

2022

ANNUAL OPERATING PLAN
for
FISH PRODUCTION PROGRAMS
in the
CLEARWATER RIVER BASIN

by

U.S Fish and Wildlife Service

Idaho Department of Fish and Game

Nez Perce Tribe

February 2022

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0. Preamble

The Annual Operating Plan (AOP) meeting and AOP/SOP documents are planning, coordination and logistics tools that identify the expected implementation of a number of 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.

1. Summer Steelhead

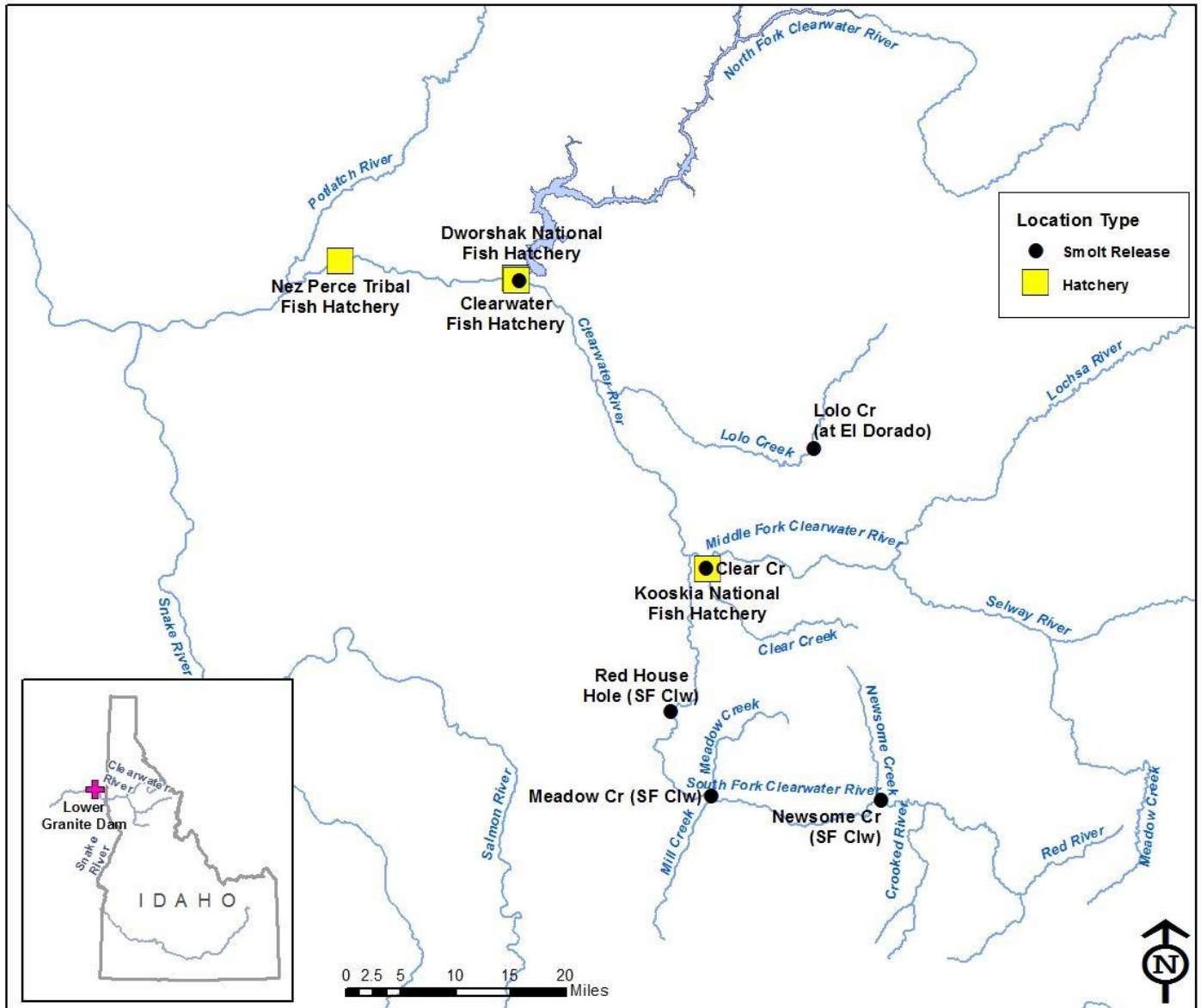


Figure 1.1. Steelhead trapping, hatchery facilities and smolt release locations. Table below gives smolt release goals by release site.

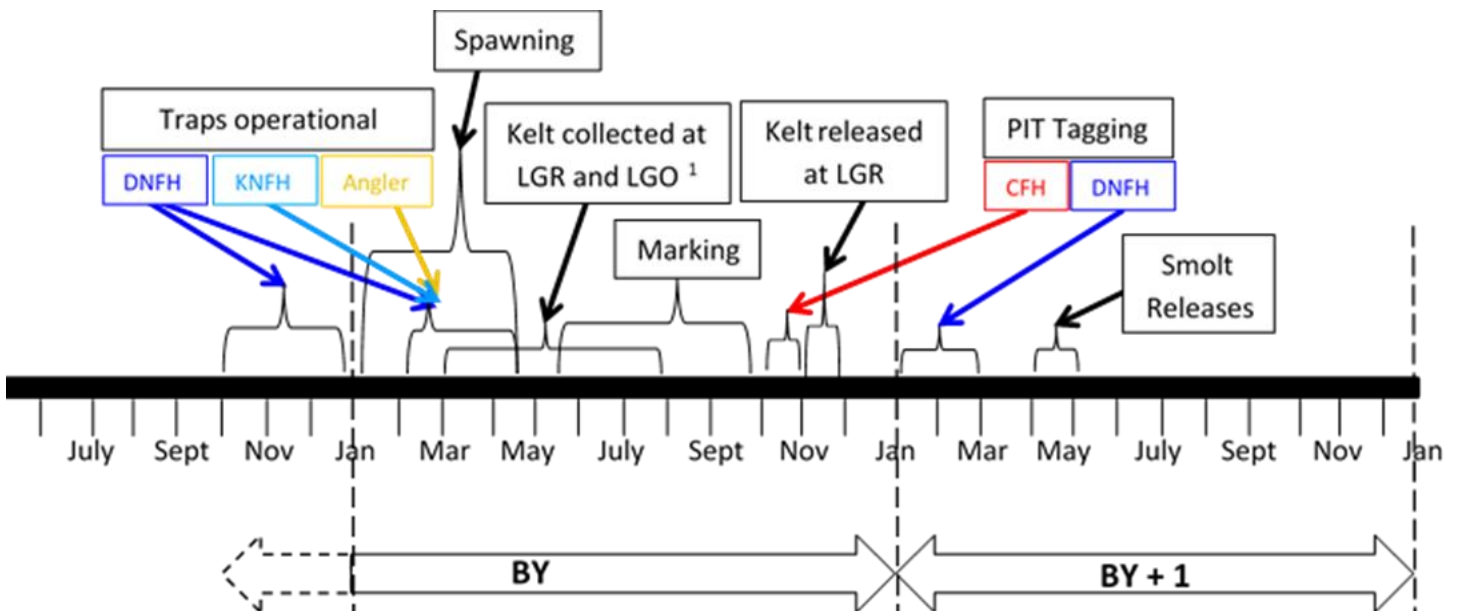
Table 1.1. BY 2021 Steelhead Release Goals for 2022.

Rearing Facility	Program	Brood Collection Site	Release Site	BY2021 Smolt Release Goals	Size (FPP)
DNFH	NF Clearwater	DNFH (Trad. Spawned) ¹	DNFH	1,200,000	5.8
			Clear Creek	300,000	5.8
			Lolo Creek ²	200,000	5.8
	SF Clearwater	SFClwR Angler (DNFH)	Red House Hole-SF Clw	400,000	5.8
Total				2,100,000	
CFH/DNFH	CFH	SFClwR Angler (DNFH)	Meadow Creek-SF Clw	501,000	4.5
			Red House Hole-SF Clw	219,000	4.5
			Newsome Creek-SF Clw	123,000	4.5
Total				843,000	
Grand Total				2,943,000	

¹ Additional brood were collected for the Upper Salmon River program (incubated at CFH, reared at MVFH, and released at Pahsimeroi). See the Salmon and Snake River AOP for details on rearing of these progeny.

² Release will be relocated to the SFClwR at Newsome Creek site for MY2022.

1.1. Timeline and Flowchart for Steelhead Production



¹ Kelt also may be collected at Lower Monumental Dam, pending Corps approval.

Figure 1.2. Timeline for Steelhead Production. Date ranges with black labels are shown to include all facilities' operations. Color-coded labels identify activities that have variability in timing for the different facilities.

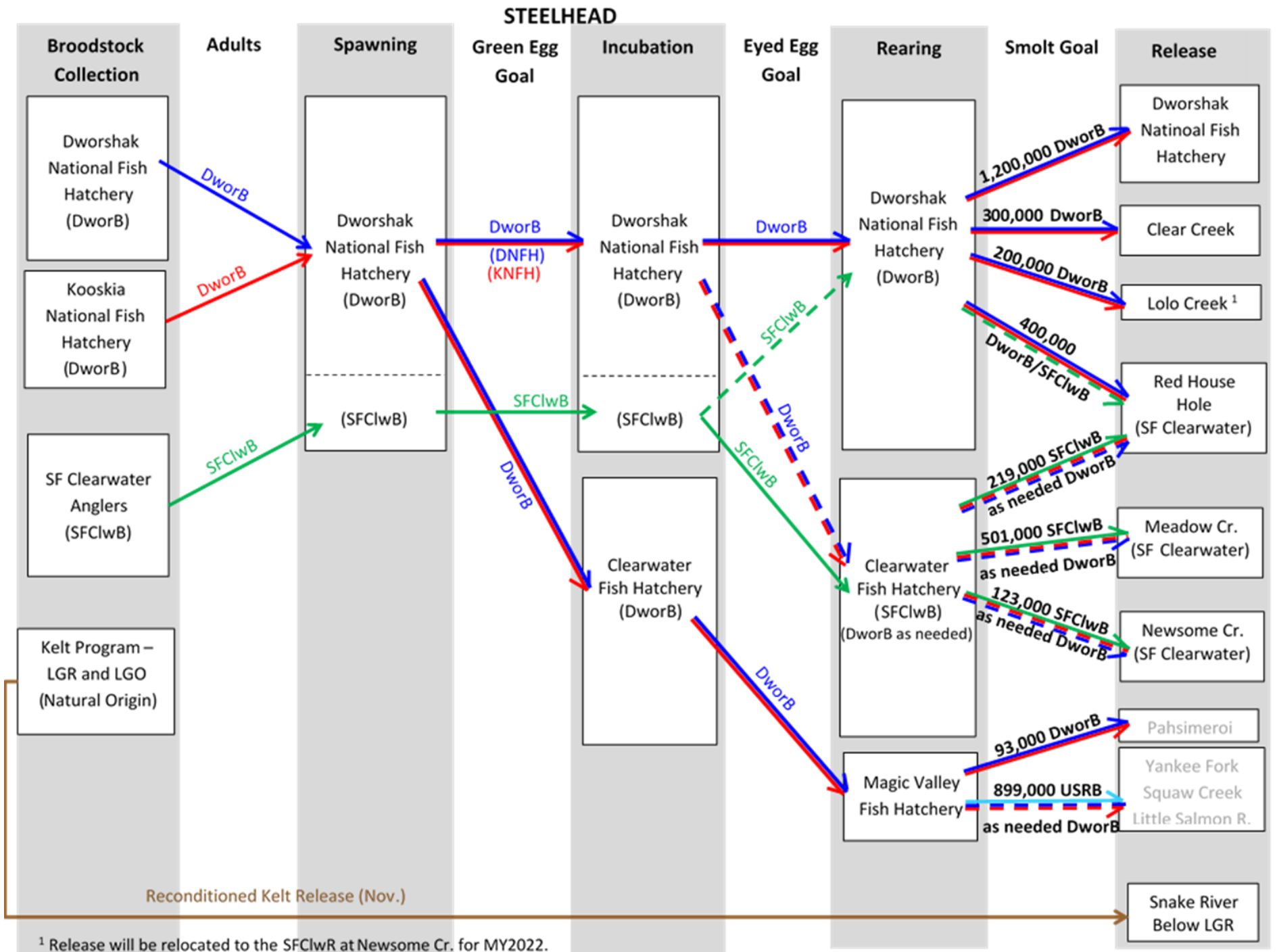


Figure 1.3. Fish and egg movements for Steelhead. Numbers represent 2022 releases.

1.2. Releases in 2022 (Smolt BY 2021)

1.2.1. Releases in 2022 (Smolt BY 2021) – Totals

Table 1.2a. Steelhead Rearing Metrics for BY 2021 fish for release in 2022

Rearing Facility	Program	Brood Collection Site	Release Site	Release Goals		Inventory To Date		Excess Fry/ Fingerlings Released		Projected Smolt Releases		
				Number	Size (FPP)	Date	Number	Number	Release Site	Dates	Number	Size (FPP)
DNFH	NF Clearwater	DNFH (Trad. Spawned) ¹	DNFH	1,200,000	5.8	12/1/2021	1,126,639	0		4/4-4/11/22	1,121,006	5.8
			Clear Creek	300,000	5.8	12/1/2021	315,232	0		4/4-4/11/22	313,676	5.8
			Lolo Creek ²	200,000	5.8	12/1/2021	200,257	0		4/13-4/14/22	199,256	5.8
	SF Clearwater	SFClwR Angler (DNFH)	Red House Hole-SF Clw	400,000	5.8	12/1/2021	376,522	0		4/4-4/11/22	374,639	5.8
Total				2,100,000			2,018,650	0			2,008,577	
CFH	CFH	SFClwR Angler (DNFH)	Meadow Creek-SF Clw	501,000	4.5	12/2/2021	430,696	0		4/4-4/6/22	429,866	4.5
			Red House Hole-SF Clw	219,000	4.5	12/2/2021	265,229	0		4/7-4/8/22	264,600	4.5
			Newsome Creek-SF Clw	123,000	4.5	12/2/2021	124,893	0		4/9/22	123,413	4.5
Totals				843,000			820,818	0			817,879	
Grand Total				2,943,000			2,839,468	0			2,826,456	

¹ Additional brood were collected for the Upper Salmon River program (incubated at CFH, reared at MVFH, and released at Pahsimeroi). See the Salmon and Snake River AOP for details on rearing of these progeny.

² Release will be relocated to the SFClwR at Newsome Creek site for MY2022.

Table 1.2b. BY 2021 Steelhead Inventory to Date by Mark Type for release in 2022.

Rearing Facility	Program	Brood Collection Site	Release Site	Inventory to Date						PIT Tags						
				Date	Total	Adipose Fin Clip		No Clip		Total # Tags ¹	Funding Source ³					
						No CWT	CWT	CWT	No CWT		CSS	LSRCP	ACOE	USFWS	NPT	SMP
DNFH	NF Clearwater	DNFH (Trad. Spawned)	DNFH	12/3/2021	1,126,639	1,019,001	107,638			19,975	6,800		12,500			1,500
			Clear Creek	12/3/2021	315,232	295,347	19,885			6,896	2,100		4,000			
			Lolo Creek ²	12/3/2021	200,257				200,257	1,000	500		500			
	SF Clearwater	SFClwR Angler (DNFH)	Red House Hole-SF Clw	12/3/2021	376,522	336,773	39,749			4,993	2,000		3,000			
Total					2,018,650	1,651,121	167,272		-	200,257	32,864	11,400	-	20,000	-	1,500
CFH	CFH	SFClwR Angler (DNFH)	Meadow Creek-SF Clw	12/2/2021	430,696	179,380		251,316		10,794	3,200	7,600				
			Red House Hole-SF Clw	12/2/2021	265,229	265,229				4,698	1,400	3,300				
			Newsome Creek-SF Clw	12/2/2021	124,893			120,219	4,674	15,892	800	1,800				13,300
Totals					820,818	444,609	-	371,535	4,674	31,384	5,400	12,700	-	-	13,300	-
Grand Total					2,839,468	2,095,730	167,272	371,535	204,931	64,248	16,800	12,700	20,000	-	13,300	1,500

¹ Represents actual number tagged if tags have already been applied at the time of this report

² Release will be relocated to the SFClwR at Newsome Creek site for MY2022.

³ Represents number of tags paid for by each agency. Sum total may not equal "Total # Tags" for locations where tagging has already occurred

1.2.2. Releases in 2022 (Smolt BY 2021) - Narrative

Here are examples of things managers talk about for each release group, if there are departures from the norm (i.e., SOP). If no departure from the norm, enter NC for “No Change”.

- **Smolt/Egg Release Targets-** e.g. Were you below goal? Was you size at release different than SOP target? Did you depart from the mark plan?
- **Fish/Egg Health-** any epizootic history, anti-biotic treatments, was production culled at any point
- **Transportation/Releases-** e.g. timing, trucking issues, site access etc.

