

2021

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

Draft Feb. 8, 2021

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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

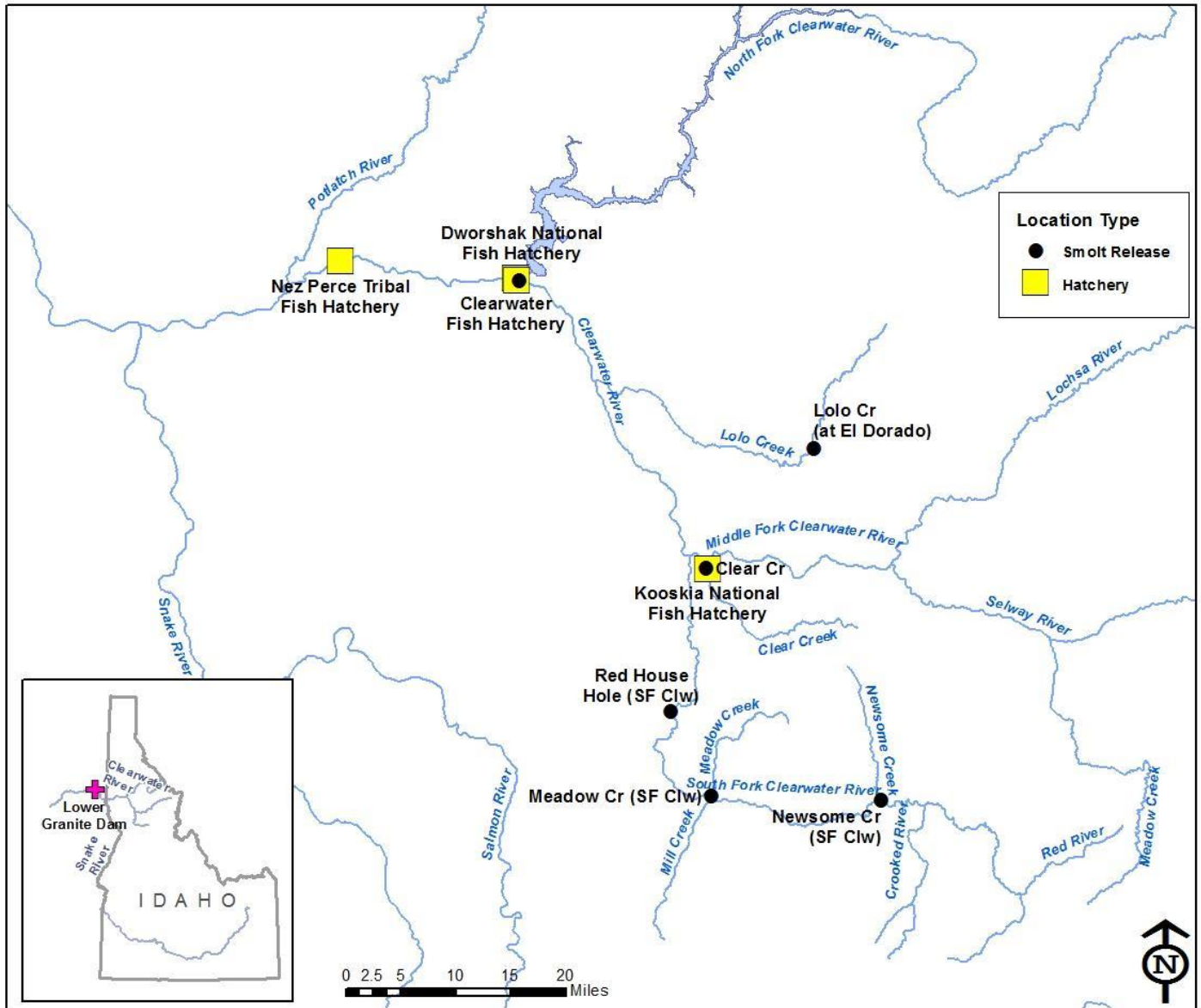


Figure 1.1. Steelhead trapping, hatchery facilities and smolt release locations. Table below gives smolt release goals by release site.

Table 1.1. BY 2020 Steelhead Release Goals for 2021.

Rearing Facility	Program	Brood Collection Site	Release Site	BY2020 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	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.

1.1. Timeline and Flowchart for Steelhead Production

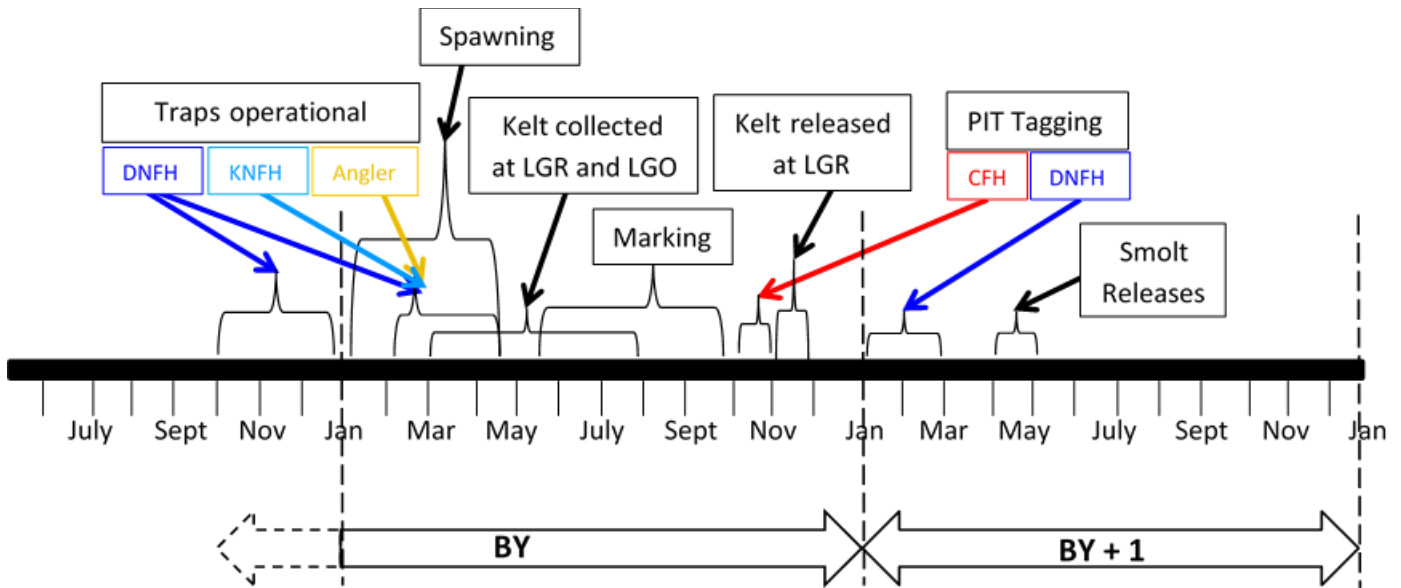


Figure 1.2. Timeline for Steelhead Production. Date ranges with black labels are shown to include all facilities’ operations. Color-coded labels identify activities that have variability in timing for the different facilities.

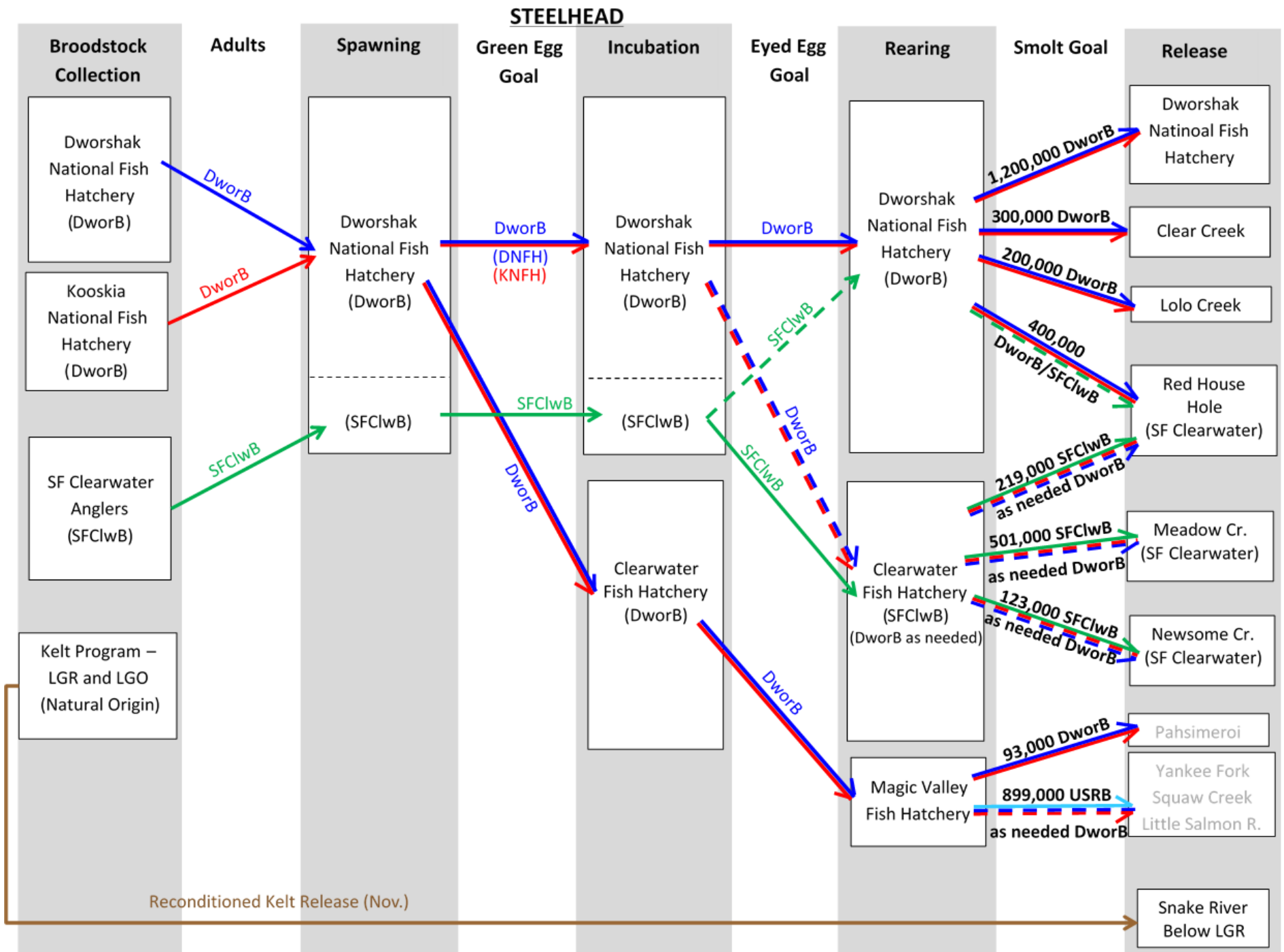


Figure 1.3. Fish and egg movements for Steelhead. Numbers represent 2021 releases.

1.2. Releases in 2021 (Smolt BY 2020)

1.2.1. Releases in 2021 (Smolt BY 2020) – Totals

Table 1.2a. Steelhead Rearing Metrics for BY 2020 fish for release in 2021

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	12/31/2020	1,313,997	0	N/A	4/12-4/13/2021	1,312,420	5.8
			Clear Creek	300,000	5.8	12/31/2020	337,402	0	N/A	4/5-4/6/2021	336,997	5.8
			Lolo Creek	200,000	5.8	12/31/2020	208,937	0	N/A	4/9-4/12/2021	208,561	5.8
	SF Clearwater	SFClwR Angler (DNFH)	Red House Hole-SF Clw	400,000	5.8	12/31/2020	430,390	0	N/A	4/6-4/9/2021	429,615	5.8
Total				2,100,000			2,290,726	0			2,287,593	
CFH	CFH	SFClwR Angler (DNFH)	Meadow Creek-SF Clw	501,000	4.5	1/5/2021	538,645	0	N/A	4/5-4/9/2021	538,045	4.5
			Red House Hole-SF Clw	219,000	4.5	1/5/2021	238,552	0	N/A	4/11-4/12/2021	238,037	4.5
			Newsome Creek-SF Clw	123,000	4.5	1/5/2021	123,160	0	N/A	4/13-4/14/2021	123,103	4.5
Totals				843,000			900,357	0			899,185	
Grand Total				2,943,000			3,191,083	0			3,186,778	

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.

Table 1.2b. BY 2020 Steelhead Inventory to Date by Mark Type for release in 2021.

