

**Limit 6 of the 4(d) Rule
Proposed Evaluation and Pending Determination**

Title: Hood River Spring Chinook salmon and Hood River Winter Steelhead Hatchery and Genetic Management Plans (HGMPs)

Plans Submitted by: Confederated Tribes Warm Springs Reservation of Oregon (CTWSRO)
Oregon Department of Fish and Wildlife (ODFW)
Bonneville Power Administration (BPA)

ESU/DPS: Lower Columbia River Spring Chinook Salmon ESU
Lower Columbia River Coho Salmon ESU
Lower Columbia River Steelhead DPS
Lower Columbia River Chum Salmon ESU

ESA 4(d) Rule: Limit 6

**NMFS Tracking
Number:** WCR-2017-7316

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1. EVALUATION

NOAA's National Marine Fisheries Service (NMFS) issued a final Endangered Species Act (ESA) 4(d) rule adopting regulations (50 CFR 223.203) to conserve listed salmon and steelhead (70 FR 37160 and 73 FR 55451; NMFS and NOAA 2005; 2008). However, under limit 6 of the 4(d) rule for salmon and steelhead (the joint state-tribal 4(d) rule) (50 CFR 223.203(b)(6)), ESA Section 9 take prohibitions for listed species do not apply to hatchery activities described in a resource management plan (RMP) that meet certain requirements.

Section 9 of the ESA prohibits the take of endangered species and, pursuant to §4, NMFS has extended that prohibition to threatened salmon and steelhead. Under the joint state-tribal 4(d) rule, those prohibitions don't apply to hatchery activities described in an RMP, provided that:

- The Secretary of Commerce has determined pursuant to 50 CFR 223.204(b) that implementing and enforcing the RMP will not appreciably reduce the likelihood of survival and recovery of listed salmon and steelhead
- The joint plans submitted for 4(d) Limit 6 review will be implemented and enforced within the parameters set forth in *U.S. v. Oregon* or *U.S. v. Washington*
- The Secretary has taken comment on how the RMP addresses the criteria in §223.203(b)(5)
- The Secretary publishes notice of the final determination (see section 3, below).
- NMFS continues to evaluate the effectiveness of the RMP (see section 1.9, below).

The Oregon Department of Fish and Wildlife (ODFW), the Confederated Tribes of the Warm Springs Reservation of Oregon (CTWSRO), and Bonneville Power Administration (BPA), have provided NMFS with two hatchery and genetic management plans (HGMPs) proposed for implementation in the Hood River Basin (Table 1). The applicants have provided the HGMPs (CTWSRO and ODFW 2017; ODFW and CTWSRO 2017) for review and determination by NMFS pursuant to the 4(d) rule limit 6 (Brun 2017; Patterson 2017). Each HGMP serves as an RMP for this evaluation. The proposed plans contain similar provisions regarding shared salmon population recovery and harvest augmentation objectives and effects, fish collection locations, fish rearing and release sites, and monitoring and evaluation activities. NMFS reviewed the HGMPs and determined that they provided sufficient information (Purcell 2017a; 2017d; 2017b; 2017c) for NMFS to proceed in its evaluation of plan effects on ESA-listed species. The Section 7 biological opinion was completed February 2018 (NMFS 2018).

The following discussion evaluates whether the submitted plans address the criteria in Section 223.203(b)(5) of the 4(d) rule for salmon and steelhead—the appropriate criteria for RMPs for hatchery programs. All references below to the hatchery programs or HGMPs include the two HGMPs being considered as part of this proposed action.

Table 1. Proposed hatchery programs for Hood River Spring Chinook Salmon and Winter Steelhead requiring 4(d) Limit 6 or Tribal 4(d) rule evaluation.

Program	HGMP Receipt ¹	Primary Program Operator ²	Funding Agency	Program Type and Purpose	ESA Review
Hood River Spring Chinook Salmon	April 2017	CTWSRO and ODFW	BPA	Integrated Recovery	4(d) Limit 6
Hood River Winter Steelhead	May 2017	ODFW and CTWSRO	BPA	Integrated Recovery	4(d) Limit 6

¹ Most recent HGMP receipt (Brun 2017; Patterson 2017) . The HGMPs have been previously submitted and updated.

