LYONS FERRY COMPLEX
ANNUAL OPERATIONS PLAN

For the Period of

OCTOBER 1, 2025 – SEPTEMBER 30, 2026

Prepared by:

Washington Department of Fish and Wildlife

Nez Perce Tribe

Confederated Tribes of the Umatilla Indian Reservation

Funded By the Bonneville Power Administration through the Lower Snake River Compensation Program

TABLE OF CONTENTS

List of Figures

List of Tables

PREAMBLE

The Annual Operating Plan (AOP) meeting and AOP/SOP documents are planning, coordination and logistics tools that identify the expected implementation of several hatchery operation and research/monitoring activities for the coming year in a transparent, open manner.

It is the responsibility of all AOP parties to participate in AOP meetings, provide follow up information and assistance as requested or needed, and work in good faith to complete the AOP document within the timeframe agreed upon at the AOP coordination meeting. A finalized electronic version of the AOP will be available to all cooperating agencies and serve as the working version of the document.

If a disputed or incomplete item is identified at the AOP meeting and persists to the end of the agreed completion timeframe for finalizing the AOP documents, the AOP will be finalized without the disputed or incomplete section. However, parties to the dispute will add a placeholder in the document, so they can work toward resolution.

After the AOP is finalized, and based on unforeseen or unanticipated circumstances (e.g., lower than expected returns, loss of production, infrastructure issues as examples), changes or deviations from the AOP may be warranted. In those cases, there is an expectation that the lead agency that has identified the issue will communicate with the appropriate AOP parties, through the weekly coordination calls or by email, so they can work collaboratively to address it and/or work towards resolution. Implemented changes should be documented in writing by the lead agency and communicated, to ensure transparency and as documentation of the change. These changes should also be captured in various year-end reports.

I. INTRODUCTION

A. Facilities

Lyons Ferry Complex (LFC; See Figure 1) includes Lyons Ferry Hatchery (LFH), Tucannon Hatchery (TFH), Cottonwood Acclimation Facility (Cottonwood AF), Dayton Acclimation Facility (Dayton AF), and Curl Lake Acclimation Facility (Curl Lake AF).

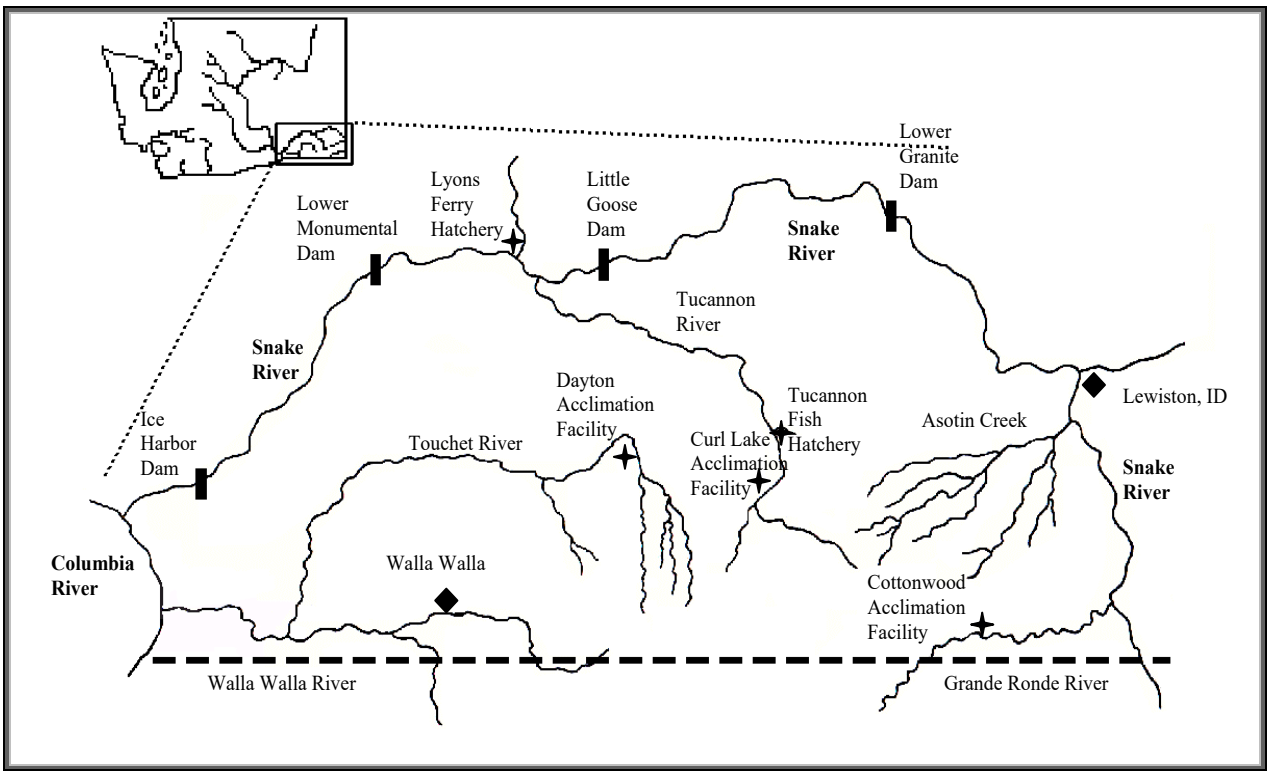

Figure 1. Map of the Lower Snake River Compensation Plan (LSRCP) LFC Facilities, and major rivers and streams in Southeast Washington.

LSRCP funded fish production in Washington began in 1983, with the construction of trout and steelhead rearing facilities at LFH. Construction of salmon hatchery facilities and steelhead acclimation sites followed and were completed in 1985. Major upgrades at TFH also occurred at that time, and operation of that facility has been funded by LSRCP ever since. Production at all facilities has been directed toward meeting established hatchery adult return goals of 18,300 fall Chinook, 1,152 spring Chinook, 4,656 summer steelhead; plus providing 67,500 angler days of fishing opportunity from 79,000 pounds of rainbow trout production (currently planted at 2.5 fish per pound (fpp). In addition to these LSRCP adult return goals to mitigate for expected hydro system losses (approximately 48% of total desired population returns), the LSRCP hatchery program has contributed to conservation efforts to maintain and restore native populations of salmon and steelhead. Additional hatchery production of jumbo-sized (1.5 pounds each) rainbow trout at TFH that historically was state funded is now funded by the Tri-State Steelheaders (non-profit organization).

1. Lyons Ferry Hatchery

The LFH is located along the Snake River at river mile (RM) 59.1, directly below the confluence of the Palouse River in Franklin County, Washington (Figure 1). Initially it was operated as two separate facilities. Washington Department of Wildlife (WDW) operated the north-side hatchery, producing steelhead and rainbow trout. Washington Department of Fisheries (WDF) operated the south-side hatchery, rearing spring and fall Chinook. A merger of the two agencies in 1994 led to a merging of the two facilities and has since been operated by the Washington Department of Fish and Wildlife (WDFW) through LSRCP funding as LFH.

LFH facilities include two incubation buildings with office space and feed storage, plus adult fish trapping, holding and spawning structures. A visitor center provides interpretive information for guests of the hatchery. There are eight residences on-site for staff to fulfill security and emergency response needs.

The LFH rearing facilities include twenty-eight raceways at 10 ft x 100 ft x 2.8 ft and nineteen raceways at 10 ft x 88.5 ft x 3.5 ft. The raceways rear all species produced at LFH (spring and fall Chinook, summer steelhead, and rainbow trout). These raceways are covered in 2" square mesh netting. There are three large rearing lakes (643,500 cubic feet (ft^3) of water each; 1,100 ft x 90 ft x 6.5 ft dimensions) which are also covered in 2" netting. Netting has significantly reduced predation since being installed in 2006-08. The steelhead and spring Chinook adult holding facilities include three 83 ft x 10 ft x 5 ft adult raceways with an enclosed spawning building incorporated over the center of these ponds. There are four 8.5 ft x 150 ft x 4.3 ft and four 10 ft x 150 ft x 4.3 ft adult fall Chinook salmon holding ponds, which also accommodate fall Chinook subyearling rearing in the spring months. The incubation facilities include 112 full Heath Tray stacks (2 units of 8 trays each) of vertical incubators in the south-side hatching building, and 88 shallow eyeing/hatching troughs and four 3.75 ft x 27.5 ft x 2 ft intermediate rearing troughs in the north-side hatching building.

Water is supplied to LFH from the Marmes pump station, which has emergency power backup generation that was completely upgraded between 2013 and 2016. In October of 2018 half of the new gear from the recent upgrade burned up. All gear and both generators were replaced between 2019 and 2021. The final phase of the project wrapped up in the spring of 2023 which included a new building to house the generators and new AC for the existing building with all the switch gear. The Marmes pump (wells) facility has three 300 horsepower (hp) pumps, four 200 hp pumps and one 75 hp pump. The well water right for LFH is 53,200 gallons per minute (gpm), or 118.5 cubic feet per second (cfs) of flow and water temperature is a constant 52°F.

2. Tucannon Hatchery

The TFH is located along the Tucannon River, between the towns of Dayton and Pomeroy Washington, at RM 36 in Columbia County (Figure 1). Fish production began in 1949 by the WDW. In 1983, construction began to remodel the hatchery as part of a transfer of ownership to LSRCP. Since November 1986, when construction was completed, the LSRCP has funded operations.

The TFH includes a combined incubation and office building, back-up power generation building, feed storage shed, shop, domestic water building, two well houses and a spring water collection building. There is also a river intake and adult trapping facility located upstream of Rainbow Lake along the Tucannon River, (Rainbow Lake intake). There are two residences for staff on site to fulfill security and emergency response needs.

The TFH is supplied with three different water sources: river, well, and spring. River water is captured from the Tucannon River at the Rainbow Lake intake and ranges in temperatures from 33 to 60 ^{o}F during use by the hatchery. The Rainbow Lake intake is located one half mile upstream of the hatchery. The captured water from the intake travels down an open channel into Rainbow Lake. From the outlet of Rainbow Lake, the water travels through an 18" above ground pipeline (replaced in 2005) to TFH. Rainbow Lake functions as a reservoir to provide the hatchery with cooler water in the summer months and warmer water in the winter months. It also provides a pool of water to draw from when encountering adverse intake conditions along the Tucannon River, resulting in temporary loss of water flows. An estimated 24-36 hours of water supply is currently available following a dredging and restructuring project at Rainbow Lake that was completed in 2018. The water right for the Rainbow Lake intake is 16 cfs. Well water is pumped from two separate sources to an aeration tower, and then gravity fed to the rearing units and the domestic pump building. The combined well water right is 2 cfs, with temperatures from well #2 between 54 – 57 ^{o}F and well #3 a constant 61 ^{o}F. Spring water is pumped from an underground collection site to the same aeration tower as the well water and gravity fed to the rearing units. The water right for spring water is 5.3 cfs and has a nearly stable temperature of 51 or 52 ^{o}F.

The rearing vessels at TFH include 40 concrete 1 ft x 15 ft x 0.5 ft shallow troughs, six concrete round ponds approximately 40 ft in diameter with a maximum of 2,660 ft^3 of rearing area each, two concrete 10 ft x 80 ft x 3 ft raceways, one concrete 15 ft x 136 ft x 5 ft raceway and one earthen rearing pond with a maximum of 136,221 ft^3 of rearing space (170 ft x 200 ft x 6.5 ft). Species reared at TFH include rainbow trout, spring Chinook and summer steelhead.

3. Cottonwood Acclimation Facility

Cottonwood AF is located along the Grande Ronde River at RM 28.7, directly above the confluence of Cottonwood Creek in Asotin County, Washington (Figure 1). Construction was completed in February 1985. This facility includes a small trailer for use by staff required to be always on-site while the pond is in operation, a small storage building, and an adult trapping facility on Cottonwood Creek. Cottonwood AF has a concrete channel with earthen walls and holds ~357,000 ft^3 of water, with a water right of 2,694 gpm (6 cfs) for the period January 1st through July 1st. The pond is supplied with water from Cottonwood Creek through a gravity water supply system, with the intake integrated into the adult trapping facility located ~ 0.10 miles above the pond. Water temperatures range from 34 to 52 ^{o}F during operation of the facility. The pond is presently used for acclimation and release of Wallowa stock summer steelhead into the Grande Ronde River.

4. Dayton Acclimation Facility

Dayton AF is located along the Touchet River at RM 53 in Columbia County, Washington (Figure 1). Construction of the Dayton AF was completed in October 1986. This pond is asphalt lined and holds ~ 200,000 ft^3 of water, with a water right of 2,694 gpm (6 cfs) for the period of Jan 1st – June 1st of each year. The pond is supplied with water from the Touchet River through a gravity water supply system, with the water intake located at the adult trapping and bypass facility approximately 0.3 miles upstream.

Water temperatures during acclimation range from 34 to 52 ºF. The pond is located adjacent to the Snake River Lab evaluation office and has a storage garage for equipment and feed and has a small trailer for use by staff required to be always on-site while the pond is in operation. The pond is presently used for acclimation and release of Carson stock Spring Chinook, and both Wallowa and Touchet stock summer steelhead. The water intake for the Dayton AF, adult trap, and fish ladder structure was rebuilt in 2008 and serves multiple functions. During the late spring and summer months, local irrigators collect water from this intake via a separate screen box and pipeline A project completed in summer 2023 fixed the issues with the dam pointed out in past AOPs with the addition of an Obermeyer Weir in the dam section closest to fish ladder wall. The intent of the Obermeyer Weir is to lower it during times of high river flows to maintain the thalweg of the river channel near the intake of the facility. This should hopefully prevent future in-river maintenance activities.

5. Curl Lake Acclimation Facility

Curl Lake AF is located along the Tucannon River at RM 41 in Columbia County, Washington (Figure 1). The construction of Curl Lake AF was completed in February 1985. Curl Lake AF is an earthen pond holding ~ 784,000 ft3 of water, with a water right of 2,694 gpm (6 cfs). The pond is supplied with water from the Tucannon River through a gravity water supply system and is currently utilized for acclimation of Tucannon summer steelhead and may be used in the future (again) for spring Chinook. Water temperatures during acclimation range from 34 to 48 ºF. Following the steelhead release, the pond is stocked with resident trout for fishing. The pond is emptied after fishing season ends October 31st each year.

6. Fall Chinook Acclimation Project (FCAP)

In addition to WDFW acclimation sites, in 2026 LFC will provide 2,100,000 subyearling fall Chinook to three acclimation facilities operated by the Nez Perce Tribe (NPT): Russel Bar (previously Pittsburgh Landing) - 600,000 sub-yearlings, Captain John's Rapids - 650,000 sub-yearlings and Big Canyon (Clearwater Basin ID) - 850,000 sub-yearlings. Each of these facilities will conduct two acclimation periods, with 450,000 or 400,000 in the first, and 200,000 or 400,000 in the second. Greater details of these facilities and their operations can be found in Appendix D. Until the Russel Bar Acclimation Facility is constructed, the sub-yearlings will continue to be direct stream released at the Slate Creek boat ramp.

7. Deer Creek Big Canyon Acclimation Facility (ODFW)

The Deer Creek Big Canyon acclimation facility is located at the junction of Deer Creek and the Wallowa River, just east of the town of Minam, Oregon. The site is at an elevation of 2,590 feet above sea level, at latitude 45.6194 and longitude -117.6990. The site area is 48 acres. This facility consists of three acclimation ponds and one adult holding pond. Water rights total 5,835 gpm from Deer Creek. The facility is staffed by Wallowa Hatchery personnel from February through May.

