



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

March 27, 2015

Randall F. Absolon
NOAA Fisheries, NWFSC, FE Division
3305 E. Commerce St.
Pasco, WA 99301

RE: Modification of Determination of Take for Research Purposes (14.1-15-NWFSC105)

Dear Mr. Absolon:

This letter is to inform you that National Marine Fisheries Service (NMFS) Interior Columbia Basin Division's Hydropower Branch has approved modifications to the take originally permitted in 2015 under the 2014 Federal Columbia River Power System (FCRPS) Supplemental Biological Opinion (2014 Opinion) in take determination letter 14-15-NWFSC105, dated March 23, 2015 for the study, "Evaluation of Fish condition and Gatewell Residence Time for Juvenile Salmonids in a Modified Gatewell at the Bonneville Dam's Second Powerhouse". If this research continues beyond 2015, the take allowed under the determination process must be updated annually.

Modifications to the original take request, new take levels and descriptions of modifications to the study are described below.

Justification

Original application omitted hatchery fish to be tagged.

Modifications

Additional 6300 hatchery fall Chinook subyearlings to be Passive Integrated Transponder (PIT-tagged). Estimated bycatch rates recalculated.

Terms, Conditions, and Requirements

This determination allows take in 2015 under the following terms, conditions, and requirements up to the amount set forth in the table below.

1. Researchers must not intentionally kill or cause to be killed any listed species unless a specific monitoring or evaluation proposal, approved by NOAA Fisheries, 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 this incidental take statement and through NOAA Fisheries' Take Determination letters, is considered to have accepted the terms and conditions of this incidental take statement and any additional terms or conditions required by NOAA Fisheries' Take Determination letters, and must be prepared to comply with the provisions of these two documents, and the applicable NOAA Fisheries 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 incidental take statement of this Opinion and NOAA Fisheries' Take Determination letters.
7. Each researcher, staff member, or designated agent acting on the researcher's behalf must possess a copy of the incidental take statement in the 2014 Opinion and the NOAA Fisheries 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 NOAA Fisheries.
9. Each researcher must obtain any other Federal, State, and local permits or authorizations necessary to conduct the activities provided for in this incidental take statement.
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. NOAA Fisheries 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, the incidental take statement, the Biological Opinion, or the Action Agencies' Biological Assessment.
12. Under the terms of NOAA Fisheries' regulations, a violation of any of the terms and conditions of this incidental take statement will subject the offending researcher and/or any individual who is operating under the authority of this incidental take statement 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 NOAA Fisheries. Any such transfer will be subject to such conditions as NOAA Fisheries deems appropriate.

14. NOAA Fisheries may amend a take authorization identified in this determination, or adjust specific take levels after reasonable notice to the applicable researcher.
15. NOAA Fisheries may revoke a take authorization identified in this incidental take statement 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 incidental take statement and the purposes and requirements of the ESA, or if NOAA Fisheries 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. The annual report is due to the FCRPS Branch by January 31, 2016. The report must include the following:

- 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.
- 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.
- Any problems that may arise during research and monitoring activities, and a statement as to whether the activities had any unforeseen effects.
- Descriptions of how all take estimates were derived.
- Any preliminary analyses of the data.
- Steps that have been and will be taken to coordinate research and monitoring activities with those of other researchers.
- The modifications noted in this letter must be included in the annual report, with a narrative concerning reasons for the modification.

Operational Reporting and Notification Requirements

1. Researchers must provide plans for future undefined projects and changes in sampling locations or research and monitoring protocols, and obtain the FCRPS Branch's approval before implementation.
2. Each researcher must alert the FCRPS Branch 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 the FCRPS Branch. Pending a review of the circumstances, the FCRPS Branch 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 the FCRPS Branch 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 the FCRPS Branch. Pending a review of the circumstances, the FCRPS Branch 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 one 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 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 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 mortality 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

In Table 1. the requested modifications to take assigned to the study are summarized. The revised total numbers of listed fish allowed to be captured, handled, and released in 2015 is limited to the following numbers and other conditions as indicated in Table 2:

Table 1. Requested modifications to 2015 take activities for ESU-listed salmonids 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: : Observe, count, or disturb fish with no physical contact, 2: Capture and handle fish, 3: Capture fish and collect biological samples, tag, or retain fish for experiments, 4: lethal take

ESU	Clip or other mark	Age	Age detail	activity	Take Level	Take	Incidental mortality	Location	Dates
Snake River Fall Chinook	wild	Subyearling	Subyearling	Passage study	2	10	0	Bonneville Dam	Mar-Jul
Snake River Fall Chinook	hatchery	Subyearling	Subyearling	Passage study	2	20	0	Bonneville Dam	Mar-Jul
Upper Columbia Spring Chinook	hatchery	Yearling	Yearling	Passage study	2	171	3	Bonneville Dam	Mar-Jul
Lower Columbia Chinook	wild	Yearling	Yearling	Passage study	2	38	0	Bonneville Dam	Mar-Jul
Lower Columbia Steelhead	wild	Yearling	Yearling	Passage study	2	71	0	Bonneville Dam	Mar-Jul
Snake River Fall Chinook	wild	Yearling	Yearling	Passage study	2	25	0	Bonneville Dam	Mar-Jul
Lower Columbia Steelhead	hatchery	Yearling	Yearling	Passage study	2	15	0	Bonneville Dam	Mar-Jul
Upper Columbia Spring Chinook	wild	Yearling	Yearling	Passage study	2	-12	-1	Bonneville Dam	Mar-Jul
Snake River Spring Chinook	wild	Yearling	Yearling	Passage study	2	73	1	Bonneville Dam	Mar-Jul
Middle Columbia Steelhead	wild	Yearling	Yearling	Passage study	2	218	3	Bonneville Dam	Mar-Jul
Snake River Spring Chinook	hatchery	Yearling	Yearling	Passage study	2	-41	0	Bonneville Dam	Mar-Jul
Snake River Steelhead	wild	Yearling	Yearling	Passage study	2	154	2	Bonneville Dam	Mar-Jul
Upper Columbia Steelhead	hatchery	Yearling	Yearling	Passage study	2	39	0	Bonneville Dam	Mar-Jul

ESU	Clip or other mark	Age	Age detail	activity	Take Level	Take	Incidental mortality	Location	Dates
Lower Columbia Chinook	hatchery	Subyearling	Subyearling	Passage study	2	-43	0	Bonneville Dam	Mar-Jul
Snake River Steelhead	hatchery	Yearling	Yearling	Passage study	2	1	0	Bonneville Dam	Mar-Jul
Lower Columbia Chinook	hatchery	Subyearling	Subyearling	Passage study	3	6,300	518	Bonneville Dam	Mar-Jul

ESU Summary			
ESU	Age	Take	Incidental Mortality
Snake River Sockeye	Juvenile	10	0
Middle Columbia Steelhead	Juvenile	6508	520
Lower Columbia Chinook	Juvenile	109	0
Snake River Fall Chinook	Juvenile	25	0
Lower Columbia Steelhead	Juvenile	15	0
Upper Columbia Spring Chinook	Juvenile	-12	-1
Snake River Spring Chinook	Juvenile	291	5
Upper Columbia Steelhead	Juvenile	113	0
Snake River Steelhead	Juvenile	-4	0
Lower Columbia Chinook	Juvenile	16	0

Table 2. Revised estimated 2015 take activities for ESU-listed salmonids 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: Observe, count, or disturb fish with no physical contact, 2: Capture and handle fish, 3: Capture fish and collect biological samples, tag, or retain fish for experiments, 4: lethal take