² Primary operators are listed, but all programs are coordinated between ODFW, CTWSRO, and BPA.

1.1 5(i)(A) The HGMP has clearly stated goals, performance objectives, and performance indicators that indicate the purpose of the program, its intended results, and measurements of its performance in meeting those results.

Each of the HGMPs has clearly stated its goal, performance objectives, and methods for measuring the progress toward achieving those objectives. The general program goals described in Section 1.7 of each HGMP for propagating hatchery fish are to:

- Mitigate lost natural-origin fish production
- Contribute to the recovery of the ESA-listed Lower Columbia River Chinook Salmon ESU, and the Lower Columbia River Steelhead DPS
- Fulfill federally protected reserved fishing rights for salmon and steelhead populations within the Columbia River Basin by supporting tribal commercial, recreational, and tribal ceremonial and subsistence fisheries when consistent with conservation objectives
- Meet tribal fishery harvest allocations guaranteed through treaties and affirmed in *U.S. v. Oregon*

Performance objectives derived from the Northwest Power Planning Council Artificial Production Review (Northwest Power Planning Council 2001), and performance indicators that would be used to gauge compliance with each objective, are described in Section 1.10 of each HGMP. Evaluation and monitoring to ensure standards and indicators are met is further described in Section 1.8 of this document and are summarized in Table 2. HGMP implementation would generally be designed to determine:

1. Program consistency with proposed hatchery actions and intended results (e.g., juvenile fish release and adult return levels)
2. Measurement of the program’s success or failure in attaining results
3. Effects of the program on listed natural-origin fish populations in the Hood River Basin

Table 2. HGMP program performance standards and indicators.

Standard	Indicator
Produce fish for harvest while minimizing excess hatchery returns	<ul style="list-style-type: none"> • Measure adult harvest and escapement • Mass marking to allow selective fisheries
Supplement natural population (both programs are integrated conservation programs)	<ul style="list-style-type: none"> • Increasing proportion of returning natural-origin adults on spawning grounds • Increasing proportion of natural-origin smolts
Proper broodstock collection and management	<ul style="list-style-type: none"> • Collected randomly throughout the run • Weir/trap checked regularly • Proportion of natural-origin fish • Proportion of hatchery-origin fish above the weir • Sex ratio • Stray rates
Meet hatchery juvenile production goal	<ul style="list-style-type: none"> • Eyed egg to fry and/or smolt survival is as expected • Release targets
Minimize interactions of releases with natural-origin fish	<ul style="list-style-type: none"> • Juveniles released at sea-water ready life stages • Size and time of release accounts for listed stocks
Life history characteristics of the natural population do not change	<ul style="list-style-type: none"> • Stable life history patterns of natural-origin fish • Age and size data for natural population
Natural population genetic variation does not change due to artificial propagation	<ul style="list-style-type: none"> • Proportion of spawning hatchery-origin fish on natural-origin spawning grounds • Genetic assessment
Limit pathogen amplification and transmission	<ul style="list-style-type: none"> • Follows applicant fish health policies

1.2 5(i)(B) The HGMP utilizes the concepts of viable and critical salmonid population thresholds, consistent with the concepts contained in the technical document entitled “Viable Salmonid Populations.”

HGMPs proposed for consideration under any of the 4(d) rules must use the concepts of viable and critical thresholds as defined in the NMFS Viable Salmonid Population (VSP) document (McElhany et al. 2000). Application of these VSP concepts is needed to adequately assess and limit the take of listed salmonids for the protection of the species. Section 2.2.2 of each HGMP describes the status of the listed Chinook salmon and steelhead populations relative to “critical” and “viable” population thresholds within the Hood River Basin and references the most recent Northwest Fisheries Science Center Status Review (NWFSC 2015).

1.3 5(i)(C) Taking into account health, abundances, and trends in the donor population, broodstock collection programs reflect appropriate priorities.

