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July 17, 2014

Certified U.S. Mail – Return Receipt Requested
Hatchery Manager Larry Ward
Lower Elwha Klallam Tribe
700 Stratton Road
Port Angeles, WA 98363

Certified U.S. Mail – Return Receipt Requested
Natural Resources Director and Fisheries Manager Doug Morrill
Lower Elwha Klallam Tribe
700 Stratton Road
Port Angeles, WA 98363

Certified U.S. Mail – Return Receipt Requested
Assistant Administrator for Fisheries Eileen Sobeck
National Marine Fisheries Service (NOAA Fisheries)
1315 East West Highway
Silver Spring, MD 20910

Certified U.S. Mail – Return Receipt Requested
National Marine Fisheries Service (NOAA Fisheries)
1315 East West Highway
Silver Spring, MD 20910

Certified U.S. Mail – Return Receipt Requested
Secretary Sally Jewell
United States Department of the Interior
1849 C Street, N.W.
Washington, D.C. 20240

Certified U.S. Mail – Return Receipt Requested
United States Department of the Interior
1849 C Street, N.W.
Washington, D.C. 20240

Certified U.S. Mail – Return Receipt Requested
Director Jonathan B. Jarvis
National Park Service
1849 C Street N.W.
Washington, D.C. 20240

Certified U.S. Mail – Return Receipt Requested
National Park Service
1849 C Street N.W.
Washington, D.C. 20240

Certified U.S. Mail – Return Receipt Requested
Director Daniel M. Ashe
United States Fish and Wildlife Service
1849 C Street N.W., Room 3331
Washington, D.C. 20240-0001

Certified U.S. Mail – Return Receipt Requested
United States Fish and Wildlife Service
1849 C Street N.W.
Washington, D.C. 20240-0001

Certified U.S. Mail – Return Receipt Requested
Secretary Penny Pritzker
United States Department of Commerce
1401 Constitution Ave. N.W.
Washington, D.C. 20230

RE: Notice of Intent to Sue for Violations of the Endangered Species Act

Dear Mr. Ward, Mr. Morrill and Federal Officials:

This letter provides notice of the intent to sue Larry Ward in his official capacity as the Hatchery Manager for the Lower Elwha Klallam Tribe and Doug Morrill in his official capacity as the Natural Resources Director and Fisheries Manager for the Lower Elwha Klallam Tribe (collectively, "Hatchery Operators") for violations of section 9 of the Endangered Species Act ("ESA"), 16 U.S.C. § 1538, associated with operations and maintenance of several Elwha River hatchery programs and activities related thereto. This letter further provides notice of intent to sue Eileen Sobeck in her official capacity as the Assistant Administrator for Fisheries of the National Marine Fisheries Service, the National Marine Fisheries Service, Sally Jewell in her official capacity as the Secretary of the United States Department of the Interior, the United States Department of the Interior, Jonathan B. Jarvis in his official capacity as the Director of the National Park Service, the National Park Service, Daniel M. Ashe in his official capacity as the Director of the United States Fish and Wildlife Service and the United States Fish and Wildlife Service (collectively, "Federal Agencies") for violations of section 7 of the ESA, 16 U.S.C. § 1536, associated with their approval, funding, and implementation of the Elwha River hatchery programs and activities related thereto.

This letter is provided pursuant to section 11(g) of the ESA, 16 U.S.C. § 1540(g), on behalf of the Wild Fish Conservancy, the Wild Steelhead Coalition, the Federation of Fly Fishers Steelhead Committee, and Wild Salmon Rivers d/b/a the Conservation

Angler. These organizations intend to sue for the violations described herein if they are not remedied within sixty days.

I. Legal Framework.

Section 9 of the ESA prohibits the "take" of an endangered species by any person. 16 U.S.C. § 1538(a). This prohibition has generally been applied to species listed as "threatened" through regulations promulgated under section 4(d) of the ESA, 16 U.S.C. § 1533(d). Section 9 of the ESA prohibits violations of those regulations. 16 U.S.C. § 1538(a)(1)(G). Section 9 of the ESA also makes it unlawful to "solicit another to commit or cause to be committed" a violation of that section of the statute. 16 U.S.C. § 1538(g).

"Take" includes actions that harass, harm, pursue, wound, kill, trap, capture, or collect a protected species. 16 U.S.C. § 1532(19). "Harm" includes significant habitat modification or degradation that kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering. 50 C.F.R. § 222.102; 50 C.F.R. § 17.3. The National Marine Fisheries Service ("NMFS") defines "harass" to include an intentional or negligent action that has the potential to injure an animal or disrupt its normal behaviors to a point where such behaviors are abandoned or significantly altered. The United States Fish and Wildlife Service ("FWS") defines this term to include acts that create the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns, which include breeding, feeding, or sheltering. 50 C.F.R. § 17.3.

NMFS has promulgated regulations under section 4(d) of the ESA, commonly known as the "4(d) Rule," that apply the take prohibition to several threatened salmonid species. 50 C.F.R. §§ 223.102(c)(8) and (23), and 223.203(a). The 4(d) Rule includes several exemptions, commonly referred to as the "4(d) Limits." 50 C.F.R. § 223.203(b). One such exemption—Limit 6—exempts take resulting from the implementation of a joint tribal/state resource management plan that NMFS has determined "will not appreciably reduce the likelihood of survival and recovery of affected threatened [species]." 50 C.F.R. § 223.203(b)(6)(i). This exemption from liability provides an affirmative defense, the proponent of which must raise, plead and prove complete compliance with at the time of an alleged violation. 50 C.F.R. § 223.203(c).

Section 7 of the ESA imposes a substantive obligation on federal agencies to "*insure* that any action authorized, funded, or carried out by such agency…is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of" habitat that has been designated as critical for such species. *See* 16 U.S.C. § 1536(a)(2) (emphasis added); *Pyramid Lake Paiute Tribe of Indians v. U.S. Dep't of the Navy*, 898 F.2d 1410, 1415 (9th Cir. 1990). Such jeopardy results where an action reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species. 50 C.F.R. § 402.02. Destruction or adverse modification of critical habitat occurs where there is a

direct or indirect alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of a listed species. *Id.*

In fulfilling the substantive mandates of section 7 of the ESA, federal agencies planning to fund or undertake an action that "may affect" ESA-listed species or their critical habitat are required to consult with NMFS and/or FWS regarding the effects of the proposed action. 50 C.F.R. § 402.14(a). Such consultation concludes with NMFS' and/or FWS' issuance of a biological opinion ("BiOp") determining whether the action is likely to jeopardize ESA-protected species or result in adverse modification of critical habitat. 50 C.F.R. § 402.14(h)(3). Agencies are prohibited from making any irreversible or irretrievable commitment of resources with respect to the action that would have the effect of foreclosing the formulation or implementation of any reasonable and prudent alternative measures until such consultation is completed. 16 U.S.C. § 1536(d).

If NMFS and/or FWS conclude that jeopardy is not likely, an incidental take statement ("ITS") is issued with the BiOp specifying conditions under which take of listed species incidental to the proposed action may occur. 16 U.S.C. § 1536(b)(4); *Aluminum Co. of Am. v. Adm'r, Bonneville Power Admin.*, 175 F.3d 1156, 1159 (9th Cir. 1999). The incidental take statement functions as a permit exempting from liability take resulting from the action to the extent that those covered thereby fully comply with its terms and conditions. *See* 16 U.S.C. § 1536(o)(2); *and* 50 C.F.R. § 402.14(i)(5); *and Ariz. Cattle Growers' Ass'n v. U.S. Fish & Wildlife Serv.*, 273 F.3d 1229, 1239 (9th Cir. 2001). The proponent of the exemption has the burden of proof in showing the ITS was applicable and in force at the time of an alleged violation. 16 U.S.C. § 1539(g).

After a BiOp is issued, federal agencies have a continuing duty under section 7 of the ESA to insure that their actions will not jeopardize the continued existence of listed species or adversely modify designated critical habitat. An agency must re-initiate consultation whenever "the amount or extent of taking specified in the incidental take statement is exceeded," "new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered," where the action in question is "subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion," or where "a new species is listed or critical habitat designated that may be affected by the identified action." 50 C.F.R. § 402.16(a)-(d).

II. Factual Background.

A. Affected Species.

The Puget Sound distinct population segment ("DPS") of steelhead was listed as a threatened species in 2007. 72 Fed. Reg. 26,722 (May 11, 2007). NMFS has applied the ESA section 9 take prohibition to this species. 50 C.F.R. §§ 223.102(c)(23), 223.203(a). Puget Sound steelhead is currently at only 1 to 4% of its historical abundance. Recovery of the Elwha River steelhead population is critical to the recovery and ESA delisting of the Puget Sound steelhead DPS.

NMFS listed the Puget Sound Chinook salmon evolutionary significant unit ("ESU") as threatened and applied the ESA section 9 take prohibition. 64 Fed. Reg. 14,308 (March 24, 1999); 70 Fed. Reg. 37,160 (June 28, 2005); 50 C.F.R. §§ 223.102(c)(8) and 223.203(a). The Elwha River Chinook salmon population is a key (Tier 1) population that must be restored for the recovery and delisting under the ESA of the Puget Sound Chinook salmon ESU. Ex. 5, p. 61 (NMFS015965).

The coterminous United States bull trout population is listed as threatened and the ESA take prohibition has been applied to the species. 64 Fed. Reg. 58,910 (Nov. 1, 1999); 50 C.F.R. §§ 17.21 and 17.31(a), 17.44(w).

B. <u>The Hatchery Programs</u>.

The Hatchery Operators implement hatchery programs in the Elwha River basin for steelhead and for coho, chum and pink salmon. The Washington Department of Fish and Wildlife ("WDFW") implements a hatchery program for Chinook salmon in the Elwha River. The Federal Agencies fund and assist in the implementation of these programs and have reviewed and approved the hatchery programs under various statutes.

The Hatchery Operators operate hatchery facilities on the Elwha River at approximately river mile 1.25. WDFW operates several facilities and structures for their Elwha River hatchery program, including the Elwha Channel facility and the Morse Creek Hatchery.

The Hatchery Operators initiated the native Elwha River steelhead program in 2005 by removing eggs and fry of wild steelhead from the river. Between 431 and 2,731 eggs and fry were removed annually through 2011—these fish were listed as threatened under the ESA in 2007. The fish were reared for three to four years and then spawned to provide broodstock. Eggs and fry are no longer removed from the river, instead, up to 500 returning adult steelhead are captured to supply broodstock. This program targets an annual release of 175,000 smolts that have been reared (and domesticated) for two years, the first of which occurred in 2011.

The Hatchery Operators have implemented a coho salmon program in the Elwha River since around 1978. These fish are reared for approximately one year before release. An annual release of 750,000 smolts was previously targeted, but that number was recently reduced to 425,000.

The Hatchery Operators' chum salmon program began in 1994. This program currently targets a release of 450,000 fry, but that number is expected to increase to 1,025,000 as recovery of salmonids in the Elwha River proceeds.

The Hatchery Operators began a pink salmon program in 2011 that will target annual releases of 3,000,000 fry. The first release occurred in 2012.

WDFW's Chinook salmon rearing facilities, known as the Elwha Channel Hatchery, were constructed in 1974. A facility was constructed on Morse Creek adjacent to the Elwha River in 2009 to provide for additional rearing of Elwha River Chinook salmon. The program previously targeted an annual release of 2,500,000 sub-yearling fish. The program is now targeting a release of 2,500,000 sub-yearling fish and 400,000 yearling fish.

