



**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

April 22, 2020

Chris Jordan  
NOAA Fisheries, Northwest Fisheries Science Center  
c/o U.S. Environmental Protection Agency (EPA)  
200 SW 35<sup>th</sup> Street  
Corvallis, Oregon 97333

RE: Determination of Take for Research Purposes (16-20-NWFSC-100) APPS - 23614

Dear Chris Jordan:

National Marine Fisheries Service (NMFS) Interior Columbia Basin Office's Columbia Hydropower Branch has determined that take associated with the study, "Estimating abundance, survival and growth rates of juvenile and adult summer steelhead and spring/summer Chinook salmon for select populations in the Mid-Columbia and Snake River Evolutionarily Significant Units (ESUs) " is permitted in 2020 under the 2019 Columbia River System (CRS) Biological Opinion (2019 Opinion). If this research continues beyond 2020, the take allowed under the determination process must be updated annually. The estimated numbers of listed salmonids needed to complete this study in 2020 are given in the attached project summary.

### **Project Justification, Description, and Methods**

#### ***Justification***

See attached project summary.

#### ***Description, Methodology, and Authorized take levels***

See attached project summary

### **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, 2019 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 2019 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 2019 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.
6. Projects which employ blocking weirs must include a log of delay monitoring in their annual report. This log must include daily trap catches and numbers of fish observed below the weir (as per the methodology described in the projects weir operation plan). Any changes in weir operation or configuration will also be noted with the dates that they are in effect. Any periods when the weir was not in operation will also be noted.

### **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 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). Determinations by the Hydropower Branch for this research during the 2019 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 Josie Thompson, FCRPS/CRS Take Determination Coordinator, (503-231-2313, [Josie.Thompson@noaa.gov](mailto:Josie.Thompson@noaa.gov)), about any deviation from the terms and conditions in this determination as soon as possible. Please include the study's official title and the number (see subject line in this Take Determination Letter) in all communications regarding this study. The annual report for this research study can be completed via the NMFS Authorizations and Permits for Protected Species (APPS) system, through which this take authorization was processed electronically.

Sincerely,



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

cc: Greg Sieglitz



## Authorizations and Permits for Protected Species (APPS)

File #: 23654

Title: Renew: Estimating abundance, survival and gro

### Applicant Information

**Name:** Chris Jordan  
**Title:** Program Manager  
**Affiliation:** NMFS Northwest Fisheries Science Center, Conservation Biology  
**Address:** c/o US EPA , 200 SW 35th St  
**City,State,Zip:** Corvallis, OR 97333  
**Phone Number:** (541)754-4629  
**Email:** chris.jordan@noaa.gov

### Project Information

**File Number:** 23654  
**Project Number:** NWFSC100  
**Application Status:** **Application Complete - Permits Pending**  
**Project Title:** Renew: Estimating abundance, survival and growth rates of juvenile and adult summer steelhead and spring/summer Chinook salmon for select populations in the Mid-Columbia and Snake River ESUs  
**Project Status:** Renewal  
**Previous Federal or State Permit/Authorization:** [23071](#)  
**Permits/Authorizations Requested:**

- Determination of Take Authorization under a Biological Opinion - Issued
- Oregon Scientific Taking Permit for Fish and Marine and Freshwater Invertebrates - In Progress

*PLEASE NOTE: Oregon Scientific Taking Permits only cover take and transport in the state of Oregon. It is the applicant's responsibility to obtain the necessary permits from all other states that may be associated with this project.*

<b>Where will activities occur?</b>	Oregon (including Columbia River and offshore waters) Washington (including Columbia River and offshore waters)
<b>State department of fish and game/wildlife:</b>	N/A
<b>Research Timeframe:</b>	<b>Start:</b> 05/01/2020 <b>End:</b> 12/31/2020
<b>Sampling Season/Project Duration:</b>	Juvenile sampling will occur seasonally: June - August, or Summer sampling period; and October - November, or Fall sampling period.
<b>Project Type(1):</b>	Academic Research
<b>Project Type(2):</b>	Management/Applied Research
<b>Project Type(3):</b>	Monitoring