A prioritized purpose of a broodstock collection program using listed fish is to re-establish an indigenous salmonid population for conservation purposes, including restoration of similar at-risk populations within the same ESU, and reintroduction of at-risk populations to under-seeded

habitat. Under this 4(d) rule criterion, as described in 50 CFR 223.203(5)(i)(B), listed salmonids may be intentionally taken for broodstock only if:

1. The donor population is currently at or above the viable threshold and the collection will not impair its function, or
2. The donor population is not currently viable but the sole objective is to enhance the propagation or survival of the listed ESU, or
3. The donor population is shown with a high degree of confidence to be above the critical threshold although not yet functioning at viable levels, and the collection will not appreciably slow attainment of viable status for that population.

The two hatchery programs included in the proposed action will use listed fish for broodstock. These programs are all considered *Integrated Conservation* programs and take listed salmonids for broodstock consistent with criterion number two, above, whereby the donor population is not viable but using it for broodstock will contribute to the propagation and survival of the ESU. Taking into account biological considerations like status of the species, the broodstock collection plans in the HGMPs reflect appropriate priorities. Co-managers reached these decisions to integrate the hatchery programs based on various conservation considerations (e.g. donor population status, etc.). Refer to Sections 6, 7, and 8 in the HGMPs as well as the Broodstock Collection and Spawning section below for descriptions of the various considerations used when determining programs should be managed as *Integrated Conservation*.

1.4 5(i)(D) The HGMP includes protocols to address fish health, broodstock collection and spawning, rearing and release of juveniles, disposition of hatchery adults, and catastrophic risk management.

The proposed HGMPs include protocols, or “best management practices” (BMPs), for fish health, broodstock collection, broodstock spawning, rearing and release of juveniles, disposition of hatchery adults, and catastrophic risk management. These practices, when implemented, would be appropriate for their purpose of adequately limiting the risk of substantial direct and incidental adverse effects on listed fish.

Fish Health: As described in Sections 7, 9, and 10 in the HGMP, all of the hatchery programs would be operated in compliance with Federal, State, and Tribal fish health policies. The policies are designed to limit the spread of fish pathogens between and within watersheds by regulating the transfers of eggs and fish. The policies also outline standard fish health diagnosis, maintenance, and hatchery sanitation protocols to reduce the risk of pathogen amplification and transmission within the hatchery and to fish in the natural environment during broodstock collection and mating as well as fish incubation, rearing, and release. Fish health specialists and pathologists would provide fish health management support and diagnostic fish health services.

Broodstock Collection and Spawning: Sections 6, 7, and 8 in the HGMP describe hatchery broodstock and spawning. Natural-origin fish are only used in both the Spring Chinook Salmon and Winter Steelhead programs, which is also consistent with the purpose of integrated

conservation programs. For the programs, broodstock are collected from adult fish returning to the hatchery release sites using a trap/weir. Adult broodstock collection and spawning details are described in Table 3.

Table 3. Broodstock collection and spawning details.

Program	Broodstock collection for Hood River Hatchery Programs						
	Component and Purpose	Population	Number and origin	Location(s) and method	Approximate timing	NMFS PNI or pHOS targets and pNOB ¹	Spawning
Spring Chinook Salmon	<i>Integrated conservation</i>	Hood River	280 (140 pairs) NORs ²	Moving Falls Fish Facility and Parkdale Fish Hatchery	March through November	pHOS = 50 pNOB = 100	1:1 (F:M); spawning at Parkdale Fish Hatchery
Winter Steelhead	<i>Integrated conservation</i>	Hood River	60 (30 pairs) NORs ²	Dee Mill Adult Trap East Fork ³	February through June	pHOS = 50 pNOB = 100	1:1 (F:M); spawning at Parkdale Fish Hatchery

¹ PNI = Proportionate Natural Influence [$pNOB/(pNOB+pHOS)$]; pHOS = % hatchery-origin fish on the spawning grounds; pNOB = % natural-origin fish in broodstock

² Broodstock collection goal is for 100% NORs, with minimum of 10% NORs and no more than 25% of the NOR adult returns retained for broodstock.

