

**National Marine Fisheries Service
ESA Section 10(a)(1)(A) Permit for Take of
Endangered/Threatened Species**

Permit Number: 18024

Permit Type: Scientific Research/Enhancement

Program Name: Operation, monitoring, and evaluation of the Tucannon River endemic spring Chinook salmon program in Southeast Washington and ongoing monitoring of natural populations of salmon in the Tucannon River basin.

Expiration Date: December 31, 2027

Permit Holders:

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Authorization

The Washington Department of Fish and Wildlife (WDFW) and U.S. Fish and Wildlife Service (USFWS), referred to as the Permit Holders, are hereby authorized to take threatened Snake River spring/summer Chinook salmon (*Oncorhynchus tshawytscha*). In addition, Snake River fall Chinook salmon (*O. tshawytscha*) and Snake River Basin steelhead (*O. mykiss*) may be encountered during program operations; however, take coverage is provided in separate permits for the Hatchery and Genetics Management Plans (HGMPs) provided for each of these species.

The program is primarily funded by the USFWS through the Lower Snake River Compensation Plan (LSRCP) which was approved by the Water Resources Development Act of 1976, (Public Law 94-587, Section 102, 94th Congress) to mitigate losses caused by the construction and operation of the four lower Snake River dams and navigation lock projects. LSRCP funds are programmed for operations and maintenance needs at related/associated facilities, and numerous research, monitoring, and evaluation activities, as identified in approved annual statements of work.

The operators or co-managers are WDFW, the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) and the Nez Perce Tribe (NPT). The activities are described in detail in the application submitted by the WDFW, and are subject to the provisions of Section 10(a)(1)(A) of the Endangered Species Act of 1973 (ESA) (16 U.S.C. 1531 *et seq.*), the National Marine Fisheries Service (NMFS) regulations governing ESA-listed species permits (50 CFR Part 222-226), and the conditions hereinafter set forth. The HGMP describing the action was developed by WDFW with cooperation from the CTUIR and NPT (WDFW 2011).

Permit Description

The Permit Holders and their agents are authorized to take adult and juvenile, threatened Snake River spring/summer Chinook salmon to enhance the propagation and survival of the species. The take of threatened Snake River fall Chinook salmon and Snake River steelhead in the Tucannon River is or will be covered in take allowances in separate permits (Fall Chinook Permit #16607, Tucannon Summer Steelhead Permit – not completed yet).

As a key component of the program management, the HGMP submitted for consideration under section 10(a)(1)(A) of the ESA includes an abundance-based sliding scale that guides adult management at the Tucannon adult trap and weir. It allows a proportion of fish from the hatchery program to escape upstream and spawn naturally based on returns of natural-origin fish to the basin. It also specifies the proportion of natural-origin fish to be incorporated into hatchery broodstock. Both portions of the scale (broodstock use and escapement) are designed to guide hatchery genetic influence within the population, while balancing the demographic risk of extirpation.

The existing Tucannon adult trap and weir has had some operational difficulties (fish have been able to pass the weir without being captured), which has complicated broodstock collection and adult escapement monitoring. The intent is to operate the adult trap and weir to allow broodstock collection across the run. Annual estimates of natural-origin run size based on pre-season and in-season information will involve considerable uncertainty, and may involve in-season adjustments. In addition, the Tucannon population has experienced ongoing difficulty with homing fidelity and pre-spawn mortality for both hatchery- and natural-origin adults, which further complicates accurate forecasting. The complexities of run forecasting, adult return issues, and difficulties with weir management may also involve operating according to the best information available at the time, though it may not be perfect. Therefore, annual management of the broodstock composition may exceed or not meet specific targets with respect to the sliding scale. However, on average, NMFS expects the program to be managed according to the sliding scale described in the HGMP and outlined in conditions below.

This Snake River spring/summer Chinook salmon hatchery program will be operated continuously from the date of this permit through December 31, 2027; however, the coverage provided by this permit is contingent on compliance with the management commitments provided in the HGMP, as well as the provisions in the Take Description and Levels, Take Limits, Special Conditions, Permit Reporting and Reauthorization Requirements, and General Conditions described below.