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 ²					
						No CWT	CWT	CWT	No CWT		CSS	LSRCP	ACOE	USFWS	NPT	SMP
DNFH	NF Clearwater	DNFH (Trad. Spawned)	DNFH	12/31/2020	1,313,997	1,215,479	98,518	0	0	20,061	7,200	0	12,000	0	0	1,500
			Clear Creek	12/31/2020	337,402	297,597	39,805	0	0	5,190	1,840	0	3,080	0	0	0
			Lolo Creek	12/31/2020	208,937	0	0	0	208,937	997	0	0	1,000	0	0	0
	SF Clearwater	SFClwR Angler (DNFH)	Red House Hole-SF Clw	12/31/2020	430,390	391,196	39,194	0	0	6,596	2,360	0	3,920	0	0	0
Total					2,290,726	1,904,272	177,517	0	208,937	32,844	11,400	-	20,000	-	-	1,500
CFH	CFH	SFClwR Angler (DNFH)	Meadow Creek-SF Clw	1/5/2021	538,645	319,315		219,330		10,799	3,200	7,600	0	0	0	0
			Red House Hole-SF Clw	1/5/2021	238,552	238,552				4,700	1,400	3,300	0	0	0	0
			Newsome Creek-SF Clw	1/5/2021	123,160			119,484	3,676	5,995	800	1,800	0	0	3,400	0
Totals					900,357	557,867	0	338,814	3,676	21,494	5,400	12,700	-	-	3,400	-
Grand Total					3,191,083	2,462,139	177,517	338,814	212,613	54,338	16,800	12,700	20,000	-	3,400	1,500

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

² 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 2021 (Smolt BY 2020) - 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.

Release Location	Plan for 2021		Changes/Conditions that Occurred 2020-Early 2021		
	Release Target Smolt BY20	Transport/Release Smolt BY20	Fish Feeding BY20	Fish/Egg Health BY20	Marking BY20
<i>Dworshak National Fish Hatchery (SOP Section 1.2)</i>					
Dworshak National Fish Hatchery (DworB)	NC	NC	NC	Florfenicol treatment for BCWD. KMnO4 treatment for BGD (Chloramine-T wasn't available).	NC
Clear Creek (DworB)	NC	NC	NC	NC	NC
Red House, SF Clearwater (SFClw/DworB)	NC	NC	NC	NC	NC
Lolo Creek (DworB)	NC	NC	NC	NC	NC
<i>Clearwater Fish Hatchery (SOP Section 1.3)</i>					
Meadow Creek SF Clearwater (SFClwB/DworB)	NC	NC	NC	Set out all lots w/i 5 days	NC
Red House Hole SF Clearwater (SFClwB/DworB)	NC	NC	NC	Set out all lots w/i 5 days	NC
Newsome Creek SF Clearwater (SFClwB/DworB)	NC	NC	NC	Set out all lots w/i 5 days	3781 UNC/NO CWT, 3,400 PIT tags added for the velocity barrier study.

1.3. Trap Operations and Production Planning for 2021 (Smolt BY 2021)

BY 2021 Steelhead smolt production goals for release in 2022.

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 2021 (Smolt BY 2021) – TOTALS

Table 1.3a. BY 2021 - 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		MVH- Upper Salmon River ¹		Grand Totals				
No.	Week of	Fecundity	DWORK		SFCWR		DNFH Green Eggs Projections Combined	SFCWR ²		DWORK		Females ² Kill Sp	Green Eggs Projections			
			Females Kill Sp	Green Eggs Projections	Females Kill Sp	Green Eggs Projections		Females Kill Sp	Green Eggs Projections	Females Kill Sp	Green Eggs Projections					
1 E	Jan 10 - Jan 16	6,855	42	287,910			0	287,910			0			42	287,910	Actual Spawmed
2 E	Jan 24 - Jan 30	6,855	64	438,720			0	438,720			0			64	438,720	
3	Feb 7 - Feb 13	6,855	51	349,605			0	349,605			0			51	349,605	
4	Feb 21 - Feb 27	6,855	51	349,605			0	349,605	TBD					51	349,605	
5	Feb 28 - Mar 6	6,855	50	342,750			0	342,750	TBD					50	342,750	
6	Mar 7 - Mar 13	6,855		0			0	0	TBD					0	0	
7	Mar 14 - Mar 20	6,855	21	143,955	30	205,650	349,605	349,605	TBD					51	349,605	for Redhouse Smolt Release
8	Mar 21 - Mar 27	6,855		0	59	404,445	404,445	404,445	TBD					59	404,445	for Redhouse Smolt Release
9	Mar 28 - Apr 3	6,855	43	294,765			0	294,765	TBD					43	294,765	
10	Apr 4 - Apr 10	6,855		0			0	0	TBD					0	0	
11	Apr 11 - Apr 17	6,855	56	383,880			0	383,880			0	26	178,230	82	562,110	
Cumulative			378	2,591,190	89	610,095	3,201,285	3,201,285	0	0	26	178,230	493	3,379,515		

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

² Total number of Females to be spawmed at CFH is estimated to be 192. These 192 fish are not included in the Grand and Cumulative totals.

1.3.2. Trap Operations and Production Planning for 2021 (Smolt 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”.

Rearing Location	Plan for 2021 (BY 2021)				
	Adult Fish Health	Trap Ops	Production target changes	Spawning protocol changes	Disposition of adults
<i>Dworshak/Kooskia National Fish Hatchery Ladder/Trap (Fall 2020-Spring 2021)(SOP Section 1.2)</i>					
Dworshak National Fish Hatchery (DworB)	Ovaplant-L (sGnRH α) injected into 80 males at a targeted dosage of 12ug/Kg. To speed the maturation of males needed for early spawn takes.	NC	Provide 1,000 eyed eggs to USGS for IHNV studies if steelhead program supported by DNFH is achieved, TBD this spring	Previously determined Covid-19 modifications to staffing and room layout. Masks and temperature check are required There will be no volunteers.	NC
Kooskia National Fish Hatchery (DworkB)	NC	NC	NC	NC	NC
Clearwater Fish Hatchery (DworB)	NC	NC	NC	Milt motility checks, green eggs transferred to CFH, heated incubation water	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)		Continue Lower Granite Dam and Little Goose Dam collections- No air spawning is planned for 2021			

Rearing Location	Plan for 2021 (BY 2021)				
	Adult Fish Health	Trap Ops	Production target changes	Spawning protocol changes	Disposition of adults
Nez Perce Tribal Hatchery (Natural/Ad intact B)		Continue Lower Granite Dam and Little Goose Dam collections- No air spawning is planned for 2021			
<i>SF Clearwater Anglers (SOP Section 1.3)</i>					
Dworshak National Fish Hatchery (SFClWB)	NC	NC	NC	TBD	NC
Clearwater Fish Hatchery (SFClWB)	NC	NC	NC	TBD, milt motility checks, rearing at CFH and heated incubation water	NC

1.4. Marking and Rearing Plan for 2021 (Smolt BY 2021)

BY 2021 Steelhead smolt production goals for release in 2022.

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	SFCIWR Angler (DNFH)	Red House Hole - SF Clw	400,000
Total				2,100,000
CFH/DNFH	CFH	SFCIWR 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 2021 (Smolt BY 2021) – TOTALS

Table 1.4a. Steelhead Projected marking for BY 2021 Production for release in 2022.

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			20,100	8,700				12,000		1,500
			Clear Creek	300,000	280,000	20,000			5,200	1,900				3,000		
			Lolo Creek	200,000	0	0		200,000	1,000	0				1,000		
	SF Clearwater	SFCIWR Angler (DNFH)	Red House Hole - SF Clw	400,000	360,000	40,000			6,600	2,300				4,000		
Total				2,100,000	1,720,000	180,000	0	200,000	32,900	12,900	0	0	0	20,000	0	1,500
CFH/DNFH	CFH	SFCIWR 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	0	333,000	0	31,400	5,400	12,700	13,300	0	0	0	0
Grand Totals				2,943,000	2,230,000	180,000	333,000	200,000	64,300	18,300	12,700	13,300	0	20,000	0	1,500

1.4.2. Marking and Rearing Plan for 2021 (Smolt 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** - 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 2021 (BY 2021)			
	Juvenile Fish Health	Fish Feeding	Rearing Conditions	Marking
<i>Dworshak National Fish Hatchery (SOP Section 1.2)</i>				
Dworshak NFH (DworB)	NC	Bio Pro II will be utilized at the #2 crumb feed size. Once outside feed orders will have extra vitamins throughout the production cycle.	NC	NC
Clear Creek (DworB)	NC	Bio Pro II will be utilized at the #2 crumb feed size. Once outside feed orders will have extra vitamins throughout the production cycle.	NC	NC
Red House, SF Clearwater (SFClw/DworB)	NC	Bio Pro II will be utilized at the #2 crumb feed size. Once outside feed orders will have extra vitamins throughout the production cycle.	NC	NC
Lolo Creek (DworB)	NC	Bio Pro II will be utilized at the #2 crumb feed size. Once outside feed orders will have extra vitamins throughout the production cycle.	NC	NC
<i>Clearwater Fish Hatchery (SOP Section 1.3)</i>				
Meadow Creek SF Clearwater (SFClwB/DworB)	NC	NC	NC	NC

Release Location	Plan for 2021 (BY 2021)			
	Juvenile Fish Health	Fish Feeding	Rearing Conditions	Marking
Red House Hole SF Clearwater (SFClwB/DworB)	NC	NC	NC	NC
Newsome Creek SF Clearwater (SFClwB/DworB)	NC	NC	NC	PIT tags increased by 13,300 for velocity barrier study

2. Spring/Summer Chinook

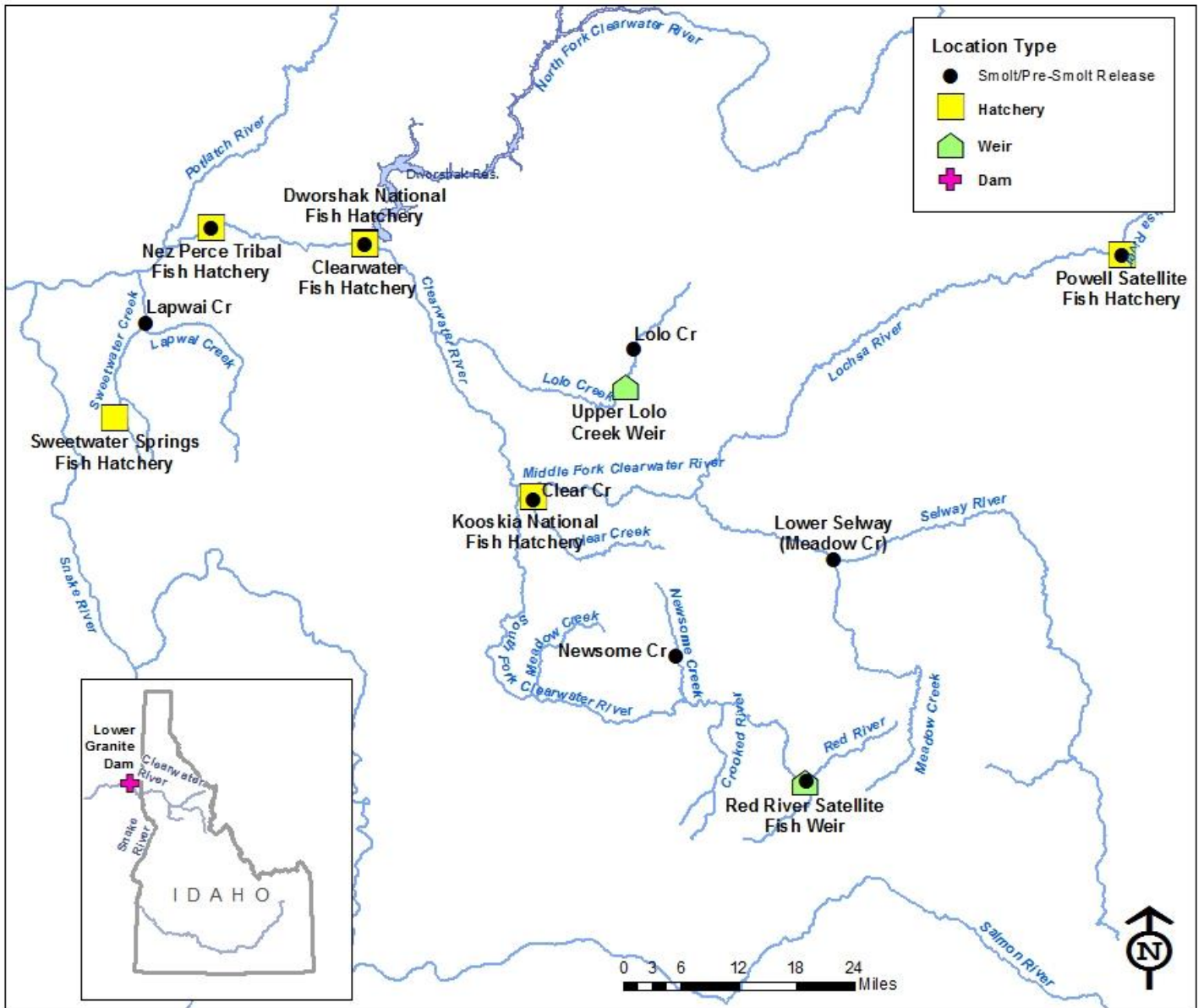


Figure 2.1. Locations of Spring/Summer Chinook Salmon hatchery facilities and smolt/pre-smolt releases. Table below gives smolt and pre-smolt release goals by release site.