### Project Description

**Purpose:** Stream habitat restoration projects initiated under the Integrated Status and Effectiveness Monitoring Program (ISEMP, 2003-017-00) are ongoing after the majority of the tasks in this large-scale collaborative effort to implement Status and Trends Monitoring for salmon and steelhead populations and their habitat, and watershed-scale Effectiveness Monitoring for management actions impacting salmon and steelhead populations and habitat in the Interior Columbia River Basin. This program was initially developed in 2002 in as a product of the NOAA-Action Agency RME workgroup developing implementation plans for the 2000 FCRPS Biological Opinion and has been maintained as a necessary evaluation component during all consultations regarding the FCRPS from 2002 to present.

ISEMP took a pilot-project approach to the development of monitoring by implementing experimental programs in several major subbasins of the Interior Columbia: the Wenatchee, Entiat, Asotin, John Day, South Fork Salmon and Lemhi River basins. The overall goal of the project continues to be to provide regional salmon management agencies with the data, information and tools necessary to design efficient and effective monitoring programs. The ongoing work covered by this sampling permit application addresses the design and implementation of watershed-scale restoration actions to maximize both the biological impact and associated learning opportunities resulting from the design and implementation strategy. Through its work to date, the project and its subsequent spin-off programs, has developed expertise in the coordination and implementation of large-scale monitoring data collection programs.

**Description:** One of the major goals of this project is to implement a standard set of fish monitoring methods (a mark-recapture study using PIT tags) in the interior Columbia River basin that will maximize the information content of the fish monitoring data through coordinated, standardized implementation of a single fish monitoring protocol (see attached Lemhi sampling protocol as an example). The data will be used to evaluate the abundance, growth, and survival of tributary fish populations in each subbasin (Wenatchee, Entiat, Methow, Asotin, John Day, Lemhi, Secesh). When combined with parallel habitat monitoring metrics from the habitat status and trends monitoring proposed in the Columbia Habitat Monitoring Program (CHaMP, a Columbia River basin wide habitat status and trends monitoring program built around a single habitat monitoring protocol), these data will be used to assess the impact of habitat management actions on fish population processes and determine the mechanistic relationships between fish and habitat. This program will result in systematic habitat and fish status and trends information that will be used to assess basin-wide habitat condition and correlated with biological response indicators to evaluate habitat management strategies. Making progress in linking habitat quality and quantity to fish population processes requires minimizing sampling and measurement error and maximizing information content in fish monitoring metrics. The former is an issue dealt with best by rigorous sampling design and the latter through the development and implementation of a mark-recapture study.

With the proliferation of automated instream PIT tag antennas in the Snake , John Day, Wenatchee and Entiat River Basins, the ability of agencies to estimate age based juvenile and adult population sizes, migration rates, and population productivity has greatly increased. For example, steelhead populations which are difficult to sample because the adult migration is during extreme flow conditions are now accessible because of the instream antennal arrays and the tagging opportunity both by increasing juvenile tagging rates and tagging of adults at Bonneville, Priest Rapids and Lower Granite Dam, as well as smaller, more focused fish trapping efforts. Instream arrays have been placed in many streams and ISEMP has placed mainstem arrays in many

major SF Salmon, SF John Day, Wenatchee, Enitat, and Lemhi River watersheds. By PIT tagging juveniles, we can utilize these arrays to estimate many characteristics of fish populations including stray rates, hatchery wild fractions, abundance at age and stage specific survival rates. However, capture of juveniles for tagging has the potential to result in take, in particular, disturbing / harassing adults holding in streams prior to spawning. For this reason, take (level 1) was requested for adults in each location where juvenile e-fishing occurs.