C. ESA Review and Approvals of Hatchery Programs.

There are several BiOps purporting to consult under section 7 of the ESA on various effects of the Elwha River hatchery programs, each of which includes an ITS.

NMFS issued a BiOp dated July 2, 2012 ("NMFS July 2012 BiOp") consulting on the effects of certain actions to Puget Sound steelhead and Puget Sound Chinook salmon. The "proposed action" evaluated therein is generally described as the National Park Service's ("NPS") "ongoing action to fully restore the Elwha River ecosystem and native anadromous fisheries by removing two hydroelectric dams, implementing a revegetation plan, and implementing fisheries restoration projects pursuant to the Elwha River Ecosystem and Fisheries Restoration Act." NMFS July 2012 BiOp lists thirteen activities within the proposed action, including:

> 9. Intensified broodstock collection of returning pre-spawn adult Chinook salmon for hatchery incubation and rearing to maximally sustain the population during dam removal (in-process);
>
> 10. Out-planting of native stocks of anadromous salmonids, including listed PS Chinook salmon and PS steelhead produced at basin hatcheries (juveniles) and collected from the lower river, weirs, and hatchery (adults) into the middle and upper Elwha watershed by tanker truck (under way) or helicopter (potentially);
>
> **** **** **** **** **** ****
>
> 13. Monitoring of habitat and juvenile and adult abundance and distribution.

NMFS concluded in the NMFS July 2012 BiOp that operations of the Elwha River hatchery programs—including broodstock collection, weir operation and adult capture, hatchery operations, fish transportation, research, and monitoring—are necessary to minimize risks to ESA-listed salmonids from the project. The NMFS July 2012 BiOp directs NPS to reinitiate consultation if the project's mitigation measures change during the implementation of the project. The NMFS July 2, 2012 BiOp, including the amended ITS associated therewith and the monitoring implementation plan prepared under Condition 6.A of the ITS, rely on the Elwha River mainstem weir as a primary tool in monitoring and adaptive management.

The Hatchery Operators and WDFW submitted hatchery and genetic management plans ("HGMPs") for their Elwha River hatchery programs to NMFS as a joint plan for review and approval under Limit 6 of the 4(d) Rule in 2012. Those plans, and the monitoring and adaptive management plan referenced therein, rely extensively on the Elwha River mainstem weir as a primary part of the hatchery programs. The weir is an essential component of monitoring and adaptive management, some of which is designed to minimize risks to natural-origin ESA-listed salmonids and some is intended to monitor and evaluate the success of the hatchery programs. Among the critical activities that operation of the weir is to facilitate are estimation of adult returns to the Elwha River and escapement to potential spawning grounds upstream of the weir, collection of adult broodstock for hatchery programs, and the removal of hatchery adults not required for broodstock and not desired to spawn in the wild upstream of the weir.

NMFS issued a memorandum dated December 10, 2012 ("Limit 6 Approval") approving the HGMPs under Limit 6 of the 4(d) Rule and thereby providing a limited exemption for take of Puget Sound steelhead and Puget Sound Chinook salmon. In doing so, NMFS cited the importance of the monitoring and adaptive management components of the HGMPs and included implementation requirements related thereto. Compliance with these requirements is dependent on a properly functioning Elwha River mainstem weir.

NMFS issued a BiOp on December 10, 2012 ("NMFS December 2012 BiOp") consulting on the effects of its approval of the Elwha River HGMPs (*i.e.*, the Limit 6 Approval) to Puget Sound Chinook salmon and Puget Sound steelhead. Additional actions consulted on include the Bureau of Indian Affairs' ongoing disbursement of funds for operations and maintenance of the Hatchery Operators' hatcheries (which funding is authorized by contracts made by the Secretary of Interior), FWS' disbursement of funds for the operations and maintenance of the Elwha River hatcheries, and the NPS' participation in funding, authorizations, and other actions in support of the Elwha River hatchery programs. As with NMFS' approval of the HGMPs, the NMFS December 2012 BiOp relied extensively on the Elwha River mainstem weir as an essential component of the approved actions.

FWS issued a BiOp dated December 3, 2012 ("FWS December 2012 BiOp") consulting on the effects of NMFS' Limit 6 Approval to threatened bull trout. The proposed actions consulted on also included funding and ancillary activities by the NPS, FWS, and Bureau of Indian Affairs. As described above, NMFS' approval of the HGMPs relied extensively on the Elwha River mainstem weir; thus, the FWS December 2012 BiOp similarly relied on this structure as an essential component of the approved actions.

D. Take Caused by the Hatchery.

Operations and maintenance of the Elwha River hatchery programs and associated activities cause "take" of ESA-listed Puget Sound steelhead, Puget Sound Chinook salmon and bull trout through a variety of mechanisms. These mechanisms include

facility effects, genetic introgression, ecological interactions, broodstock collection activities, monitoring and evaluation activities, and disease transmission. Such take is briefly described below and is further described in the excerpts of the incidental take statements from the NMFS July 2012 BiOp, the NMFS December 2012 BiOp, and the FWS December 2012 BiOp attached hereto and incorporated by this reference.

1. Take Caused by Facility Effects.

The hatchery programs and associated activities cause take of Puget Sound steelhead, Puget Sound Chinook salmon and bull trout through facility effects—those effects resulting from the physical structures and devices associated with the programs. A variety of facility effects cause such take.

Take occurs when the ESA-listed fish enter hatchery facilities/structures and are thereby captured, trapped, and/or collected by the hatchery facilities/structures. Additional take occurs when the ESA-listed fish that are trapped in the hatchery facilities/structures are wounded and/or killed in the hatchery environment and/or during attempts to return the fish back to the wild. Take also occurs when ESA-listed fish captured in the hatchery facilities/structures have their migration delayed or prevented, including spawning and/or foraging migration. Take also occurs when ESA-listed fish are wounded and/or killed attempting to enter into hatchery facilities/structures, such as fish ladders when the gates are closed.

Take occurs when hatchery facilities/structures block migration of the ESA-listed fish, including spawning and foraging migration. Delays in spawning migration prevent successful spawning and cause spawning in less desirable habitat. Take also occurs when the ESA-listed fish are wounded and/or killed attempting to migrate past hatchery facilities/structure.

2. Take Caused by Genetic Interactions.

The hatchery programs cause take of Puget Sound steelhead and Puget Sound Chinook salmon through genetic interactions. Such take occurs when hatchery fish spawn in the wild with ESA-listed fish.

Fish become domesticated in a hatchery environment and thereby less fit to survive and reproduce in the wild. Take through genetic introgression occurs when these hatchery fish are allowed to spawn in the wild and thereby pass their maladaptive genes to the wild Puget Sound steelhead and Puget Sound Chinook salmon. The resultant offspring have markedly reduced fitness, dying at a much higher rate at pre-adult life stages and producing fewer mature adults that return to spawn than would occur with two wild parents. Each release of fish at the hatchery facilities results in take through these genetic interactions.

3. Take Caused by Ecological Interactions.

The Elwha River hatchery programs cause take of Puget Sound steelhead, Puget Sound Chinook salmon and bull trout through ecological interactions. Such take occurs through a variety of mechanisms.

The hatchery programs cause take through increased competition for food and space, including rearing, foraging, sheltering, and spawning territory, with the ESA-listed fish. The programs also cause take through increased competition for spawning mates with wild ESA-listed Puget Sound Chinook salmon and Puget Sound steelhead.

The hatchery programs cause take of Puget Sound steelhead, Puget Sound Chinook salmon and bull trout through predation. This occurs when the hatchery fish prey on protected fish. The hatchery programs also cause take when hatchery fish—less fit for survival in the wild and released *en masse*—attract predators that then consume the ESA-listed fish.

4. Take Caused by Broodstock Collection Activities.

The hatchery programs cause take of Puget Sound steelhead, Puget Sound Chinook salmon and bull trout through the broodstock collection activities. Broodstock collection activities are those associated with the collection of returning adult fish to supply the hatcheries' broodstock.

The Chinook salmon and steelhead hatchery programs use ESA-listed fish to supply broodstock. These hatchery programs cause take when the ESA-listed fish are trapped, captured, collected, and killed to supply hatchery broodstock.

The broodstock collection activities cause take of Puget Sound Chinook salmon, Puget Sound steelhead, and bull trout when these ESA-listed fish are trapped, captured and/or collected during the broodstock collection activities. Additional take occurs when the captured fish are wounded and/or killed while in the hatchery environment and/or when efforts are made to return them to the wild. Take also occurs when the broodstock collection activities delay and/or prevent spawning migration of ESA-listed fish—including those fish captured by the hatchery facilities/structures and those delayed or prevented from migrating by in-river structures.

5. Take Caused by Monitoring and Evaluation Activities.

The hatchery programs cause take of Puget Sound steelhead, Puget Sound Chinook salmon and bull trout through monitoring and evaluation activities. Monitoring and evaluation activities are those undertaken to evaluate the success of the hatchery programs and/or their effects on wild fish. Specific activities can include electrofishing and other salmonid sampling efforts that directly affect listed salmonids and ecological research activities that adversely affect the habitats of listed salmonids or disrupt their typical life history functions. The monitoring and evaluation activities cause take of

ESA-listed salmonids when they capture, collect, trap, harm, harass, wound, and/or kill protected fish.

6. Take Caused by Disease Transmission.

The hatchery programs cause take of Puget Sound steelhead, Puget Sound Chinook salmon and bull trout through the transmission of diseases. The unnaturally high densities of fish maintained in the hatcheries lead to increased occurrence of infection of hatchery fish and the creation of concentrated and effective vectors for the transmission of infection to other fish. Take occurs when the hatcheries transmit disease through water discharges from the hatcheries or directly from fish released by the hatcheries to ESA-listed salmonids.

III. The Hatchery Operators Violations of Section 9 of the ESA.

The Hatchery Operators are in violation of section 9 of the ESA, 16 U.S.C. § 1538, for carrying out operations and maintenance of the Elwha River steelhead and coho, pink, and chum salmon programs and associated activities, including monitoring and adaptive management activities. As described above and in the attached ITS excerpts, these programs cause take of ESA-listed Puget Sound steelhead, Puget Sound Chinook salmon and bull trout. While NMFS and FWS have provided various exemptions to liability for take resulting from the Elwha River hatchery programs, the Hatchery Operators will not be able to prove compliance with these authorizations. Accordingly, the Hatchery Operators are in violation of section 9 of the ESA for causing take and/or for soliciting another to commit and/or causing to be committed violations of section 9 of the ESA. *See* 16 U.S.C. § 1538(a), (a)(1)(G), (g).

The ESA citizen suit provision requires pre-suit notice "of the violation." 16 U.S.C. § 1540(g)(2)(A)(i). It is not a violation of the ESA to disregard the requirements of an ITS or an authorization under the 4(d) Limits. *See Bennett v. Spear*, 520 U.S. 154, 170 (1997); *Ariz. Cattle Growers' Ass'n v. U.S. Fish & Wildlife*, 273 F.3d 1229, 1239 (9th Cir. 2001). Rather, the proponent of such an exemption from liability for take must prove the validity of and compliance with these agency authorizations. *See* 16 U.S.C. § 1539(g); 50 C.F.R. § 223.203(c). Nonetheless, notice is hereby provided that the Hatchery Operators are not in compliance and will not be able to prove compliance with the various ITS or the Limit 6 Approval. The hatchery programs are not being implemented in the manner described and evaluated in the HGMPs and the three BiOps described herein and are also not in compliance with the terms and conditions of the ITS and the Limit 6 Approval. Failure to implement the programs as described in the HGMPs and BiOp invalidates the liability exemption, as does failure to comply with the ITS' terms and conditions and the Limit 6 Approval's implementation terms. *See Ctr. for Biological Diversity v. U.S. Bureau of Land Mgmt.*, 698 F.3d 1101, 1113-19 (9th Cir. 2012).