Description of Proposed Action

The Tucannon River spring Chinook program goal is 1) conservation: The immediate short-term goal of the program is to prevent extinction of the population and contribute to the rebuilding of the population for de-listing, and 2) mitigation: The long term goal of the LSRCP program is to return 2,400 hatchery- and natural-origin fish back to the Tucannon River, though a goal identified by the Nez Perce Tribe (NPT 2013) is to return 3,400 total adults. The goal includes at least 750 natural origin fish over a 10-year geometric mean (population viability threshold). Through 2008-2017 *U.S. v. Oregon*, an agreement was made between the four Columbia River Treaty Tribes, States, and Federal agencies to release 225,000 yearlings at the Curl Lake acclimation facility on the Tucannon River (*U.S. v. Oregon* 2009).

Artificial production of Snake River spring Chinook salmon occurs through a single program managed and monitored using multiple sites and facilities: (1) The Tucannon Fish Hatchery; (2) the Lyons Ferry Hatchery; (3) the Curl Lake Acclimation Pond; (4) the Tucannon River adult trap and weir; (5) the Tucannon River screw trap; and (6) at multiple sampling locations throughout the basin that vary annually to monitor adult returns and juvenile abundance. Activities occurring for the Tucannon River spring/summer Chinook program occurring at these facilities and locations are covered under this permit. In addition, spring Chinook salmon that are identified as hatchery-origin fish from this program may be removed at weirs throughout the Snake River basin for brood needs and/or killed for adult management. The program is operated by the WDFW in coordination with co-managers NPT and CTUIR, and is highly coordinated and funded through the LSRCP.

In most years, all adult spring/summer Chinook salmon needed for the program are collected at the Tucannon River adult trap and weir; however it is possible that some adults may be collected at the Lyons Ferry Hatchery trap if they can be positively identified as Tucannon River stock and are needed for the broodstock program. Annually, this program produces up to 225,000 juveniles, which are released as yearlings from an acclimation pond (Curl Lake) into the Tucannon River. A key component of the program is also the implementation of a sliding scale, which controls the genetic contribution of the hatchery program within the Tucannon River population by managing proportions of hatchery-origin fish in the broodstock.

This permit covers several activities related to the production, monitoring, and evaluation of the Tucannon River spring/summer Chinook salmon hatchery program as well as status monitoring of the associated natural population. These activities include:

- The collection and sampling of adult spring/summer Chinook salmon at the Tucannon River trap and weir and Lyons Ferry Hatchery ladder for hatchery broodstock.
- Closely monitoring fish escapement in the natural spawning population.
- Collection and transport of adults to Lyons Ferry Hatchery for holding and spawning, in addition to those used for outplanting back into the Tucannon River for natural spawning.
- Integrating natural-origin fish into the broodstock as defined in the sliding scale.

- All sampling, tagging, and monitoring of fish reared as part of the program.
- Research, monitoring, and evaluation (RM&E) activities associated with the Tucannon River spring Chinook Program and with assessing natural population status and trends.
- Incubation, marking, rearing, tagging, transport, acclimation, and release of juveniles.

RM&E activities include use of a trap and weir, screw trap, beach seines, hand nets, and electroshockers. Fish may be anesthetized, tagged, measured, and biological samples taken (such as scales and fin clips) prior to release. Both juvenile and adult fish may also be observed during spawning ground and snorkel surveys. Spawning surveys will also be conducted in the Tucannon River and Asotin annually to determine spawner abundance, spawning density, adult distribution and proportion of hatchery-origin fish in the wild, which is critical to monitoring hatchery program compliance with this permit and performance. Because all fish encountered or handled during spawning ground surveys will be dead or moribund, NMFS does not apply a maximum level of fish that may be handled during those surveys. The Permit Holders may collect and possess tissue samples from unlimited salmon carcasses collected during these surveys.

Take Description and Levels

This permit authorizes the Permit Holders, program operators, and their agents for annual take of ESA-listed species, as described in the HGMPs submitted by the operators and further detailed below and further detailed below.

A. Take Limits

There are three general categories for direct take that is authorized by this permit:

- (1) Direct take of Snake River spring/summer Chinook salmon associated with fish culture activities, including: adult broodstock and juvenile collection, capture, handling, transport, and lethal spawning; lethal health exam sampling; tagging and biological sampling; and release of juveniles.
- (2) Direct take of Snake River spring/summer Chinook salmon associated with RM&E activities, including tagging and biological sampling, and monitoring of escapement of adult hatchery-origin spring Chinook salmon to natural spawning areas.