	Plan for 2022		Changes/Conditions that Occurred 2021-Early 2022		
Release Location	Release Target Smolt BY21	Transport/Release Smolt BY21	Fish Feeding BY21	Fish/Egg Health BY21	Marking BY21
<i>Dworshak National Fish Hatchery (SOP Section 1.2)</i>					
Dworshak National Fish Hatchery (DworB)	NC	NC	NC	coldwater disease in several ponds. Treated for external parasites	NC
Clear Creek (DworB)	NC	NC	NC	coldwater disease in several ponds. Treated for external parasites	NC
Red House, SF Clearwater (SFClw/DworB)	NC	NC	NC	coldwater disease in several ponds. Treated for external parasites	NC
Lolo Creek (DworB)	NC	NPTHC will not be plowing the road and an alternative release location will need to be determined	NC	Coldwater disease, external parasites, BGD, possible lightning strike	NC
<i>Clearwater Fish Hatchery (SOP Section 1.3)</i>					
Meadow Creek SF Clearwater (SFClwB/DworB)	NC	NC	75,000 reared on the chinook bank (A/B) using pendulum feeders	BGD and/or Coldwater disease in two units Incubation water heater to speed up sthd development	NC
Red House Hole SF Clearwater (SFClwB/DworB)	NC	NC	NC	Incubation water heater to speed up sthd development	NC
Newsome Creek SF Clearwater (SFClwB/DworB)	NC	NC	NC	Incubation water heater to speed up sthd development	NC

1.3. Trap Operations and Production Planning for 2022 (Smolt BY 2022)

BY 2022 Steelhead smolt production goals for release in 2023.

Rearing Facility	Program	Brood Collection Site	Release Site	Smolt Release Goals
DNFH	NF Clearwater	DNFH (Trad. Spawned) ¹	MS Clearwater at DNFH	1,200,000
			Clear Creek	300,000
			Lolo Creek	200,000
	SF Clearwater	SFClwR Angler (DNFH)	Red House Hole - SF Clw	400,000
Total				2,100,000
CFH/DNFH	CFH	SFClwR Angler (DNFH)	Meadow Creek-SF Clw	501,000
			Red House Hole-SF Clw	219,000
			Newsome Creek-SF Clw	123,000
Total				843,000
Grand Total				2,943,000

¹ Additional brood are collected for the Upper Salmon River program (to be incubated at CFH, reared at MVFH, and released at Pahsimeroi). Tables 1.3a and 1.3b show details of brood acquisition, which include fish to be spawned for this program. See the Salmon and Snake River AOP for details on rearing of these progeny.

1.3.1. Trap Operations and Production Planning for 2022 (Smolt BY 2022) – TOTALS

Table 1.3a. BY 2022 - Steelhead Spawning/Egg Take Plan.

Take		Estimated Eggs per Female	Hatchery Program / Brood Source / Females Spawmed By Method / Green Eggs Taken											Comments
			DNFH - All Releases					CFH - South Fork Clearwater ²		MVH- Upper Salmon River ^{1, 2}		Grand Totals		
			DWORK		SFCWR		DNFH Green Eggs Projections Combined	SFCWR		DWORK		Females Kill Sp	Green Eggs Projections	
Females	Green Eggs	Females	Green Eggs	Females	Green Eggs	Females		Green Eggs						
No.	Week of	Fecundity	Kill Sp	Projections	Kill Sp	Projections	Green Eggs Projections Combined	Kill Sp	Projections	Kill Sp	Projections	Kill Sp	Projections	
1 E	Jan 9 - Jan 15	7,046	35	246,610		0	246,610		0		0	35	246,610	35 females and 35 males spawned
2 E	Jan 23 - Jan 29	7,046	62	436,852		0	436,852		0		0	62	436,852	62 females and 44 males spawned
3	Feb 6 - Feb 12	7,046	51	359,346		0	359,346		0		0	51	359,346	51 females and 43 males spawned
4	Feb 20 - Feb 26	7,046	58	408,668		0	408,668		0		0	58	408,668	58 females and 39 males spawned
5	Feb 27 - Mar 5	7,046	60	422,760		0	422,760	50			0	110	422,760	43 females and 32 males spawned
6	Mar 6 - Mar 12	7,046		0		0	0	50			0	50	0	
7	Mar 13 - Mar 19	7,046		0	45	317,070	317,070	43			0	88	317,070	
8	Mar 20 - Mar 26	7,046		0	45	317,070	317,070	40			0	85	317,070	
9	Mar 27 - Apr 2	7,046		0		0	0	TBD			0	0	0	
10	Apr 3 - Apr 9	7,046	46	324,116		0	324,116	TBD		TBD		46	324,116	
11	Apr 10 - Apr 16	7,046	52	366,392		0	366,392		0	TBD		52	366,392	
	19-Apr	7,046		0		0	0		0	21	147,966	21	147,966	
Grand Total 2			364	2,564,744	90	634,140	3,198,884	183	1,289,418	21	147,966	658	4,636,268	

¹ Number of females spawned will be dependent on the number of fish needed to backfill the Upper Salmon B programs

² Grand Total represents the Total Goal and does not reconcile with the sum of Weekly spawning goals above for CFH and MVFH because they do not have specific weekly goals (shown as TBD).

1.3.2. Trap Operations and Production Planning for 2022 (Smolt BY 2022) – NARRATIVE

Here are examples of things managers were instructed to discuss for each release group, if there are departures from the norm (i.e., SOP). If no departure from the norm, enter NC for “No Change”.

Plan for 2022 (BY 2022)					
Rearing Location	Adult Fish Health	Trap Ops	Production target changes	Spawning protocol changes	Disposition of adults
<i>Dworshak/Kooskia National Fish Hatchery Ladder/Trap (Fall 2021-Spring 2022)(SOP Section 1.2)</i>					
Dworshak National Fish Hatchery (DworB)	NC	NC	NC	There will be two dedicated spawns earlier in spawning season to ensure Dworshak has full component of SFClwB derived progeny	NC
Kooskia National Fish Hatchery (DworkB)	NC	NC	NC	NC	Adults will be transported to DNFH or picked up by the IDFG for the Clearwater Hatchery
Clearwater Fish Hatchery (DworB)	NC	NC	NC	NC	NC
Magic Valley Fish Hatchery (DworB)	NC	NC	NC	NC	NC
<i>Reconditioned Kelts (SOP Section 1.2)</i>					
Dworshak National Fish Hatchery (Natural/Ad intact B)	NC	Anticipate collecting kelts from Lower Monumental Dam and Snake/Clearwater River tributaries in 2022.	NC	NC	NC
Nez Perce Tribal Hatchery (Natural/Ad intact B)	NC	Anticipate collecting kelts from Lower Monumental Dam and Snake/Clearwater River tributaries in 2022.	NC	NC	Anticipate construction of kelt reconditioning facility at NPTH in 2022.

Plan for 2022 (BY 2022)					
Rearing Location	Adult Fish Health	Trap Ops	Production target changes	Spawning protocol changes	Disposition of adults
<i>SF Clearwater Anglers (SOP Section 1.3)</i>					
Dworshak National Fish Hatchery (SFCIwB)	NC	NC	NC	NC	NC
Clearwater Fish Hatchery (SFCIwB)	NC	NC	NC	NC	NC

1.4. Marking and Rearing Plan for 2022 (Smolt BY 2022)

BY 2022 Steelhead smolt production goals for release in 2023.

Rearing Facility	Program	Brood Collection Site	Release Site	Smolt Release Goals
DNFH	NF Clearwater	DNFH	MS Clearwater at DNFH	1,200,000
			Clear Creek	300,000
			Lolo Creek	200,000
	SF Clearwater	SFClwR Angler (DNFH)	Red House Hole - SF Clw	400,000
Total				2,100,000
CFH/DNFH	CFH	SFClwR Angler (DNFH)	Meadow Creek-SF Clw	501,000
			Red House Hole-SF Clw	219,000
			Newsome Creek-SF Clw	123,000
Total				843,000
Grand Total				2,943,000

1.4.1. Marking and Rearing Plan for 2022 (Smolt BY 2022) – TOTALS

Table 1.4a. Steelhead Projected marking for BY 2022 Production for release in 2023.

Rearing Facility	Program	Brood Collection Site	Release Site	Smolt Release Goals	Projected Marking				PIT Tags								
					Adipose Fin Clip		No Clip		Total # Tags	Funding Source							
					No CWT	CWT	CWT	No CWT		CSS	LSRCP	NPT	IPC	ACOE	USFWS	SMP	
DNFH	NF Clearwater	DNFH	MS Clearwater at DNFH	1,200,000	1,080,000	120,000			21,500					20,000		1,500	
			Clear Creek	300,000	280,000	20,000			5,400	5,400							
			Lolo Creek	200,000			200,000	1,000	1,000								
	SF Clearwater	SFClwR Angler (DNFH)	Red House Hole - SF Clw	400,000	360,000	40,000			5,000	5,000							
Total				2,100,000	1,720,000	180,000	-	200,000	32,900	11,400	-	-	-	20,000	-	1,500	
CFH/DNFH	CFH	SFClwR Angler (DNFH)	Meadow Creek-SF Clw	501,000	291,000		210,000		10,800	3,200	7,600						
			Red House Hole-SF Clw	219,000	219,000			4,700	1,400	3,300							
			Newsome Creek-SF Clw	123,000		123,000		15,900	800	1,800	13,300						
Totals				843,000	510,000	-	333,000	-	31,400	5,400	12,700	13,300		-	-	-	
Grand Totals				2,943,000	2,230,000	180,000	333,000	200,000	64,300	16,800	12,700	13,300		-	20,000	-	1,500

1.4.2. Marking and Rearing Plan for 2022 (Smolt BY 2022) – NARRATIVE

Here are examples of things managers were instructed to discuss for each release group, if there are departures from the norm (i.e., SOP). If no departure from the norm, enter NC for “No Change”.

- **Fish Health** - anticipated changes to normal fish health sampling or treatments to start for BY2020
- **Fish feeding** - changes of diets of feed manufacturer, growth regimes etc.
- **Rearing conditions** - incubation, water temp, flow, rearing density changes
- **Marking** - e.g. changes to schedules, fish handling or movement, raceway loading for PBT, %PBT etc.

Release Location	Plan for 2022 (BY 2022)			
	Juvenile Fish Health	Fish Feeding	Rearing Conditions	Marking
<i>Dworshak National Fish Hatchery (SOP Section 1.2)</i>				
Dworshak NFH (DworB)	NC	NC	NC	NC
Clear Creek (DworB)	NC	NC	NC	NC
Red House, SF Clearwater (SFClw/DworB)	NC	NC	NC	NC
Lolo Creek (DworB)	NC	NC	NC	NC
<i>Clearwater Fish Hatchery (SOP Section 1.3)</i>				
Meadow Creek SF Clearwater (SFClwB/DworB)	NC	Earlier setout, belt feeders and reduced vertical water column to counter pin heading	NC	NC
Red House Hole SF Clearwater (SFClwB/DworB)	NC	Earlier setout, belt feeders and reduced vertical water column to counter pin heading	NC	NC
Newsome Creek SF Clearwater (SFClwB/DworB)	NC	Earlier setout, belt feeders and reduced vertical water column to counter pin heading	NC	NC

2. Spring/Summer Chinook

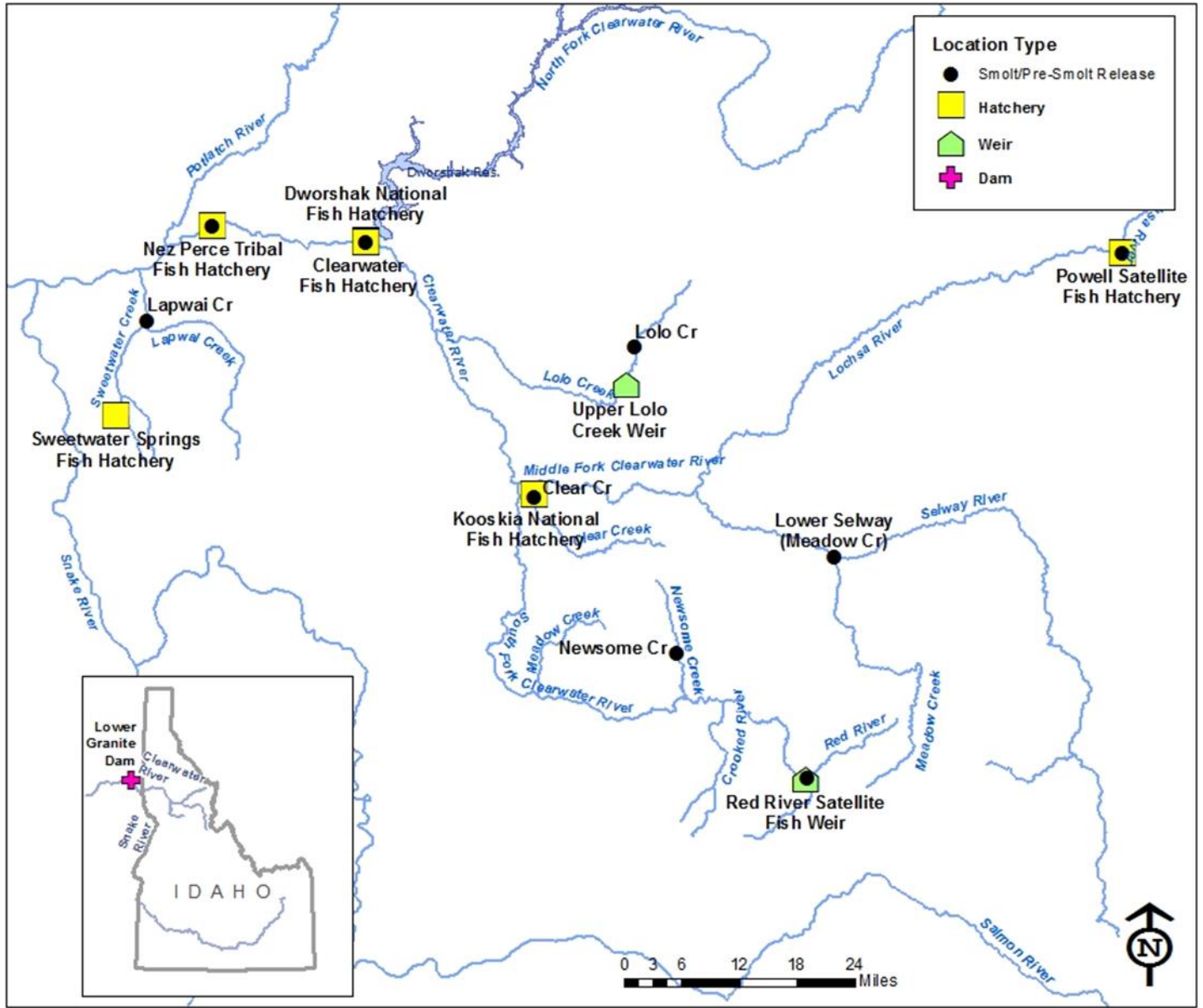


Figure 2.1. Locations of Spring/Summer Chinook Salmon hatchery facilities and smolt/pre-smolt releases. Table below gives smolt and pre-smolt release goals by release site.

Table 2.1. Spring/Summer Chinook Goals for Release in 2022

BY2020 SMOLTS

Action in 2022	Brood/Release Year	Hatchery Program	Rearing Facility	Brood Collection Site	Release Site	Smolt Release Goal	
Release	BY2020 RY2022	Spring					
		DNFH - LSRCP	DNFH	DNFH	NF Clearwater (DNFH)-Early Rel		1,650,000
					NF Clearwater (DNFH)-Late Rel		
		Total					1,650,000
		KNFH-NPT	KNFH	KNFH	Kooskia NFH		650,000
		Total					650,000
		NPTH	NPTH	DNFH	Trans. to NPTH from DNFH-Early Rel		100,000
					Trans. to NPTH from DNFH-Late Rel ⁴		100,000
				NPTH	Lolo Creek ³		200,000
					Lapwai Creek		200,000
		Total					600,000
		CFH-LSRCP	CFH	SFClw	Red River		1,280,000
				DNFH/RR ¹	NF Clearwater-CFH (Baffle) ²		389,000
				DNFH/RR ¹	NF Clearwater-CFH (Regular) ²		320,000
				DNFH/RR ¹	Selway River-Lower		400,000
				KNFH/DNFH/RR ¹	Clear Creek		720,000
				KNFH/RR ¹	Powell Pond		NA
		Total					3,109,000
		Spring Grand Total					6,009,000
		Summer					
CFH-LSRCP	CFH	Pow	Powell Pond		640,000		
Summer Grand Total					640,000		

¹ RR represents the Rapid River brood collection site.

² The early/late release groups were reared in the unbaffled adult ponds and the regular raceways

³ Group originally destined for Lolo release will now be released at NPTH as a Late Release. The Lolo Creek release site is not accessible in 2022.

⁴ Group originally destined for NPTH-Late Release will now be released at NPTH as an Early Release.

