

**Calendar Year 2024
Annual Operation Plan
for
Salmon and Steelhead
Production Programs
in the
Salmon and Snake River Basins**

**Prepared by
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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

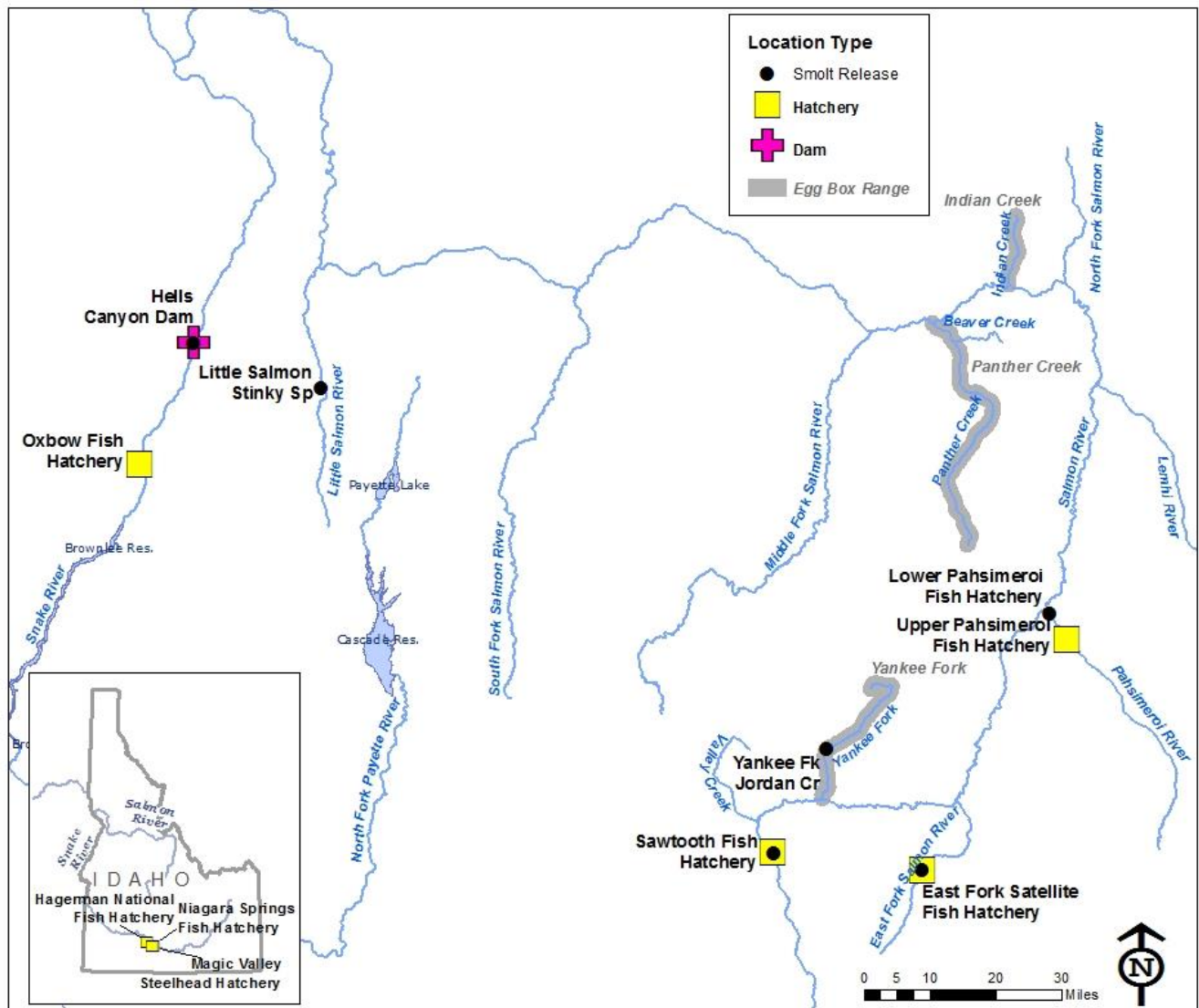


Figure 1.1. Steelhead facilities, smolt releases and egg box locations.

Table 1.1. Steelhead Release Goals.

Smolt Release Program	Rearing Facility	Release Site	Parent Stock	BY 2023 Smolt Release Goal
LSRCP / IDFG	HNFH	Sawtooth Weir	SawA	1,410,000
	HNFH	Sawtooth Weir (PRAS Eval)	SawA	90,000
	HNFH	E. Fork Salmon R. - Upper	EFNat	60,000
	Total			1,560,000
	MVFH	Sawtooth Weir	SawA	279,000
	MVFH	Little Salmon R. - Stinky Sp.	SawA	403,000
	MVFH	Pahsimeroi Weir	USRB	434,000
	MVFH	Yankee Fork	USRB	434,000
	Total			1,550,000
IPC / IDFG	NSFH	Pahsimeroi Weir	PahA	800,000
	NSFH	Little Salmon R. - Stinky Sp.	PahA	200,000
	NSFH	Little Salmon R. - Stinky Sp.	OxbA	250,000
	NSFH	Snake R. Hells Canyon	OxbA	550,000
	Total			1,800,000
Grand Total				4,910,000

Egg Box Program	Hatchery Egg Source	Egg Box Site	Parent Stock	Egg Box BY2024 Outplant Goals
SBT	PFH/SFH	Yankee Fork	USRB/SawA ¹	500,000
		Panther Creek	PahA	300,000
	PFH	Indian Creek	PahA	200,000
		Total		1,000,000

¹ USRB or SawA eggs will be used for the SBT egg box program in the Yankee Fork

1.1. Timeline and Flowchart for Steelhead Production

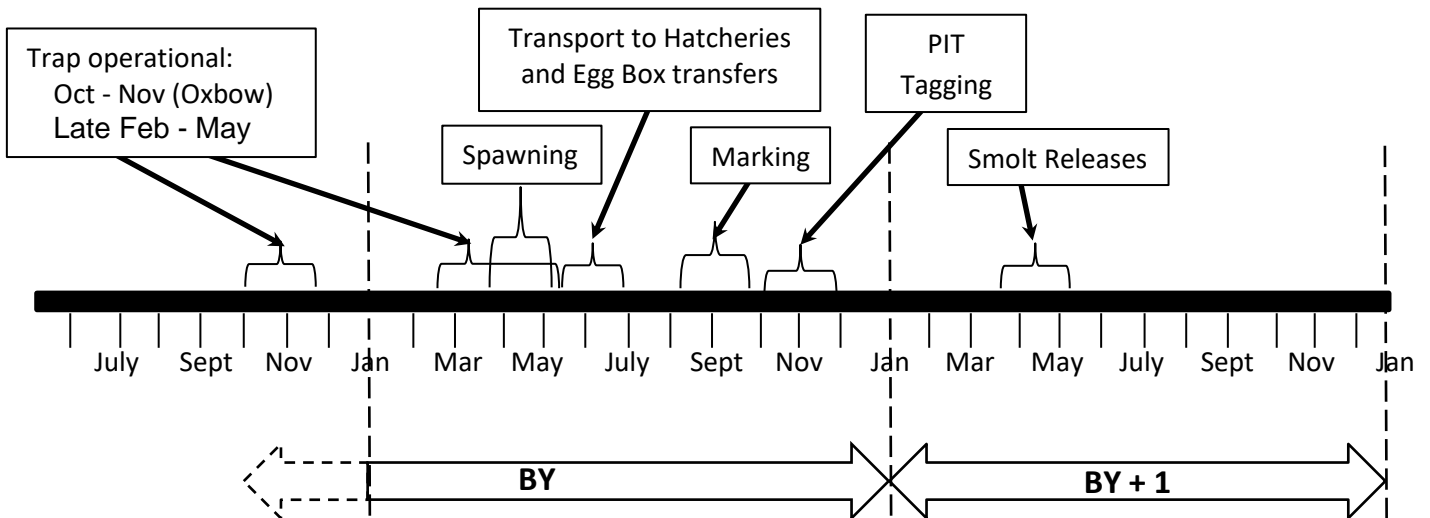


Figure 1.2. Timeline for Steelhead Production. Date ranges are shown to include all facilities' operations