As described below, the Federal Agencies are required to reinitiate the ESA section 7 consultations that resulted in the NMFS July 2012 BiOp, the NMFS December

2012 BiOp, and the FWS December 2012 BiOp. Accordingly, these BiOps and their associated ITS are invalid. *See id.* at 1108. Similarly, the Limit 6 Approval is invalid because the BiOps upon which it depends require reinitiated consultation and are therefore invalid.

As discussed above, the Elwha River HGMPs, and the monitoring and adaptive management plan described therein, relied extensively on the Elwha River mainstem weir as a primary part of the hatchery programs. Similarly, the NMFS July 2012 BiOp, the NMFS December 2012 BiOp, and the FWS December 2012 BiOp and the ITS associated with these three BiOps, and the Limit 6 Approval all relied on a functioning Elwha River mainstem weir as an essential component of the hatchery programs evaluated and approved, providing critical functions for, *inter alia*, monitoring, evaluation and adaptive management.

The Elwha River hatchery programs are not being implemented in the manner described, evaluated and authorized in each these agency authorizations because the Elwha River mainstem weir is not properly functioning. Accordingly, the Elwha River hatchery programs are not in compliance with the NMFS July 2012 BiOp and its ITS, the NMFS December 2012 BiOp and its ITS, the FWS December 2012 BiOp and its ITS, and the Limit 6 Approval. Further, without this weir, the Elwha River hatchery programs are not in compliance with, and cannot comply with, numerous requirements incorporated as terms and conditions in the ITS and as implementation terms in the Limit 6 Approval that are dependent upon the weir, including the following: NMFS July 2012 BiOp's Amended ITS, terms and conditions 1.A and 6.A; NMFS December 2012 BiOp's ITS, terms and conditions 1a, 1c, 1d, 1e, 1g, 1h, 2a, 2b, 2c, 2e, 2f, 3a, 3b, 3c, 4a, 4b, 5a, 7c, 7d; and Limit 6 Approval, implementation terms 1, 3, 4 (these documents are attached for reference).

The hatchery programs are not in compliance with the HGMPs, the NMFS December 2012 BiOp and its ITS, the FWS December 2012 BiOp and its ITS, and the Limit 6 Approval because the steelhead program is not incorporating natural-origin fish into the hatchery's brood stock in the manner described in the HGMPs and in the manner described, evaluated and approved in the BiOps and the Limit 6 Approval. As discussed in the NMFS 2012 BiOp, incorporating natural-origin steelhead into the hatchery's broodstock can mitigate adverse effects associated with the hatchery, including those related to loss of genetic diversity and domestication. The HGMPs indicate that natural-origin steelhead would be incorporated into broodstock and the BiOps relied upon that representation. Instead, the hatchery program is relying entirely on the captive broodstock program to supply broodstock. The ability of the program to use natural-origin steelhead is questionable given the failure of the Elwha River mainstem weir.

The hatchery programs are not in compliance with the NMFS December 2012 BiOp and its ITS, the FWS December 2012 BiOp and its ITS, and the Limit 6 Approval because the hatchery releases are not occurring as described in the HGMPs and BiOps. The steelhead HGMP provides:

> Release dates have been chosen based upon smolt readiness…and upon the outmigrant movements of the offspring of naturally-spawning salmonids in the Elwha River (chum, pink, coho, Chinook, steelhead). Since 1996, hatchery release dates have been delayed until Mid-May to ensure that potential for predation upon these populations is minimized.

Similarly, the coho HMPS provides:

> Release dates have been chosen based upon smolt readiness…and to reduce interactions with outmigrating, naturally-produced chum, pink, coho, Chinook, steelhead smolts. Since 1996, hatchery release dates have been delayed until mid-May to reduce predation on pink and chum in particular.

In evaluating the harm caused by these hatchery programs, the NMFS December 2012 BiOp explained:

> Although of similar size, hatchery origin 2+ steelhead and coho yearlings are released in mid-May when any co-occurring natural-origin Chinook salmon subyearlings and steelhead parr are be [sic] too large to prey upon.

However, these releases are not and have not been delayed to mid-May as described, evaluated, and authorized, but rather are occurring earlier (March and April) when more ESA-listed fish are present and adversely affected. Accordingly, these hatchery programs are not in compliance with the NMFS December 2012 BiOp and its ITS, the FWS December 2012 BiOp and its ITS, and the Limit 6 Approval and are causing more take than contemplated and authorized.

Given the pattern of ESA-violations associated with the Elwha River hatchery programs, many more areas of non-compliance are likely. Accordingly, the Elwha River hatchery programs are not being operated as described in the HGMPs, the Limit 6 Approval and the three BiOps and as required by each and every one of the terms and conditions of the three ITS and the implementation terms of the Limit 6 Approval.

Notice is provided pursuant to section 11(g) of the ESA, that any and all "take" of ESA-listed Puget Sound steelhead, Puget Sound Chinook salmon and bull trout resulting from the Hatchery Operators' steelhead and coho, chum, and pink salmon hatchery programs and related activities constitutes a violation of section 9 of the ESA.

IV. Federal Agencies Violations of Section 7 of the ESA.

The Federal Agencies are required to comply with the procedural and substantive requirements of section 7 of the ESA, 16 U.S.C. § 1536, in funding, approving and

carrying out the operations and maintenance of the Elwha River hatchery programs and related activities to insure that these activities will not jeopardize the continued existence of protected species, including Puget Sound steelhead, Puget Sound Chinook salmon and bull trout. The Federal Agencies have failed to comply with these statutory requirements.

A. Failure to Reinitiate Consultation Under Section 7(a)(2) of the ESA.

The Federal Agencies are in violation of section 7(a)(2) of the ESA, 16 U.S.C. § 136(a)(2), for carrying out, funding, and approving the operations and maintenance of the Elwha River hatchery programs and related activities without reinitiating consultation with NMFS on the effects to Puget Sound Chinook salmon and Puget Sound steelhead and without reinitiating consultation with FWS on the effects to bull trout. *See* 50 C.F.R. § 402.16(a)-(d).

As described in Section III above, the hatchery programs are not being operated in the manner described, evaluated and approved in the NMFS July 2012 BiOp, the NMFS December 2012 BiOp and the FWS December 2012 BiOp. The failure of the Elwha River weir, the failure to incorporate natural-origin steelhead into the hatchery's broodstock, and the timing of hatchery coho and steelhead releases are modifications to the programs that cause effects to listed species not considered in the BiOps, as are the other areas of non-compliance with the HGMPs, the BiOps, the ITS, and the Limit 6 Approval. Further, these modifications and areas of non-compliance are causing the amount of take specified in the ITS to be exceeded. Accordingly, the Federal Agencies are in violation of the ESA for failing to reinitiate the consultations associated with the NMFS July 2012 BiOp, the NMFS December 2012 BiOp and the FWS December 2012 BiOp.

B. Unlawful Commitment of Irreversible and/or Irretrievable Resources.

The Federal Agencies are in violation of section 7(d) of the ESA, 16 U.S.C. § 1536(d), for making irreversible and/or irretrievable commitments of resources with respect to operations, maintenance, improvements, and/or upgrades for the Elwha River hatchery programs before reinitiated consultation with NMFS has been completed on the effects to Puget Sound steelhead and Puget Sound Chinook salmon and before reinitiated consultation with FWS has been completed on the effects to bull trout. All funding and/or commitments to fund operations, maintenance, improvements, and/or upgrades for the Elwha River hatchery programs violate this provision.

V. Party Giving Notice of Intent to Sue.

The full names, addresses, and telephone numbers of the parties giving notice are:

Wild Fish Conservancy
15629 Main Street N.E.
Duvall, WA 98019
Tel: (425) 788-1167

The Wild Steelhead Coalition
117 E. Louisa St., No. 329, Seattle, WA 98102
Tel: (425) 941-7041

The Federation of Fly Fishers Steelhead Committee
5237 US Hwy 89 South, Suite 11, Livingston, MT 59047
Tel: (406) 222-9369

Wild Salmon Rivers d/b/a the Conservation Angler
16430 72nd Ave. W., Edmonds, WA 98026
Tel: (425) 742-4651

VI. Attorneys Representing Wild Fish Conservancy.

The attorneys representing those giving notice in this matter are:

Brian A. Knutsen, Richard Smith, Elizabeth Zultoski, and Claire Tonry
Smith & Lowney, PLLC
917 S.W. Oak Street, Suite 300, Portland, OR 97205
(971) 373-8692

Please direct mail to:

Smith & Lowney, PLLC
2317 East John Street, Seattle, WA 98112

VII. Conclusion.

This letter provides notice under section 11(g) of the ESA, 16 U.S.C. § 1540(g), of intent to sue on behalf of Wild Fish Conservancy, the Wild Steelhead Coalition, the Federation of Fly Fishers Steelhead Committee, and Wild Salmon Rivers d/b/a the Conservation Angler for the violations of the ESA discussed herein. Unless these ongoing and imminent violations described herein are corrected within sixty days, these parties intend to file suit against Larry Ward in his official capacity as the Hatchery Manager for the Lower Elwha Klallam Tribe, Doug Morrill in his official capacity as the Natural Resources Director and Fisheries Manager for the Lower Elwha Klallam Tribe, Eileen Sobeck in her official capacity as the Assistant Administrator for Fisheries of the National Marine Fisheries Service, the National Marine Fisheries Service, Sally Jewell in her official capacity as the Secretary of the United States Department of the Interior, the United States Department of the Interior, Jonathan B. Jarvis in his official capacity as the Director of the National Park Service, the National Park Service, Daniel M. Ashe in his official capacity as the Director of the United States Fish and Wildlife Service and the United States Fish and Wildlife Service to enforce the ESA. The parties providing notice are available during the sixty-day notice period to discuss effective remedies and actions that will assure future compliance with the ESA.

Very truly yours,

SMITH & LOWNEY, PLLC

By: _____
Brian A. Knutsen

c. Stephen Suagee (2851 Lower Elwha Road, Port Angeles, WA 98363)
Cory Albright (401 Second Ave. S., Suite 700, Seattle, WA 98104)
Coby Howell (1000 S.W. Third Ave., Portland, OR 97204-2902)

Limit 6 Approval (excerpts)

Pacific salmon EFH. There will be minimal disturbance of vegetation, and negligible harm to Pacific salmon spawning and rearing habitat, and to water quantity and water quality. What small effects on EFH might occur as a result of facility operations on Elwha River habitat would be adequately addressed by the steps described in the HGMPs. Because NMFS has found that the action is not likely to adversely affect EFH, there is no statutory response requirement.

Evaluation of HGMPs under the ESA 4(d) Rule

Attachment 2 is NMFS' evaluations of whether the HGMPs meet all of the requirements specified under Limit 6 of the ESA 4(d) Rule for salmon and steelhead. The NMFS SMD determined that the HGMPs provided by LEKT and WDFW meet all of the requirements in Limit 6 of the ESA 4(d) Rule.

Evaluation of NMFS' Proposed Determination under NEPA

The SMD determined that, for purposes of complying with the National Environmental Policy Act, an EA was sufficient to evaluate NMFS' proposed determination, and the Deputy Northwest Regional Administrator concurred. Accordingly, SMD drafted an EA that considered the effects of the proposed action on the human environment, also evaluating the effects of closing the programs (no hatchery programs on the Elwha River).