B. Fish Production Summary

Annual hatchery production is intended to meet LSRCP adult return goals for several species. Current production levels are set to both conserve and rebuild the Chinook populations, or to meet the adult hatchery return goals for steelhead while minimizing any adverse effects on Endangered Species Act (ESA) listed salmon and steelhead (Table 1; Table 2). Production levels for salmon and steelhead at LFC have been approved through the *U.S. v Oregon* (*US v OR*) 2018-2027 Management Agreement and specified in species specific tables within. The overall fall Chinook production goal is 5.4 million smolts (includes LFH, FCAP, and Idaho Power Company releases). The spring Chinook production goal is 475,000 smolts per year, 225,000 Tucannon stock for the Tucannon River and 250,000 Touchet/Carson stock for the Touchet River. LFC is currently utilizing two hatchery steelhead stocks (Wallowa and Tucannon) to fulfill harvest mitigation objectives under LSRCP, and utilizes two stocks (Touchet and Tucannon), for conservation purposes in the Touchet and Tucannon rivers. The summer steelhead production goal is 585,000 (385,000 Wallowa stock, 150,000 Tucannon Stock, and 50,000 Touchet stock). At the time of this AOP, WDFW is looking to change steelhead production and releases in SE WA. This is talked about later in the document under each steelhead stock. If agreement is reached after October 1, 2025, and amendment to this AOP will be sent out.

It is important to stress that *any* change to a specific program at LFH or TFH will potentially impact the other programs, so "current capacity" values shown in Table 1 represent rearing limits *as the programs are structured today.* Additionally, restrictions anywhere within the rearing cycle will determine program size. Restrictions can be rearing vessels, water, tagging groups and schedules, fish management decisions regarding harvest or adult return contribution and carrying capacity, etc.

Monitoring and Evaluation (M&E) has been ongoing since 1983 and 1985 for summer steelhead and Chinook salmon programs, respectively. Recent emphasis has centered on meeting ESA permitting and recovery planning requirements. Routine monitoring includes fish health examinations and pre-release quality control checks (length, weight, K-factor, fin clips and tag retention) that is completed on all WDFW releases.

Table 1. LFC production capacities (historical design versus current 2025-26 production goals).

Facility	Location River (Mile)	Water Source	Species	Designed Capacity (#Fish)	Designed Capacity (Pounds)	Current Program Capacity (#Fish)	Current Program Capacity (Pounds)
Lyons Ferry [a]	Snake (59)	Wells	Fall Chinook Spring Chinook Steelhead Rainbow TOTALS	9,160,000 132,000 931,200 260,000 **10,483,200**	101,800 8,800 116,400 86,000 **313,000**	3,300,000 475,000 585,000 [d] 126,750 **4,486,750**	54,000 34,900 111,944 48,443 **249,287**
Tucannon [b]	Tucannon (36)	Wells, Springs, Tucannon R.	Spring Chinook Rainbow Steelhead TOTALS	132,000 210,000 -0- **342,000**	8,800 39,285 -0- **48,085**	225,000 94,000 0 **319,000**	18,750 37,600 0 **56,350**
Cottonwood AF	Grande Ronde (28.7)	Cottonwood Creek	Steelhead	**250,000**	**31,250**	**225,000**	**50,000**
Curl Lake AP	Tucannon (41)	Tucannon R.	Steelhead Spring Chinook [e] TOTALS	160,000 **160,000**	32,000 -0-	50,000 **0** **50,000**	11,111 **0** **11,111**
Dayton AF	Touchet (53)	Touchet R.	Steelhead Spring Chinook TOTALS	**125,000** **0**	**27,750** **0**	150,000[c] 250,000 **400,000**	33,333[c] 25,000 **58,333**

[a] Lyons Ferry Hatchery was designed to accommodate subyearling Chinook based on the traditional density factor of 0.18. However, with regards to fish health, fish quality, increased yearling production, marking strategies that have been implemented since construction, and water composition, the density index must not exceed 0.09 for sub-yearlings and 0.14 for yearlings.

[b] Tucannon Hatchery was initially designed for rainbow and spring Chinook. Following facility modifications in the 1980's, and the construction of Curl Lake as an acclimation site, increased production for rainbow trout, spring Chinook, and incorporating a steelhead conservation program, were all implemented.

[c] 50,000 endemic smolts will be added to the AF when volitional release begins on the Wallowa stock. No feeding will occur at this point and fish will be leaving the pond.

[d] All steelhead production initially starts at Lyons Ferry, with releases occurring at multiple locations. 60,000 are released at Lyons Ferry, 225,000 at Cottonwood AP, 150,000 at Dayton AP, 50,000 at Curl Lake AP, and 100,000 get direct stream released into the Tucannon River = Total = 585,000.

[e] Spring Chinook are no longer released at Curl Lake, due to concerns about predation and low production levels in more recent years. WDFW now releases them at the hatchery, the lower Tucannon River and 50,000 will be acclimated and released at the WDFW Kalama Falls Hatchery on the lower Columbia River. Curl Lake is also a pinch point for river flow and there are talks of removing or moving the lake to create better river connectivity.

Table 2. LFC plants and transfers by brood years (BY) – three-year profile.

Species	Year slated for release/transfer				
	2025 Goal	2025 Actual Plants and Transfers	2026 Goal [a]	Fish/Eggs on Hand For 2026 Goal	2027 Tentative Plan [a]
Fall Chinook					
Yearling releases:	**BY 2023**	**BY 2023**	**BY 2024**	**BY 2024**	**BY 2025**
LFH-on station	450,000	452,332	0	0	0
Sub-yearling releases:	**BY 2024**	**BY 2024**	**BY 2025**	**BY 2025**	**BY 2026**
LFH-on station	1,200,000	1,124,952	1,200,000	0	1,200,000[a]
NPT – FCAP	2,100,000	2,090,640	2,100,000	0	2,100,000[a]
Eyed Egg Transfers:	**BY 2024**	**BY 2024**	**BY 2025**	**BY 2025**	**BY 2026**
Irrigon-IPC	1,100,000 [b]	1,100,00	1,100,000 [b]	0	1,100,000 [b]
Irrigon – Acclimation – Deer Creek Big Canyon	560,000 [b]	559,958	560,000 [b]	0	560,000 [a]
Irrigon – Direct – Couse Crk	700,000[b]	703,000	700,000	0	600,000[a]
Sub-yearling releases:	**BY 2024**	**BY 2024**	**BY 2025**	**BY 2025**	**BY2026**
Irrigon-IPC	1,000,000	1,095,322	1,000,000	0	1,000,000
Irrigon-Acclimation-Deer Creek Big Canyon	500,000	531,379	500,000	0	500,000
Irrigon-Direct-Couse Crk	600,000	643,321	600,000	0	600,000
Spring Chinook (Stock)					
	BY 2023	**BY 2023**	**BY 2024**	**BY 2024**	**BY 2025**
Tucannon Hatch (Tucannon)	185,000	37,043	155,000	19,000	155,000
Lwr Tuc River (Tucannon)	20,000	19,091	20,000	0	20,000
Barge Release (Tucannon)	0	0	0	0	0
Kalama River (Tucannon)	50,000	48,852	50,000	50,000	50,000
Touchet River (Carson/Touchet/Clearwater)	250,000	265,782[c]	250,000	219,500	250,000
Summer Steelhead (Stock)					
	BY2024	**BY 2024**	**BY 2025**	**BY 2025**	**BY 2026**
On Station (Wallowa)	60,000	21,000	60,000	65,000	60,000
Touchet (Wallowa)	100,000	100,000	100,000	108,000	100,000
Cottonwood (Wallowa)	225,000	226,151	225,000	230,000	225,000
Tucannon (Endemic, Mit)	100,000	101,702	100,000	82,900	100,000
Tucannon (Endemic, Cons)	50,000	55,963	50,000	36,100	50,000
Touchet (Endemic WxW)	50,000	52,199	50,000	37,200	50,000

Spokane Rainbow Trout					
Mitigation	**BY 2023**	**BY 2023**	**BY 2024**	**BY 2024**	**BY 2025**
Catchables	197,500 *79,000lbs*	200,947 *77,272lbs*	202,850 *79,000lbs*	218,580 *79,000lbs*	202,850 *79,000lbs*
Jumbo's	1,000 *1,493lbs*	2,077 *3,100 lbs*	1,000 *1,493lbs*	1,000 *1,493lbs*	1,000 *1,493lbs*
IDFG Catchables	16,000 *5,333lbs*	16,480 *5,150lbs*	16,000 *5,333lbs*	16,200 *5,333lbs*	16,000 *5,333lbs*
Jumbo's – NPT's	3,650 *5,447lbs*	3,670 *5,477lbs*	3,650 *5,447lbs*	3,650 *5,447lbs*	3,650 *5,447lbs*
State Program					
Jumbo's – TSS organization	2,500 *3,731lbs*	2,600 *3,880lbs*	2,500 *3,731lbs*	2,500 *3,731lbs*	2,500 *3,731lbs*

[a] Based on the *US v. Oregon* table B4 and implementation of the Snake River Fall Chinook salmon conversion of yearlings to sub-yearlings

[b] Transfer numbers include an overage to assure meeting mitigation goals due to possible coagulated yolk and other disease outbreaks.

[C] Beginning with BY24 releases in 2025, the direct stream release of SRFCH from Cougar Creek on the Grande Ronde has been moved to the Big Canyon Acclimation facility with ODFW.

[d] Includes 23,992 smolt from the ?Imtwaha Hatchery as a size at release comparison and to get CTUIR inside of the allowable 10% over program release goal.

Botulism has been a problem in the rearing Lakes in 2023 and 2024. In 2023 lake 2, with Touchet spring Chinook, had mortality coming up in June/July. Juveniles were moved out to the lake and into raceways, but a substantial mortality was seen. In 2024 lake 2 again had high mortality but it was in November. Shortly thereafter, the other two lakes were having high mortality. Juveniles from lake 2 were transferred to the Dayton Acclimation facility a month early to make room to move other fish out of the lakes. The decision was made with co-managers to release the fall Chinook yearlings in January to get them out of the current rearing environment. Samples for botulism were sent off and after ~three months came back inconclusive, but fish health staff are confident that it was botulism based on how the fish acted in the lakes and after being moved to raceways.

We are not sure what is triggering this new problem. Staff used a bleach solution on lake 3 in June 2025 to try and kill any organisms. The lake will also be neutralized before fish are put in. Instead of marking steelhead in August/September straight into lake 3, the fish will be marked into raceways and reared until mid-October and then transferred into the lake. This will allow for marking mortality to be picked out, which we have not been able to do in the lake. We will come up with a way to pick mortality in the lake using the small jon boat at the facility. How the lakes have being fed will be changed. There is the chance that the lakes have been being fed too quickly and feed is ending up on the bottom, creating an environment for the bacteria. Fish will be fed multiple times per day and at a slower rate to reduce the possibility of feed ending up on the bottom. There also plans to line the lakes so they can be washed out each season, but do to losing the $200 million from BPA, the eta on this is in the air.

II. SNAKE RIVER FALL CHINOOK

The Snake River fall Chinook program at LFH is the cornerstone of a highly coordinated and integrated artificial program, implemented through the LSRCP, the Idaho Power Company (IPC) Hells Canyon Settlement Agreement, and the Nez Perce Tribal Hatchery (NPTH) with funding through BPA. Broodstock for the program at LFH are primarily collected at Lower Granite Dam (LGR) but may be collected at LFH if trapping at LGR is limited. The *US v OR* 2018-2027 Management Agreement Table B4 shows priority production by release location and marking/tagging schemes for Snake River fall Chinook production at LFH/Irrigon FH (Table 3).

Table 3. *US v OR* 2018-2027 Management Agreement Table B4

Priority	Production Program				
	Rearing Facility	**Number**	**Age**	**Release Location (s)**	**Mark/Tag**
1	Lyons Ferry	500,000	0+	On Station	500,000 Ad/Cwt
2	Lyons Ferry	450,000	0+	Captain John Rapids	100,000 Ad/Cwt 350,000 Unmarked
3	Lyons Ferry	450,000	0+	Big Canyon	100,000 Ad/Cwt 350,000 Unmarked
4	Lyons Ferry	500,000	0+	On Station	500,000 Ad Only
5	Lyons Ferry	400,000	0+	Russell Bar	100,000 Ad/Cwt 300,000 Unmarked
6	Lyons Ferry	200,000	0+	Captain John Rapids 2	100,000 Ad/Cwt 100,000 Unmarked
7	Lyons Ferry	400,000	0+	Big Canyon 2	100,000 Ad/Cwt 300,000 Unmarked
8	Lyons Ferry	200,000	0+	Russell Bar	100,000 Ad/Cwt 100,000 Unmarked
9	Irrigon	1,000,000	0+	Salmon River	100,000 Ad/Cwt 100,000 Ad Only 800,000 Unmarked
10	Irrigon	500,000	0+	Deer Creek Big Canyon (ODFW)	100,000 Ad/Cwt 400,000 Ad Only
11	Lyons Ferry	200,000	0+	On Station	200,000 Ad Only
12	Irrigon	600,000	0+	Couse Creek (Snake)	100,000 Ad/Cwt 250,000 Unmarked 250,000 Ad Only
Total	**Sub-yearlings**			**5,400,000**	

The LFH was initially designed to release 9.16 million Snake River fall Chinook sub-yearlings (Table 1) at around 90 fpp. The CY 2026 production release at LFH will be 1,200,000 sub-yearlings at 50 fpp. LFH will transfer another 2,100,000 sub-yearlings to the FCAP facilities, with size at transfer of 65 - 75 fpp. Size at release goal for the FCAP facilities are 50 fpp. In addition, 700,000 green eggs and 1,660,000 eyed eggs will be transferred to and reared at the Oregon Department of Fish and Wildlife's (ODFW) Irrigon Hatchery for the LSRCP and IPC programs. The size at release for the sub-yearlings at Irrigon FH are also 50 fpp. The IPC program at Irrigon FH will release 1,000,000 sub-yearlings into the Salmon River near Hammer Creek. Another 600,000 sub-yearlings will be released into the Snake River at the mouth of Couse Creek and 500,000 will be acclimated and released at Deer Creek Big Canyon AF on the Wallowa River, a tributary to the Grande Ronde River, part of LSRCP production.

A. Trapping

Brood Year 2025

Tribal, state, and federal inter-jurisdictional management of fisheries for conservation of natural populations, sharing of harvestable returns and ESA take, trapping of hatchery broodstocks and distribution of fish trapped in excess of brood needs is extremely complex. To better coordinate hatchery and harvest management, agencies in the basin have implemented a structured pre-season planning, in-season coordination, post season review and evaluation process. Weekly in-season coordination teleconferences occur and run projections, harvest estimates and hatchery trapping and broodstock collection data are exchanged. Co-managers have agreed to maximize natural-origin fish that are incorporated into the broodstock. Trapping protocols at LGR (within reasonable assumptions of what the Lower Granite Trap can handle) and broodstock spawning in-season management will be targeted to achieve 30% proportion of Natural Origin in Broodstock (pNOB) if possible.

The trapping objective, (**Appendix B**), for broodstock at Lyons Ferry is up to 3,200 fish (*to meet eggtake goals through Priority 12*) based upon previously observed stray rates, pre-spawning mortalities, and average fecundities. The female collection goal for 2026 is 1,800 ($\geq$ 70cm). Throughout the spawning season, males may be used on multiple females, so males are not needed at a 1:1 rate and fewer are generally collected (mainly because males of the appropriate size (>70cm) are not as abundant in the run). Brood collection occurs primarily at LGR but may also occur at LFH or NPTH. Adults trapped at NPTH may be used to supplement LFH production shortages of LGR and volunteer adult returns, and vice versa.

1. Lyons Ferry Hatchery

Trapping at LFH will not occur unless it is necessary to meet broodstock goals. Due to high water temperatures in the Columbia and Snake Rivers, WDFW did trap fall Chinook adults for three weeks to ensure that broodstock goals were met. It appears at the time of this document, that trapping goals will be met a Lower Granite Dam.

2. Lower Granite Dam

Trapping and the collection of Snake River fall Chinook for broodstock at LGR is scheduled to begin on August 18th. Collected broodstock are divided between the LFH and NPTH (usually 80:20 ratio) as agreed upon annually, with a predetermined hauling schedule shared between both facilities to meet this need and adjusted as necessary. The goal will focus on females in calculating the 80:20 split between the two hatchery facilities.