Table 2.1. Spring/Summer Chinook Goals for Release in 2021

BY2019 SMOLTS

Action in 2021	Brood/Release Year	Hatchery Program	Rearing Facility	Brood Collection Site	Release Site	Smolt Release Goal	
Release	BY2019 RY2021	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
		NPTHC	NPTH	DNFH	NPTH late release	200,000	
					NPTH Early release	180,000	
		Total					380,000
		CFH-LSRCP	CFH	SFCIw/LWS/RR ^{1,2}	Red River	1,280,000	
				SFCIw	NF Clearwater-CFH (Baffle)	389,000	
					NF Clearwater-CFH (Regular)	320,000	
				LWS ²	Selway River-Lower	400,000	
			KNFH/DNFH	Clear Creek	720,000		
		Total					3,109,000
		Spring Grand Total					5,789,000
Summer							
CFH-LSRCP	CFH	Pow/SFSR	Powell Pond	640,000			
Summer Grand Total					640,000		

¹ RR represents the Rapid River brood collection site.

² LWS represents the Little White Salmon brood collection site.

BY2020 PRE-SMOLTS

Action in 2021	Brood/Release Year	Hatchery Program	Rearing Facility	Brood Collection Site	Life Stage	Release Site	Smolt Release Goal
Marking and Release	BY2020 RY2021	Spring					
		NPTHC	NPTH	NPTHC	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

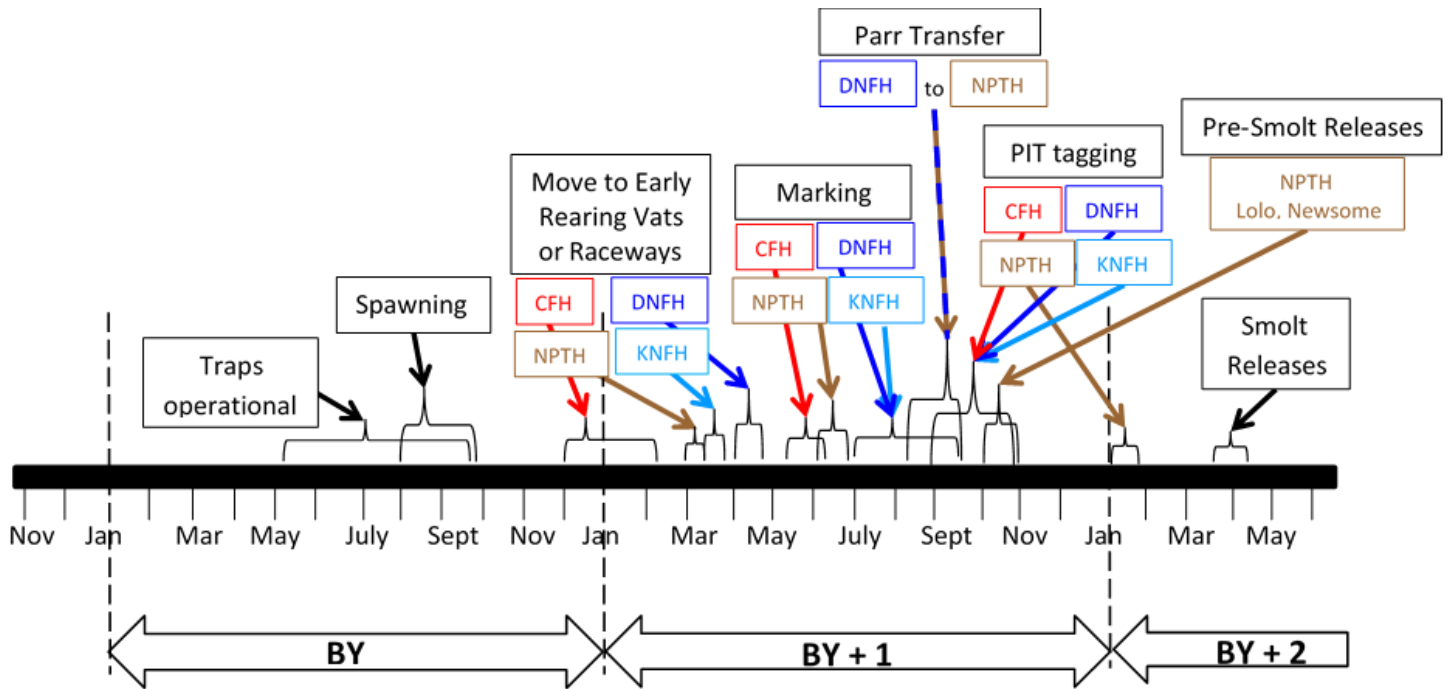


Figure 2.2. Timeline for Spring/Summer Chinook Production. Date ranges with black labels are shown to include all facilities' operations. Color-coded labels identify activities that have variability in timing for the different facilities.

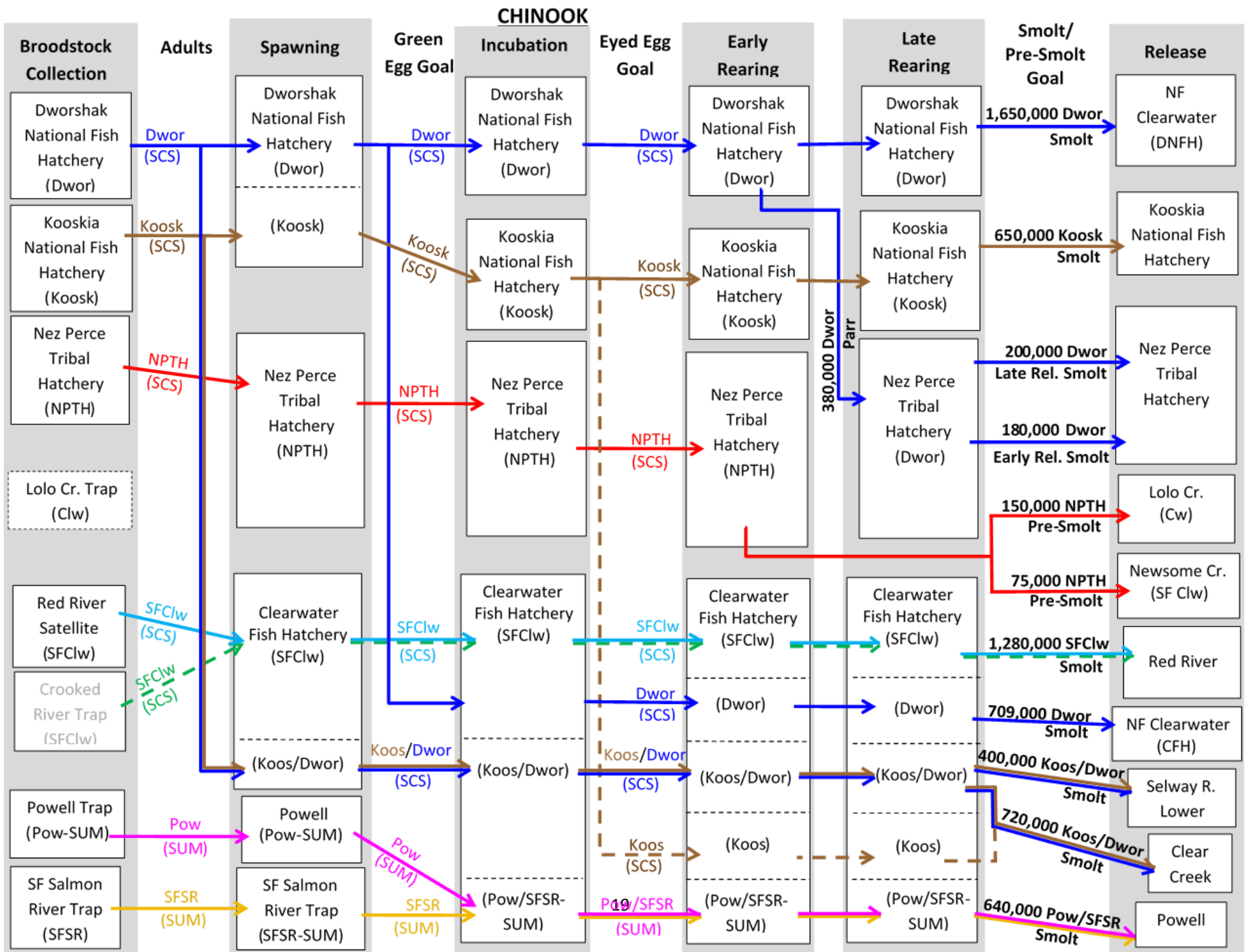


Figure 2.3. Chinook movements for Clearwater. Numbers represent 2021 releases.

2.2. Releases in 2021 (Smolt BY 2019, Pre-Smolt BY 2020)

2.2.1. Releases in 2021 (Smolt BY 2019, Pre-Smolt BY 2020) – Totals

Table 2.2a. BY2019 SMOLTS - Sp/Su Chinook Salmon inventories by life stage, smolt release goals and projected releases in 2021.

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	20.0	11/31/2020	1,003,817	3/31/2021	998,797	20.0
				NF Clearwater (DNFH)-Late Rel		20.0	11/31/2020	684,472	4/14/2021	681,049	20.0
Total					1,650,000			1,688,289		1,679,846	
KNFH-NPT	SpCS	KNFH	KNFH	Kooskia NFH	650,000	20.0	12/28/2020	636,450	4/13/2021	636,000	20.0
Total					650,000			636,450		636,000	
NPTH	SpCS	NPTH	DNFH	NPTH late release	200,000	20.0	12/31/2020	223,646	4/12/21	223,250	20.0
				NPTH Early release	180,000	20.0	12/31/2020	177,924	3/25/21	177,500	20.0
Total					380,000			401,570		400,750	
CFH-LSRCP	SpCS	CFH	SFCIw/LWS/RR ^{1,2}	Red River	1,280,000	16.0	12/17/2020	1,212,412	3/18/2021-3/29/2021	1,211,774	16.0
			SFCIw	NF Clearwater-CFH (Baffle)	389,000	16.0	12/17/2020	382,850	3/31/2021-4/1/2021	382,812	16.0
				NF Clearwater-CFH (Regular)	320,000	16.0	12/17/2020	197,587	4/14/2021	197,567	16.0
			LWS ²	Selway River-Lower	400,000	16.0	12/17/2020	395,876	3/15/2021-3/17/2021	395,836	16.0
KNFH/DNFH	Clear Creek	720,000	16.0	12/17/2020	656,768	3/30/2021, 4/16/2021	656,702	16.0			
Total					3,109,000			2,845,493		2,844,691	
Spring Grand Total					5,789,000			5,571,802		5,561,287	
Summer											
CFH-LSRCP	SuCS	CFH	Pow/SFSR	Powell Pond	640,000	16.0	12/17/2020	402,972	3/22/2021	390,883	16.0
Summer Grand Total					640,000			402,972		390,883	
Spring/Summer Grand Total					6,429,000			5,974,774		5,952,170	

¹ RR represents the Rapid River brood collection site.

² LWS represents the Little White Salmon brood collection site.

Table 2.2b. BY2019 SMOLTS - Sp/Su Chinook Salmon Inventory to Date by Mark Type for release in 2021.

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	11/31/2020	1,003,817	60,000	943,817	0	0	17,000	17,000			
				NF Clearwater (DNFH)-Late Rel	11/31/2020	684,472	60,000	624,472	0	0	25,000	25,000			
Total						1,688,289	120,000	1,568,289	0	0	42,000	42,000	0	0	
KNFH-NPT	SpCS	KNFH	KNFH	Kooskia NFH	12/28/2020	636,450	106,286	475,751		54,413	6,000			6,000	
Total						636,450	106,286	475,751	0	54,413	6,000	0	0	6,000	
NPTH	SpCS	NPTH	DNFH	NPTH late release	12/31/2020	223,646	69,622	247	136,118	17,659	1,000	0	0	0	
				NPTH Early release	12/31/2020	177,924	61,173	112,037	0	4,714	1,000	0	600	0	400
Total						401,570	130,795	112,284	136,118	22,373	2,000	0	600	0	
CFH-LSRCP	SpCS	CFH	SFCIw/LWS/RR ^{1,2}	Red River	12/17/2020	1,212,412	120,006	1,092,406	0	0	17,080	5,080	12,000	0	
			SFCIw	NF Clearwater-CFH (Baffle)	12/17/2020	382,850	382,850	0	0	0	17,105	2,505	14,600	0	
				NF Clearwater-CFH (Regular)	12/17/2020	197,587	0	197,587	0	0	2,000	0	2,000	0	
			LWS ²	Selway River-Lower	12/17/2020	395,876	120,879	138,531	91,464	45,002	17,094	5,094	12,000	0	
KNFH/DNFH	Clear Creek	12/17/2020	656,768	120,339	536,429	0	0	9,800	3,500	6,300	0				
Total						2,845,493	744,074	1,964,953	91,464	45,002	63,079	16,179	46,900	0	
Spring Grand Total						5,571,802	1,101,155	4,121,277	227,582	121,788	113,079	58,179	47,500	6,000	
Summer															
CFH-LSRCP	SuCS	CFH	Pow/SFSR	Powell Pond	12/17/2020	402,972	119,954	81,160	119,875	81,983	25,497	13,497	12,000	0	
Summer Grand Total						402,972	119,954	81,160	119,875	81,983	25,497	13,497	12,000	0	
Spring and Summer Grand Total						5,974,774	1,221,109	4,202,437	347,457	203,771	138,576	71,676	59,500	6,000	

Table 2.2c. BY2020 PRE-SMOLT - Sp/Su Chinook Salmon inventories by life stage, release goals and projected releases in 2021.