³ In low return years, broodstock may also be collected at East Fork Irrigation District's Headgate fish ladder and the Parkdale Fish Hatchery.

Rearing and Release of Juveniles: Sections 9 and 10 of the HGMPs describe the rearing and release of hatchery-produced juveniles. All hatchery released spring Chinook salmon would receive a mark with an adipose fin-clip with a proportion tagged with a CWT and/or PIT tag prior to release to allow for their differentiation from natural-origin salmon. Release numbers, life stage, mark/tag types, and dates for all hatchery programs are detailed in Table 4.

Table 4. Summary of annual release groups (number and life stage), marking, egg incubation and rearing locations, acclimation, and release times

Program	Annual release groups (number and life stage)	Marking and Tagging ¹	Egg incubation Location	Rearing Location	Acclimation	Release Time
Spring Chinook Salmon	Up to 200,000 volitionally released into the Hood River at the Moving Falls Fish Facility, and 50,000 at the Parkdale Fish Hatchery	100% ad-clipped with 10% receiving a PIT tag.	Eggs will be incubated at the Parkdale Fish Hatchery and then transferred to the Round Butte Hatchery for further incubation and rearing until May when the fish are transferred back to the Parkdale Fish Facility. In March, 200,000 fish are transferred to the Moving Falls Fish Facility for final acclimation.	Parkdale Fish Hatchery (Round Butte Hatchery)	Yes at Moving Fall Fish Facility	April
Winter Steelhead	Up to 50,000 smolts at the East Fork Irrigation District's sediment settling and screen ponds	100% ad-clipped plus secondary fin mark ¹	All eggs after fertilization are transferred to the Oak Springs Fish Hatchery. Fish are reared until they reach 5.0 fish per pound and are then transferred to the release sight.	Oak Springs Hatchery	Yes, East Fork Irrigation District's sediment settling and screening ponds	April

¹ Secondary fin marks include Left Ventral, Right Ventral, Left Maxillary, and Right Maxillary. Secondary marks are used to distinguish between release years.

Disposition of Hatchery Fish: There are no excess fish associated with the Spring Chinook Salmon Program. Excess hatchery winter steelhead are removed at the traps disposed as described in Table 5. Additional details regarding the disposition of hatchery fish are covered in Section 7.5 of the HGMPs.

Table 5. Summary of disposition by life stage.

Program	Life stage	Disposition
Spring Chinook Salmon	Adults	<ul style="list-style-type: none"> All hatchery fish not retained for broodstock are passed upstream to spawn naturally.
	Juveniles	<ul style="list-style-type: none"> Surpluses are reduced to target production levels before smolts are transferred to Moving Falls Fish Facility for acclimation and release.
Winter Steelhead	Adults	<ul style="list-style-type: none"> Hatchery fish surplus to broodstock needs in good condition will be sacrificed and provided to the Warm Springs tribal members as a food source. Hatchery fish not needed for tribal food banks are outplanted into local area standing waters to supplement fisheries.

		<ul style="list-style-type: none"> Late-return fish or those in poor condition will be sacrificed and used for nutrient enhancement in the Hood River Basin.
	Juveniles	<ul style="list-style-type: none"> Surpluses are reduced to target production levels before smolts are transferred to the East Fork release site.

Catastrophic Risk Management: All facilities identified in Table 6 adhere to the applicants' fish health policies and apply BMPs to reduce the risk of catastrophic loss of fish under propagation. All hatcheries have staff on site and low-water alarms. Additional details on these safeguards are provided in the HGMPs in Section 5.8.

Table 6. Facility water source and use for hatchery program operations (n/a = not applicable).

