UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
1201 NE Lloyd Boulevard, Suite 1100
PORTLAND, OREGON 97232-1274

March 7, 2013

Douglas M. Marsh
National Marine Fisheries Service
Northwest Fisheries Science Center
Fish Ecology Division
2725 Montlake Boulevard East
Seattle, WA 98112-2097

RE: Determination of Take for Research Purposes (12-13-NWFSC17)

Dear Mr. Marsh:

National Marine Fisheries Service (NMFS) Hydropower Division's Federal Columbia River Power System (FCRPS) Branch has determined that take associated with the study, "A study to compare Smolt-to-Adult Return Rates (SARs) of in-river migrating versus transported Snake River yearling anadromous salmonids" is permitted in 2013 under the 2010 FCRPS Supplemental Biological Opinion (2010 Opinion). If this research continues beyond 2013, the take allowed under the determination process must be updated annually. The estimated numbers of listed salmonids needed to complete this study in 2013 are given in Table 1 below.

Project Justification, Description, and Methods

Justification

This study addresses needs identified in NOAA's 2008 Biological Opinion (BiOp), Reasonable and Prudent Alternative (RPA) 54 "Monitor and evaluate the effectiveness of the juvenile fish transportation program and modifications to operations". The Studies Review Work Group (SRWG) favorably reviewed it.

Description

National Marine Fisheries Service has been funded by the U.S. Army Corps of Engineers (Corps) to continue evaluating temporal SARs of wild Snake River yearling Chinook salmon (*Oncorhynchus tshawytscha*) and steelhead (*O. mykiss*) smolts transported from Lower Granite Dam. The results of this evaluation will be coupled with data from other studies documenting ocean conditions during the spring juvenile salmonid outmigration in an effort to determine the relationship between ocean conditions early in a smolt's ocean residency and SARs.

Methodology

With 2012, being the final tagging year for the Snake River fall Chinook salmon transport study (NWFSC10), collection of holdover fall Chinook salmon tagged in 2012 was moved under this study. During the spring outmigration, fish tagged in 2012 will be sampled using the juvenile separation-by-code systems at Lower Granite and Bonneville Dams. Based on the same work conducted at Lower Granite and Bonneville Dams in previous years and adjusting for more

available fish, up to 400 targeted fish plus up to another 400 non-targeted fish of various species will be collected.

Tagging for the study will occur from April to mid-June 2013. Our goal is to mark approximately 25,000 each of wild yearling Chinook salmon and steelhead and up to 10,000-hatchery steelhead. All smolts will be handled and marked according to pre-anesthetic handling techniques shown to effectively reduce stress and substantially reduce mortality associated with handling and marking. Smolts will be transferred using water-to-water techniques and anesthetized in special compartments with either 50 ppm MS-222 or clove oil solutions prior to removal from the water for handling or marking. In this way, fish are never removed from water until after they are anesthetized. With this procedure, overall (hatchery and wild combined) post-marking delayed mortality has been reduced from a range of 1.9 to 33.1% during earlier studies to a range of 0.5 to 1.5% during current studies. After tagging, study fish will be placed in a common raceway with other species /rearing types, transported by barge under current guidelines, and released below Bonneville Dam.

This study may begin prior to the beginning of general transportation operations at Lower Granite Dam (which will not begin before 20 April 2013). Fish will be collected and tagged between either 21 April (if general transport begins on 20 April) or 22 April (if general transport begins after 21 April) and end on 14 June 2013. The goal is to tag sufficient numbers of fish to establish firm estimates of weekly SARs to better understand the timing of the seasonal changes observed in past studies. This research will aid regional administrators in establishing the best time to begin general transportation.

Prior to the beginning of general transport, the current proposal would collect fish for 1-2 days each week for Passive Integrated Transponder (PIT) tagging. A barge index group would be formed from part of the tagged fish while the rest of the fish would be tagged for the BPA-funded reach survival study (Project # 199302900). The reach survival study fish will serve as surrogate inriver migrant fish. It is anticipated that all of the fish collected, except for the research survival fish, will be transported so barge holds are at adequate holding densities. One barge trip per week is planned for this time period.

The number of days that fish will be collected will not exceed 3 days per week (the possible third day would be to increase loading density for the barge). Depending on the numbers of fish entering the juvenile bypass facility, less than 3 days may be needed, and the collection may be focused on the time of day when wild Chinook salmon and steelhead are most available (early-late evening). During the times when fish are not being collected for this study, all fish entering the juvenile bypass facility will be returned to the river as would normally occur at this time of year.