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)
Spring											
NPTH	NPTH	NPTH	Pre-Smolt	Newsome Cr (SF Clw)	12/31/2020	100,000	75,000	30.0	10/18/2021	98,500	30.0
			Pre-Smolt	Lolo Cr (SF Clw)		175,000	150,000	30.0	10/18/2021	172,375	30.0
Total						275,000	225,000			270,875	

2.2.2. Releases in 2021 (Smolt BY 2019, Pre-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, antibiotic treatments, was production culled at any point
- **Transportation/Releases-** e.g. timing, trucking issues, site access etc.

Release Location	Plan for 2021		Changes/Conditions that Occurred 2020-Early 2021		
	Release Target Smolt BY19 Pre-Smolt BY20	Transport/Release Smolt BY19 Pre-Smolt BY20	Fish Feeding Smolt BY19 Pre-Smolt BY20	Fish/Egg Health Smolt BY19 Pre-Smolt BY20	Marking Smolt BY19 Pre-Smolt BY20
<i>Dworshak National Fish Hatchery (SOP Section 2.2)</i>					
NF Clearwater-DNFH (Dwor)	NC	B-bank will be released on 3/31. A bank will be delayed 14 days to determine if arrival time to LGR increases survival. 1,000 BY20 unfed-fry will be transferred from DNFH to USGS for continued IHNV studies prior to ponding of this brood year in 2021.	NC	BY19: 6/20 Phoma detected. Treated with Chloramine-T for BGD	NC
<i>Kooskia National Fish Hatchery (SOP Sections 2.3)</i>					
Kooskia National Fish Hatchery (Koosk)	BY19 low fecundity numbers at spawning produced a short egg count	NC	NC	BY20 eggs will be long and we will release excess fry 100,000 in the spring into Clear Creek at the second bridge.	NC
<i>Nez Perce Tribal Hatchery (SOP Section 2.4)</i>					
Nez Perce Tribal Hatchery (Dwor Smolt transferred to NPTH from DNFH)	NC	Will be released On-Station as an Early/Late Release Study	NC	NC	NC

Release Location	Plan for 2021		Changes/Conditions that Occurred 2020-Early 2021		
	Release Target Smolt BY19 Pre-Smolt BY20	Transport/Release Smolt BY19 Pre-Smolt BY20	Fish Feeding Smolt BY19 Pre-Smolt BY20	Fish/Egg Health Smolt BY19 Pre-Smolt BY20	Marking Smolt BY19 Pre-Smolt BY20
Lolo Creek (Dwor-Smolt transferred to NPTH from DNFH)	NC	Will be released On-Station as an Early/Late Release Study	NC	NC	Group marked at NPTH by NPT
Lolo Creek (NPTH-Pre-Smolt)	NC	NC	NC	NC	NC
Newsome Creek (NPTH-Pre-Smolt)	NC	NC	NC	NC	NC
Lolo Creek (NPTH-Smolt)	NC	NC	NC	NC	NC
<i>Clearwater Fish Hatchery (SOP Sections 2.5)</i>					
Red River (SFClw/LWS/RR)	NC	NC	NC	NC	NC
NF Clearwater-CFH (Baffle) (SFClw)	NC	NC	NC	NC	NC
NF Clearwater-CFH (Regular) (SFClw)	197K scheduled for Apr 14 direct release	Release in Mid-April to evaluate arrival timing to LGD. This group will be the “late” release.	NC	NC	Approximately 2,000 fish will be PIT tagged to assess arrival timing at LGR as part of the late release.
Selway River-Lower (LWS)	NC	NC	NC	NC	NC
Clear Creek (Dwor/Koos)	NC	NC	NC	NC	NC
Powell (Pow/SFSR Summer)	NC	NC	NC	NC	NC

2.3. Trap Operations and Production Planning for 2021 (Smolt and Pre-Smolt BY 2021)

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

Action in 2021	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	BY2021 RY2023	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	
		NPTHC	DNFH	DNFH	Trans. to NPTH-NPTH	200,000	200,000		
					Trans. to NPTH-Lapwai Creek	0	200,000		
			NPTHC	NPTHC	Lolo Creek	200,000	200,000		
		Total					400,000	600,000	
		CFH-LSRCP		SFClw	CFH	Red River	1,100,000	1,280,000	
				DNFH		NF Clearwater-CFH (Baffle)	0	389,000	
				DNFH		NF Clearwater-CFH (Regular)	0	320,000	
				DNFH		Selway River-Lower	400,000	400,000	
				KNFH/DNFH		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.

BY2021 PRE-SMOLT - Spring/Summer Chinook Goals for Release in 2023

Action in 2020	Brood/Release Year	Hatchery Program	Life Stage	Brood Collection Site	Rearing Facility	Release Site	Smolt Release Goal
Trapping	BY2021 RY2022	Spring					
		NPTHC	Pre-Smolt	NPTHC	NPTHC	Newsome Cr (SF Clw)	75,000
			Pre-Smolt	NPTHC		Lolo Cr (Clw)	150,000
		Spring Grand Total					

2.3.1. Trap Operations and Production Planning for 2021 (Smolt and Pre-Smolt BY 2021) – TOTALS

FULL PRODUCTION

Table 2.3a. 2021 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
3-May						
10-May						
17-May			3			
24-May		15	7			
31-May		42	10			
7-Jun		468	47		9	
14-Jun		692	73		75	
21-Jun		778	123		159	22
28-Jun		807	160		319	58
5-Jul	178	980	193		515	148
12-Jul	512	1,065	243		637	188
19-Jul	957	1,109	266		684	206
26-Jul	1,402	1,146	296		693	210
2-Aug	1,825		313		712	210
9-Aug	2,225		313		721	215
16-Aug			333		750	224
23-Aug			333		843	228
30-Aug			333		937	282
6-Sep					937	393
13-Sep						447
20-Sep						
27-Sep						
Total	2,225	1,146	333	TBD	937	447
2021 LGR Forecast ¹	1,491	828	0	0	1,383	358

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 2021 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 - LSRCP	DNFH	DNFH	NF Clearwater (DNFH)	2,096,590	3,867	543	543	3.8%	1,129	6/1-9/1	1,260
Total				2,096,590		543	543		1,129		1,260
KNFH-NPT	KNFH	KNFH	Kooskia NFH	993,040	3,661	272	272	12.1%	619	5/18-8/19	121
Total				993,040		272	272		619		121
NPTHC	DNFH	DNFH	Trans. to NPTH-NPTH	256,725	3,867	67	67	3.8%	140		0
			Trans. to NPTH-Lapwai Creek	256,725	3,867	67	67	3.8%	140		0
	NPTHC	NPTHC	Lolo Creek	280,303	3,801	74	74	5.0%	156	5/10-8/30	0
Total				793,754		208	208		436		0
CFH-LSRCP	SFClw	CFH	Red River	1,510,517	3,400	445	445	5.0%	937	6/7-9/6	1,383
	DNFH		NF Clearwater-CFH (Baffle)	459,056	3,400	136	136	5.0%	287	7/5-8/9	231
	DNFH		NF Clearwater-CFH (Regular)	377,629	3,400	112	112	5.0%	236	7/5-8/9	
	DNFH		Selway River-Lower	472,037	3,400	139	139	5.0%	293	7/5-8/9	936
	KNFH/DNFH		Clear Creek	849,666	3,400	250	250	5.0%	527	5/24-7/26	707
Total				3,668,904		1,082	1,082		2,280		3,257
Spring Smolt Grand Total				7,552,288		2,105	2,105		4,464		4,638
Summer											
CFH-LSRCP	Pow/SFSR	CFH	Powell Pond (SUM)	781,006	3,700	212	212	5.0%	447	6/21-9/13	358
Summer Smolt Grand Total				781,006		212	212		447		358

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

FULL PRODUCTION

Table 2.3c. BY 2021 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	3,801	28	28	5.0%	59	5/10-8/30	0
	Pre-Smolt	NPTHC	NPTHC	Lolo Cr (Clw)	210,227	3,801	56	56	5.0%	118	5/10-8/30	0
Total					315,341		84	84		177		0
Spring Pre-smolt Grand Total					315,341		84	84		177		0

FULL PRODUCTION

Table 2.3d. BY2021 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	1,064	1,064	2,225	2,427
KNFH	522	522	1,146	828
SFCIw	445	445	937	1,383
NPTH	158	158	333	0
Summer				
Pow/SFSR	212	212	447	358

BASE US v OR PRODUCTION

Table 2.3e. 2021 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	
3-May						
10-May						
17-May			3			
24-May		14	7			
31-May		40	10			
7-Jun		443	47			8
14-Jun		655	73			64
21-Jun		737	123			137
28-Jun		764	160			274
5-Jul	109	928	193			443
12-Jul	312	1,008	243			547
19-Jul	584	1,050	266			588
26-Jul	855	1,085	296			596
2-Aug	1,113		313			612
9-Aug	1,357		313			620
16-Aug			333			644
23-Aug			333			725
30-Aug			333			805
6-Sep						805
13-Sep						447
20-Sep						
27-Sep						
Total	1,357	1,085	333	TBD	805	447
2021 LGR Forecast 1	1,491	828	0	0	1,383	358

Date	Proportion of brood acquisition over season				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 2021 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)	1,715,392	3,867	444	444	3.8%	924	6/1-9/1	1,260
Total				1,715,392		444	444		924		1,260
KNFH-NPT	KNFH	KNFH	Kooskia NFH	993,376	3,661	272	272	12.1%	619	5/15-8/16	121
Total				993,376		272	272		619		121
NPTHC	DNFH	DNFH	Trans. to NPTH-NPTH	256,725	3,867	67	67	3.8%	140		0
			Trans. to NPTH-Lapwai Creek	0	3,867	0	0	3.8%	0		0
	NPTHC	NPTHC	Lolo Creek	280,303	3,801	74	74	5.0%	156	5/10-8/30	0
Total				537,029		141	141		296		0
CFH-LSRCP	SFClw	CFH	Red River	1,298,101	3,400	382	382	5.0%	805	6/7-9/6	1,383
	DNFH		NF Clearwater-CFH (Baffle)	0	3,400	0	0	5.0%	0	7/5-8/9	231
	DNFH		NF Clearwater-CFH (Regular)	0	3,400	0	0	5.0%	0	7/5-8/9	
	DNFH		Selway River-Lower	472,037	3,400	139	139	5.0%	293	7/5-8/9	936
	KNFH/DNFH		Clear Creek	749,358	3,400	221	221	5.0%	466	5/24-7/26	707
Total				2,519,495		742	742		1,564		3,257
Spring Grand Total				5,765,292		1,599	1599		3,403		4,638
Summer											
CFH-LSRCP	Pow/SFSR	CFH	Powell Pond 1	781,006	3,700	212	212	5.0%	447	6/21-9/13	358
Summer Grand Total				781,006		212	212		447		358

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 2021 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	3,801	28	28	5.0%	59	5/10-8/30	0
	Pre-Smolt	NPTHC		Lolo Cr (Clw)	210,227	3,801	56	56	5.0%	118	5/10-8/30	0
Total					315,341		84	84		177		0
Spring Grand Total					315,341		84	84		177		0

BASE US v OR PRODUCTION

Table 2.3h. BY 2021 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	650	650	1,357	2,427
KNFH	493	493	1,085	828
SFCIw	382	382	805	1,383
NPTHC	158	158	333	0
<i>Summer</i>				
Pow/SFSR	212	212	447	358

2.3.2. Trap Operations and Production Planning for 2021 (Smolts and 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”.