STEELHEAD

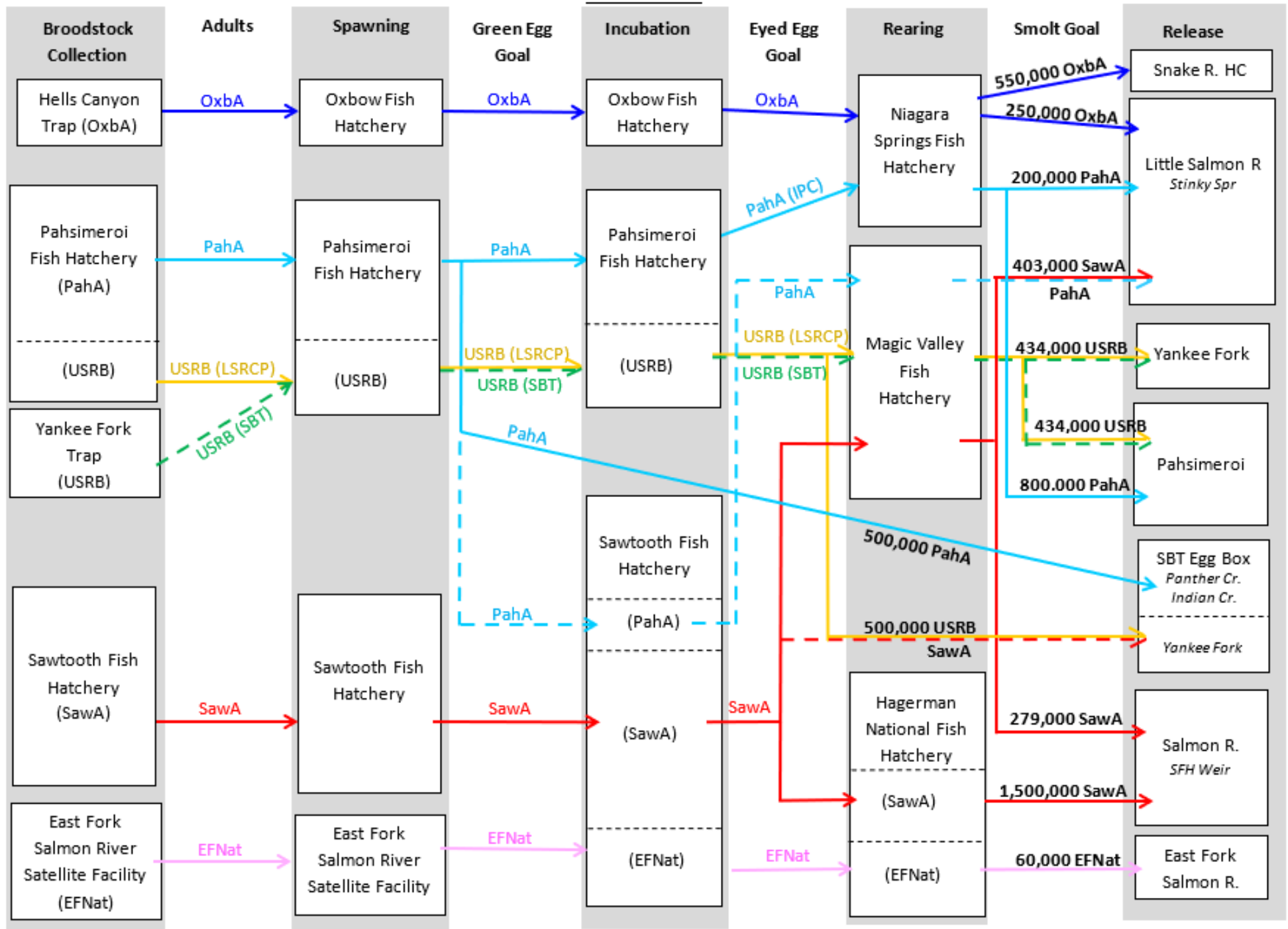


Figure 1.3. Fish and egg movements for Steelhead. Numbers reflect 2024 releases.

1.2. Releases in 2024 (Smolt BY 2023, Egg Box BY 2024)

1.2.1. Releases in 2024 (Smolt BY 2023, Egg Box BY 2024) – Totals

Table 1.2a. Steelhead Rearing Metrics for BY 2023 fish

Hatchery	Release Site	Stock	Eggs/Fry Shipped/Received	Inventory To Date		Release Goals		Excess Fry/ Fingerlings Released		Projected Smolt Releases		
				Date	Number	Number	Size (FPP)	Number	Release Site (Date)	Dates	Number	Size (FPP)
HNFH	Sawtooth Weir	SawA	1,585,790	2/1/2024	1,502,459	1,410,000	4.5	0		4/1-4/12;4/18-4/25	1,500,000	4.5
HNFH	Sawtooth Weir (PRAS Eval	SawA	100,640	2/1/2024	94,478	90,000	4.5	0		4/15-4/17/24	94,000	4.5
HNFH	E. Fork Salmon R. - Upper	EFNat	56,767	2/1/2024	52,645	60,000	4.5	0		4/26/2024	52,000	4.5
Totals			1,743,197		1,649,582	1,560,000		0			1,646,000	
MVFH	Sawtooth Weir	SawA	339,313	2/1/2024	285,092	279,000	4.5	0		4/10-4/15/24	282,000	4.5
MVFH	Little Salmon R. - Stinky Sp	SawA	481,508	2/1/2024	413,614	403,000	4.5	0		4/4-4/10/24	409,150	4.5
MVFH	Pahsimeroi Weir	USRB	536,856	2/1/2024	232,146	434,000	4.5	0		4/1-4/3/24	229,450	4.5
MVFH	Yankee Fork	USRB	496,185	2/1/2024	305,843	434,000	4.5	0		4/16-4/19/24	302,600	4.5
Totals			1,853,862		1,236,695	1,550,000		0			1,223,200	
NSFH	Pahsimeroi Weir	PahA	972,447	1/31/2024	809,319	800,000	4.5	138,746	Salmon Falls Cr Reservoir	4/4-4/18/24	805,000	4.5
NSFH	Little Salmon R. - Stinky Sp	PahA	282,369	1/31/2024	203,043	200,000	4.5	27,322	Lower Goose Cr Reservoir	4/19-4/23/24	205,419	4.5
NSFH	Little Salmon R. - Stinky Sp	OxbA	309,242	1/31/2024	256,652	250,000	4.5	28,687	Lower Goose Cr Reservoir	4/24-4/26/24	256,181	4.5
NSFH	Snake R. Hells Canyon	OxbA	626,302	1/31/2024	563,300	550,000	4.5	9,234	Lower Goose Cr Reservoir	3/25-4/3/24	556,000	4.5
Totals			2,190,360		1,832,314	1,800,000		203,989			1,822,600	
Grand Total			5,787,419		4,718,591	4,910,000		203,989			4,691,800	

