

**Record of Decision
for the
Selection of Policy Direction for
the Funding of Mitchell Act Hatchery Programs in the Columbia River Basin**

**National Marine Fisheries Service
West Coast Region**

Summary

The National Marine Fisheries Service (NMFS) has decided, pursuant to its analysis in the Final Environmental Impact Statement (FEIS) to Inform Columbia River Basin Hatchery Operations and the Funding of Mitchell Act Hatchery Programs (NMFS 2014; 79 Fed. Reg. 54708; September 12, 2014), to select Alternative 6 (All Hatchery Programs Meet Stronger Performance Goal), which was the preferred alternative identified in the FEIS. Alternative 6 provides the best balance among the alternatives analyzed in the FEIS because it minimizes adverse impacts to salmon and steelhead listed under the Endangered Species Act (ESA) while simultaneously providing economic and cultural benefits to regional treaty and non-treaty fisheries. NMFS will begin implementing this decision by applying the underlying policy direction to all future distributions of Mitchell Act funds for hatchery operations, beginning with fiscal year 2016 appropriations.

For Further Information: Contact James Dixon
NOAA Fisheries, West Coast Region
Sustainable Fisheries Division
(360) 534-9329
james.dixon@noaa.gov

1.0 Background

Congress enacted the Mitchell Act (16 United States Code of Federal Regulations [USC] 755 757) in 1938 for the conservation of anadromous (salmon and steelhead) fishery resources in the Columbia River Basin (defined as all tributaries of the Columbia River in the United States [U.S.] and the Snake River Basin). It authorized the establishment, operation, and maintenance of one or more hatchery facilities in the states of Oregon, Washington, and Idaho, scientific investigations to facilitate the conservation of the fishery resource, and “all other activities necessary for the conservation of fish in the Columbia River Basin in accordance with law.”

Since 1946, Congress has continued to appropriate Mitchell Act funds on an annual basis. These funds have been used to support research, improve fish passage, install screens on water diversions, and build and operate more than 20 salmon and steelhead hatchery facilities.

In 2014, NMFS completed an FEIS to Inform Columbia River Basin Hatchery Operations and the Funding of Mitchell Act Hatchery Programs (hereafter referred to as the Mitchell Act Hatchery FEIS)(NMFS 2014). The analyses within the Mitchell Act Hatchery FEIS were intended to inform NMFS, hatchery operators, and the public about the effects of operating Columbia River Basin salmon and steelhead hatchery programs, both Mitchell Act-funded and programs not funded under the Mitchell Act, under a full range of alternatives. The Mitchell Act Hatchery FEIS analyzed six alternatives. Each alternative identified a different policy direction that would be used to guide NMFS' decisions on the distribution of funds for hatchery production under the Mitchell Act.

The final EIS was made available for a 60-day public review period announced in the Federal Register (79 Fed. Reg. 54708; September 12, 2014). During the review period, seven comment letters/emails were received. A review of comments on the final EIS revealed that most of the issues raised had already been raised in public comments on the draft EIS, and they had been addressed in the preparation of the FEIS (Appendix L of Mitchell Act FEIS). The

remaining, new issues raised, were considered during NMFS' decision-making process; responses to these have been included in Appendix A of this Record of Decision (ROD).

2.0 Description of Alternatives Considered

NMFS analyzed six alternatives in the FEIS, including a no-action alternative (Alternative 1) and five action alternatives as summarized below (FEIS, Section 2.0, Alternatives). Alternatives were designed to reduce or minimize the adverse effects or increase the benefits of hatchery operations, relative to the no-action alternative, on natural-origin salmon and steelhead populations.

Baseline conditions referred to in Table 1 are considered similar to current or existing conditions of the human environment within the analysis area. Terminology pertinent to the alternatives discussion is explained in Appendix B.

Alternative 1 (No Action)

Under Alternative 1, there would not be a defined policy direction, and Columbia River Basin hatchery production would continue under baseline conditions. Based on NMFS' observations, the following describe the baseline conditions:

- Hatchery operators (both Mitchell Act-funded and other) have made substantial improvements to both programs and facilities to reduce the impacts on ESA-listed and non-listed salmon and steelhead populations in the Columbia River Basin.
- Hatchery programs (both Mitchell Act-funded and other) are used primarily to contribute to harvest (Section 2.3.2, Purpose of Hatchery Programs, in FEIS), although some hatchery programs are designed to help conserve natural-origin salmon and steelhead populations.
- Many hatchery programs are used to meet mitigation agreements. Most mitigation occurs to reduce the effects from hydro development on the fisheries resource.
- Monitoring, evaluation, and reform (MER) activities occur, but they are not guided by a comprehensive basinwide plan. MER plans, where they occur, are usually developed at the individual program level.
- Adaptive management of hatchery programs occurs, but it is usually directed at the performance of the program, i.e., survival of juveniles to adult recruits, and it is not necessarily directed at risk reduction on natural populations.
- Best management practices (BMPs) for hatchery facilities are widely applied, but their application is not universal. In many cases, application is based on available funding and/or whether the BMP is a regulatory requirement.
- The amount of Mitchell Act hatchery funding can vary annually (Table 1-3 in FEIS). Hatchery operators generally receive a consistent proportion of the total funding each year.