In 2025, the managers agreed to set the trap rate at 70% from August 18th through September 6th, with the trap rate dropping to 16% for the remainder of the season. WDFW did start collecting adults on August 4th at the current trap rate of 28%, five days a week, until August 18th. This was done trying to get older age class fish and to hopefully offset concerns with excessively high-water temperatures that are expected after September 1. NOAA directed additional spill from Dworshak in July for returning Sockeye adults that will reduce the amount of colder water available in early September. The trapping rate of 70% was extended until Sept 13 due to the low number of adults returning to the Snake River due to high water temperatures. The trap rate was dropped to 16% on Sept 9 due to the number of fall Chinook and steelhead crossing Little Goose Dam. The number of adults would have been more that the NOAA staff could handle at the Lower Granite Dam trap. The trapping rate remained at 16% the rest of the season. After the female goal was achieved for broodstock needs, males were continued to be collected.

2025 will be the third year of the new trapping/collection/sampling procedures. With all returning hatchery origin fish now identifiable by release site through Parental Based Tagging (PBT), the directed collection of CWT fish, which have been the main method for estimating the run of natural and hatchery origin fall Chinook to LGR, will no longer occur. Instead, the collection of broodstock will focus on unmarked/untagged fish as well as known hatchery fish over 80cm, using PBT to differentiate between natural and hatchery origin fish. In addition, all fish collected for broodstock will be PIT tagged and tracked through spawning, with all data linked to the LGR NOAA Fisheries Database. All PBT samples which will be needed for run-reconstruction and broodstock (for pNOB) estimates will be collected at LGR.

With NOAA fisheries current plans of not operating the trap after 2028, all parties will develop a means for NOAA fisheries to transfer the current database in order to preserve historical data and ensure data continuity going forward.

B. Spawning

Brood Year 2025

Spawning will occur weekly, generally on Tuesdays and Wednesdays, with a tentative starting date of October 21st. Spawning will continue until late November or early December, as necessary to meet egg-take goals. Per spawning protocols, CWTs on males (if any) will be read prior to matings to determine origin and age (we want to avoid using strays and jacks if possible). We will continue to increase the percentage of four and five-year-old fish in the broodstock to offset the past high incorporation rate of jacks in the broodstock and the higher harvest rate of these older age classes in lower river fisheries. Also, the goal for BY25 is to continue the strategy for reducing the number of "true jacks or jills" (i.e., one-salt fish) in the broodstock.

Full exclusion of strays in broodstock is preferred to retain Snake River fall Chinook stock integrity. To abide by the *US v OR* Agreement to reach eggtake goals, stray females may be included in broodstock if there are limitations on the number of brood collected and crosses including a stray do not exceed 5% of the total numbers of matings at LFH. Jills will not be used in production unless it has been determined that we are broodstock limited. Jills that are spawned are to be mated with true adults. If production goals can be met without using jills: 1) the progeny of jills will be culled after fecundity counts at eye up, or 2) released as unfed fry as they would be tagged by Parental Based Tagging (PBT), with option one as the top preference. See Table 5 for disposition of these unfed fry. If we are short on males during spawning, jacks may be used if they come from subyearling production groups. Priority would be to keep known Snake River origin jills before keeping gametes from strays.

The mating protocol, (**Appendix C**: 2026 Trapping, Sampling and Mating Protocols at LFH**),** will minimize hatchery stray incorporation into the LFH broodstock while incorporating as many natural-origin fall Chinook as possible, striving to maximize pNOB.

Tissue samples (fin clips) will be collected at LGR for all fish handled by NOAA staff at the adult traps and samples from all fish hauled for brood will be analyzed for PBT tracking.

Fertilized eggs will be water hardened for one hour in 100 ppm iodophor and incubated in vertical stack incubators. Distribution of progeny to specific release sites is based on BKD ELISA sampling as identified in the fish health section of this document.

There is the potential that surplus Snake River origin fall Chinook may be available at the end of the spawning season once egg take goals have been met. If so, fish will be released back into the Snake River according to Table 5. In the event of broodstock releases during an ongoing fishery, the fish will be marked with a top caudal lobe clip to identify them as fish exposed to MS-222.

Table 4. Identified areas for fall Chinook juvenile and *adult out-planting as presented in the June 1, 2006 Draft SRFMP.

Facility	Out plant Locations		
	Adults/jacks	**Fry**	**Sub-yearlings**
Lyons Ferry Hatchery	-Tucannon River -Grande Ronde River -Mainstem Snake River	-Tucannon River -Mainstem Snake River near LFH -Mainstem Snake River above LGR -Mouth of Palouse River	-Mainstem Snake near Captain John Rapids -Big Canyon -Grande Ronde River -Mainstem Snake downstream of Clearwater River
NPTH	-Lower mainstem Clearwater River, below North Fork	-Lower mainstem Clearwater River	-Lower mainstem Clearwater River

*-According to fish health guidelines, adults receiving antibiotic injections and/or being anesthetized must meet the withdrawal period for the antibiotic and/or anesthetic used prior to out planting.

C. Rearing

Brood Year 2025

Eggs are reared in the vertical incubators and are treated with formalin at a rate of 1:600 to control fungus daily. Eggs are shocked at eye-up around 580 temperature units (TU's). After eggs are picked, vexar screening is added to each tray to simulate substrate. Formalin treatments stop after eggs are eyed, picked and weighed down to hatch. Hatched fry are transferred to raceways for rearing after yolk sac absorption at approximately 1,600 fpp, or approximately 1,900 TU's. Head troughs providing well water to the incubators are alarmed and visual inspections of flow through the trays along with head trough levels are conducted daily. BY 2025 will be the nineth BY in which all release groups will be independently PBT marked and reared to the release site/time.

In addition to the standard raceways available for rearing fall Chinook, the adult salmon holding raceways are also utilized for subyearling fall Chinook rearing. By utilizing these larger ponds, densities in other raceways are substantially reduced. In 2025 the BY24 fish were not partially reared in a lake. This was due to the botulism the previous year in the yearling release group. We hope to be able to use one of the two lakes available in 2026, after a chlorine disinfection, to partially rear half of the sub-yearlings. All sub-yearling release groups have a 100,000 Ad/CWT group and the remainder of each release group is unmarked/untagged. Of the 1.2 mill on-station release, 500,000 will be ad/cwt, and 700,000 will be Ad-only. The current density index for fall Chinook sub-yearlings up to marking is monitored so as not to exceed 0.09 lbs/ft^3/in. Density index values can increase on a sliding scale to a maximum value of 0.14 lbs/ft^3/in. These density index goals were developed and agreed upon by all parties to improve fish quality and survival.

D. Tagging, Transfers and Releases

Brood Year 2025

This section outlines the anticipated subyearling for BY25, assuming full production of Table 3. All tagging, transfers and releases are listed in Table 6.

Egg Transfers and Marking at Irrigon Hatchery

Irrigon Hatchery will receive 700,000 green eggs and 1,660,000 eyed eggs from LFH in October through mid-December for the IPC program, Couse Creek and Deer Creek Big Canyon releases (LSRCP program). Coded wire tags for the fish destined for Couse Creek and the Deer Creek Big Canyon will be purchased by WDFW and will have a WDFW Agency prefix. In 2025 WDFW sent a tagging trailer and crew to Irrigon to mark and tag the Couse Crk and Deer Creek Big Canyon fish. ODFW has purchased another trailer and will take care of this marking in 2026 and on. 100,000 sub-yearlings in each release group will be Ad/CWT marked/tagged, with the remainder of the Deer Creek Big Canyon release being Ad only, and 250k of the Couse release being Ad only, and 250k being unmarked/untagged (*Priority 10* in Table 3). Both groups will receive 2,200 PIT tags prior to release. See also Table 6. Quality control checks will be completed by WDFW, and PIT tags will be inserted by IPC and WDFW staff as part of a cooperative effort.

Coded wire tags for the Salmon River release will be funded by IPC and will have an ODFW Agency prefix. These fish will be 100,000 Ad/CWT, 100,000 Ad only and 800,000 unmarked (*Priority 9* in Table 3), with 2,200 PIT tags. See also Table 6. Quality control checks will be

completed by WDFW and funded by IPC. PIT tags will be inserted by IPC and WDFW staff as part of a cooperative effort.

Sub-Yearling Releases

At LFH, a total of 1,200,000 sub-yearlings (at 50 fpp) will be released into the Snake River in May 2026. A total of 500,000 will be Ad/CWT marked and the remaining 700,000 will be Ad only, (*Priorities 4 & 11* in Table 3). See also Table 6. WDFW staff will insert 20,000 PIT tags as they are being released into the Snake River at the release structure. Quality control checks are completed by WDFW staff prior to fish going into the rearing lake.

From Irrigon Hatchery, in mid-May, ODFW will direct stream release 600,000 sub-yearlings at 50 fpp into the Snake River at Couse Creek and release 500,000 from the Big Canyon AF on the Grande Ronde. In addition, IPC will truck and direct stream release 1,000,000 fall Chinook in mid-May into the Salmon River at the Hammer Creek boat ramp (50 fpp).

Table 5. Proposed BY25 Snake River fall Chinook tagging, transfers and releases.

Site	Transfer Goal	Release Goal	Size (fpp)	Age	Mark/Tag	PIT Tags	Transfer/Release Date
Irrigon-Salmon River (IPC)	1,136,000	1,000,000	Eyed Eggs	0+	100,000 ad/cwt 100,000 ad only 800,000 unmarked	2,200 [1]	Dec 2025 (egg transfer)
Irrigon-Grande Ronde	550,000	500,000	Eyed Eggs	0+	100,000 ad/cwt 400,000 ad only	2,200 [2]	Dec 2025 (egg transfer)
Irrigon- Couse Creek Direct	700,000	600,000	Green Eggs	0+	100,000 ad/cwt 250,000 unmarked 250,000 ad only	2,200 [2]	Oct/Nov 2025 (egg transfer)
LFH		1,200,000	50	0+	500,000 ad/cwt 700,000 ad only	20,000 [2]	May 2026 (transfer)
Capt John 1	451,000	450,000	75	0+	100,000 ad/cwt 350,000 unmarked	26,000 [3]	April 2026 (transfer)
Big Canyon 1	451,000	450,000	75	0+	100,000 ad/cwt 350,000 unmarked	11,000 [3]	April 2026 (transfer)
Russell Bar	401,000	400,000	75	0+	100,000 ad/cwt 300,000 unmarked	26,000 [3]	April 2026 (transfer)
Capt. John 2	201,000	200,000	75	0+	100,000 ad/cwt 100,000 unmarked	2,200 [4]	May 2026 (transfer)
Big Canyon 2	401,000	400,000	75	0+	100,000 ad/cwt 300,000 unmarked	2,200 [4]	May 2026 (transfer)
Russell Bar	201,000	200,000	75	0+	100,000 ad/cwt 100,000 unmarked	2,200 [4]	May 2026 (transfer)

1 Provided by Idaho Power Company
2 Provided by LSRCP
3 Provided by the Fish Passage Center for Comparative Survival Studies (CSS).
4 Provided by the Bonneville Power Administration (BPA).

All FCAP release sites will receive two different release groups of sub-yearlings, (*Priorities 2, 3,5,6,7 & 8* in Table 3). See also Table 6. All marking and CWT tagging is completed by WDFW in March and April, prior to transfer. PIT tagging may occur prior to and/or post

transfer to FCAP acclimation sites. All these subyearling groups are acclimated and released by NPT at a goal of 50 fpp. Quality control checks, PIT tagging, and the purchase of the PIT tags for fish destined for FCAP facilities will be completed by NPT staff. Captain John Rapids (CJR) Acclimation Facility (AF) will receive the first group, 450,000, tentatively on April 20, 2026, with a planned release date of May 7. The second group, 200,000, is planned to be received on May 11 with a planned release date of May 28. The first group will be comprised of 100,000 Ad/CWT and 350,000 unmarked/untagged fish and the second group will be comprised of 100,000 Ad/CWT and 100,000 unmarked/untagged fish. Big Canyon (BC) AF will receive the first group, 450,000, tentatively on April 20 with a planned release date of May 6. The second group, 400,000, is planned to be received on May 11 with an anticipated release date of May 29. The first group will be comprised of 100,000 Ad/CWT and 350,000 unmarked/untagged fish and the second group will be comprised of 100,000 Ad/CWT and 300,000 unmarked/untagged fish. Russell Bar AF, (formerly Pittsburg Landing (PL) AF) will receive the first group, 400,000, tentatively on April 13 with a planned release date of April 29. The second group, 200,000, is planned to be received on May 4 with a release date of May 20. The first group will be comprised of 100,000 Ad/CWT and 300,000 unmarked/untagged fish and the second group will be 100,000 ad/cwt and 100,000 unmarked fish. If the AF is not up and running, the fish will be direct stream released, as they have been the previous two years.

Yearlings

Yearling production ended with BY23 with the final yearling release in January 2025. Release was scheduled for March of 2025 but due to a botulism outbreak, consensus was reached to release them in January 2025 due to high mortality occurring in the rearing lake.

III. TUCANNON SPRING CHINOOK

The Tucannon River Spring Chinook Hatchery production began in 1985 using endemic broodstock. Currently, both natural origin and hatchery supplementation fish are collected for broodstock. Returning adults are collected at the Rainbow Lake Intake and transported to LFH for holding, spawning, hatching and initial rearing. The release goal is 225,000 yearling smolts. WDFW has initiated discussions with co-managers and NOAA Fisheries on different rearing/release strategies within and outside the Snake River basin, along with a potential to reinitiate a captive broodstock program in the near future to help preserve this stock.

A. Fish on Hand

Brood Year 2024

At the end of August 2025, LFH had 69,300 juvenile spring Chinook on hand.

B. Tagging, Transfers, and Releases

Brood Year 2024

In March 2025, BY24 progeny were 100% CWT tagged with no fin clip at LFH. The BY24 spring Chinook at LFH will be reared at LFH until mid-October before they are transferred to the Tucannon FH (19,300) and the WDFW Kalama Falls Hatchery (50,000) in November. In 2020

WDFW started a release strategy alternatives study to try and get more broodstock back that included direct release at TFH, a release at the mouth of the Tucannon River and barging below Bonneville Dam. A fourth alternative was to over winter smolts at the Kalama Falls Hatchery for acclimation. This alternative began with BY23 fish, ~50,000 fish were shipped in 2024 for release in 2025. BY24 will be the second year, and we are anticipating shipping ~50,000 fish in the fall of 2025. Due to the high number of adults and jacks that are straying from the first two years of barged releases, the barging alternative was dropped for the 2025 release year. – See Table 2 for the expected number of fish in each study group). All releases into the Tucannon River will receive a total of 15,000 PIT tags proportionate to release locations/quantity, while the fish released from Kalama Falls will not be PIT tagged. All fish released into the Tucannon River will be over-wintered at TFH to provide adequate imprinting to Tucannon River water prior to release. Per standard protocols, checks for CWT retention will be conducted when the fish are PIT tagged.

A fifth release strategy is being considered for releases in the spring of 2026. The group over-wintered at the TFH will be brought back to LFH a few weeks before release and direct stream released from LFH into the Snake River. In the spring/summer of 2025 adults were collected at the LFH adult trap, to try and get barge released and mouth released fish that were not entering the Tucannon River. This proved to be very effective. With the reduced number of fish to release into the Tucannon River, we think that by releasing them at LFH we can capture more adults. We will not have the 30 to 40% in river, (Tucannon River), mortality that we see as the smolts outmigrate. This will increase the number of adults returning and we can effectively collect them at LFH.

Table 6. Proposed BY24 Tucannon spring Chinook tagging, transfers and releases.

Site	BY24 Goal	Expected at Release	Size (fpp)	Age	Mark/Tag	PIT Tags	Transfer/Release Date
Tucannon Hatchery or LFH	155,000	19,000	12	1+	19,000 CWT only	15,000	Transfer to Tucannon in Oct 2025
Tucannon River Mouth	20,000	0	12	1+	0	0	Transfer to Tucannon in Oct 2025
Kalama Falls	50,000	50,000	12	1+	50,000 CWT only	0	Transfer to K Falls in Nov 2025.