Table 1.2b. BY 2023 Steelhead Inventory to Date by Mark Type in 2024

Hatchery	Release Site	Stock	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	IPC	USFWS
HNFH	Sawtooth Weir	SawA	2/1/2024	1,502,459	1,402,803	99,656			8,595	2,600	6,000		
HNFH	Sawtooth Weir (PRAS Eval)	SawA	2/1/2024	94,478		94,478			13,800		13,800		
HNFH	E. Fork Salmon R. - Upper	EFNat	2/1/2024	52,645			52,645		8,600	2,600	6,000		
Totals				1,649,582	1,402,803	194,134	52,645	0	30,995	5,200	25,800	0	0
MVFH ³	Sawtooth Weir	SawA	2/1/2024	285,092	285,092				0				
MVFH ³	Little Salmon R. - Stinky Sp.	SawA	2/1/2024	413,614	413,614				0				
MVFH ³	Pahsimeroi Weir	USRB	2/1/2024	232,146			232,146		0				
MVFH ³	Yankee Fork	USRB	2/1/2024	305,843	305,843				0				
Totals				1,236,695	1,004,549	0	232,146	0	0	0	0	0	0
NSFH	Pahsimeroi Weir	PahA	1/31/2024	809,319	809,319				9,000	3,000		6,000	
NSFH	Little Salmon R. - Stinky Sp.	PahA	1/31/2024	203,043	203,043				2,301	1,800		500	
NSFH	Little Salmon R. - Stinky Sp.	OxbA	1/31/2024	256,652	256,652				2,799	2,300		500	
NSFH	Snake R. Hells Canyon	OxbA	1/31/2024	563,300	563,300				8,595	2,600		6,000	
Totals				1,832,314	1,832,314	0	0	0	22,695	9,700	0	13,000	0
Grand Total				4,718,591	4,239,666	194,134	284,791	0	53,690	14,900	25,800	13,000	0

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

³ No PIT tagging of MVFH fish due to an IHN outbreak.

See **Table 1.1** for BY 2024 Steelhead Egg box transfers in 2024

1.2.2. Releases in 2024 (Smolt BY 2023, Egg Box BY 2024) - 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. Were you below goal? Was your size at release different from the 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 2024		Changes/Conditions that Occurred 2023-Early 2024		
	Release Target Smolt BY23, Egg BY24	Transport/Release Smolt BY23, Egg BY24	Fish Feeding BY23	Fish/Egg Health BY23	Marking BY23
<i>Niagara Springs Fish Hatchery (SOP Section 1.2)</i>					
Pahsimeroi Weir (PahA)	NC	NC	NC	Raceways 12,14-17,19 confirmed IHN	204,794 excess Oxbow/Pahsimeroi origin steelhead were marked to backfill Magic Valley Hatchery for IHN outbreak. It was decided not to use these steelhead and they were stocked as excess steelhead into Oakley and Salmon Falls Creek Reservoirs. See steelhead table 1.2a for details.
L. Salmon R. Stinky Springs (PahA/OxbA)	NC	NC	NC	Raceways 8,10 confirmed IHN	NC
Snake R. Hells Canyon (OxbA)	NC	NC	NC	NC	NC
<i>Pahsimeroi Fish Hatchery - Egg transfers to SBT - BY 2024 (SOP Sections 1.4, 1.7 and 1.10)</i>					
Yankee Fork (USRB/SawA)	NC	NC			
Indian Creek (PahA)	NC	NC			
Panther Creek (PahA)	NC	NC			
<i>Hagerman National Fish Hatchery (SOP Section 1.5)</i>					
East Fork Weir (EFnat)	NC	NC	NC	NC	NC

Release Location	Plan for 2024		Changes/Conditions that Occurred 2023-Early 2024		
	Release Target Smolt BY23, Egg BY24	Transport/Release Smolt BY23, Egg BY24	Fish Feeding BY23	Fish/Egg Health BY23	Marking BY23
Sawtooth Weir (SawA)	NC	NC	NC to mitigation SAW A fish. PRAS/Study SAW A being fed Super Smolt Feed for 30 days prior to release.	ICH confirmed in raceways in September. Potassium Permanganate used to control.	NC
<i>Magic Valley Fish Hatchery (SOP Section 1.6)</i>					
Sawtooth Weir (SawA)	NC	NC	Aquaflor Med Feed Vats 1 & 2	Vats 1 & 2 confirmed CWD	No PIT tags due to IHN
L. Salmon R. Stinky Springs (SawA)	NC	NC	NC	Rcwy East 9AB confirmed IHN	Hand Ad clip surplus SawA 10/19/23 to offset IHN mortality No PIT tags due to IHN
Pahsimeroi Weir (USRB)	BY23 Inventory 52.9% of release target due to IHN	NC	NC	Rcwys 10-16AB confirmed IHN	No PIT tags due to IHN
Yankee Fork (USRB)	BY23 Inventory 69.7% of release target due to IHN	NC	Aquaflor Med Feed Vat 17 CWD OTC MED Feed Vat 17 CWD	Vat 17 confirmed CWD Rcwys 10-11AB & 15AB confirmed IHN	Inventory 4.1% short of Rcwy marking target No PIT tags due to IHN

1.3. Trap Operations and Production Planning for 2024 (Smolt BY 2024, Egg Box BY 2024)

1.3.1. Trap Operations and Production Planning for 2024 (Smolt BY 2024, Egg Box BY 2024) – TOTALS

Table 1.3a. Steelhead Projected BY 2024 Smolt Production Goals for Release in 2025

Hatchery	Release Site	Stock	Smolt Release Goals
HNFH	Sawtooth Weir	SawA	1,410,000
	Sawtooth Weir (RAS Eval)	SawA	90,000
	E. Fork Salmon R. - Upper	EFNat	60,000
Total			1,560,000
MVFH	Sawtooth Weir	SawA	279,000
	Little Salmon R. - Stinky Sp.	SawA	403,000
	Pahsimeroi Weir	USRB	434,000
	Yankee Fork	USRB	434,000
Total			1,550,000
NSFH	Pahsimeroi Weir	PahA	800,000
	Little Salmon R. - Stinky Sp.	PahA	200,000
	Little Salmon R. - Stinky Sp.	OxbA	250,000
	Snake R. Hells Canyon	OxbA	550,000
Total			1,800,000
Grand Total			4,910,000

Table 1.3b. Steelhead Spawning for BY 2024 - Based on Brood Calculator

Green Egg Goal					Spawning Goal				Broodstock Trapping Goals							
Spawning Facility	Brood Source	Rearing Hatchery	Release Site	Green Egg Goal	Brood Source	Rearing Hatchery	Fecundity	Spawn Goal	Brood Source	Rearing Hatchery	Projected Return to LGD ³	Trapping period		Trapping Goal to meet broodstock needs ¹		
								Females				Total	Season	Dates	Female	Male
SFH	SawA	HNFH	Sawtooth Weir	1,676,757	SawA	HNFH	5,050	333	SawA	HNFH	10,972			333	333	666
			Sawtooth Weir (RAS Eval)	107,027			5,050	22						22	22	44
		MVFH	Sawtooth Weir	359,073		MVFH	5,050	72						72	72	144
			Little Salmon R. - Stinky Sp.	518,662			5,050	103						103	103	206
EFSR Sat.	EFNat	HNFH	E. Fork Salmon R. - Upper	77,803	EFNat	HNFH	5,775	14	EFNat	HNFH	164			14	14	28
PFH	PahA	NSFH	Pahsimeroi Weir	1,051,374	PahA	NSFH	6,200	170	PahA	NSFH	2,266			170	170	340
			Little Salmon R. - Stinky Sp.	262,843			6,200	43						43	43	86
		PFH	SBT Egg Box-Panther Creek ⁴	500,000		PFH	6,200	81		81				81	162	
			SBT Egg Box-Indian Creek ⁴	125,000			6,200	21		21				21	42	
	USRB ²	MVFH	Pahsimeroi Weir	574,074	USRB	MVFH	6,200	93	USRB	MVFH	392			98	65	164
			Yankee Fork	574,074			6,200	93						98	65	164
		SFH	SBT Egg Box-Yankee Fork	595,238		SFH	6,200	97		SFH		102	68	171		
OFH	OxbA	NSFH	Little Salmon R. - Stinky Sp.	366,930	OxbA	NSFH	6,201	60	OxbA	NSFH	3,707	fall	11/6 to 11/23/23	298	298	597
			Snake R. Hells Canyon	807,247			6,201	131				spring	4/2 and 4/3/24			

¹ Broodstock trapping need is dictated by number of females needed

² Sequence of priority for USRB eggs: Pahsimeroi Weir, Yankee Fork Salmon River, Yankee Fork Egg Box Program.