Alternative 2 (No Mitchell Act Funding)

Under Alternative 2, the policy direction would be defined by the following goals and/or principles:

- All Mitchell Act-funded hatchery programs and facilities would be closed.
- The intermediate performance goal (Section 2.4.2.1, Performance Goals Defined, in FEIS) would be applied to the remaining non-Mitchell Act-funded hatchery programs that affect primary and contributing salmon and steelhead populations. Application of the intermediate performance goal would, in most cases, reduce the risks of hatchery programs on natural-origin salmon and steelhead populations.
 - Integrated hatchery programs would be better integrated than under Alternative 1.
 - Isolated hatchery programs would be better isolated than under Alternative 1.
- Production levels would be reduced from levels under Alternative 1 in hatchery programs designed to meet mitigation requirements only when those production levels conflicted with the ability of a hatchery program to meet performance goals.
- Conservation hatchery programs would be operated at a level determined by conservation need. Benefits of the conservation hatchery program must outweigh the risks (Section 3.2.3.1, General Risks and Benefits of Hatchery Programs to Salmon and Steelhead Species, in FEIS).
- Many hatchery programs are used to meet mitigation agreements. These programs would be aligned with the performance goals for the alternative.
- No new hatchery programs would be initiated.
- Monitoring, evaluation, and reform would be guided by a comprehensive basinwide plan.
- Adaptive management planning related to risk reduction would be required for all programs that affect ESA-listed primary and contributing populations.
- BMPs for facilities would be applied to all remaining hatchery facilities.
- Mitchell Act hatchery funding would be eliminated.

Alternative 3 (All Hatchery Programs Meet Intermediate Performance Goal)

Under Alternative 3, the policy direction would be defined by the following goals and/or principles:

- The intermediate performance goal (Section 2.4.2.1, Performance Goals Defined, in FEIS) would be applied to all Columbia River Basin hatchery programs that affect primary and contributing salmon and steelhead populations. Application of the intermediate performance goal would, in most cases, reduce the risks of hatchery programs on natural-origin salmon and steelhead populations.

- Integrated hatchery programs would be better integrated than under Alternative 1.
- Isolated hatchery programs would be better isolated than under Alternative 1.
- Conservation hatchery programs would be operated at a level determined by conservation need. Benefits of the conservation hatchery program must outweigh the risks (Section 3.2.3.1, General Risks and Benefits of Hatchery Programs to Salmon and Steelhead Species, in FEIS).
- Many hatchery programs are used to meet mitigation agreements. These programs would be aligned with the performance goals for the alternative.
- No new hatchery programs would be initiated.
- Monitoring, evaluation, and reform would be guided by a comprehensive basinwide plan.
- Adaptive management planning related to risk reduction would be required for all programs that affect ESA-listed primary and contributing populations.
- BMPs for facilities would be applied to all hatchery facilities.
- Adaptive management planning related to risk reduction would be required for all programs that affect ESA-listed primary and contributing populations.
- Mitchell Act funds would be disbursed in support of the above goals and/or principles.

Alternative 4 (Willamette/Lower Columbia River Hatchery Programs Meet Stronger Performance Goal)

Under Alternative 4, the policy direction would be defined by the following goals and/or principles:

- The intermediate performance goal (Section 2.4.2.1, Performance Goals Defined, in FEIS) would be applied to all Columbia River Basin hatchery programs that affect primary and contributing salmon and steelhead populations in the Interior Columbia Recovery Domain. Application of the intermediate performance goal would, in most cases, reduce the risks of hatchery programs on natural-origin salmon and steelhead populations.
 - Integrated hatchery programs would be better integrated than under Alternative 1.
 - Isolated hatchery programs would be better isolated than under Alternative 1.
- The stronger performance goal (Section 2.4.2.1, Performance Goals Defined, in FEIS) would be applied to all Columbia River Basin hatchery programs that affect primary and contributing salmon and steelhead populations in the Willamette/Lower Columbia Recovery Domain. Application of the stronger performance goal would minimize the risks of hatchery programs on natural-origin salmon and steelhead populations more than the intermediate performance goal.
 - Integrated hatchery programs would be better integrated than under Alternative 1.
 - Isolated hatchery programs would be better isolated than under Alternative 1.
- Production levels would be reduced from levels under Alternative 1 in hatchery programs designed to meet mitigation requirements only when those production levels conflicted with the ability of a hatchery program to meet performance goals.
- Conservation hatchery programs would be operated at a level determined by conservation need.

Benefits of the conservation hatchery program must outweigh the risks (Section 3.2.3.1, General Risks and Benefits of Hatchery Programs to Salmon and Steelhead Species, in FEIS).

- BMPs for facilities would be applied in all hatchery facilities.
- Many hatchery programs are used to meet mitigation agreements. These programs would be aligned with the performance goals for the alternative.
- New conservation hatchery programs could be initiated in the Willamette/Lower Columbia Recovery Domain for populations deemed at high risk of extinction.
- New harvest hatchery programs could be initiated, and/or existing hatchery programs would be changed to better support harvest opportunities below Bonneville Dam, including ocean fisheries.
- Monitoring, evaluation, and reform would be guided by a comprehensive basinwide plan.
- Adaptive management planning related to risk reduction would be required for all programs that affect primary and contributing salmon and steelhead populations in the Willamette/Lower Columbia Recovery Domain.
- Mitchell Act funds would be disbursed in support of the above goals and/or principles.