The maximum take levels by various life stages, origin (natural or hatchery), facility, and activities associated with culture of Snake River spring/summer Chinook salmon are shown in Table 1. Take levels for collection of hatchery broodstock will be guided by sliding scale identified in Appendix A in the HGMP (WDFW 2011) as well as the description of broodstock collection in Section 1.11 of the HGMP. The take level from the release of hatchery-origin spring Chinook salmon will also vary annually based on the number of fish in the hatchery facility in any year based on the availability of broodstock and juvenile survival for hatchery production. The hatchery program release goal is 225,000 fish annually. The maximum take levels for concurrent RM&E of Snake River spring/summer Chinook salmon captured, handled, and tagged during RM&E activities are shown in Table 2. If the take levels are exceeded in any

given year, NMFS must be notified according to the reporting requirements in Section C. of this permit, and will evaluate program modification or the need to reinitiate consultation at that time.

In addition, spawning ground surveys will be conducted annually to determine spawner abundance, spawning density, adult distribution, and proportion of hatchery-origin fish in the wild, which is critical to monitoring hatchery program compliance with this permit and performance. Because all fish encountered or handled during spawning ground surveys will be dead or moribund, NMFS does not apply a maximum level of fish that may be handled. The permit holders may collect and possess tissue samples from unlimited salmon carcasses collected during these surveys.

For purposes of this permit, “Adipose fin-clipped” refers to all fish that have their adipose fin intentionally removed for identification of fish produced in a hatchery setting. “Adipose fin-clipped” also refers to all fish, destined to have their adipose fin removed at a later date as part of the program prior to the action of clipping. “Adipose fin intact” salmon include both natural-origin fish and hatchery-origin fish that have not been clipped.

Table 1. Permissible direct take of listed Snake River spring/summer Chinook salmon for fish culture purposes for the Tucannon River program. NMFS must be notified within two days if the number handled, tagged, or killed are exceeded.

Tucannon Hatchery-related Chinook Take					
Species and Lifestage	Take Activity	Capture Method and Location	Total Number Handled annually	Number of those handled that are marked/tagged annually (1% trap mortalities)	Total Number Killed or removed annually
SR spring/summer Chinook salmon Adult over 61 cm - Natural-origin	Capture, handle, tag, tissue sample. Remove for transport, holding, and outplanting in Tucannon River, Remove for use for broodstock, or release live animal (pass above weir)	Tucannon River Adult Weir and Lyons Ferry Hatchery ladder ²	2,000	Up to 1,824 ¹ (passed live with fin-clip or operculum punch, PIT and/or radio tagged)	Up to 232 ¹ broodstock and fish used for outplants Plus up to 19 adult trap mortalities
SR spring/summer Chinook salmon Non-juvenile under 61 cm - Natural-origin	Capture, handle, tag, tissue sample. Remove for transport, use for broodstock, or release live animal (pass above weir)	Tucannon River Adult Weir and Lyons Ferry Hatchery ladder ²	200	Up to 200 (passed live with fin-clip or operculum punch, PIT and/or radio tagged)	Up to 9 broodstock Plus up to 2 trap mortalities
SR spring/summer Chinook salmon Adult over 61 cm - Adipose fin-clipped or otherwise identifiable as hatchery-origin	Capture, handle, tag, tissue sample. Remove for transport, holding and outplanting in Tucannon River, remove for use for broodstock, remove for adult management or release live animal (pass above weir)	Tucannon River Adult Weir and Lyons Ferry Hatchery ladder ²	1,400 ¹ (up to 132 removed for broodstock based on sliding scale)	Up to 1,400 ¹ (passed live with fin-clip or operculum punch, PIT and/or radio tagged)	Up to 232 ¹ broodstock and fish held for later outplanting Up to 100% of total handled may be removed, killed, or transported for adult management or outplanting as described in the HGMP
SR spring/summer Chinook salmon Non-juvenile under 61 cm - Adipose fin-clipped or otherwise identifiable as hatchery-origin	Capture, handle, tag, tissue sample. Remove for transport, use for broodstock, remove for adult management or release live animal (pass above weir)	Tucannon River Adult Weir and Lyons Ferry Hatchery ladder ²	500	Up to 135 (more may be passed to mimic natural-origin jack proportions, with NMFS concurrence) (passed live with fin-clip or operculum punch)	Up to 9 broodstock Up to 100% of remainder may be removed, transported, or killed for jack management as described in the HGMP
SR spring/summer Chinook salmon Juvenile and egg - Hatchery-origin (regardless of fin-clip)	Capture, handle, tag, tissue sample, and release live animal (within hatchery sampling, and research use)	Tucannon Hatchery or Lyons Ferry Hatchery total	280,125 (Maximum eggs/juveniles on hand annually prior to any juvenile rearing loss)	280,125	Up to 55,125 total rearing mortality (which may include sampling and research requirements related to program goals and management)
SR spring/summer Chinook salmon Juvenile- Hatchery-origin (regardless of fin-clip)	Capture, sample, kill (Fish health examinations)	Tucannon Hatchery or Lyons Ferry Hatchery total	170	170	170

¹The actual number taken annually will be subject to the sliding scale identified in Table 1 (Section 1.11) in the HGMP, in addition to fish that are collected, held and used for adult outplants in the Tucannon, but may die while holding, or be used as part of the broodstock, and shall not exceed the totals of each origin identified there.