BY2021 PRE-SMOLTS SMOLTS

Action in 2022	Brood/Release Year	Hatchery Program	Rearing Facility	Brood Collection Site	Life Stage	Release Site	Smolt Release Goal
Marking and Release	BY2021 RY2022	Spring					
		NPTH	NPTH	NPTH	Pre-Smolt	Newsome Cr (SF Clw)	75,000
					Pre-Smolt	Lolo Cr (SF Clw)	150,000
		Spring Grand Total					225,000

2.1. Timeline and Flowchart for Spring/Summer Chinook Production

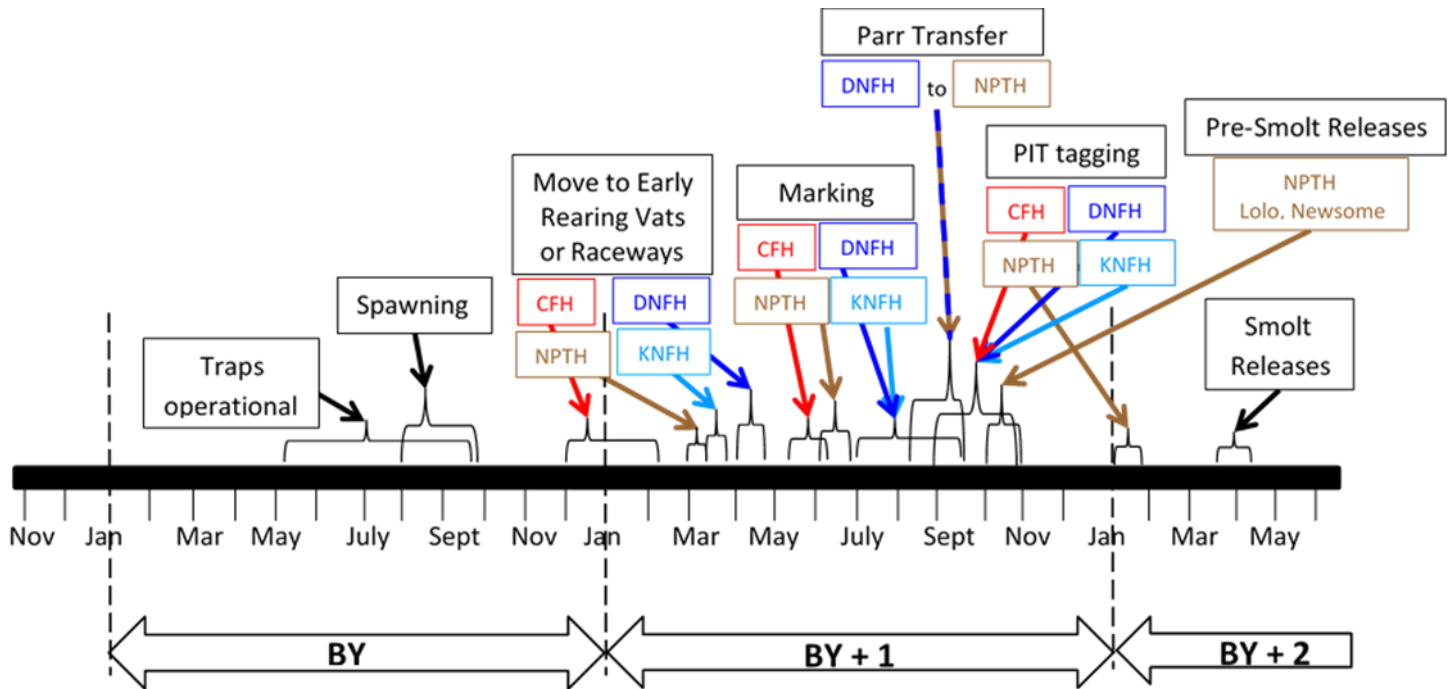
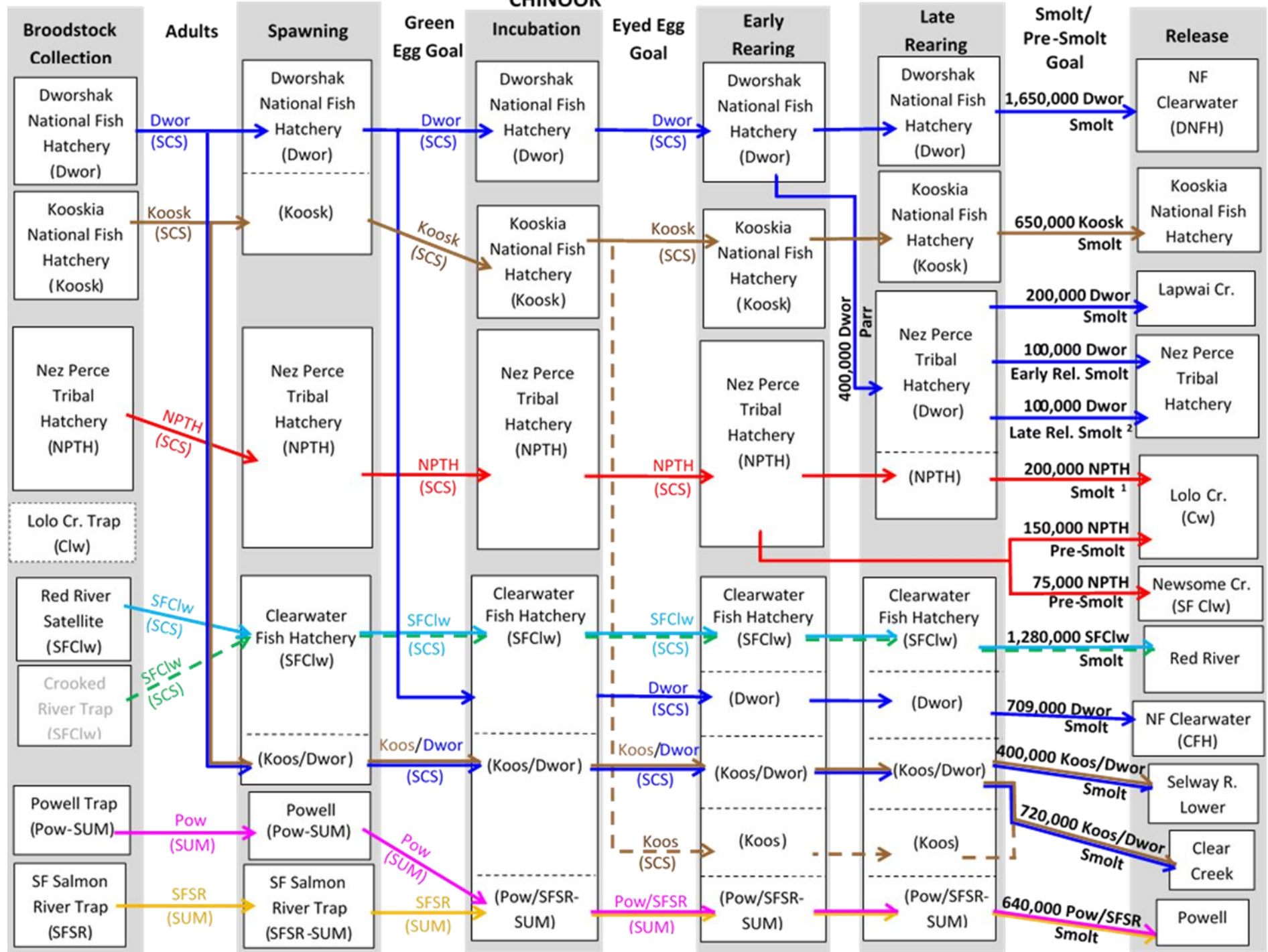


Figure 2.2. Timeline for Spring/Summer Chinook Production. Date ranges with black labels are shown to include all facilities' operations. Color-coded labels identify activities that have variability in timing for the different facilities.

CHINOOK



¹ Group originally destined for Lolo release will now be released at NPTH as a Late Release. The Lolo Creek release site is not accessible in 2022.

² Group originally destined for NPTH-Late Release will now be released at NPTH as an Early Release.

Figure 2.3. Chinook movements for Clearwater. Numbers represent 2022 releases.

2.2. Releases in 2022 (Smolt BY 2020, Pre-Smolt BY 2021)

2.2.1. Releases in 2022 (Smolt BY 2020, Pre-Smolt BY 2021) – Totals

Table 2.2a. BY2020 SMOLTS - Sp/Su Chinook Salmon inventories by life stage, smolt release goals and projected releases in 2022.

Hatchery Program	Run	Rearing Facility	Brood Collection Site	Release Site	Release Goals		Inventory To Date		Projected Smolt Release		
					Number	Size (FPP)	Date	Number	Dates	Number	Size (FPP)
Spring											
DNFH - LSRCP	SpCS	DNFH	DNFH	NF Clearwater (DNFH)-Early Rel	1,650,000		12/1/2021	1,016,144	3/31/2022	998,870	20.0
				NF Clearwater (DNFH)-Late Rel			12/1/2021	1,185,927	4/14/2022	1,165,766	20.0
Total					1,650,000			2,202,071		2,164,636	
KNFH-NPT	SpCS	KNFH	KNFH	Kooskia NFH	650,000		1/3/2022	681,972	4/13/2022	675,000	20.0
Total					650,000			681,972		675,000	
NPTH	SpCS	NPTH	DNFH	Trans. to NPTH from DNFH-Early Rel	100,000	20.0	12/1/2021	97,021	3/31/2022	96,051	20.0
	SpCS			Trans. to NPTH from DNFH-Early Rel ⁴	100,000	20.0	12/1/2021	93,736	3/31/2022	92,799	20.0
	SpCS	NPTH	NPTH	NPTH- Late Rel ³	200,000	20.0	12/1/2021	257,474	4/14/2022	249,749	20.0
	SpCS	NPTH	DNFH	Lapwai Creek	200,000	20.0	12/1/2021	205,283	4/1/2022	200,883	20.0
Total					600,000			653,514		639,482	
CFH-LSRCP	SpCS	CFH	SFCIw	Red River	1,280,000	16.0	12/15/2021	1,250,724	4/4/2022 - 4/8/2022	1,249,411	16.0
			DNFH/RR ¹	NF Clearwater-CFH (Baffle) ²	389,000	16.0	12/15/2021	396,864	3/31/2022, 4/14/2022	396,308	16.0
				NF Clearwater-CFH (Regular) ²	320,000	16.0	12/15/2021	302,755	3/31/2022, 4/14/2022	302,331	16.0
			DNFH/RR ¹	Selway River-Lower	400,000	16.0	12/15/2021	436,231	3/18/2022 - 3/19/2022	435,620	16.0
			KNFH/DNFH/RR ¹	Clear Creek ⁵	720,000	16.0	2/24/2022	772,516	4/14/2022, 4/30/2022	772,096	16.0
KNFH/RR ¹	Powell Pond	NA		2/24/2022	304,581	3/14/2022 - 3/17/2022	304,154	16.0			
Total					3,109,000			3,463,671		3,459,920	
Spring Grand Total					6,009,000			7,001,228		6,939,038	
Summer											
CFH-LSRCP	SuCS	CFH	Pow	Powell Pond	640,000		12/15/2021	270,448	3/14/2022-3/17/2022	270,069	16.0
Summer Grand Total					640,000			270,448		270,069	
Spring/Summer Grand Total					6,649,000			7,271,676		7,209,107	

¹ RR represents the Rapid River brood collection site.

² The early/late release groups were reared in the unbaffled adult ponds and the regular raceways

³ Group originally destined for Lolo release. The Lolo Creek release site is not accessible in 2022.

⁴ Group originally destined for NPTH-Late Release will now be released at NPTH as an Early Release.

⁵ Inventory to Date and Projected Smolt Release Numbers include excess springer production in lieu of the Powell summer shortfall.

Table 2.2b. BY2020 SMOLTS - Sp/Su Chinook Salmon Inventory to Date by Mark Type for release in 2022.

Hatchery Program	Run	Rearing Facility	Brood Collection Site	Release Site	Inventory to Date						PIT Tags				
					Date	Total	Adipose Fin Clip		No Clip		Total # Tags	Funding Source			
							CWT	No CWT	CWT	No CWT		CSS	LSRCP	USFWS	BPA
Spring															
DNFH - LSRCP	SpCS	DNFH	DNFH	NF Clearwater (DNFH)-Early Rel	12/1/2021	1,016,144	59,230	956,914	0	0	21,400	21,400			
				NF Clearwater (DNFH)-Late Rel	12/1/2021	1,185,927	59,655	1,126,272	0	0	20,600	20,600			
Total						2,202,071	118,885	2,083,186	0	0	42,000	42,000	0	0	0
KNFH-NPT	SpCS	KNFH	KNFH	Kooskia NFH	12/1/2021	681,972	105,971	519,163		56,838	6,000			6,000	
Total						681,972	105,971	519,163	0	56,838	6,000	0	0	6,000	0
NPTHC	SpCS	NPTH	DNFH	Trans. to NPTH from DNFH-Early Rel	12/1/2021	97,021	31,056	65,965	0	0	1,600				1,600
	SpCS			Trans. to NPTH from DNFH-Early Rel ⁴	12/1/2021	93,736	31,114	62,622	0	0	1,600				1,600
	SpCS	NPTH	NPTH	NPTH- Late Rel ³	12/1/2021	257,474	0	0	200,493	56,981	2,000				2,000
	SpCS	NPTH	DNFH	Lapwai Creek	12/1/2021	205,283	59,792	145,491	0	0	600		600		
Total						653,514	121,962	274,078	200,493	56,981	5,800	0	600	0	5,200
CFH-LSRCP	SpCS	CFH	SFCIw	Red River	12/15/2021	1,250,724	119,741	1,130,983	0	0	17,094	5,000	12,094	0	0
			DNFH/RR ¹	NF Clearwater-CFH (Baffle) ²	12/15/2021	396,864	60,279	336,585	0	0	4,799	1,440	3,359	0	0
				NF Clearwater-CFH (Regular) ²	12/15/2021	302,755	60,334	242,421	0	0	12,295	3,689	8,607	0	0
			DNFH/RR ¹	Selway River-Lower	12/15/2021	436,225	119,896	170,590	143,245	2,494	17,093	5,093	12,000	0	0
			KNFH/DNFH/RR ¹	Clear Creek	2/24/2022	772,516	121,560	650,956	0	0	9,793	3,500	6,293	0	0
KNFH/RR ¹	Powell Pond	2/24/2022	304,581	0	304,581	0	0	0	0	0	0	0	0		
Total						3,463,665	481,810	2,836,116	143,245	2,494	61,074	18,721	42,353	0	0
Spring Grand Total						7,001,222	828,628	5,712,543	343,738	116,313	114,874	60,721	42,953	6,000	5,200
Summer															
CFH-LSRCP	SuCS	CFH	Pow	Powell Pond	12/15/2021	270,448	0	0	119,506	150,942	25,399	12,799	12,600	0	0
Summer Grand Total						270,448	0	0	119,506	150,942	25,399	12,799	12,600	0	0
Spring and Summer Grand Total						7,271,670	828,628	5,712,543	463,244	267,255	140,273	73,520	55,553	6,000	5,200

¹ RR represents the Rapid River brood collection site.

² The early/late release groups were reared in the unbaffled adult ponds and the regular raceways.

³ Group originally destined for Lolo release. The Lolo Creek release site is not accessible in 2022.

⁴ Group originally destined for NPTH-Late Release will now be released at NPTH as an Early Release.

Table 2.2c. BY2021 PRE-SMOLT - Sp/Su Chinook Salmon inventories by life stage, release goals and projected releases in 2022.

Hatchery Program	Rearing Facility	Brood Collection Site	Life Stage	Release Site	Inventory To Date		Release Goals		Projected Releases		
					Date	Number	Number	Size (FPP)	Dates	Number	Size (FPP)
<i>Spring</i>											
NPTHC	NPTH	NPTHC	Pre-Smolt	Newsome Cr (SF Clw)	12/1/2021	91,774	75,000	30.0	10/15/2021	89,021	30.0
			Pre-Smolt	Lolo Cr (SF Clw)	12/1/2021	192,409	150,000	30.0	10/15/2021	186,636	30.0
Total						284,183	225,000			275,657	

2.2.2. Releases in 2022 (Smolt BY 2020, Pre-Smolt BY 2021) – Total

Here are examples of things managers were instructed to discuss for each release group, if there are departures from the norm (i.e., SOP). If no departure from the norm, enter NC for “No Change”.

- **Smolt/Egg Release Targets-** e.g. were you below goal, was your size at release different than SOP target etc.
- **Fish/Egg Health-** any epizootic history, antibiotic treatments, was production culled at any point
- **Transportation/Releases-** e.g. timing, trucking issues, site access etc.

	Plan for 2022		Changes/Conditions that Occurred 2021-Early 2022		
Release Location	Release Target Smolt BY20 Pre-Smolt BY21	Transport/Release Smolt BY20 Pre-Smolt BY21	Fish Feeding Smolt BY20 Pre-Smolt BY21	Fish/Egg Health Smolt BY20 Pre-Smolt BY21	Marking Smolt BY20 Pre-Smolt BY21
<i>Dworshak National Fish Hatchery (SOP Section 2.2)</i>					
NF Clearwater-DNFH (Dwor)	1.35M + 500K for Southern Resident Killer Whale Program + 300K Selway Parr program ended and incorporated into USvOR DR production Early and later releases.	2.15M smolt at Dworshak 400K parr to NPTH	Reared at 55,000 per raceway both banks	Treated for internal parasites.	500K Southern Resident Killer Whale Program parr marked by NPT
<i>Kooskia National Fish Hatchery (SOP Sections 2.3)</i>					
Kooskia National Fish Hatchery (Koosk)	NC	NC	NC	NC	NC
<i>Nez Perce Tribal Hatchery (SOP Section 2.4)</i>					
Nez Perce Tribal Hatchery (Dwor Smolt transferred to NPTH from DNFH)	Actual inventories are approximately 200K Early Rel, 250K Late Rel	NC	NC	NC	NC
Lapwai Creek (Dwor Smolt transferred to NPTH from DNFH)	NC	NC	NC	NC	NC

Release Location	Plan for 2022		Changes/Conditions that Occurred 2021-Early 2022		
	Release Target Smolt BY20 Pre-Smolt BY21	Transport/Release Smolt BY20 Pre-Smolt BY21	Fish Feeding Smolt BY20 Pre-Smolt BY21	Fish/Egg Health Smolt BY20 Pre-Smolt BY21	Marking Smolt BY20 Pre-Smolt BY21
Lolo Creek (NPTH-Smolt)	Due to Lolo Creek access issues- Move release to NPTH on Station for late release.	Due to Lolo Creek access issues- Move release to NPTH on Station for late release.	NC	NC	NC
Newsome Creek (NPTH-Pre-Smolt)	NC	NC	NC	NC	NC
Lolo Creek (NPTH-Pre-Smolt)	NC	NC	NC	NC	NC
<i>Clearwater Fish Hatchery (SOP Sections 2.5)</i>					
Red River (SFClw)	NC	NC	NC	NC	NC
NF Clearwater-CFH (Baffle) (Dwor/RR)	NC	NC	NC	NC	NC
NF Clearwater-CFH (Regular) (Dwor/RR)	NC	NC	NC	NC	NC
Selway River-Lower (Dwor/RR)	NC	NC	NC	NC	NC
Clear Creek (Dwor/Koos/RR)	NC	NC	NC	NC	NC
Powell (Pow/SFSR Summer)	A group of spring Chinook will be released at Powell in 2022 to compare performance of spring vs summers	NC	NC	NC	NC

2.3. Trap Operations and Production Planning for 2022 (Smolt and Pre-Smolt BY 2022)

BY2022 SMOLTS - Spring/Summer Chinook Goals for Release in 2024

Action in 2022	Brood/Release Year	Hatchery Program	Brood Collection Site	Rearing Facility	Release Site	Smolt Release Goal (US v OR)	Smolt Release Goal (Including Additional Production)		
Trapping	BY2022 RY2024	Spring							
		DNFH - LSRCP	DNFH	DNFH	NF Clearwater (DNFH)		1,350,000	1,650,000	
		Total				1,350,000	1,650,000		
		KNFH-NPT	KNFH	KNFH	Kooskia NFH		650,000	650,000	
		Total				650,000	650,000		
		NPTH	DNFH	DNFH	Trans. to NPTH-NPTH		200,000	200,000	
					Trans. to NPTH-Lapwai Creek		0	200,000	
			NPTH	NPTH	Lolo Creek		200,000	200,000	
		Total				400,000	600,000		
		CFH-LSRCP	SFCIw	CFH	Red River		1,100,000	1,280,000	
					NF Clearwater-CFH (Baffle)		0	389,000	
					NF Clearwater-CFH (Regular)		0	320,000	
					Selway River-Lower		400,000	400,000	
					Clear Creek		635,000	720,000	
		Total				2,135,000	3,109,000		
		Spring Grand Total						4,535,000	6,009,000
		Summer							
CFH-LSRCP	Pow/SFSR	CFH	Powell Pond (SUM)		640,000	640,000			
Summer Grand Total ¹						640,000	640,000		

¹ Powell is not a US v OR program; however we will target 640,000 summer Chinook smolts even if the spring Chinook production target is set at the base US v OR level.