Once general transport begins, tagging will occur up to five days per week with barges leaving either daily or every other day, depending on the Corps barging schedule.

Terms, Conditions, and Requirements

Fish listed under the Endangered Species Act (ESA) must be handled with extreme care and kept in water to the maximum extent possible during sampling and processing. Adequate circulation and replenishment of water in holding units is required. When using gear that captures a mix of species, ESA-listed fish must be processed first, to the extent possible, to minimize the duration of handling stress. Endangered Species Act listed fish must be transferred using a sanctuary net (which holds water during transfer) whenever practical to prevent the added stress of being out of water. Should NMFS determine that a researcher's procedure is no longer acceptable; the researcher must immediately cease such activity until an acceptable alternative procedure can be developed with NMFS. To implement the Hydro research, monitoring & evaluation (RM&E) reasonable and prudent alternatives (RPAs), the Applicant shall ensure that all of the following conditions are met:

1. Researchers must not intentionally kill or cause to be killed any listed species unless a specific monitoring or evaluation proposal, approved by NMFS, specifically allows intentional lethal take.

2. Each ESA-listed fish handled out of water must be anesthetized to prevent injury or mortality.
3. Anesthetized fish must be allowed to recover (e.g., in a recovery tank) before being released. Fish that are simply counted but not handled must remain in water, but do not have to be anesthetized. Whenever possible, unintentional or indirect mortalities of ESA-listed fish that occur during scientific research and monitoring activities shall be used in place of intentional lethal take, if applicable.

4. Each researcher must ensure that the ESA-listed species are taken only by the means, in the areas, and for the purposes set forth in the research proposal, as limited by the terms and conditions.

5. Each researcher, in effecting the take authorized by the incidental take statement (ITS) (Chapter 14, 2008 Opinion – incorporated into the 2010 Opinion) and through NMFS' Take Determination Letters, is considered to have accepted the terms and conditions of the ITS and any additional terms or conditions required by NMFS' Take Determination Letters, and must be prepared to comply with the provisions of these two documents, and the applicable NMFS' regulations and the ESA.

6. Each researcher is responsible for the actions of any individual operating under the authority of the researcher's designated take authorization within the ITS of the 2010 Opinion and NMFS' Take Determination Letters.

7. Each researcher, staff member, or designated agent acting on the researcher's behalf must possess a copy of the ITS in the 2010 Opinion and the NMFS authorizing Take Determination letter when conducting the activities for which a take of ESA-listed species or other exception to ESA prohibitions is authorized herein.

8. Researchers may not transfer or assign a take authorization included within this determination to any other person(s), as person is defined in Section 3(12) of the ESA. The take authorization ceases to be in force or effective if transferred or assigned to any other person without prior authorization from NMFS.

9. Each researcher must obtain any other Federal, State, and local permits or authorizations necessary to conduct the activities provided for in this ITS.

10. Each researcher must coordinate with other applicable co-managers and researchers to ensure that no unnecessary duplication or adverse cumulative effects occur as a result of the researcher's activities.

11. National Marine Fisheries Service reserves the right to inspect research activities as they occur. This may include observation or review of research activities, facilities, records, etc., pertaining to ESA-listed species covered by this determination.

12. Under the terms of NMFS' regulations, a violation of any of the terms and conditions of this ITS will subject the offending researcher and/or any individual who is operating under the authority of this ITS to penalties as provided for in the ESA for authorized take.

13. Each researcher is responsible for biological samples collected from ESA-listed species as long as they are useful for research purposes. The terms and conditions concerning any samples collected remain in effect as long as the researcher maintains authority over and responsibility for the material taken. A researcher may not transfer biological samples to anyone not listed in the research proposal without obtaining prior written approval from NMFS. Any such transfer will be subject to such conditions, as NMFS deems appropriate.

14. NMFS may amend a take authorization identified in this determination, or adjust specific take levels after reasonable notice to the applicable researcher.

15. NMFS may revoke a take authorization identified in this ITS if the activities for which it provides are not carried out. If the activities are not carried out in accordance with the conditions of this ITS and the purposes and requirements of the ESA, or if NMFS otherwise determines that the continuation of activities would operate to the disadvantage of ESA-listed species.