² In years when returns to Tucannon Hatchery are low, adult Chinook arriving at Lyons Ferry Hatchery ladder that are identifiable as Tucannon River hatchery adults may be taken for broodstock.

Table 2. Permissible direct take of Snake River spring/summer Chinook salmon for RM&E activities associated with the Tucannon River Chinook salmon program not directly related to fish culture. NMFS must be notified within two days if the number handled, tagged, or killed are exceeded.

Tucannon RM&E Chinook Take					
Species and Lifestage	Take Activity	Capture Method and Location	Total Number Handled annually (0.5% handling mortalities)	Number of those handled that are marked/tagged annually (1% handling mortalities)	Total Number Killed or removed annually
SR spring/summer Chinook salmon Juvenile - Natural-origin	Capture, handle, tag, tissue sample, and release live animal	Trapping operations that include a screw trap, beach seines, cast nets, dip nets, and use of backpack electroshock equipment throughout Tucannon River	18,000	7,000	Up to 160
SR spring/summer Chinook salmon Juvenile - Hatchery-origin (regardless of fin-clip)	Capture, handle, tag, tissue sample, and release live animal	Trapping operations that include a screw trap, beach seines, cast nets, dip nets, and use of backpack electroshock equipment throughout Tucannon River	35,000	7,000	Up to 245
SR spring/summer Chinook salmon Adult and Jack - Natural-origin	Capture, handle, tag, tissue sample, and release live animal	Adult and jack fall back at screw traps	5	5 (genetic fin-clip or operculum punch – release live)	Up to 2*
SR spring/summer Chinook salmon Adult and Jack - Hatchery-origin (regardless of clip)	Capture, handle, tag, tissue sample, and release live animal	Adult and jack fall back at screw traps	10	10	Up to 2*

* In cases where total number killed is not likely to exceed one (1) mortality, NMFS rounds the total mortality up to two (2), so that operations are not halted completely at the first mortality.

A. Special Conditions

Annual Planning

1. The Permit Holders must participate in a coordinated annual planning process to review the operation of and anticipated changes to the trapping and sampling program. Co-managers will develop annual operation plans (Lyons Ferry AOP) for this program that is consistent with permit conditions and the current version of the *U.S. v. Oregon* Management Agreement.
 - a. The Lyons Ferry AOP, and a pre-season broodstock collection protocol will include designs to meet goals identified in the sliding scale.
 - b. Collection protocols will include a plan for estimating weir efficiency and/or estimating passage of adults when the weir is not capturing 100% of the run.
 - c. The Permit Holders will also coordinate during the adult run to review updated in-season run projections and revise weir management plans as necessary.
 - d. Annual operation plans and broodstock collection protocols will be shared with NMFS once completed.

Broodstock Collection (at Tucannon River trap)

2. The Permit Holder(s) and/or their agents may collect Chinook salmon from the adult trap on the Tucannon River, and the ladder at Lyons Ferry Hatchery, annually from approximately April 15 through September 30 annually, provided that:
 - a. Proportions of hatchery- and natural-origin adults collected for broodstock is consistent with levels defined in the sliding scale (WDFW 2011), as measured by using post-season estimates, to confirm that in at least three of the previous five years the proportion of natural-origin Chinook salmon incorporated into the broodstock was consistent with the sliding scale. Data collection for this performance criterion will begin in 2016.
 - b. The post season estimate of proportions of hatchery-origin adults above the weir (total escaped and released), is monitored and recorded so that it can be useful in any future management decisions for this population. Data collection for this performance criterion will begin in 2016.
3. The co-managers will describe a plan outlined annually in the AOP and/or in the Broodstock Collection Protocol for sorting and passage to minimize or avoid trap crowding as well as passage delays of more than 24 hours.