³ Projected Return to LGD includes only 2-ocean and 3-ocean adults for USRB.

⁴ Due to low water in Panther Creek (i.e., Beaver Creek) over the past several years, the SBT proposes to reduce Panther Creek goal to 300k and increase Indian Creek goal to 200k until a more suitable site for egg incubation is found.

Table 1.3c. BY2024 Steelhead adult female broodstock acquisition schedules for hatchery programs.

Season	Week of	Hells Canyon Trap		Pahsimeroi Fish Hatchery				Sawtooth Fish Hatchery		East Fork Salmon River Satellite	
		OxbA ¹		PahA		USRB		SawA		EFNat	
		Wkly	Cum	Wkly	Cum	Wkly	Cum	Wkly	Cum	Wkly	Cum
Fall 2023	Oct	0	0	0	0	0	0	0	0	0	0
	Nov	298	298	0	0	0	0	0	0	0	0
	Dec	0	298	0	0	0	0	0	0	0	0
Spring 2024	13-Feb	0	298	0	0	0	0	0	0	0	0
	20-Feb	0	298	0	0	0	0	0	0	0	0
	27-Feb	0	298	0	0	0	0	0	0	0	0
	6-Mar	0	298	0	0	0	0	0	0	0	0
	13-Mar	0	298	0	0	0	0	0	0	0	0
	20-Mar	0	298	0	0	0	0	0	0	0	0
	27-Mar	0	298	70	70	15	15	41	41	0	0
	3-Apr	75	373	32	102	46	62	174	215	0	0
	10-Apr	0	373	61	163	77	139	158	372	0	0
	17-Apr	0	373	61	224	46	185	69	442	3	3
	24-Apr	0	373	60	284	11	196	88	530	6	10
	1-May	0	373	31	315	0	196	0	530	4	14

Proportion of brood acquisition over season					
OxbA	PahA	USRB	SawA	EFNat	
Oct	0	0	0	0	0
Nov	1	0	0	0	0
Dec	0	0	0	0	0
13-Feb	0	0	0	0	0
20-Feb	0	0	0	0	0
27-Feb	0	0	0	0	0
6-Mar	0	0	0	0	0
13-Mar	0	0	0	0	0
20-Mar	0	0	0	0	0
27-Mar	0.00	0.22	0.08	0.08	0.00
3-Apr	0.25	0.10	0.24	0.33	0.00
10-Apr	0.00	0.19	0.39	0.30	0.00
17-Apr	0.00	0.19	0.24	0.13	0.23
24-Apr	0.00	0.19	0.06	0.17	0.46
1-May	0.00	0.10	0.00	0.00	0.31

	OxbA	PahA	USRB	SawA	EFNat
Total Females to Trap (from Brood Calculator)	298	315	196	530	14

¹ The sum of OxbA adult female broodstock acquisition values exceeds the Total Females to Trap in the Brood Calculator to account for additional fish trapped during the spring trapping season.

Table 1.3d. Steelhead Spawning for BY 2025 - Based on Brood Calculator

Green Egg Goal					Spawning Goal					Broodstock Trapping Goals						
Spawning Facility	Brood Source	Rearing Hatchery	Release Site	Green Egg Goal	Brood Source	Rearing Hatchery	Fecundity	Spawn Goal		Brood Source	Rearing Hatchery	Trapping period		Trapping Goal ¹		
								Female	Males ²			Season	Dates	Female	Male	Total
OFH	OxbA	NSFH	Little Salmon R. - Stinky Sp.	366,930	OxbA	NSFH	6,201	60	60	OxbA	NSFH	fall and spring	11/4 to 11/27/24 and 4/1 and 4/2/25	298	298	597
			Snake R. Hells Canyon	807,247			6,201	131	131							

¹ Broodstock trapping need is dictated by number of females needed

² This is acutally the # of Males collected while getting the # of Females needed, based on % of F in Brodstock

Table 1.3e. BY2025 Steelhead adult female broodstock acquisition schedule for hatchery programs.

Season	Date	Hells Canyon Trap		Proportion of brood acquisition over season	
		OxbA ¹			
		Wkly	Cum		
Fall 2023	Oct	0	0	Oct	0
	Nov	298	298	Nov	1
	Dec	0	298	Dec	0

Total Females to Trap (from Brood Calculator)		OxbA
		298

¹ The sum of OxbA adult female broodstock acquisition values exceeds the Total Females to Trap in the Brood Calculator to account for additional fish trapped during the spring trapping season.

1.3.2. Trap Operations and Production Planning for 2024 (Smolt BY 2024, Egg Box BY 2024) – 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 2024 (BY 2024)				
	Adult Fish Health	Trap Ops	Production target changes	Spawning protocol changes	Disposition of adults
<i>Hells Canyon Trap/Oxbow Hatchery (Fall 2023-Spring 2024) (SOP Section 1.3)</i>					
Niagara Springs (OxbA)	NC	NC	NC	no chiller; use old incubation room; do not incubate extra fry for release	NC
<i>Pahsimeroi Weir (SOP Section 1.4)</i>					
Niagara Springs (PahA)	NC	NC	NC	NC	NC
SBT Egg Box (PahA)	NC	NC	egg box locations clarified in SOP edits	NC	NC
SBT Egg Box (USRB)	NC	NC	USRB preference in Yankee Fork captured in SOP edits	NC	NC
Magic Valley (USRB)	NC	NC	868K smolt goal reflected in SOP edits	NC	NC
RBT Program (PahA)	NC	NC	NC	Starting 2024, IDFG will use SH eggs from PFH in the resident RBT Brood Program. See SOP 1.1.10 for details.	NC
<i>Sawtooth and East Fork Weirs (SOP Sections 1.7 and 1.8)</i>					
Hagerman National (EFNat)	NC	NC	NC	NC	NC
Hagerman National (SawA)	NC	NC	NC	NC	NC
Magic Valley (SawA)	NC	NC	NC	NC	NC

Rearing Location	Plan for 2024 (BY 2024)				
	Adult Fish Health	Trap Ops	Production target changes	Spawning protocol changes	Disposition of adults
SBT Egg Box (SawA)	NC	NC	SawA eggs will be used only if USRB eggs are not available.	NC	NC
RBT Program (SawA)	NC	NC	NC	Starting 2024, IDFG will use SH eggs from SFH in the resident RBT Brood Program. See SOP 1.1.10 for details.	NC

1.4. Marking and Rearing Plan for 2024 (Smolt BY 2024)

1.4.1. Marking and Rearing Plan for 2024 (Smolt BY 2024) – TOTALS

Table 1.4a. Steelhead Projected marking of BY 2024 Production for release in 2025

Hatchery	Release Site	Stock	Smolt Release Goals	Projected Marking				PIT Tags			
				Adipose Fin Clip		No Clip		Total # Tags	Funding Source		
				No CWT	CWT	CWT	No CWT		CSS	LSRCP	IPC
HNFH	Sawtooth Weir	SawA	1,410,000	1,430,000				8,600	2,600	6,000	
	Sawtooth Weir (RAS Eval) ¹	SawA	90,000	95,000				-			
	E. Fork Salmon R. - Upper	EFNat	60,000			60,000		8,600	2,600	6,000	
Totals			1,560,000	1,525,000	-	60,000	-	17,200	5,200	12,000	-
MVFH	Sawtooth Weir	SawA	279,000	288,000				5,700	5,700		
	Little Salmon R. - Stinky Sp.	SawA	403,000	416,000				4,400	4,400		
	Pahsimeroi Weir	USRB	434,000			448,000		11,400	3,400	8,000	
	Yankee Fork	USRB	434,000	448,000				13,300	5,300	8,000	
Totals			1,550,000	1,152,000	-	448,000	-	34,800	18,800	16,000	-
NSFH	Pahsimeroi Weir	PahA	800,000	816,000				9,000	3,000		6,000
	Little Salmon R. - Stinky Sp.	PahA	200,000	212,000				2,300	1,800		500
	Little Salmon R. - Stinky Sp.	OxbA	250,000	258,000				2,800	2,300		500
	Snake R. Hells Canyon	OxbA	550,000	566,000				8,600	2,600		6,000
Totals			1,800,000	1,852,000	-	-	-	22,700	9,700	-	13,000
Grand Totals			4,910,000	4,529,000	-	508,000	-	74,700	33,700	28,000	13,000

¹ Marking and Tagging for the PRAS group is TBD.

