



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
West Coast Region
650 Capitol Mall, Suite 5-100
Sacramento, California 95814-4700

May 21, 2019

Ms. Amy Gibbons
Chief, Environmental Resources Branch
U.S. Army Corps of Engineers
P.O. Box 2946
Portland, Oregon 97208-2946

Dr. Bruce McIntosh
Assistant Fish Division Administrator
Oregon Department of Fish and Wildlife
4034 Fairview Industrial Drive SE
Salem, Oregon 97302

Dear. Ms. Gibbons & Dr. McIntosh:

NOAA's National Marine Fisheries Service (NMFS) has evaluated four Hatchery and Genetic Management Plans (HGMPs) for Upper Willamette spring Chinook salmon hatchery programs provided by the U.S. Army Corps of Engineers (Corps) and the Oregon Department of Fish and Wildlife (ODFW). NMFS has concluded that the HGMPs meet all of the requirements of limit 5 under the ESA 4(d) Rule. Thus the activities described in the HGMPs qualify for limitation of take prohibitions pursuant to the 4(d) Rule, provided that they are implemented in accordance with the implementation and reporting requirements specified in the attachment to this letter.

Thank you for the time your staff has invested in developing the HGMPs and for providing information throughout the consultation process. NMFS looks forward to working with you on implementation of these HGMPs. If you have any questions, please feel free to contact me at (503) 231-6266 or Allyson Purcell, Branch Chief for Hatcheries and Inland Fisheries, at (503) 736-4736.

Sincerely,

A handwritten signature in blue ink, appearing to read "Barry A. Thom".

for Barry A. Thom
Regional Administrator

Attachment



cc: Corps – Mackey, Traylor, Walker
ODFW – Couture, Latif, Patterson

Upper Willamette Spring Chinook Salmon HGMPs ESA 4(d) Rule Limit 5 Take Exemption

Implementation and Reporting Requirements

The following implementation and reporting requirements are for the spring Chinook salmon hatchery programs and were taken from Section 2.9.4 “Terms and Conditions” of the ESA Section 7 Biological Opinion for Upper Willamette hatchery programs, dated May 17, 2019.

1. Production of hatchery spring Chinook salmon - In accordance with the proposed action, the Corps and ODFW shall ensure funding and production of hatchery spring Chinook salmon smolts for release annually in the following rivers: 704,000 in the North Santiam, 1,021,000 in the South Santiam River, 605,000 in the McKenzie River, and 1,672,000 in the Middle Fork Willamette River. Additional spring Chinook salmon production may occur according to the appropriate HGMP in order to meet federal mitigation responsibilities for fisheries (e.g. 267,000 in the Coast Fork Willamette River). If changes to production levels in the future are proposed, these changes must be consistent with the adaptive management approaches specified in the appropriate HGMP and NMFS SFD (contact below) must issue written concurrence with the change before being adopted. The levels of spring Chinook production specified above are necessary to ensure the objectives are met for hatchery broodstock, outplanting needs above federal dams, and Tribal treaty-trust responsibilities. These production levels are authorized by the Incidental Take Statement in section 2.9 above (cross reference Term and Condition 1a.).
2. Biometrics of hatchery salmon – The Corps and ODFW shall fund and collect information from salmon returning to collection facilities to determine sex ratio, length, and age of hatchery and natural-origin salmon. This data is essential to monitor trends in hatchery domestication and selection. The funding of this action between the Corps and ODFW should be allocated according to the cost sharing for each hatchery salmon program, or as otherwise mutually agreeable between these agencies (cross reference Term and Condition 1b.).
3. Use of natural-origin salmon for broodstock - The ODFW, in collaboration with the Corps, shall develop and send to NMFS SFD a written proposal for the use of natural-origin spring Chinook salmon for broodstock prior to June 1st each year. The document will include how the HGMP criteria are met for natural-origin broodstock use and estimated impact to the natural population. NMFS SFD shall concur with the proposal prior to implementation. In-season adjustments can be made as real-time information on the returns of adult salmon occurs at the various fish collection facilities throughout the UWR. NMFS SFD must concur

with any in-season modifications before being implemented (cross reference Term and Condition 2a.).

4. Count salmon at Bennett Dams - In accordance with the proposed action, the Corps and ODFW shall fund and operate the fish counting stations throughout the entire spring Chinook salmon migration in the fish ladders at upper and lower Bennett dams on the North Santiam River. The existing fish ladders on these dams allow for the enumeration of returning salmon to this river. The Corps and ODFW shall seek to obtain permission from the City of Salem and Santiam Water Control District (owners of these dams) to continue to count fish at these dams; as no other options are available in the lower North Santiam River. The purpose of this information is to estimate the number of natural-origin salmon returning to this population and allowable numbers of natural-origin salmon that can be collected and integrated into the North Santiam hatchery salmon broodstock. Without run size information, impacts from hatchery broodstock integration cannot be determined. These counts will also provide estimates of pHOS. The funding of this action between the Corps and ODFW will be allocated according to the cost sharing for this entire program (operations at Minto Fish Collection Facility and Marion Forks Hatchery), or as otherwise mutually agreeable between these agencies (cross reference Term and Condition 2b.).