Program	Facility	Surface Water (cfs)					Ground Water (cfs)			Number and type of instream structures	Meet NMFS screening criteria (specify year)?	NPDES Permit (provide number)?
		Source and water right	Average and maximum use	Diversion Distance (Meters)	Discharge Location	Months utilized	Water right	Average and maximum use	Months utilized			
Spring Chinook Salmon	Parkdale Fish Hatchery	Rogers Creek/ Middle Fork Hood River S-53484	Combined, 5.59 cfs	n/a ¹	West Fork Hood River	1/1 to 12/31	G-16381	1.36 cfs	n/a	1 intake, 1 fish ladder/trap	n/a	n/a
	Moving Falls Fish Facility	West Fork Hood River S-87269	5.0 cfs	107	West Fork Hood River	1/1 to 12/31 (2/1 to 4/30 acclimation)	n/a	n/a	n/a	1 intake, 1 fish ladder/trap	Yes (2010)	n/a
	Round Butte Hatchery	Deschutes River (S-52642 for 13.57 cfs, and S-37974 for 20.0 cfs) ³	33.57 cfs	n/a	Deschutes River	1/1 to 12/31	n/a	n/a	n/a	n/a	n/a	n/a
	Pelton Fish Ladder	Lake Simtustus River ³	n/a	n/a	Deschutes River	1/11 to 1/5	n/a	n/a	n/a	n/a	n/a	n/a
Winter Steelhead	Parkdale Fish Hatchery	Rogers Spring Creek/ Middle Fork Hood River	16 avg, 23 max	n/a	West Fork Hood River	1/1 to 12/31	G-16381	1.36 cfs	n/a	n/a	n/a	n/a
	Oak Springs	Oak Springs	n/a	n/a	Deschutes River	1/1 to 12/31	n/a	50 cfs	12	n/a	n/a	n/a
	East Fork Irrigation District's sediment settling and screen ponds ⁴	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Fish ladder trap	n/a	n/a

¹ Rogers Creek intake is located at the outfall of the Middle Fork Irrigation District's hydroelectric facility. There are no anadromous fish above the outfall in Rogers Creek. Rogers Creek below the intake is accessible to anadromous fish but rearing habitat is severely impacted by the operation of the Middle Fork Irrigation District's powerhouse tailrace due to extreme flow fluctuations.

² The water source for the Round Butte Hatchery is seepage that emerges from the below Round Butte Dam.

³ The Pelton Fish Ladder is used to rear and acclimate Spring Chinook salmon for the Round Butte Hatchery program, Hood River program fish are reared in one section of the ladder. The water source is from either a surface or a deep intake in Lake Simtustus and travels over 2 miles down the ladder before reaching the rearing cells at the lower end of the ladder.

⁴ The water rights for the East Fork Irrigation District's diversion.

Source: (Brun 2017; Patterson 2017)

1.5 5(i)(E) The HGMP evaluates, minimizes, and accounts for the propagation programs’ genetic and ecological effects on natural populations, including disease transfer, competition, predation, and genetic introgression caused by straying of hatchery fish.

The Hood River Spring Chinook Salmon and Winter Steelhead HGMPs provide evaluations of potential genetic and ecological effects on listed salmon and steelhead in Section 2 and risk minimization measures in Sections 6-10.

Generally speaking, artificial fish production may result in a loss of within-population genetic diversity (the reduction in quantity, variety and combinations of alleles in a population), outbreeding depression (loss in fitness caused by changes in allele frequency or the introduction of new alleles), and/or hatchery-influenced selection (Busack and Currens 1995).

The primary ecological risks to natural-origin salmon and steelhead populations posed by salmon and steelhead hatchery programs are increased pathogen transfer, competition, and predation (NMFS 2012). As noted in the HGMPs and earlier in this document, all hatchery actions would be implemented in accordance with fish health policies as a means to account for and minimize the risks of pathogen amplification and transmission.

The HGMPs included here each account for and minimize genetic and ecological risks to listed salmon and steelhead populations through implementation of the following measures:

- Broodstock are randomly collected throughout the adult return to ensure full representation of run timing, return location, age class, and sex ratio
- No more than 25% of the natural-origin fish return would be used for broodstock and limit the proportion of hatchery-origin spawners (winter steelhead only) above the weir to reduce negative genetic impacts
- 100% natural-origin fish would be used in broodstock to reduce negative genetic impacts
- Straying of hatchery fish would be monitored using CWT and PIT tags
- Fish are released as 1 year smolts that are ready to migrate
- Monitoring of residuals would occur through PIT tag arrays and/or visual inspections prior to release

1.6 5(i)(F) The HGMP describes interrelationships and interdependencies with fisheries management.