1.4.2. Marking and Rearing Plan for 2024 (Smolt BY 2024) – 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
- 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 2024 (BY 2024)			
	Juvenile Fish Health	Fish Feeding	Rearing Conditions	Marking
<i>Niagara Springs Fish Hatchery (SOP Section 1.2)</i>				
L. Salmon R. Stinky Springs (OxbA)	NC	NC	NC	NC
Snake R. Hells Canyon (OxbA)	NC	NC	NC	NC
L. Salmon R. Stinky Springs (PahA)	NC	NC	NC	NC
Pahsimeroi Weir (PahA)	NC	NC	NC	NC
<i>Hagerman National Fish Hatchery (SOP Section 1.5)</i>				
East Fork Weir (EFnat)	NC	NC	NC	NC
Sawtooth Weir (SawA)	NC	NC	NC	NC
<i>Magic Valley Fish Hatchery (SOP Section 1.6)</i>				
Sawtooth Weir (SawA)	NC	NC	NC	NC
L. Salmon R. Stinky Springs (SawA)	NC	NC	NC	NC

Release Location	Plan for 2024 (BY 2024)			
	Juvenile Fish Health	Fish Feeding	Rearing Conditions	Marking
Pahsimeroi Weir (USRB)	NC	NC	NC	NC
Yankee Fork Salmon R., Lower (USRB)	NC	NC	NC	NC

2. Spring/Summer Chinook

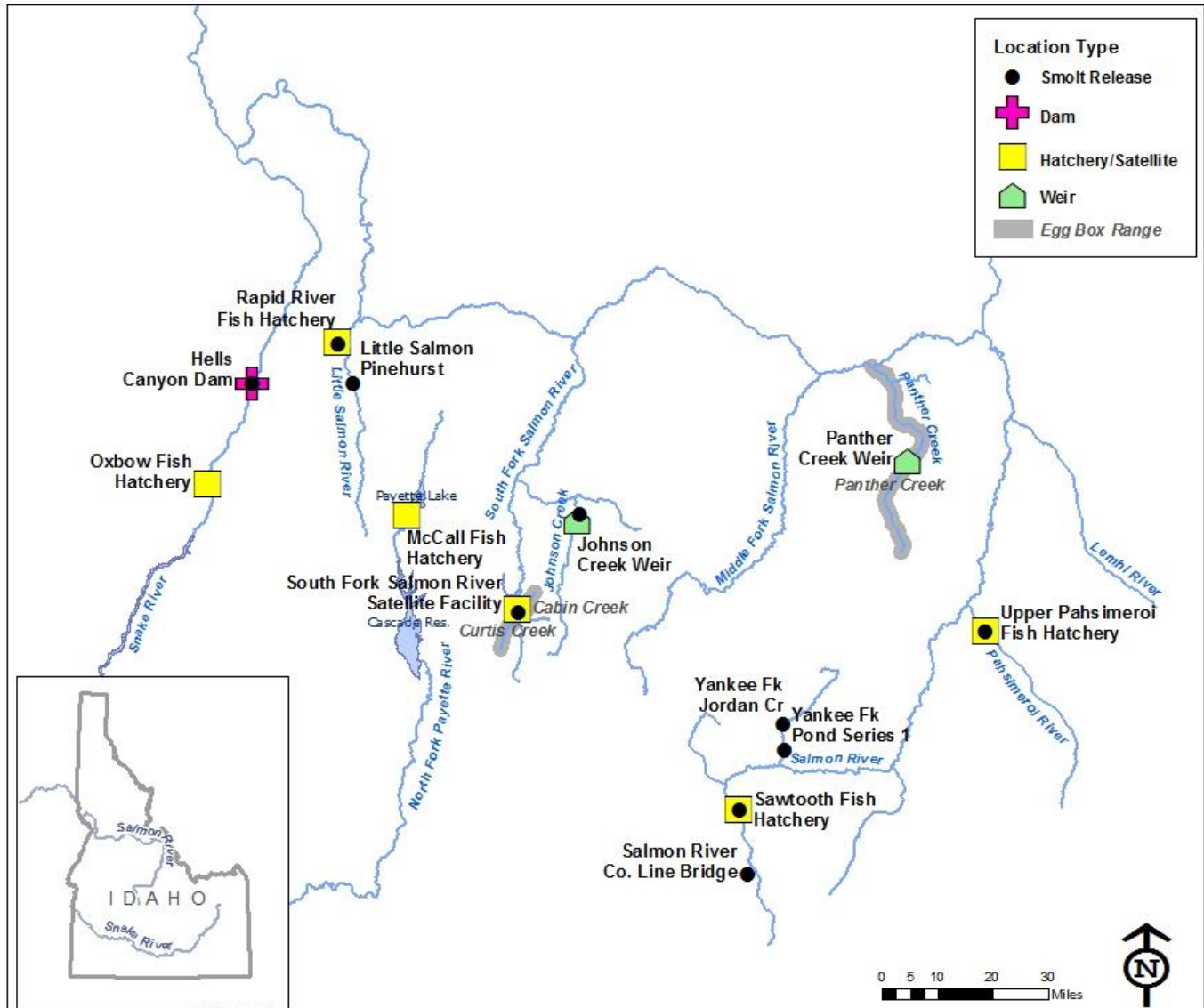


Figure 2.1. Spring/Summer Chinook salmon hatchery facilities and smolt release and egg box locations.

Table 2.1. Sp/Su Chinook Release Goals.

Smolts

Release Program	Release Site	Rearing Facility	Stock	BY2022 Smolt Release Goal
IPC / IDFG	Rapid River Hatchery	RRFH	RapidR	2,650,000
	Little Salmon (@ Pinehurst)		RapidR	0
	Hells Canyon		RapidR	350,000
Total				3,000,000
LSRCP / IDFG	Salmon R. - Co. Line Br. - Integrated	SFH	USRIInt	250,000
	Sawtooth Weir -Segregated		USRSeg	1,450,000
	Yankee Fork		USRSeg	300,000
	Panther Creek 1		PahSeg	-
Total				2,000,000
IPC / IDFG	Pahsimeroi Weir - Integrated	PFH	PahInt	65,000
	Pahsimeroi Weir - Segregated		PahSeg	935,000
Total				1,000,000
LSRCP / IDFG	SFSR Knox Br. - Integrated	McFH	SFSRIInt	150,000
	SFSR Knox Br. - Segregated		SFSRSeg	850,000
NPT	Johnson Creek			Johnson Cr.
Total				1,150,000
Grand Total				7,150,000

¹ No release target. Opportunistically reared one raceway of PFH fish to smolts for Panther Creek