C. Spawning / Outplants

Brood Year 2025

The egg take goal for BY25 is approximately 245,000 green eggs. Approximately seventy-five females are needed to meet the egg take goal at a fecundity of 3,500. In 2025, all females were injected when trapped and transported to LFH for adult holding. The first adult was collected on June 1 at TFH and concluded on September 9th. Fish being held for broodstock were inoculated for a second time on July 29th -as they were sorted at LFH. In 2025, 62 adults were collected for broodstock. Adults were also collected at the ODFW Butte Creek Hatchery and Lower Granite Dam. LFH and evaluation staff hauled this fish back to LFH. Adults were injected upon arrival at LFH.

As with previous years, a 2 x 2 spawning matrix protocol will be followed for Tucannon River spring Chinook spawning at LFH. During spawning, eggs and milt are collected in individual bags and placed in a cooler until fertilization. Spawning matrices are determined after all fish are spawned, all CWTs are checked for origin, and then fertilization takes place at the spawning building. Fertilized eggs are then brought to the dirty room where they are laid down individually into Heath baskets, rinsed and placed into Heath stacks to water harden in 100 ppm iodophor for one hour. Starting with BY25, green gametes will be taken to Irrigon FH to be incubated on chilled water. We are hoping that slowing down egg development can help up reduce the high proportion of jacks we are seeing in adult returns. The eggs will be shipped back to LFH before hatching, disinfected and weighed down to hatch.

All pre-spawn mortalities and spawned spring Chinook carcasses are disposed of on site. Due to antibiotic injections, these fish cannot be used for nutrient enhancement.

No adults were outplanted above the hatchery weir/trap in 2025.

D. Rearing

Brood Year 2026

The production goal for BY25 is 225,000 smolts at release. Eggs are treated with formalin daily to reduce fungus and are reared in vertical incubation trays. At eye-up, eggs from individual females are shocked, picked and placed in separate trays with vexar screening to simulate substrate. Upon complete yolk-sac absorption (~1600 fpp), they will be transferred to the north side shallow troughs for introduction to feed or ponded directly into raceways on the south side of LFH. We will also be employing a new feeding strategy for the year. We will be slowing down there growth early in the rearing cycle and not marking them until the end of July. Traditionally we push them to be able to mark them at the 1st of March, and we are thinking that this may be a cause for the high proportion of jacks in returning adults.

Table 7. Proposed BY25 Tucannon spring Chinook tagging, transfers and releases.

Site	BY24 Goal	Expected at Release	Size (fpp)	Age	Mark/Tag	PIT Tags	Transfer/Release Date
Tucannon Hatchery or LFH	155,000	155,000	12	1+	155,000 CWT only	15,000	Transfer to Tucannon in Oct 2025
Tucannon River Mouth	0	0	12	1+	0	0	Transfer to Tucannon in Oct 2025
Kalama Falls	50,000	50,000	12	1+	50,000 CWT only	0	Transfer to K Falls in Oct/Nov 2025.

E. Trapping

Brood Year 2026

Trapping for the spring Chinook broodstock program has been conducted exclusively at the TFH adult trap, located upstream of TFH, and incorporated to the Rainbow Lake Intake. In 2025, due to the compromised homing of the barge release groups, and the sheer number of PIT tags present in all groups, an effort was made to educate trap operators in other basin to be on the lookout for Tucannon spring Chinook strays. In addition, PIT tag data showed a large component of returning adults were overshooting the mouth of the Tucannon, so a SbyCode was issued for Tucannon PIT tags overshooting the mouth of the Tucannon to be captured at the Lower Granite Adult trap. Although the barge group PIT tags did not convert well into the Tucannon, a large proportion of them converted into the Snake River. The decision was also made to run the on-station adult trap at Lyons Ferry, and it was successful in capturing Tucannon adult spring Chinook. A picket weir is being considered below the trap if adults hold up below the trap and stop migrating, like in 2024. All of these additional trapping locations will be utilized again in 2026 because there will be one additional year of 4-year old barge release fish returning. Broodstock collection is permitted for up to 170 adults. The proportion of hatchery and natural origin adults incorporated into the broodstock is based on the estimated run size and the Tucannon Spring Chinook HGMP sliding scale (Appendix F) and will be adjusted in-season, if necessary, to meet the 225,000 smolt production goal. One-ocean age (jacks: <61 cm FL) fish may be included in the brood at a rate not to exceed 10% of the adult males during low run years.

Adults collected for spawning are transferred by truck to LFH for holding. Adults will receive 167 ppm formalin treatments every-other day to control fungus and decrease pre-spawning mortality.

Depending on the pre-season forecast, experience from previous out-planting success, and expected environmental conditions in the Tucannon River in 2025, WDFW (with co-manager agreement) may collect and hold some of the returning adults that would normally be passed upstream to spawn naturally. Until there is certainty as to whether the pre-spawn mortality

issues experienced in the past have been resolved, WDFW and the co-managers have agreed that at expected returns of less than 400 fish at the trap, all fish will be trapped and transported to LFH for holding. Adults in excess of broodstock needs will not be injected for outplants in the Tucannon River upstream of the weir for natural spawning in late August (sites to be determined based on numbers of fish available). For expected returns of 400 or more adults returning to the Tucannon River at the trap, WDFW and the co-managers agree to pass fish above the Tucannon weir as they are trapped. The initial decision to hold or pass fish will be based on the preseason forecast, but actual implementation will be based on in-season assessments of adult returns based on PIT tags, trapping, etc. and determined via weekly coordination calls between co-managers. In 2025, if fish will be held, all will be brought back to LFH and released back into the river just prior to spawning in late August 2025.

Staff will pass, or collect for holding, hatchery jacks to mimic the NOR jacks returning to the best of their ability and cull the excess hatchery jacks at the trap. Jacks culled at the adult trap will be utilized for food bank or stream enrichment purposes. On a low male proportion year, we will pass more HOR jacks to help ensure there are enough males on the spawning grounds.

IV. ASOTIN CREEK SPRING CHINOOK

WDFW continues to explore options with the co-managers to implement a spring Chinook program in Asotin Creek using Tucannon River stock. This program would allow for another broodstock source in years of low returns and would act as a safety net to the Tucannon River population. More planning still needs to occur, along with ESA consultation with NOAA Fisheries before such a program can be implemented. WDFW completed a draft HGMP for a conceptual program (2015), but this plan doesn't reflect the current performance of the Tucannon spring Chinook program, the release alternatives being explored (within our out-of-basin) for the stock. WDFW is committed to work with the co-managers and LSRCP in the coming years.

Discussions have also been initiated to discuss possible options of using a different hatchery stock (instead of Tucannon stock), for release in Asotin Creek. This would be an action to fulfill mitigation requirements for spring Chinook under the LSRCP. This could be a temporary action, and if returns to the Tucannon River improve in the future, options to start a program in Asotin Creek using Tucannon River stock could be implemented at that time.

V. TOUCHET SPRING CHINOOK

WDFW brought forth a proposal to PAC in January of 2018 to initiate a harvest mitigation program for spring Chinook in the Touchet River. This proposal was agreed to in PAC, passed on and accepted through the *US vs OR* Policy Committee. The HGMP for this program was submitted and approved by NOAA Fisheries in 2017. Since then, WDFW has received ~270,000 eyed Carson stock eggs annually from either the USFWS Little White Salmon or Carson hatcheries. BY24 eggs were received from Clearwater Hatchery as Carson had to cull a large number of eggs due to BKD prevalence in adults spawned. All hatching and rearing has taken place at LFH, with the first releases occurring in 2020. A sub-sample of smolts will be PIT tagged annually before they are moved to the Dayton AF. Smolts will be released from the Dayton AF in mid to late-March.

A. Fish on Hand

Brood Year 2024

At the end of August 2025, LFH had 219,900 juvenile spring Chinook on hand. These fish will be transferred to the Dayton AF in February 2026 (Table 7). The fish are comprised of Touchet and Clearwater stocks.

B. Tagging, Transfers, and Releases

Brood Year 2024

In March 2025, the BY24 progeny were 100% Ad clipped, with a portion (~85,000) CWT tagged at LFH.

Table 8. Proposed BY24 Touchet River spring Chinook tagging, transfers and releases.

Site (Type)	BY24 Release Goal	Expected at release	Size (fpp)	Age	Mark/Tag	PIT Tags	Release Date
Dayton AP Facility	250,000	219,500	12	1+	85,000 Ad/CWT 134,500 Ad Only	15,000	Mid to Late March 2026

C. Spawning

Brood Year 2025

The goal is to trap and collect enough fish at the Dayton Adult Trap (DAT) to meet full eggtake needs. However, given uncertainties in expected returns and trapping capabilities as determined by flows and stream conditions in the Touchet River, there may be a need to supplement the egg needs of the program from other facilities that use Carson stock spring Chinook. As such, eggs may continue to be provided from Carson NFH, Little White Salmon NFH, Leavenworth NFH or the CTUIR ?Imtwaha Hatchery as green or eyed eggs dependent on adult availability. Staff remained in close contact with the WDFW PAC representative during the trapping season, keeping them updated weekly on estimated returns and broodstock collections.

The egg take goal for BY25 is approximately 270,000 green eggs. Eighty-eight females are needed to meet the egg take goal at a fecundity of 3,500. Females are captured at DAT and injected through June 15th and then transported to LFH. These females were inoculated for a second time on July 15th.

Similar to the Tucannon spring Chinook program, we plan to use a 2 x 2 spawning matrix protocol when possible, for the Touchet spring Chinook program. However, given the low number of adults collected in 2025, and depending on the number of ripe males available on a given spawn day, a 1x1 cross may be used. During spawning, eggs and milt will be collected in individual bags and placed in a cooler until fertilization. Fertilized eggs are then brought to the dirty room where they are laid down individually into Heath baskets, rinsed and placed into Heath stacks to water harden in 100 ppm iodophor for one hour.

D. Rearing

Brood Year 2025

The production goal for BY25 is 250,000 smolts at release (Table 8). Eggs are treated with formalin daily to reduce fungus and are reared in vertical incubation trays. At eye-up (if we receive green eggs), eggs from individual females are shocked, picked and placed in separate trays with vexar screening to simulate substrate. Upon complete yolk-sac absorption (~1600 fpp), they will be ponded directly into raceways at LFH. These fish will also be reared in one of the large rearing lakes at LFH.

Table 9. Proposed BY25 Touchet River spring Chinook tagging, transfers and releases.

Site (Type)	BY25 Release Goal	Expected at release	Size (fpp)	Age	Mark/Tag	PIT Tags	Transfer/Release Date
Dayton AP Facility	250,000	250,000	12	1+	85,000 Ad/CWT 165,000 Ad Only	15,000	March 2027

E. Trapping

Brood Year 2026

For BY26, WDFW will trap returning adults (HOR and NOR) at the DAT, which will immediately be transferred to LFH for holding/spawning. Depending on survival and returns in 2026, it's anticipated that we may have to get some eggs from Carson or Little White Salmon NFH's until we have enough adults returning to meet broodstock needs. Another alternative that is being explored and has been preliminarily discussed with CTUIR would be to collect broodstock from returns in the Umatilla River, or the Walla Walla River from Nursery Bridge (both Carson stock origins). A formal broodstock trapping plan / agreement has been drafted by CTUIR at this time, but additional reviews / discussions are needed before this can be implemented. Conversely, if more adults return to DAT than what's required for broodstock needs, fish may be provided to CTUIR for their brood needs at the ?Imtwaha Hatchery or passed upstream for natural spawning.

VI. SUMMER STEELHEAD - GENERAL

The LFC currently uses two stocks of steelhead in the Snake River basin, (Tucannon and Wallowa) and two stocks in the Walla Walla basin (Touchet and Wallowa). The Wallowa stock is a non-endemic stock and was originally collected by ODFW from Lower Snake River dams (likely comprised of both A- and B-run fish from Washington, Oregon, and Idaho), and then released in the Wallowa River in the Grande Ronde Basin. The Wallowa stock steelhead will be released in the Grande Ronde and Touchet rivers, and on-station at LFH into the Snake River.

The NMFS 1999 Biological Opinion ruled that continued use of Lyons Ferry and Wallowa stocks were causing jeopardy to listed ESU Steelhead populations in the Snake and mid-Columbia rivers. It was recommended by NMFS to convert to endemic stock populations where possible. The Touchet and Tucannon endemic broodstock programs began with BY2000.

Additional changes to the steelhead program are likely in response to results from evaluation of fish stock performance and ESA related concerns regarding the ongoing releases of Wallowa stock steelhead into the Snake, Touchet and Grande Ronde rivers. Such changes may require a departure from the general mitigation approach used for steelhead so far but also will need careful planning to ensure that the change can be implemented within the limits of the hatchery facilities now or as planned to exist soon.

VII. TOUCHET SUMMER STEELHEAD

The Touchet River summer steelhead program is considered an endemic program, due to natural origin adults being used for broodstock. The current goal of this program is to produce 50,000 smolts annually released at ~4.5 to 6 fish/lb. Should this program ever be expanded to replace the Wallowa stock program in the Touchet River, the production goal would likely increase to 100,000-150,000 smolt annually, depending on co-manager agreement.

Broodstock adults are trapped on the Touchet River at DAT and transferred to LFH for holding and spawning. Historically, progeny from this program were planted in the North Fork of the Touchet River as yearlings each spring. Starting in BY15 smolts were trucked to the Dayton AF and allowed 10 to 14 days to acclimate with the Wallowa stock at the time the volitional release began. At the end of the acclimation period, the remaining fish will be forced out to the Touchet River. All adults trapped and handled are anesthetized by electronarcosis (EN).

A. Fish on Hand

Brood Year 2025

At the end of September 2025, LFH had 37,200 Touchet River summer steelhead juveniles on hand.

B. Tagging, Transfers, and Releases

Brood Year 2025

In September, all Touchet River endemic stock steelhead were CWT tagged, with no external fin clips, thereby making them unsusceptible to sport fisheries. Smolts will be put into the Dayton AF and allowed to comingle with the Wallowa stock and then volitionally outmigrate with the Wallowa stock (Table 9). Identified juveniles in excess of program needs (>55,000) will be outplanted as fry/fingerling in the Touchet River in late summer/fall, unmarked/untagged.

Table 10. Proposed BY25 Touchet summer steelhead tagging, transfers and releases.

Site	BY25 Goal	Expected at release	Size (fpp)	Age	Mark/Tag	PIT Tags	Transfer/Release Date
Dayton AP Facility	50,000	37,000	4.5 to 6	1+	No Mark, 100% CWT	5,000	April 2026

C. Trapping

Brood Year 2026

BY25 may be the last year of this program. We have had no effect on bolstering abundance of this stock. Returning adults from the hatchery program overshoot and stay all over the Snake River Basin. By discontinuing this program, we will stop mining NOR's and reduce straying. Agreement will have to be reached at USvOR policy and have NOAA buy off. An amendment to the AOP will be sent out if agreement is reached after October 1, 2025.

Trapping of BY26 Touchet River endemic stock will begin in January or February (depending on seasonal weather) at the DAT and is generally completed by early May. WDFW evaluation staff checks the trap daily, using EN to calm the fish for handling, transferring only a portion of NOR adults to LFH based on broodstock needs. All remaining NOR's and any captured endemics are released upstream of the trap. All trapped Wallowa stock fish are: 1) transferred to the Dayton Juvenile Fishing Pond to remove them from the river and provide additional fishing opportunities within Dayton, 2) sacrificed for CWT retrieval, and/or 3) donated to a local food bank.

Current survival estimates indicate that 14-15 spawned females (depending on age structure) should provide enough eggs to meet the smolt production goal (Table 10). Per co-manager agreement, WDFW evaluation staff target collecting 16 females and 20 males for the broodstock (100% NOR).

D. Spawning

Based on fecundity and survival estimates, LFH typically spawns 14-15 females to provide 65,000 green eggs for the program. Up to 55,000 smolts may be reared full cycle and planted as yearlings in the spring. Fish in excess of 55,000 will be planted into the Touchet River as fry/fingerlings in the late summer/fall, unmarked/untagged. Spawning usually occurs in March and April. A matrix-type spawning protocol is employed, (2x1; two males to every female), to increase the effective breeder population (N_b) due to the relatively small founding population for this program. If there are not enough males ripe to achieve this goal; 1:1 spawning is employed.