BY2022 PRE-SMOLT - Spring/Summer Chinook Goals for Release in 2024

Action in 2022	Brood/Release Year	Hatchery Program	Life Stage	Brood Collection Site	Rearing Facility	Release Site	Smolt Release Goal	
Trapping	BY2022 RY2023	Spring						
		NPTH	Pre-Smolt	NPTH	NPTH	Newsome Cr (SF Clw)	75,000	
			Pre-Smolt	NPTH		Lolo Cr (Clw)	150,000	
Spring Grand Total						225,000		

2.3.1. Trap Operations and Production Planning for 2022 (Smolt and Pre-Smolt BY 2022) – TOTALS

FULL PRODUCTION

Table 2.3a. 2022 Adult brood stock acquisition schedules for hatchery Sp/Su Chinook Salmon in Clearwater River drainage for FULL PRODUCTION.

Date	Spring					Summer
	Dworshak Trap	Kooskia Trap	NPTH Trap	Lolo Cr Weir	Red River Trap	Powell
2-May						
9-May						
16-May			3			
23-May		13	7			
30-May		38	10			
6-Jun		421	48		9	
13-Jun		623	75		71	
20-Jun		700	127		151	22
27-Jun		726	164		302	56
4-Jul	172	882	198		489	143
11-Jul	493	958	250		605	181
18-Jul	922	998	274		649	199
25-Jul	1,351	1,031	304		658	203
1-Aug	1,758		321		676	203
8-Aug	2,144		321		685	207
15-Aug			342		711	216
22-Aug			342		800	220
29-Aug			342		889	272
5-Sep					889	380
12-Sep						432
19-Sep						
26-Sep						
Total	2,144	1,031	342	TBD	889	432
2022 LGR Forecast ¹	6,949	3,341	119	0	1,919	1,015

Proportion of brood acquisition over season					
Date	Spring				Summer
	Dworshak Trap	Kooskia Trap	NPTH Trap	Red River	Powell ²
3-May	0.000	0.000	0.000	0.000	0.00
10-May	0.000	0.000	0.000	0.000	0.00
17-May	0.000	0.000	0.010	0.000	0.00
24-May	0.000	0.013	0.020	0.000	0.00
31-May	0.000	0.037	0.030	0.000	0.00
7-Jun	0.000	0.409	0.140	0.010	0.00
14-Jun	0.000	0.604	0.220	0.080	0.00
21-Jun	0.000	0.679	0.370	0.170	0.05
28-Jun	0.000	0.704	0.480	0.340	0.13
5-Jul	0.080	0.855	0.580	0.550	0.33
12-Jul	0.230	0.929	0.730	0.680	0.42
19-Jul	0.430	0.968	0.800	0.730	0.46
26-Jul	0.630	1.000	0.890	0.740	0.47
2-Aug	0.820	1.000	0.940	0.760	0.47
9-Aug	1.000	1.000	0.940	0.770	0.48
16-Aug	1.000	1.000	1.000	0.800	0.50
23-Aug	1.000	1.000	1.000	0.900	0.51
30-Aug	1.000	1.000	1.000	1.000	0.63
6-Sep	1.000	1.000	1.000	1.000	0.88
13-Sep	1.000	1.000	1.000	1.000	1.00
20-Sep	1.000	1.000	1.000	1.000	1.00
27-Sep	1.000	1.000	1.000	1.000	1.00

¹ 2- and 3-ocean returns only. Dworshak forecast includes Clearwater Hatchery NF Clearwater release and Dworshak NF Clearwater release. Kooskia forecast includes Clearwater Hatchery Clear Creek release and Kooskia Hatchery Clear Creek release.

² Based on Crooked River timing.

FULL PRODUCTION

Table 2.3b. BY 2022 SMOLT - Sp/Su Chinook Spawning and Trapping Plan for FULL PRODUCTION

Hatchery Program	Brood Collection Site	Rearing Facility	Release Site	Green Egg Goal	Green Egg Fecundity	Female Spawn Goal	Male Spawn Goal	Holding Mortality	Total Trapping Goal	Estimated Trapping Dates	Projected Returns to LGR ¹
Spring											
DNFH - LSRCF	DNFH	DNFH	NF Clearwater (DNFH)	2,053,236	3,880	530	530	3.6%	1,100	6/15-8/30	3,806
Total				2,053,236		530	530		1,100		3,806
KNFH-NPT	KNFH	KNFH	Kooskia NFH	851,302	3,580	238	238	10.0%	529	5/1-9/6	2,032
Total				851,302		238	238		529		2,032
NPTHC	DNFH	DNFH	Trans. to NPTH-NPTH	251,417	3,880	65	65	3.6%	135		119
			Trans. to NPTH-Lapwai Creek	251,417	3,880	65	65	3.6%	135		
	NPTHC	NPTHC	Lolo Creek	280,303	3,724	76	76	5.0%	160		
Total				783,137		206	206		430		119
CFH-LSRCF	SFClw	CFH	Red River	1,510,517	3,581	422	422	5.0%	889	6/7-9/6	1,919
	DNFH		NF Clearwater-CFH (Baffle)	459,056	3,581	129	129	5.0%	272	7/5-8/9	3,143
	DNFH		NF Clearwater-CFH (Regular)	377,629	3,581	106	106	5.0%	224	7/5-/8/9	
	DNFH		Selway River-Lower	472,037	3,581	132	132	5.0%	278	7/5-8/9	663
	KNFH/DNFH		Clear Creek	849,666	3,581	238	238	5.0%	502	5/24-7/26	1,309
Total				3,668,904		1,027	1,027		2,165		7,034
Spring Smolt Grand Total				7,356,579		2,001	2,001		4,224		12,991
Summer											
CFH-LSRCF	Pow/SFSR	CFH	Powell Pond (SUM)	765,067	3,741	205	205	5.0%	432	6/21-9/13	1,015
Summer Smolt Grand Total				765,067		205	205		432		1,015

¹ Forecasts for Kooskia NFH, Selway River-Lower, and Powell Pond include AD clipped and unclipped returns.

FULL PRODUCTION

Table 2.3c. BY 2022 PRE-SMOLT - Sp/Su Chinook Spawning and Trapping Plan FULL PRODUCTION

Hatchery Program	Life Stage	Brood Collection Site	Rearing Facility	Release Site	Green Egg Goal	Green Egg Fecundity	Female Spawn Goal	Male Spawn Goal	Holding Mortality	Total Trapping Goal	Estimated Trapping Dates	Projected Returns to LGR
Spring												
NPTHC	Pre-Smolt	NPTHC	NPTHC	Newsome Cr (SF Clw)	105,114	3,724	29	29	5.0%	62		
	Pre-Smolt	NPTHC	NPTHC	Lolo Cr (Clw)	210,227	3,724	57	57	5.0%	120		
Total					315,341		86	86		182		0
Spring Parr/Pre-smolt Grand Total					315,341		86	86		182		0

FULL PRODUCTION

Table 2.3d. BY2022 Sp/Su Chinook Spawning and Trapping Plan Summarized by Trapping Facility for FULL PRODUCTION

Brood Collection Site	Female Spawn Goal	Male Spawn Goal	Total Trapping Goal	Projected Returns to LGR
Spring				
DNFH	1,027	1,027	2,144	7,731
KNFH	476	476	1,031	3,341
SFCIw	422	422	889	1,919
NPTH	162	162	342	0
Summer				
Pow/SFSR	205	205	432	1,015

BASE US v OR PRODUCTION

Table 2.3e. 2022 Adult brood stock acquisition schedules for hatchery Sp/Su Chinook Salmon in Clearwater River drainage for BASE US v OR PRODUCTION.

Date	Spring					Summer Powell
	Dworshak Trap	Kooskia Trap	NPTH Trap	Lolo Cr Weir	Red River Trap	
2-May						
9-May						
16-May			3			
23-May		13	7			
30-May		36	10			
6-Jun		397	48		8	
13-Jun		587	75		61	
20-Jun		660	127		130	21
27-Jun		684	164		260	55
4-Jul	105	831	198		421	139
11-Jul	302	903	250		520	177
18-Jul	564	941	274		558	194
25-Jul	827	972	304		566	198
1-Aug	1,076		321		581	198
8-Aug	1,312		321		589	203
15-Aug			342		612	211
22-Aug			342		689	215
29-Aug			342		765	266
5-Sep					765	371
12-Sep						422
19-Sep						
26-Sep						
Total	1,312	972	342	TBD	765	422
2022 LGR Forecast ¹	6,949	3,341	119	0	1,919	1,015

Date	Spring				Summer Powell ²
	Dworshak Trap	Kooskia Trap	NPTH Trap	Red River Trap	
3-May	0.000	0.000	0.000	0.000	0.00
10-May	0.000	0.000	0.000	0.000	0.00
17-May	0.000	0.000	0.010	0.000	0.00
24-May	0.000	0.013	0.020	0.000	0.00
31-May	0.000	0.037	0.030	0.000	0.00
7-Jun	0.000	0.409	0.140	0.010	0.00
14-Jun	0.000	0.604	0.220	0.080	0.00
21-Jun	0.000	0.679	0.370	0.170	0.05
28-Jun	0.000	0.704	0.480	0.340	0.13
5-Jul	0.080	0.855	0.580	0.550	0.33
12-Jul	0.230	0.929	0.730	0.680	0.42
19-Jul	0.430	0.968	0.800	0.730	0.46
26-Jul	0.630	1.000	0.890	0.740	0.47
2-Aug	0.820	1.000	0.940	0.760	0.47
9-Aug	1.000	1.000	0.940	0.770	0.48
16-Aug	1.000	1.000	1.000	0.800	0.50
23-Aug	1.000	1.000	1.000	0.900	0.51
30-Aug	1.000	1.000	1.000	1.000	0.63
6-Sep	1.000	1.000	1.000	1.000	0.88
13-Sep	1.000	1.000	1.000	1.000	1.00
20-Sep	1.000	1.000	1.000	1.000	1.00
27-Sep	1.000	1.000	1.000	1.000	1.00

¹ 2- and 3-ocean returns only

² Based on Crooked River timing.

BASE US v OR PRODUCTION

Table 2.3f. BY 2022 SMOLT - Sp/Su Chinook Spawning and Trapping Plan for BASE US v OR PRODUCTION

Hatchery Program	Brood Collection Site	Rearing Facility	Release Site	Green Egg Goal	Green Egg Fecundity	Female Spawn Goal	Male Spawn Goal	Holding Mortality	Total Trapping Goal	Estimated Trapping Dates	Projected Returns to LGR ¹
Spring											
DNFH - LSRCP	DNFH	DNFH	NF Clearwater (DNFH)	1,679,920	3,880	433	433	3.6%	899	7/1-9/25	3,806
Total				1,679,920		433	433		899		3,806
KNFH-NPT	KNFH	KNFH	Kooskia NFH	851,302	3,580	238	238	10.0%	529	5/1-9/6	2,032
Total				851,302		238	238		529		2,032
NPTHC	DNFH	DNFH	Trans. to NPTH-NPTH	251,417	3,880	65	65	3.6%	135		119
			Trans. to NPTH-Lapwai Creek	0	3,880	0	0	3.6%	0		
	NPTHC	NPTHC	Lolo Creek	280,303	3,724	76	76	5.0%	160		
Total				531,720		141	141		295		119
CFH-LSRCP	SFCIw	CFH	Red River	1,298,101	3,581	363	363	5.0%	765	6/7-9/6	1,919
	DNFH		NF Clearwater-CFH (Baffle)	0	3,581	0	0	5.0%	0	7/5-8/9	3,143
	DNFH		NF Clearwater-CFH (Regular)	0	3,581	0	0	5.0%	0	7/5-8/9	
	DNFH		Selway River-Lower	472,037	3,581	132	132	5.0%	278	7/5-8/9	663
	KNFH/DNFH		Clear Creek	749,358	3,581	210	210	5.0%	443	5/24-7/26	1,309
Total				2,519,495		705	705		1,486		7,034
Spring Grand Total				5,582,437		1,517	1517		3,209		12,991
Summer											
CFH-LSRCP	Pow/SFSR	CFH	Powell Pond 1	748,066	3,741	200	200	5.0%	422	6/21-9/13	1,015
Summer Grand Total				748,066		200	200		422		1,015

¹ Forecasts for Kooskia NFH, Selway River-Lower, and Powell Pond include AD clipped and unclipped returns.

BASE US v OR PRODUCTION

Table 2.3g. BY 2022 PRE-SMOLT - Sp/Su Chinook Spawning and Trapping Plan BASE US v OR PRODUCTION.

Hatchery Program	Life Stage	Brood Collection Site	Rearing Facility	Release Site	Green Egg Goal	Green Egg Fecundity	Female Spawn Goal	Male Spawn Goal	Holding Mortality	Total Trapping Goal	Estimated Trapping Dates	Projected Returns to LGR
Spring												
NPTHC	Pre-Smolt	NPTHC	NPTHC	Newsome Cr (SF Clw)	105,114	3,724	29	29	5.0%	62		
	Pre-Smolt	NPTHC		Lolo Cr (Clw)	210,227	3,724	57	57	5.0%	120		
Total					315,341		86	86		182		0
Spring Grand Total					315,341		86	86		182		0

BASE US v OR PRODUCTION

Table 2.3h. BY 2022 Sp/Su Chinook Spawning and Trapping Plan Summarized by Trapping Facility for BASE US v OR PRODUCTION

Brood Collection Site	Female Spawn Goal	Male Spawn Goal	Total Trapping Goal	Projected Returns to LGR
<i>Spring</i>				
DNFH	630	630	1,312	7,731
KNFH	448	448	972	3,341
SFCIw	363	363	765	1,919
NPTHC	162	162	342	0
<i>Summer</i>				
Pow/SFSR	200	200	422	1,015

2.3.2. Trap Operations and Production Planning for 2022 (Smolts and Pre-Smolt BY2022) – NARRATIVE

Here are examples of things managers were instructed to discuss for each release group, if there are departures from the norm (i.e., SOP). If no departure from the norm, enter NC for “No Change”.