Juvenile Release Location	Plan for 2021 (BY 2021)				
	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	300,000 reduction to accommodate Selway being added to Dwor US V OR production; 1,000 eyed eggs to USGS for IHN studies if Clearwater Basin US v OR programs supported by DNFH are met, or from high BKD cull eggs, TBD at eye up	Covid-19 spawning protocol will include required masks and temp check, elimination of volunteers, floor layout changes and staffing changes.	NC
Selway River Upper (Dwor-Parr)			This program has been changed to a smolt program and will be addressed as part of the NF Clearwater production group.		
Nez Perce Tribal Hatchery (Dwor-Smolt)	NC	NC	NC	NC	NC
Lolo (Dwor-Smolt)	NC	NC	NC	NC	NC
NF Clearwater-CFH (Baffle) (Dwor)					

Juvenile Release Location	Plan for 2021 (BY 2021)				
	Adult Fish Health	Trap Ops	Production target changes	Spawning protocol changes	Disposition of adults
NF Clearwater-CFH (Regular) (Dwor)					
Selway River Lower (Dwor)					
Clear Creek (Dwor)					
<i>Kooskia National Fish Hatchery Trap (SOP Sections 2.3)</i>					
Kooskia National Fish Hatchery (Koos)	NC	NC	NC	Covid-19 spawning protocol will include required masks and temp check, elimination of volunteers, floor layout changes and staffing changes.	Hatchery adults at the end of the spawning season will be loaded and transported back to Clear Creek and released at the second bridge to spawn naturally.
Clear Creek (Koos)	NC	NC	NC	Same as above	Same as above
<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 2021 (Smolts BY 2020, Pre-Smolt BY2020)

BY2020 SMOLTS - Spring/Summer Chinook Goals for Release in 2022

Action in 2021	Brood/Release Year	Hatchery Program	Brood Collection Site	Rearing Facility	Release Site	Smolt Release Goal	
Early Rearing and Marking	BY2020 RY2022	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 from DNFH-Onstation early		100,000
			DNFH		Trans. to NPTH from DNFH-Onstation late		100,000
			NPTH	NPTH	Lolo Creek		200,000
			DNFH	NPTH	Lapwai Creek		200,000
		Total					600,000
		CFH-LSRCP	SFCIw	CFH	Red River		1,280,000
			DNFH/RR ¹		NF Clearwater-CFH (Baffle)		389,000
			DNFH/RR ¹		NF Clearwater-CFH (Regular)		320,000
			DNFH/RR ¹		Selway River-Lower		400,000
			KNFH/DNFH/RR ¹		Clear Creek		720,000
		Total					3,109,000
		Spring Grand Total					6,009,000
Summer							
CFH-LSRCP	Pow	CFH	Powell Pond (SUM)		640,000		
Summer Grand Total					640,000		

¹ RR represents the Rapid River brood collection site

BY2020 PRE-SMOLT - Spring Chinook Goals for Release in 2021

Action in 2021	Brood/Release Year	Hatchery Program	Life Stage	Brood Collection Site	Rearing Facility	Release Site	Smolt Release Goal
Early Rearing, Marking and Release	BY2020 RY2021	Spring					
		NPTH	Pre-Smolt	NPTH	NPTH	Newsome Cr (SF Clw)	75,000
			Pre-Smolt			Lolo Cr (SF Clw)	150,000
		Total					225,000
		Spring Grand Total					225,000

2.4.1. Early Rearing and Marking Plan for 2021 (Smolts BY 2020, Pre-Smolt BY2020) – TOTALS

Table 2.4a. BY 2020 Sp/Su Chinook Salmon - Early Rearing Inventory for smolt releases in 2022 (including anticipated set out)

Hatchery Program	Run	Brood Collection Site	Rearing Facility	Release Site	Release Goals for 2021	Size (FPP)	Inventory to Date		
							Date	Goal ²	Actual
Spring									
DNFH	SpCS	DNFH	DNFH	NF Clearwater (DNFH)	1,650,000	20.0	1/6/21	1,858,045	2,403,692
Totals					1,650,000			1,858,045	2,403,692
KNFH	SpCS	KNFH	KNFH	Kooskia NFH	650,000	20.0	1/11/2021	650,000	910,890
Totals					650,000			650,000	910,890
NPTH	SpCS	DNFH	NPTH	Trans. to NPTH from DNFH-Onstation early	100,000	20.0	1/6/2021	227,516	227,608
		DNFH		Trans. to NPTH from DNFH-Onstation late	100,000	20.0	1/6/2021	0	205,089
		NPTH		Lolo Creek	200,000	20.0	12/31/2020	200,000	210,000
		DNFH		Lapwai Creek	200,000	20.0	1/6/2021	204,764	205,089
Totals					600,000			632,280	847,786
CFH	SpCS	SFClw	CFH	Red River	1,280,000	16.0	12/17/2020	1,333,333	1,277,519
		DNFH/RR ¹		NF Clearwater-CFH (Baffle)	389,000	16.0	12/17/2020	405,208	380,126
		DNFH/RR ¹		NF Clearwater-CFH (Regular)	320,000	16.0	12/17/2020	333,333	329,969
		DNFH/RR ¹		Selway River-Lower	400,000	16.0	12/17/2020	416,667	440,643
		KNFH/DNFH/RR ¹		Clear Creek	720,000	16.0	12/17/2020	750,000	1,094,685
Totals					3,109,000			3,238,541	3,522,942
Spring Grand Total					6,009,000			6,378,866	7,685,310
Summer									
CFH	SuCS	Pow	CFH	Powell Pond (SUM)	640,000	16.0	12/17/2020	666,667	276,300
Totals					640,000			666,667	276,300
Summer Grand Total					640,000			666,667	276,300

¹ RR represents the Rapid River brood collection site

² Estimated fish needed in vats to reach eventual smolt release goals, based on brood calculator exclusive of the buffer.

Table 2.4b. BY 2020 SMOLTS - Sp/Su Chinook Projected Marking of BY 2020 juveniles to be released in 2022.

Hatchery Program	Run	Brood Collection Site	Rearing Facility	Release Site	Release Goals for 2022	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
<i>Spring</i>																	
DNFH	SpCS	DNFH	DNFH	NF Clearwater (DNFH)	1,650,000	9/7-9/17	1/6/2021	2,403,692	2,283,692	120,000	0	0	42,000	42,000			
Totals					1,650,000			2,403,692	2,283,692	120,000	0	0	42,000	42,000	0	0	
KFH	SpCS	KNFH	KNFH	Kooskia NFH	650,000		1/11/2021	910,890	495,000	100,000		55,000	8,000		8,000		
Totals					650,000			910,890	495,000	100,000	0	55,000	8,000	0	0	8,000	
NPTH	SpCS	DNFH	NPTH	Trans. to NPTH from DNFH-Onstation early	100,000	8/16-8/20	1/6/2021	227,608	70,000	30,000	0	0	1,600	0	0	1,600	
				Trans. to NPTH from DNFH-Onstation late	100,000	8/16-8/20	1/6/2021	205,089	70,000	30,000	0	0	1,600	0	0	1,600	
				Lolo Creek	200,000	6/14-6/18	12/31/2020	210,000	0	0	200,000	0	2,000	0	0	2,000	
				Lapwai Creek	200,000		1/6/2021	205,089	140,000	60,000		600		600			
Totals					600,000			847,786	280,000	120,000	200,000	0	5,800	0	600	0	5,200
CFH	SpCS	SFCIw	CFH	Red River	1,280,000	4/26-4/30	12/17/2020	1,277,519	1,157,519	120,000	0	0	17,100	5,100	12,000	0	0
				DNFH/RR ¹	389,000	5/3-5/7	12/17/2020	380,126	320,126	60,000	0	0	8,523	1,223	7,300	0	0
				DNFH/RR ¹	320,000	5/3-5/7	12/17/2020	329,969	269,969	60,000	0	0	8,523	1,223	7,300	0	0
				DNFH/RR ¹	400,000	5/3-5/7	12/17/2020	440,643	120,697	120,000	135,000	64,946	17,100	5,100	12,000	0	0
				KNFH/DNFH/RR ¹	720,000	5/17-5/26	12/17/2020	1,094,685	974,685	120,000	0	0	9,800	3,500	6,300	0	0
Totals					3,109,000			3,522,942	2,842,996	480,000	135,000	64,946	61,046	16,146	44,900	0	0
Spring Grand Total					6,009,000			7,685,310	5,901,688	820,000	335,000	119,946	116,846	58,146	45,500	8,000	5,200
<i>Summer</i>																	
CFH	SuCS	Pow	CFH	Powell Pond (SUM)	640,000	5/17-5/26	12/17/2020	276,300	0	0	120,000	156,300	25,500	13,500	12,000	0	0
Totals					640,000			276,300	0	0	120,000	156,300	25,500	13,500	12,000	0	0
Summer Grand Totals					640,000			276,300	0	0	120,000	156,300	25,500	13,500	12,000	0	0
Spring/Summer Grand Total					6,649,000			7,961,610	5,901,688	820,000	455,000	276,246	142,346	71,646	57,500	8,000	5,200

¹ RR represents the Rapid River brood collection site

Table 2.4c. BY2020 PRE-SMOLT - Sp Chinook Salmon Inventory to Date by Projected Mark Type for release in 2021.

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)	12/31/2020	100,000	0	0	85,000	15,000	3,000	0	0	0	3,000
	Pre-Smolt			Lolo Cr (SF Clw)		175,000	0	0	160,000	15,000	6,000	0	0	0	6,000
Total						275,000	0	0	245,000	30,000	9,000	0	0	0	9,000
Spring Grand Total						275,000	0	0	245,000	30,000	9,000	0	0	0	9,000

2.4.2. Early Rearing and Marking Plan for 2021 (Smolts BY 2019, Pre-Smolt BY2020) – 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 2021 (Smolts BY 2020, Parr/Pre-Smolt BY2020)					
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)	NC	NC	Raceway loading has changed to 55,000 fish/rcwy. Flow will be adjusted to accommodate extra production. Extra production will be reared in 5 Burrough’s Ponds.	Extra production will be ad-clipped and PBT distinct. CWT distribution plan will be altered to incorporate Burrough’s Ponds	BY20 release will be approximately 500,000 smolts more than formal release goals. Half the production will be released 14 days later in continuation of survival evaluation.
Selway River Upper (Dwor-Parr)	This program has been changed to a smolt program and will be addressed as part of the NF Clearwater production group.				
Nez Perce Tribal Hatchery (Dwor)	NC	NC	NC	NC	NC
Lolo Creek (Dwor)	NC	NC	NC	NC	NC

Plan for 2021 (Smolts BY 2020, Parr/Pre-Smolt BY2020)					
Release Location	Juvenile Fish Health	Fish Feeding	Rearing Conditions	Marking	Meets Release Target
<i>Kooskia National Fish Hatchery (SOP Sections 2.3)</i>					
Kooskia National Fish Hatchery (Koos)	NC	NC	NC	NC	BY20 has extra production which will be released as parr in spring 2021. Number to be determined based on survival.
<i>Nez Perce Tribal Hatchery (SOP Section 2.4)</i>					
Lolo Creek (NPTH-Pre-Smolt)	NC	NC	NC	NC	NC
Newsome Creek (NPTH-Pre-Smolt)	NC	NC	NC	NC	NC
Lolo Creek (NPTH-Smolt)	NC	NC	NC	TBD	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	Projected smolt release exceeds production target to offset shortage for the Powell release

Plan for 2021 (Smolts BY 2020, Parr/Pre-Smolt BY2020)					
Release Location	Juvenile Fish Health	Fish Feeding	Rearing Conditions	Marking	Meets Release Target
Powell (Pow/SFSR-Summer)	NC	NC	NC	Due to low projected smolt number (~265k), the preference is to leave all fish unclipped with 120k CWT. This will help to ensure brood collection in 2024. In previous years, production has been split ~50:50 (clipped and unclipped)	Due to brood shortage, projected smolt release will be ~375k below production target

3. Coho Salmon

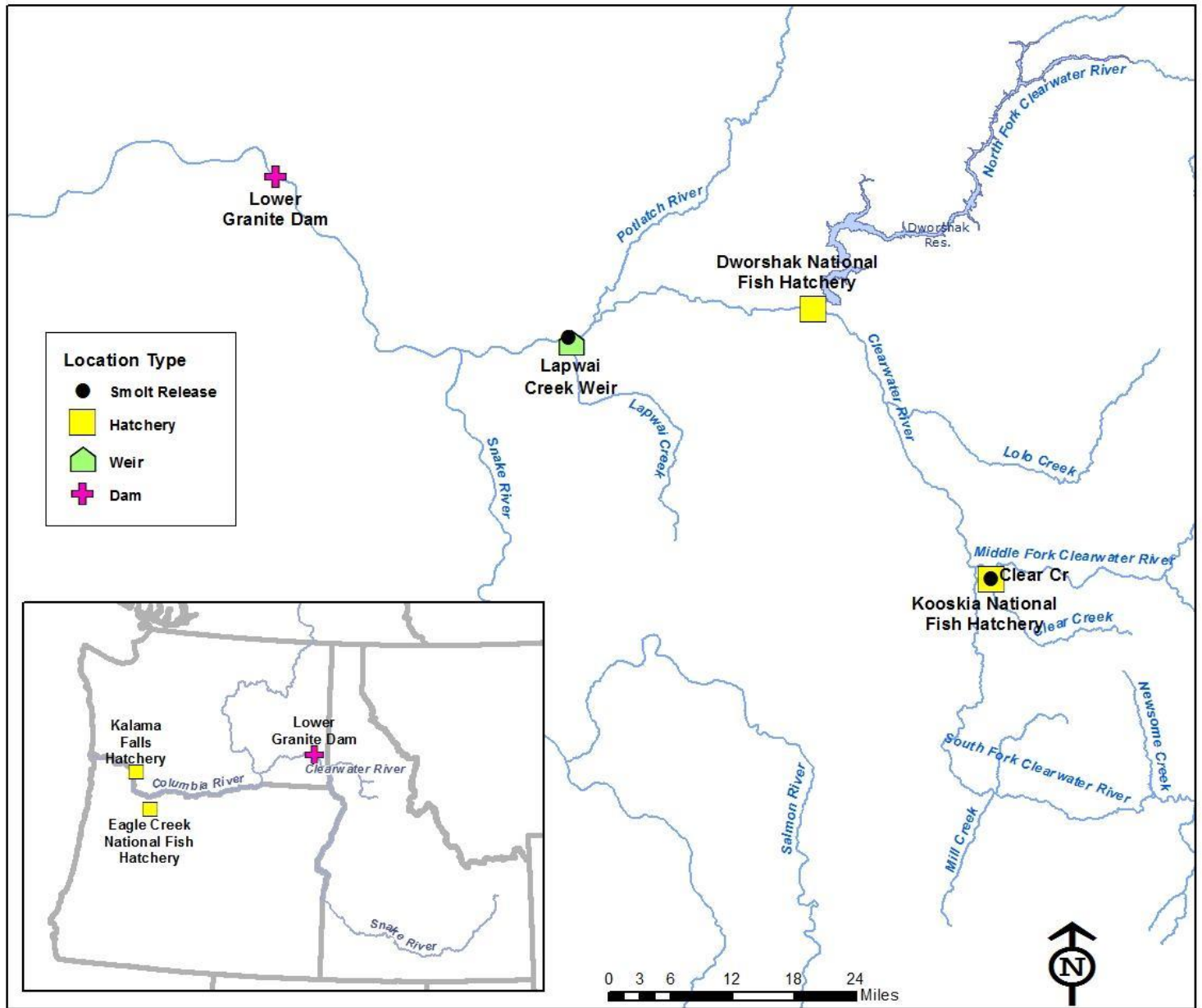


Figure 3.1. Coho trapping, hatchery facilities and smolt release locations.