As detailed above, the EA was made available for public comment. Comments were received, many of them from the plaintiffs in the litigation. Many of the comments were directed at the HGMPs and the proposed program operations themselves, and others were specifically directed at the EA. NOAA addressed the comments on the EA, as reflected in the final version of the EA itself and in our responses to comments appended to the final EA. The SMD prepared a Finding Of No Significant Impact (FONSI). The EA and FONSI were reviewed by NOAA's Office of Program Planning and Integration. The final EA, with changes from the draft EA marked, and the FONSI are provided as Attachment 3.

Implementation Terms

The five joint HGMPs include performance standards and indicators designed to identify, monitor, and evaluate the benefits and risks associated with the supportive breeding programs, and progress in achieving population viability status triggers identified for listed Chinook salmon and steelhead for the two phases of restoration spanning the duration of the proposed supportive breeding actions. Monitoring actions proposed to evaluate the performance indicators are identified in sections 1.10 and 11.0 of the HGMPs. NMFS supports the collection and the reporting of the results of the identified monitoring and evaluation activities to determine the performance and effects of the supportive breeding actions. Of particular importance are monitoring and evaluation actions addressing hatchery-related impacts on natural-origin populations, and identification of the viability status of affected listed salmon and steelhead populations in the Elwha River. These actions include, but are not limited to:

- annual monitoring of the annual abundance, timing, distribution, and origin of listed Chinook salmon and steelhead adults escaping to the Elwha River watershed above and

below the dam sites using methods sufficient to provide estimates of the status of the natural- and hatchery-origin components of the population, proportions of the population by origin escaping to the river above and below the dam sites, relative contribution of natural- and hatchery-origin fish to natural spawning, and the effects of supportive breeding actions in meeting restoration objectives

- total number of adult salmon of other species escaping to spawn naturally
- the number of adult fish escaping to the hatcheries and/or removed from the mainstem Elwha River for use as broodstock each year
- the total number of juvenile fish by species released at each hatchery location each year

In particular, LEKT and WDFW must comply with the following implementation terms in operating the programs described in the HGMPs. These terms respond to monitoring, take accounting, and reporting regulations for hatchery actions specified in subparagraphs 5(ii) and 5(iii) of Limit 5 of the ESA 4(d) Rule, and are applied to hatchery actions under Limit 6.

(1) Monitor the abundance, diversity, spatial structure, and productivity status of Elwha River Chinook salmon and steelhead populations relative to population viability parameter triggers identified in the Monitoring and Adaptive Management Plan for the Elwha Restoration Project (EMG 2012) for each restoration phase to guide decisions regarding transition between the preservation, recolonization, and local adaptation phases of fish restoration, and responsive adjustment or phase out of supportive breeding actions for the listed species.

(2) Mark and/or tag all hatchery-origin juvenile salmon and steelhead released each year through the hatchery programs as described in the HGMPs to allow for the differentiation of hatchery- and natural-origin juvenile and adult fish in the natural environment, assessment of hatchery program effects on listed fish, and monitoring and evaluation of program performance in meeting population preservation and recolonization objectives.

(3) Maintain on-station releases of juvenile salmon and steelhead, consistent with abundance levels described in the proposed HGMPs, as the primary hatchery fish release strategy applied during the preservation and recolonization phases. Upstream transport and release of natural spawning of adult fish will be applied as the secondary hatchery fish release strategy during the preservation phase, and the tertiary strategy, behind spontaneous natural escapement and spawning by returning adult fish, during the recolonization phase.

(4) Annually report numbers, pounds, dates, tag/mark information, locations of artificially propagated fish releases, results of monitoring and evaluation activities that occur within the hatchery environment, and adult return numbers by fish origin to any naturally spawning area and to the hatchery program. Reports shall also include any analyses of fisheries harvest rate impacts, including impacts associated with Chinook salmon marking strategies; analyses of scientific research data; any problems that may

have arisen during conduct of the authorized activities; a statement as to whether or not the activities had any unforeseen effects; and steps that have been and that will be taken to coordinate the research or monitoring with that of other researchers.

Consistent with subparagraph 5(vi) of Limit 5 of the ESA 4(d) Rule, it is NMFS' intent to regularly communicate with LEKT and WDFW regarding the effectiveness of the HGMPs in meeting performance standards, including the program's effect on listed salmon and steelhead abundance, diversity, spatial structure and productivity and survival. All reports, as well as all other notifications required through the 4(d) determination, should be submitted to NMFS, attention to:

Tim Tynan
Production and Inland Fisheries Branch
Salmon Management Division
NOAA Fisheries – Northwest Region
510 Desmond Drive, Suite 103
Lacey, Washington 98503

SUMMARY

SMD concludes that the joint HGMPs provided by LEKT and WDFW for Elwha River Chinook salmon, steelhead, coho salmon, fall chum salmon, and pink salmon meet all of the requirements for HGMPs under Limit 6 of the ESA 4(d) Rule. As described above, all of the necessary administrative and biological requirements have been met for the approval of the co-managers' HGMPs. SMD recommends that the supportive breeding programs described by the joint HGMPs qualify for limitation of take prohibitions pursuant to Limit 6 of the 4(d) Rule provided that they are implemented in accordance with the implementation terms and reporting requirements described in NMFS' letter of concurrence. SMD recommends that you concur with the implementation of the HGMPs.

I concur with your recommendation to approve LEKT's and WDFW's implementation of the Elwha River Chinook salmon, steelhead, coho salmon, fall chum salmon, and pink salmon HGMPs, provided the plans are implemented in accordance with the section on Implementation Terms described above.

Barry Thom
Deputy Regional Administrator

12/10/12
Date

NMFS July 2012 BiOp's ITS and Amended T&C (excerpts)

provide the conditions necessary and sufficient to naturally rebuild healthy local populations of anadromous fish.

(4) NMFS is satisfied that the action agency will implement all necessary measures, monitoring, and adaptive management to ensure the adequate protection of the extant PS Chinook salmon, PS steelhead, and eulachon populations during the removal of the two dams.

(5) Because habitat conditions will continue to improve over the long term after the dams are removed, NMFS believes the result from these actions will further benefit PS Chinook salmon, PS steelhead, and eulachon recovery.

(6) There are potential negative effects from continued hatchery supplementation programs beyond the term of the proposed action. Because those programs are substantially undefined but expected to be eliminated or substantially reduced as recovery occurs, the precise extent of effects is uncertain. Based on available information about the likely direction of the programs, the effects of hatchery operations are not likely to substantially impede recovery.

2.8 Incidental Take Statement

Section 9 of the ESA and Federal regulation pursuant to section 4(d) of the ESA prohibit the take of endangered and threatened species, respectively, without a special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harm is further defined by regulation to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. For purposes of this consultation, we interpret "harass" to mean an intentional or negligent action that has the potential to injure an animal or disrupt its normal behaviors to a point where such behaviors are abandoned or significantly altered.[2] Section 7(b)(4) and Section 7(o)(2) provide that taking that is incidental to an otherwise lawful agency action is not considered to be prohibited taking under the ESA, if that action is performed in compliance with the terms and conditions of this incidental take statement.

This incidental take exemption applies to the NPS as the lead action agency, and other agencies acting under the NPS authority in carrying out components of the proposed action as consulted on, including the Lower Elwha Klallam Tribe, United States Geological Survey, National Marine Fisheries Service, United States Fish and Wildlife Service, Washington State Department of Fish and Wildlife, Bureau of Reclamation, and the agents of these organizations tasked with completing components of the project. This does not apply to other actions by those parties, such as hatchery programs, to the extent that they are not included in the proposed action.

[2] NMFS has not adopted a regulatory definition of harassment under the ESA. The World English Dictionary defines harass as "to trouble, torment, or confuse by continual persistent attacks, questions, etc." The U.S. Fish and Wildlife Service defines "harass" in its regulations as an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering (50 CFR 17.3). The interpretation we adopt in this consultation is consistent with our understanding of the dictionary definition of harass and is consistent with the U.S. Fish and Wildlife interpretation of the term.

2.8.1 Amount or Extent of Take

NMFS has determined that take of PS Chinook salmon and PS steelhead is reasonably certain to occur. The sources of the effects causing take will be:

(1) Sediment – both the suspension of sediment in the water column and the transport of increased bed loads during and after dam removal throughout the lower and middle river; and
(2) Fish handling associated with monitoring, transport, and collection efforts.

Sediment

With respect to the sediment, the proposed action will likely injure or kill high numbers of individual PS Chinook and steelhead and their incubating eggs in the mainstem Elwha and side channels for up to 5 years immediately following removal of the dams. High levels of suspended sediment will cause injury to fish by damaging gills and inhibiting breathing, and will significantly reduce egg survival for salmonids. The actual numbers killed or injured will depend on the effectiveness of work windows in reducing suspended sediment loads, and the number and extent of high flow events that will extend impacts to side and off channel habitats, and the effectiveness of adult fish removal efforts. Five years after dam removal, sediment loads are expected to have diminished significantly, but there is a fair likelihood that they will continue to be elevated to levels that will cause some take of steelhead and Chinook salmon, at levels decreasing further over time until the suspended sediment and bed load normalizes, with a decreasing potential for take extending out 10 years after dam removal.

Take caused by the habitat-related effects of this action – the sediment loads – cannot be accurately quantified as a number of fish. The distribution and abundance of fish within the action area cannot be predicted precisely based on existing habitat conditions, nor can NMFS precisely predict the number of fish that are reasonably certain to be harmed or killed if their habitat is modified or degraded by the proposed action. In such circumstances, NMFS uses the causal link established between the activity and the likely changes in habitat conditions affecting the listed species to describe the extent of take. Here, the best available indicator for the extent of incidental take associated with sediment is the maximum observed turbidity levels in the mainstem Elwha River below Lake Mills. Those levels are expected to be proportional to the amount of lethal take or injury that the proposed action is likely to cause through elevated sediment loading. As the maximum turbidity levels drop, so too does the likelihood of take.

For up to five years after the start of dam removal, the extent of take is a maximum observed turbidity pulse of 51,000mg/l over any 3-day period as measured at a continuous turbidity monitoring station at the engineered riffle, and supplemented by water quality measurements in at least 5 other locations throughout the river below the Glines Canyon Dam site. During the following five years, the extent of take from dam removal is a maximum observed turbidity of 15,000mg/l as measured in the same locations.

Fish Handling

For 10 years following dam removal, the handling of adult and juvenile fish during monitoring and collection (for removal to unaffected areas or to provide stock for the supportive breeding programs) will also likely result in small numbers of juvenile and adult Chinook and steelhead being injured or killed. The current draft of the Monitoring and Adaptive Management Plan (NPS 2012) indicates that a maximum of 4000 juvenile and 2000 adult fish of each species will be targeted, with annual estimates of take shown in Table 2.

As set out in Table 2, the amount of expected take is 162 juvenile Chinook and 162 juvenile Steelhead (102 associated with electrofishing, and 60 associated with tagging and other collection methods; and, 85 adult Chinook and 85 adult Steelhead (25 associated with electrofishing and 60 associated with tagging and other collection methods.

Table 2. Estimates of Potential Annual Take From Monitoring and Collection Efforts for PS Chinook salmon and PS steelhead (each).

	Max Sample Size Target	Percent Take Estimate	Estimated Take
Electrofishing (juveniles)	2000	5%	102
Electrofishing (adults)	*	28%	25
Tagging & other collection methods(juveniles)	2000	3%	60
Tagging & other collection methods (adults)	2000	3%	60

* Adults will not be targeted by electrofishing.

2.8.2 Effect of the Take

In Section 2.7, NMFS determined that the level of anticipated take, coupled with other effects of the proposed action, is not likely to result in jeopardy to the species or destruction or adverse modification of critical habitat.