Juvenile Release Location	Plan for 2022 (BY 2022)				
	Adult Fish Health	Trap Ops	Production target changes	Spawning protocol changes	Disposition of adults
<i>Dworshak National Fish Hatchery Ladder/Trap (SOP Section 2.2)</i>					
NF Clearwater-DNFH (Dwor)	NC	NC	NC	NC	NC
Nez Perce Tribal Hatchery (Dwor-Smolt)	NC	NC	NC	NC	NC
Lolo (Dwor-Smolt)	NC	NC	NC	NC	NC
NF Clearwater-CFH (Baffle) (Dwor)	NC	NC	NC	NC	NC
NF Clearwater-CFH (Regular) (Dwor)	NC	NC	NC	NC	NC
Selway River Lower (Dwor)	NC	NC	NC	NC	NC
Clear Creek (Dwor)	NC	NC	NC	NC	NC
<i>Kooskia National Fish Hatchery Trap (SOP Sections 2.3)</i>					
Kooskia National Fish Hatchery (Koos)	NC	NC	NC	NC	In 2021 adults for the CFH were trapped and transported to DNFH for holding and then handled a second time to move them to CFH for spawning. After filling brood needs for KNFH at DWNF, adults will be moved to CFH

Juvenile Release Location	Plan for 2022 (BY 2022)				
	Adult Fish Health	Trap Ops	Production target changes	Spawning protocol changes	Disposition of adults
Clear Creek (Koos)	NC	NC	NC	NC	NC
<i>Nez Perce Tribal Hatchery Trap (SOP Section 2.4)</i>					
Lolo Creek (NPTH-Pre-Smolt)	NC	NC	NC	NC	NC
Lolo Creek (NPTH-Smolt)	NC	NC	NC	NC	NC
<i>Red River and Crooked River Traps (SOP Section 2.5)</i>					
Red River (SFClw)	NC	NC	NC	NC	NC
<i>Powell Trap (SOP Section 2.5)</i>					
Powell (Pow-Summer)	NC	NC	NC	NC	NC

2.4. Early Rearing and Marking Plan for 2022 (Smolts BY 2021, Pre-Smolt BY2021)

BY2021 SMOLTS - Spring/Summer Chinook Goals for Release in 2023

Action in 2022	Brood/Release Year	Hatchery Program	Brood Collection Site	Rearing Facility	Release Site	Smolt Release Goal	
Early Rearing and Marking	BY2021 RY2023	Spring					
		DNFH - LSRCP	DNFH	DNFH	NF Clearwater (DNFH)	1,650,000	
		Total					1,650,000
		KNFH-NPT	KNFH	KNFH	Kooskia NFH	650,000	
		Total					650,000
		NPTH	DNFH	NPTH	Trans. to NPTH - NPTH	200,000	
			NPTH		Lolo Creek	200,000	
			DNFH		Trans. to NPTH - Lapwai Creek	200,000	
		Total					600,000
		CFH-LSRCP	SFCIw	CFH	Red River	1,280,000	
			DNFH		NF Clearwater-CFH (Baffle)	389,000	
			DNFH		NF Clearwater-CFH (Regular)	320,000	
			DNFH		Selway River-Lower	400,000	
			KNFH/DNFH		Clear Creek	720,000	
			TBD		TBD	321,000	
		Total					3,430,000
		Spring Grand Total					6,330,000
Summer							
CFH-LSRCP	Pow	CFH	Powell Pond (SUM)	640,000			
Summer Grand Total					640,000		

BY2021 PRE-SMOLT - Spring Chinook Goals for Release in 2022

Action in 2022	Brood/Release Year	Hatchery Program	Life Stage	Brood Collection Site	Rearing Facility	Release Site	Smolt Release Goal
Early Rearing, Marking and Release	BY2021 RY2022	Spring					
		NPTH	Pre-Smolt	NPTH	NPTH	Newsome Cr (SF Clw)	75,000
			Pre-Smolt			Lolo Cr (SF Clw)	150,000
		Total					
Spring Grand Total						225,000	

2.4.1. Early Rearing and Marking Plan for 2022 (Smolts BY 2021, Pre-Smolt BY2021) – TOTALS

Table 2.4a. BY 2021 Sp/Su Chinook Salmon - Early Rearing Inventory for smolt releases in 2023 (including anticipated set out)

Hatchery Program	Run	Brood Collection Site	Rearing Facility	Release Site	Release Goals for 2023	Size (FPP)	Inventory to Date		
							Date	Goal ¹	Actual
Spring									
DNFH	SpCS	DNFH	DNFH	NF Clearwater (DNFH)	1,650,000	20.0	1/12/22	2,552,977	2,873,201
Totals					1,650,000			2,552,977	2,873,201
KNFH	SpCS	KNFH	KNFH	Kooskia NFH	650,000		12/1/2021	650,000	984,011
Totals					650,000			650,000	984,011
NPTH	SpCS	DNFH	NPTH	Trans. to NPTH - NPTH	200,000	20.0	1/12/2021	225,604	244,110
		NPTH		Lolo Creek	200,000	20.0	12/1/2021	200,000	293,306
		DNFH		Trans. to NPTH - Lapwai Creek	200,000	20.0	1/12/2021	225,604	243,075
Totals					600,000			651,208	780,491
CFH	SpCS	SFClw	CFH	Red River	1,280,000	16.0	12/15/2021		1,318,098
		DNFH		NF Clearwater-CFH (Baffle)	389,000	16.0	12/15/2021		389,000
		DNFH		NF Clearwater-CFH (Regular)	320,000	16.0	12/15/2021		336,868
		DNFH		Selway River-Lower	400,000	16.0	12/15/2021		403,828
		KNFH/DNFH		Clear Creek	720,000	16.0	12/15/2021		741,516
		TBD		TBD	321,000	16.0	12/15/2021		462,989
Totals					3,430,000			0	3,652,299
Spring Grand Total					6,330,000			3,854,185	8,290,002
Summer									
CFH	SuCS	Pow	CFH	Powell Pond (SUM)	640,000	16.0	12/15/0201		239,751
Totals					640,000			0	239,751
Summer Grand Total					640,000			0	239,751

¹ Estimated fish needed in vats to reach eventual smolt release goals, based on brood calculator exclusive of the buffer.

Table 2.4b. BY 2021 SMOLTS - Sp/Su Chinook Projected Marking of BY 2021 juveniles to be released in 2023.

Hatchery Program	Run	Brood Collection Site	Rearing Facility	Release Site	Release Goals for 2023	Likely Marking Date(s)	Inventory to Date		Projected Marking				Projected PIT Tags				
							Date	Number	Adipose Fin Clip		No Clip		Total # Tags	Funding Source			
									No CWT	CWT	CWT	No CWT		CSS	LSRCP	USFWS	BPA
Spring																	
DNFH	SpCS	DNFH	DNFH	NF Clearwater (DNFH)	1,650,000	9/6 - 9/22/22	1/12/2022	2,873,201	2,494,612	120,000			42,000	42,000			
Totals					1,650,000			2,873,201	2,494,612	120,000	0	0	42,000	42,000	0	0	0
KFH	SpCS	KNFH	KNFH	Kooskia NFH	650,000	5/30/2022	12/1/2021	984,011	495,000	100,000		55,000	6,000			6,000	
Totals					650,000			984,011	495,000	100,000	0	55,000	6,000	0	0	6,000	0
NPTHC	SpCS	DNFH	NPTH	Trans. to NPTH - NPTH	200,000		1/12/2021	244,110	184,110	60,000			3,200				3,200
		NPTH		Lolo Creek	200,000	6/1/22	12/1/2021	293,306	0	0	200,000	93,306	2,000				2,000
		DNFH		Trans. to NPTH - Lapwai Creek	200,000	9/6/22	1/12/2021	243,075	183,075	60,000			600		600		
Totals					600,000			780,491	367,185	120,000	200,000	93,306	5,800	0	600	0	5,200
CFH	SpCS	SFCIw	CFH	Red River	1,280,000	4/26 - 4/30/22	12/15/2021	1,318,098	1,198,098	120,000	0	0	17,000	5,000	12,000	0	0
		DNFH		NF Clearwater-CFH (Baffle)	389,000	5/3 - 5/7/22	12/15/2021	389,000	329,000	60,000	0	0	8,500	2,500	6,000	0	0
		DNFH		NF Clearwater-CFH (Regular)	320,000	5/3 - 5/7/22	12/15/2021	336,868	276,868	60,000	0	0	8,500	2,500	6,000	0	0
		DNFH		Selway River-Lower	400,000	5/3 - 5/7/22	12/15/2021	403,828	150,565	120,000	133,263	0	17,000	5,000	12,000	0	0
		KNFH/DNFH		Clear Creek	720,000	5/17 - 5/26/22	12/15/2021	741,516	621,516	120,000	0	0	9,800	3,500	6,300	0	0
	TBD	TBD ¹		321,000	5/3 - 5/7/22	12/15/2021	462,989	462,989	0	0	0	0			0	0	
Totals					3,430,000			3,652,299	3,039,036	480,000	133,263	0	60,800	18,500	42,300	0	0
Spring Grand Total					6,330,000			8,290,002	6,395,833	820,000	333,263	148,306	114,600	60,500	42,900	6,000	5,200
Summer																	
CFH	SuCS	Pow	CFH	Powell Pond (SUM)	640,000	5/17 - 5/26/22	12/15/2021	239,751	0	0	119,751	120,000	25,500	13,500	12,000	0	0
Totals					640,000			239,751	0	0	119,751	120,000	25,500	13,500	12,000	0	0
Summer Grand Totals					640,000			239,751	0	0	119,751	120,000	25,500	13,500	12,000	0	0
Spring/Summer Grand Total					6,970,000			8,529,753	6,395,833	820,000	453,014	268,306	140,100	74,000	54,900	6,000	5,200

¹ Marking plan may change pending continued discussions. PIT tagging plan is TBD.

Table 2.4c. BY2021 PRE-SMOLT - Sp Chinook Salmon Inventory to Date by Projected Mark Type for release in 2022.

Hatchery Program	Run/ Life Stage	Brood Collection Site	Rearing Facility	Release Site	Inventory to Date		Projected Marking & Tagging				PIT Tags				
					Date	Total	Adipose Fin Clip		No Clip		Total # Tags	Funding Source			
							No CWT	CWT	CWT	No CWT		CSS	LSRCP	USFWS	BPA
NPTH	Pre-Smolt	NPTH	NPTH	Newsome Cr (SF Clw)	12/1/2021	91,774	0	0	75,000	16,744	3,000				3,000
	Pre-Smolt			Lolo Cr (SF Clw)		192,409	0	0	150,000	42,409	6,000				6,000
Total						284,183	0	0	225,000	59,153	9,000	0	0	0	9,000
Spring Grand Total						284,183	0	0	225,000	59,153	9,000	0	0	0	9,000

2.4.2. Early Rearing and Marking Plan for 2022 (Smolts BY 2020, Pre-Smolt BY2021) – NARRATIVE

Here are examples of things managers were instructed to discuss for each release group, if there are departures from the norm (i.e., SOP). If no departure from the norm, enter NC for “No Change”.

- **Fish Health** - fish health issues, action taken and how was the treatment implemented, anticipated changes to normal fish health sampling or treatments
- **Fish feeding** - changes of diets of feed manufacturer, growth regimes etc.
- **Rearing conditions** - incubation, water temp, flow, rearing density changes
- **Marking** - e.g. schedule changes, planned changes to fish handling or movement, marking schedule, raceway loading for PBT etc.
- **Current Inventory** - . If projected marking lines up with the current inventory, then no comment is needed at this bullet (enter NC). If current inventory is significantly above or below the projected numbers, then explain why.

Plan for 2022 (Smolts BY 2021, Pre-Smolt BY2021)					
Release Location	Juvenile Fish Health	Fish Feeding	Rearing Conditions	Marking	Meets Release Target
<i>Dworshak National Fish Hatchery (SOP Section 2.2)</i>					
NF Clearwater-DNFH (Dwor)	Early and later releases.	2.15M smolt	Potential shade cover construction 2022 - raise fish temporarily in burrows ponds.	500K Southern Resident Killer Whale Program marked by NPT	1.65M + 500K for Southern Resident Killer Whale Program
Nez Perce Tribal Hatchery (Dwor)	NC	NC	Potential shade cover construction 2022 - raise fish temporarily in burrows ponds.	NC	NC
Lapwai Creek (Dwor)	NC	NC	Potential shade cover construction 2022 - raise fish temporarily in burrows ponds.	NC	NC
<i>Kooskia National Fish Hatchery (SOP Sections 2.3)</i>					
Kooskia National Fish Hatchery (Koos)	NC	NC	NC	NC	NC
<i>Nez Perce Tribal Hatchery (SOP Section 2.4)</i>					
Lolo Creek (NPTH-Pre-Smolt)	WDFW will be fish health service provider	NC	NC	NC	NC

Plan for 2022 (Smolts BY 2021, Pre-Smolt BY2021)					
Release Location	Juvenile Fish Health	Fish Feeding	Rearing Conditions	Marking	Meets Release Target
Newsome Creek (NPTH-Pre-Smolt)	WDFW will be fish health service provider	NC	NC	NC	NC
Lolo Creek (NPTH-Smolt)	WDFW will be fish health service provider	NC	NC	NC	NC
<i>Clearwater Fish Hatchery (SOP Sections 2.5)</i>					
Red River (SFClw/RR)	NC	NC	NC	NC	NC
NF Clearwater - Baffle (Dwor/RR)	NC	NC	NC	NC	NC
NF Clearwater – Regular (Dwor/RR)	NC	NC	NC	NC	NC
Selway River-Lower (Dwor/RR)	NC	NC	NC	NC	NC
Clear Creek (Koos/Dwor/RR)	NC	NC	NC	NC	NC
Powell (Pow/SFSR-Summer)	NC	NC	NC	NC	NC

3. Coho Salmon

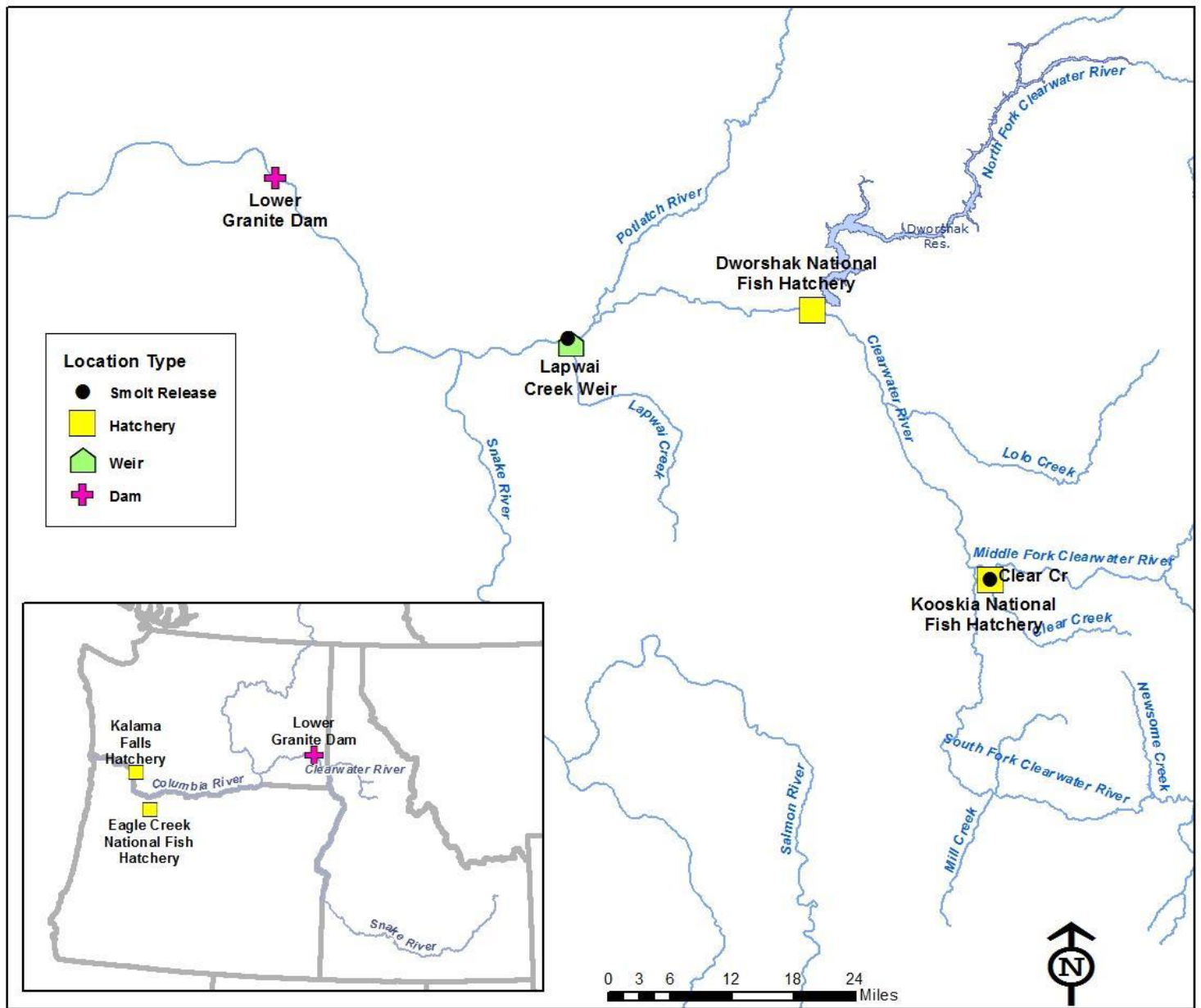


Figure 3.1. Coho trapping, hatchery facilities and smolt release locations.

Table 3.1. BY2020 SMOLTS - Coho Release Goals for 2022

Hatchery Program	Species	Brood Collection Site	Rearing Facility	Release Site	2022 Smolt Release Goal
NPT	Coho	LAP, DNFH, KNFH, LGR	DNFH	Clear Creek	500,000
Total					500,000
NPT	Coho	LAP, DNFH, KNFH, LGR	ECNFH	Lapwai Creek	275,000
	Coho			Clear Creek	275,000
Total					550,000
Grand Total					1,050,000

3.1. Timeline and Flowchart for Coho Production

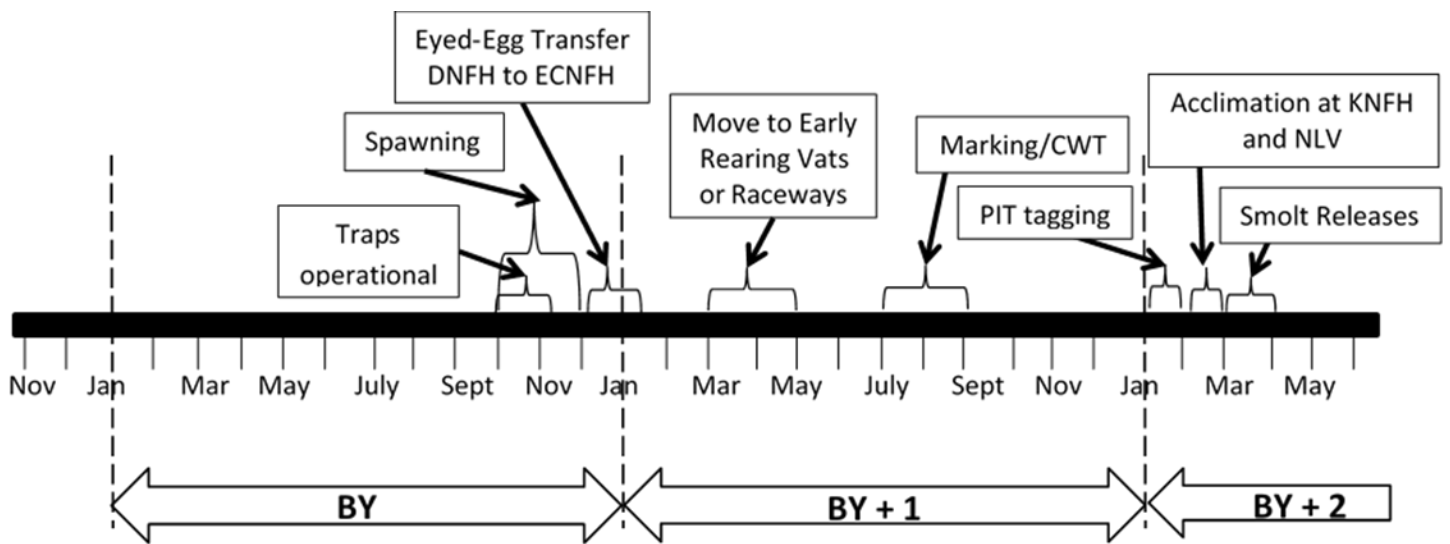


Figure 3.2. Timeline for Coho Production. Date ranges with black labels are shown to include all facilities' operations.