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### Biological Opinion

<b>Biological Opinion:</b>	2019 CRS Bi-Op
<b>Objectives:</b>	<ul style="list-style-type: none"><li>• Life History</li><li>• Survival Monitoring</li></ul>
<b>Justification:</b>	The 2019 FCRPS biological opinion identifies the need for juvenile and adult monitoring in focal watersheds, and most importantly, as data collection to support the evaluation of the effect of stream restoration actions.
<b>Review:</b>	The monitoring activities associated with the restoration work in Bridge Creek (OR) and Asotin Creek (WA) have undergone positive ISRP and SRFB review in 2003, 2006, and 2010. Much of the data collection on abundance and survival of juvenile salmonids in Columbia River tributaries have supported analyses on the role stream habitat quality and quantity that have been published in the peer reviewed scientific literature.

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### Supplemental Information

<b>Methods:</b>	<p>Three collection methods will be used: electrofishing, snorkel herding/seining, and angling. To manage tagging and handling data, each collection method will be separated by a new record in the fish encounter screen of the data management system, at each site sampled. All pertinent information about each site and each data collection event will be recorded in the data logger. If a data logger is not available, sampling information will be recorded on the field data sheets. Fish will be held in live boxes and/or aerated 20-liter buckets in which water will be frequently refreshed. Fish will be tagged and released immediately upon recovering from anesthetic. To minimize collection stress, all fish collection, handling, and tagging activity will occur at water temperatures of less than 17° C, and will cease when any other occurrence suggests fish are being stressed.</p> <p>Sites where multiple methods can be employed, different sequences of methods should be used. In streams where snorkel herding and seining can be employed where the seines reach completely across the habitat units, angling should be done first, followed by seining, and finally by electrofishing. In streams where seining can only reach parts of habitat units because of safety or habitat complexity (pocket water), snorkel herding and seining should occur first, and while crews are working up the collected fish, angling can occur, and then electrofishing. Fish from each capture method and pass needs to be kept separated.</p> <p>Fish will be PIT tagged using individual modified 100cc syringes and 1 1/2", 12ga hypodermic needles (Prentice et al. 1990). Implantation of PIT tags into juvenile salmonids will follow protocol set forth by the PIT tag Steering Committee (CBFWA 1999). Use two PIT tag sizes, 12mm and 9mm, depending on the size of the fish. To minimize disease transmission, disinfect all tags and all associated equipment for a minimum of 10 min with isopropyl alcohol. Fish will be transported from live boxes to the streamside tagging station in aerated, 20-L buckets with lids. Fish will be transferred from buckets to an anesthetic solution of tricaine (MS222, final concentration of about 40 mg/L) and sodium bicarbonate to help buffer the acidic properties of the MS222. After anesthesia, fish will be sorted to remove fish of other species and target species not suitable for tagging (i.e. injured or too small), allowed to recover, and released back to the stream (after all ongoing sampling has been completed). Only anesthetize enough fish you can process in 30 minutes or less dependent on additive stress variables. The start and stop times and temperatures will be recorded in the data logger or a data sheet if necessary.</p> <p>The workflow for all target species is as follows. Fish will be scanned with a Digital Angel FS2001, or a Biomark 601 PIT tag reader to check for recaptures. Each fish will be measured, recording fork length (to nearest mm), weight (to nearest 0.1 g), species, and any injuries for each fish. Then each untagged fish will be injected with a PIT tag following</p>
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procedures published by PTAGIS. Each tagged fish will be scanned with the reader and the tag information recorded. If appropriate, genetics samples will be collected and recorded according to the instructions provided. After tagging, fish will be allowed to recover in fresh water, transferred them back to a live cage in the stream, and held for a minimum of 0.5 h before release as close as possible to the location where they were collected.

Because there is a potential to encounter adult salmonids holding in areas deemed to be juvenile rearing habitat, we have put watershed specific guidelines in place to avoid interacting with adult ESA-listed salmonids and redds. The take associated with these activities are included in Table 1 and 2 and the methods are included following the application (See attached file).