2.8.3 Reasonable and Prudent Measures

Reasonable and prudent measures are non-discretionary measures to avoid or minimize take. NMFS believes that full application of the reasonable and prudent measures described below are necessary and appropriate to minimize the likelihood of incidental take of ESA-listed species.

1. The NPS shall monitor and biennially (every 2 years) report levels of take and survival for Puget Sound Chinook salmon and Puget Sound steelhead during dam removal and for 10 years following dam removal, to cover two full generations of adult returns after dam removal.

2. The NPS shall annually monitor and biennially (every 2 years) report to determine whether post-action habitat responses meet expected outcomes and to limit take of

2.8.3 Reasonable and Prudent Measures

Reasonable and prudent measures are non-discretionary measures to avoid or minimize take. NMFS believes that full application of the reasonable and prudent measures described below are necessary and appropriate to minimize the likelihood of incidental take of ESA-listed species.

1. The NPS shall monitor and biennially (every 2 years) report levels of take and survival for Puget Sound Chinook salmon and Puget Sound steelhead during dam removal and for 10 years following dam removal, to cover two full generations of adult returns after dam removal.

2. The NPS shall annually monitor and biennially (every 2 years) report whether post-action habitat responses meet expected outcomes for Puget Sound Chinook and Puget Sound steelhead during dam removal and for 10 years following dam removal.

3. The NPS shall use alternative bank stabilization methods whenever possible to minimize impacts on habitat from dike and levee enhancements and the creation of new revetments.

4. The NPS shall minimize riparian vegetation disturbance during construction and dam removal.

5. The NPS shall follow best management practices and work windows to protect fish from in-water work activities.

6. The NPS shall undertake or fund effective efforts to monitor salmonid abundance, distribution, productivity, stock composition, and general habitat and ecosystem conditions to allow for adaptive management and to assess the impacts associated with dam removal to ESA listed species. It is estimated that, over a ten year period beginning in 2013, such monitoring efforts will cost approximately $6.7 million.

2.8.4 Terms and Conditions

The terms and conditions described below are non-discretionary, and the NPS or any operator must comply with them in order to implement the reasonable and prudent measures (50 CFR 402.14). The NPS has a continuing duty to monitor the impacts of incidental take and must report the progress of the action and its impact on the species as specified in this incidental take statement (50 CFR 402.14). If the following terms and conditions are not complied with, the protective coverage of section 7(o)(2) will likely lapse. In all cases, monitoring reports shall be submitted to NMFS Washington State Habitat Office in Lacey, Washington.

1. To implement Reasonable and Prudent Measure No. 1 (monitoring and biennial reporting):

A. The NPS shall monitor and report the levels of, adult spawner abundance and productivity, juvenile abundance and distribution, and levels of take from monitoring for PS Chinook and Steelhead on the Elwha River.
B. The NPS shall continuously monitor turbidity in a least one location in the lower river, with multiple locations sampled throughout the river throughout the year. Sediment monitoring shall be reported to NMFS biennially.
C. During the sediment release impact period (dam demolition and fine sediment erosion phase), the NPS shall ensure the new fish diversion screen is properly maintained and functioning to preclude juvenile fish from entering the industrial water supply pipeline.
D. During the period of Federal ownership, the NPS shall monitor and biennially report to NMFS the condition of the engineered riffle, and ensure that habitat design features continue to function as intended, i.e., allowing fish passage and unimpeded fluvial transport of sediment and large wood.

2. To implement Reasonable and Prudent Measure No. 2 (monitoring of habitat responses and biennial reporting):

A. The NPS shall monitor monitor and biennially report on estuarine ecosystem responses to sediment inputs and report to NMFS changes in intertidal beach profiles and associated aquatic vegetation before, during, and for 10 years after dam removal.

B. The NPS shall biennially report success of vegetation planting and maintain vegetation to ensure planting goals are achieved on the slopes and along the newly formed riparian corridor through Lake Mills' sediments and adjacent terraces. The revegetation plan submitted by the NPS contains appropriate sampling protocol for determining the success of native plantings, invasive plant abundance, and adaptively managing the restoration of these areas (Chenoweth et al. 2011), and if completed will meet this requirement.

C. The NPS shall monitor and biennially report effects of the proposed action on in-stream habitat from the mouth of the Elwha River to the upstream end of Lake Mills before, during, and for 10 years after dam removal.

3. To implement Reasonable and Prudent Measure No. 3 (reduce take from extending and creating new revetments):

A. When designing and constructing bank stabilization on the west bank of the Elwha River, starting at the engineered riffle and ending downstream where the flood plain narrows and bedrock on the left bank is exposed, NPS shall seek to incorporate alternative bank stabilization measures that enhance fish habitat. For example, the revetment to be built on the west bank at the engineered riffle could be planted with willow stakes to encourage rapid recovery of riparian function.
B. The NPS shall seek to incorporate alternative bank stabilization measures for extended and altered levees that enhance fish habitat along these extended portions.

4. To implement Reasonable and Prudent Measure No. 4 (Reduce take by minimizing riparian loss):

A. The NPS shall avoid to the maximum extent possible riparian impacts associated with road and temporary diversion channel.

B. Large trees that must be removed shall be retained and placed within the Elwha flood zone.

C. The NPS shall use best management practices to minimize erosion, release of sediments, or the removal of trees, shrubs, coarse woody debris, and large woody debris if dike and levee enhancements are needed.

D. Road widening shall be kept to the minimum needed to provide access by heavy equipment to reduce impacts to vegetation.

5. To implement the Reasonable and Prudent Measure No. 5 the NPS shall:

A. To the extent possible, proposed facilities needed in or near the water should be constructed during the dry period to minimize impacts to fish.

B. Apply best management practices during construction to minimize soil lost to the river; and impacts to water quality through accidental releases of oil, diesel, gas, lubricants, or hydraulic fluids.

C. Manage work windows for dam removal that ensure less-turbid water timing windows are adaptively managed to preserve adult salmon returns and emigrating juvenile salmon. Initial work windows are set forth in the BA, and shall be adaptively managed as set forth in the adaptive management plan to ensure adult broodstock collection goals can be met, and work windows can be adjusted to preserve peak immigrating and emigrating salmon.

6. To implement the Reasonable and Prudent measure No. 6 the NPS shall:

A. The NPS shall create a monitoring implementation plan by March 1, 2013, that describes how the NPS will support monitoring and adaptive management.

NMFS December 2012 BiOp's ITS (excerpts)

particularly for Elwha Chinook salmon and Elwha native winter-run steelhead that are genetically unique, native populations, essential for the recovery of the entire ESA-listed Puget Sound Chinook salmon ESU and Puget Sound steelhead DPS, respectively. The proposed programs would preserve and help recover what remains of the Elwha River salmon and steelhead populations and set each of the populations on course for recovery.

2.8. Incidental Take Statement

Section 9 of the ESA and Federal regulation pursuant to section 4(d) of the ESA prohibit the take of endangered and threatened species, respectively, without a special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harm is further defined by regulation to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. For purposes of this consultation, we interpret "harass" to mean an intentional or negligent action that has the potential to injure an animal or disrupt its normal behaviors to a point where such behaviors are abandoned or significantly altered.[6] Section 7(b)(4) and Section 7(o)(2) provide that taking that is incidental to an otherwise lawful agency action is not considered to be prohibited taking under the ESA, if that action is performed in compliance with the terms and conditions of this incidental take statement.

2.8.1. Amount or Extent of Take

Takes of listed Puget Sound Chinook salmon, Puget Sound steelhead, and eulachon would be expected to result from the proposed hatchery programs. The take of these species as a result of the proposed action would potentially occur through (1) facility operation, specifically groundwater withdrawal and hatchery effluent discharge effects on all listed fish species; (2) propagation of Chinook salmon and steelhead in the hatchery environment, causing hatchery-induced selection effects; (3) release of juvenile hatchery fish, and resultant return of hatchery-origin adult fish, leading to outplanting of genetic effects on listed Chinook salmon and steelhead in the wild; (4) ecological effects (competition and predation) impacting all of the listed fish species; (5) harvest impacts on Chinook as a result of adipose fin clipping; (6) broodstock collection, impacting Chinook and steelhead; and (7) methods implemented to conduct monitoring and evaluation of Chinook and steelhead.

[6] NMFS has not adopted a regulatory definition of harassment under the ESA. The World English Dictionary defines harass as "to trouble, torment, or confuse by continual persistent attacks, questions, etc." The U.S. Fish and Wildlife Service defines "harass" in its regulations as an intentional or negligent act or omission that creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns, which include, but are not limited to, breeding, feeding, or sheltering (50 CFR 17.3). The interpretation we adopt in this consultation is consistent with our understanding of the dictionary definition of harass and is consistent with the U.S. Fish and Wildlife interpretation of the term.

(1) Facility Operation Effects

While minimal effects are expected as discussed above, NMFS believes that groundwater withdrawals and effluent discharges resulting from implementation of the proposed hatchery programs have the potential to cause take of ESA-listed salmon, steelhead and Eulachon in the action area. It would not be possible to accurately assign take of listed species to facility effects, however, since the minimal change in water quality and quantity will be just one factor facing salmonids in the river; nor would it be possible to quantify such take, since the effects of water withdrawals on individual fish cannot be detected and counted. Therefore, NMFS will rely on a surrogate take indicator for both take pathways.

Regarding groundwater withdrawals, the surrogate take indicator is any withdrawal of water by hatchery wells that reduces the flow of the Elwha River by 25 percent of the total flow immediately downstream from the point of groundwater withdrawal. This level has a rational connection to the amount of take because it reflects potential changes to the hydrograph of the Elwha River which, if significant, are likely to result in take of salmonids. This will be measured by the hatchery operators through comparisons of estimated average groundwater withdrawal levels by month in cubic feet per second (cfs) with monthly average river flow estimates for the section of the mainstem river above the point of groundwater removal.

Regarding effluent discharge effects, the surrogate take indicator is any effluent discharge that exceeds any applicable water quality standard or any term of the NPDES permit issued to the LEKT (permit# WAG13-0023) and WDFW (permit #WAG13-1043). This standard has a rational connection to the amount of take because water quality standards are designed to limit discharges into waterways which would result in harm to fish, wildlife and other beneficial uses. This will be measured by compliance by the LEKT and WDFW with NPDES discharge permit standards, gauged through periodic monitoring and reporting (quarterly) of specific water quality parameters at the point of hatchery effluent discharge into downstream waters, consistent with NPDES Permit requirements.

(2)-(3) Genetic Effects

Take of listed Chinook salmon and steelhead is expected to occur (a) as a result of artificial propagation of both species in the hatchery environment, resulting in hatchery-induced selection effects; and (b) as a result of the release of those hatchery-bred fish into the natural environment where they interact with natural-origin Chinook salmon and steelhead, resulting in the outplanting of the hatchery-induced selection effects and the potential outbreeding effects on the genetic diversity and productivity of natural origin fish who interbreed with the hatchery-origin fish. These two take pathways constitute the genetic effects

During the preservation phase of the proposed action, it is possible that up to 100 percent of the listed Elwha Chinook and steelhead populations will experience the genetic effects because listed Chinook salmon and steelhead returning adults will either be taken into the hatchery and exposed to these genetic effects, or moved upstream to spawn naturally along with hatchery-origin fish. In the effects analysis, NMFS determined that genetic impacts to all listed fish will not amount to jeopardy, although in reaching that conclusion we assumed that the impacts would be of a certain magnitude. In this context the appropriate take indicator should reflect the level of harm anticipated as a result of genetic effects.