Table 3.1. BY2019 SMOLTS - Coho Release Goals for 2021

Hatchery Program	Species	Brood Collection Site	Rearing Facility	Release Site	2021 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

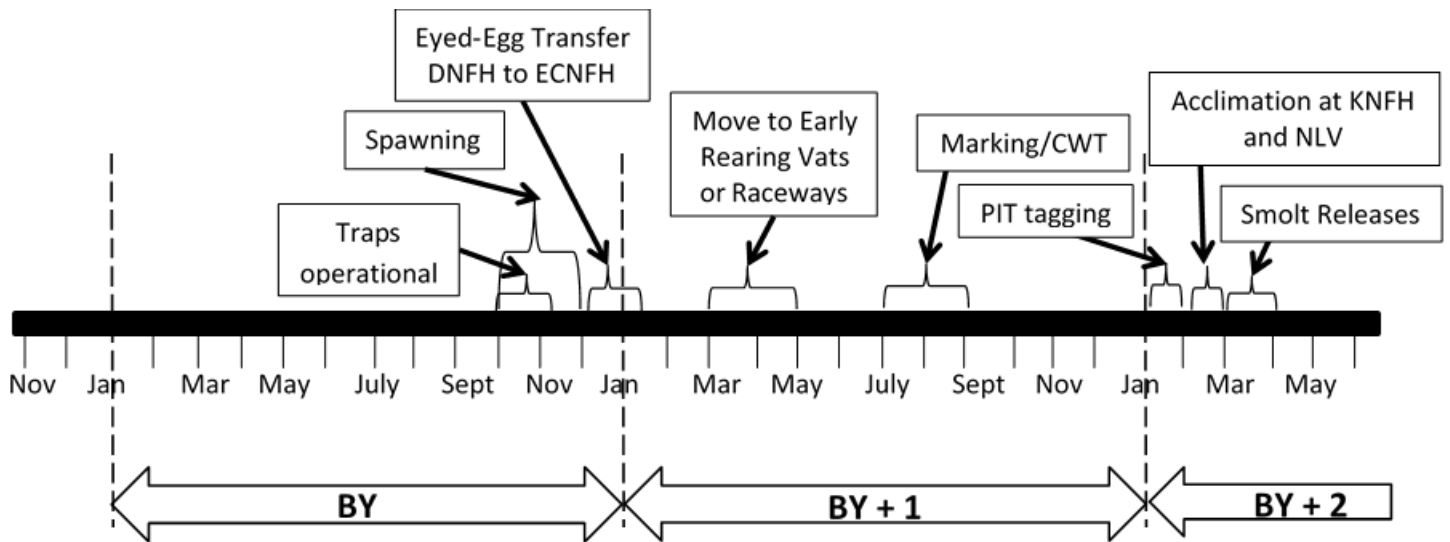


Figure 3.2. Timeline for Coho Production. Date ranges with black labels are shown to include all facilities' operations.

COHO

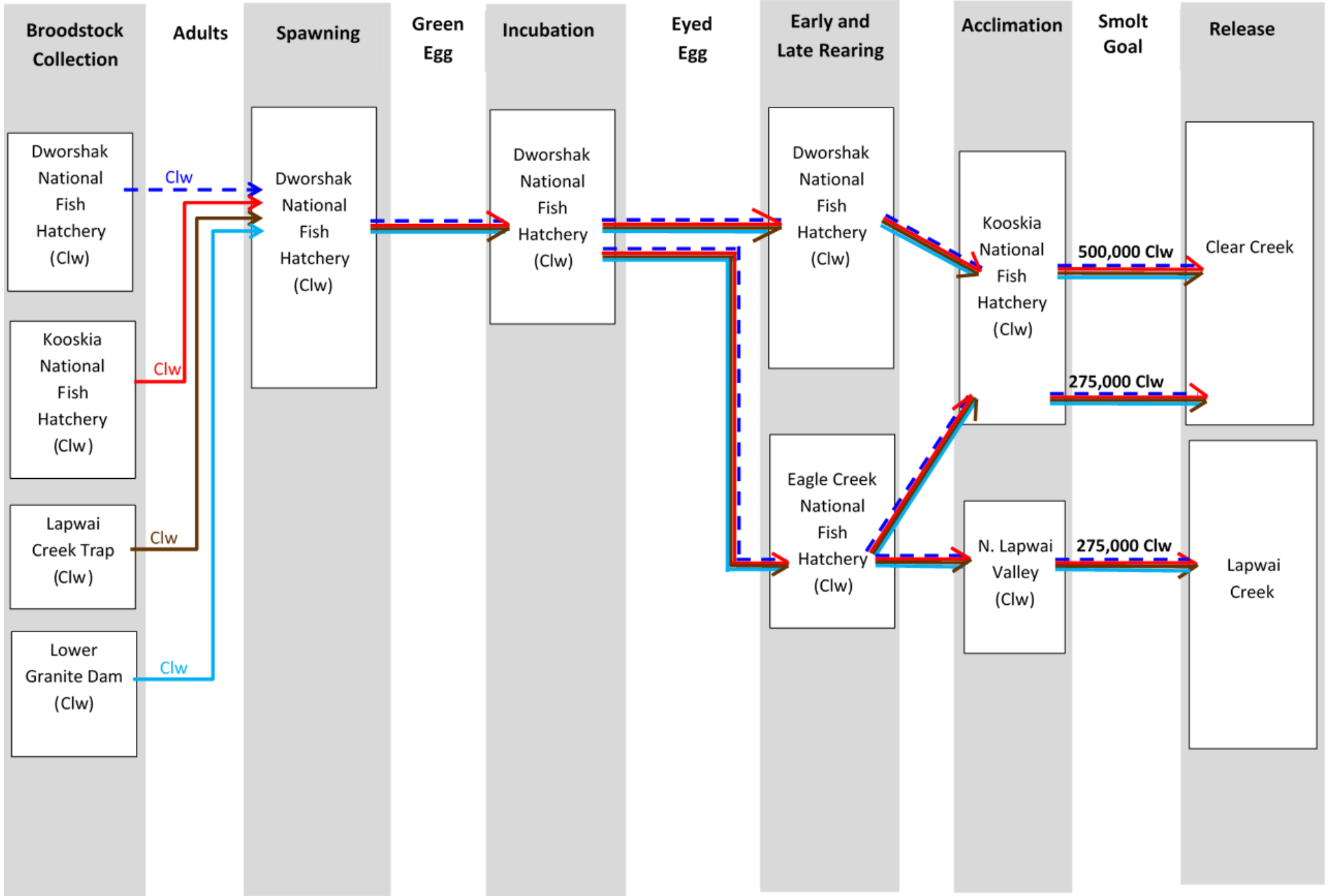


Figure 3.3. Coho movements in Clearwater. Numbers represent BY2021 releases.

3.2. Releases in 2021 (Smolt BY 2019)

3.2.1. Releases in 2021 (Smolt BY 2019) – Totals

Table 3.2a. BY2019 SMOLTS - Coho Salmon inventories by life stage, smolt release goals, and projected releases in 2021.

Rearing Facility	Species	Brood Collection Site	Rearing Facility	Release Site	Inventory To Date		Release Goals		Projected Smolt Release		
					Date	Number	Number	Size (FPP)	Dates	Number	Size (FPP)
NPT	Coho	LAP, DNFH, KNFH, LGR	DNFH	Clear Creek	12/16/2020	571,306	500,000	53.2	March 2021	550,000	20.0
Total						571,306	500,000			550,000	
ECNFH	Coho	LAP, DNFH, KNFH, LGR	ECNFH	Lapwai Creek	12/7/2020	322,872	275,000	29.0	March 2021	300,000	20.0
	Coho			Clear Creek	12/7/2020	323,525	275,000	29.0	March 2021	300,000	20.0
Total						646,397	550,000			600,000	
Grand Total						1,217,703	1,050,000			1,150,000	

Table 3.2b. BY2019 SMOLTS - Coho Salmon Inventory to Date by Mark Type for release in 2021.

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	12/16/2020	571,306	0	0	105,180	466,126	4,000
Total						571,306	0	0	105,180	466,126	4,000
ECNFH	Coho	LAP, DNFH, KNFH, LGR	ECNFH	Lapwai Creek	12/7/2020	322,872	0	0	30,000	292,872	5,000
	Coho			Clear Creek	12/7/2020	323,525	0	0	30,000	293,525	5,000
Total						646,397	0	0	60,000	586,397	10,000
Grand Total						1,217,703	0	0	165,180	1,052,523	14,000

3.2.2. Releases in 2021 (Smolt BY 2019) – 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 2021		Changes/Conditions that Occurred 2020-Early 2021		
Location	Release Target Smolt BY19	Transport/Release Smolt BY19	Fish Feeding Smolt BY19	Fish/Egg Health Smolt BY19	Marking Smolt BY19
<i>Dworshak National Fish Hatchery (SOP Section 3.2)</i>					
Clear Creek - DNFH (Clw)					
<i>Eagle Creek National Fish Hatchery (SOP Section 3.3)</i>					
Lapwai Creek (Clw)					
Clear Creek (Clw)					

3.3. Trap Operations and Production Planning for 2021 (Smolt BY 2021)

3.3.1. Trap Operations and Production Planning for 2021 (Smolt BY 2021) – TOTALS

Table 3.3a. BY 2021 SMOLTS - Coho Smolt Production Goals for Release in 2023.

Hatchery Program	Species	Brood Collection Site	Rearing Facility	Release Site	2023 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 2021 (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”.

Location	Plan for 2021 (BY 2021)				
	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)					
Lapwai Creek Trap (Clw)					
<i>Secondary Trapping Facilities (SOP Section 3.2) ¹</i>					
Dworshak National Fish Hatchery Trap (Clw)					
Lower Granite Dam (Clw)					

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 2021 (Smolts BY 2020)

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

3.4.1. Early Rearing and Marking Plan for 2021 (Smolts BY 2020) – TOTALS

Table 3.4a. BY 2020 Coho - Early Rearing Inventory (including anticipated set out)

Rearing Hatchery	Species	Stock	Inventory to Date		
			Date	Goal ¹	Actual
DNFH	Coho	Clw		644,093	958,310
ECNFH	Coho	Clw		650,000	751,385

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

Table 3.4b. BY 2020 SMOLTS - Coho Projected Marking of BY 2020 fish in 2021

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
									Adipose Fin Clip		No Clip		
							Date	Number	No CWT	CWT	CWT	No CWT	Total # Tags (Mitchell Act)
NPT	Coho	LAP, DNFH, KNFH, LGR	DNFH	Clear Creek		500,000	12/18/2020	958,310	0	0	60,000	0	4,000
Total						500,000		958,310	0	0	60,000	0	4,000
NPT	Coho	LAP, DNFH, KNFH, LGR	ECNFH	Lapwai Creek		275,000	12/18/20	751,385	0	0	30,000	0	5,000
	Coho			Clear Creek	275,000	0			0	30,000	0	5,000	
Total						550,000		751,385	0	0	60,000	0	10,000
Grand Total						1,050,000		1,709,695	0	0	120,000	0	14,000

¹ PIT Tagging occurs in spring 2022

3.4.2. Early Rearing and Marking Plan for 2021 (Smolts BY 2020) – 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 2021 (Smolts BY 2020)				
	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)					
<i>Eagle Creek National Fish Hatchery (SOP Sections 3.3)</i>					
Clear Creek (Clw)					
Lapwai Creek (Clw)					