Remote-site surveys enable us to determine juvenile distribution and survival prior to emigration as a function of the habitat occupied by those juveniles, while Rotary Screw Traps generate estimates of total emigration. Both types of information are important for determining the effect habitat quality and quantity has on population processes (capacity and survival) and how and to what extent habitat restoration might improve freshwater productivity. However, in some cases, fish begin migrating out of their natal tributary environment within their first summer, and as such, are at the lower size limit for tagging. Given the importance of the need to associate fish survival with habitat conditions, it is necessary to be able to sample these individuals. Therefore, we have also included in this application a request to tag these fish (See attached file).

**Intentional Lethal Take:** Not Applicable

**Anticipated Effects on Animals:** Handling and tagging juvenile salmonids is known to have negative impacts such as direct mortality due to handling stress and tagging and capture injuries, delayed growth for days to weeks post tagging, and potentially reduced survival through their life cycle as indicated by lower return rates as adults or lower recapture rates at later life stages. While these effects are real, all efforts possible to minimize these effects and to keep them below a level that is thought to impact population dynamics are implemented. There is concern that capturing, handling and tagging small, young of the year, juveniles, is of particular concern. We have used our extensive data collection over the past 5 years to evaluate tagging impacts on smaller size classes and to date, cannot detect differential mortality due to size at tagging (see attached file).

**Measures to Minimize Effects:** Handling and tagging juvenile salmonid is known to have negative impacts directly on the fish handled, as well as indirectly due to the disturbance in the stream habitat during capture and release activities. Project personnel are all trained in fish capture and handling techniques as specified by the PSMFC PIT tagging guidance and the NOAA electrofishing guidelines. In addition, all terms and conditions for capturing, handling and tagging juvenile salmonids are strictly adhered to with respect to water temperature, holding conditions and release timing and location. The project has developed guidelines for mitigating impacts on holding and spawning adult salmonids (see attached file) during juvenile sampling and PIT tag antenna operation and maintenance activities.

**Disposition of Tissues:** Tissues samples, primarily scale samples, are taken from juvenile salmonids when captured and handled. Age structure for outmigrating steelhead are determined from these scales by USFWS in the Entiat, and ODFW from the John Day. Tissue samples for genetic analysis are collected when collaborating with co-managers, though are not a regular part of the sampling protocol. Tissue samples are archived with NOAA/NWFSC in Seattle.

**Public Availability of Product/Publications:** All PIT tagging records are publicly available through the PSMFC PTAGIS website. All study design and project reports and publicly available through the project web site ([www.isemp.org](http://www.isemp.org)) or the Bonneville Power Administration EFW website ([www.efw.bpa.gov](http://www.efw.bpa.gov)) for project #2003-017.

Biologist Comments

Date	From	Comments
12/20/2019	Stephan Charette	The John Day District supports efforts such as these which aid in a better understanding and correlation of fish abundance response to restoration actions within the Basin.

12/24/2019	Fish Research	As a condition of this permit, ODFW requests the permittee provide the State Fisheries Geneticist, Dr. Kathleen O'Malley with: 1) electronic copies of the raw genetic data AND 2) a detailed description of the methods and conditions used to generate the genetic results OR 3) copies of reports or publications utilizing information obtained from these samples For questions regarding this request, please contact Dr. Kathleen O'Malley via email: Kathleen.omalley@oregonstate.edu.
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Federal Information

Federal Agency	Type	Authorization Number and Title	Date Signed	Expiration Date	Listing Units/Stocks Covered	Comments
U.S. Fish and Wildlife Service (FWS)	Section 10 permit	TE67017A-2 Recovery permit to sample Bull Trout	07/24/2018	07/23/2021	Bull Trout, Range-wide (USFWS Threatened)	no bull trout take in oregon, only washington

Location/Take Information

**Freshwater Location**  
**Research Area:** Pacific Ocean **State:** WA **Sub Basin (4th Field HUC):** Lower Snake-Asotin **Stream Name:** Asotin River basin  
**Sale in Oregon of species taken:** None  
**Location Description:** Wadeable streams that are accessible to anadromous salmonids.