It would not be possible to accurately measure genetic effects in a way that would allow for the accurate quantification of take, because the genetic effects specified above cannot be detected in a comprehensive, reliable manner. [Tissue sample studies can be used to detect genetic certain trends, but they take several years to complete, making them unfit as a compliance tool.] Therefore, NMFS will rely on a surrogate take indicator that relates to the productivity of the listed populations – the primary factor in determining genetic effects. During the recolonization phase, the productivity goal identified in Tables 3 and 4 above is 1.0 recruits per spawner (post-fishing, in the case of Chinook). The surrogate take indicator, therefore, is a failure to attain a productivity rate of 0.8 recruits per spawner for the Elwha River Chinook salmon and steelhead populations for four consecutive years. Productivity will be monitored by the hatchery operators, by comparing estimated adult Chinook and steelhead escapement to natural spawning areas in the Elwha River watershed fwith resultant returning spawner brood years escapement. For Chinook salmon, FRAM-based estimates of total adult recruitment to fisheries harvest plus escapement would be used to estimate total recruitment for resultant progeny brood years.

This standard has a rational connection to the genetic effects take pathway, for several reasons. First, four consecutive years represents the full life cycle of the species and enables NMFS to detect potential effects above and beyond any single-year anomaly. Secondly, 0.8 recruits per spawner is materially below the stated productivity goal, which would indicate that NMFS' conclusion that genetic effects are not a significant limiting factor would merit reconsideration at that point. It should be noted that the productivity goals may go unmet for a variety of factors, apart from genetic effects, but this indicator would trigger further analysis to determine the causes of low productivity.

There is no potential for genetic effects to cause take of Eulachon.

(4) Ecological Effects - Competition and Predation

NMFS has determined that the proposed action carries a risk of take resulting from ecological hazards: competition between hatchery and natural-origin fish for food and habitat, and predation by hatchery fish on natural-origin fish. These ecological effects posed by the proposed hatchery programs to listed Chinook salmon, steelhead, and eulachon in the action area are anticipated to be minimal over the duration of the preservation and recolonization phases, as described above.

It is not possible to quantify the take associated with competition and predation in the action area, because it is not possible to meaningfully measure the number of interactions between hatchery-reared and natural origin salmon and steelhead, or between hatchery-bred fish and Eulachon. Therefore, NMFS will rely on a surrogate take indicator that relates to the proportion of hatchery fish in the rearing areas of the lower Elwha River. The surrogate take indicator is a proportion of hatchery juvenile salmon and steelhead greater than 10 percent of all hatchery and naturally-produced salmon and steelhead in the rearing areas in the rearing areas downstream of the hatchery release site on or after the 21st day following any release of hatchery fish during the recolonization phase.

This standard has a rational connection to the amount of take expected from ecological effects, since the co-occurrence of hatchery and natural-origin fish is a necessary precondition to competition and predation, and the assumption that the greater ratio of hatchery fish to wild fish, the greater likelihood that competition and predation will occur. This proportion of hatchery fish in the rearing areas will be monitored by standing LEKT juvenile monitoring activities

(5) Harvest Effects
Under the proposed action, an adipose fin-clip mark will be applied to all yearling fish and to as many as 250,000 subyearling Chinook salmon beginning no earlier than in release year 2016. Providing an adipose fin-clip mark increases the likelihood that an individual salmon will be harvested at sea, since unmarked fish are more likely to be released when caught. WDFW calculates that this action would likely result in a reduction in the total abundance of adult fish escaping to spawn in the river each year relative to the escapement level that would result from the release of unmarked fish groups. As estimated by FRAM exploitation rate comparisons, WDFW proposes that increased interceptions of Elwha River hatchery-origin Chinook salmon in mark-selective fisheries allowing retention of adipose fin-clipped fish may result in the additional take of 48 fish per year, reducing annual escapement to the river by 2.8% (WDFW 2012). Therefore, the extent of take of Elwha River Chinook salmon anticipated as a result of the adipose fin-clip marking of hatchery Chinook is 48 fish per year.

To verify these estimates, WDFW will release a sub-group of 250,000 subyearlings in 2013 marked with an adipose fin clip-coded wire tag combination to allow for assessment of actual fisheries interception rates for adipose fin clipped Elwha Chinook salmon. Fisheries exploitation rates and take levels that may result from fisheries harvest will be monitored throughout the proposed action by WDFW and the LEKT using the FRAM and through spawner abundance surveys and estimates. No take of Eulachon results from marking of Chinook.

(6) Broodstock Collection
Up to 1,700 listed adult Chinook salmon and 500 listed adult steelhead will be collected each year for use as broodstock at the hatchery weirs and traps, the mainstem Elwha River weir, and through in-river methods including seining, gillnetting and gaffing. Therefore, the expected take by capture, handling and sampling during broodstock collection is 1700 Chinook salmon and 500 steelhead. Monitoring of take levels for broodstock collection actions will occur through hatchery operator observation and recording of daily and cumulative adult Chinook salmon and steelhead removal levels for all broodstock collection activities. No take of Eulachon occurs as a result of broodstock collection.

(7) Monitoring and Evaluation
Take may occur in connection with the monitoring and evaluation actions included in the proposed action. Marking and/or tagging of all juvenile Chinook salmon and steelhead reared and released through the hatchery programs to allow for assessment of hatchery program performance and effects is expected to take up to 2.9 million listed Chinook salmon and 175,000 listed native stock steelhead each year. Sampling of Chinook salmon and steelhead reared in the hatchery and prior to their release for fish health monitoring purposes would lead to the handling, injury and mortality of a small (e.g., 60 juvenile and 60 adult fish) subset of the total number of

fish produced each year. In annual reports required by NMFS, takes associated with the monitoring and evaluation projects will be identified so that the effects on listed species can be monitored. No take of Eulachon results from these monitoring and evaluation activities.

2.8.2. Effect of the Take

In section 2.7, NMFS determined that the level of anticipated take, coupled with other effects in the proposed action, is not likely to jeopardize the continued existence of Puget Sound Chinook, Puget Sound steelhead, Pacific Eulachon, or adversely modify designated critical habitat for Puget Sound Chinook salmon or Pacific Eulachon.

2.8.3. Reasonable and Prudent Measures

"Reasonable and prudent measures" are nondiscretionary measures to minimize the amount or extent of incidental take (50 CFR 402.02). "Terms and conditions" implement the reasonable and prudent measures (50 CFR 402.14). These must be carried out for the exemption in section 7(o)(2) to apply. NMFS may amend the provisions of this incidental take statement after giving the LEKT and WDFW reasonable notice of the amendment.

NMFS concludes that the following reasonable and prudent measures are necessary and appropriate to minimize the impacts from the proposed hatchery programs on the Puget Sound Chinook salmon ESU, Puget Sound Steelhead DPS, and Southern DPS of Pacific Eulachon:

1. The Action Agencies must ensure implementation of the hatchery programs as described in the submitted HGMPs as proposed for the duration of the preservation and recolonization phases of fish restoration.
2. The Action Agencies must ensure that LEKT and WDFW manage their operations to limit the risk of adverse demographic, ecological, and genetic effects on listed Puget Sound Chinook salmon.
3. The Action Agencies must ensure that LEKT and WDFW manage their operations to limit the risk of adverse demographic, ecological, and genetic effects on listed Puget Sound steelhead.
4. The Action Agencies must ensure that LEKT and WDFW manage their operations to limit the risk of adverse demographic and ecological effects on listed eulachon.
5. The Action Agencies must ensure that LEKT and WDFW follow criteria and guidelines specified in this opinion for their respective hatchery facilities, including associated broodstock collection and juvenile and adult fish release locations.
6. The Action Agencies must ensure that LEKT and WDFW follow criteria and guidelines specified in this opinion for their respective monitoring and evaluation activities within the Elwha River Basin.
7. The Action Agencies must ensure that LEKT and WDFW provide reports to the NMFS Salmon Management Division (SMD) annually for all hatchery programs, and for all research, monitoring, and evaluation activities associated with the hatchery programs.

8. The Action Agencies must ensure that LEKT and WDFW comply with all of the ESA requirements and provisions in the Incidental Take Statement.

2.8.4. Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the ESA, the Action Agencies must ensure that the compliance with the following terms and conditions, which implement the reasonable and prudent measures described above. These terms and conditions are non-discretionary with respect to species listed under the ESA.

1a. The Action Agencies must ensure implementation of the hatchery programs as described in the submitted HGMPs for the terms of the preservation and recolonization phases of fish restoration only. These two phases are defined for the purposes of this opinion in Section 1.2. NMFS' SMD must be notified, in advance, of any change in hatchery program operation and implementation that potentially would result in increased take of ESA-listed species.

1b. The Action Agencies must ensure that LEKT and WDFW maintain levels of hatchery-origin juvenile and adult salmon and steelhead production up to the levels proposed in the HGMPs to the extent feasible for the duration of the preservation and recolonization phases to help ensure that remnant native populations are preserved and enhanced to improve future prospects for meeting population viability parameters for the local adaptation and self-sustaining exploitable population phases of restoration.

1c. The Action Agencies must ensure that LEKT and WDFW adjust supportive breeding actions described in the HGMPs, including juvenile and adult fish release levels and locations, and adult fish broodstock collection levels, based on achievement of the specific population viability parameter triggers identified for each restoration phase, as summarized in Tables 3 and 4 of this opinion from the Monitoring and Adaptive Management Plans for Elwha River Chinook salmon and steelhead (EMG 2012; 2012b). In general, achievement of the triggers identified in the plans shall direct the need to transition between restoration phases, and adjust supportive breeding actions and escapement management actions accordingly.

1d. The Action Agencies must ensure that LEKT and WDFW prepare for transition from the recolonization phase to the local adaptation phase of restoration by taking actions consistent with achievement of triggers for the two phases, as the natural-origin listed Chinook salmon and steelhead populations meet population viability criteria identified by the Elwha Monitoring Group for the phases (EMG 2012; 2012b; summarized in Tables 3 and 4 of this opinion).

1e. The Action Agencies must ensure that LEKT and WDFW maintain on-station releases of juvenile salmon and steelhead, consistent with abundance levels described in the proposed HGMPs, as the primary hatchery fish release strategy applied during the preservation and recolonization phases. Upstream transport and release for natural spawning of adult fish shall be applied as the secondary hatchery fish release strategy

during the preservation phase, and the tertiary strategy, behind spontaneous natural escapement and spawning by returning adult fish, during the recolonization phase.

1f. The Action Agencies must ensure that LEKT and WDFW mark and/or tag all hatchery-origin juvenile salmon and steelhead released each year through the hatchery programs as described in the HGMPs to allow for the differentiation of hatchery- and natural-origin juvenile and adult fish in the natural environment, assessment of hatchery program effects on listed fish, and evaluation of program performance in meeting HGMP objectives.

1g. The Action Agencies must ensure that LEKT and WDFW review annually the status of the Elwha River Chinook salmon and steelhead populations relative to population viability parameter triggers identified for each restoration phase to guide decisions regarding transition between the preservation, recolonization, and local adaptation phases, and responsive adjustment or phase out of supportive breeding actions for the listed species.

1h. The Action Agencies must ensure that LEKT and WDFW submit an Annual Operation Plan to the NMFS SMD for the following year that is consistent with the terms and conditions within this incidental take statement and designed consistent with information on program performance and the standing of supportive breeding actions relative to fish restoration phases provided by monitoring data.