- a. During operation of the weir and adult trap, the trap will be checked and the fish will be either collected and transported or passed upstream at least once every 24 hours.
 - b. If more than 50 adults are processed in the trap during the morning check, then staff will check the trap 1-2 more times that day, with fish being collected and transported or passed upstream.
 - c. If mortality exceeds the levels identified in Table 1, the co-managers will review daily trap capacity limits, and trap operation schedules, and proposed modifications if necessary.
4. The Permit Holders shall determine when river flow conditions or bull trout passage concerns limit the ability to sample fish at the weir within 24 hours. If fish cannot be passed using normal protocols, free passage will be provided to prevent fish from being entrapped or delayed for long periods at the weir.
 - a. If free passage must be provided, co-managers will attempt to monitor escapement of hatchery- and natural-origin Chinook salmon to monitor escapement of hatchery- and natural-origin Chinook salmon.
 5. The Permit Holders and/or their agents may capture, handle, and remove spring Chinook salmon, as specified in HGMP, and in Table 1 and Table 2 of this permit, and as described in the sliding scale identified in Appendix A in the HGMP (WDFW 2011).
 6. The Permit Holder(s) ensure that infrastructure and management are achieving adult management objectives for escapement above the weir using the adult sliding scale (Appendix A of the HGMP), and consistent with the supplementation effectiveness monitoring objectives identified in section 1.10, Table 1, of the HGMP.
 - a. Broodstock collection will occur throughout the entire adult return, with the intent of spawning adults that represent the entire run.
 7. If ESA-listed salmon are anesthetized to avoid injuring or killing them during handling, the fish must be allowed to recover before being released. Fish may be handled without anesthetization if handling and sampling can be done without injuring them (e.g., if they are only counted), and they must remain at all times in or above the water in which they are to be released.
 8. ESA-listed salmon must be handled with extreme care and kept in water to the maximum extent possible during sampling and processing procedures and during handling and passage upstream. Adequate circulation (as identified by dissolved oxygen content) and replenishment of water in holding units is required. When a mix of species is captured, ESA-listed salmon must be processed first, including those passed upstream to spawn naturally.

9. The Permit Holder(s) and/or their agents may capture, handle, measure, tag, and collect tissue samples (fin clips, opercular punches, scales, and blood) from live Snake River spring/summer Chinook salmon. Otoliths, head cartilage, or whole snouts may be taken from spring Chinook salmon used for hatchery broodstock as well as any carcasses discovered during spawning ground surveys as well as mortalities from trap/weir or screw-trap operation. Tissue samples and/or scales collected during the activities authorized above may be collected and/or transferred to WDFW, ODFW, the NPT, CTUIR, the Idaho Department of Fish and Game, the Columbia River Intertribal Fish Commission, NMFS laboratories, or state or Federal fish health laboratories for analysis and/or archive. Tissues of collected animals are the responsibility of the Permit Holders and remain so as long as they are useful for research purposes. Transfer of the tissues from the Permit Holder(s) to researchers other than those listed above requires written approval from the Branch Chief, Anadromous Production and Inland Fisheries Branch, Sustainable Fisheries Division, NMFS West Coast Region.
10. The ESA-listed salmon used for research/enhancement activities may only be taken by the means, in the areas, and for the purposes set forth in the application and modification requests, as limited by the terms and conditions specified in this permit.

Fish Culture

11. Fish culture, including collection, transport, holding and spawning of broodstock, incubation of eggs, ponding and rearing (including acclimation where specified), fish health examinations, clipping (marking) and tagging and necessary transportation shall be as described in the HGMP(s) and annual operation plans. In addition, the co-managers may collect, transport and hold at Lyons Ferry a portion of natural-origin adults and jacks returning the Tucannon River prior to returning them to the Tucannon River for natural spawning. NMFS recognizes the need for management flexibility, so minor deviations consistent with best management practices, conforming to the intent of the program, and are consistent with effects already considered in this consultation, may be permitted upon request.
12. In addition to reporting required for exceeding overall take as described in the above tables, co-managers will notify NMFS within two working days of:
 - a. Any single event in which the handling of a minimum of 100 adults or 1,000 juveniles results in mortality that exceeds 10% of those handled.
 - b. Any single event not related to handling but resulting in the mortality of 100 juveniles or 10 adults, such as equipment failure, disease outbreaks, or other operational difficulties.