E. Rearing

After spawning, fertilized eggs are water hardened in 100 ppm iodophor. They are incubated in Heath stacks until the eggs eye up. The eyed eggs are shocked, handpicked and enumerated, and placed in hatching baskets suspended over shallow troughs or hatched in Heath stacks. Fry hatched in Heath stacks are transferred to shallow troughs at swim up. After hatch and swim-up, they are introduced to feed and transferred to intermediate raceways at around 500 fpp in June. They are transferred again to outside raceways at roughly 200 fpp in July.

Table 11. Proposed BY26 Touchet summer steelhead tagging, transfers and releases.

Site	BY26 Goal	Expected at release	Size (fpp)	Age	Mark/Tag	PIT Tags	Transfer/Release Date
Dayton AP Facility	50,000	50,000	4.5 to 6	1+	No Mark, 100% CWT	5,000	April 2027

VIII. TUCANNON SUMMER STEELHEAD

The Tucannon River summer steelhead program is considered an endemic program, meaning all original production was derived from natural parentage, and in later years, from 1st generation hatchery reared endemic stock fish as well. The adults for this program are collected at TFH and their progeny planted in the Tucannon River as yearlings. The current release goal is 150,000 smolts at 4.5 to 6 fpp, with 50,000 smolts being released for the conservation portion of the program (unclipped) and 100,000 smolts being released for the mitigation portion (Ad-clipped) of the program. According to the Tucannon Steelhead Program broodstock sliding scale, the 50,000 smolts for the conservation portion will come from NOR's and unclipped endemic returns (conservation group). The 100,000 smolts for the mitigation portion will come from hatchery endemic returns and consist of Ad/CWT or CWT-only adults, with no NOR's at lower NOR return levels.

A. Fish on Hand

Brood Year 2025

At the end of September 2025, LFH had an estimated 119,000 Tucannon River summer steelhead juveniles on hand. 36,100 fish for the conservation program and 82,900 fish for the mitigation program.

B. Tagging, Transfers, and Releases

In September, all Tucannon River endemic steelhead for the conservation portion of the program will be tagged with a CWT only. The mitigation portion of the program will be 100% Ad-clipped with 25,000 also receiving a CWT. Prior to 2016, the conservation portion releases have been roughly five miles upstream of the TFH, just below the Curl Lake intake structure. Beginning in 2016, WDFW staff began transferring the smolts for the conservation portion into Curl Lake after the spring Chinook were released. A total of 15,500 fish will be PIT tagged prior to release (Table 11). Spring Chinook are no longer acclimated and released at Curl Lake and the steelhead are transferred approximately two weeks before release.

With recent low returns, river conditions, and that many out-of-basin steelhead are escaping into the Tucannon River and making their way up to the TFH adult trap, broodstock trapping has been difficult and total broodstock needs have not been met for several years. However, broodstock needs were met in 2024 and 2025. The majority of the Tucannon mitigation group are just adipose fin clipped. Unfortunately, most of the stray hatchery fish arriving at the TFH adult trap are also adipose fin clipped, thereby making them undistinguishable from Tucannon

origin fish. Because of the uncertainty, these fish can't be collected for broodstock, or they aren't (or potentially shouldn't be) passed upstream for natural spawning. Therefore, WDFW wants to discuss alternative external marking strategies for the Tucannon stock mitigation program. External marks to consider would either be a maxillary clip (currently being evaluated with Wallowa Stock releases at LFH) or ventral fin clip.

Table 4. Proposed BY25 Tucannon River summer steelhead production.

Site	BY25 Goal	Expected at Release	Size (fpp)	Age	Mark/Tag	PIT Tags	Transfer/Release Date
Tucannon River (Curl Lake)	50,000	36,000	4.5 to 6	1+	100% CWT Only	5,000	April 2026
Tucannon River (TFH)	100,000	82,000	4.5 to 6	1+	27,000 Ad only. 25,000 Ad/CWT	10,500	March 2026

C. Trapping

Brood Year 2026

BY25 may have been the last year of this program as it has been. We plan to eliminate the conservation piece of the program and shift to an all-mitigation program. This new program will be used for releases in the Tucannon River, Snake River at LFH and potentially the Touchet River. Eliminating the conservation piece, we will stop mining NORs. We hope to reduce straying as well, as fish released at LFH or in the Touchet River, would return to the Tucannon River if they stray. Agreement will have to be reached at USvOR policy and have NOAA buy off. An amendment to the AOP will be sent out if agreement is reached after October 1, 2025.

Trapping of BY26Tucannon River endemic stock will begin in February (depending on seasonal weather) at the Tucannon FH adult trap (located adjacent to the Rainbow Lake Intake) and is generally completed by mid-May. Tucannon FH staff use EN to calm the fish for handling, transferring only a portion of unmarked natural origin adults and tagged endemic origin adults to LFH based on broodstock needs. All NOR's and endemic stock (CWT only, Ad, and Ad/CWT fish) not needed for broodstock are released upriver of the trap (per guidance in the Tucannon Summer steelhead sliding scale).

Current survival estimates indicate that 35-38 spawned females (depending on age structure) will provide enough eggs to meet the current smolt production goal. WDFW will target 40 to 42 females to be brought to the hatchery for broodstock needs, with up to 14 being NOR. Any females not used will be returned to the river to spawn naturally. Per co-manager agreement, a pre-season estimate based on PIT tag returns on the number natural origin fish expected at the TFH adult trap will be made. Per the Tucannon Steelhead Broodstock Sliding Scale (Appendix G), the appropriate number of natural and hatchery origin fish will be collected for either the conservation or mitigation broodstock.

D. Spawning

Based on fecundity and survival estimates, LFH typically spawns 35-38 females to provide 180,000 green eggs to meet the current conservation and harvest program release goals (Table 12). Spawning typically occurs in March and April but may extend into May. Matrix spawning is employed due to the relatively small founding population for this program. The intent of this protocol is to spawn two males with each female, increasing genetic diversity and helping ensure successful fertilization of eggs. If there are not enough males to achieve this goal; a 1:1 spawning matrix is employed.

E. Rearing

After spawning, fertilized eggs are water hardened in 100 ppm iodophor. They are incubated in Heath stacks until the eggs eye up. The eyed eggs are shocked, handpicked and enumerated, and placed in hatching baskets suspended over shallow troughs or hatched in Heath stacks. Fry

hatched in Heath stacks are transferred to shallow troughs at swim up. After hatch and swim-up, the fry are introduced to feed and transferred to intermediate raceways at around 500 fpp in June. They are transferred again to outside raceways at roughly 200 fpp in July.

Table 5. Proposed BY26 Tucannon River summer steelhead production.

Site	BY26 Goal	Expected at Release	Size (fpp)	Age	Mark/Tag	PIT Tags	Transfer/Release Date
Tucannon River (Curl Lake)	50,000	50,000	4.5 to 6	1+	100% CWT Only	5,000	April 2027
Tucannon River (TFH)	100,000	100,000	4.5 to 6	1+	75,000 Ad only. 25,000 Ad/CWT	10,500	March 2027

IX. WALLOWA SUMMER STEELHEAD

The Wallowa stock program was initiated to provide a fishery for summer steelhead in the Grande Ronde River (for both Oregon and Washington anglers) and contribute to both tribal and sport fisheries in the mainstem Columbia and Snake rivers. The overall production of this stock was increased in December 2012, following the elimination of the Lyons Ferry stock steelhead program, and now produces steelhead that are released in the Touchet River from the Dayton AF (100,000), Grande Ronde River from the Cottonwood AF (225,000) and into the Snake River at Lyons Ferry (60,000).

A. Fish on Hand

Brood Year 2025

At the end of September 2025, LFH had 428,000 Wallowa stock summer steelhead juveniles on hand. 408,000 will be held in Lake 3 until transfers and release and the remainder will be planted out into Rock Lake in October when water temperatures drop.

B. Tagging, Transfers, and Releases

Brood Year 2025

All these fish were 100% adipose fin clipped and tagged in August/September 2028. BY18 was the first group that a single CWT group was used to represent all three release groups, with the CWT fish reared in the lake with the Ad only fish (Table 13).

In late January or early February 2026, 225,000 smolts from Lake 3 will be transferred to the Cottonwood AF for final rearing and released into the Grande Ronde River. The fish will be reared/acclimated at Cottonwood AF for approximately 2.5 months and then volitionally

released. A total of 6,000 juveniles will be PIT tagged by WDFW for Cottonwood AF prior to transfer; 2,000 of those PIT tags will be used as part of the Comparative Survival Study (CSS) for steelhead production above LGR (Fish Passage Center). After the Touchet spring Chinook are released from the Dayton AF in March, 100,000 will be moved from LFH into Dayton AF. This group will be PIT tagged in the release structure just prior to transfer. They will then remain in the Dayton AF for approximately 2-4 weeks and will be volitionally released during the month of April. The final remaining fish from Lake 3 will be released directly from LFH into the Snake River in April, with a portion being PIT tagged at release in the release structure. A small study was started with the 2022 release to look at post-release survival of a maxillary clip. The final release from this study was in April 2025. Two groups of 5,000 fish were PIT tagged, with one group receiving a maxillary clip. Smolt-to-adult survivals will be estimated through PIT tag returns to Bonneville Dam. Depending on results, a maxillary clip would potentially be used on a portion or all of the Tucannon endemic stock to aid the collection of broodstock and the TFH adult trap.

Table 6. Proposed BY25 Wallowa stock summer steelhead production.

Site	BY24 Goal	Expected at Release	Size (fpp)	Age	Mark/Tag	PIT Tags	Transfer/Release Date
Cottonwood AF on the Grande Ronde River	225,000	225,000	4.5	1+	201,800 Ad Only 23,200 Ad/CWT	6,000*	Transfer to Cottonwood AF in Feb from LFH, release in April 2026
Dayton AF on the Touchet River	100,000	100,000	4.5	1+	99,600 Ad Only 10,400 Ad/CWT	5,000	Transfer to Dayton AF in mid-March, released in April 2026.
Snake River (On site at LFH)	60,000	60,000	4.5	1+	53,600 Ad Only 6,400 Ad/CWT	5,000**	On station release in mid-April 2026.

*2,000 of these PIT tags are part of the CSS study from the Fish Passage Center, 4,000 LSRCP
**5,000 PIT/maxillary clip

C. Trapping

Brood Year 2026

BY25 may have been the last year of this program as it has been. We are looking to do away with releases of Wallowa stock in the Touchet River and into the Snake River at LFH. We are looking to use Tucannon stock for these two releases into the future. This programmatic change will reduce straying and using out of basin fish in the Touchet River. Agreement will have to be reached at USvOR policy and have NOAA buy off. An amendment to the AOP will be sent out if agreement is reached after October 1, 2025.

Trapping of returning Wallowa stock adults occurs on Cottonwood Creek (a small tributary to the Grande Ronde River) in March and April. This creek also supplies water to the Cottonwood AF. Approximately 106 spawned females are needed to provide 440,000 to 450,000 green eggs for the program of 385,000 smolts (Table 14). All unmarked (presumably natural origin)

steelhead captured in the Cottonwood Creek adult trap are passed upstream to spawn naturally**.** All spawned carcasses not considered good quality for food banks will be returned to LFH for burial. If low water flow in the creek does not allow returning adults access to the trap, three alternate strategies may be employed: 1) release juveniles early and begin trapping adults, 2) collection of broodstock at ODFWs Big Canyon or the Wallowa Hatchery may occur and 3) trap at LFH. Disposition of excess fish (Wallowa Stock HGMP) include 1) killed to collect any CWT fish, 2) offered to local food banks, or 3) killed outright to prevent hatchery swamping of natural origin spawners and hauled to LFH to be buried.

D. Spawning

Spawning generally occurs in late March and early April on a weekly basis. All fish are spawned at the Cottonwood Creek trap site, with the gametes transported to LFH for fertilization, incubation, and rearing. A 1:1 male to female mating ratio will continue to be employed whenever possible. Adults trapped at LFH or excess adults from ODFW's Wallowa Hatchery or Big Canyon site may be used to provide eggs for this program if not enough adults are collected at Cottonwood Creek.

E. Rearing

After spawning, fertilized eggs are water hardened in 100 ppm iodophor. They are incubated in Heath stacks until the eggs eye up. The eyed eggs are shocked, handpicked and enumerated, and placed in hatching baskets suspended over shallow troughs or hatched in Heath stacks. Fry hatched in Heath stacks are transferred to shallow troughs at swim up. After hatch and swim-up, they are introduced to feed and transferred to outside raceways at roughly 500 fpp in June.

Table 75. Proposed BY26 Wallowa stock summer steelhead production.

Site	BY26 Goal	Size (fpp)	Age	Mark/Tag	PIT Tags	Transfer/Release Date
Cottonwood AF on the Grande Ronde River	225,000	4.5	1+	201,800 Ad Only 23,200 Ad/CWT	6,000*	Transfer to Cottonwood AF in Feb from LFH, release in April 2027
Dayton AF on the Touchet River	100,000	4.5	1+	99,600 Ad Only 10,400 Ad/CWT	5,000	Transfer to Dayton AF in March, release in April 2027.
Snake River (On site at LFH)	60,000	4.5	1+	53,600 Ad Only 6,400 Ad/CWT	10,000**	Direct stream release in mid-April 2027

*2,000 of these PIT tags are part of the CSS study from the Fish Passage Center, 4,000 LSRCP
**5,000 PIT, 5,000 PIT/maxillary clip

X. SPOKANE RAINBOW TROUT

Rainbow trout are reared and planted in both southeast Washington and northwest Idaho to meet LSRCP mitigation goals in both states for lost fishing opportunities because of construction and operation of the lower Snake River dams. The original LSRCP goal was 93,000 lbs. However, the WDW determined that in stream habitat improvements, equivalent to the cost of producing 7,000 lbs. annually of hatchery trout, was a reasonable exchange, and that was implemented in 1983, which reduced the annual production goal to 86,000 lbs. for the Snake River Basin. The SE Washington production goal is 79,000 lbs. and the NW Idaho production goal is 7,000 lbs. A small, privately funded program (Tri-State Steelheaders, TSS) at the LFH rears rainbow to1.5 lbs. each, providing a unique fishing opportunity in local lakes. This locally funded program replaced the previously state funded program in 2011 which had been in place since the LSRCP took ownership of the Tucannon Hatchery. The agreement at that time was that the state funded program would be allowed to continue at the TFH. In 2023 this program was moved to LFH due to limited funding from the TSS and the need to reduce the number of fish reared and released. It made sense to move this program into a rearing vessel at LFH and not take up vessels at TFH.

A. Fish on Hand

Brood Year 2024

At the end of August 2025, LFH and TFH had a combined total of 258,066 Spokane stock rainbow trout on hand, this includes diploids and triploids. LFC will keep approximately 5% over release goals in the fall to account for mortality, disease and predation.

B. Tagging, Transfers, and Releases

The IDFG fall catchables will be planted in the Moose Creek Reservoir by IDFG staff in late September or early October 2025. All fish for IDFG are triploids from the Spokane stock rainbow trout. Refer to Table 15.

In the spring of 2026, 74,000 catchable diploids (2.5 fpp) and 3,500 jumbos (1.5 lbs. each) will be planted by LFH staff into various lakes in southeast Washington. Spring planting begins in February and is completed in May/June. The jumbo trout from TSS program (usually around 2,500) are planted February through May each year, supplementing catchable plants.

At the TFH, the goal is to plant 94,000 rainbow trout into various lakes in southeast Washington as catchables (2.5 fpp average.). Planting typically begins in April and is generally completed by the end of June. No Spokane stock rainbow trout are tagged, or fin clipped at LFH or TFH.

Table 86. Proposed BY24 Spokane rainbow trout transfers and releases.