2a. The Action Agencies must ensure that LEKT and WDFW monitor and evaluate the performance and effects of the programs, and manage the programs in response to findings, to meet program objectives while minimizing impacts on listed Puget Sound Chinook salmon. Monitoring and evaluation actions shall concentrate on collection and analyses of data necessary to identify the status of the Elwha Chinook salmon population relative to population viability parameter triggers defined for each restoration phase in Table 3 of this opinion. The supportive breeding programs shall be adjusted in response to monitoring and evaluation data indicating achievement of all of the viability triggers for each restoration phase summarized in Table 3.

2b. The Action Agencies must ensure that LEKT and WDFW monitor the annual abundance, timing, distribution, and origin of Chinook salmon adults escaping to the Elwha River watershed above and below the dam sites using methods sufficient to provide estimates of the status of the natural- and hatchery-origin components of the population, proportions of the population by origin escaping to the river above and below the dam sites, relative contribution of natural- and hatchery-origin fish to natural spawning, and the effects of supportive breeding actions in meeting restoration objectives.

2c. The Action Agencies must ensure that LEKT and WDFW monitor the annual abundance, timing, life history stage, and origin of Chinook salmon juveniles emigrating seaward from production areas in Elwha River watershed above and below the dam sites using methods sufficient to derive estimates of the productivity status of the naturally produced component of the population, migrational overlap and behavior of natural- and hatchery-

origin fish, and the effects of supportive breeding actions in meeting restoration objectives.

2d. The Action Agencies must ensure that WDFW not apply an adipose fin clip mark to more than 250,000 juvenile Chinook salmon released through the Elwha Channel Hatchery program each year if the average observed fisheries exploitation rate in all adipose mark-selective fisheries is shown to be greater than 5.0%, as estimated by NMFS' exploitation rate analysis of 2012 and 2013 brood year adipose clipped, coded-wire tagged subyearling Chinook salmon release sub-groups. Until the exploitation rate analysis of the 2012 and 2013 brood subyearling coded-wire tagged Chinook salmon is completed (based on projected availability of required CWT recovery data for the two brood years, earliest exploitation rate analysis completion year would be 2018), adipose fin clip mass marking of the remainder of the juvenile Chinook salmon released through the program shall not occur and other means to differentiate hatchery-origin fish will continue to be used, such as otolith marking or wire tagging without an adipose fin clip of all fish released. The intent is that the total annual escapement of Chinook salmon to the river would be reduced by no more than 2.8% as a consequence of estimated additional mark-selective fishery impacts if *all* Elwha Channel Hatchery program production was mass-marked with an adipose fin clip.

2e. The Action Agencies must ensure that WDFW monitor and report relative fisheries and escapement contribution proportions for mass adipose fin clip-marked Elwha Channel Hatchery program-origin subyearling Chinook salmon sub-groups on an annual basis consistent with the reporting requirements described elsewhere in the Terms and Conditions as a means to indicate the potential effects of a 100% adipose fin clip marking strategy on the total abundance of fish escaping to the river.

2f. In combination with the information described in 2d and 2e above, the Action Agencies must ensure that WDFW take into account the current escapement abundance status of the total Elwha River Chinook salmon return relative to abundance triggers included in Table 3 of this opinion. These triggers are subject to adjustment, when appropriate, as population-specific data regarding Elwha Chinook salmon survival and recruitment rates become available, and following the decision-making approach specified in the Chinook salmon MAMP (EWG 2012). The standing or adjusted abundance triggers set for the preservation and re-colonization phases shall be used to guide the timing for application of a mass adipose fin clip mark for subyearling Chinook salmon released through the Elwha Channel Hatchery program. Adipose fin clip marking of all sub-yearlings will be delayed if NMFS determines that total fisheries impact levels estimated from subyearling Chinook salmon sub-group coded wire tag recoveries would slow progress in achieving agreed abundance triggers for the preservation and re-colonization phases relative to fisheries impact outcomes resulting from other hatchery-origin fish marking strategies.

3a. The Action Agencies must ensure that LEKT and WDFW monitor and evaluate the performance and effects of the programs, and manage the programs in response to findings, to meet program objectives while minimizing impacts on listed steelhead.

Monitoring and evaluation actions shall concentrate on adequate collection and analyses of data necessary to identify the status of the Elwha River steelhead population relative to population viability parameter triggers defined for each restoration phase in Table 4 of this opinion. The supportive breeding programs shall be adjusted in response to monitoring and evaluation data indicating achievement of all of the viability triggers for each restoration phase summarized in Table 4.

3b. The Action Agencies must ensure that LEKT and WDFW monitor the annual abundance, timing, distribution, and origin of steelhead adults escaping to the Elwha River watershed above and below the dam sites using methods sufficient to provide estimates of the status of the natural- and hatchery-origin components of the population, proportions of the population by origin escaping to the river above and below the dam sites, relative contribution of natural- and hatchery-origin fish to natural spawning, and the effects of supportive breeding actions in meeting restoration objectives.

3c. The Action Agencies must ensure that LEKT and WDFW monitor the annual abundance, timing, life history stage, and origin of steelhead juveniles emigrating seaward from production areas in Elwha River watershed above and below the dam sites using methods sufficient to derive estimates of the productivity status of the naturally produced component of the population, migrational overlap and behavior of natural- and hatchery-origin fish, and the effects of supportive breeding actions in meeting HGMP objectives.

3.d The Action Agencies must ensure that LEKT continue to remove hatchery-origin Chambers Creek steelhead from the Elwha River through directed fisheries, consistent with past authorizations, and remove any Chambers Creek steelhead encountered at weirs and traps or at the hatchery.

3e. For all years when fisheries directed at hatchery-origin Chambers Creek steelhead are implemented, the Action Agencies must ensure that LEKT provide monthly steelhead fishery reports through the duration of the season by the 10th working day of the following month to NMFS. The reports shall summarize the al harvest activities, including effort, the number of natural-origin and hatchery-origin steelhead encountered, the number harvested, and estimated total steelhead mortality impacts. A final report describing fishery impacts on listed steelhead by month and fishing area shall be submitted to NMFS by November 30th of the year the fishery was concluded.

4a. The Action Agencies must ensure that LEKT and WDFW monitor and evaluate the performance and effects of the programs, and manage the programs in response to findings, to meet program objectives while minimizing impacts on listed eulachon.

4b. The Action Agencies must ensure that LEKT and WDFW monitor the migration timing and behavior of hatchery-origin salmon and steelhead released during the late winter and early spring months into the lower river through the programs using methods sufficient to estimate the degree of spatial and temporal overlap with any eulachon that are present in the lower river.

5a. The Action Agencies must ensure that broodstock collection actions directed at, or incidentally affecting listed Chinook salmon, steelhead, and eulachon shall be conducted consistent with previous NMFS ESA consultation requirements and listed fish take allowances specified in NMFS (2012a).

5b. The Action Agencies must ensure that water withdrawal actions and methods shall be via structures that meet or exceed NMFS water intake screening criteria. Water withdrawals shall not exceed levels permitted by any Water Use Permits issued to each of the hatchery facilities.

5c. The Action Agencies must ensure that groundwater withdrawals at the hatcheries do not reduce the flow of the Elwha River by 25 percent of the total flow immediately downstream from the point of groundwater withdrawal. Compliance with this condition will be measured by the hatchery operators through comparisons of estimated average groundwater withdrawal levels by month in cubic feet per second (cfs) with monthly average river flow estimates for the section of the mainstem river above the point of groundwater removal.

5d. The Action Agencies must ensure that LEKT and WDFW handle listed fish with extreme care and maintain any listed fish handled in cold water to the maximum extent possible during sampling and processing procedures. When fish are transferred or held, a healthy environment must be provided; e.g., the holding units must contain adequate amounts of well-circulated water. When using gear that captures a mix of species, the permit holder must process listed fish first, whenever possible, to minimize handling stress.

5e. The Action Agencies must ensure that LEKT and WDFW allow any NMFS employee or representative to inspect any records or facilities related to hatchery program monitoring, evaluation, and research activities.

6b. The Action Agencies must ensure that LEKT and WDFW do not intentionally kill or cause to be killed any listed species unless the incidental take statement specifically allows intentional lethal take.

6c. The Action Agencies must ensure that if the LEKT and WDFW anesthetize listed fish to avoid injuring or killing them during handling, the fish must be allowed to recover before being released. Fish that are only counted must remain in water and not be anesthetized.

6d. The Action Agencies must ensure that LEKT and WDFW use a sterilized needle for each individual injection when passive integrated transponder tags (PIT-tags) are inserted into listed fish.

6e. The Action Agencies must ensure that if the LEKT and WDFW unintentionally capture any listed adult fish while sampling for juveniles, the adult fish must be released without further handling and such take must be reported.

6f. The Action Agencies must ensure that LEKT and WDFW exercise care during spawning ground surveys to avoid disturbing listed adult salmonids when they are spawning. Researchers must avoid walking in salmon streams whenever possible, especially where listed salmonids are likely to spawn. Visual observation must be used instead of intrusive sampling methods, especially when just determining fish presence.

6g. The Action Agencies must ensure that LEKT and WDFW, when using backpack electrofishing equipment, comply with NMFS' Backpack Electrofishing Guidelines (June 2000) available at *http://www.nwr.noaa.gov/ESA-Salmon-Regulations-Permits/4d-Rules/upload/electro2000.pdf.*

6h. The Action Agencies must ensure that LEKT and WDFW obtain approval from NMFS before changing sampling locations or research protocols.

6i. The Action Agencies must ensure that LEKT and WDFW be responsible for any biological samples collected from listed species as long as they are used for research purposes. The Action Agencies must ensure that LEKT and WDFW not transfer biological samples to anyone not listed in the HGMPs without prior written approval from NMFS.

6j. The Action Agencies must ensure that the person(s) actually conducting monitoring and research addressed in this opinion shall carry a copy of this incidental take statement while conducting the authorized activities.

6k. The Action Agencies must ensure that LEKT and WDFW allow any NMFS employee or representative to accompany field personnel while they conduct the research activities.

6l. The Action Agencies must ensure that LEKT and WDFW obtain all other Federal, state, and local permits/authorizations needed for the research activities.

7a. All reports, as well as all other notifications required in the permit, be submitted to NMFS at:

NMFS - Salmon Management Division
Production and Inland Fisheries Branch
1201 N.E. Lloyd Boulevard, Suite 1100
Portland, Oregon 97232
Phone: (503) 230-5427
Fax: (503) 872-2737

7b. The Action Agencies must ensure that SMD is notified, as soon as possible, but no later than two days, after any authorized level of take is exceeded or if such an event is likely. This includes the take of any ESA-listed species not otherwise included in this incidental take statement. LEKT and WDFW shall submit a written report detailing why the authorized take level was exceed or is likely to be exceeded.

7c. The Action Agencies must ensure that LEKT and WDFW provide SMD, by October 1 of each year, a monitoring and evaluation project operating plan for the coming year.

7d. The Action Agencies must ensure that LEKT and WDFW provide annual reports to SMD that summarize numbers, pounds, dates, tag/mark information, locations of artificially propagated fish releases, results of monitoring and evaluation activities that occur within the hatchery environment, and adult return numbers by fish origin to any naturally spawning area and to the hatchery program. Reports shall also include any analyses of fisheries harvest rate impacts, including impacts associated with Chinook salmon marking strategies; analyses of scientific research data; any problems that may have arisen during conduct of the authorized activities; a statement as to whether or not the activities had any unforeseen effects; and steps that have been and that will be taken to coordinate the research or monitoring with that of other researchers. These annual reports can include, but are not limited to, reports provided to NPS, USGS, USFWS, and NMFS NWFSC. The reports shall be submitted to SMD by January 31st of the year following juvenile fish releases (e.g., brood year 2011, release year 2012, report due January 2013), or as soon thereafter as the reports providing the necessary information are available.

