhead. (USFWS 2007)

- The review team identified potential risks to native coho from interbreeding and competition with ESA listed coho in the Clackamas River. (USFWS 2007)

- A purpose of the Eagle Creek Hatchery coho salmon program is to support commercial and recreational fisheries in the lower Columbia River. (USFWS 2007)

- Harvest directed at these hatchery coho also pose a risk to adult spawners of ESA listed coho. The roll back of commercial harvest in the Columbia River in 2006 resulted in an increased return of wild coho salmon to the Clackamas watershed with a 19 percent increase in hatchery coho to the hatchery. It is obvious that harvest of hatchery coho salmon has caused a decline in wild coho adult spawners. This cumulative decline has contributed to the extinction of all wild coho populations in the Columbia River Basin except for the Clackamas and Sandy rivers.

- The review team concluded that the hatchery "spawns substantially more adults, incubates significantly more eggs, and rears more juveniles than are necessary to meet current program objectives." This expanded program

"exceeds fish health guidelines and densities…" And "these surpluses may also add unnecessary labor requirements to hatchery staff…" which have been reduced due to funding cuts. (USFWS 2007)

- The review team concluded that the "high biological significance of Clackamas River coho salmon within the lower Columbia River Coho ESU provides strong motivation for the Eagle Creek NFS to transition from its current out-of-basin coho broodstock to a native Clackamas River broodstock." (USFWS 2007)

- The review team also said that such a transition to a native Clackamas River coho broodstock would "provide immediate conservation benefits by reducing extinction risks of Clackamas River coho, reducing genetic and ecological risks to ESA listed natural populations in the Clackamas River, and potentially assisting with recovery of natural populations, particularly in the lower Clackamas River." However, the review team recommended a delay in making this ESA consistent transition to a native brood stock until genetic studies were competed. (USFWS 2007)

- The review team also recommended delaying changes in coho broodstock for nine years in order to supply the tribes with coho stock for release into upper Columbia River tributaries. During the public hearing USFWS staff noted that transfer of coho eggs and juveniles to the tribes for release in upper Columbia tributaries would be monitored to determine whether a self-sustaining run of natural coho resulted from the introductions, however, there is no evaluation program currently funded or scheduled.

Comments on the hatchery coho program:

The findings of the review team clearly point out that the existing hatchery stock is composed of non-native stocks to the Clackamas River and that these fish represent a genetic and ecological risk to the ESA listed coho in the Clackamas River. They recommend shifting the existing non-native coho broodstock to a native Clackamas River broodstock in order to reduce risks to ESA listed coho salmon in the Clackamas River. They also say this transition to a native broodstock could contribute to the recovery of natural populations in the lower Clackamas River tributaries.

The review team also states that the existing hatchery coho salmon program "exceeds fish health standards" and is taxing to staffing levels at the hatchery.

However, the review team also recommends delaying reductions in the numbers of coho reared at the hatchery and development of a native Clackamas River broodstock in order to continue supplying eggs and juveniles to tribal programs in the upper Columbia River and to do genetic studies.

The legal responsibility of the U.S. Fish and Wildlife Service is to operate its hatchery programs consistent with federal law, including the Endangered Species Act. The present Eagle Creek NFH coho salmon program is admittedly inconsistent with the ESA because it poses a genetic and ecological risk to ESA listed coho salmon in the Clackamas River. Delaying changes in the hatchery program means it will remain inconsistent with the legal obligations of the agency.

The Native Fish Society recommends that the coho hatchery program at Eagle Creek NFH be brought into full compliance with the ESA without delay.

The USFWS recommends this be done by switching to a Clackamas River origin native coho broodstock. While it is possible to improve conservation benefits for ESA listed wild coho by switching to a native broodstock hatchery program, those benefits must be verified by funding a monitoring and evaluation program. The USFWS should describe how a monitoring and evaluation program would be structured, the benefits to be achieved, and the funding available to accomplish this work. If this cannot be done, then the legal obligation is to terminate the hatchery coho program in order to not impede the recovery of ESA listed wild coho salmon in the Clackamas River.

Sincerely,

Bill M. Bakke, Director

References

Cramer, Douglas, personal communication.

Federal Register. Vol. 70. No. 123/ Tuesday, June 28, 2005

Kostow, Kathryn. 2004. Differences in juvenile phenotypes and survival between hatchery stocks and a natural population provide evidence for modified selection due to captive breeding. Can. J. Fish. Aquat. Sci. 61: 577-589.

NOAA. June 2005. Updated status of federally listed ESUs of West Coast salmon and steelhead. *Editors*:Good, Thomas, P., Robin S. Waples, and Pete Adams. NOAA Technical Memorandum NMFS-NWFSC-66.

U.S. Fish and Wildlife Service, Pacific Region. February 2007. Eagle Creek National Fish Hatchery Assessments and Recommendations. Columbia Basin Hatchery Review Team.

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Comments on the Review of the Eagle Creek National Fish Hatchery Program
February 8, 2007

Oregon Anglers thanks the U.S. Fish and Wildlife Assessment Team for the scope of their report. This fishery source is very important to the sport fishing community.