Juvenile Releases

13. The Permit Holder(s) and/or their agents shall release juvenile Snake River

spring/summer Chinook salmon consistent with the numbers, release stages, release locations, and marking described in Table 13 and sections 10.2, 10.3, and 10.7 of the Tucannon spring/summer Chinook HGMP. Releases may begin as early as March 1 and last through end of April annually. Juvenile release levels will be dependent on obtaining adequate returns of broodstock, maintaining adequate facility rearing space, and funding. NMFS recognizes the need for management flexibility, so minor annual deviations consistent with best management practices, conforming to the intent of the program, and are consistent with effects already considered in this consultation, may be permitted upon request. However:

- a. Co-managers will collect broodstock annually with the intent to produce 225,000 smolts for release, as identified in the program HGMP and *U.S. v. Oregon* Production Table B1.
- b. Although the annual program goal is a release of 225,000 smolts annually, to allow for annual survival variability, production above program targets may be released provided that:
 - i. Fish will not be released at locations or at life stages other than those described in the HGMP, without the express approval of NMFS. Alternative locations will be approved only if the impact is deemed to not exceed that determined in the effects analysis in the biological opinion.
 - ii. The smolt number released will not exceed 110% of the proposed release levels in any year.
 - iii. Up to 55,125 eggs or fry may be outplanted in the Tucannon River annually to adjust for smolt release production targets.
- c. Annual operational adjustments, to maintain consistency with the proposed production levels identified in the HGMP and *U.S. v. Oregon* Production Table B1, should be addressed during the development of the annual operation plan(s).
- d. Fish will not be released at locations other than those described in the HGMP.

Facility Operations

14. Water withdrawals at all facilities shall be via structures that meet or exceed NMFS water intake screening criteria. Water withdrawals shall not exceed levels permitted by the Water Use Permits issued to each of the acclimation facilities.
 - a. Before the end of 2016, LSRCP will coordinate with co-managers and NMFS environmental services branch to conduct a review to confirm that the screen meets juvenile passage criteria.

- i. If screens are not in compliance, LSRCP will coordinate with co-managers and NMFS environmental services branch to develop a plan to bring the structure into compliance with current passage and screening criteria. If a plan is needed, it must include a schedule for securing funding and an implementation timeline.

Research, Monitoring, and Evaluation

15. The Permit Holder(s) shall continue existing evaluations identified in section 11.1.1 for the duration of the permitted program. These research programs evaluate the abundance, productivity, spatial structure, and diversity of Snake River spring/summer Chinook salmon.
16. The Permit Holder(s) shall apply the conservation measures identified in section 11.2 of the HGMP to minimize effects of monitoring and evaluation activities on listed anadromous salmonids.
17. The Permit Holder(s) shall follow the performance standards identified in section 1.10, Table 1, of the HGMP.
18. Monitor and report on hatchery- and natural-origin adult escapement in the Tucannon River both above and below the weir.
19. Record and report any strays from this program that are detected in other monitoring programs throughout the basin. To the extent possible, remove strays known to be from this program from areas which they are not intended to spawn.
20. Smolt screw traps will only be operated when staff and funding are available to actively check traps and work through fish and avoid overcrowding the trap box.
 - a. Smolt trap operators downstream of the release site will maintain contact with hatchery staff to remain informed on the type and timing of smolt releases. Prior to and during releases, trap operators will consider appropriate modifications to minimize excessive trapping of smolts.
 - b. Screw traps will be monitored and checked with additional frequency if operated during hatchery smolt releases (including night checks when needed). Sub samples will be taken to confirm the risk of overcrowding the trap box is minimal.
 - c. If monitoring or sub sampling indicates that fish are being captured at a rate higher than the trap box can handle, one or more of the following measures will be implemented:
 - i. Decrease trap efficiency through trap modifications (pulling the cone, using deflectors, moving out of thalweg, etc.), and increase the frequency of trap checks consistent with the new trap efficiency to avoid overcrowding the trap box.

- ii. Stop the trap from operating during smolt releases until sub sampling at the trap suggests that the number of smolts captured has decreased to a level that would not lead to overcrowding the trap box with the combination of trap efficiency and trap check frequency that will be implemented.
- d. If 10% of the total annual take (in any category) occurs on a single day of operation, NMFS will be notified, and trap operations will cease until NMFS and all co-managers agree that new protocols are sufficient to avoid the risk of another mortality event of similar size.

Recognizing the need for flexibility and the ability to respond to new developments, modifications to specific RM&E measures may be proposed during the term of the permit. Changes to the measures listed above require NMFS concurrence to ensure they are consistent with the effects analysis in the biological opinion.