Alternative 5 (Interior Columbia River Hatchery Programs Meet Stronger Performance Goal)

Under Alternative 5, the policy direction would be defined by the following goals and/or principles:

- The intermediate performance goal (Section 2.4.2.1, Performance Goals Defined, in FEIS) would be applied to all Columbia River Basin hatchery programs that affect primary and contributing salmon and steelhead populations in the Willamette/Lower Columbia Recovery Domain. Application of the intermediate performance goals would, in most cases, reduce the risks of hatchery programs on natural-origin salmon and steelhead populations.
 - Integrated hatchery programs would be better integrated than under Alternative 1.
 - Isolated hatchery programs would be better isolated than under Alternative 1.
- The stronger performance goal (Section 2.4.2.1, Performance Goals Defined, in FEIS) would be applied to all Columbia River Basin hatchery programs that affect primary and contributing salmon and steelhead populations in the Interior Columbia Recovery Domain. These stronger performance goals would minimize the risks of hatchery programs on natural-origin salmon and steelhead populations more than the intermediate performance goal.
 - Integrated hatchery programs would be better integrated than under Alternative 1.
 - Isolated hatchery programs would be better isolated than under Alternative 1.
- Conservation hatchery programs would be operated at a level determined by conservation need. Benefits of the conservation hatchery program must outweigh the risks (Section 3.2.3.1, General Risks and Benefits of Hatchery Programs to Salmon and Steelhead Species, in FEIS).
- Many hatchery programs are used to meet mitigation agreements. These programs would be aligned with the performance goals for the alternative.
- BMPs for facilities would be applied in all hatchery programs.

- New conservation hatchery programs could be initiated in the Interior Columbia Recovery Domain for populations deemed at high risk of extinction.
- New harvest hatchery programs may be initiated, and/or existing hatchery programs would be changed to better support harvest opportunities above Bonneville Dam, including treaty Indian commercial fisheries.
- Monitoring, evaluation, and reform would be guided by a comprehensive basinwide plan.
- Adaptive management planning related to risk reduction would be required for all programs that affect primary and contributing salmon and steelhead populations in the Willamette/Lower Columbia Recovery Domain.
- Mitchell Act funds would be disbursed in support of the above goals and/or principles.

Alternative 6 (Preferred Alternative - All Hatchery Programs Meet Stronger Performance Goal)

Under Alternative 6, the policy direction would be defined by the following goals and/or principles:

- The stronger performance goal (Section 2.4.2.1, Performance Goals Defined, in FEIS) would be applied to all Columbia River Basin hatchery programs that affect primary and contributing salmon and steelhead populations. These stronger performance goals would minimize the risks of hatchery programs on natural-origin salmon and steelhead populations.
 - Integrated hatchery programs would be better integrated than under Alternative 1.
 - Isolated hatchery programs would be better isolated than under Alternative 1.
- Conservation hatchery programs would be operated at a level determined by conservation need. Benefits of conservation hatchery programs must outweigh their risks (Section 3.2.3.1, General Risks and Benefits of Hatchery Programs to Salmon and Steelhead Species, in FEIS).
- Many hatchery programs are used to meet mitigation agreements. These programs would be aligned with the performance goals for the alternative.
- BMPs for facilities would be applied to all hatchery facilities.
- New programs (for conservation, harvest, or both purposes) could be initiated throughout the Columbia River Basin, where appropriate.
- Monitoring, evaluation, and reform would continue to occur. NMFS would continue to work with hatchery operators, basinwide, to develop priorities and strategies for monitoring, evaluation, and reform.
- Adaptive management planning, related to risk reduction, would be required for all programs that affect ESA-listed primary and contributing salmon and steelhead populations in the Columbia River Basin.
- Mitchell Act funds would be disbursed in support of the above goals and/or principles.

Table 1 summarizes hatchery performance goals for each alternative. Information in the table covers the Willamette/Lower Columbia Recovery Domain and the Interior Columbia Recovery Domain.

Table 1. Hatchery Performance Goals Identified for Each Alternative's Policy Direction.

Recovery Domain	Population Type*	-- Hatchery Performance Goals by Alternative --					
		Alternative 1	Alternative 2**	Alternative 3	Alternative 4	Alternative 5	Alternative 6 (Preferred Alternative)
Willamette/ Lower Columbia	Primary	Baseline conditions	Intermediate	Intermediate	Stronger	Intermediate	Stronger
	Contributing	Baseline conditions	Intermediate	Intermediate	Stronger	Intermediate	Stronger
	Stabilizing	Baseline conditions	Baseline conditions	Baseline conditions	Baseline conditions	Baseline conditions	Baseline conditions
Interior Columbia	Primary	Baseline conditions	Intermediate	Intermediate	Intermediate	Stronger	Stronger
	Contributing	Baseline conditions	Intermediate	Intermediate	Intermediate	Stronger	Stronger
	Stabilizing	Baseline conditions	Baseline conditions	Baseline conditions	Baseline conditions	Baseline conditions	Baseline conditions

* Each population's role in recovery was designated as primary, contributing, or stabilizing. These designations were used by the Lower Columbia River Fish Recovery Board (LCFRB) in the development of the Lower Columbia Fish Recovery Plan (LCFRB 2004). The Hatchery Scientific Review Group (HSRG) adapted these designations throughout the basin after discussions with the hatchery operators, and they are applied in the EIS (Appendix C through Appendix F of FEIS). Not all recovery plans for salmon and steelhead utilize this same hierarchical structure to identify recovery goals for listed populations.

** Under Alternative 2, Mitchell Act hatchery funding is assumed to be eliminated. The remaining non-Mitchell Act hatchery programs would be managed to meet the intermediate performance goal.

3.0 Environmentally Preferred Alternative

NMFS is required by regulation to specify in the ROD “the alternative or alternatives which were considered to be environmentally preferable” (40 CFR 1505.2(b)). The environmentally preferred alternative generally means the alternative that causes the least damage to the biological and physical environment; it also means the alternative that best protects, preserves, and enhances historic, cultural, and natural resources (CEQ 1981).

As analyzed in the FEIS, NMFS identified the Environmentally Preferred Alternative as FEIS Alternative 4 because, compared to the other alternatives analyzed, this alternative best supports NMFS’ statutory missions to conserve anadromous salmon and steelhead and administer Mitchell Act funding for the conservation of anadromous (salmon and steelhead) fishery resources in the Columbia River Basin by (1) minimizing and reducing risks and enhancing benefits to natural-origin salmon and steelhead from hatchery production in the Columbia River Basin, and (2) limiting or decreasing effects to other natural resources such as wildlife, water quality, and human health. Alternative 4 would be the least environmentally damaging.