Facility	BY24 Goal	Expected at release	Size (fpp)	Lbs.	Age	Transfer/Release Date

	16,000	16,000	3.0	5,333	0+	Transfer to and planted by IDFG in Sept/Oct 2025
	32,500	32,500	3.0	10,833	0+	Planted in early Oct 2025
Lyons Ferry	74,000	74,000	2.5	29,600	1+	Planted in Feb-Apr 2026
	1,000	1,000	0.67	1,493	1+	Planted in Feb-Apr 2026
	3,650	3,650	1.0	3,650	1+	Transfer to and planted by NPT in Mar-May 2026
	2,500[a]	2,500[a]	0.67	3,713[a]	1+	Planted in Mar-June 2026
LFH total	125,150[b]	127,150[b]		47,924[b]		
Tucannon	94,000	94,000	2.5	37,600	1+	Planted in Mar-June 2026
Complex Total	219,150[b]	221,150[b]		85,515[b]		

[a] Funded by TSS.
[b] Totals do not include fish funded by TSS or 2,000 jumbos for the NPT.

C. Rearing

Brood Year 2025

Eggs for Washington's legal and jumbo programs, along with Idaho's fall catchable plants come from WDFW's Spokane Hatchery (Spokane stock). WDFW managers completed an Inland Trout Stocking Plan in 2012 for all hatcheries and water bodies in Washington. The management strategy is to plant larger catchables (2.5 fpp) at reduced numbers. Total pounds reared were not affected.

Approximately 75,000 eyed triploid rainbow eggs for IDFG, NPT and the WDFW Rock Lake fall plant will be transferred from the Spokane Trout Hatchery to LFH in December. After trough rearing, they are transferred to outside standard raceways in March. In January, LFH will receive about 100,000 eyed Spokane diploid rainbow eggs for the balance of its catchable and jumbo program. Early rearing is conducted in either shallow troughs or intermediate raceways before transfer to outside standard raceways in April. BY23 was the first year LFH provides an additional 2,000 jumbos to the NPT. NPT has agreed to pay for the feed costs associated with these fish and will haul the fish. This action was agreed to by LSRCP management and does not require an additional rearing vessel. These fish will be reared in the same vessel as the other jumbo trout for Washington and the NPT.

The Tucannon Hatchery will receive about 115,000 eyed rainbow eggs in January. Of these, 94,000 will be destined for planting as catchables (2.5 fpp). After receiving these eggs in January, a small portion (1,750) is transferred from TFH to regional education programs, now privately funded by the TSS club. The catchable program group is started in shallow troughs, intermediate reared in outside round tanks and final reared in the earthen rearing pond. The jumbos start in shallow troughs as well and finish in the round tanks. The entire jumbo program at LFH is privately funded by the TSS organization.

Table 97. Proposed BY25 Spokane rainbow trout transfers and releases.

Facility	BY25 Goal	Expected at release	Size (fpp)	Lbs.	Age	Transfer/Release Date

	16,000	16,000	3.0	5,333	0+	Transfer to and planted by IDFG in Sept/Oct 2026
	32,500	32,500	3.0	9,833	0+	Planted in early Oct 2027
	74,000	74,000	2.5	29,600	1+	Planted in Feb-Apr 2027
Lyons	1,000	1,000	0.67	1,493	1+	Planted in Feb-Apr 2027
Ferry	3,650	3,650	1.0	1,650	1+	Transfer to and planted by NPT in Mar-May 2027
	2,500[a]	2,500[a]	0.67	3,713[a]	1+	Planted in Mar-June 2027
LFH total	125,150[b]	125,150[b]		47,924[b]		
Tucannon	94,000	94,000	2.5	37,600	1+	Planted in Mar-June 2027
Complex Total	219,150[b]	219,150[b]		85,515[b]		

[a] Funded by TSS.
[b] Totals do not include fish funded by TSS or 2,000 jumbos for the NPT.

XI. RESEARCH

WDFW (Fish Management or Fish Science staff) are involved in a variety of research, monitoring, and evaluation projects throughout SE Washington. Funding of these activities comes from a variety of sources, and many may not be directly related to the LSRCP Lyons Ferry/Tucannon Annual Operations Plan but are provided here in general context for the co-managers so they are aware of activities. Some of the below activities are covered under the RM&E Statement of Work submitted to LSRCP under the hatchery evaluation program.

Fall Chinook

1) WDFW currently conducts fall Chinook spawning ground surveys in the Tucannon River to document abundance, distribution, and origin of spawners. Coho salmon redds are also estimated during these surveys. (LSRCP)
2) WDFW operates a smolt trap on the lower Tucannon River for estimating natural origin salmonid smolt production (spring Chinook, fall Chinook, and summer steelhead). Monitoring of the fall Chinook portion consists of estimating smolt out-migration only and smolt/redd. (LSRCP)
3) Fall Chinook carcasses ([1,000-1,200] females) from LFH spawning are saved, frozen at Lyons Ferry, and taken to the Tucannon River for nutrient enhancement in late fall. This did not happen in 2023 or 2024 due to freezer issues but will resume in Fall 2025.

Spring Chinook

1) Due to the history of high pre-spawn mortality for Tucannon River spring Chinook salmon, it was agreed that all the fish captured at the TFH adult trap during low return years may be kept at LFH for broodstock or adult out planting in late August. (LSRCP)
2) WDFW currently conducts spring Chinook carcass and redd surveys in the Tucannon River to document pre-spawn mortality, total returns, abundance by origin, and spatial distribution of spawners. (LSRCP)

3) WDFW operates a smolt trap on the lower Tucannon River for estimating natural origin smolt production (spring Chinook, fall Chinook, and summer steelhead). Annually, up to 5,000 NOR spring Chinook are PIT tagged for juvenile outmigration and adult return monitoring. (LSRCP)
4) WDFW staff may conduct spring Chinook redd surveys (as needed) in the Touchet River to document spawning from adult returns from the Touchet River spring Chinook program. (LSRCP, BPA, WDFW State Funds)
5) WDFW operates a smolt trap on the lower Touchet River for estimating natural origin smolt production. This trap has been used to estimate the limited natural production of spring Chinook in the basin which is expected to increase with the new releases of hatchery spring Chinook into the Touchet River. (Salmon Recovery Board Funding, BPA, FIFO Funds)

Summer Steelhead (by basin)

Asotin Creek:

1) WDFW operates adult weirs for summer steelhead in the Asotin Creek population. Current trap locations include Asotin, George, Alpowa, Ten Mile and Couse creeks. The weirs are used to estimate natural and hatchery origin abundance at all locations, and for collection of biological samples of returning steelhead for population age and genetic structure. (BPA). The Asotin Creek staff also coordinates with NPT staff on the capture/transfer or steelhead kelts from Asotin Creek for the NPT kelt-reconditioning program. Collection of kelts from Asotin Creek for this purpose is expected to continue into the future.
2) WDFW operates a smolt trap in the mainstem of Asotin Creek (below the Asotin Creek and George Creek weirs) for estimating natural origin smolt production (primarily summer steelhead, but spring/fall Chinook are also captured) from the basin. Annually, up to 5,000 summer steelhead are PIT tagged for juvenile outmigration and adult return monitoring. (BPA)
3) WDFW is partially funded by the Asotin Creek Intensively Monitored Watershed (IMW) for juvenile sampling in the upper basin, some hook/line sampling and PIT tagging of summer steelhead, and maintenance/operation of PIT Tag arrays within the Asotin Creek basin that are part of the IMW study. (Pacific Salmon Coastal Fund, WA State Salmon Recovery Fund).

Small Snake River Tributaries:

1) WDFW operates/maintains PIT Tag arrays on small tributaries located between the mouth of the Tucannon River and LGR. Currently, these tributaries have been designated as part of either the Tucannon or Asotin steelhead populations. The PIT tag arrays are used to estimate natural and hatchery origin abundance at all locations (BPA project #2010-028-00)

Touchet:

1) WDFW operates a smolt trap on the lower Touchet River for estimating natural origin smolt production of summer steelhead. Annually, we target 4,000 (or more) summer steelhead to PIT tag for juvenile outmigration, estimating adult returns, and overshoot monitoring. (WA State Salmon Recovery Fund – Fish In/Fish Out Projects, BPA – Touchet River Steelhead VSP Project).
2) WDFW operates adult steelhead traps on Coppei and Patit creeks to monitor abundance of natural and hatchery origin spawners, and collection of biological samples for age composition. (Touchet River Steelhead VSP Project – BPA)
3) WDFW currently conducts summer steelhead spawning ground surveys in the Touchet River basin (locations above Dayton) to estimate abundance and distribution of spawners. (LSRCP)
4) WDFW operates and maintains a series of PIT tag arrays (Harvey Shaw, Bolles, Coppei, Patit, and Dayton) for monitoring adult steelhead (hatchery and wild) returns and distributions to the basin. An additional PIT array is slated to be installed near the mouth of the Touchet River in late 2023 (BPA – Touchet River Steelhead VSP Project, LSRCP)
5) WDFW operates the Dayton Adult Trap (DAT) to capture summer steelhead and spring Chinook for broodstock and other biological samples from each run. Bull trout, brown trout, whitefish, suckers, and other species are also captured.

Tucannon:

1) WDFW operates a smolt trap on the lower Tucannon River for estimating natural origin smolt production (spring Chinook, fall Chinook, and steelhead). Annually, we target 2,500 summer steelhead (or more) for PIT tagging for adult return estimation and overshoot monitoring. (LSRCP, BPA – PIT Tags for Steelhead only)
2) WDFW currently conducts summer steelhead spawning ground surveys in the upper Tucannon River only (and Cummings Creek) to estimate abundance of spawners in correlation with fish passed at the Tucannon adult trap. (BPA)
3) WDFW operates and maintains a series of PIT tag arrays (Lower Tucannon, Middle Tucannon, Upper Tucannon, Tucannon FH), for monitoring adult steelhead (hatchery and wild) returns and distribution throughout the basin. Arrays are also used for adult spring Chinook and bull trout monitoring. (BPA, LSRCP).
4) Beginning with the 2022 release year, an evaluation of different release locations/strategies for Tucannon spring Chinook was started. Due to low overall production, only two groups were evaluated during the 2022 release. A barge release group was added for the 2023 and 2024 release groups but was aborted in 2025 due to the barge groups inability to convert back to the Tucannon River. It was desired to have all three release strategies be evaluated for a minimum of three years but it will end up being 4 years of the TFH/Mouth comparison with two years of barge releases.

Grande Ronde:

1) The Wallowa stock reciprocal study was completed with 2020 run year returns. A final progress report is completed and can be provided to all interested parties managers across the Snake River Basin. Overall, survival of LFH reared fish has averaged 2-3 times greater than those reared at Irrigon FH, regardless of release location, with statistically significant differences in most years. In addition, differences in stray rates based on

CWT or PIT tag detections from these groups, from either release location, are very similar and small relative to the total return of fish (<5%). Production changes because of this study have been discussed, with some options currently being explored. (LSRCP)

Snake River:

In 2023, a small evaluation was started to look at post-release survival of a maxillary clip to summer steelhead. Two groups of 5,000 fish (Wallowa stock) were PIT tagged, with one group receiving a maxillary clip, the other no maxillary clip. The plan is to replicate this evaluation for the next two release years (2024 and 2025), with final adult returns in 2027. Smolt-to-adult survivals will be estimated through adult PIT tag detections at Bonneville Dam. Depending on results, a maxillary clip would then potentially be used on a portion or all of the Tucannon steelhead endemic stock to aid the collection of broodstock at the TFH adult trap.

XII. FISH HEALTH

A. Guiding Policies

All fish production at LFH is conducted according to the Salmonid Disease Control Policy of the Fisheries Co-Managers of Washington State and Integrated Hatchery Operations Team (IHOT) fish health policy. Specifically, all lots of fish are monitored for fish health, all broodstock are inspected annually, strict hatchery sanitation procedures and fish culture practices (rearing criteria) are followed, and egg and fish transfer and release requirements are met. The attending aquatic veterinarian will respond to all fish disease outbreaks and oversee fish health-related services. Bacterial kidney disease (BKD) management for Chinook stocks, imposed by Idaho and Oregon state agencies' transfer policies, is outlined in Section C.

B. Monitoring

The WDFW aquatic veterinarian will regularly visit LFH and TFH to inspect stocks, address mortality events, and provide consultation per their discretion and as needed to maintain a veterinary client patient relationship (VCPR). During site visitations, any fish cohorts exhibiting morbidity and/or abnormal mortality may be examined by the veterinarian. . Updated mortality records, loading forms, feed records, and treatments logs will be provided to the veterinarian upon their request. Copies of fish health reports, veterinary feed directives (VFDs), and prescriptions referencing fish at each respective hatchery will be kept on file on site for at least three years.

At spawning, broodstock will be tested for viral pathogens. Samples of ovarian fluid and kidney/spleen tissue from 60 females will be submitted for testing Samples will be pooled into groups of up to five individual fish. If 60 female fish cannot be obtained, all eligible fish from the population will be sampled (i.e., steelhead stocks for the Tucannon and Touchet). Standard hatchery practices of egg disinfection and use of pathogen-free rearing water during early rearing are considered sufficient fish health measures for the control of viral pathogens, including infectious hematopoietic necrosis virus (IHNV).

To comply with Idaho's fish import regulation, kidney/spleen samples from 60 rainbow trout will be tested for viral pathogens four to six weeks before transfer. Upon completion, results will be communicated to IDFG.

C. Specific Fish Health Management

1. BKD Management – Fall Chinook

Starting with BY16, all females spawned at LFH will be 100% tested using BKD ELISA. This practice allows more flexibility in shipping eggs and for using fry in either yearling or subyearling programs.

WDFW categorizes BKD-ELISA optical densities as follows:

- Below low = < 0.099,
- Low = 0.1 to 0.199,
- Moderate = 0.2 to 0.449,
- High = > 0.45

Progeny of negative (below-low) females will be selected for the yearling fall Chinook program. Eggs from below low and low females will be selected for shipment to the states of Oregon and Idaho. ODFW has agreed to perform the BKD ELISA sampling and testing on 150 females at LFH during spawning. WDFW takes the remaining samples, with a portion of the ELISA testing paid for by IPC (350 females/season). Progeny of all low, moderate, and high BKD ELISA females may be utilized in the subyearling fall Chinook program for WDFW on-station releases and Captain John's landing.

2. BKD Management – Spring Chinook

Starting with BY17, all pre-spawning antibiotic injections intended for 1) the control of adult mortalities associated with *Renibacterium salmoninarum* and/or 2) the mitigation of vertical transmission of *R. salmoninarum* to progeny were suspended until an evidence-based risk of disease, confirmed by necropsy findings and appropriate ancillary testing, and which reasonably threatens the welfare of the broodstock program, was established. Starting with BY18, all female spring Chinook broodstock received a pre-spawning injection of tulathromycin (Draxxin®) at a target dose of 2.5 mg/kg in the dorsal sinus upon collection and a second injection of tulathromycin (Draxxin®) at the same dose in the dorsal sinus 30 days prior to spawning. Tulathromycin injections were replaced with erythromycin injections once erythromycin was again readily available. Starting with BY20, all female spring Chinook broodstock now receive a pre-spawning injection of erythromycin (Erymicin 200®) at a target dose of 20 mg/kg in the dorsal sinus upon collection until the end of June. Fish collected in July are not injected when collected to avoid an over-dosing of erythromycin (Erymicin 200®) when a second injection of erythromycin (Erymicin 200®) at the same dose is done 30 days prior to spawning. Pre-spawning female spring Chinook will be evaluated for BKD-antigen via ELISA assay and

indexed according to the resulting value. (Refer to WDFW categorizes of optical densities under section C. 1. “BKD Management of Fall Chinook”). The following culling program is intended to minimize bacterial load within the population and reduce risk of infection:
Until the ELISA results are known, eggs from all females will be incubated separately. Egg reductions required to meet production targets will begin with the highest ELISA range and proceed downward by range until the production target is met. If possible, all eggs from adults with an ELISA OD value of 0.45 or higher will be culled from the program. If it is determined that all eggs must be kept to meet program requirements and space is available, groups with ELISA OD values above 0.45 may be segregated and reared separately. No segregation between production groups with ELISA readings below 0.45 will occur. Preferably, only the eggs from females with the lowest ELISA values will be kept for the program.