Eggs

Program	Release Location	Hatchery Egg Source	Stock	Green Egg Target	Eyed Egg BY2024 Goal	Smolt BY2024 Release Goal
Egg Box Release						
SBT Eggbox	Curtis/Cabin Creek	McFH	SFSRSeg	344,372	300,000	NA
SBT Eggbox ²	Panther Creek	PFH/Panther Cr.	PahSeg/PantherCr	918,326	800,000	NA
Egg Transfer						
Clearwater Su Chinook ¹	Powell Ponds	McFH/CFH	SFSRSeg	0	0	0

¹ This program was discontinued starting BY2023

² Pahsimeroi should have capacity to incubate 800K eggs with stacks to be acquired from Oxbow rebuild

2.1. Timeline and Flowchart for Spring/Summer Chinook Production

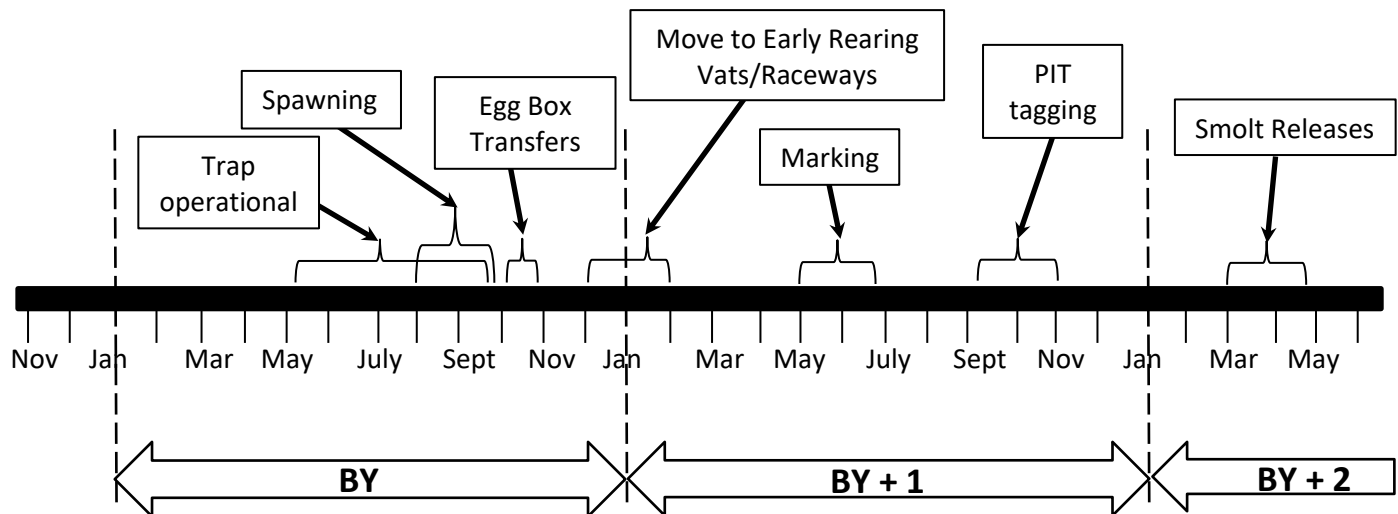
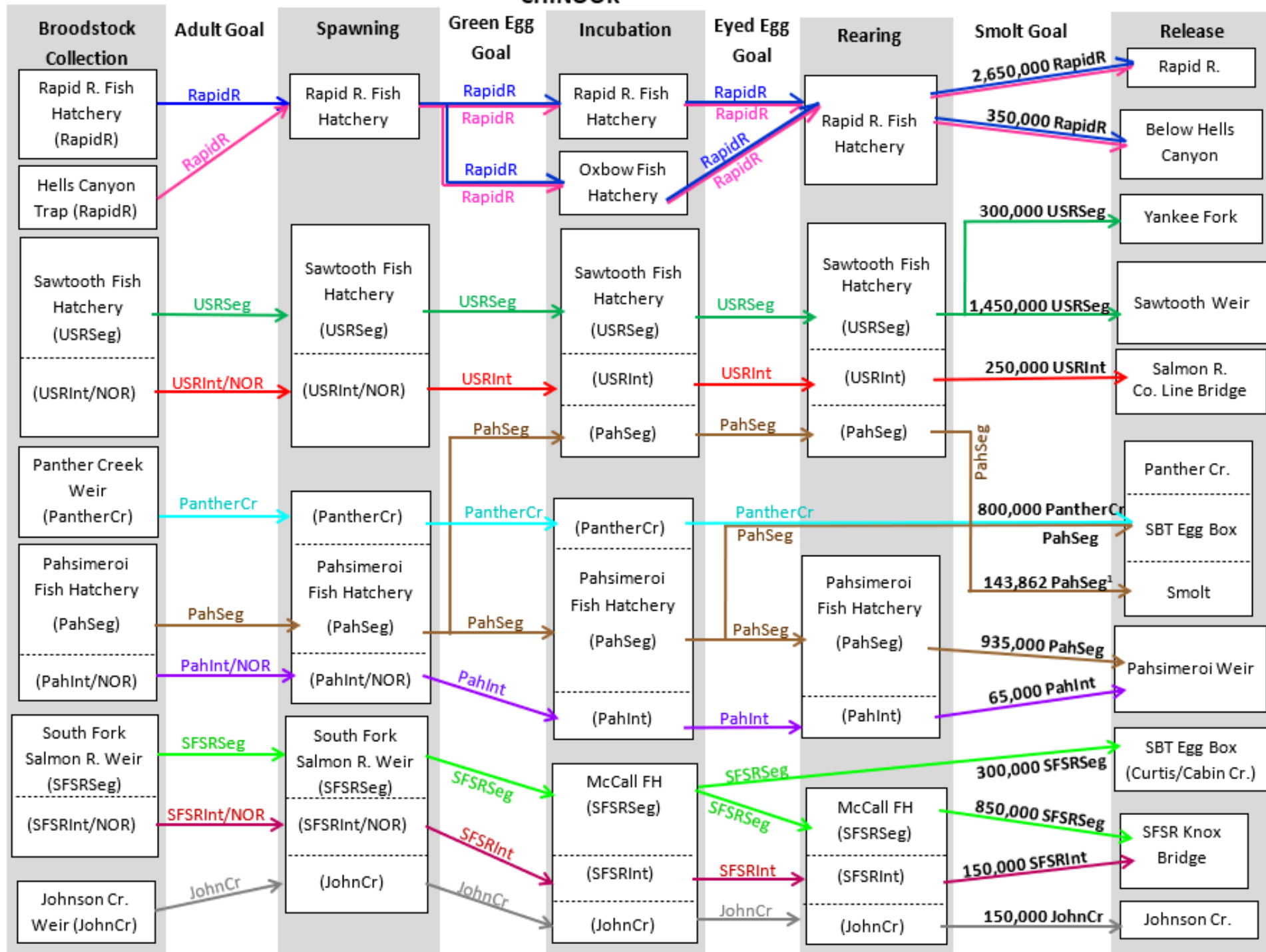


Figure 2.2. Timeline for Spring/Summer Chinook Production. Date ranges are shown to include all facilities' operations.

CHINOOK



¹ Represents estimate of actual release total. Smolt goal was zero for 2024 release.

Figure 2.3. Fish and Egg movements for Sp and Su Chinook. Numbers reflect 2024 releases.

2.2. Releases in 2024 (Smolt BY 2022, Egg Box BY 2024)

2.2.1. Releases in 2024 (Smolt BY 2022, Egg Box BY 2024) – Totals

Table 2.2a. BY2022 SMOLTS - Sp/Su Chinook Salmon inventories by life stage , smolts release goals and projected releases in 2024.