4.0 NMFS’ Decision and Rationale

At this time, NMFS has decided to select and implement Alternative 6. In making this decision to implement Alternative 6, NMFS considered the following factors:

- Effects of the action on species listed under the ESA
- Effects of the action on fisheries
- Effects of the action on cultural and economic resources
- Potential for disproportionate adverse environmental or health impacts on minority and low-income populations
- Effects of the action on NMFS’ ability to fulfill statutory mission and responsibilities
- Public, tribal, and agency comments received during the EIS scoping and review periods
- Extent to which impacts of action could be adequately mitigated

After considering these factors, NMFS has concluded that Alternative 6 supports NMFS’ statutory missions to conserve anadromous salmon and steelhead and administer Mitchell Act funding for the conservation of anadromous (salmon and steelhead) fishery resources in the Columbia River Basin. Alternative 6 also provides the best balance among the alternatives analyzed in the FEIS because it minimizes adverse impacts to ESA-listed natural-origin salmon and steelhead while simultaneously allowing economic and cultural benefits to regional treaty and non-treaty fisheries.

NMFS has reviewed new studies and information, including additional years of data obtained since the EIS was prepared, and determined that there are no significant new circumstances or information relevant to environmental concerns that would change the conclusions of the Mitchell Act FEIS (Jones 2017). In addition, NMFS has completed a biological opinion on implementation of the Mitchell Act FEIS’s preferred alternative and administration of Mitchell Act hatchery funding (NMFS 2017) and found that the action will not jeopardize the continued existence of Lower Columbia River Chinook salmon, Lower

Columbia River coho salmon, Lower Columbia River steelhead, Columbia River chum salmon, Upper Willamette River Chinook salmon, Upper Willamette River steelhead, Mid-Columbia River steelhead, Upper Columbia River steelhead or spring Chinook salmon, Snake River steelhead, Snake River fall or spring/summer Chinook salmon, or Snake River sockeye salmon, or destroy or adversely modify the species' designated critical habitat (NMFS 2017). NMFS has also determined that its selection of the preferred alternative is not likely to adversely affect Southern Resident killer whale or the southern distinct population segment of green sturgeon (NMFS 2017). NMFS determined that its selection of the preferred alternative is not likely to adversely affect (NLAA) the threatened bull trout, endangered Columbia white-tailed deer, threatened marbled murrelet, threatened northern spotted owl, threatened streaked horned lark, the threatened yellow-billed cuckoo, or designated critical habitat for the bull trout, murrelet, spotted owl, or proposed critical habitat for the cuckoo (NMFS 2016). The U.S. Fish and Wildlife Service (USFWS) concurred with NMFS' NLAA determination (USFWS 2016).

Adverse impacts have been mitigated through the application of terms and conditions in NMFS' biological opinion on implementation of the Mitchell Act FEIS's preferred alternative and administration of Mitchell Act hatchery funding (NMFS 2017) and will be implemented by NMFS and that hatchery operators that receive Mitchell Act funds. NMFS will only fund hatchery programs with monitoring programs, in compliance with 40 CFR 1505.2(c), and results will be submitted to NMFS through an annual report.

As a consequence of this decision, NMFS expects to implement the selected policy direction in all forthcoming distributions of Mitchell Act funds for hatchery operations, beginning with fiscal year 2016 appropriations.



Barry A. Thom
Regional Administrator

1/23/2017
Date

5.0 References

- LCFRB. 2004. Lower Columbia Salmon Recovery and Fish & Subbasin Plan. Volume I & II. LCFRB, Longview, Washington. Available at:
<http://www.nwcouncil.org/fw/subbasinplanning/lowerColumbia/plan/RP%20Vol%20I%20Ch%201%20Intro.pdf>
- NMFS. 2014. Final Environmental Impact Statement to Inform Columbia River Basin Hatchery Operations and the Funding of the Mitchell Act Programs. West Coast Region. September 12, 2014.
- NMFS. 2016a. Request of concurrence with a determination that NMFS' implementation of the preferred alternatives from the Mitchell Act Final Environmental Impact Statement and the continued funding of Mitchell Act hatchery programs in the Columbia River basin are not likely to adversely affect ESA-listed Columbia River bull trout, Columbia white-tailed deer, Marbled murrelet, Northern spotted owl, streaked horned lark, or yellow-billed cuckoo. Letter from Rob Jones, Branch Chief, Anadromous Production and Inland Fisheries, West Coast Region, to USFWS. August 12, 2016.
- USFWS. 2016. Letter of concurrence with NMFS' determination that its implementation of the preferred alternatives from the Mitchell Act Final Environmental Impact Statement and the continued funding of Mitchell Act hatchery programs in the Columbia River basin are not likely to adversely affect ESA-listed Columbia River bull trout, Columbia white-tailed deer, Marbled murrelet, Northern spotted owl, streaked horned lark, or yellow-billed cuckoo. Letter from Rollie White, Assistant Regional Director for Ecological Services, USFWS Pacific Region, to NMFS. August 17, 2016.
- NMFS. 2017. Endangered Species Act (ESA) Section 7(a)(2) Biological Opinion and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat (EFH) Consultation on NOAA's National Marine Fisheries Service's implementation of the Mitchell Act Final Environmental Impact Statement preferred alternative and administration of Mitchell Act hatchery funding. NMFS Consultation Number: NWR-2014-697. January 15, 2017.

Appendix A - Comments and Response to Comments Received on FEIS.

