

Management Entity Response to
Council Questions
Concerning
Preparation of Comments on
the
Mitchell Act Hatchery
DEIS

FWS Responses to PFMC Mitchell Act DEIS Questions

Disclaimer

These responses to the Pacific Fishery Management Council's (Council) questions on the Mitchell Act Draft Environmental Impact Statement are technical comments and are not the position of the U.S. Fish and Wildlife Service. The U.S. Fish and Wildlife Service is currently developing policy and technical comments on the Mitchell Act DEIS, and will provide an official response at a later date.

PFMC Question #3

What are the other alternatives that meet the purpose and need of the proposed action that were not included in the DEIS?

The DEIS defines the Purpose and Need of NMFS' proposed action as follows:

“The combination of funding pressures under the Mitchell Act, the 13 ESA listings for salmon and steelhead in the Columbia River basin, and the value of a comprehensive review of hatchery programs to inform decision makers have resulted in the need for the proposed action. NMFS' purpose for the action is to develop a policy direction related to Columbia River basin hatchery production that will 1) guide its decisions about distribution of funds for hatchery production under the Mitchell Act; and 2) inform its future review of the individual Columbia River hatchery programs under the ESA.” (emphasis added)

In its review of the DEIS, the Council noted that the DEIS does not provide a discussion of how the mitigation commitments that were the very purpose for implementing most of the Columbia River hatchery programs described in the DEIS, including the Mitchell Act program, could or would be met through alternate means if the hatchery programs were in fact terminated or substantially reduced under any of the current DEIS alternatives, let alone the cost and social-economic effects of those other alternatives relative to the hatchery programs. Other alternatives that might address how the mitigation debt could be accommodated might include but not be limited to habitat restoration, dam removal, technological/physical infrastructure measures to increase fish passage survival, water management measures targeted to benefit fish life history survival, etc.

Mitigation is a legal and stewardship responsibility and commitment to the American public just as are ESA recovery, treaty trust responsibilities to the Tribes, and other legally binding agreements and legislative directives. Some mitigation commitments and responsibilities for Columbia River hatchery programs were more clearly defined than others during the history of

the development of the hatchery programs with the Lower Snake River Compensation Plan (LSRCP) program established in 1976, probably providing one of the most explicit mitigation commitment descriptions in terms of adult returns back to the project area (mouth of the Snake River) after accounting for prior intervening fisheries. The LSRCP program provides mitigation/compensation for the four lower Snake River dams (Ice Harbor, Lower Monumental, Little Goose, and Lower Granite dams).

Unfortunately, other earlier hatchery mitigation programs such as the Mitchell Act program (authorized in 1938) and Grand Coulee Dam program (authorized in 1941) had little or no explicit definition of what the mitigation responsibility was in terms of numbers of smolts to be produced let alone the numbers of adult fish those hatchery programs were supposed to replace for the habitat that was lost to hydrosystem and other related Columbia River basin development. However, even with a lack of specificity of what the mitigation obligation for the Mitchell Act program was to be, it is clear from the historical record and magnitude of the Columbia River Fishery Development Program, which the Mitchell Act annually funded, that Congressional intent for the scope of the Mitchell Act program was indeed very large. Over the history of the Mitchell Act program more than 20 individual salmon and steelhead facilities were built, many with multiple salmon and steelhead programs. The DEIS indicates that the current program distributes Mitchell Act appropriations to the operators of 62 hatchery programs that release more than 71 million juvenile fish and that this is already a substantial reduction (45 percent) from the level of about 128.6 million juveniles that were produced by these Mitchell Act facilities in the mid-1990's that occurred primarily because of funding shortfalls to continue that level of Mitchell Act production.

As the Region struggles with the complex issues of how to move forward with ESA recovery, including determining appropriate and scientifically defensible levels of hatchery production that allow continued fishery opportunities and address mitigation commitments to the American public, the Council believes that a broader discussion of the current management agreements and responsibilities, including ongoing mitigation commitments, is appropriate and necessary to inform final decisions in this DEIS especially if the second purpose (developing policy direction to "inform" its future review of the individual Columbia River hatchery programs under the ESA remains as a part of the DEIS. In that regard, the Council believes that there needs to be a focused discussion in the DEIS on how other non-hatchery mitigation alternatives might achieve the fishery benefits that hatcheries were called upon to generate as development, especially hydrosystem development, occurred within the Columbia River basin and habitat for native stocks was lost.