B. Permit Reporting and Reauthorization Requirements

NMFS contact for all reports and notifications:

Brett Farman
Sustainable Fisheries Division
National Marine Fisheries Service, West Coast Region
1201 N.E. Lloyd Boulevard, Suite 1100
Portland, OR 97232
(503) 231-6222
(503) 872-2737 (fax)

1. If the authorized level of take, including mortalities, is exceeded, or if circumstances indicate that such an event is imminent, the Permit Holder(s) must notify the above contact as soon as possible, but no later than two days after the authorized level of take is exceeded. The Permit Holder(s) must then submit a written report to the above contact describing the circumstances of the unauthorized take, within two weeks of take exceedance. Pending review of these circumstances, NMFS may suspend program activities or amend this permit in order to allow activities to continue.
2. The Permit Holder(s) must submit to NMFS for approval, in writing, changes in any aspect of program implementation and operations, including broodstock collection protocols or numbers, juvenile release numbers, and marking, that potentially would result in increased take or the manner or effect of take of ESA-listed species.
3. The Permit Holder(s) must submit, upon request, the identities and qualifications of all personnel designated to act under the authority of this permit
4. NMFS must be notified within 48 hours of any take of an ESA-listed species not authorized under this permit. The level of take, the circumstances leading to the

take, and any other relevant information, must be provided to NMFS, in writing, within one week of knowledge that the take occurred.

5. For the duration of this permit, broodstock collection, hatchery fish releases, and RM&E activities are contingent upon submission of the Annual Operating Plan (AOP) and a Broodstock Collection Protocol to the funding agency and to NMFS by March 31st of each year for review and comment.
 - a. Reporting on each preceding year's annual production, and RM&E will occur based on the funding agency reporting timelines.
 - b. Comprehensive multi-year analysis will occur on the LSRCP review timeline (typically every five years), and may be submitted to NMFS directly, though they are typically already available at the LSRCP (<http://www.fws.gov/snakecomplan/>).
 - c. The annual report and/or multi-year analysis must include an assessment of the compliance with each of the provisions included in this permit. Information and analysis requirements include, but are not limited to:
 - (i) Annual escapement estimates and estimated proportion of hatchery-origin spring/summer Chinook salmon spawning in nature above the weir, below the weir, and the total for the Tucannon River Basin;
 - (ii) A summary of all hatchery- and natural-origin spring/summer Chinook salmon encountered at the Tucannon River adult trap, and their disposition (passed, retained for broodstock, culled, or outplanted) as well the number of any known strays and their disposition;
 - (iii) Redd counts for Snake River spring/summer Chinook salmon in natural spawning areas both above and below the weir;
 - (iv) Summary of outplant monitoring, as described in section B.13 above;
 - (v) Carcass recovery data, including numbers, sex ratios, fish stock origin, mark observations, tributary location, and age class;
 - (vi) Number and species of any ESA-listed Chinook salmon captured, anesthetized, tagged, and any mortalities observed annually during RM&E activities related to this permit;
 - (vii) Unintentional injuries or mortalities of listed Chinook that result from all operational activities to include the cause, if known, and disposition;

- (viii) Any other information deemed necessary by the applicants for assessing the program, such as results from biological sampling, population trends, disease trends, etc.
- d. An AOP and Broodstock Collection Protocol will be provided for NMFS's review for the following year that includes a schedule of proposed collection and sampling methods. The schedule shall include preseason estimates of encounter rates for natural- and hatchery- origin Snake River spring/summer Chinook salmon and the proposed collection protocols for the upcoming year.
- e. A description of any measures in addition to those listed in 11.2 of the HGMP taken to minimize impacts on ESA-listed salmon both in the hatchery and during RM&E activities, and the effectiveness of those measures, the disposition of ESA-listed salmon in the event of mortality, and a brief narrative of the circumstances surrounding injuries or mortalities of ESA-listed salmon.
- f. Steps that the Permit Holder(s) took to coordinate adult trap operation actions, associated data collection and reporting activities, and responses to any problems arising in the hatchery program, with any appropriate resource managers.