Letter #	Comment #	Comment	NMFS' Response
1	1	The only thing that has kept the Salmon in the rivers is the hatchery programs and these should not be reduced or eliminated.	Comment noted.
2	1	...the amount of time given to comment on the FEIS is extremely brief, especially given its enormous length. When the Mitchell Act Draft Environmental Impact Statement (DEIS) was released in 2010, 90 days were given to provide comment, later extended to 120 days. In 2014, only 60 days have been given to provide comment on the Mitchell Act FEIS. The DEIS, together with its Appendices, was 1,118 pages in length. The FEIS, together with its Executive Summary, Mitchell Act FEIS FAQ, and Appendixes, including DEIS Comments and Responses to same, amounts to 3,008 pages in length. Even without the DEIS Comments and Responses, the main body of the FEIS itself is 2,120 pages in length. The time allowed to read and respond to the FEIS is incommensurate with its enormous length.	NMFS understands that review of large documents, such as this final EIS, can take significant time and in recognition of this NMFS provided for comment periods on the DEIS and FEIS that exceeded the time frames required under the CEQ NEPA regulations. While 40 CFR § 1506.10(c) requires that 45 days be given for the review of a draft EIS, NMFS provided 120 days for the DEIS review. While 40 CFR § 1506.10(b)(2) requires that 30 days be given for the review of final EISs, NMFS allowed for a 60-day review period for the final EIS.
2	2	In short, the process has taken such a long time that much of the data cited is out of date. That leads to an open question concerning the validity of the conclusions reached and the opinions stated based on the data cited.	Please refer to Appendix L1, Global Response 7c, of the final EIS, for a response to comments related to the data quality in the EIS.

Letter #	Comment #	Comment	NMFS' Response
2	3	Our comments regarding the Mitchell Act DEIS on the importance of habitat improvements for this increase in natural abundance and productivity to occur were dismissed out of hand.	Please refer to Appendix L1, Global Response 6k, of the final EIS, for a response to comments related to alternatives that include habitat restoration.
2	4	On page 3-87, the FEIS states that coho comprise 58% of non-Indian commercial harvest on the lower Columbia Rivet based on Table 3-13 on page 3-88, which shows annual landed catch in the period 2002-2009. It is completely disingenuous for NMFS to ignore the effect of listing lower Columbia coho as Threatened under the Endangered Species Act in 2005. If instead, one examines the total landed catch during the period 2006-2010, the picture looks quite different.	The range of fishery years used in the EIS were not specific to each species harvested, rather the range was selected based on the available data (complete fishery-year data sets) for fisheries targeting Chinook and coho salmon and steelhead in the Columbia River Basin and in the ocean areas where Columbia River fish are harvested. Furthermore, the dataset used in the FEIS included several years under which Lower Columbia River coho salmon were listed.
2	5	We note that in response to our comment 29/48 regarding the lack of public access to The Research Group's 2009 document referenced in Appendix J, Thomas Wegge, "Mitchell Act Hatchery EIS, Socioeconomics Impact Methods Appendix, March 2010," NMFS responded, "Thank you. The references in the Draft EIS to Table B.2 were incorrect and have been corrected in the final EIS." Yet, in Appendix J in the final EIS, Tables A-1, A-2, A-3, A-5, and A-6 all reference Table B.2 in TRG 2009.	<p>The version of the TRG report published with the DEIS was the wrong version, so to reduce confusion regarding socioeconomic analyses references used in the EIS and information provided in The Research Group's 2009 report, the 2009 report was removed from the appendices in the final EIS, and use of any reference to this report was minimized in the final EIS.</p> <p>The 2009 report is available upon request to NMFS.</p>
2	6	The most egregious of these is Table A-3 on page 18, in which it is stated that the net commercial economic value per fish of steelhead in the lower Columbia River is \$7.34	The error has been noted; however, there were no estimates generated using this value for commercial steelhead in the Lower Columbia River region.

Letter #	Comment #	Comment	NMFS' Response
		in 2009 dollars, when in fact the retention and sale of steel head is prohibited in non-Indian commercial fisheries on the lower Columbia River. This oversight should have been corrected.	
2	7	With respect to Appendix L. 1, Global Comments and Responses, Section 2a, responding to "Commenter' s views that the EIS considers alternatives that are inconsistent with NMFS' current authority," the use of the Council of Environmental Quality's defense that it is reasonable to consider alternatives inconsistent with federal or local law, is self-serving at best.	Comment noted.
3	1	We encourage carrying these advancements forward into your upcoming policy direction to promote hatchery programs that are designed and operated in a scientifically defensible manner (HSRG Principle #2).	Comment noted.
3	2	The HSRG encourages creation of a policy direction that requires specific and quantifiable harvest and conservation goals for the natural and hatchery populations affected by your hatchery programs; and that these goals be developed within an "All H", comprehensive strategy that integrates knowledge of population habitat, harvest and any hydropower effects (HSRG Principle #1).	While NMFS recognizes that decisions addressing specific harvest actions in the Columbia River Basin need to be evaluated in relation to hatchery and hydropower effects, the development of an overarching policy to do so is beyond the scope of this EIS review. However, many of these effects are captured in the analysis as part of the affected environment and through cumulative impacts.
3	3	The final EIS did not provide clear goals and objectives on how Mitchell Act hatcheries should operate in the future. We understand that has been left to a future policy direction	In the FEIS, NMFS identified a preferred alternative. The preferred alternative was defined by a set of goals and/or principles that would guide decisions on the distribution of Mitchell Act funds. The preferred alternative did not identify specific actions that