Descriptions of this criterion are found in Section 3 of the HGMPs. Crossover with fisheries management occurs in:

- The *United States vs. Oregon Management Agreement (U.S. v. Oregon)*: hatchery programs would operate consistent with the fisheries framework identified in the *U.S. v.*

Oregon Management Agreement, which requires that all parties cooperate and agree on the function, purpose, and fish production strategies.

- State recreational and tribal fisheries for hatchery-origin species produced through the programs may incidentally affect natural-origin Chinook salmon, coho salmon, and steelhead, but these fisheries are not considered interrelated with or interdependent on these programs because these programs are not the sole producers of fish for the fisheries.

1.7 5(i)(G) Adequate artificial propagation facilities exist to properly rear progeny of naturally spawned broodstock, to maintain population health and diversity, and to avoid hatchery-influenced selection and domestication.

The Hood River hatchery programs that propagate natural-origin and/or hatchery-origin ESA-listed fish utilize multiple facilities to properly rear progeny. As described in Sections 4 and 5 of the HGMPs, and Table 6, the hatchery facilities used to implement the programs have adequate surface and groundwater sources, fish trapping and holding facilities, egg incubation and fish rearing vessels, and fish release facilities to ensure proper rearing.

As described in each HGMP, water at all facilities is withdrawn in accordance with state-issued water rights. The hatchery facilities have been evaluated against the NMFS 2011 screening and passage criteria and currently meet criteria. Programs that rear over 20,000 pounds of fish operate under applicable National Pollutant Discharge Elimination System (NPDES) general permits. As mentioned previously, fish health is maintained throughout rearing by adhering to fish health policies and using pathogen-free water sources when possible. Minimization of catastrophic loss and genetic risks associated with these programs were addressed in Sections 1.3 and 1.4, respectively, of this document.

1.8 5(i)(H) Adequate monitoring and evaluation exist to detect and evaluate the success of the hatchery program and any risks potentially impairing the recovery of the listed ESU.

Monitoring and evaluation actions to identify the performance of each program and hatchery-related effects on ESA-listed fish are also described in each HGMP. These actions are summarized in Section 1.10 and Section 11 of each HGMP, are covered within the biological opinion, and are further described in Table 7.

Table 7. Specific adult and juvenile RM&E activities in the Hood River Basin considered under this analysis.

Adult monitoring
Hatchery operators will monitor the broodstock collection and composition (timing, age class, sex ratio, and condition), as well as survival metrics, for all life stages in the hatchery from spawning to release. CWT tagging of representative groups of juveniles will be used to estimate contribution to harvest in mixed-stock fisheries outside the basin and survival.
Sampling of adults to determine escapement of NOR and hatchery spring Chinook salmon will be conducted at the Moving Falls Fish Facility and in returns to Parkdale Hatchery
Sampling of adults to determine escapement of NOR and hatchery winter steelhead will use adult collections at the Moving Falls Fish Facility, Dee Mill trap, Neal Creek weir, East Fork Irrigation District Diversion, and returns to Parkdale Hatchery.
Spawning ground surveys for spring Chinook salmon will be conducted to estimate spawning abundance and distribution. Due to high flows and poor access, winter steelhead spawning surveys are not conducted.
Spring Chinook salmon are captured and radio-tagged in the lower Hood River to determine spawning distribution above and below the Moving Falls Fish Facility. Winter steelhead may also be radio-tagged to determine the rate of upstream migration, relative spawning distribution, and interactions at the Dee Mill trapping facilities.
Juvenile Monitoring
Snorkel surveys will be conducted to estimate the summer-time abundance of Chinook salmon and steelhead parr. Snorkel observations may be calibrated using multiple-pass electrofishing.
Naturally produced smolt abundance will be estimated using rotary screw traps. Rotary screw traps will be operated in four different locations: Hood River mainstem, West Fork Hood River, Middle Fork Hood River, and East Fork Hood River. Juveniles collected will be examined for marks and tags, measured, and, if not tagged, given a PIT tag. PIT-tagged juveniles will be used to estimate outmigration timing, outmigration survival rates, and adult returns.
Juveniles may also be collected with beach seines to increase the number of PIT-tagged juveniles in the sample population to provide data to supplement the PIT tag juvenile and adult population models.
Facility Operations
Hatchery operators will monitor water withdrawal and effluent discharge to be able to qualitatively assess risk to listed species. Operators will monitor fish health monitoring and reporting in accordance with fish health policies.