Annual Reporting and Authorization Requirements

The conduct of scientific research and monitoring activities each year is contingent on submission and approval of a report on each proceeding year's research and monitoring activities. Researchers are providing annual reports summarizing the take of ESA-listed salmon and steelhead associated with their activity. These annual reports are to be provided to NMFS' designated Take Determination Coordinator by December 1 of each year unless this date is otherwise modified by NMFS' authorizing Take Determination letter. The report must include the following:

1. A detailed description of scientific research and monitoring activities, including the total number of fish taken at each location, an estimate of the number of ESA-listed fish taken at each location, the manner of take, and the dates and locations of the take.

2. Measures taken to minimize disturbances to ESA-listed fish and the effectiveness of these measures, the condition of ESA-listed fish taken and used for research and monitoring, a description of the effects of research and monitoring activities on the subject species, the disposition of ESA-listed fish in the event of mortality, and a brief narrative of the circumstances surrounding fish injuries or mortalities to ESA-listed fish.

3. Any problems that arose during research and monitoring activities, and a statement as to whether the activities had any unforeseen effects.

4. Descriptions of how all take estimates were derived.

5. Steps that have been and will be taken to coordinate research and monitoring activities with those of other researchers.

Operational Reporting & Notification Requirements

1. Researchers must obtain NMFS' approval prior to implementing research protocols (e.g., changes in sampling locations or fish handling protocols) that differ from those considered in the Take Determination Letters, unless immediate deviation from these same protocols are necessary to reduce impacts to fish in hand. In this case, researchers must contact NMFS' designated Take Determination Coordinator or other designated staff as soon as possible to report on the situation (including reporting any resultant unexpected take), the actions taken by the research to minimize impacts to research fish, and coordination of additional actions that are necessary before the research can continue.

2. Each researcher must alert NMFS whenever the authorized level of take is exceeded, or if circumstances indicate that such an event is imminent. Notification should be made as soon as possible, but no later than 2 days after the authorized level of take is exceeded. The researcher must then submit a detailed written report to NMFS. Pending a review of the circumstances, NMFS may suspend the research and monitoring activities or implement reasonable measures and/or alternatives to allow research and monitoring activities to continue.

3. Each researcher must alert NMFS when a take of any ESA-listed species not included in the research proposal is killed, injured, or collected during the course of research and monitoring activities. Notification should be made as soon as possible, but no later than 2 days after the unauthorized take. The researcher must then submit a detailed written report to NMFS. Pending a review of the circumstances, NMFS may suspend research and monitoring activities or implement reasonable measures and/or alternatives to allow research and monitoring activities to continue.

4. In the case of ongoing studies, a report of actual take will be submitted to NMFS no less than 30 days before the request for take for the next year is submitted. For studies which only last 1 year, or upon termination of a multi-year study, a report of actual take will be submitted no less than 30 days after the activities described in the take determination letter cease. Take reports will include the numbers, life stage, species, and evolutionarily significant unit (ESU) of fish taken; the type of take (harass, handle, kill); and levels of incidental mortality. The reports will also include the location of the take (geographical names and Hydrologic Unit Code (HUC), and summarize take into blocks no larger than one month (i.e., take for April, May, etc.). Any of the incidents described in items 2 and 3 above (exceeded take limits, or incidental morality not covered by the take determination) will also be described in this report. The report will also include an evaluation if methodology can be improved to reduce take (especially incidental mortality).

Take Estimates

The following tables list the total authorized take of listed salmon species.

Table 1. Total number of all potentially listed salmon species taken by the study. These numbers do not include numbers of fish carcass (no limit) which may be handled or sampled in the course of this project. Take levels: 1-harass or disturb, 2-capture and handle, 3-collect sample or tag, 4-lethal sampling.

Species	Clip status	Age	Age detail	Activity	Take Level	Take	Incidental mortality	Location	Dates
Chinook	Unclipped	Yearling	Yearling	Tag	3	25,000	500	Lower Granite Dam	April-June
Steelhead	Unclipped	Yearling	Yearling	Tag	3	25,000	500	Lower Granite Dam	April-June
Steelhead	Hatchery	Yearling	Yearling	Tag	3	10,000	200	Lower Granite Dam	April-June
Chinook	Unclipped	Yearling	Yearling	capture, measure, release	2	23,274	233	Lower Granite Dam	April-June
Chinook	Hatchery	Yearling	Yearling	capture, measure, release	2	75,387	754	Lower Granite Dam	April-June
Chinook	Unclipped	Subyearling	Subyearling	capture, measure, release	2	104,276	1,043	Lower Granite Dam	April-June
Chinook	Hatchery	Subyearling	Subyearling	capture, measure, release	2	85,000	850	Lower Granite Dam	April-June
Steelhead	Unclipped	Yearling	Yearling	capture, measure, release	2	2,457	25	Lower Granite Dam	April-June
Steelhead	Hatchery	Yearling	Yearling	capture, measure, release	2	131,168	1,312	Lower Granite Dam	April-June