Letter #	Comment #	Comment	NMFS' Response
		to be created from the range of alternatives displayed in the EIS.	would be taken consistent with its preferred alternative because specific actions are best identified on a hatchery program-by-hatchery programs basis.
3	4	In developing that policy, the HSRG encourages NOAA to reflect more on the use of selective fisheries in combination with reformed hatchery operations to optimize co-managers' conservation and sustainable fisheries goals.	Please see response to comment #2 in letter #3.
3	5	The HSRG encourages NOAA to establish clear operating standards and thresholds in its forthcoming policy direction. Stating that performance of a hatchery program will be "stronger" or "intermediate" relative to important performance metrics does not provide sufficient clarity in management standards.	The preferred alternative was defined by a set of goals and/or principles that would guide decisions on the distribution of Mitchell Act funds. The preferred alternative did not identify specific actions that would be taken consistent with its preferred alternative because specific actions are best identified on a hatchery program-by-hatchery programs basis.
3	6	As NOAA proceeds to its policy direction, the HSRG recommends consideration of its most recent paper, <u>On the Science of Hatcheries, An updated perspective on the role of hatcheries in salmon and steelhead management in the Pacific Northwest.</u>	Comment and reference noted.
4	1	On page 3-87 of the Mitchell Act FEIS, in Section 3.3, Socioeconomics, it asserts: Coho salmon also dominate the non-tribal commercial harvest in the terminal areas (Select Area Fishery Enhancement [SAFE] areas and the <i>Willamette River</i> . (Emphasis added.)	Comment and error noted. Currently, there are no commercial fisheries in the Willamette River.

Letter #	Comment #	Comment	NMFS' Response
		<p>Commercial fishing has been banned in the Willamette River since 1918. Even though a terminal non-Indian commercial fishery would be in some way ideally situated in the lower Willamette River or in Multnomah Channel, it would in fact be prohibited by Oregon Jaws and regulations. Furthermore, since lower Columbia coho are not native to the Willamette River, and the Willamette River above Willamette Falls is excluded from the lower Columbia coho ESU, a terminal coho fishery in that location would be highly unlikely.</p>	
5	1	<p>Do you think this EIS is consistent with Entiat Watershed Planning Unit (WRIA 46) Watershed Plan and Entiat Community Wildfire Protection Plan?</p>	<p>Unlike this EIS, neither the Entiat Watershed Planning Unit (WRIA 46) Watershed Plan nor the Entiat Community Wildfire Protection Plan address issues associated with hatchery production. Therefore, we could not find any inconsistencies between this EIS and the two plans referenced.</p> <p>For more information on the Entiat Watershed Planning Unit Watershed Plan, see http://cascadiacd.org/entiat-watershed-plan-appendices_255.html. For more information on the Entiat Community Wildflower Protection Plan, see http://file.dnr.wa.gov/publications/rp_burn_cwpp_entiatvalley.pdf</p>
5	2	<p>Rumors continue to fly about that hatchery fish are not planted in the Entiat River because it is a reference reach/population/stream/river/whatever word y'all are using today. Please let me know if the Entiat River/Watershed has a</p>	<p>Hatchery fish are currently planted in the Entiat River. The Entiat National Fish Hatchery (ENFH) currently releases 400,000 summer Chinook salmon to augment fisheries within and outside of the Entiat River</p> <p>Please refer to the Upper Columbia Spring Chinook Salmon and Steelhead Recovery Plan, at UCR Recovery Plan, for more</p>

Letter #	Comment #	Comment	NMFS' Response
		<p>designation like this from NOAA-Fisheries or any other fish agency.</p> <p>If it is so designated, what does that mean?</p>	<p>information related to the Entiat River's role in Upper Columbia River salmon and steelhead recovery.</p>
6	1	<p>The FEIS appears to analyze impacts to US citizens at the county level. 146 pages of the FEIS appear specifically devoted to socioeconomics and environmental justice. However, I could not find a single reference to <i>Title VI of tile Civil Rights Act of 1964</i> nor U.S. Department of Commerce's 15 C.F.R. Parts.</p>	<p>Consistent with Title VI of the Civil Rights Act if 1964, the Department of Commerce's 15 C.F.R. states that no person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program <u>receiving</u> Federal financial assistance from the Department of Commerce. In 1994, the President issued Executive Order 12898 entitled "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations." While that Executive Order created no new obligations or rights, it did clarify existing Title VI requirements on Federal officials and those that receive federal financial assistance to incorporate into their respective cost-benefit analyses a meaningful consideration of possible disproportionate adverse environmental and health impacts on minority and low-income populations. This was done within the FEIS in NMFS' environmental justice sections (Subsection 3.4 and 4.4, Environmental Justice)</p>
6	2	<p>Analysis of impacts to U.S. citizens at the county level often masks disparate impacts at the community or neighborhood level.</p> <p>For example, every county in the Upper Columbia is a community of concern.</p>	<p>Please see Subsection 3.4.3.1, Approach for Identifying Environmental Justice User Groups and Communities of Concern, in the final EIS. In particular, review Step 2, Identifying the Population Area Unit, which describes the area where the EIS delineated "sub-economic Impact regions," which are specific, sub-county level locations. For the analysis in the EIS, these were typically port locations, associated with the buying and processing of fish. However, tribal reservations, which encompass less than a county area, where also included in this delineation.</p>
6	3	<p>What do NOAA-Fisheries provide to the Entiat community that makes this equitable</p>	<p>In selecting Alternative 6, NMFS considered the possible disproportionate adverse environmental and health impacts on</p>