Another option, and perhaps preferred option at this point, might be to separate the two purposes in the DEIS and refocus the DEIS back to its original need and purpose (to develop policy direction to guide future distribution of funds for hatchery production under the Mitchell Act). Subsequent NEPA processes could then be more appropriately developed as needed during the actual ESA consultation process as more specific ESA requirements for individual programs

become more clearly defined. At that point, non-hatchery mitigation actions would need to be considered if in fact hatchery program reductions/terminations were the necessary outcome of ESA compliance determinations.

While the Region cannot turn back the clock on Columbia River basin development, the Region can and should make informed policy and funding decisions that implement a suite of management actions that enable ESA recovery while meeting treaty Indian fishing rights and tribal trust responsibilities and commitments and that uphold its promise and commitment to the general American public to maintain the mitigation fishery opportunities and benefits lost due to basin development. That suite of management actions likely would involve a blend of all four H's (i.e., hydro, hatchery, harvest, and habitat actions). Affected stakeholders and the general American public deserve an explanation of how the mitigation debt for their fishery interests will be addressed, if hatchery production is significantly reduced as a part of this or any future EIS process before a final Record of Decision is developed.

PFMC Question #9

Is production from all Columbia Basin hatcheries included in the analysis?

Relative to hatchery production for USFWS National Fish Hatchery (NFH) programs it appears that the DEIS incorporates correct production releases for all NFH programs except for the following omissions or corrections, albeit at the 2007 production level for status quo (Alternative 1) versus the more appropriate 2010 production level: (See also response to question #17.)

1. Entiat NFH 200,000 summer Chinook program is not included.
2. Leavenworth NFH spring Chinook program listed as 1,650,200 should be corrected to 1,200,000.
3. Umatilla River spring Chinook program listed as 925,300 via Little White Salmon NFH is now being conducted at Umatilla SH with no tie to Little White Salmon NFH.
4. Ringold SH spring Chinook program listed at 487,100 via Little White Salmon NFH should be deleted since Little White Salmon no longer provides broodstock eggs for this program.
5. Upper Yakima-Naches coho program listed as 452,100 via Little White Salmon NFH should be corrected as via Eagle Creek NFH.
6. Spring Creek NFH tule fall Chinook program listed as 15,044,900 should be corrected to 10,500,000.

7. Little White Salmon NFH should include an acclimated release of 1,700,000 tule fall Chinook via Spring Creek NFH and an acclimated release of 2,500,000 upriver bright fall Chinook via Bonneville SH in addition to the currently listed production.
8. Bonneville SH should include a tule fall Chinook release of 2,800,000 via broodstock eggs from Spring Creek NFH and a reduction of 2,500,000 upriver bright fall Chinook (transferred to Little White Salmon NFH) in its on-station release of this stock.

Adjustments for 6-8 above are the result of the Spring Creek NFH Reprogramming Agreement that currently extends through 2011.

PFMC Question #17

Recognizing recent changes in the hatchery practices that have already occurred, what is the period used to decide the status quo alternative?

A number of DEIS tables reference 2007 as the “base year” to define the status quo alternative. Given recent hatchery program changes that have occurred in the last several years, including some that specifically implemented Hatchery Scientific Review Group recommendations, it seems appropriate that 2010 hatchery production programs should be designated as the “base year” programs for the status quo alternative with appropriate adjustments made to the document to reflect this update to the status quo production program.



Oregon

Theodore R. Kulongoski, Governor

Department of Fish and Wildlife

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October 7, 2010

Dr. John Coon
Deputy Director
Pacific Fishery Management Council
7700 NE Ambassador Place, Suite 101
Portland, OR 97220-1384

Dear Dr. Coon:

Enclosed are Oregon's responses to questions posed in the list attached to the September 23, 2010 memorandum concerning Council comments on the Mitchell Act DEIS. Our understanding is that Council staff will compile responses from the entities identified for each question and will distribute the compilation to Council members and advisors in the November Council briefing book. The responses will serve as reference material for the Mitchell Act Committee when it meets on November 3 to draft an initial set of recommended comments for review and approval by the Council at its November meeting.