Sockeye	Unclipped	Yearling	Yearling	capture, measure, release	2	6,293	63	Lower Granite Dam	April-June
Sockeye	Hatchery	Yearling	Yearling	capture, measure, release	2	3,124	31	Lower Granite Dam	April-June
Coho	Unk	Yearling	Yearling	capture, measure, release	2	31,838	318	Lower Granite Dam	April-June
Chinook	Unclipped	Yearling	Yearling	capture, measure, release	2	140	1	Lower Granite Dam	Mar-Jun
Chinook	Hatchery	Yearling	Yearling	capture, measure, release	2	40	0	Lower Granite Dam	Mar-Jun
Steelhead	Unclipped	Yearling	Yearling	capture, measure, release	2	50	1	Lower Granite Dam	Mar-Jun
Steelhead	Hatchery	Yearling	Yearling	capture, measure, release	2	50	1	Lower Granite Dam	Mar-Jun
Chinook	Hatchery	subyearling	Subyearling	capture, measure, release	2	58	1	Bonneville Dam	Mar-June
Chinook	Unclipped	Yearling	Yearling	capture, measure, release	2	90	1	Bonneville Dam	Mar-June
Chinook	Hatchery	Yearling	Yearling	capture, measure, release	2	114	1	Bonneville Dam	Mar-June

Steelhead	Unclipped	Yearling	Yearling	capture, measure, release	2	101	0	Bonneville Dam	Mar-June
Steelhead	Hatchery	Yearling	Yearling	capture, measure, release	2	112	0	Bonneville Dam	Mar-June
Sockeye	Unclipped	Yearling	Yearling	capture, measure, release	2	1	0	Bonneville Dam	Mar-June
Coho	Unclipped	Yearling	Yearling	capture, measure, release	2	20	0	Bonneville Dam	Mar-June
Coho	Hatchery	Yearling	Yearling	capture, measure, release	2	10	0	Bonneville Dam	Mar-June

Species Summary	Allotted Take	Allotted Incidental Mortality	Location
Chinook	25,000	500	Lower Granite Dam
Steelhead	35,000	700	Lower Granite Dam
Chinook	98,841	997	Lower Granite Dam
Chinook	189,276	1,893	Lower Granite Dam
Steelhead	133,725	1,339	Lower Granite Dam
Sockeye	9,417	94	Lower Granite Dam
Coho	31,838	318	Lower Granite Dam

Chinook	204	2	Bonneville Dam
Chinook	58	1	Bonneville Dam
Steelhead	213	0	Bonneville Dam
Sockeye	1	0	Bonneville Dam
Coho	30	0	Bonneville Dam

Table 2. Estimated 2013 take activities for potentially ESA-listed salmonids authorized to be taken during the study. These numbers do not include numbers of fish carcass (no limit) which may be handled or sampled in the course of this project. Take levels: 1-harass or disturb, 2-capture and handle, 3-collect sample or tag, 4-lethal sampling.

ESU	Hatchery or Wild	Age	Age detail	Activity	Take Level	Take	Incidental mortality	Location	Dates
Snake River Spring Summer Chinook	wild	Juvenile	Yearling	Tag	3	25,000	500	Lower Granite Dam	April-June
Snake River Steelhead	wild	Juvenile	Yearling	Tag	3	25,000	500	Lower Granite Dam	April-June
Snake River Steelhead	hatchery	Juvenile	Yearling	Tag	3	3,713	74	Lower Granite Dam	April-June
Snake River Steelhead	hatchery	Juvenile	Yearling	Tag	3	990	20	Lower Granite Dam	April-June
Snake River Spring Summer Chinook	wild	Juvenile	Yearling	capture, measure, release	2	17,274	173	Lower Granite Dam	April-June