8a. The Action Agencies must ensure that LEKT and WDFW, in effectuating the take authorized by this incidental take statement, are considered to have accepted the terms and conditions set forth herein and must be prepared to comply with the provisions of this incidental take statement, the applicable regulations, and the ESA.

2.9. Conservation Recommendations

Section 7(a)(1) of the ESA directs Federal agencies to use their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of threatened and endangered species. Specifically, conservation recommendations are suggestions regarding discretionary measures to minimize or avoid adverse effects of a proposed action on listed species or critical habitat or regarding the development of information (50 CFR 402.02).

1. The LEKT and WDFW should investigate additional methods to externally mark and/or internally tag hatchery-origin salmon and steelhead to ease monitoring and evaluation of hatchery-origin and natural-origin fish survival, productivity, and behavior without substantially increasing risks for the listed species, including harvest impacts, above previously evaluated or authorized levels,.
2. The LEKT and WDFW should continue to improve anadromous fish habitat within the lower Elwha River and estuary areas to support and accelerate recovery of properly functioning habitat processes and conditions that would help foster the establishment of viable Chinook salmon and steelhead populations.
3. The LEKT and WDFW should investigate the level of ecological interactions between hatchery-produced salmon and steelhead and listed fish populations within the Elwha River watershed to identify additional methods to minimize any adverse effects from interactions.

FWS December 2012 BiOp's ITS (excerpts)

After reviewing the current status of bull trout critical habitat, the environmental baseline for the action area, the effects of the proposed actions, and the cumulative effects, it is USFWS's Opinion that the action, as proposed, will not destroy or adversely modify bull trout critical habitat.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. *Harm* is defined by the USFWS as an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavior patterns, including breeding, feeding, or sheltering (50 CFR §17.3). *Harass* is defined by the USFWS as an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering (50 CFR §17.3). Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

The measures described below are non-discretionary, and must be undertaken by the NMFS, NPS, BIA, and USFWS so that they become binding conditions of any grant, permit, or authorization issued to the WDFW or LEKT, as appropriate, for the exemption in section 7(o)(2) to apply. The NMFS, NPS, BIA, and USFWS have a continuing duty to regulate the activity covered by this incidental take statement. If NMFS, NPS, BIA, and USFWS 1) fail to assume and implement the terms and conditions or 2) fail to require WDFW and LEKT to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the grant, permit, or authorization document, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, the NMFS, NPS, BIA, and USFWS must report the progress of the action and its impact on the species to the USFWS as specified in the incidental take statement [50 CFR §402.14(i)(3)].

AMOUNT OR EXTENT OF TAKE

The USFWS anticipates up to 127 bull trout adults or subadults, and offspring of up to 2 adult female bull trout could be taken as a result of this proposed action. The incidental take is expected to be in the form of capture and handling, injury and/or mortality, harassment, and harm as detailed below and summarized in Table 3.

Some forms of incidental take will be difficult to detect or quantify for the following reasons: the species is wide-ranging in habitats that are difficult to access; eggs, fry, and juveniles are small and follow cryptic behaviors; and some effects will result in delayed injury or mortality.

The following incidental take is anticipated due to the proposed action:

1. Incidental take of bull trout in the form of *harassment* (significant disruption or interference with normal behaviors) resulting from operation of the mainstem weir or other mainstem traps, effluent attraction of the holding ponds, and exacerbated low flows. We estimate that up to 112 adult or subadult bull trout could be harassed as a result of these activities annually for the period of this consultation.

2. Incidental take of bull trout in the form of *capture* (sub-lethal effects) resulting from handling related to fish capture and processing. We estimate that up to 119 adult or subadult bull trout could be captured as a result of operations of the weir, at facility outlets, seining and/or netting, genetic risk reduction harvests, and other forms of monitoring and broodstock collection annually for the period of this consultation. Some of these bull trout are addressed above under harassment.

3. Incidental take of bull trout in the form of *injury or death* resulting from handling related to fish capture and processing for monitoring, broodstock collection, rescue at holding ponds, or injuries sustained at the weir or other stream-spanning structures. We estimate that 2 adult or subadult bull trout could be injured or killed as a result of these activities annually for the period of this consultation.

4. Incidental take of bull trout in the form of *harm* (significant impairment with essential behaviors) resulting from delays or blockage of migration at the weir or interspecies interactions (e.g., redd displacement). We estimate that potential offspring of 2 adult female bull trout could be harmed as a result of these activities annually for the period of this consultation. However, as explained in the effects analysis, it is unlikely that this level would occur in most years. Over the extended time period of this consultation, such take is reasonably certain to occur.

EFFECT OF THE TAKE

In the accompanying Opinion, the USFWS determined that this level of anticipated take is not likely to result in jeopardy to the species or destruction or adverse modification of critical habitat.

REASONABLE AND PRUDENT MEASURES

The USFWS believes the following reasonable and prudent measure(s) are necessary and appropriate to minimize impacts of incidental take of (species):

1. Minimize potential for injury during fish capture and handling and collect information when handling is necessary.

TERMS AND CONDITIONS

In order to be exempt from the prohibitions of section 9 of the Act, the Federal agencies, WDFW, and LEKT must comply with the following terms and conditions, which implement the reasonable and prudent measures described above and outline required reporting/monitoring requirements. These terms and conditions are non-discretionary.

1. Capture and handling of bull trout.

    a. Follow approved capture, handling, holding, and release procedures.

    b. Document all bull trout encountered during broodstock collection, monitoring (excluding the weir for which requirements are described below), or genetic risk-reduction efforts by submitting a fish-handling and injury-occurrence report to the USFWS. The report should including include: 1) the name and address of the supervisory fish biologist; 2) methods used to minimize capture of or disturbances to bull trout; 3) stream conditions at time of operations; 4) the means of fish removal; 5) the number of bull trout removed by age class; 6) condition of all bull trout released; and 7) any incidence of observed injury or mortality to bull trout.

    Specifically, for all bull trout captured at the weir, the fisheries biologist in charge of handling will record the date and time, capture location, methods used, length and weight of the specimen, condition (if abnormal), search for and record identification numbers from any tags that may be present, and provide the collector's name. They will also inform us of any tissue samples (such as scales) that are collected. USFWS may request that additional samples be collected – see **Conservation Recommendations**.

    Reports of incidental injury or killing of bull trout would include any pertinent information such as the cause of death or injury. Such reports would generally include the quantification of take, including numbers of fish incidentally killed or injured, and the locations where this take occurred. The report should also include any insight derived from this work that may contribute to minimizing sources of injury or mortality in the future.

    c. All incidental mortalities of bull trout must be preserved in a fashion to best provide maximum scientific information. Any specimen killed shall be kept whole and put on ice or frozen as soon as possible. Such specimens shall be wrapped in aluminum foil rather than plastic to facilitate contaminant analysis. Collector shall label the specimen with appropriate information and notify Jeff Chan or Jay Davis, U.S. Fish

and Wildlife Service; Washington Fish and Wildlife Office, Suite 102,510 Desmond Drive; Lacey, Washington 98503 at (360) 753-9440, so that immediate arrangements can be made for shipping or retrieving the specimens.

2. All bull trout captured will be passed over the weir in the direction of travel. It is not anticipated at this time that bull trout captured at the weir would be relocated higher within the watershed, although that option could be reconsidered in the event that a number of bull trout were being captured at the weir. Any relocation higher into the watershed (e.g., above Carlson Canyon) should be limited to bull trout genetically determined to be a part of the upper Elwha population, and would need to be approved by USFWS. The USFWS shall work with the other Federal agencies to determine methods to ensure this term and condition is properly implemented.

3. The WDFW and LEKT will submit copies of any otherwise required water-quality monitoring reports to USFWS so that USFWS may ascertain whether any concentrations of chemicals or other compounds may be resulting in unanticipated adverse effects to bull trout.

REPORTING AND MONITORING REQUIREMENT

In order to monitor the impacts of incidental take, the Federal agency or any applicant (i.e., LEKT and WDFW) must report the progress of the action and its impact on the species to the USFWS as specified in the incidental take statement [(50 CFR 402.14 (i)(3)].

For this reason, we require reporting of the information described above in terms and conditions 1b and 1c. This ensures that we will receive information by method of capture and age class, such as length, condition, and any incidence of observed injury or mortality.

We also require that any take of bull trout observed be reported to the USFWS on an annual basis.

The USFWS believes that no more than 127 adult bull trout and progeny from 2 spawning bull trout females of bull trout will be incidentally taken annually as a result of the proposed action. The reasonable and prudent measures, with their implementing terms and conditions, are designed to minimize the impact of incidental take that might otherwise result from the proposed action.
If, during the course of the action, this level of incidental take is exceeded, such incidental take represents new information requiring reinitiation of consultation and review of the reasonable and prudent measures provided. The Federal agency must immediately provide an explanation of the causes of the taking and review with the USFWS the need for possible modification of the reasonable and prudent measures.

The USFWS is to be notified within three working days upon locating a dead, injured or sick endangered or threatened species specimen. Initial notification must be made to the nearest U.S. Fish and Wildlife Service Law Enforcement Office. Notification must include the date, time,

precise location of the injured animal or carcass, and any other pertinent information. Care should be taken in handling sick or injured specimens to preserve biological materials in the best possible state for later analysis of cause of death, if that occurs. In conjunction with the care of sick or injured endangered or threatened species or preservation of biological materials from a dead animal, the finder has the responsibility to ensure that evidence associated with the specimen is not unnecessarily disturbed. Contact the U.S. Fish and Wildlife Service Law Enforcement Office at (425) 883-8122, or the USFWS's Washington Fish and Wildlife Office at (360) 753-9440.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information. The USFWS recommends that the NMFS, NPS, BIA, and USFWS implement the following conservation recommendations:

Collection of Tissue Samples: The NMFS, NPS, BIA, and USFWS should request that personnel at the mainstem resistance-board weir operated by WDFW should collect deoxyribonucleic acid (DNA) samples as described in this Biological Opinion for any bull trout captured during fish-salvage operations. Although not listed as a required monitoring report above, the Federal agencies should submit to the USFWS within 60 days of completing such fish capture a report regarding any DNA samples collected, as well as providing the DNA samples as described in this Opinion. Because valuable information can be obtained from genetic analysis of bull trout, the USFWS requests a small tissue sample (e.g., fin clip of 2 to 5 mm in diameter, depending on fish length) from all bull trout would be preserved in a vial of 95 percent ethanol and sent to the Washington Fish and Wildlife Office for storage or processing.

If bull trout are greater than 125 mm in length, we ask that the fisheries biologist take a scale sample; if bull trout are less than 125 mm in length, no scale sample is necessary. If bull trout are greater than 40 mm in length, we ask that the fisheries biologist take a DNA sample. If the fish is greater than 85 mm in length, we ask that they clip a portion of the anal fin to obtain a 5-mm-diameter tissue sample. I f the fish is less than 85 mm in length (but greater than 40 mm), we ask that they clip a portion of the caudal fin lobe (lower lobe) to obtain a 2 mm-diameter tissue sample.

Following collection, they must place such tissue in a sample bottle containing 95 percent non-denatured ethanol solution. They must not dilute the ethanol and must not use methanol or reagent alcohol solutions (i.e., rubbing alcohol or denatured alcohol) because these chemicals disrupt DNA extraction. They must not overload the vials with tissue because DNA will degrade; vials should contain no more than 1 part tissue to 9 parts ethanol.

The biologist must label each bottle with geographic location, species, date, and sampler's name. It is important that all this information be included for the sample to be useful. If labels are to be placed inside vials, they must not use (wood) paper-based waterproof paper (e.g., Rite-in-the-