Please contact me at 971-673-6082 (tony.nigro@state.or.us) or Kathryn Kostow at 971-673-6025 (kathryn.e.kostow@state.or.us) with any questions.

Sincerely,

Signature on original

Tony Nigro, Manager
Ocean Salmon and Columbia River Program

Cc. Stephen Williams
Kathryn Kostow

Oregon Responses to PFMC Questions Regarding the Mitchell Act Hatchery Draft Environmental Impact Statement (DEIS)

1. *Have the population and fishery impacts methodologies used in the analysis been peer reviewed, and is there agreement with the States and Tribes that it represents the best available science? (WA, OR, ID, Tribes, AK, NMFS)*

The DEIS analysis is multi-disciplined and Oregon will only comment on the harvest and hatchery science.

The harvest model that was used in the DEIS has not been peer-reviewed; however our own review of it indicates that it is a reasonable model. We found that some of the harvest input data and harvest assumptions contain errors or are out-dated (for example, the harvest rates used and the assumed harvest structure such as application of mark-selective fisheries or abundance-based harvest rates). These problems can be corrected by using updated harvest data, management agreements and harvest biological opinions.

The hatchery risk assessment in the DEIS is poorly explained and documented, and could be substantiated and improved by a sound literature review. The peer-reviewed hatchery risk science is extensive. A short list of recent review papers is appended¹, and additional reference information is available from the Hatchery Scientific Review Group, available on line at: http://www.hatcheryreform.us/hrp/reports/system/welcome_show.action (accessed October 6, 2010); and the US Fish and Wildlife Federal Hatchery Review, available on line at: <http://www.fws.gov/Pacific/fisheries/hatcheryreview/reports.html> (accessed October 6, 2010).

2. *Are the mitigation requirements and responsibilities under the Mitchell Act adequately described in the DEIS? (WA, OR, ID, Tribes, AK)*

The DEIS incorporates the text of the Mitchell Act (Box 1-2, page 1-4), which “*provide(s) for the conservation of the fishery resources of the Columbia River.*”

We recognize that the Act lacks specificity in its language. The Mitchell Act funding has been used by the States to provide mitigation for a wide variety of human-related development and natural resource use in the Columbia Basin. The EIS does not recognize the use of this funding for mitigation, nor identify alternative mitigation in lieu of hatchery programs. We interpret the current funding scenario as a minimum responsibility to meet what we believe to be the mitigation responsibilities under the Act.

¹ Araki, H. et al. 2009. Carry-over effect of captive breeding reduces reproductive fitness of wild-born descendants in the wild. *Biol. Lett.* DOI:10.1098/rsbl.2009.0315

Araki, H. et al. 2008. Fitness of hatchery-reared salmonids in the wild *Evolutionary Applications* DOI:10.1111/j.1752-4571.2008.00026.x

Ford, M. 2002. Selection in captivity during supportive breeding may reduce fitness in the wild. *Conserv. Biol.* 16:815-925.

Fraser, D.J. 2008 How well can captive breeding programs conserve biodiversity? A review of salmonids *Evolutionary Applications* DOI:10.1111/j.1752-4571.2008.00036.x

Kostow, K. 2009 Factors that contribute to the ecological risks of salmon and steelhead hatchery programs and some mitigating strategies. *Rev. Fish. Biol. Fisheries* 19:9-31.

Morbrand, L.E. et al. 2005. Hatchery reform in Washington State: Principles and emerging issues. *Fisheries* 30:11-23.

Naish, K.A. et al. 2008. An Evaluation of the Effects of Conservation and Fishery Enhancement Hatcheries on Wild Populations of Salmon. *Advances in Marine Biology*, Volume 53 DOI: 10.1016/S0065-2881(07)53002-6

3. *What are the other alternatives that meet the purpose and need of the proposed action that were not included in the DEIS? (USFWS, NMFS)*

This DEIS combines two Actions, with the majority of the text devoted to the second action:

- **The specific action of funding Mitchell Act hatchery programs;**
- **A broad, programmatic action of providing policy guidance for reviewing HGMPs.**

We recommend the current DEIS focus on the first action, funding for Mitchell Act hatchery programs, and develop appropriate alternatives that recognize the current program and incorporates hatchery reform measures.