Hatchery	Release Site	Stock	Inventory To Date		Release Goals		Projected Smolt Release		
			Date	Number	Number	Size (FPP)	Dates	Number	Size (FPP)
RRFH	Rapid River Hatchery	RapidR	2/26		2,650,000	20	3/15-4/26	2,934,500	20
	Little Salmon (@ Pinehurst)	RapidR			0				
	Hells Canyon	RapidR			350,000	20	3/18-3/20	350,000	20
Total				3,286,083	3,000,000			3,284,500	
SFH	Salmon R. - Co. Line Br. - Integrated	USRInt	1/31/2024	176,891	250,000	18	4/2/24	171,637	20
	Sawtooth Weir -Segregated	USRSeg	1/31/2024	1,478,279	1,450,000	18	4/3-4/4/24	1,435,222	20
	Yankee Fork	USRSeg	1/31/2024	313,455	300,000	18	3/14/24	304,511	20
	Panther Creek ¹	PahSeg	1/31/2024	148,293	-	18	4/1/2024	143,862	20
Total				2,116,918	2,000,000			2,055,232	
PFH	Pahsimeroi Weir - Integrated	PahInt	1/10/2024	67,350	65,000	15	4/8-4/21/24	67,250	15
	Pahsimeroi Weir - Segregated ²	PahSeg	1/10/2024	1,046,600	935,000	15		1,045,500	15
Total				1,113,950	1,000,000			1,112,750	
McFH	SFSR Knox Br. - Integrated	SFSRInt	1/31/2024	117,265	150,000	20	4/9-4/12/24	117,050	20
	SFSR Knox Br. - Segregated	SFSRSeg	1/31/2024	814,572	850,000	20	4/9-4/12/24	813,500	20
	Johnson Creek	Johnson Cr.	1/21/2024	93,018	150,000	25	4/2-4/2024	92,500	25
Total				1,024,855	1,150,000			1,023,050	
Grand Total				7,541,806	7,150,000			7,475,532	

¹ No release target. Opportunistically reared one raceway of PFH fish to smolts for Panther Creek

² 14,000 smolts from this group released into Panther Creek to get on-site release at Pahsimeroi within 110% of smolt release goal.

Table 2.2b. BY2022 SMOLTS for release in 2024 - Sp/Su Chinook Salmon Inventory to Date by Mark Type in 2024

Hatchery	Release Site	Stock	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	OTHER
RRFH	Rapid River Hatchery	RapidR			2,818,021	118,062			51,880	32,000		20,000		
	Little Salmon (@ Pinehurst)	RapidR		3,286,083										
	Hells Canyon	RapidR			350,000									
Totals				3,286,083	3,168,021	118,062	-	-	51,880	32,000	0	20,000	0	0
SFH	Salmon R. - Co. Line Br. - Integrated	USRInt	1/31/24	176,891			176,891		999		1,000			
	Sawtooth Weir - Segregated	USRSeg	1/31/24	1,478,279	1,357,858	120,421			18,896	5,700	13,200			
	Yankee Fork	USRSeg	1/31/24	313,455	192,977	120,478			8,504	700	7,800			
	Panther Creek ¹	PahSeg	1/31/24	148,293	148,293				999		1,000			
Totals				2,116,918	1,699,128	240,899	176,891	-	29,398	6,400	23,000	0	0	0
Pah	Pahsimeroi Weir - Integrated	PahInt	1/10/24	67,350			67,350		1,000				1,000	
	Pahsimeroi Weir - Segregated ²	PahSeg	1/10/24	1,046,600	926,500	120,100			23,394	6,400		17,000		
Totals				1,113,950	926,500	120,100	67,350	-	24,394	6,400	0	17,000	1,000	0
McFH	SFSR Knox Br. - Integrated	SFSRInt	1/23/24	117,267			117,267		26,037	26,000				
	SFSR Knox Br. - Segregated	SFSRSeg	1/23/24	814,620	702,776	111,844			25,969	6,000	20,000			
	Johnson Creek	Johnson Cr.	1/31/24	91,158	-	-	91,158	-	1,939				1,939	
Totals				1,023,045	702,776	111,844	208,425	-	53,945	32,000	20,000	0	1,939	0
Grand Total				7,539,996	6,496,425	590,905	452,666	-	159,617	76,800	43,000	37,000	2,939	0

¹ No release target. Opportunistically reared one raceway of PFH fish to smolts for Panther Creek

² 14,000 smolts from this group released into Panther Creek to get on-site release at Pahsimeroi within 110% of smolt release goal. These fish were unmarked/untagged, but received 2,000 PIT tags to evaluate outmigration survival.

See **Table 2.1** for BY 2024 Sp/Su Chinook salmon egg transfers to streamside egg boxes in 2024.

2.2.2. Releases in 2024 (Smolt BY 2022, Egg Box BY 2024) – 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.

Location	Plan for 2024		Changes/Conditions that Occurred 2023-Early 2024		
	Release Target Smolt BY22, Egg BY24	Transport/Release Smolt BY22, Egg BY24	Fish Feeding BY22	Fish/Egg Health BY22	Marking BY22
<i>Rapid River Fish Hatchery (SOP Section 2.2)</i>					
Rapid River Hatchery (RapidR)	Added 150,000 to direct release	NC	Switched to BioPro diet for final feed size	NC	NC
Little Salmon R. (RapidR)	Eliminated this release, transferred number to direct release	NC	NC	NC	NC
Hells Canyon (RapidR)	NC	NC	Switched to BioPro diet for final feed size	NC	NC
<i>McCall Fish Hatchery (SOP Sections 2.3, 2.4 and 2.9)</i>					
SFSR Knox Bridge (SFSRInt)	The projected release of 117,200 smolts is ~78.1% of the release goal of 150,000	NC	NC	NC	NC
SFSR Knox Bridge (SFSRSeg)	NC	NC	NC	NC	NC
Johnson Cr. (JohnCr)	BY22 release is 38% below target	NC	NC	NC	NC
Curtis/Cabin Cr. Egg Box (SFSRSeg)	NC	NC			
<i>Pahsimeroi Fish Hatchery (SOP Section 2.5)</i>					
Pahsimeroi Weir Integrated (PahInt)	NC	NC	NC	Fish have tested positive for BKD, no clinical signs to date	NC

Location	Plan for 2024		Changes/Conditions that Occurred 2023-Early 2024		
	Release Target Smolt BY22, Egg BY24	Transport/Release Smolt BY22, Egg BY24	Fish Feeding BY22	Fish/Egg Health BY22	Marking BY22
Pahsimeroi Weir Segregated (PahSeg)	projected release is 112% of goal. 14,000 smolts released in Panther Creek in early April to get on-site release within 110% of release goal.	NC	~60K reared on well water to smolt	Fish in ponds have tested positive for BKD, no clinical signs to date	NC
Panther Cr. Egg Box (PanthCr/PahSeg)	NC	NC			
<i>Sawtooth Fish Hatchery (SOP Sections 2.6 and 2.8)</i>					
Salmon R - Co Line Bridge Integrated (USRInt)	The projected release of 171,637 smolts is ~68.7 of the release goal of 250,000	NC	NC	NC	Marking occurred in September due to fish not making size in Late May/Early June
Sawtooth Weir Segregated (USRSeg)	NC	NC	NC	Fish have tested positive and show Clinical BKD signs	Marking occurred in September due to fish not making size in Late May/Early June
Yankee Fork (USRSeg)	NC	Fish to be transported by Bower	NC	Fish have tested positive and show Clinical BKD signs	Marking occurred in September due to fish not making size in Late May/Early June
Panther Cr. Smolt (PahSeg)	Due to surplus eggs at PAH and extra rearing room at SFH	Fish to be transported by IDFG/Bower	NC	NC	Marking occurred in September due to fish not making size in Late May/Early June

2.3. Trap Operations and Production Planning for 2024 (Smolt BY 2024)

2.3.1. Trap Operations and Production Planning for 2024 (Smolt BY 2024) – TOTALS

Table 2.3a. BY 2024 Sp/Su Chinook Smolt Production Goals for Release in 2026.