5. Count salmon at Lebanon Dam - The Corps and ODFW shall fund and operate a fish counting station throughout the entire spring Chinook salmon migration in the fish ladders at Lebanon Dam on the South Santiam River. The existing fish ladder on this dam allow for the enumeration of returning salmon to this river. The Corps and ODFW shall seek to obtain permission from the city of Albany (owner of the dam) to continue to count fish here; as no other options are available in the lower South Santiam River. The purpose of this information is to estimate the number of natural-origin salmon returning to this population and allowable numbers of natural-origin salmon that can be collected and integrated into the South Santiam hatchery salmon broodstock. Without run size information, impacts from hatchery broodstock integration cannot be determined. These counts will also provide estimates of pHOS. The funding of this action between the Corps and ODFW will be allocated according to the cost sharing for this entire program (operations at Foster Fish Collection Facility and South Santiam Hatchery), or as otherwise mutually agreeable between these agencies (cross reference Term and Condition 2c.).

6. Count salmon at Leaburg Dam - The Corps and ODFW shall fund and operate a fish counting station throughout the entire spring Chinook salmon migration in the fish ladders at Leaburg Dam on the McKenzie River. The existing fish ladders on this dam allow for the enumeration of returning salmon to this river. The Corps and ODFW shall seek to obtain permission from the Eugene Water and Electric Board (owner of the dam) to continue to count fish here; as no other options are available in the lower McKenzie River. The purpose of this information is

to estimate the number of natural-origin salmon returning to this population and allowable numbers of natural-origin salmon that can be collected and integrated into the McKenzie hatchery salmon broodstock. Without run size information, effects from hatchery broodstock integration cannot be determined. These counts will also provide estimates of pHOS. The funding of this action between the Corps and ODFW will be allocated according to the cost sharing for this entire program (operations at McKenzie hatchery), or as otherwise mutually agreeable between these agencies (cross reference Term and Condition 2d.).

7. Reduce pHOS in the McKenzie River – In accordance with the proposed action, the Corps and ODFW shall implement and evaluate actions intended to reduce pHOS in the McKenzie River according to the HGMP. These actions include: smolt production reductions to 604,750 annual release, improvements to the entrance of the fish ladder at McKenzie hatchery, improvements to the water supply at McKenzie River, and removing hatchery salmon at Leaburg Dam. The Corps and ODFW shall explore possibilities to remove hatchery salmon from the existing fish ladders at Leaburg Dam in the most cost-effective manner while minimizing impacts to natural-origin salmon. The funding of these actions and evaluation should be allocated according to the cost sharing for this entire program, or as otherwise mutually agreeable between these agencies. Any plans for actions in the future must be sent to NMFS SFD (contact below) at least 60 days prior to adoption for review and concurrence (cross reference Term and Condition 2e.).
8. Improve broodstock holding at Willamette Hatchery – The Corps shall fund the design and construction of an improved broodstock holding facility at Willamette Hatchery in order to reduce the prespawning mortality of hatchery broodstock (including natural-origin salmon authorized by NMFS under limit 5 of the 4(d) Rule). The HGMP identified this fix as a critical need. The Corps is the owner of Willamette Hatchery and funds the spring Chinook salmon program in the Middle Fork Willamette River. The design will follow criteria and standards approved by NMFS at other facilities recently improved in the UWR for adult salmon holding, survival, and spawning (e.g. Minto, Foster FCFs). Once funding is obtained, design and specifications of the improved broodstock facility shall be provided to NMFS SFD (contact below) by the end of fiscal year (FY) following the Corps receiving funding. Construction of the new facility shall be completed by the end of FY after the design and specifications have been provided and concurred with by NMFS SFD (contact below) (cross reference Term and Condition 2f.).
9. Assess genetic pedigree of Chinook salmon – In accordance with the proposed action, the Corps shall fund the collection of tissue samples throughout the entire run annually for genetic pedigree determination from all spring Chinook salmon outplanted above the Corps' Detroit, Foster, and Cougar dams from now until a long-term juvenile fish passage solution is completed. The Corps shall fund pedigree analysis of tissue samples for previous year's