Should NOAA pursue a programmatic EIS in the future, we recommend that clear alternative policies be identified. The language of the current alternatives lacks policy substance and it is not evident how the alternatives would differ from each other if stripped of their implementation scenarios.

4. *Can hatchery reform concepts other than percent of hatchery origin spawners (pHOS) and percent of natural origin broodstock (pNOB), such as natural rearing strategies, be used to develop alternatives that meet the purpose and need of the DEIS but maintain more production than Alternatives 3-5? (Tribes, AK, OR, WA, ID)*

The DEIS needs to include a broad recognition of hatchery reform actions. These may include various standards and best management practices that have been developed by the HSRG, the Technical Recovery Teams, Recovery Plans, other state and federal policies and regulations, and the scientific literature. Consideration of hatchery reform actions should not be exclusive of new, developing or future strategies as they become available. Hatchery reform actions need to be integrated with harvest management to promote more efficient strategies that increase the number of fish harvested per number of hatchery fish released.

5. *What fisheries are assumed in the analysis to be mark-selective, and at what point in time? (OR, WA, ID, Tribes, AK, NMFS)*

Mark-selective fisheries can be modeled in the AHA and harvest models that were used in the DEIS. However, at this time it is difficult to determine how such fisheries were incorporated into the Implementation Scenarios because the DEIS is not explicit. Many of the harvest assumptions appear to be out-dated and the revised EIS needs to incorporate updated harvest data, management agreements and harvest biological opinions.

6. *Were Native American tribes engaged in government to government consultations in development of the DEIS, including but not limited to the four Washington coastal treaty tribes and the four Columbia River treaty tribes? (Tribes)*

No comment from ODFW.

7. *Are the impacts to all ocean fisheries in areas under management authority of the Pacific Council, the Pacific Salmon Commission, and the State of Alaska included in the analysis of each alternative in DEIS (harvest impacts to individual fishery strata, socioeconomic impacts, and the environmental justice analyses)? (STT)*

- *If not, what is the list of fisheries not included and what is the relationship of Mitchell Act hatchery production to the stock composition of those fisheries? (STT)*

We are confident that the STT will address this question. However the revised EIS needs to incorporate updated harvest data, management agreements and harvest biological opinions.

8. *Are impacts in all Columbia River basin fisheries included in the DEIS, including tributary ceremonial and subsistence and recreational fisheries? (Tribes, OR, WA, ID)*

It appears that all Columbia River fisheries were considered. However the revised EIS needs to incorporate updated harvest data, management agreements and harvest biological opinions.

9. *Is production from all Columbia Basin hatcheries included in the analysis? (USFWS, OR, WA, ID, Tribes)*

All Columbia River fish production is considered. We recommend that the scope of the current EIS be narrowed to address only Mitchell Act-funded hatchery programs.

If NOAA pursues a programmatic EIS in the future, it will need to incorporate updated fish propagation information and recognize the production agreements in the US v OR 2008-2017 agreement.

10. *Is the methodology describing economic impacts complete and proper, including the use of consistent metrics? (SSC)*

No comment from ODFW.

11. *Were expected benefits to fisheries from increased wild production included in the economic analyses? (WA, OR, ID, Tribes, AK)*

The DEIS is not explicit on this point, but based on supplemental material that has been provided by NOAA, it appears that some increased wild production and associated fisheries benefits were anticipated. However, fisheries decline under all alternatives compared to Alternative 1, Status Quo.

12. *Were current fishery and hatchery management agreements used to estimate impacts (e.g., US v Oregon, Pacific Salmon Treaty Chinook Annex, US v Washington, Hoh v Baldrige, etc.)? (WA, OR, ID, Tribes, AK)*

The DEIS states that the alternatives do not account for these agreements. A revised EIS would need to incorporate updated harvest data, management agreements and harvest biological opinions, and recognize the production agreements in the US v OR 2008-2017 agreement.

13. *Were impacts to commitments and expectations in the PST, US v Oregon, US v Washington, Hoh v Baldrige properly described in the DEIS? (WA, OR, ID, Tribes, AK)*

The anticipated decreases in hatchery production and harvest described in Alternatives 2-5 are not consistent with the anticipated harvest and hatchery production tables in the 2008-2017 US v OR

management agreement. The DEIS states that the alternatives do not account for these commitments, but also that they are not intended to supersede the commitments.