1.9 5(i)(I) The HGMP provides for evaluating monitoring data and making any revisions of assumptions, management strategies, or objectives that data show are needed.

As described in Section 1.10 of the HGMPs, data collected relating to hatchery program performance and effects would be evaluated by the applicants to determine whether performance standards are being met. Annual reports for the programs assembled by the applicants would be jointly reviewed by NMFS to document program results, and to determine if adjustments to the programs’ assumptions and management strategies are warranted. Any changes would be incorporated into the *U.S. v. Oregon* Management Agreement, Annual Operating Plan documents, and/or the HGMPs as necessary.

1.10 5(i)(J) NMFS provides written concurrence [with] the HGMP [that] specifies the implementation and reporting requirements.

After consideration of any comments received during the public review and comment period for this proposed evaluation and pending determination document, and after consulting with itself under Section 7 of the ESA, NMFS will make a determination regarding the adequacy of the HGMPs. If the determination is made that implementing and enforcing the plans will not appreciably reduce the likelihood of survival and recovery of the ESA-listed species, and that the plans address all of the criteria specified in limit 6 of the 4(d) rule, NMFS will so notify the managers in writing, and will specify any necessary implementation and reporting requirements.

1.11 5(i)(K) The HGMP is consistent with plans and conditions set within any Federal court proceeding with continuing jurisdiction over tribal harvest allocations.

The HGMPs were developed by the applicants pursuant to the fisheries and hatchery framework in the *U.S. v. Oregon* Management Agreement. The HGMPs are one component of an effort to preserve ESA-listed salmon and steelhead in the Hood River Basin and recover them to a fishable status. The final recovery plans for Lower Columbia River Chinook Salmon and Steelhead have hatchery and habitat components, and include monitoring, research, and restoration recommendations to complement artificial production (NMFS 2013). The hatchery actions proposed in the HGMPs are included within, and consistent with, these recovery plans. There are no other plans or conditions set within Federal court proceedings—including memoranda of understanding, court orders, or other management plans—that direct operation of the proposed salmon and steelhead hatchery programs.

2. PENDING DETERMINATION

As required by limit 6 of the 4(d) rule, the Secretary is seeking comment from the public on the pending determination as to whether or not the HGMPs evaluated here would appreciably reduce the likelihood of survival and recovery of the listed salmon and steelhead. In addition, comment is sought on whether the RMPs meet the requirements of limit 6 of the 4(d) rule.

3. RECOMMENDED DETERMINATION

As required in (b)(6) of section 223.203 (joint state/tribal RMPs), after taking all public comments under consideration, the Secretary will publish notice of his determination as to whether each RMP appreciably reduces the likelihood of survival and recovery of affected threatened species, together with a discussion of the biological analysis underlying that determination.

4. REEVALUATION CRITERIA

NMFS will re-evaluate this determination if: (1) the amount or extent of incidental take is exceeded, (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion, (3) the agency action is subsequently modified in a manner that causes an effect on the listed species or critical habitat that was not considered in this opinion, or (4) a new species is listed or critical habitat designated that may be affected by the action.

5. REFERENCES

- Brun, C. 2017. Letter to Steve Freese from Chris Brun. HRPP Chinook NOAA cover letter. April 3, 2017. The Confederated Tribes of the Warm Springs Reservation of Oregon, Warm Springs, Oregon. 1p.
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