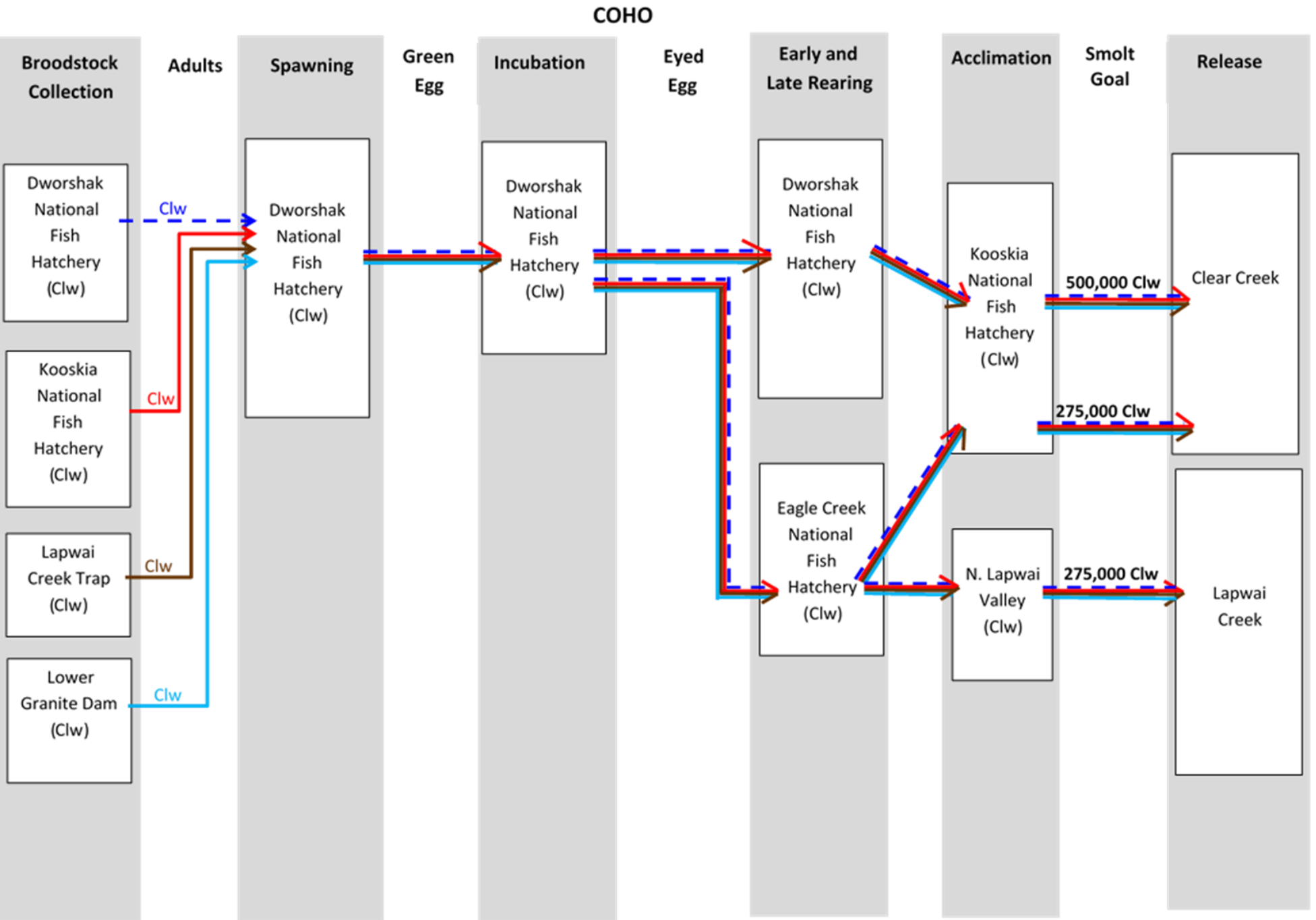


Figure 3.3. Coho movements in Clearwater. Numbers represent BY2022 releases.

3.2. Releases in 2022 (Smolt BY 2020)

3.2.1. Releases in 2022 (Smolt BY 2020) – Totals

Table 3.2a. BY2020 SMOLTS - Coho Salmon inventories by life stage, smolt release goals, and projected releases in 2022.

Rearing Facility	Species	Brood Collection Site	Rearing Facility	Release Site	Inventory To Date		Release Goals		Projected Smolt Release		
					Date	Number	Number	(FPP)	Dates	Number	(FPP)
NPT	Coho	LAP, DNFH, KNFH, LGR	DNFH	Clear Creek	1/11/2022	848,825	500,000	34.1	March 2022	840,000	20.0
Total							848,825	500,000		840,000	
ECNFH	Coho	LAP, DNFH, KNFH, LGR	ECNFH	Lapwai Creek	1/12/2022	293,262	275,000	30.0	March 2022	275,000	20.0
	Coho			Clear Creek	1/12/2022	293,262	275,000	30.0	March 2022	275,000	20.0
Total							586,524	550,000		550,000	
Grand Total							1,435,349	1,050,000		1,390,000	

Table 3.2b. BY2020 SMOLTS - Coho Salmon Inventory to Date by Mark Type for release in 2022.

Rearing Facility	Species	Brood Collection Site	Rearing Facility	Release Site	Inventory to Date						PIT Tags	
					Date	Total	Adipose Fin Clip		No Clip		Total # Tags (Mitchell Act)	
							No CWT	CWT	CWT	No CWT		
NPT	Coho	LAP, DNFH, KNFH, LGR	DNFH	Clear Creek	1/11/2022	848,825	0	0	62,016	786,809	4,000	
Total							848,825	0	0	62,016	786,809	4,000
ECNFH	Coho	LAP, DNFH, KNFH, LGR	ECNFH	Lapwai Creek	1/12/2022	293,262	0	0	30,004	263,258	5,000	
	Coho			Clear Creek	1/12/2022	293,262	0	0	30,018	263,244	5,000	
Total							586,524	0	0	60,022	526,502	10,000
Grand Total							1,435,349	0	0	122,038	1,313,311	14,000

3.2.2. Releases in 2022 (Smolt BY 2020) – Total

Here are examples of things managers were instructed to discuss for each release group, if there are departures from the norm (i.e., SOP). If no departure from the norm, enter NC for “No Change”.

- **Smolt/Egg Release Targets-** e.g. were you below goal, was your size at release different than SOP target etc.
- **Fish/Egg Health-** any epizootic history, anti-biotic treatments, was production culled at any point
- **Transportation/Releases-** e.g. timing, trucking issues, site access etc.

	Plan for 2022		Changes/Conditions that Occurred 2021-Early 2022		
Location	Release Target Smolt BY20	Transport/Release Smolt BY20	Fish Feeding Smolt BY20	Fish/Egg Health Smolt BY20	Marking Smolt BY20
<i>Dworshak National Fish Hatchery (SOP Section 3.2)</i>					
Clear Creek - DNFH (Clw)	300K over release goal of 500K.	NC	NC	NC	NC
<i>Eagle Creek National Fish Hatchery (SOP Section 3.3)</i>					
Lapwai Creek (Clw)	NC	NC	NC	NC	NC
Clear Creek (Clw)	NC	NC	NC	NC	NC

3.3. Trap Operations and Production Planning for 2022 (Smolt BY 2022)

3.3.1. Trap Operations and Production Planning for 2022 (Smolt BY 2022) – TOTALS

Table 3.3a. BY 2022 SMOLTS - Coho Smolt Production Goals for Release in 2024.

Hatchery Program	Species	Brood Collection Site	Rearing Facility	Release Site	2024 Smolt Release Goal
NPT	Coho	LAP, DNFH, KNFH, LGR	DNFH	Clear Creek	500,000
Total					500,000
NPT	Coho	LAP, DNFH, KNFH, LGR	ECNFH	Lapwai Creek	275,000
	Coho			Clear Creek	275,000
Total					550,000
Grand Total					1,050,000

3.3.2. Trap Operations and Production Planning for 2022 (Smolts BY 2022) – NARRATIVE

Here are examples of things managers were instructed to discuss for each release group, if there are departures from the norm (i.e., SOP). If no departure from the norm, enter NC for “No Change”.

Location	Plan for 2022 (BY 2022)				
	Adult Fish Health	Trap Ops	Production target changes	Spawning protocol changes	Disposition of adults
<i>Primary Trapping Facilities (SOP Section 3.2) ¹</i>					
Kooskia National Fish Hatchery Trap (Clw)	WDFW will be fish health service provider	NC	NC	NC	NC
Lapwai Creek Trap (Clw)	WDFW will be fish health service provider	NC	NC	NC	NC
<i>Secondary Trapping Facilities (SOP Section 3.2) ¹</i>					
Dworshak National Fish Hatchery Trap (Clw)	WDFW will be fish health service provider	NC	NC	NC	NC
Lower Granite Dam (Clw)	WDFW will be fish health service provider	NC	NC	NC	NC

¹ If broodstock collection at primary and secondary trapping locations falls short of goals, green eggs from Eagle Creek National Fish hatchery and/or Kalama Fish Hatchery may be used as a source.

3.4. Early Rearing and Marking Plan for 2022 (Smolts BY 2021)

BY2021 SMOLTS - Coho Release Goals for 2023

Hatchery Program	Species	Brood Collection Site	Rearing Facility	Release Site	2022 Smolt Release Goal
NPT	Coho	LAP, DNFH, KNFH, LGR	DNFH	Clear Creek	500,000
Total					500,000
NPT	Coho	LAP, DNFH, KNFH, LGR	ECNFH	Lapwai Creek	275,000
	Coho			Clear Creek	275,000
Total					550,000
Grand Total					1,050,000

3.4.1. Early Rearing and Marking Plan for 2022 (Smolts BY 2021) – TOTALS

Table 3.4a. BY 2021 Coho - Early Rearing Inventory (including anticipated set out)

Rearing Hatchery	Species	Stock	Inventory to Date		
			Date	Goal ¹	Actual
DNFH	Coho	Clw	1/12	500,000	862,005
ECNFH	Coho	Clw	1/12	575,000	628,620

¹ Estimated fish needed in vats to reach eventual smolt release goals, based on brood calculator

Table 3.4b. BY 2021 SMOLTS - Coho Projected Marking of BY 2021 fish in 2022

Hatchery Program	Species	Brood Collection Site	Rearing Facility	Release Site	Likely Marking Date(s)	Release Goals for 2022	Inventory to Date		Projected Marking				PIT Tags ¹
							Date	Number	Adipose Fin Clip		No Clip		Total # Tags (Mitchell Act)
									No CWT	CWT	CWT	No CWT	
NPT	Coho	LAP, DNFH, KNFH, LGR	DNFH	Clear Creek		500,000	1/12/2022	860,005	-	-	60,000	800,005	4,000
Total						500,000		860,005	-	-	60,000	800,005	4,000
NPT	Coho	LAP, DNFH, KNFH, LGR	ECNFH	Lapwai Creek		275,000	1/12/2022	628,620	-	-	30,000	284,310	5,000
	Coho			Clear Creek	275,000	-			-	30,000	284,310	5,000	
Total						550,000		628,620	-	-	60,000	568,620	10,000
Grand Total						1,050,000		1,488,625	-	-	120,000	1,368,625	14,000

¹ PIT Tagging occurs in spring 2023

3.4.2. Early Rearing and Marking Plan for 2022 (Smolts BY 2021) – NARRATIVE

Here are examples of things managers were instructed to discuss for each release group, if there are departures from the norm (i.e., SOP). If no departure from the norm, enter NC for “No Change”.

- **Fish Health** - observed fish health issues, what action was taken and how was the treatment implemented, anticipated changes to normal fish health sampling or treatments
- **Fish feeding** - changes of diets of feed manufacturer, growth regimes etc.
- **Rearing conditions** - incubation, water temp, flow, rearing density changes
- **Marking** - e.g. schedule changes, planned changes to fish handling or movement, marking schedule, raceway loading for PBT etc.
- **Current Inventory** - . If projected marking lines up with the current inventory, then no comment is needed at this bullet (enter NC). If current inventory is significantly above or below the projected numbers, then explain why.

Release Location	Plan for 2022 (Smolts BY 2021)				
	Juvenile Fish Health	Fish Feeding	Rearing Conditions	Marking	Meets Release Target
<i>Dworshak National Fish Hatchery (SOP Section 3.2)</i>					
Clear Creek - DNFH (Clw)	WDFW will be fish health service provider	NC	NC	NC	NC
<i>Eagle Creek National Fish Hatchery (SOP Sections 3.3)</i>					
Clear Creek (Clw)	NC	NC	NC	NC	NC
Lapwai Creek (Clw)	NC	NC	NC	NC	NC

4. Fall Chinook

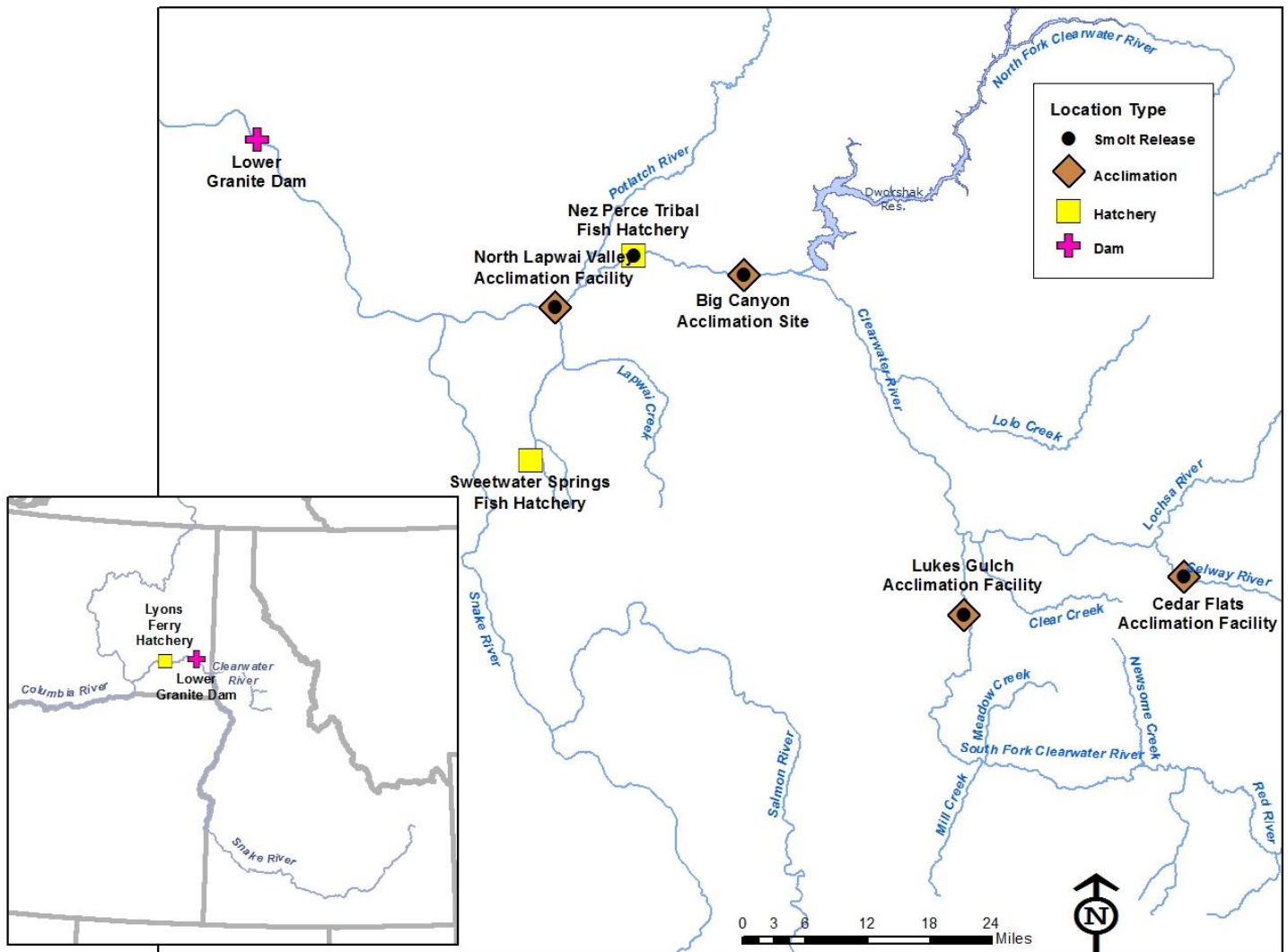


Figure 4.1. Fall Chinook Salmon hatchery and acclimation facilities, and sub-yearling release locations.