4. Fall Chinook

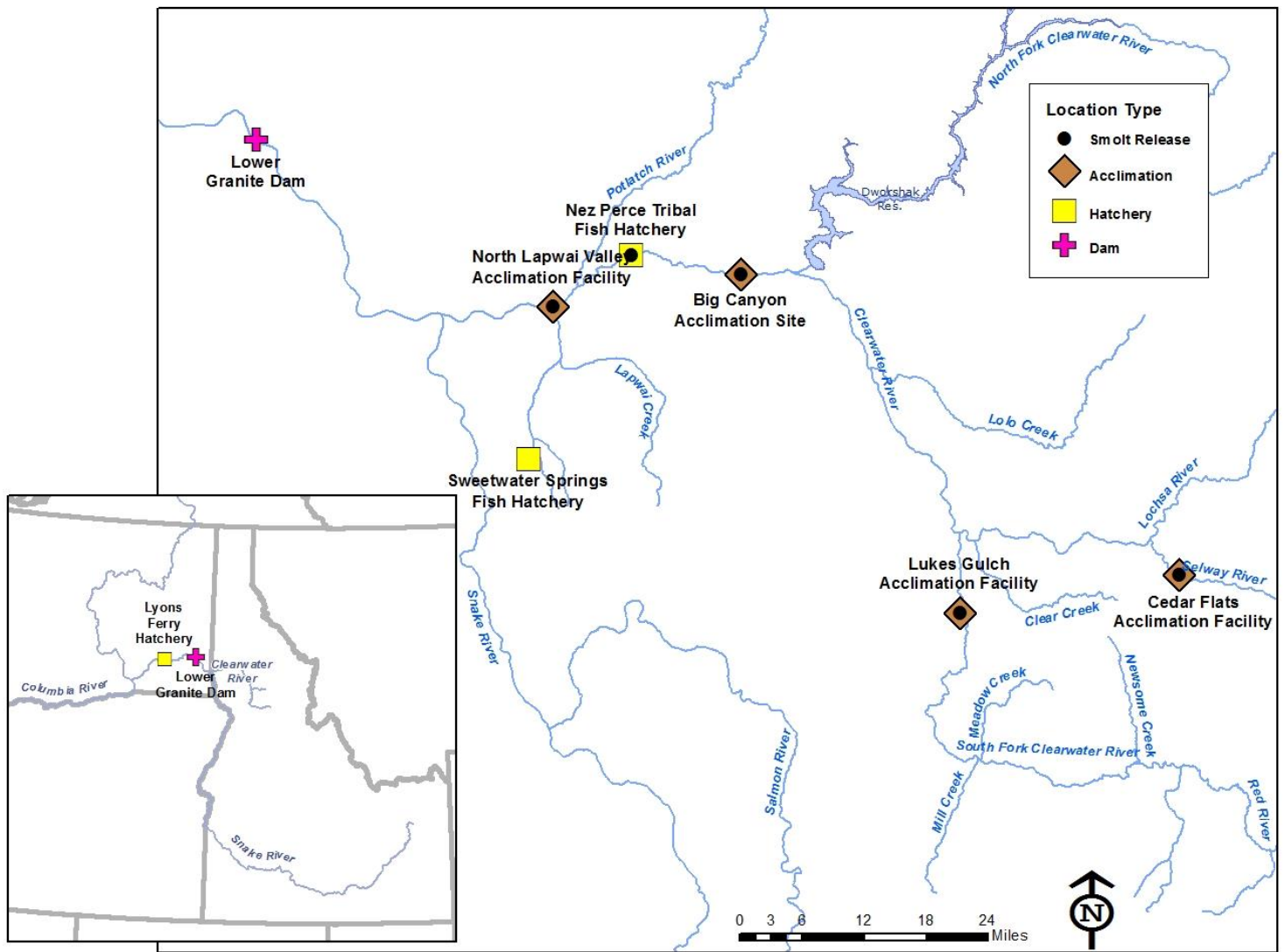


Figure 4.1. Fall Chinook Salmon hatchery and acclimation facilities, and sub-yearling release locations.

Table 4.1. Fall Chinook Goals for Release in 2021

BY2020 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

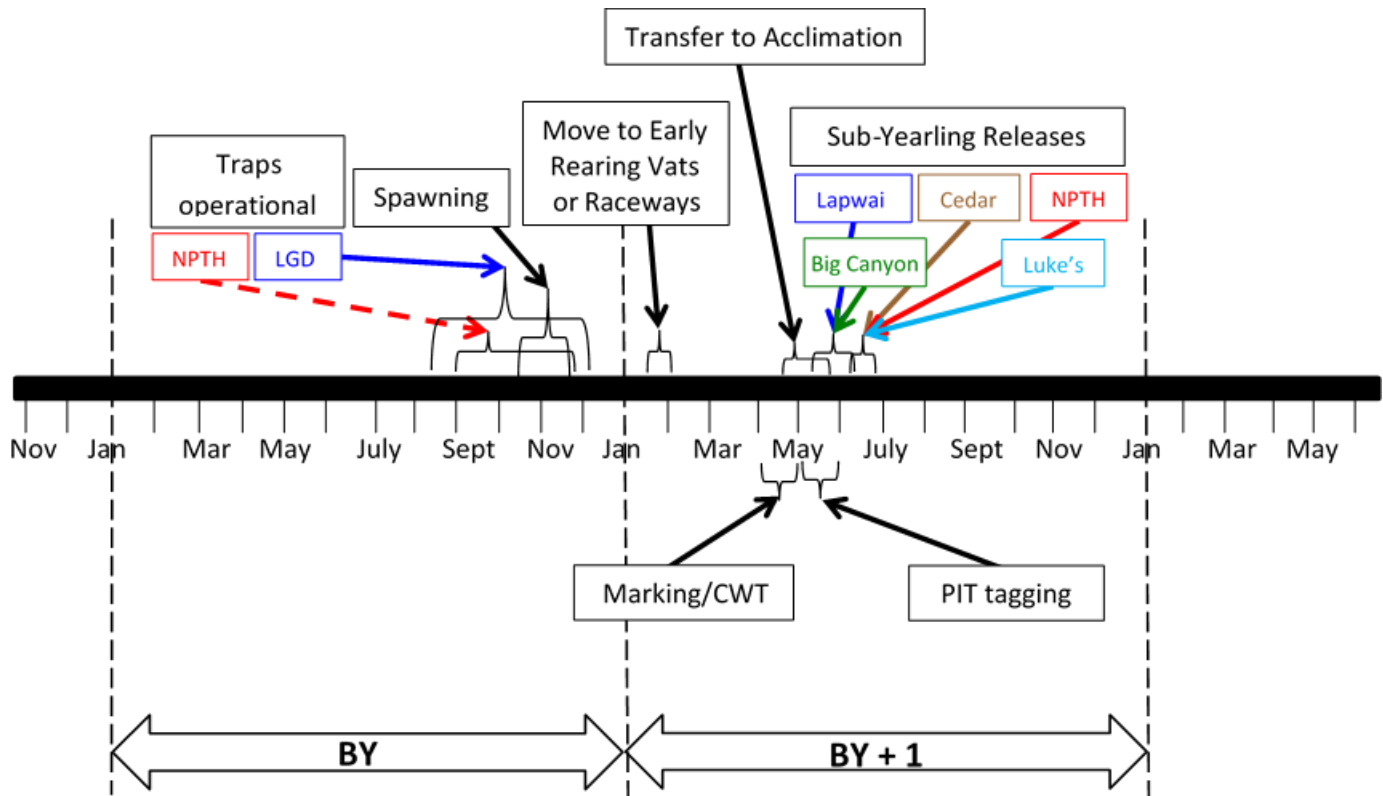


Figure 4.2. Timeline for Sub-Yearling Fall Chinook Production. Date ranges with black labels are shown to include all facilities' operations. Color-coded labels identify activities that have variability in timing for the different facilities.

FALL CHINOOK

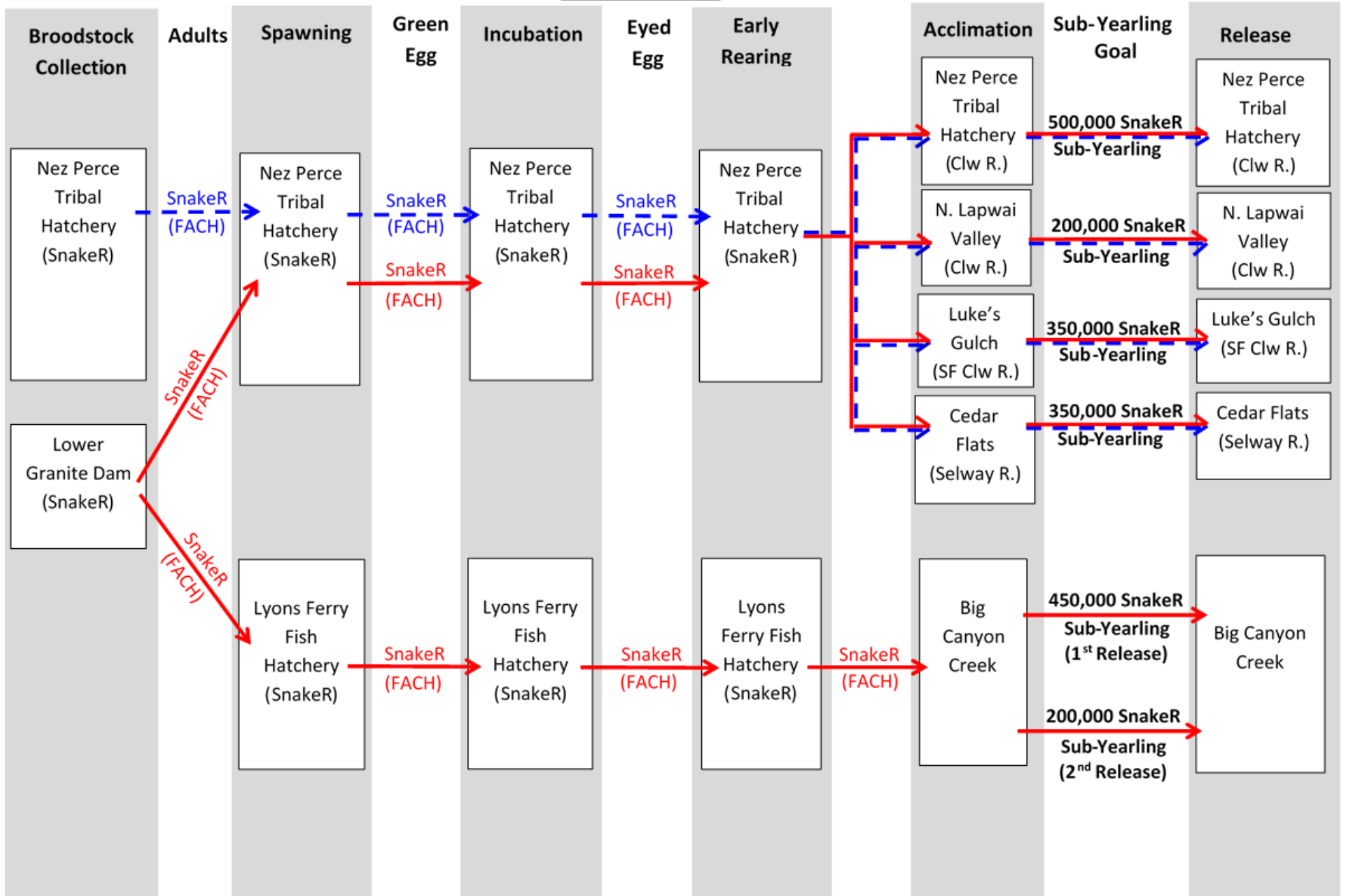


Figure 4.3. Fall Chinook movements in Clearwater. Numbers represent 2021 releases.

4.2. Releases in 2021 (Sub-Yearling BY 2020)

4.2.1. Releases in 2021 (Sub-Yearling BY 2020) – Totals

Table 4.2a. BY2020 SUB-YEARLINGS - Fall Chinook Salmon inventories by life stage, smolt release goals and projected releases in 2021.

Hatchery Program	Species	Brood Collection Site	Rearing Facility	Release Site	Inventory To Date		Release Goals		Projected Sub-Yearling Release		
					Date	Number	Number	Size (FPP)	Dates	Number	Size (FPP)
NPT	FACH	SnakeR	Lyons Ferry	Big Canyon Creek ¹	1/11/2021	463,785	450,000	50.0	5/12/21	450,000	50.0
					1/11/2021	206,486	200,000	50.0	6/2/2021	200,000	50.0
Total						670,271	650,000			650,000	
NPT	FACH	SnakeR	NPTH	NPTH	12/31/2020	789,984	500,000	50.0	6/15/2021	788,000	50.0
	FACH	SnakeR		N Lapwai Valley	12/31/2020	225,000	200,000	50.0	5/12/2021	223,000	50.0
	FACH	SnakeR		Lukes Gulch	12/31/2020	325,000	350,000	50.0	6/14/2021	323,000	50.0
	FACH	SnakeR		Cedar Flats	12/31/2020	280,000	350,000	50.0	6/14/2021	278,000	50.0
Total						1,619,984	1,400,000			1,612,000	
Grand Total						2,290,255	2,050,000			2,262,000	

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

Table 4.2b. BY2020 SUB-YEARLINGS - Fall Chinook Salmon Inventory to Date by Mark Type for release in 2021.

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		450,000		200,000		250,000	11,000	11,000			
						200,000		200,000		0	4,000				4,000
Total						650,000	0	400,000	0	250,000	15,000	11,000	0	0	4,000
NPT	FACH	SnakeR	NPTH	NPTH	12/31/2020	788,000	0	100,000	0	688,000	4,500	0	0	0	4,500
	FACH	SnakeR		N Lapwai Valley	12/31/2020	223,000	0	100,000	0	123,000	4,500	0	0	0	4,500
	FACH	SnakeR		Lukes Gulch	12/31/2020	323,000	0	100,000	0	223,000	4,500	0	0	0	4,500
	FACH	SnakeR		Cedar Flats	12/31/2020	278,000	0	100,000	0	178,000	4,500	0	0	0	4,500
Total						1,612,000	0	400,000	0	1,212,000	18,000	0	0	0	18,000
Grand Total						2,262,000	0	800,000	0	1,462,000	33,000	11,000	0	0	22,000

¹ Projected marking numbers because marking/tagging occurs in April/May

4.2.2. Releases in 2021 (Sub-Yearling BY 2020) - 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 2021		Changes/Conditions that Occurred 2020-Early 2021		
	Release Target Sub-YrIng BY20	Transport/Release Sub-YrIng BY20	Fish Feeding Sub-YrIng BY20	Fish/Egg Health Sub-YrIng BY20	Marking Sub-YrIng BY20
<i>Nez Perce Tribal Hatchery (SOP Section 4.2)</i>					
Nez Perce Tribal Hatchery (Clw R.)	NC	NNC	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 2021

4.3.1. Trap Operations and Production Planning for 2021 – TOTALS

Table 4.3a. BY 2021 SUB-YEARLINGS - Fall Chinook Production Goals for Release in 2022

Hatchery Program	Species	Brood Collection Site	Rearing Facility	Release Site	2022 Sub-Yearling Release Goal
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 2021 (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”.