samples collected since 2010 and including up to adult Chinook returns in 2019 with results being available by the end of fiscal year 2020, except where already analyzed. Additional pedigree analysis will occur from each area every five years (beginning in 2024; or more often if determined necessary by NMFS SFD in coordination with WATER technical committees) to inform specific actions to achieve HGMP outplanting program goals. Each five year analysis will include the previous five years of samples (e.g. 2020-2024) with results being available by the end of the following fiscal year (e.g. 2025). This data is essential to guide management decisions for natural-origin salmon collected at the federal dams according to the HGMP replacement criteria, evaluate the genetic effects of hatchery salmon in reintroduction efforts above federal dams, and to determine natural production by hatchery- and natural-origin salmon above federal dams. Sampling salmon in reaches below the Corps dams should also be analyzed periodically (e.g. every 5 years) to determine the extent salmon produced above the dam(s) are spawning below the dam(s). All results from pedigree analyses shall be sent to NMFS SFD (contact below) by the end of the appropriate fiscal year (cross reference Term and Condition 3a.).

10. Assess salmon spawning above federal dams – The Corps shall fund surveys for spring Chinook salmon above Detroit and Cougar dams to determine prespawning mortality and the distribution and abundance of hatchery- and natural-origin spawners. In the event marked hatchery salmon are outplanted above Foster Dam in the future, spawning surveys will need to be conducted there as well (presently no hatchery supplementation occurs above Foster Dam). This information is essential to evaluate the success of the outplanting program for reintroducing salmon above federal dams, collection and transport protocols, and the genetic pedigree analyses in 3a. Due to high prespawning mortality of salmon, these data are essential for determining actual spawning escapement and distribution that cannot be attained otherwise. Annual surveys will continue until <20% of the Chinook salmon outplanted above a given dam are hatchery fish (adipose finclipped), or until the NMFS SFD, in coordination with WATER, determines information is adequate to meet HGMP goals for the outplanting program. The surveys shall follow established protocols currently used by the Corps and ODFW and include the collection and analyses of coded wire tags, fin clips, scales, and otoliths as appropriate. Spawning ground surveys for salmon below federal dams are lower priority and should be implemented to monitor trends in pHOS and prespawning mortality, unless counts at Bennett, Lebanon and Leaburg dams are determined to be adequate by the NMFS SFD (contact below), in coordination with WATER, to evaluate pHOS and abundance trends (cross reference Term and Condition 3b.).
11. Adaptively manage hatchery salmon outplanting above federal dams – Formal reintroduction plans are to be completed by ODFW and NMFS prior to the completion of the long-term juvenile fish passage solutions at federal dams. These plans will incorporate the best available science to ensure the goals and objectives for establishing sustainable populations of

Chinook salmon above federal dams are achieved according to the Recovery Plan (ODFW and NMFS 2011), while minimizing the effects of hatchery fish on natural populations. The outplanting protocols and guidelines currently specified in the HGMPs may need to be adapted in the future according to these Reintroduction Plans. Updates could include modifications to the number of hatchery Chinook salmon outplanted, criteria for when a reduction in hatchery supplementation occurs, and criteria for outplanting of natural-origin salmon above federal dams. Prior to any changes, the ODFW, in collaboration with the Corps, shall submit proposed plans to the NMFS SFD for review and obtain concurrence from NMFS prior to modification of the HGMP(s) and implementation (cross reference Term and Condition 3c.).

12. ODFW's Willamette Chinook Salmon Database – the Corps, ODFW, and any associated contractors shall use ODFW's existing databases for inputting research, monitoring, and evaluation associated with these Terms and Conditions in the future to maintain appropriate protocols and data sets. Information included in this database shall be made available to NMFS and the Corps as needed. Note: the Coded Wire Tag (CWT) database is not an ODFW database and not considered part of this specific action (cross reference Term and Condition 4a.).
13. The ODFW, in collaboration with the Corps, shall provide a report to NMFS SFD every three years on the implementation of the spring Chinook salmon HGMPs, specifically describing (cross reference Term and Condition 4b.):
 - a. The number of natural-origin salmon collected and used for broodstock
 - b. The impact of broodstock integration on the respective natural-origin population, with reference to the HGMP criteria for maximum impact levels.
 - c. The proportion of hatchery- and natural-origin salmon spawning in their respective population areas (pHOS).
 - d. The total number of hatchery salmon released by brood year for the programs operating in the UWR.
 - e. Any proposed changes to the HGMPs and/or future hatchery production.
 - f. These reports in written form shall be sent to:

NMFS – Sustainable Fisheries Division (SFD)
Anadromous Production and Inland Fisheries Program
1201 N.E. Lloyd Boulevard, Suite 1100
Portland, Oregon 97232

Technical Contact:
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(541) 957-3381