Table 4.1. Fall Chinook Goals for Release in 2022

BY2021 SUB-YEARLINGS

Hatchery Program	Brood Collection Site	Rearing Facility	Release Site	Sub-Yearling Release Goal
NPT	SnakeR	Lyons Ferry	Big Canyon Creek ¹	450,000
				200,000
Total				650,000
NPT	SnakeR	NPTH	NPTH	500,000
	SnakeR		N Lapwai Valley	200,000
	SnakeR		Lukes Gulch	350,000
	SnakeR		Cedar Flats	350,000
Total				1,400,000
Grand Total				2,050,000

¹ Two separate release goals at Big Canyon Creek (different release dates)

4.1. Timeline and Flowchart for Fall Chinook Production

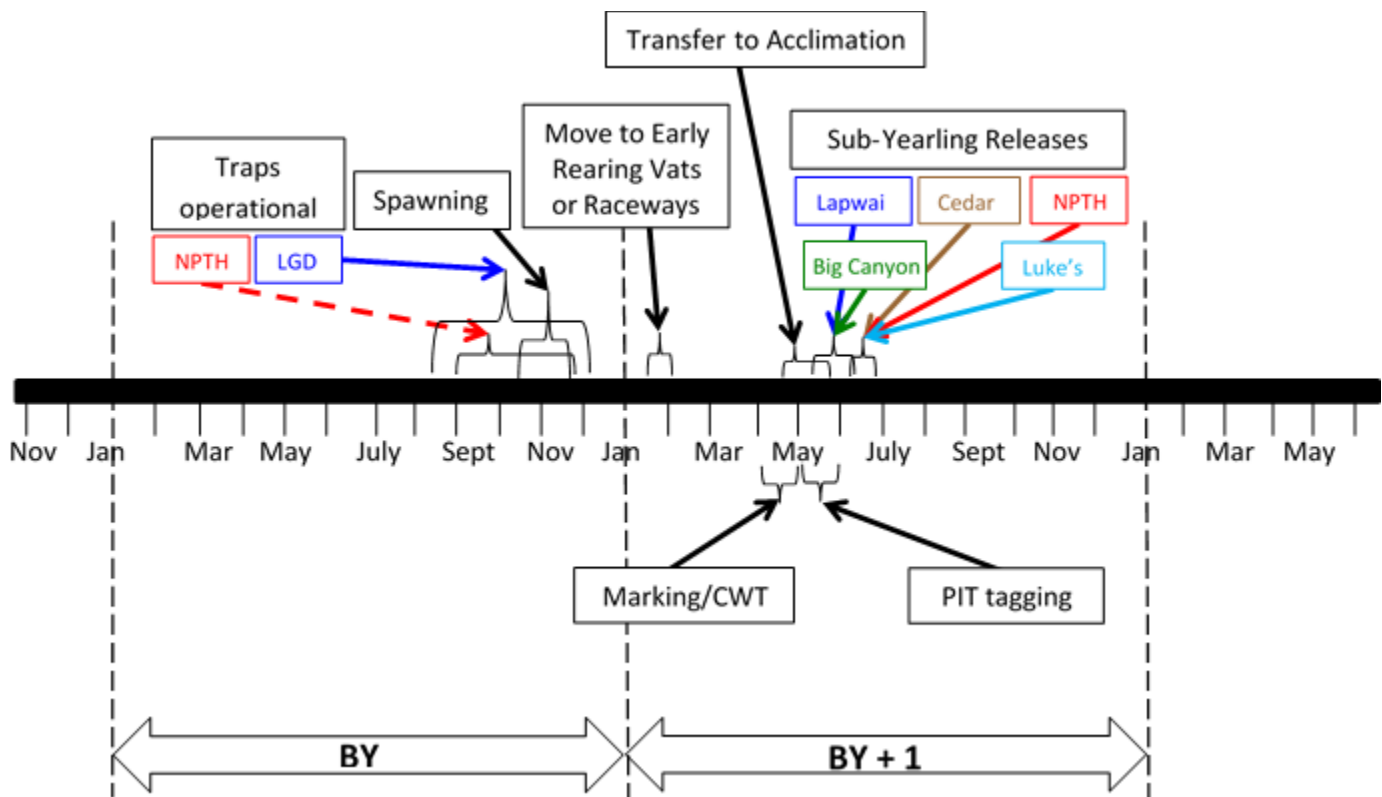


Figure 4.2. Timeline for Sub-Yearling Fall Chinook Production. Date ranges with black labels are shown to include all facilities' operations. Color-coded labels identify activities that have variability in timing for the different facilities.

FALL CHINOOK

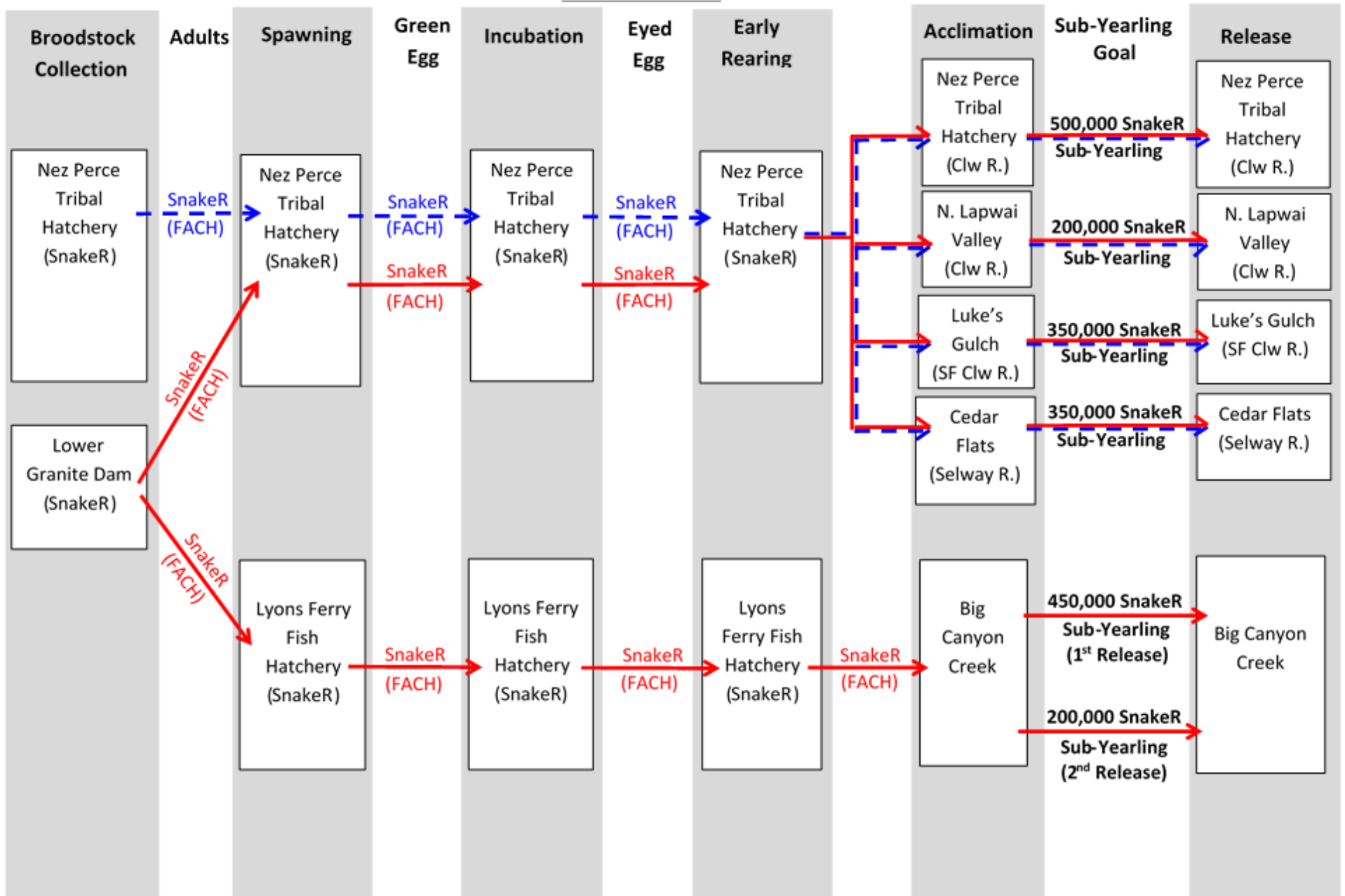


Figure 4.3. Fall Chinook movements in Clearwater. Numbers represent 2022 releases.

4.2. Releases in 2022 (Sub-Yearling BY 2021)

4.2.1. Releases in 2022 (Sub-Yearling BY 2021) – Totals

Table 4.2a. BY2021 SUB-YEARLINGS - Fall Chinook Salmon inventories by life stage, smolt release goals and projected releases in 2022.

Hatchery Program	Species	Brood Collection Site	Rearing Facility	Release Site	Inventory To Date		Release Goals		Projected Sub-Yearling Release		
					Date	Number	Number	(FPP)	Dates	Number	(FPP)
NPT	FACH	SnakeR	Lyons Ferry	Big Canyon Creek ¹	12/15/2021	450,000	450,000	50.0	5/11/2022	450,000	50.0
					12/15/2021	200,000	200,000	50.0	6/1/2022	200,000	50.0
Total						650,000	650,000			650,000	
NPT	FACH	SnakeR	NPTH	NPTH	12/15/2021	687,153	500,000	50.0	6/15/2022	680,282	50.0
	FACH	SnakeR		N Lapwai Valley	12/15/2021	281,714	200,000	50.0	5/30/2022	278,897	50.0
	FACH	SnakeR		Lukes Gulch	12/15/2021	579,593	350,000	50.0	6/8/2022	307,000	50.0
	FACH	SnakeR		Cedar Flats			350,000	50.0	6/8/2022	272,000	50.0
Total						1,548,460	1,400,000			1,538,179	
Grand Total						2,198,460	2,050,000			2,188,179	

¹ Two separate release goals at Big Canyon Creek (different release dates)

Table 4.2b. BY2021 SUB-YEARLINGS - Fall Chinook Salmon Inventory to Date by Mark Type for release in 2022.²

Hatchery Program	Species	Brood Collection Site	Rearing Facility	Release Site	Inventory to Date						PIT Tags				
					Date	Total	Adipose Fin Clip		No Clip		Total # Tags	Funding Source			
							No CWT	CWT	CWT	No CWT		CSS	LSRCP	IPC	BPA
NPT	FACH	SnakeR	Lyons Ferry	Big Canyon Creek ¹	12/15/2021	450,000	0	200,000	0	250,000	11,100	11,100			
					12/15/2021	200,000	0	200,000	0	0	4,500				4,500
Total						650,000	0	400,000	0	250,000	15,600	11,100	0	0	4,500
NPT	FACH	SnakeR	NPTH	NPTH	12/15/2021	680,282	0	100,000	0	580,282	4,500				4,500
	FACH	SnakeR		N Lapwai Valley	12/15/2021	278,897	0	100,000	0	178,897	4,500				4,500
	FACH	SnakeR		Lukes Gulch	12/15/2021	307,000	0	100,000	0	207,000	4,500				4,500
	FACH	SnakeR		Cedar Flats			0	100,000	0	172,000	4,500			4,500	
Total						1,538,179	0	400,000	0	1,138,179	18,000	0	0	0	18,000
Grand Total						2,188,179	0	800,000	0	1,388,179	33,600	11,100	0	0	22,500

¹ Two separate release goals at Big Canyon Creek (different release dates)

² Projected marking numbers because marking/tagging occurs in April/May

4.2.2. Releases in 2022 (Sub-Yearling BY 2021) - Narrative

Here are examples of things managers talk about for each release group, if there are departures from the norm (i.e., SOP). If no departure from the norm, enter NC for “No Change”.

- **Smolt Release Targets**- e.g. Were you below goal? Was you size at release different than SOP target? Did you depart from the mark plan?
- **Fish Health**- any epizootic history, anti-biotic treatments, was production culled at any point
- **Transportation/Releases**- e.g. timing, trucking issues, site access etc.

Release Location	Plan for 2022		Changes/Conditions that Occurred 2021-Early 2022		
	Release Target Sub-YrIng BY21	Transport/Release Sub-YrIng BY21	Fish Feeding Sub-YrIng BY21	Fish/Egg Health Sub-YrIng BY21	Marking Sub-YrIng BY21
<i>Nez Perce Tribal Hatchery (SOP Section 4.2)</i>					
Nez Perce Tribal Hatchery (Clw R.)	500K Target + 180K 680K Total Release	NC	NC	NC	NC
N. Lapwai Valley (Clw R.)	NC	NC	NC	NC	NC
Luke’s Gulch (SF Clw R.)	NC	NC	NC	NC	NC
Cedar Flats (Selway R.)	NC	NC	NC	NC	NC
<i>Lyons Ferry Fish Hatchery (SOP Section 4.3)</i>					
Big Canyon Creek Sub-Yearling ¹	NC	NC	NC	NC	NC
Big Canyon Creek Sub Yearling ¹	NC	NC	NC	NC	NC

¹ Two separate release goals at Big Canyon Creek (different release dates)

4.3. Trap Operations and Production Planning for 2022

4.3.1. Trap Operations and Production Planning for 2022 – TOTALS

Table 4.3a. BY 2022 SUB-YEARLINGS - Fall Chinook Production Goals for Release in 2023

FCAP	FACH	SnakeR	Lyons Ferry	Big Canyon Creek	450,000
					200,000
Total					650,000
NPTH	FACH	Snake R.	NPTH	NPTH	500,000
	FACH	Snake R.		N Lapwai Valley	200,000
	FACH	Snake R.		Lukes Gulch	350,000
	FACH	Snake R.		Cedar Flats	350,000
Total					1,400,000
Grand Total					2,050,000

4.3.2. Trap Operations and Production Planning for 2022 (Sub-Yearling) – NARRATIVE

Here are examples of things managers were instructed to discuss for each release group, if there are departures from the norm (i.e., SOP). If no departure from the norm, enter NC for “No Change”.

Rearing Location	Plan for 2022 (BY 2022)				
	Adult Fish Health	Trap Ops	Production target changes	Spawning protocol changes	Disposition of adults
<i>Lower Granite Dam Ladder/Trap (SOP Sections 4.2 and 4.3)</i>					
Nez Perce Tribal Hatchery (SnakeR)	2nd year of WDFW performing fish health	NC	NC	NC	NC
Lyons Ferry Fish Hatchery – Sub-Yearling (SnakeR)	NC	NC	NC	NC	NC
<i>Nez Perce Tribal Hatchery Trap (SOP Section 4.2)</i>					
Nez Perce Tribal Hatchery (SnakeR)	NC	NC	NC	NC	NC

4.4. Early Rearing and Marking Plan for 2022 (Sub-Yearling BY 2021)

4.4.1. Early Rearing and Marking Plan for 2022 (Sub-Yearling BY 2021) – NARRATIVE

Here are examples of things managers were instructed to discuss for each release group, if there are departures from the norm (i.e., SOP). If no departure from the norm, enter NC for “No Change”.

- **Fish Health** - fish health issues, action taken and how was the treatment implemented, anticipated changes to normal fish health sampling or treatments
- **Fish feeding** - changes of diets of feed manufacturer, growth regimes etc.
- **Rearing conditions** - incubation, water temp, flow, rearing density changes
- **Marking** - e.g. schedule changes, planned changes to fish handling or movement, marking schedule, raceway loading for PBT etc.
- **Current Inventory** - . If projected marking lines up with the current inventory, then no comment is needed at this bullet (enter NC). If current inventory is significantly above or below the projected numbers, then explain why.

	Plan for 2022 (Sub-Yearling BY 2021)				
Release Location	Juvenile Fish Health	Fish Feeding	Rearing Conditions	Marking	Meets Release Target
<i>Nez Perce Tribal Hatchery (SOP Section 4.2)</i>					
Nez Perce Tribal Hatchery (Clw R.)	2nd year of WDFW performing fish health	NC	NC	NC	NC
N. Lapwai Valley (Clw R.)	2nd year of WDFW performing fish health	NC	NC	NC	NC
Luke’s Gulch (SF Clw R.)	2nd year of WDFW performing fish health	NC	NC	NC	NC
Cedar Flats (Selway R.)	2nd year of WDFW performing fish health	NC	NC	NC	NC
<i>Lyons Ferry Fish Hatchery (SOP Sections 4.3)</i>					
Big Canyon Creek Sub-Yearling ¹	NC	NC	NC	NC	NC
Big Canyon Creek Sub-Yearling ¹	NC	NC	NC	NC	NC

¹ Two separate release goals at Big Canyon Creek (different release dates)

5. Lamprey

5.1. Releases in 2022 - Narrative

- **Release Targets** - Release Targets based on maximization of summer collections at Bonneville, The Dalles, and John Day dams which are no longer limited by an allocation cap but seek to trap and collect as many lamprey as possible since trap efficiencies remain low. A strategy of balancing Direct Releases with Conventional Overwintering (approximately 50%-50%) will be pursued.
- **Fish Health**- Transferred from USFWS to WDFW (mortalities only)
- **Transportation/Releases**- Releases of adult lamprey will continue with Direct Releases (trapped current Migration Year fish transported past all eight dams then released back into mainstem river to continue migration) and Conventional Overwintering (trapped fish transported to hatchery and held overwinter in holding tanks then released the following spring in targeted tributaries).