C. General Conditions

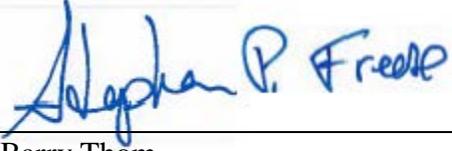
1. The Permit Holder(s) must ensure that all ESA-listed species are handled carefully. Should NMFS determine that a procedure provided for under this permit is no longer acceptable, it will so inform the Permit Holder(s).
2. The Permit Holder(s), in implementing the hatchery program authorized by this Permit, has/have accepted the terms and conditions of this permit and must ensure compliance by itself and its agents with the provisions of this permit, the applicable regulations, and the ESA.
3. The Permit Holder(s) is/are responsible for the actions of any individual operating under the authority of this permit. Such actions include operation of the adult trap for broodstock collection and capturing, handling, releasing, maintaining, and caring for any ESA-listed species authorized to be taken by this permit.
4. The Permit Holder(s) and/or their agents must possess a copy of this permit when conducting the activities for which a take of ESA-listed species or other exception to ESA prohibitions is authorized herein.
5. The Permit Holder(s) may not transfer or assign this permit without NMFS's approval to any other person(s), as person is defined in Section 3(12) of the ESA. This permit ceases to be in force or effective if transferred or assigned to any other person without prior authorization from NMFS.

6. The Permit Holder(s) must obtain any other Federal, state, and local permits/authorizations necessary for the conduct of the activities provided for in this permit.
7. Permit Holder(s) and/or their agents carrying out any of the permit conditions or weir program actions requiring Federal or state licenses to practice their profession must be duly licensed under the appropriate law.
8. The Permit Holder(s) must coordinate with other co-managers and/or researchers to minimize duplication and/or adverse cumulative effects occur as a result of the Permit Holder(s) activities.
9. The Permit Holder(s) and/or their agents must allow any NMFS employee(s) or any other person(s) designated by NMFS to accompany field personnel during the activities provided for in this permit. The Permit Holder(s) must allow such person(s) to inspect the records and facilities of the Permit Holder(s) and their agents if such records and facilities pertain to ESA-listed species covered by this permit or NMFS's responsibilities under the ESA.
10. Under the terms of the regulations, a violation of any of the terms and conditions of this permit will subject the Permit Holder(s), and/or any individual who is operating under the authority of this permit, to penalties as provided for in the ESA.
11. The Permit Holder is responsible for maintaining biological samples collected from ESA-listed species as long as they are useful for research purposes. The terms and conditions concerning any samples collected under this authorization remain in effect as long as the Permit Holder(s) have authority and responsibility for the material taken. The Permit Holder(s) may not transfer biological samples to anyone not listed in the application without obtaining prior written approval from NMFS. Any such transfer will be subject to such conditions as NMFS deems appropriate.
12. NMFS may amend the provisions of this permit after reasonable notice to the Permit Holder(s).
13. 50 CFR Section 222.23(d)(8) allows NMFS to charge a reasonable fee to cover the costs of issuing permits under the ESA. NMFS has waived the fee for this permit.
14. NMFS may revoke this permit if the activities are not carried out in accordance with the description provided in the HGMP, conditions of the permit or the ESA and its regulations, or if NMFS otherwise determines that the findings made under section 10(d) of the ESA no longer hold.
15. Any falsification of annual reports or records pertaining to this permit is a violation of this permit.

D. Penalties and Permit Sanctions

1. Any person who violates any provision of this permit is subject to civil and criminal penalties, permit sanctions, and forfeiture as authorized under the ESA and 15 CFR Part 904 [Civil Procedures].
2. All permits are subject to suspension, revocation, modification, and denial in accordance with the provisions of subpart D [Permit Sanctions and Denials] of 15 CFR Part 904.

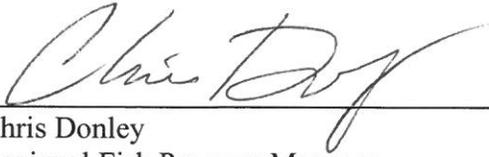
E. Signatures

A handwritten signature in blue ink that reads "Barry Thom". The signature is written in a cursive style with a large initial 'B'.

Barry Thom
Regional Administrator
NMFS West Coast Region

9/12/2016

Date



Chris Donley
Regional Fish Program Manager
Washington Department of Fish and Wildlife

9/13/2014
Date

Julie Collins

Julie Collins
LSRCP Program Manager
U.S. Fish and Wildlife Service

9/21/2016

Date

F. References

U.S. v. Oregon. 2009. 2008-2017 *U.S. v. Oregon* Management Agreement (modified January 23, 2009). Portland, Oregon.

WDFW. 2011. WDFW Tucannon River Endemic Stock Spring Chinook Supplementation Program HGMP. July 22, 2011. Tucannon River Endemic Stock Spring Chinook Supplementation Program: Lyons Ferry Complex – Lyons Ferry Hatchery and Tucannon Hatchery, with revised Tuc spring Chin sliding scale Appendix A for HGMP revised Apr 7, 2014.