ESU	Hatchery or Wild	Age	Age detail	Activity	Take Level	Take	Incidental mortality	Location	Dates
Snake River Spring Summer Chinook	hatchery	Juvenile	Yearling	capture, measure, release	2	39,659	397	Lower Granite Dam	April-June
Snake River Spring Chinook	hatchery	Juvenile	Yearling	capture, measure, release	2	13,005	130	Lower Granite Dam	April-June
Snake River Steelhead	wild	Juvenile	Yearling	capture, measure, release	2	2,457	25	Lower Granite Dam	April-June
Snake River Steelhead	hatchery	Juvenile	Yearling	capture, measure, release	2	69,064	691	Lower Granite Dam	April-June
Snake River Steelhead	hatchery	Juvenile	Yearling	capture, measure, release	2	18,405	184	Lower Granite Dam	April-June
Snake River Fall Chinook	wild	Juvenile	Subyearling	capture, measure, release	2	10,538	105	Lower Granite Dam	April-June
Snake River Fall Chinook	hatchery	Juvenile	Subyearling	capture, measure, release	2	85,000	850	Lower Granite Dam	April-June
Snake River Fall Chinook	hatchery	Juvenile	Subyearling	capture, measure, release	2	93,738	937	Lower Granite Dam	April-June
Snake River Fall Chinook	hatchery	Juvenile	Yearling	capture, measure, release	2	6,000	60	Lower Granite Dam	April-June

ESU	Hatchery or Wild	Age	Age detail	Activity	Take Level	Take	Incidental mortality	Location	Dates
Snake River Fall Chinook	hatchery	Juvenile	Yearling	capture, measure, release	2	4,500	45	Lower Granite Dam	April-June
Snake River sockeye	wild	Juvenile	Yearling	capture, measure, release	2	4,421	44	Lower Granite Dam	April-June
Snake River sockeye	hatchery	Juvenile	Yearling	capture, measure, release	2	3,124	31	Lower Granite Dam	April-June
Snake River Spring Chinook	wild	Juvenile	Yearling	capture, measure, release	2	50	1	Lower Granite Dam	March-June
Snake River Spring Summer Chinook	hatchery	Juvenile	Yearling	capture, measure, release	2	9	0	Lower Granite Dam	March-June
Snake River Spring Summer Chinook	hatchery	Juvenile	Yearling	capture, measure, release	2	3	0	Lower Granite Dam	March-June
Snake River Fall Chinook	wild	Juvenile	Yearling	capture, measure, release	2	15	0	Lower Granite Dam	March-June
Snake River Fall Chinook	hatchery	Juvenile	Yearling	capture, measure, release	2	75	1	Lower Granite Dam	March-June
Snake River Steelhead	wild	Juvenile	Yearling	capture, measure, release	2	50	1	Lower Granite Dam	March-June

ESU	Hatchery or Wild	Age	Age detail	Activity	Take Level	Take	Incidental mortality	Location	Dates
Snake River Steelhead	hatchery	Juvenile	Yearling	capture, measure, release	2	19	0	Lower Granite Dam	March-June
Snake River Steelhead	hatchery	Juvenile	Yearling	capture, measure, release	2	5	0	Lower Granite Dam	March-June
Snake River Fall Chinook	hatchery	Juvenile	Yearling	capture, measure, release	2	69	1	Bonneville Dam	March-June
Snake River Fall Chinook	hatchery	Juvenile	Yearling	capture, measure, release	2	65	1	Bonneville Dam	March-June
Snake River Spring Chinook	wild	Juvenile	Yearling	capture, measure, release	2	1	0	Bonneville Dam	March-June
Snake River Spring Chinook	hatchery	Juvenile	Yearling	capture, measure, release	2	2	0	Bonneville Dam	March-June
Snake River Spring Chinook	hatchery	Juvenile	Yearling	capture, measure, release	2	1	0	Bonneville Dam	March-June
Snake River Steelhead	wild	Juvenile	Yearling	capture, measure, release	2	8	0	Bonneville Dam	March-June
Snake River Steelhead	hatchery	Juvenile	Yearling	capture, measure, release	2	3	0	Bonneville Dam	March-June

ESU	Hatchery or Wild	Age	Age detail	Activity	Take Level	Take	Incidental mortality	Location	Dates
Snake River Steelhead	hatchery	Juvenile	Yearling	capture, measure, release	2	5	0	Bonneville Dam	March-June
Upper Columbia Spring Chinook	wild	Juvenile	Yearling	capture, measure, release	2	2	0	Bonneville Dam	March-June
Upper Columbia Spring Chinook	hatchery	Juvenile	Yearling	capture, measure, release	2	1	0	Bonneville Dam	March-June
Upper Columbia Spring Chinook	hatchery	Juvenile	Yearling	capture, measure, release	2	4	0	Bonneville Dam	March-June
Upper Columbia Steelhead	wild	Juvenile	Yearling	capture, measure, release	2	17	0	Bonneville Dam	March-June
Upper Columbia Steelhead	hatchery	Juvenile	Yearling	capture, measure, release	2	20	0	Bonneville Dam	March-June
Upper Columbia Steelhead	hatchery	Juvenile	Yearling	capture, measure, release	2	6	0	Bonneville Dam	March-June
Middle Columbia Steelhead	wild	Juvenile	Yearling	capture, measure, release	2	25	0	Bonneville Dam	March-June
Middle Columbia Steelhead	hatchery	Juvenile	Yearling	capture, measure, release	2	18	0	Bonneville Dam	March-June