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		<p>program delivery? Please let me know how you think the chosen alternative will meet equitable program delivery to the Entiat community in relation to program delivery in the entire project area as mandated by Title VI of the Civil Rights Act of 1964 and US Department of Commerce's 15 C.F .R. Part 8.</p>	<p>minority and low-income populations as analyzed in its environmental justice sections (Subsection 3.4 and 4.4, Environmental Justice). Annual per capita income would increase for 27 of the 37 environmental justice communities of concern under Alternative 6 when compared to baseline conditions.</p> <p>Consistent with Title VI of the Civil Rights Act if 1964, the Department of Commerce's 15 C.F.R. states that no person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program <u>receiving</u> Federal financial assistance from the Department of Commerce. If you believe that any of the hatchery operators that receive Mitchell Act funds has discriminated on the ground of race, color, or national origin, please contact the Department of Commerce's Office of Civil Rights at (202) 482-0625.</p>
7	1	<p>.. .but note that non-tribal fisheries resource user groups were not formally consulted during the EIS development process (See Chapter 8), which we regard as a major flaw.</p>	<p>Please refer to final EIS Subsection 2.4.1, Public Involvement, for a detailed description of the public process involved in the development of the EIS, including the series of open public meetings and the periods of open public review and comment.</p>
7	2	<p>When faced with important policy determinations such as this, we urge NMFS to ensure that sport fishermen are represented amongst the parties consulted.</p>	<p>Please refer to Subsection 1.6, Scoping and Relevant Issues, in the final EIS. Including: Subsection 1.6.2, Notice of Intent; Subsection 1.6.4, Written Comments; and Subsection 1.6.6, Public Review and Comment, which outlines the series of regional public meetings held, in 2010, to discuss the draft EIS.</p>
7	3	<p>If the assumptions used to parameterize the All-H Analyzer, which drives the fish impacts assessment, are incorrect, the policy direction adopted by NMFS may unnecessarily reduce sport fishing opportunities throughout the Columbia Basin.</p>	<p>Please refer to Appendix L1, response 7b, Criticism of the use of the All-H Analyzer in the EIS analysis.</p>

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7	4	Use the All-H Analyzer model to test a variety of assumptions about hatchery fish impacts on natural-origin fish ranging from large effects to little or no effect. This approach would more accurately reflect the range in scientific findings concerning this topic as described in Appendix I of the EIS.	Please refer to Appendix L1, response 7b, Criticism of the use of the All-H Analyzer in the EIS analysis. Additionally, please refer to Subsection 3.2.3.1.1.2, Effects on Genetic Diversity, in the final EIS. This section contains significant updating compared to the draft EIS, and includes additional, recent findings on the genetic effects of hatchery programs.
7	5	We urge NMFS to acknowledge the uncertainty about hatchery fish impacts on naturally spawning populations of salmon and steelhead, and request that these uncertainties be a major emphasis of NMFS's Record of Decision (ROD).	Comment noted.
7	6	We object to the policy determination that hatcheries, whose explicit purpose is to support fisheries, should be terminated if they do not meet target performance criteria, particularly those that are not replaced by new programs.	Comment noted.
7	7	These assumptions rely on theoretical descriptions of the potential genetic interaction between hatchery and natural-origin fish (Ford 2002) and we expect there are hatcheries slated for termination on the basis of these theories that do not actually impair production of natural-origin salmon and steelhead.	Please see Appendix L1, Response 7b, Criticism of the use of the All-H Analyzer in the EIS analysis. Additionally, NMFS refers the commenter to Section 3.2.3.1.1 Effects on the Viable Salmonid Population Concept, for a comprehensive review and discussion regarding the effects of hatchery fish on natural population, including where there are uncertainties in our understanding.
7	8	Each hatchery program presumed to pose a genetic risk to natural-origin fish should be individually evaluated to ensure that the assumptions of the genetic interactions	NMFS agrees that evaluations of an individual hatchery program's effect on natural salmon and steelhead populations should be conducted at the individual program level. See Appendix L1, Response 7a, Confusion between the alternatives and the implementation scenarios.

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		model are appropriate before proposing to close these programs.	
7	9	The number of hatcheries terminated and initiated under each policy alternative needs clarification.	<p>Please see Appendix L1, Response 7a, Confusion between the alternatives and the implementation scenarios.</p> <p>Additionally, please see Tables 4-10 through 4-16 for a list and rationale for the hatchery programs assumed to be terminated under each of the action alternatives (Alternative 2 through Alternative 6). Also see Table 4-15 for a summary of new hatchery programs assumed to be initiated under each of the action alternatives (Alternative 2 through Alternative-6).</p>
7	10	The EIS appears to indicate that implementation of the preferred policy alternative would result in a net increase in hatchery programs, but this is because of the assumed number of non-Mitchell Act funded programs that would be initiated (Table 4-5).	<p>Please see Appendix L1, Response 7a, Confusion between the alternatives and the implementation scenarios.</p> <p>In short, this comment is accurate, in that the particular suite of hatchery programs analyzed under each of the alternatives, in the EIS, represents one potential for overall Basin production, relative to the goals and principles outlined in the alternative's policy direction (see Section 2.0 Description of Alternatives Considered).</p> <p>To analyze, illustrate, and compare the potential environmental effects of each alternative, an example of how each alternative might be implemented was necessary. Accordingly, an implementation scenario was developed for the policy direction under each alternative. Each implementation scenario is one example of how hatchery programs could be operated to meet the policy direction of the alternative. There are, however, different potential implementation scenarios that managers could apply and still remain consistent with each alternative policy direction.</p>
7	11	Table 4-4 suggests that total hatchery fish production throughout the Columbia Basin	Please see Appendix L1, Response 7a, Confusion between the alternatives and the implementation scenarios.