	Plan for 2021 (BY 2021)				
Rearing Location	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)	NC	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 2021 (Sub-Yearling BY 2020)

4.4.1. Early Rearing and Marking Plan for 2021 (Sub-Yearling BY 2020) – 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 2021 (Sub-Yearling BY 2020)				
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.)	NC	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 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 2021 - Narrative

- Release Targets-
- Fish Health-
- Transportation/Releases-

Release Location	Plan for 2021		Changes/Conditions that Occurred 2020-Early 2021		
	Release Target	Transport/Release	Fish Feeding	Fish Health	Marking
<i>Nez Perce Tribal Hatchery (SOP Section 5.1)</i>					
Lolo Creek	30				
Orofino Creek	30				
Newsome Creek	30				
Red River	30				
Big Canyon Creek	30				
SF Salmon River	30				
Johnson Creek	30				
Asotin Creek	30				
Wallowa River	30				
Minam River	30				
Secesh River	30				
Joseph Creek	30				
Potlatch River	30				
Mainstem Clearwater River	TBD- direct release 2021				
TOTAL RELEASED	390				

5.2. Trap Operations for 2021

5.2.1. Trap Operations for 2021 - Narrative

	Plan for 2021				
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	≤ 976			50% at NPTH	50% Direct Release
John Day Dam	≤ 467			50% at NPTH	50% Direct Release
The Dalles Dam	≤ 671			50% at NPTH	50% Direc Release

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										NOTE #
SPECIES	HATCHERY	PROGRAM	Life Stage	PREFERRED TRAPPING SITE	FORMAL RELEASE GOAL (F)	COMANAGER APPROVED CUSHION % (1) (G)	% FEMALES IN BROODSTOCK (H)	% MORTALITY DURING HOLDING (I)	GREEN EGG FECUNDITY (J)	REMAINING AFTER DISEASE CULLING (K)	% 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)	
STLHD	DNFH	MS Clearwater at DNFH		DNFH	1,200,000	2%	50.0%	6.2%	6,855	88.9%	88.6%	85.7%	1,224,000	1,428,238	1,612,007	1,813,281	265	265	530	566	566	2,163	
		Red House Hole - SF Clw		SFClw Angle	400,000	2%	50.0%	6.2%	6,855	88.9%	88.6%	85.7%	408,000	476,079	537,336	604,427	89	89	178	190	190	2,147	
		Clear Creek		DNFH	300,000	2%	50.0%	6.2%	6,855	88.9%	88.6%	85.7%	306,000	357,060	403,002	453,320	67	67	134	143	143	2,140	
		Lolo Creek		DNFH	200,000	5%	50.0%	6.2%	6,855	88.9%	88.6%	85.7%	210,000	245,041	276,570	311,102	46	46	92	99	99	2,121	
	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%	7,000	100.0%	81.0%	80.0%	868,290	1,085,363	1,339,954	1,339,954	192	192	384	398	398	2,182	
SP/SU CHIN	DNFH	NF Clearwater (DNFH)		DNFH	1,650,000	1%	50.0%	3.8%	3,867	91.6%	96.0%	90.4%	1,666,667	1,843,658	1,920,477	2,096,590	543	543	1,086	1,129	1,129	1,476 (3)	
		Selway River-Upper		DNFH	0	1%	50.0%	3.8%	3,867	91.6%	96.0%	90.4%	0	0	0	0	0	0	0	0	0	#DIV/0!	
		Trans. to NPTH-NPTH		DNFH	200,000	2%	50.0%	3.8%	3,867	91.6%	96.0%	90.4%	204,082	225,754	235,160	256,725	67	67	134	140	140	1,458	
		Trans. to NPTH-Lapwai Creek		DNFH	200,000	2%	50.0%	3.8%	3,867	91.6%	96.0%	90.4%	204,082	225,754	235,160	256,725	67	67	134	140	140	1,458 (4)	
	KNFH	Kooskia NFH		KNFH	650,000	10%	50.0%	12.1%	3,661	88.2%	93.1%	88.6%	722,222	815,149	875,563	993,040	272	272	544	619	619	1,167	
	CFH	Red River		SFClw	1,280,000	0%	50.0%	5.0%	3,400	91.0%	96.0%	97.0%	1,280,000	1,319,588	1,374,570	1,510,517	445	445	890	937	937	1,366	
		Selway River-Lower		DNFH	400,000	0%	50.0%	5.0%	3,400	91.0%	96.0%	97.0%	400,000	412,371	429,553	472,037	139	139	278	293	293	1,365	
		Clear Creek		KNFH/DNFH	720,000	0%	50.0%	5.0%	3,400	91.0%	96.0%	97.0%	720,000	742,268	773,196	849,666	250	250	500	527	527	1,366	
		NF Clearwater-CFH (Baffle)		DNFH	389,000	0%	50.0%	5.0%	3,400	91.0%	96.0%	97.0%	389,000	401,031	417,741	459,056	136	136	272	287	287	1,355 (5)	
		NF Clearwater-CFH (Regular)		DNFH	320,000	0%	50.0%	5.0%	3,400	91.0%	96.0%	97.0%	320,000	329,897	343,643	377,629	112	112	224	236	236	1,356 (6)	
		Powell Pond (SUM)		Pow/SFSR	640,000	0%	50.0%	5.0%	3,700	96.0%	88.0%	97.0%	640,000	659,794	749,766	781,006	212	212	424	447	447	1,432 (7)	
	NPTH	Lolo Cr (Clw)	Pre-Smolt	NPTH	150,000	1%	50.0%	5.0%	3,801	90.0%	88.0%	91.0%	151,515	166,500	189,205	210,227	56	56	112	118	118	1,284	
		Newsome Cr (SF Clw)	Pre-Smolt	NPTH	75,000	1%	50.0%	5.0%	3,801	90.0%	88.0%	91.0%	75,758	83,250	94,602	105,114	28	28	56	59	59	1,284	
Lolo Creek		Smolt	NPTH	200,000	1%	50.0%	5.0%	3,801	90.0%	88.0%	91.0%	202,020	222,000	252,273	280,303	74	74	148	156	156	1,295		
FACH	NPTH	Snake River		LGR/NPTH	1,400,000	1%	50.0%	12.0%	4,061	94.0%	90.0%	96.0%	1,414,000	1,472,917	1,636,574	1,741,036	429	429	858	975	975	1,450	
COHO	DNFH	Clearwater			500,000	10%	49.8%	14.4%	2,598	96.3%	80.5%	81.6%	550,000	674,020	837,604	870,237	335	337	672	786	781	700	
	ECFH	Clearwater			550,000	10%	49.8%	14.4%	2,598	96.3%	80.5%	81.6%	605,000	741,422	921,364	957,261	369	372	741	866	860	699	
													CELL FORMULAS	F*(1+G)	N/(M)	O/(L)	P/(K)	ROUNDUP(Q/J,0)	R/(H)-R	R+S	ROUNDUP(P(T/1-	ROUNDUP(R/(1-H)/(1-	N/U

- In the 2013 AOP process, the co-managers approved a 10% cushion to meet release targets
- Culling of eggs for BKD, IHN, etc.
- Includes the New Production started in BY2015. Added production by increasing densities to 65k in all B-Bank rcows.
- New production started in BY2015, Lolo release group.
- NEW PRODUCTION in 2015. First timing rearing smolt in the adult holding ponds
- NEW PRODUCTION in 2015. Increasing rearing densities across raceways and spreading the new smolts across release groups
- 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								NOTE #			
SPECIES	HATCHERY	PROGRAM	Life Stage	PREFERRED TRAPPING SITE	FORMAL RELEASE GOAL (F)	COMANAGER APPROVED CUSHION % (1)	% FEMALES IN BROODSTOCK (H)	% MORTALITY DURING HOLDING (I)	GREEN EGG FECUNDITY (J)	% REMAINING AFTER DISEASE CULLING (K)	% 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)		
STLHD	DNFH	MS Clearwater at DNFH		DNFH	1,200,000	2%	67.0%	6.2%	6,855	88.9%	88.6%	85.7%	1,224,000	1,428,238	1,612,007	1,813,281	265	131	396	422	857	2,900		
		Red House Hole - SF Clw		SFClw Angle	400,000	2%	67.0%	6.2%	6,855	88.9%	88.6%	85.7%	408,000	476,079	537,336	604,427	89	44	133	142	288	2,873		
		Clear Creek		DNFH	300,000	2%	67.0%	6.2%	6,855	88.9%	88.6%	85.7%	306,000	357,060	403,002	453,320	67	33	100	107	217	2,860		
		Lolo Creek		DNFH	200,000	5%	67.0%	6.2%	6,855	88.9%	88.6%	85.7%	210,000	245,041	276,570	311,102	46	23	69	74	149	2,838		
	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%	7,000	100.0%	81.0%	80.0%	868,290	1,085,363	1,339,954	1,339,954	192	95	287	297	603	2,924			
SP/SU CHIN	DNFH	NF Clearwater (DNFH)		DNFH	1,350,000	1%	50.0%	3.8%	3,867	91.6%	96.0%	90.4%	1,363,636	1,508,447	1,571,299	1,715,392	444	444	888	924	924	1,476	(3)	
		Selway River-Upper	Parr	DNFH	0	1%	50.0%	3.8%	3,867	91.6%	96.0%	90.4%	0	0	0	0	0	0	0	0	0	0	#DIV/0!	
		Trans. to NPTH-NPTH		DNFH	200,000	2%	50.0%	3.8%	3,867	91.6%	96.0%	90.4%	204,082	225,754	235,160	256,725	67	67	134	140	140	1,458		
		Trans. to NPTH-Lapwai Creek		DNFH	0	2%	50.0%	3.8%	3,867	91.6%	96.0%	90.4%	0	0	0	0	0	0	0	0	0	0	#DIV/0!	(4)
	KNFH	Kooskia NFH		KNFH	650,000	10%	50.0%	12.1%	3,661	88.2%	93.1%	88.6%	722,222	815,425	875,860	993,376	272	272	544	619	619	1,167		
	CFH	Red River		SFClw	1,100,000	0%	50.0%	5.0%	3,400	91.0%	96.0%	97.0%	1,100,000	1,134,021	1,181,271	1,298,101	382	382	764	805	805	1,366		
		Selway River-Lower		DNFH	400,000	0%	50.0%	5.0%	3,400	91.0%	96.0%	97.0%	400,000	412,371	429,553	472,037	139	139	278	293	293	1,365		
		Clear Creek		KNFH/DNFH	635,000	0%	50.0%	5.0%	3,400	91.0%	96.0%	97.0%	635,000	654,639	681,916	749,358	221	221	442	466	466	1,363		
		NF Clearwater-CFH (Baffle)		DNFH	0	0%	50.0%	5.0%	3,400	91.0%	96.0%	97.0%	0	0	0	0	0	0	0	0	0	0	#DIV/0!	(5)
		NF Clearwater-CFH (Regular)		DNFH	0	0%	50.0%	5.0%	3,400	91.0%	96.0%	97.0%	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%	3,700	96.0%	88.0%	97.0%	640,000	659,794	749,766	781,006	212	212	424	447	447	1,432	(7)		
NPTH	Lolo Cr (Clw)	Pre-Smolt	NPTH	150,000	1%	50.0%	5.0%	3,801	90.0%	88.0%	91.0%	151,515	166,500	189,205	210,227	56	56	112	118	118	1,284			
	Newsome Cr (SF Clw)	Pre-Smolt	NPTH	75,000	1%	50.0%	5.0%	3,801	90.0%	88.0%	91.0%	75,758	83,250	94,602	105,114	28	28	56	59	59	1,284			
	Lolo Creek		NPTH	200,000	1%	50.0%	5.0%	3,801	90.0%	88.0%	91.0%	202,020	222,000	252,273	280,303	74	74	148	156	156	1,295			
FACH	NPTH	Snake River		LGR/NPTH	1,400,000	1%	50.0%	12.0%	4,061	94.0%	89.0%	96.0%	1,414,000	1,472,917	1,654,963	1,760,598	434	434	868	987	987	1,433		
COHO	DNFH	Clearwater			500,000	10%	49.8%	14.4%	2,598	96.3%	80.5%	81.6%	550,000	674,020	837,604	870,237	335	337	672	786	781	700		
	ECFH	Clearwater			550,000	10%	49.8%	14.4%	2,598	96.3%	80.5%	81.6%	605,000	741,422	921,364	957,261	369	372	741	866	860	699		

- (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	
<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.

*There are weekly conference calls 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 outplants 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