ESU	Clip or other mark	Age	Age detail	activity	Take Level	Take	Incidental mortality	Location	Dates
Snake River Fall Chinook	wild	Subyearling	Subyearling	Passage study	2	2	0	Bonneville Dam	Mar-Jul
Snake River Fall Chinook	hatchery	Subyearling	Subyearling	Passage study	2	11	0	Bonneville Dam	Mar-Jul
Snake River Fall Chinook	wild	Yearling	Yearling	Passage study	2	17	0	Bonneville Dam	Mar-Jul
Lower Columbia Chinook	wild	Subyearling	Subyearling	Passage study	2	37	1	Bonneville Dam	Mar-Jul
Lower Columbia Chinook	hatchery	Subyearling	Subyearling	Passage study	2	780	14	Bonneville Dam	Mar-Jul
Snake River Spring Chinook	wild	Yearling	Yearling	Passage study	2	67	1	Bonneville Dam	Mar-Jul
Snake River Spring Chinook	hatchery	Yearling	Yearling	Passage study	2	120	2	Bonneville Dam	Mar-Jul
Upper Columbia Spring Chinook	wild	Yearling	Yearling	Passage study	2	67	1	Bonneville Dam	Mar-Jul
Upper Columbia Spring Chinook	hatchery	Yearling	Yearling	Passage study	2	85	2	Bonneville Dam	Mar-Jul
Lower Columbia Chinook	wild	Yearling	Yearling	Passage study	2	4	0	Bonneville Dam	Mar-Jul
Lower Columbia Coho	wild	Yearling	Yearling	Passage study	2	35	1	Bonneville Dam	Mar-Jul
Snake River Sockeye	wild	Yearling	Yearling	Passage study	2	46	1	Bonneville Dam	Mar-Jul

ESU	Clip or other mark	Age	Age detail	activity	Take Level	Take	Incidental mortality	Location	Dates
Snake River Steelhead	wild	Yearling	Yearling	Passage study	2	114	2	Bonneville Dam	Mar-Jul
Snake River Steelhead	hatchery	Yearling	Yearling	Passage study	2	307	5	Bonneville Dam	Mar-Jul
Upper Columbia Steelhead	wild	Yearling	Yearling	Passage study	2	42	2	Bonneville Dam	Mar-Jul
Upper Columbia Steelhead	hatchery	Yearling	Yearling	Passage study	2	282	5	Bonneville Dam	Mar-Jul
Middle Columbia Steelhead	wild	Yearling	Yearling	Passage study	2	184	3	Bonneville Dam	Mar-Jul
Middle Columbia Steelhead	hatchery	Yearling	Yearling	Passage study	2	228	5	Bonneville Dam	Mar-Jul
Lower Columbia Steelhead	wild	Yearling	Yearling	Passage study	2	14	0	Bonneville Dam	Mar-Jul
Lower Columbia Steelhead	hatchery	Yearling	Yearling	Passage study	2	36	1	Bonneville Dam	Mar-Jul

ESU Summary

ESU	Age		Take	Incidental Mortality
	Age	Take		
Snake River Fall Chinook	Juvenile	30	0	
Lower Columbia Chinook	Juvenile	7,134	532	
Snake River Spring Chinook	Juvenile	187	3	
Upper Columbia Spring Chinook	Juvenile	152	3	
Lower Columbia Chinook	Juvenile	4	0	
Lower Columbia Coho	Juvenile	35	1	
Snake River Sockeye	Juvenile	46	1	
Snake River Steelhead	Juvenile	421	7	
Upper Columbia Steelhead	Juvenile	324	5	
Middle Columbia Steelhead	Juvenile	412	8	
Lower Columbia Steelhead	Juvenile	45	1	

Determinations by the FCRPS Branch for this research during the 2015 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 Gary Fredricks, (503) 231-6855, Gary.Fredricks@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 of the current take letter (from the subject line) in all communications regarding this study. Please provide the FCRPS Branch's research reporting coordinator, Blane Bellerud (503)-231-2238, Blane.Bellerud@noaa.gov, with the annual report for this research study.

Sincerely,

A handwritten signature in black ink, appearing to read "R. Graves", with the word "for" written below it.

Ritchie J. Graves, Chief
Columbia Hydropower Branch
Interior Columbia Basin Office
NOAA Fisheries, West Coast Region

cc: Kinsey Frick