Take Information

Line	Ver	Species	Listing Unit/Stock	Production /Origin	Life Stage	Sex	Expected Take	Indirect Mort	Take Action	Observe /Collect Method	Procedure	Run	Transport Record	Begin Date	End Date
1		Steelhead	Snake River Basin (NMFS Threatened)	Natural	Adult	Male and Female	50	0	Observe/Harass	Fish or a stream survey (where fish information is collected)		Summer	N/A	5/1/2020	12/31/2020
<b>Details:</b> for harassment of adults while efishing for juvs															
2		Steelhead	Snake River Basin (NMFS Threatened)	Natural	Juvenile	Male and Female	7700	77	Capture/Handle/Release Fish	Electrofishing, Backpack		Summer	N/A	5/1/2020	12/31/2020
3		Steelhead	Snake River Basin (NMFS Threatened)	Natural	Juvenile	Male and Female	5500	55	Capture/Mark, Tag, Sample Tissue/Release Live Animal	Electrofishing, Backpack	Anesthetize; Tag, PIT; Tissue Sample Fin or Opercle; Tissue Sample Scale	Summer	N/A	5/1/2020	12/31/2020
4		Salmon, Chinook	Snake River spring/summer-run (NMFS Threatened)	Natural	Adult	Male and Female	50	0	Observe/Harass	Fish or a stream survey (where fish information is collected)		Spring/Summer	N/A	5/1/2020	12/31/2020

5		Salmon, Chinook	Snake River spring/summer-run (NMFS Threatened)	Natural	Juvenile	Male and Female	100	1	Capture/Handle/Release Fish	Electrofishing, Backpack		Spring/Summer	N/A	5/1/2020	12/31/2020
6		Salmon, Chinook	Snake River spring/summer-run (NMFS Threatened)	Natural	Juvenile	Male and Female	100	1	Capture/Mark, Tag, Sample Tissue/Release Live Animal	Electrofishing, Backpack	Anesthetize; Tag, PIT; Tissue Sample Fin or Opercle; Tissue Sample Scale	Spring/Summer	N/A	5/1/2020	12/31/2020
7		Steelhead	Snake River Basin (NMFS Threatened)	Natural	Adult	Male and Female	1	0	Observe/Harass	Electrofishing, Backpack		Summer	N/A	5/1/2020	12/31/2020
		<b>Details:</b> for harassment of adults while efishing for juvs													
8		Salmon, Chinook	Snake River spring/summer-run (NMFS Threatened)	Natural	Adult	Male and Female	1	0	Observe/Harass	Electrofishing, Backpack		Spring/Summer	N/A	5/1/2020	12/31/2020

Project Contacts

Primary Contact: Chris Jordan

Principal Investigator: Chris Jordan

Other Personnel	
Name	Role(s)
Stephen N Bennett	Co-Investigator
Nick Bouwes	Co-Investigator
Gus Wathen	Co-Investigator
Nicholas Peter Weber	Co-Investigator

Attachments

- Application Archive - (Added Apr 20, 2020)
- Certification of Identity - (Added Dec 20, 2019)
- Project Description - (Added Dec 20, 2019)
- Project Description - (Added Dec 20, 2019)
- Project Description - (Added Dec 20, 2019)

Status

Application Status:

Date Submitted:

Date Completed:

Last Date Archived:

Application Complete  
January 8, 2020  
April 20, 2020  
April 20, 2020

• Determination of Take Authorization under a Biological Opinion

Current Status:

Issued

Status Date:

April 20, 2020

Expire Date:

December 31, 2020

Analyst Information:

Josie Thompson

Phone: (503)231-2313  
Email: Josie.Thompson@noaa.gov

• Oregon Scientific Taking Permit for Fish and Marine and Freshwater Invertebrates

Current Status:

In Progress

Status Date:

April 20, 2020

Expire Date:

Modification Requests

This section is currently empty.

Reports

Report Required						
Nbr	Report Type	Report Period		Date Due	Status	Date Received
		Start Date	End Date			
1	Annual	05/01/2020	12/31/2020	01/30/2021	N/A	