3. Summer Steelhead

At spawning, broodstock will be tested for viral pathogens. Samples of ovarian fluid and kidney/spleen tissue from 60 adults females will be submitted for testing. Samples will be pooled into groups of up to five individual fish. If 60 female fish cannot be obtained, all eligible fish from the population will be sampled (i.e., steelhead stocks for the Tucannon and Touchet). Standard hatchery practices of egg disinfection and use of pathogen-free rearing water during early rearing are considered sufficient fish health measures for the control of viral pathogens, including infectious hematopoietic necrosis virus (IHNV). No culling is planned due to IHNV.

4. Broodstock and Egg Fungus Management

All adult Chinook and steelhead held for broodstock or for adult outplanting will be treated with formalin every other day to control external fungus. Any adults that have the potential to be outplanted, will not be injected with antibiotics. All eggs will be treated with formalin daily to control fungus. Treatments will be started 24 hours after fertilization. Treatment of Chinook eggs will be discontinued seven days before hatch. Steelhead egg treatments will be discontinued when the eggs are transferred to baskets for hatching.

Rainbow trout eggs are received at the eyed stage and are not treated with formalin.

XIII. COMMUNICATION

The list of people on the following table are either directly involved in the operation of the LFC, or in related programs and facilities.

Name	Agency	Position	Phone	Email
Policy				
Chris Donley	WDFW	Reg. 1 Fish Program Mgr.	509-892-7861	christopher.donley@dfw.wa.gov
Nate Wiese	USFWS	LSRCP Project Lead	208-378-5668	nathan_wiese@fws.gov
Greg Burak	USFWS	LSRCP Permitting	208-378-5323	greg_burak@fws.gov
Jerimiah Bonifer	CTUIR	Fisheries Program Mgr.	541-429-7552	jerimiah.bonifer@ctuir.org
Joe Oatman	NPT	Fisheries Dept. Mgr.	208-621-3736	joatman@nezperce.org
Lance Hebdon	IDFG	Anandromous Fish Mgr.	208-334-3791	lhebdon@idfg.idaho.gov
Production				
Ace Trump	WDFW	Lyons Ferry Operations Mgr.	509-646-9201	ace.trump@dfw.wa.gov
Derek Gloyn	WDFW	LFH Manager	509-646-3454	derek.gloyn@dfw.wa.gov
Dan Pounds	WDFW	TFH Manager	509-843-1430	daniel.pounds@dfw.wa.gov
Brian Devlin	USFWS	Hatchery Coordination	208-378-5329	brian_devlin@fws.org
Jen Krajcik	CTUIR	Production Supervisor	541-429-7278	jenniferkrajcik@ctuir.org
Becky Johnson	NPT	Production Director	208-621-4629	beckyj@nezperce.org
Mike Tuell	NPT	Deputy Prod. Director	208-621- 2403	miket@nezperce.org
Joe Louis	NPT	FCAP Manager	509-751-7279	mikek@nezperce.org
Scott Kellar	NPT	NPTH Manager	208-621-3502	scottk@nezperce.org
Carl East	NPT	NPTH Assistant Manager	208-621-3503	carle@nezperce.org
Keenan Schmidt	ODFW	Irrigon Hatchery Mgr.	541-922-5732	keenan.schmidt@odfw.oregon.gov
	ODFW	Fish & Wildlife Supervisor	541-922-5732	
Evaluation				
Michael Herr	WDFW	SRL Lead/ Steelhead	509-382-1004	michael.herr@dfw.wa.gov
Nell McGuan	WDFW	Fall Chinook	509-382-4755	nell.mcguan@dfw.wa.gov
Michael Gallinat	WDFW	Spring Chinook Biologist	509-382-4755	michael.gallinat@dfw.wa.gov
	WDFW	Steelhead Biologist	509-382-1710	
Rod Engle	USFWS	Fishery Biologist	208-378-5298	rod_engle@fws.gov
Jay Hesse	NPT	Research Coordinator	208-621-3552	jayh@nezperce.org
Jason Vogel	NPT	Research Division	208-621-3602	jasonv@nezperce.org
Bill Young	NPT	Hatchery Eval Coordinator	208-634-5290	billy@nezperce.org
Bill Arnsberg	NPT	Fall Chinook M & E	208-621-3758	billa@nezperce.org
Stuart Rosenberger	IPC	Hatchery Supervisor	208-388-6121	srosenberger@idahopower.com

Management				
Jeremy Trump	WDFW	Fish Management	509-382-1005	jeremy.trump@dfw.wa.gov
Chris Sullivan	IDFG	Anadromous Coordinator	208-334-3791	chris.sullivan@idfg.idaho.gov
Joe Dupont	IDFG	Regional Fisheries Mgr	208-799-5010	joe.dupont@idfg.idaho.gov
Fish Health				
Andrew Wilson	WDFW	Fish Health Specialist	509-885-0668	andrew.wilson@dfw.wa.gov
Erika Brigante	ODFW	Fish Pathologist		erika.n.brigante@odfw.oregon.gov

Appendix A: 2025 Fall Chinook Production Fish/Eggs Estimator

Priority #	Who	Release Site	Age	Number of Green Eggs Needed	Green Egg to Transfer or Release Survival	Number For Transfer	Number for Release
1	WDFW	Lyons Ferry	0+	531,900	0.92%	- - -	500,000
2	NPT	Capt. John AF #1	0+	479,800	0.94%	451,000	450,000
3	NPT	Big Canyon AF #1	0+	479,800	0.94%	451,000	450,000
4	WDFW	Lyons Ferry	0+	531,900	0.94%	- - -	500,000
5	NPT	Russell Bar #1	0+	426,600	0.94%	401,000	400,000
6	NPT	Capt. John AF #2	0+	213,900	0.94%	201,000	200,000
7	NPT	Big Canyon AF #2	0+	426,600	0.94%	401,000	400,000
8	NPT	Russell Bar #2	0+	213,900	0.94%	201,000	200,000
9	ODFW	Salmon River	Eggs	1,157,900	0.95%	1,100,000	1,000,000
10	ODFW	Grande Ronde River	Eggs	565,000	0.95%	560,000	500,000
11	WDFW	Lyons Ferry	0+	212,800	0.95%	- - -	200,000
12	WDFW	Couse Crk (Snake)	Eggs	700,000	0.86%	700,000	600,000
		Total Green Eggs Needed		**5,927,700**		**Total Release**	**5,400,000**
		Average Fecundity	3,800				
		Spawned Females Needed	**1,579**				
		Female Trapping Goal	**1,700**	Buffer for strays, Pre-spawn mortalities, and non-viable females			

Appendix B: 2025 Fall Chinook Trapping / Sampling Protocols at LGR

August 18, 2025

Protocols:

1) **This protocol assumes 24 hours/day, 7 days per week trapping at 70% continuing through September 6th, and then dropping to 18% through the end of the season.**

2) Males and females will **not** be inoculated or opercle punched.

3) All fish (Hatchery or Unmarked/Untagged, male or female) ≥ 70 cm will be PIT Tagged in the pelvic girdle, PBT sampled and hauled to LFH and NPTH. LFH will haul ~70% and the NPT will haul ~30%.

4) All Unmarked/Untagged fish >29cm to <70cm will be 100% scale and PBT sampled and released upstream (males and females).

5) All wire tagged fish ≥29cm to <70cm will be PBT sampled and released upstream (males and females).

WIRE TAGGED FISH

Fork Length	Action
≥ 70cm	Haul all fish (PIT tag in the pelvic girdle and PBT sample all)
>29cm to <70cm	Release all fish (PBT sample all)

UNMARKED/UNTAGGED FISH :

Fork Length	Action
≥ 70cm	Haul all fish (PIT tag in the pelvic girdle and PBT sample all)
>29cm to <70cm	Release All (Scale and PBT sample all)
Injury Releases	Scale Sample all UM/UT fish released

Appendix C: 2025 Trapping, Sampling and Mating Protocols at LFH

LFH may start up the volunteer trap if a shortfall of females or males being collected at LGR happens. If the LFH volunteer trap is started, staff will try to high grade for larger-sized adults. All LFH trapped fish retained for broodstock will be held in a separate adult raceway(s) for spawning so they can be accounted for during spawning by trapping location at the end of the season.

Sampling protocol

LFH staff processing DIPS: Document Fork length, sex, presence/absence of CWT, and PIT tag number. Take scales on unmarked/untagged fish and take the snout of the fish if CWT is detected.

SRL staff processing during spawning days: Fin clips for DNA: take sample on every spawned fish so data can be used for PBT profiling of broodstock and for juvenile releases. Scales: taken on all unmarked/untagged fish. Any fish with wire does not need to have scales collected.

Carcasses for nutrient enhancement: A tote of females only will be filled and dumped into a bin next to the loading dock. These fish will be frozen separately and taken to the Tucannon River for nutrient enhancement after ELISA testing.

Mating protocol

Our goals are: 1) to maximize the use of potentially NOR fish and larger/older aged fish and to 2) exclude jills and strays from broodstock.

All wire tagged males must wait until their CWTs are decoded before they are used in a mating.

Stray males will be immediately culled based on CWTs. If broodstock limited, up to ~5% stray females may be spawned and retained to make production.

Wire tagged males verified as adults can be used on multiple females, but generally not more than 1:2.

Untagged Males $\geq$75 cm can be used on multiple females.

Untagged Males 70-74 cm will only be used in 1 x 1 crosses unless there is a shortage of males.

Males <70 cm will not be used in matings unless they are verified as adults. This size criteria may be adjusted in season.

Appendix D: FCAP Facilities

1.1 Pittsburg Landing (Russell Bar in the future)

It is the intention at this time to no longer use this site. Releases in 2025 occurred at Russell Bar on the Salmon River. The NPT intends to move all the below listed infrastructure to Russell Bar. It is still uncertain whether or not this will be completed in time for acclimation and release in 2026. If not, the fish will be reared to release size at LFH and then direct stream released at the Slate Creek Boat ramp.

The acclimation facility at Pittsburg Landing consists of: 16 -20ft aluminum circular tanks; 2 aluminum distribution boxes; 4 river intake screens; ring lock flexible hose: 4" = 1,260 ft, 6" = 1,780 ft, 8" = 3,110 ft; camlock flexible hose: 6" = 2,080 ft; 1 - 500 gallon diesel storage tank; 1 - 20ft storage container; 2 - 30ft camp trailers; 1 - 1996 Chevy S-10 pickup; two alarm systems; 16 emergency oxygen systems - hoses, micro diffusers and regulators (1 per tank); a trailer mounted 4,000 watt generator light plant; one utility storage trailer; 16 camouflage nets; 2 trailer mounted hydrocyclones; miscellaneous bolts, seals, camlock fittings, etc. Equipment used at Pittsburg Landing and the other two facilities was purchased by USCOE, Walla Walla under the FY95 Congressional Add-on (Senate Report, 103-672, p7).

Water is pumped directly from the Snake River to the acclimation tanks by four, 4-inch electric pumps powered by diesel generators. Generators are rented from a contractor because leasing appeared to offer the least cost over a ten-year life cycle. Each pump has a portable water intake screen that is placed into the river each year and connected to the pump by 120 ft of 6-inch plastic hose. The pumps provide 500 gpm of water and operate 24 hours each day throughout the 6-week acclimation period except for oil checks and servicing. A 1,000-gallon tank, placed within a spill containment barrier, supplies fuel for the pumps. The water is pumped to one of two12 ft. high water distribution boxes, containing degassing towers to remove nitrogen gas, before flowing through a series of downsizing pipes to the rearing units.

The rearing units consist of 16 circular aluminum tanks, 20 ft in diameter and 4 feet deep. The tanks are transported from the storage area by a 20 ft flatbed lift-truck and placed on leveled 6-inch by 6-inch wood timbers. The tanks, made in two pieces and bolted together, drain water from the center of the tank through an 8-inch pipe placed in a plywood manhole running under the tank. The tank is fitted with vertical 12-inch circular perforated aluminum screen and the water depth controlled by a 6-inch center PVC standpipe. The rearing water enters the tank through a 4-inch pipe located on the edge of the tank and is directed in a manner to facilitate a circular motion to aid the movement of fish waste and mortality to the center screen. Water flow is controlled by a 4-inch gate valve located on the incoming line and maintains flows at l00 gpm. The water discharge line is connected from the tank to the river by an 8-inch flexible plastic pipe, which is also used to release the fish.

A 24-volt alarm system constantly monitors water levels in each rearing tank and each of the two water distribution towers. An enunciator panel that provides a visual and audio alarm when a low water level is detected monitors the alarm system. The alarm control box and enunciator panel is located near the staff-housing trailer.

Assembly of the acclimation site begins in February each year with the transport of equipment and material from an offsite storage area. In 2006, the U.S. Forest Service (USFS) agreed to a trial operation of allowing the NPT to leave half of the assembled fish rearing tanks in place and remove the other half and related equipment at a storage site near the fish acclimation site. This agreement should greatly reduce equipment fatigue and reduce assembly and disassembly time by half.

1.2 Big Canyon (Clearwater Basin ID)

The Big Canyon facility uses identical or similar equipment to that of Pittsburg Landing. The rearing tank assembly has been changed over the years to include a single row of tanks that sit flat on the gravel surface. The center drain line is in a trench dug under the tank, thus eliminating the need for the 12-inch-deep gravel pad that was previously used. This method can only be used where the proper elevation is available to facilitate water discharge to the river.

The USCOE agreed to furnish electric pumps to replace the diesel units that were rented each year. Electric pumps were installed and tested before the 2002 acclimation season. The electric pumps provide the same performance as the diesel pumps while reducing rental and maintenance costs, allowing onsite staff reduction and eliminates the risk of a major fuel spill.

FCAP Project Leader received verbal agreement from the Nez Perce Tribe that allows the fish rearing tanks and water distribution tower to remain assembled at the site the entire year. This eliminates the need for an assembly and disassembly contract and reduces equipment fatigue hence provide dollar savings to the program.

1.3 Capt. John Rapids

The Capt. John Rapids Fall Chinook Acclimation Facility is a single 150 ft X 50 ft in-ground, lined pond that is supplied with Snake River water by two independent 1,250 gpm submersible electric pumps. Other facility equipment and capital construction consists of 2 river intake screens; one camp trailer; one standby propane generator; one water well (domestic water); septic system; commercial electric service; alarm system; telephone service. The pumps and intake screens were designed to be placed into the river and then removed following fish acclimation each year but were replaced in 2001 with permanent intake screens located in the main Snake River channel. The pump intake screens are provided with an air back flush system to remove debris and an alarm system is available to monitor flows.

The pumps deposited large amounts of sand in the acclimation pond, which was removed by hand tools between each group of fish. The deposited sand created extremely poor environmental conditions for the fish during release.

Negotiations with the USCOE resulted in the installation of two sand separators, two larger sized water pumps, and upgrade of the electrical and pump control panels and changes in the pond water alarm system. Installation of the new equipment began in the fall of 2007 and testing indicated that the sand separators removed most of the sand load that had been deposited in previous years.

2. Operations

2.1 Fish transport

Approximately 500,000 sub-yearlings will be transferred to the Big Canyon and CJR facilities and 400,000 will be transferred to Pittsburg Landing. CJR sub-yearlings will be transported by WDFW, while Russell Bar and Big Canyon transports will be shared by NPT and WDFW. Big Canyon and Captain John Rapids sub-yearlings will be transferred in late April while Pittsburg landing sub-yearlings will be transferred around the third week in April. Lyons Ferry Hatchery personnel provide schedules and facilitate loading and enumeration of the fish. Fish transport permits will be requested from IDFG.

The final release of yearlings was in 2019 as the program has shifted to a sub-yearling only release with two groups being released at each facility. The second release group of approximately 200,000 sub-yearlings will be transferred to all three facilities approximately 4-5 days after the release of the first group.