ESU	Hatchery or Wild	Age	Age detail	Activity	Take Level	Take	Incidental mortality	Location	Dates
Middle Columbia Steelhead	hatchery	Juvenile	Yearling	capture, measure, release	2	37	0	Bonneville Dam	March-June
Middle Columbia Steelhead	wild	Juvenile	Yearling	capture, measure, release	2	4	0	Bonneville Dam	March-June
Lower Columbia Steelhead	wild	Juvenile	Yearling	capture, measure, release	2	2	0	Bonneville Dam	March-June
Lower Columbia Steelhead	wild	Juvenile	Yearling	capture, measure, release	2	1	0	Bonneville Dam	March-June
Lower Columbia Steelhead	hatchery	Juvenile	Yearling	capture, measure, release	2	3	0	Bonneville Dam	March-June
Lower Columbia Chinook	wild	Juvenile	Subyearling	capture, measure, release	3	1	0	Bonneville Dam	March-June
Lower Columbia Chinook	hatchery	Juvenile	Subyearling	capture, measure, release	3	20	0	Bonneville Dam	March-June
Lower Columbia Chinook	hatchery	Juvenile	Subyearling	capture, measure, release	3	1	0	Bonneville Dam	March-June
Lower Columbia Coho	wild	Juvenile	Yearling	capture, measure, release	2	1	0	Bonneville Dam	March-June

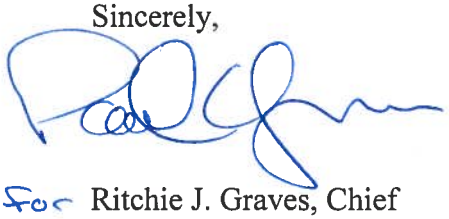
ESU summary	Alloted Take	Alloted Incidental Mortality	Location
Snake River Steelhead	29,702	594	Lower Granite Dam
Snake River Spring Summer Chinook	95,000	1201	Lower Granite Dam
Snake River Steelhead	90,000	901	Lower Granite Dam
Snake River Fall Chinook	199,866	1,998	Lower Granite Dam
Snake River sockeye	7,545	75	Lower Granite Dam
Snake River Spring Chinook	4	0	Bonneville Dam
Snake River Steelhead	16	0	Bonneville Dam
Snake River Fall Chinook	134	2	Bonneville Dam
Upper Columbia Spring Chinook	7	0	Bonneville Dam
Upper Columbia Steelhead	43	0	Bonneville Dam
Middle Columbia Steelhead	84	0	Bonneville Dam
Lower Columbia Steelhead	6	0	Bonneville Dam
Lower Columbia Chinook	22	0	Bonneville Dam
Lower Columbia Coho	1	0	Bonneville Dam

Pacific eulachon are listed as threatened under the ESA and eulachon critical habitat in the lower Columbia River and tributaries has been designated for protection. Nothing in this letter authorizes any take of eulachon, which may occur as a result of your activities. If you encounter any eulachon in your activities, you should report any sighting, handling or other encounters with eulachon, and take all appropriate measures to avoid contact or minimize the potential for harm to the species. Any eulachon captured during your activities should be released as quickly as possible; and NMFS should be notified as soon as practicable. If your activities are also likely to adversely affect eulachon critical habitat, you should consult with NMFS.

Determinations by the FCRPS Branch for this research during the 2013 fish passage season and beyond will be made on an annual basis. The annual determination will depend upon information submitted in the research study's annual report, other new information, the annual anticipated status of fisheries stocks, and any subsequent review through regional review processes.

Please notify Paul Wagner, (503)231-2316, Paul.Wagner@noaa.gov,as soon as possible of any deviation from the terms and conditions in this determination. Please include the study's official title and the number (from the subject line) of the current Take Determination Letter in all communications regarding this study. Please provide the FCRPS Branch's Take Determination Coordinator, Blane Bellerud (503-231-2238, Blane.Bellerud@noaa.gov), with the annual report for this research study.

Sincerely,



For Ritchie J. Graves, Chief
Federal Columbia River Power System Branch
Hydropower Division