Coho evaluation: This in-house mixture of the three Lower Columbia stocks has been quite successful, with an average harvest plus return rate of 4 ½ to 6% according to your figures. We, however agree with both alternative goals. The continuing use of the current stock for 9 or 10 years until the egg and smolt transfers for the Yakima and Snake Rivers re-establishment is either on track or discontinued makes sense. At that time, the use of Clackamas River wild broodstock should be used- providing there is much of a genetic divergence from the existing hatchery stock.

We find it difficult to imagine that with even a 1% stray rate from this stock into the upper Clackamas, that the genetic contribution from Eagle Creek has not been considerable over the past 50+ years.

We also agree that cutting down the number of spawners and improving the crowded conditions may not only prevent disease, but also improve the quality of the smolt raised under those less crowded conditions, resulting in no falloff in the harvest and return numbers.

Steelhead evaluation: We endorse the 5 year genetic study before changing the early steelhead stock. There are few early stocks left for sport fishermen in Northwest Oregon, and it would be sorely missed. If the genetic combination does present a significant threat after 40+ years of straying and spawning with upper Clackamas winters, please improve the stock. But we would be strongly opposed to total discontinuance of the early winter steelhead program for this popular fishery. This would cause an economic hardship for the area, and violate the spirit of the Mitchell Act, to mitigate for dams' effects on fishing.

Sincerely,

Dennis Richey

Dennis Richey, Executive Director

John Holloway

John Holloway, Secretary

FROM TROUT UNLIMITED (VIA EMAIL)

March 23, 2007

Doug DeHart
USFWS
911 NE 11th Ave.
Portland, OR 97232

RE: Eagle Creek Hatchery Review

Dear Doug:

Thank you for the opportunity to comment on the U.S. Fish and Wildlife Review's draft Columbia River Basin Hatchery Review Team's Assessments and Recommendations for the Eagle Creek (Clackamas River Watershed). Many of these comments echo comments you have received from us on other hatchery review assessments, as well as provide additional comments tailored to Eagle Creek and the Clackamas Watershed. We hope you find these comments beneficial.

Trout Unlimited's extensive hatchery reform project has already been active in the Clackamas River basin through our participation and commitment to the Portland General Electric relicensing of the Clackamas hydroelectric project, the joint state-federal Lower Columbia River Recovery Team, and regular on the ground habitat improvements through our local Clackamas River chapter. This multi-faceted approach to targeting all H's in the basin in an effort to restore the entire watershed and its ESA listed chinook, coho, steelhead and bull trout, is complimented by the USFWS review of Eagle Creek hatchery. This review provides a timely opportunity to make important changes to one of the longest standing impacts in the critically important lower river. We additionally look forward to the review of these recommendations in the cumulative analysis of all Lower Columbia River hatchery programs currently underway. We believe that the larger watershed context will add greater clarity to the benefits and risks of this particular program.

After our review of the report, we are disappointed with the Reviewers recommendation to maintain the current coho and winter steelhead programs in the short term. We believe that long term recommendations should be squarely before the managers now, and not pushed off as future options. Wild fish recovery in the Clackamas must be prioritized now, not years later. For example, the Reviewers conclude "genetic and ecological risks of the current steelhead program to ESA listed natural populations in the Clackamas River could be significant but that existing data were insufficient at this time to warrant termination of the program." The existing and increasing data on hatcheries and the critical importance of the Clackamas River especially to wild coho survival and recovery,[1] as well as

[1] *McElheny, P. et. al. April 1, 2006. Revised Viability Criteria for Salmon and Steelhead in the Willamette and Lower Columbia Basins. Willamette/Lower Columbia Technical Recovery Team and Oregon Department of Fish and Wildlife.*

winter steelhead, squarely places the burden of error on the hatchery program and not on threatened coho and steelhead. The threshold should not be to make changes to the hatchery only when the data are sufficient to drive the specific changes, but rather, permit hatchery operations when the health of the wild fish can sustain it. There is no doubt that at this point in time, Eagle Creek hatchery should cease its production in the Clackamas River.[2]

The Review Team's conclusions and recommendations, we believe, are as a result of overstating the benefits of the hatchery program while understating the importance of the lower Clackamas River to the recovery of the affected stocks. The primary stated purpose of the coho program is reintroduction. This is a relatively new purpose of the program's fifty year history, and is considered primary only because of the sheer number of eggs it donates to the tribal reintroduction efforts. We agree with and support the reintroduction effort, however, missing from the analysis is a discussion of why Eagle Creek coho were chosen over a closer facility, and what the various measures of success will be for the reintroduction program. Thus, while conservation and reintroduction may be stated goals, they are not proven goals as of yet. Furthermore, the availability of eggs to these goals is secondary to the other stated goal of harvest and expected to end once the reintroduction efforts can be sustained locally. We support the recommendations of the Review Team, such as establishing sunset dates for the transfers, but we do not support the weight that the Review Team has attributed to this goal in an effort to maintain the status quo of the hatchery in the short term.

