

NFS

NATIVE FISH SOCIETY

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 authorization 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 on ESA-listed wild steelhead 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 passed 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.
- 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 non-DPS steelhead in the basin.
- “The review team concluded that the Eagle Creek NFH needs to support hatchery program 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 NFS 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.

Comments on Eagle Creek National Fish Hatchery Coho Salmon Program:

Eagle Creek Hatchery Coho Salmon Finding:

- 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.

- 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.
- 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.
- The review team identified potential risks to native coho from interbreeding and competition with ESA listed coho in the Clackamas River.
- A purpose of the Eagle Creek Hatchery coho salmon program is to support commercial and recreational fisheries in the lower Columbia River.
- 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.
- 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.”
- 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 completed.

- 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.

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.

References

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.

Sincerely,

A handwritten signature in black ink, appearing to read "Bill Bakke", with a horizontal line extending to the right.

Bill M. Bakke, Director