2.2 Rearing

During acclimation, staff perform daily scheduled fish culture duties that includes checking and recording oxygen levels in the rearing units three times each day, feeding the rearing units three times each day, and picking fish mortality twice each day. Staff also observes fish behavior for abnormalities and assist in fish health checks and the fish-marking program. The fish are fed Bio-Clark's fry and Bio-Pro, manufactured by Bio-Oregon of Longview Washington. Fish culture methods are the same as per Integrated Hatchery Operations Team (IHOT) guidelines and consistent with WDFW fish culture techniques at Lyons Ferry Hatchery. Environmental precautions are necessary to handle diesel and oil for the portable water pumps.

Fish health services are provided by contract with the USFWS, Dworshak Fish Health Center (DFHC). The contract provides diagnostic and pathogen survey services for all fall Chinook juveniles and smolts transported to the fish acclimation facilities. The services include a fish health check before transfer, and a pre-release exam. Other health checks are performed as requested. Fish health protocols are as per AFS Blue Book, IHOT and Nez Perce Tribe fish health protocols.

2.3 Marking

Sub-yearling fish will be marked with coded wire tags (CWT), adipose fin clipped, and pit tagged prior to transfer to the FCAP facilities.

2.4 Release

Sub-yearling fish are acclimated approximately three weeks before release in early to mid-May at 50fpp. The second group of sub-yearlings will be released in late May to early June, also at 50 fpp. Anticipated sub-yearling transfer and release dates for 2023:

- Russell Bar – Transfer April 13 – Release April 29
- Russell Bar (2) – Transfer May 4 – Release May 20

- Captain John Rapids – Transfer April 20 – Release May 7
- Captain John Rapids (2) – Transfer May 11 – Release May 28
- Big Canyon – Transfer April 20 – Release May 6
- Big Canyon (2) – Transfer May 11 – Release May 29

Emergency low water, water temperatures or facility equipment failure may necessitate an early release of fish from the facilities. The facility operator is authorized to determine when to release the fish if emergency circumstances warrant. Co-management agencies will be contacted within 24 hours with notification of an early release.

2.3 Communication

Verbal communications between FCAP personnel and co-managers is done on an as needed basis to facilitate planning, transportation, and acclimation. Co-managers will be involved in any planned deviation to the fish acclimation schedule.

Fish release numbers will be reported, and a FCAP fish acclimation summary will be completed by Nez Perce Tribe Research division. FCAP fish acclimation summary and other pertinent information will be presented to co-managers at the Snake River Fall Chinook Technical Group meeting.

FCAP personnel will complete and submit a project annual report to LSRCP in August each year.

FCAP contact list:

Becky Johnson: 208-621-4629; Cell #: 208-791-3392; E-mail; beckyj@nezperce.org
Mike Tuell: 208-621-3521; Cell #: 208-190-5158 E-mail: miket@nezperce.org
Joe Louis: Cell #: 509-751-7279; E-mail: joel@nezperce.org

Appendix E: 2026 Releases - Fall Chinook Pit Tag Allocation (*US v OR* agreement)

Summary of PIT tag allocation for release year 2025 Snake River fall Chinook salmon hatchery production.

Priority	Production Program						Release numbers available for PIT tagging		Tagging Lead / Uploading
							Sub-yearlings		
	Rearing Facility	Number	Age	Release Location(s)	PIT Tag #'s Monitor Mode	PIT Tag #'s Bypass if collected	Yearlings		
							Subyearling Sample Size		
						BIC	Representative Allocation		
1	Lyons Ferry	450,000	1+	On station	10,000 [1]	0			WDFW/WDFW(monitor mode for SARs)
2	Lyons Ferry	450,000	0+	Capt. John Rapids 1	18,200 [2]	7,800 [2]			NPT/NPT
3	Lyons Ferry	450,000	0+	Big Canyon 1	7,700 [2]	3,300 [2]			NPT/NPT
4	Lyons Ferry	500,000	0+	On Station	15,000 [1]				WDFW/WDFW(monitor mode for SARs)
5	Lyons Ferry	400,000	0+	Russell Bar 1	18,200 [2]	7,800 [2]			NPT/NPT
6	Lyons Ferry	200,000	0+	Captain John Rapids 2		4,500 [3]			NPT/NPT
7	Lyons Ferry	200,000	0+	Big Canyon 2		4,500 [3]			NPT/NPT
8	Lyons Ferry	200,000	0+	Russell Bar 2		4,500 [3]			NPT/NPT
9	Irrigon	1,000,000	0+	Salmon River		4,500 [4]			IPC/IPC
10	Irrigon	200,000	0+	Grande Ronde		4,500 [1]			WDFW/WDFW
11	Lyons Ferry	200,000	0+	On Station					
NPTH 1	NPTH	500,000	0+	NPTH		4,500 [3]			NPT/NPT
NPTH 2	NPTH	200,000	0+	Lukes Gulch		4,500 [3]			NPT/NPT
NPTH 2	NPTH	200,000	0+	Ceder Flats		4,500 [3]			NPT/NPT
NPTH 3	NPTH	500,000	0+	North Lapwai Valley		4,500 [3]			NPT/NPT
TOTAL	**Yearlings**	**450,000**					**0**	PIT Yearlings	PIT Sub-yearlings
	Sub-yearlings	**5,200,000**						**10,000**	**118,500**

Total PIT tags:

1. LSRCP tags 29,500
2. FPAC 63,000
3. BPA tags 21,500
4. IPC tags 4,500

Appendix F: Tucannon spring Chinook Sliding Scale

Appendix F - Adult Disposition Model for Tucannon spring Chinook (to be reconsidered and revised by 2017)

HOR = Hatchery origin return — **modified based on Tribal comments on Jan 18, 2013** -corrected formulas for 65% of run at trap

NOR = Natural origin return — MAT = 750, so 555 NOR at trap provides ~750 NOR to river

Predicted HOR =	203	at trap	Total predict. HOR=	312	
Predicted NOR =	51	at trap	Total predict. NOR=	78	
Tot. Est Return at Trap =	254	at trap			
Total River Return =	391	w/ 35% below trap		391	
Brood Target =	156				

Dispostion Table

NOR Brood	NOR SpEsc	HOR Brood	HOR SpEsc	Program Size	Tribal & Nontribal Harvest	Tribal & Nontribal Transfer
50	23	106	175	225,000	0	0

w/o harvest or transfer mgmt

PNI Prior to harvest or transfer: **PNI = 0.27**; pNOB= 0.32; pNOS= 0.12; pHOS= 0.88

Enter predicted Adult run size at the TFH trap in cells C5 and C6

Predicted NOR at Trap	NOR Broodst.	HOR Broodst.	PNOB (NOR Brood %)	At trap NOR SpEsc	At trap HOR SpEsc	At Trap Total Esc	At trap NOR Esc%	NOR total river escapem.	HOR total river escapem.	Total River Escapem NOR +HOR	Total Run Size in Tuc. R.	Total Escap after 15% prespawn loss	Total NOS Escapement after 15% presp loss	pNOS (NOS escapement %)	Total HOS Escapement after 15% presp loss	pHOS (HOS escapement %)
50	50	106	32%	0	97	97	0.0%	27	206	233	389	198	23	11.5%	175	88.5%
100	50	106	32%	50	97	147	34.0%	104	206	310	466	264	88	33.5%	175	66.5%
150	75	81	48%	75	122	197	38.1%	156	231	387	543	329	132	40.2%	197	59.8%
200	85	71	54%	115	132	247	46.6%	223	241	464	620	394	189	48.0%	205	52.0%
250	85	71	54%	165	132	297	55.6%	300	241	541	697	460	255	55.4%	205	44.6%
300	100	56	64%	200	147	347	57.6%	362	256	618	774	525	307	58.5%	218	41.5%
350	110	46	71%	240	157	397	60.5%	428	266	695	851	591	364	61.7%	226	38.3%
400	125	31	80%	275	172	447	61.5%	490	281	772	928	656	417	63.5%	239	36.5%
450	140	16	90%	310	187	497	62.4%	552	296	849	1005	721	469	65.1%	252	34.9%
500	156	0	100%	344	203	547	62.9%	613	312	926	1082	787	521	66.3%	265	33.7%
550	156	0	100%	394	203	597	66.0%	690	312	1002	1158	852	587	68.8%	265	31.2%
600	156	0	100%	444	203	647	68.6%	767	312	1079	1235	917	652	71.1%	265	28.9%
650	156	0	100%	494	203	697	70.9%	844	312	1156	1312	983	717	73.0%	265	27.0%
700	156	0	100%	544	203	747	72.8%	921	312	1233	1389	1048	783	74.7%	265	25.3%
750	156	0	100%	594	203	797	74.5%	998	312	1310	1466	1114	848	76.2%	265	23.8%
800	156	0	100%	644	203	847	76.0%	1075	312	1387	1543	1179	914	77.5%	265	22.5%
850	156	0	100%	694	203	897	77.4%	1152	312	1464	1620	1244	979	78.7%	265	21.3%
900	156	0	100%	744	203	947	78.6%	1229	312	1541	1697	1310	1044	79.7%	265	20.3%
950	156	0	100%	794	203	997	79.6%	1306	312	1618	1774	1375	1110	80.7%	265	19.3%
1000	156	0	100%	844	203	1047	80.6%	1382	312	1695	1851	1441	1175	81.6%	265	18.4%
1100	156	0	100%	944	203	1147	82.3%	1536	312	1849	2005	1571	1306	83.1%	265	16.9%
1200	156	0	100%	1044	203	1247	83.7%	1690	312	2002	2158	1702	1437	84.4%	265	15.6%
1300	156	0	100%	1144	203	1347	84.9%	1844	312	2156	2312	1833	1567	85.5%	265	14.5%
1400	156	0	100%	1244	203	1447	86.0%	1998	312	2310	2466	1964	1698	86.5%	265	13.5%
1500	156	0	100%	1344	203	1547	86.9%	2152	312	2464	2620	2094	1829	87.3%	265	12.7%

Model Calculations and Assumptions
Cell C5 - Predicted HOR at Tucannon FH trap: This is an entered number based on preseason projection
Cell C6 - Predicted NOR at Tucannon FH trap: This is an entered number based on preseason projection
Cell C7 - Total Estimated Run at the trap: Sum of HOR and NOR preseason projections
Cell C8 - Total run at trap divided by 0.65 to estimate total return to Tucannon River, including downstream of trap (35%).
Cell C9 - Brood Number: This is a constant number of 170 based on a 225,000 production level at HOR levels >500 - would be adjusted downward at lower HOR levels
Column A - Predicted NOR at the trap: Lookup value column based on cell C6 preseason projection at trap.
Column B - NOR Broodstock Requirement: generally 50% of brood need up to 350 NOR predicted return to trap, except at NOR < 100
Column C - HOR Brood Requirement: Total brood need - NOR brood
Column D - NOR Brood Percent: % NOR in broodstock
Column E - NOR at trap minus NOR broodstock taken
Column F - HOR Spawning Escapement above the trap after broodstock taken
Column G - Total NOR and HOR Spawning Escapement above the trap: after broodstock
Column H - % NOR Escapement Percent above trap
Column I - NOR total spawning escapement (trap passage plus 35% below the trap)
Column J - HOR total spawning escapement (trap passage plus 35% below trap)
Column K - Sum of NOR and HOR total spawning escapement (trap passage plus 35% below trap)
Column L - Total return to the Tucannon River, including all broodstock taken
Column M - Total escapement in the Tucannon River after broodstock collection, minus 15% prespawn mortality
Column N - NOR escapement after broodstock collection and 15% prespawning loss in river
Column O - HOR escapement after broodstock collection and 15% prespawning loss in river

Appendix G: Tucannon River Summer Steelhead Sliding Scale.

Estimated NOR Return to Weir (based on PIT Tag Estimates)		Total NOR & HOR needed for Broodstock	Total Broodstock Needed for Conservation Program	Conservation Brood		Total Broodstock Needed for Mitigation Program	Mitigation Brood		# of NOR's Used for Total Broodstock needs	# of HOR's Used for Total Broodstock needs	NOR's Released Above Weir	
				NOR	HOR		NOR	HOR			Min	Max
	<50	78	26	16	10	52	0	52	16	62	10	34
50	200	78	26	18	8	52	0	52	18	60	37	187
201	400	78	26	21	5	52	0	52	21	57	185	384
401	600	78	26	26	0	52	5	47	31	47	378	577
601	800	78	26	26	0	52	10	42	36	42	574	773
801	1000	78	26	26	0	52	15	37	41	37	770	969

Table Continued…..

Estimated NOR Return to Weir (based on PIT Tag Estimates)		Actual HOR Returns		Total Fish Released Above Weir		%NOR Used in Broodstock from Total Return to Weir		% NOR in Conservation Program	% NOR in Total Program	pHOS (effective) above the Weir		PNI above the Weir	
		Low	High	Min	Max	Min	Max	PNOB	PNOB	High	Low	Low	High
	<50	68	313	78	347	NA	32%	62%	21%	0.96	0.58	0.39	0.51
50	200	70	315	107	502	36%	9%	69%	23%	0.86	0.21	0.45	0.77
201	400	73	318	258	702	10%	5%	81%	27%	0.55	0.12	0.6	0.87
401	600	83	328	461	905	8%	5%	100%	40%	0.38	0.09	0.73	0.92
601	800	88	333	662	1106	6%	5%	100%	46%	0.29	0.07	0.78	0.93
801	1000	93	338	863	1307	5%	4%	100%	53%	0.23	0.06	0.81	0.94

1) F1 hatchery origin fish - from the conservation program - will be used for broodstock needs in both conservation and harvest programs.

2) No AD-clipped fish will be used for broodstock, though some will be passed upstream to meet the maximum hatchery fish upstream of the weir (375-broodstock needs)

3) Goal is to have about 300-350 total hatchery origin fish (of either group - conservation preferred over mitigation) above the weir - to ensure future broodstock needs

Appendix H: Numbers of PIT Tags and Coded-Wire Tags Implanted into spring Chinook, fall Chinook, or summer steelhead at Lyons Ferry Hatchery Complex, and funding source of those tags.

Species	Stock	Age	Release Location	Program Release Goal		PIT Tag (LSRCP)	PIT Tags (BPA)	PIT Tags (Other)	CWT (LSRCP)	CWT (BPA)	PBT Baseline Evaluation
SPCHK	Tucannon	1+	Tucannon River	225,000					225,000		BPA
SPCHK	Carson	1+	Touchet River	250,000		15,000			85,000		BPA
FACHK	Snake River	0	Snake River, Lyons Ferry FH	700,000		20,000			100,000		BPA
FACHK	Snake River	0	Snake River, Pittsburgh Landing 1	400,000			2,200		100,000		BPA
FACHK	Snake River	0	Snake River, Pittsburgh Landing 2	200,000			2,200		100,000		BPA
FACHK	Snake River	0	Snake River, Captain Johns Landing1	450,000			2,200		100,000		BPA
FACHK	Snake River	0	Snake River, Captain Johns Landing 2	200,000			2,200		100,000		BPA
FACHK	Snake River	0	Clearwater River, Big Canyon 1	450,000			2,200		100,000		BPA
STL	Wallowa	1+	Touchet R. @ Dayton Acclimation	100,000		5,000			40,000 for all three groups combined		BPA
STL	Wallowa	1+	Snake River @ Lyons Ferry Hatchery	60,000		5,000					BPA
STL	Wallowa	1+	Grande Ronde R. @ Cottonwood Pond	225,000		4,000		2,000			BPA
STL	Touchet Endemic	1+	Touchet R., Dayton Acclimation	50,000		5,000			50,000		BPA
STL	Tucannon-Mitigation	1+	Tucannon River (lower)	100,000			10,000		25,000		BPA
STL	Tucannon-Conservation	1+	Tucannon River, Curl Lake	50,000			5,000		50,000	50,000	BPA
SPCHK	Tucannon	1+	Tucannon River at Smolt Trap	NA		5,000			NA		NA
STL	Tucannon	1+	Tucannon River at Smolt Trap	NA		2,500			NA		NA