Instead, we believe it is more appropriate to rely on the long term historical goal of the program: harvest. This program supports a large ocean and smaller in river coho harvest programs. We wholeheartedly agree that this program should not be considered part of the listed ESU due to the broodstock origins and long term domestication effects. As such, the risks to the local wild stock (pg. 42) is more than just genetic and demographic, but also includes a large ecological risk. When measured against the sheer biological significance of the Clackamas River coho population to the overall health of the ESU, there is simply no comparison. Without this population, and without the recovery of this population, the ESU as a whole will not survive. There is undoubtedly a legal and biological imperative that heavily favors the wild coho over the minor harvest provided by this hatchery. Given this importance, we believe that the entire Clackamas River should be declared a wild coho sanctuary. While Eagle Creek is not considered primary habitat for the coho, other lower tributaries are critical and the lower river is the migratory corridor. The Lower Clackamas River wild coho likely suffer from significant density dependence impacts, and are without a doubt subject to high incidental harvest rates. It is impossible for the Clackamas River coho to recover, and the upper river wild fish to thrive, if the Lower Clackamas River suffers.[3]

Review Draft.

[2] *Reliance on the 1999 Biological Opinion to provide ESA coverage to this program (pg. 28) is misplaced. Not only is this Biological Opinion woefully out of date and subject to reconsultation, but the identified impacts from this review and the continuing decline of the listed species in this watershed make any future coverage highly suspect.*

[3] *For example, in Table 6, the Reviewers only include counts of wild coho above the dams, essentially ignoring or writing off, the lower river. As one commentator stated at the public comment period, it is encouraging that wild populations are hanging on above the dams, but they still exist above three dams and that imposes a very high risk.*

We do not believe however, that the designation of the Clackamas River as a wild coho sanctuary should have a major impact on coho harvest. Transferring much of the production to the CEDC program would continue to support the highest harvest in the ocean. Because of the large number of coho released from Washington hatcheries, very little impact will be felt from the loss of adult coho in the Columbia River harvest (pg. 57). The Lower Willamette River region can target the unmarked, out of ESU, naturally produced coho migrating to streams above Willamette Falls. This run continues to increase and can, with the proper management around listed Lower Columbia coho, can sustain a consumptive harvest. The Clackamas River harvest will suffer the most, with the loss of the terminal fishery (it is unclear how many adult coho are caught in the Willamette and how many are caught in the Clackamas/Eagle Creek fisheries). We believe that the desperate state of Lower Columbia River coho requires such an immediate, dramatic action. Coupled with the changes to the hydrosystem, the Clackamas River hatchery and the forthcoming commitments made in the Lower Columbia River Recovery Plan, we are hopeful that the state of Clackamas River wild coho can improve quickly to first allow possible a small catch and release fishery followed by a more sustained and sustainable wild fishery.

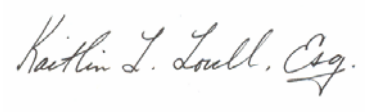
In conclusion, we agree with many of the Review Teams recommendations, however we believe that the totality of the recommendations heavily favor Alternative 3 or 7 in the short and long term. Because of the extent of the recommendations and structural improvements that must be made, we do not believe that Alternative 1 is possible in the short term (1-5 years) without major risks and impacts to the wild listed coho. Further, there has been no analysis to demonstrate that an integrated coho conservation program will improve the status of wild coho, or provides an advantage over other, less risky strategies in the basin such as establishing a wild fish sanctuary in the river. (*See e.g.* Goodman, 2005; Oosterhaut et. al., 2005).

With respect to the winter steelhead program, we were particularly struck by the high stray rates (pg. 62) and the potential impact from these strays. We agree with the significance of the questions raised by the Review Team regarding the stray rates and potential impacts from this program (pg 74). Coupled with the growing volume of research from Dr. Kostow, as referenced by the Review Team, we find it difficult to see the justification for the continued operation of this program. The Lower Clackamas River, and Eagle Creek itself, is very important to wild winter steelhead production (pg. 64). We therefore agree with the recommendations from the Review Team, but again believe that the totality of these recommendations heavily favor Alternative 4 in both the short term and long term. The harvest benefits of the program should be transferred to the Clackamas River hatchery to the greatest extent possible without harm to the wild native steelhead.

Conclusion

We thank the USFWS for the opportunity to be a part of the Assessment, review and provide comment on this document. We look forward to working with you in the implementation of some of the changes to restore these highly endangered icons.

Respectfully submitted,



Kaitlin Lovell

References

Goodman, D. 2005. Selection equilibrium for hatchery and wild spawning fitness in integrated breeding programs. Can. J. Fish. Aquat. Sci. 62:374-389.

Oosterhout, G. R., C.W. Huntington, T. E. Nickelson, and P.W. Lawson. 2005. Potential benefits of a conservation hatchery for supplementing Oregon Coast coho salmon (Oncorhynchus kisutch) populations: a stochastic model investigation. Can. J. Fish. Aquat. Sci. 62:1920-1935.

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www.fws.gov/pacific/Fisheries/Hatcheryreview/

The mission of the U.S. Fish and Wildlife Service is working with others to conserve, protect and enhance fish, wildlife, plants and their habitats for the continuing benefit of the American people.

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