Release Location	Plan for 2022		Changes/Conditions that Occurred 2021-Early 2022		
	Release Target	Transport/Release	Fish Feeding	Fish Health	Marking
<i>Nez Perce Tribal Hatchery (SOP Section 5.1)</i>					
Lolo Creek	100 MY2021				
Orofino Creek	100 MY2021				
Newsome Creek	100 MY2021				
Red River					
Big Canyon Creek					
SF Salmon River		100 MY2022			
Johnson Creek					
Asotin Creek	100 MY2021				
Wallowa River	50 MY2021				
Minam River	50 MY2021				
Secesh River		100 MY2022			
Joseph Creek					
Potlatch River	100 MY2021				
Mainstem Clearwater River		750 MY2022			
TOTAL RELEASED	600 MY2021	950 MY2022			

5.2. Trap Operations for 2022

5.2.1. Trap Operations for 2022 - Narrative Trap operation targets based on maximization of summer collections at Bonneville, The Dalles, and John Day dams which are no longer limited by an allocation cap but seek to trap and collect as many lamprey as possible since trap efficiencies remain low.

	Plan for 2022				
Trapping Location	Adult Fish Health	Trap Ops	Trapping target changes	Holding protocol changes	Disposition of adults
<i>Primary Trapping Facilities (SOP Sections 5.1)</i>					
Bonneville Dam		1500 collection goal			
John Day Dam		250 collection goal			
The Dalles Dam		250 collection goal			

6. Appendices

6.1. Clearwater Brood Calculators

6.1.1. FULL PRODUCTION Brood Calculator

PROGRAM INPUTS						HISTORICAL HATCHERY PERFORMANCE METRICS (5-YR AVG)							FORM CALCULATED VALUES												
SPECIES	HATCHERY	PROGRAM	Life Stage	PREFERRED TRAPPING SITE	FORMAL RELEASE GOAL	COMANAGER APPROVED CUSHION % (1)	% FEMALES IN BROODSTOCK	% MORTALITY DURING HOLDING	GREEN EGG FECUNDITY	% REMAINING AFTER DISEASE CULLING (2)	% SURVIVAL GREEN TO EYED EGG	% SURVIVAL EYED EGG TO RELEASE	RELEASE GOAL WITH CUSHION	EYED EGGS	GREEN EGGS	GREEN EGGS BEFORE DISEASE CULL	FEMALES SPAWNED	MALES SPAWNED	TOTAL ADULTS SPAWNED	TRAPPED ADULTS NEEDED	ADULTS TRAPPED TO MEET 1:1 RATIO	SMOLTS PER TRAPPED ADULTS NEEDED	NOTE		
					(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)	(T)	(U)	(V)	(W)	#		
STLHD	DNFH	MS Clearwater at DNFH		DNFH	1,200,000	4%	50.0%	7.3%	7,046	91.5%	88.9%	85.5%	1,248,000	1,459,649	1,641,900	1,794,426	255	255	510	551	551	2,265			
		Red House Hole - SF Clw		SFClw Angler	400,000	4%	50.0%	7.3%	7,046	91.5%	88.9%	85.5%	416,000	486,550	547,300	598,142	85	85	170	184	184	2,261			
		Clear Creek		DNFH	300,000	4%	50.0%	7.3%	7,046	91.5%	88.9%	85.5%	312,000	364,912	410,475	448,607	64	64	128	139	139	2,245			
		Lolo Creek		DNFH	200,000	5%	50.0%	7.3%	7,046	91.5%	88.9%	85.5%	210,000	245,614	276,281	301,947	43	43	86	93	93	2,258			
	MVH	Salmon River		DNFH	93,000	5%	50.0%	6.2%	6,681	100.0%	84.0%	85.0%	97,650	114,882	136,765	136,765	21	21	42	45	45	2,170			
CFH	Clearwater		SFCLW	843,000	3%	50.0%	3.5%	7,267	100.0%	82.0%	80.0%	868,290	1,085,363	1,323,613	1,323,613	183	183	366	380	380	2,285				
SP/SU CHIN	DNFH	NF Clearwater (DNFH)		DNFH	1,650,000	1%	50.0%	3.6%	3,880	91.8%	95.8%	92.3%	1,666,667	1,805,706	1,884,871	2,053,236	530	530	1,060	1,100	1,100	1,515	(3)		
		Trans. to NPTH-NPTH		DNFH	200,000	2%	50.0%	3.6%	3,880	91.8%	95.8%	92.3%	204,082	221,107	230,800	251,417	65	65	130	135	135	1,512			
		Trans. to NPTH-Lapwai Creek		DNFH	200,000	2%	50.0%	3.6%	3,880	91.8%	95.8%	92.3%	204,082	221,107	230,800	251,417	65	65	130	135	135	1,512	(4)		
	CFH	KNFH	Kooskia NFH		KNFH	650,000	5%	50.0%	10.0%	3,580	94.5%	94.5%	90.0%	684,211	760,234	804,480	851,302	238	238	476	529	529	1,293		
			Red River		SFClw	1,280,000	0%	50.0%	5.0%	3,581	91.0%	96.0%	97.0%	1,280,000	1,319,588	1,374,570	1,510,517	422	422	844	889	889	1,440		
			Selway River-Lower		DNFH	400,000	0%	50.0%	5.0%	3,581	91.0%	96.0%	97.0%	400,000	412,371	429,553	472,037	132	132	264	278	278	1,439		
		NPTH	CFH	Clear Creek		KNFH/DNFH	720,000	0%	50.0%	5.0%	3,581	91.0%	96.0%	97.0%	720,000	742,268	773,196	849,666	238	238	476	502	502	1,434	
				NF Clearwater-CFH (Baffle)		DNFH	389,000	0%	50.0%	5.0%	3,581	91.0%	96.0%	97.0%	389,000	401,031	417,741	459,056	129	129	258	272	272	1,430	(5)
				NF Clearwater-CFH (Regular)		DNFH	320,000	0%	50.0%	5.0%	3,581	91.0%	96.0%	97.0%	320,000	329,897	343,643	377,629	106	106	212	224	224	1,429	(6)
			Powell Pond (SUM)		Pow/SFSR	640,000	0%	50.0%	5.0%	3,741	98.0%	88.0%	97.0%	640,000	659,794	749,766	765,067	205	205	410	432	432	1,481	(7)	
			NPTH	Lolo Cr (Clw)	Pre-Smolt	NPTH	150,000	1%	50.0%	5.0%	3,724	90.0%	88.0%	91.0%	151,515	166,500	189,205	210,227	57	57	114	120	120	1,263	
				Newsome Cr (SF Clw)	Pre-Smolt	NPTH	75,000	1%	50.0%	5.0%	3,724	90.0%	88.0%	91.0%	75,758	83,250	94,602	105,114	29	29	58	62	62	1,222	
		Lolo Creek	Smolt	NPTH	200,000	1%	50.0%	5.0%	3,724	90.0%	88.0%	91.0%	202,020	222,000	252,273	280,303	76	76	152	160	160	1,263			
FACH	NPTH	Snake River		LGR/NPTH	1,400,000	1%	50.0%	8.0%	4,119	94.0%	90.0%	96.0%	1,414,000	1,472,917	1,636,574	1,741,036	423	423	846	920	920	1,537			
COHO	DNFH	Clearwater			500,000	10%	49.3%	15.1%	2,488	97.3%	80.2%	81.2%	550,000	677,090	844,462	868,074	349	359	708	835	810	659			
	ECFH	Clearwater			550,000	10%	49.3%	15.1%	2,488	97.3%	80.2%	81.2%	605,000	744,799	928,908	954,881	384	396	780	918	892	659			
CELL FORMULAS													F*(1+G)	N/(M)	O/(L)	P/(K)	ROUNDUP (Q/J,0)	R/(H)-R	R+S	ROUNDUP (T/(1-I),0)	ROUNDUP(R/(1-H)/(1-I),0)	N/U			

(1) In the 2013 AOP process, the co-managers approved a 10% cushion to meet release targets

(2) Culling of eggs for BKD, IHN, etc.

(3) Includes the New Production started in BY2015. Added production by increasing densities to 65k in all B-Bank rcwys.

(4) New production started in BY2015, Lolo release group.

(5) NEW PRODUCTION in 2015. First timing rearing smolt in the adult holding ponds

(6) NEW PRODUCTION in 2015. Increasing rearing densities across raceways and spreading the new smolts across release groups

(7) Powell is not a US v OR program; however we will target 640,000 summer Chinook smolts even if the spring Chinook production target is set at the base US v OR level.

6.1.2. US v OR Brood Calculator

PROGRAM INPUTS						HISTORICAL HATCHERY PERFORMANCE METRICS (5-YR AVG)						FORM CALCULATED VALUES												
SPECIES	HATCHER Y	PROGRAM	Life Stage	PREFERRED TRAPPING SITE	FORMAL RELEASE GOAL	COMANAGER APPROVED CUSHION % (1)	% FEMALES IN BROODSTOCK (H)	% MORTALITY DURING HOLDING (I)	GREEN EGG FECUNDITY (J)	REMAINING AFTER DISEASE CULLING (2)	% SURVIVAL GREEN TO EYED EGG (L)	% SURVIVAL EYED EGG TO RELEASE (M)	RELEASE GOAL WITH CUSHION (N)	EYED EGGS (O)	GREEN EGGS (P)	GREEN EGGS BEFORE DISEASE CULL (Q)	FEMALES SPAWNED (R)	MALES SPAWNED (S)	TOTAL ADULTS SPAWNED (T)	TRAPPED ADULTS NEEDED (U)	ADULTS TRAPPED TO MEET 1:1 RATIO (V)	SMOLTS PER TRAPPED ADULTS NEEDED (W)	NOTE	
					(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)	(T)	(U)	(V)	(W)	#	
STLHD	DNFH	MS Clearwater at DNFH		DNFH	1,200,000	4%	67.0%	7.3%	7,046	91.5%	88.9%	85.5%	1,248,000	1,459,649	1,641,900	1,794,426	255	126	381	411	834	3,036		
		Red House Hole - SF Clw		SFClw Angler	400,000	4%	67.0%	7.3%	7,046	91.5%	88.9%	85.5%	416,000	486,550	547,300	598,142	85	42	127	137	278	3,036		
		Clear Creek		DNFH	300,000	4%	67.0%	7.3%	7,046	91.5%	88.9%	85.5%	312,000	364,912	410,475	448,607	64	32	96	104	210	3,000		
		Lolo Creek		DNFH	200,000	5%	67.0%	7.3%	7,046	91.5%	88.9%	85.5%	210,000	245,614	276,281	301,947	43	21	64	70	141	3,000		
	MVH	Salmon River		DNFH	93,000	5%	67.0%	3.5%	6,681	100.0%	84.0%	85.0%	97,650	114,882	136,765	136,765	21	10	31	33	66	2,959		
	CFH	Clearwater		SFCLW	843,000	3%	67.0%	3.5%	7,267	100.0%	82.0%	80.0%	868,290	1,085,363	1,323,613	1,323,613	183	90	273	284	575	3,057		
SP/SU CHIN	DNFH	NF Clearwater (DNFH)		DNFH	1,350,000	1%	50.0%	3.6%	3,880	91.8%	95.8%	92.3%	1,363,636	1,477,396	1,542,167	1,679,920	433	433	866	899	899	1,517	(3)	
		Trans. to NPTH-NPTH		DNFH	200,000	2%	50.0%	3.6%	3,880	91.8%	95.8%	92.3%	204,082	221,107	230,800	251,417	65	65	130	135	135	1,512		
		Trans. to NPTH-Lapwai Creek		DNFH	0	2%	50.0%	3.6%	3,880	91.8%	95.8%	92.3%	0	0	0	0	0	0	0	0	0	#DIV/0!	(4)	
	CFH	KNFH	Kooskia NFH		KNFH	650,000	5%	50.0%	10.0%	3,580	94.5%	94.5%	90.0%	684,211	760,234	804,480	851,302	238	238	476	529	529	1,293	
			Red River		SFClw	1,100,000	0%	50.0%	5.0%	3,581	91.0%	96.0%	97.0%	1,100,000	1,134,021	1,181,271	1,298,101	363	363	726	765	765	1,438	
		Selway River-Lower		DNFH	400,000	0%	50.0%	5.0%	3,581	91.0%	96.0%	97.0%	400,000	412,371	429,553	472,037	132	132	264	278	278	1,439		
		Clear Creek		KNFH/DNFH	635,000	0%	50.0%	5.0%	3,581	91.0%	96.0%	97.0%	635,000	654,639	681,916	749,358	210	210	420	443	443	1,433		
		NF Clearwater-CFH (Baffle)		DNFH	0	0%	50.0%	5.0%	3,581	91.0%	96.0%	97.0%	0	0	0	0	0	0	0	0	0	#DIV/0!	(5)	
		NF Clearwater-CFH (Regular)		DNFH	0	0%	50.0%	5.0%	3,581	91.0%	96.0%	97.0%	0	0	0	0	0	0	0	0	0	#DIV/0!	(6)	
		Powell Pond (SUM)		Pow/SFSR	640,000	0%	50.0%	5.0%	3,741	98.0%	90.0%	97.0%	640,000	659,794	733,104	748,066	200	200	400	422	422	1,517	(7)	
	NPTH	Lolo Cr (Clw)	Pre-Smolt	NPTH	150,000	1%	50.0%	5.0%	3,724	90.0%	88.0%	91.0%	151,515	166,500	189,205	210,227	57	57	114	120	120	1,263		
		Newsome Cr (SF Clw)	Pre-Smolt	NPTH	75,000	1%	50.0%	5.0%	3,724	90.0%	88.0%	91.0%	75,758	83,250	94,602	105,114	29	29	58	62	62	1,222		
Lolo Creek			NPTH	200,000	1%	50.0%	5.0%	3,724	90.0%	88.0%	91.0%	202,020	222,000	252,273	280,303	76	76	152	160	160	1,263			
FACH	NPTH	Snake River		LGR/NPTH	1,400,000	1%	50.0%	8.0%	4,119	94.0%	89.0%	96.0%	1,414,000	1,472,917	1,654,963	1,760,598	428	428	856	931	931	1,519		
COHO	DNFH	Clearwater			500,000	10%	49.3%	15.1%	2,488	97.3%	80.2%	81.2%	550,000	677,090	844,462	868,074	349	359	708	835	810	659		
	ECFH	Clearwater			550,000	10%	49.3%	15.1%	2,488	97.3%	80.2%	81.2%	605,000	744,799	928,908	954,881	384	396	780	918	892	659		
													CELL FORMULAS	F*(1+G)	N/(M)	O/(L)	P/(K)	ROUNDUP (Q/I,0)	R/(H)-R	R+S	ROUNDUP (T/(1-I),0)	ROUNDUP(R/(1-H)/(1-I),0)	N/U	

(1) In the 2013 AOP process, the co-managers approved a 10% cushion to meet release targets
(2) Culling of eggs for BKD, IHN, etc.
(3) Includes the New Production started in BY2015. Added production by increasing densities to 65k in all B-Bank rcwys.
(4) New production started in BY2015, Lolo release group.
(5) NEW PRODUCTION in 2015. First timing rearing smolt in the adult holding ponds
(6) NEW PRODUCTION in 2015. Increasing rearing densities across raceways and spreading the new smolts across release groups
(7) Powell is not a US v OR program; however we will target 640,000 summer Chinook smolts even if the spring Chinook production target is set at the base US v OR level.

6.2. Sites, release numbers for adult Spring Chinook Salmon, when all Clearwater Basin Production Programs are above broodstock, harvest and C&S needs.*

Release Location	Hatchery Source	Guideline Range	Proposed Max
<i>Selway Basin</i>			
McGruder	RR, NPTH, Clear, DNFH, KNFH	800 - 1,000	6,000
O'Hara Creek	RR, NPTH, Clear, DNFH	200	
Lower Selway	RR, NPTH, Clear, DNFH, KNFH	0 - 2,000	3,400
<i>SF Clearwater R.</i>			
Mill Creek	RR, NPTH, Clear, DNFH	150	600
Meadow Creek	RR, NPTH, Clear, DNFH	150 - 300	
SF Clearwater R.	RR, NPTH, Clear, DNFH	0 - 500	
Crooked River	RR, NPTH, Clear, DNFH	0 - 500	
<i>Lochsa River</i>			
Main Lochsa, Badger Cr., Boulder Cr.	RR, NPTH, Clear, DNFH	500	
TOTAL		1,800 - 4,650	10,000

*Release Locations are not prioritized. If guideline range is likely to be exceeded, co-managers will discuss disposition of excess fish.

*Weekly conference calls are scheduled for Tuesdays, to keep all parties updated, informed, and coordinated on in-season run development, harvest estimates, broodstock collection, outplanting plans, etc...

6.3. Proposed hatchery identifying marks for adult spring Chinook salmon outplanting in the Clearwater River.

Hatchery / Location	Mark	Purpose
Dworshak	left opercle v-notch	outplant
Kooskia	1) 1 right opercle v-notches	outplant / fishery recycle
	2) if recycle returnees - additional opercle v-notch	outplant / fishery recycle
Clear Creek above weir	right opercle v-notch	natural spawners
Lochsa (Powell satellite)	left opercle punch	fishery recycle / outplant
Red River/Crooked River	1) right opercle punch	fishery recycle
	2) 2 right opercle punches	outplant (early)
Rapid River	dorsal punch	Clearwater (Selway) outplants
Lolo Cr. weir	right opercle punch	Broodstock collection for NPTH
NPTH	left opercle punch	outplant / fishery recycled to Lenore Boat Launch