14. Are there relevant sources of information omitted from socioeconomic analysis? (SSC)

No comment from ODFW.

15. Is the temporal scale of the impact assessment adequate? (WA, OR, Tribes, ID, AK)

The temporal scale of the DEIS is 10 years, which reflects the duration of the 2008-2017 US v OR management agreement. We may not see the biological benefits of some of the hatchery reform actions in a 10-year time period.

16. Are the natural salmon populations targeted for restoration, particularly those that become limiting factors in hatchery production, appropriately identified? (WA, OR, ID, Tribes, Council Staff)

The natural salmon and steelhead populations addressed in the DEIS appear to be the same primary and contributing populations that are identified in the HSRG and recovery planning forums, and are therefore appropriate. Similar to the approach taken by the HSRG, stabilizing populations were not considered.

17. Recognizing recent changes in the hatchery practices that have already occurred, what is the period used to decide the status quo alternative? (OR, USFWS, NMFS)

According to NOAA staff, the Status Quo alternative is based largely on the period 2004 – 2007. The Status Quo alternative in a final EIS will need to recognize hatchery reform actions that have been implemented by the states, tribes, and federal government since that period.

18. Are the DEIS alternatives consistent with adopted state recovery plans? (OR, WA, ID)

The DEIS alternatives did not consider adopted state recovery plans. As a result the alternatives and the Implementation Scenarios are frequently not consistent with these plans. The final EIS will need to take these into consideration.

Subject: STT question for Mitchell Act DEIS comments

From: Robert Kope <Robert.Kope@noaa.gov>

Date: Tue, 28 Sep 2010 13:41:00 -0700

To: Larrie LaVoy <Larrie.LaVoy@noaa.gov>

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The consideration of fishery impacts in the Mitchell Act DEIS is described in Appendix K (pages 1063-1124 of the DEIS). This analysis was performed by Gary Morishima and Larry Lestelle. They apparently relied heavily on the PSC Chinook and coho (FRAM) models and baseline data to configure and parameterize simplified spreadsheet models for the purpose of analyzing impacts of alternative scenarios on fisheries.

For the coho model, FRAM fisheries were used. These included troll fisheries from the southern extent of fishing in California to Northwest Alaska, sport fisheries from the southern extent of fishing through northern British Columbia, and net fisheries from the Columbia River through Alaska. This represents complete coverage of all fisheries under the jurisdiction of the Pacific Fishery Management Council, the Pacific Salmon Commission, and the State of Alaska where Columbia River coho are likely to be encountered. So I do not think we need to address question about the contribution of Mitchell Act hatcheries to coho fisheries.

For the Chinook model, the Northern extend of fisheries included was Southeast Alaska, and the southernmost fisheries were WA/OR troll, WA ocean sport, and Columbia River net. These are fisheries from the PSC Chinook model, which has a focus on stocks and fisheries that are subject to the Pacific Salmon Treaty. It appears that for convenience, the WA/OR troll fishery was assumed to be confined to the area north of Cape Falcon, thus all fishery impacts were considered to occur north of Cape Falcon. This is similar to the assumption in Council processes that ocean fishery impacts on Sacramento Fall Chinook are negligible north of Cape Falcon. However, the contribution of Columbia River hatcheries to Chinook fisheries south of Cape Falcon appears to be something greater than "negligible". So we should address the question of the contribution of Mitchell Act hatcheries to Chinook troll and sport fisheries south of Cape Falcon. I think that Larrie and I can probably do that.

A couple of observations that mitigate the omission of these fisheries from the DEIS:

- 1) During the time period considered for the analysis (early 2000's) the abundance of California Chinook was high and they would have diluted the contribution of Columbia River fish to fisheries off the Oregon coast. Recent years for which we have GSI data SRFC have been scarce, so naturally the Columbia River Chinook make a larger contribution.
- 2) The intent of the socioeconomic and environmental justice analyses is to compare and contrast the different alternatives, so the comparisons are viewed in relativistic terms. Omission of a couple of fisheries from this comparison is unlikely to have much of an impact on the relative impacts of the different alternatives.

--Robert