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		<p>would decline by 2% under the preferred alternative, while hatchery production from Mitchell Act funded programs would decline by greater than 14%. Therefore, the assumed number of non-Mitchell Act funded programs seems to mask the true impact of the proposed policy changes on hatchery fish production and relies too heavily on the assumption that non-Mitchell Act funded programs will mitigate for losses in fish production.</p>	<p>See response to Comment 7-10</p>
7	12	<p>Greater assurance is needed that basin-wide hatchery production will not decline dramatically if the preferred alternative is implemented, with less reliance on programs that do not receive Mitchell Act funds, which are outside the scope of this EIS.</p>	<p>Please see Appendix L1, Response 7a, Confusion between the alternatives and the implementation scenarios.</p> <p>See response to Comment 7-10</p>
7	13	<p>The preferred alternative (Alternative 6) includes provisions that will reduce hatchery fish production in some locations to meet target hatchery performance metrics and allows for increases in hatchery fish production in other locations, but the EIS does not specify where production increases would occur and by how much.</p>	<p>See Table 4-15 for a summary of new hatchery programs, assumed to be initiated, under each of the action alternatives (Alternative 2 through Alternative 6).</p> <p>Additionally, the hatchery program size can be seen in the species-specific appendices (Appendix C2 through Appendix F2). The assumed hatchery program release size is listed under the "Hatchery Smolt Release" column for each program, for each alternative.</p>
7	14	<p>The ROD should provide assurance that the assumed increases in hatchery fish production from non-Mitchell Act funded programs are likely to occur within a timeline similar to the timeline proposed for implementation of the preferred alternative policies.</p>	<p>Please see Appendix L1, Response 7a, Confusion between the alternatives and the implementation scenarios.</p> <p>Neither the ROD nor the EIS identifies specific production levels changes that will be made. However, for the purposes of analysis, the effects of production levels were considered.</p>

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7	15	NMFS states that the EIS and ESA evaluations, such as section 4(d), section 7, and section 10, are separate analyses, but later explains on page L-7 that the intent is to use the EIS analysis to inform future ESA analyses.	<p>This comment misinterprets the statement made in the final EIS, Appendix L1, Section 2.c. This section further clarifies why the EIS is not intended to be used to inform ESA decisions:</p> <p><i>As a result of these comments, NMFS revised the purpose and need section and its proposed action to avoid misunderstanding NMFS' purpose, as related to ESA. In the final EIS, the proposed action is to develop a NMFS policy direction that will guide the distribution of Mitchell Act hatchery funds. The proposed action does not include development of a policy direction to inform NMFS's future review of individual hatchery programs under ESA.</i></p>
7	16	The ROD resulting from this EIS should carefully explain the differences between EIS and future ESA evaluations.	See response to Comment 7-15, above.

Appendix B: Important terms used in the EIS and ROD

Stronger performance goal (i.e., stronger than baseline conditions) and **intermediate performance goal** (i.e., a level between baseline conditions and stronger performance) indicate different levels of effects reduction or benefits that hatchery programs can have on natural-origin populations of salmon and steelhead. These performance goals are not intended to infer compliance with any legal standard, nor are they intended to be analogous to ESA terminology or threshold standards, but they are helpful in aggregating and describing the effect of multiple hatchery programs on natural-origin populations of salmon and steelhead.

Hatcheries that operate using **stronger performance goals** would maintain or promote beneficial effects (benefits) and minimize adverse effects (risks) of hatchery programs on salmon and steelhead populations when compared to baseline conditions.

Hatcheries that operate under **intermediate performance goals** would, in most cases, reduce the adverse effects (risks) of many hatchery programs on salmon and steelhead populations when compared to baseline conditions.

The Washington Lower Columbia Salmon Recovery and Fish and Wildlife Plan (2004) utilized a hierarchal population recovery approach, which identified three types of salmon and steelhead populations in the Columbia River Basin. This approach was later adopted by the Hatchery Scientific Review Group (2009) for their review of Columbia River Basin hatcheries.

Primary Populations. Targeted for restoration to high or very high viability. These populations are the foundation of salmon recovery. Primary populations are typically the strongest extant populations and/or those with the best prospects for protection or restoration.

Contributing Populations. Those for which some improvement will be needed to achieve medium viability. Contributing populations might include those of low to medium significance and viability where improvements can be expected to contribute to recovery.

Stabilizing Populations. Those that would be maintained at current levels. These are typically populations currently at very low viability. Stabilizing populations might include those where significance is low, feasibility of improvement is low, and uncertainty is high.

Recovery Domain. An administrative unit for recovery planning, defined by NMFS, based on a species population boundary, ecosystem boundaries, and existing local planning processes. Recovery domains may contain one or more ESA-listed populations.

Integrated Hatchery Programs. A hatchery program that includes natural-origin adults in the program broodstock. Generally, an integrated program intends for the natural environment to drive the adaptation and fitness of a composite population (hatchery- and natural-origin) of fish that spawns both in a hatchery and in the natural environment.

Isolated Hatchery Programs. A hatchery program that intends for the hatchery-origin population to be reproductively isolated from the natural-origin population.

Best Management Practices (BMP). Generally, BMPs are defined as: policies, practices, procedures, or structures implemented to mitigate adverse environmental effects. For the purposes of this ROD, the term refers to the BMPs related to hatchery facility effects (intake screening, facility effluent, facility failure, etc.).

Monitoring, Evaluation, and Reform (MER). Mitchell Act MER is a component of the Mitchell Act hatchery program used to: 1) monitor the natural-origin populations in the areas where Mitchell Act hatchery programs operate, 2) evaluate the performance of the hatchery programs toward meeting the program objectives and 3) incorporate necessary elements of hatchery reform into the management of Mitchell Act hatchery programs, e.g., natural-origin broodstock collection, weir operations, surveys for hatchery-origin fish on natural spawning grounds.

Adaptive Management. A management process involving step-wise evolution of a flexible management system in response to feedback information actively collected to check or test its performance (in biological, social, and economic terms). The process of improving management effectiveness by learning from the results of carefully designed decisions or experiments.