Hatchery	Release Site	Stock	2026 Smolt Release Goals
RRFH	Rapid River Hatchery	RapidR	2,650,000
	Hells Canyon	RapidR	350,000
	Total		3,000,000
SFH	Salmon R. - Co. Line Br. - Integrated	USRInt	250,000
	Sawtooth Weir - Segregated	USRSeg	1,450,000
	Yankee Fork	USRSeg	300,000
	Total		2,000,000
PFH	Pahsimeroi Weir - Integrated	PahInt	65,000
	Pahsimeroi Weir - Segregated	PahSeg	935,000
	Total		1,000,000
McFH	SFSR Knox Br. - Integrated	SFSRInt	150,000
	SFSR Knox Br. - Segregated	SFSRSeg	850,000
	Johnson Creek	JohnCr	150,000
	Total		1,150,000
Grand Total			7,150,000

Table 2.3b. Sp/Su Chinook Egg Releases in 2024 and Egg Transfers used for BY 2024 Smolt Production (Release in 2026).

Program	Release Location	Hatchery Egg Source	Stock	Green Egg Target	Eyed Egg BY2024 Goal	Smolt BY2024 Release
Egg Box Release						
SBT Eggbox	Curtis/Cabin Creek	McFH	SFSRSeg	344,372	300,000	NA
SBT Eggbox ¹	Panther Creek	PAH/Panther Cr	Panther Cr.	918,326	800,000	NA

¹ Brood stock may be sourced from Panther Creek and transferred to the Pahsimeroi Hatchery in 2024.

Table 2.3c. BY2024 SMOLTS -Chinook Spawning for BY 2024 - Based on Brood Calculator.

Green Egg Goal					Spawning Goal						Broodstock Trapping Goals					
Spawning Facility	Stock	Rearing Hatchery	Release Site	Green Egg Goal	Fecundity	Spawn Goal						Projected Returns		Trapping Goal ³		
						HORSeg ⁴		HORInt ⁵		NOR ⁶		LGD				
						Female	Male	Female	Male	Female	Male	HORseg ⁴	HORint ⁵	Female	Male	Total
RRFH	RapidR	RRFH	Rapid River Trap	4,012,140	3,570	993	993					10,840		1,056	1,056	2,394
			Hells Canyon Trap			132	132					1,821		140	140	
SFH	USRInt	SFH	Salmon R. - Co. Line Br. - Int ¹	318,047	4,350			0	0	77	76		367	76	76	153
	USRSeg	SFH	Sawtooth Weir - Seg	1,742,528	4,200	415	415					2,182		428	428	856
			Yankee Fork	360,523	4,200	86	86					251		89	89	178
PFH	PahInt	PFH	Pahsimeroi - Int ¹	80,033	4,500			0	0	21	21		55	21	21	42
	PahSeg	PFH	Pahsimeroi - Seg	1,266,376	4,500	282	282					936		332	332	664
			SBT Eggbox - Panther Cr. ²			TBD	TBD							TBD	TBD	0
SFSR	SFSRInt	McFH	SFSR - Int ^{1, 7}	202,572	3,800			6	6	54	54		399	60	60	120
	SFSRSeg	McFH	SFSR - Seg ⁷	1,262,699	3,800	333	333					2,589		370	370	740
			SBT Eggbox - Curtis/Cabin Cr. ⁷	344,372	3,800	91	91							101	101	203
	JohnCr	McFH		Johnson Creek ⁸	227,350	4,200					55	46			61	61

¹ Origin of broodstock for Integrated programs will be determined in-season based on abundance projections.

² Brood for these eggs are not included in stated brood goals and will come from fish trapped in excess of brood needs for the onsite smolt program.

³ Broodstock trapping need is dictated by number of females needed

⁴ HORSeg: Adult Hatchery Origin fish that are progeny of a Segregated program

⁵ HORInt: Adult Hatchery Origin fish that are progeny of an Integrated program

⁶ NOR: Adult Natural Origin fish

⁷ After fulfilling brood stock needs for integrated smolt production, prescribed sliding scale releases above weir to spawn, and segregated brood stock (up to 30%), eggs from integrated adults could be used to supply eggs for the egg box program.

⁸ Trapping Goal at Johnson Cr is for NOR fish.

2.3.2. Trap Operations and Production Planning for 2024 (Smolts BY 2024) – 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/Egg Release Location	Plan for 2024 (BY 2024)				
	Adult Fish Health	Trap Ops	Production target changes	Spawning protocol changes	Disposition of adults
<i>Rapid River Fish Hatchery and Hells Canyon Traps (SOP Section 2.2)</i>					
Rapid River Hatchery (RapidR)	NC	NC	Added 150,000 from Little Salmon R. release group	NC	NC
Hells Canyon (RapidR)	NC	only trap enough adults to meet C&S goals	NC	NC	no broodstock or releases; only C&S
<i>South Fork Salmon River and Johnson Creek Weirs (SOP Sections 2.3 and 2.4)</i>					
Johnson Cr. (JohnCr)	NC	NC	NC	NC	NC
SFSR Knox Bridge Integrated (SFSRInt)	NC	see SOP edits that address transport and holding brood at McFH	NC	NC	NC
SFSR Knox Bridge Segregated (SFSRSeg)	NC	see SOP edits that address transport and holding brood at McFH	NC	NC	NC
SBT Egg Box – Curtis/Cabin Cr. (SFSRSeg)	NC	see SOP edits that address transport and holding brood at McFH	NC	NC	NC
<i>Pahsimeroi Fish Hatchery Trap (SOP Section 2.5)</i>					
Pahsimeroi Weir Integrated (PahInt)	NC	NC	NC	NC	NC
Pahsimeroi Weir Segregated (PahSeg)	NC	NC	NC	NC	NC
SBT Egg Box - Panther Creek (PahSeg)	NC	NC	800K goal reflected in SOP	NC	NC

Juvenile/Egg Release Location	Plan for 2024 (BY 2024)				
	Adult Fish Health	Trap Ops	Production target changes	Spawning protocol changes	Disposition of adults
<i>Sawtooth Fish Hatchery (SOP Sections 2.6, 2.7 and 2.8)</i>					
Salmon R - Co Line Bridge Integrated (USRInt)	NC	Continue using West adult holding pond as trap with potential for altering ladder entry	NC	NC	NC
Sawtooth Weir Segregated (USRSeg)	NC	Continue using West adult holding pond as trap with potential for altering ladder entry	NC	NC	NC
Yankee Fork (USRSeg)	NC	Continue using West adult holding pond as trap with potential for altering ladder entry	NC	NC	NC

2.4. Early Rearing and Marking Plan for 2024 (Smolt BY 2023)

2.4.1. Early Rearing and Marking Plan for 2024 (Smolt BY 2023) – TOTALS

Table 2.4a. Sp/Su Chinook Projected Marking of BY 2023 juveniles to be marked in 2024 (released in 2025).

Hatchery	Release Site	Stock	Likely Marking Date(s)	Release Goals for 2024	Inventory to Date		Projected Release	Projected Marking				PIT Tags					
								Adipose Fin Clip		No Clip		Total # Tags	Funding Source				
					Date	Number	Number	No CWT	CWT	CWT	No CWT		CSS	LSRCP	IPC	BPA	Other
RRFH	Rapid River Hatchery	RapidR	6/10-6/21	2,650,000	2/13/24	3,331,767	2,825,000	2,705,000	120,000			52,000	32,000		20,000		
	Hells Canyon	RapidR		350,000			350,000				-						
Totals				3,000,000		3,331,767	3,175,000	3,055,000	120,000	-	-	52,000	32,000	0	20,000	0	0
SFH	Salmon R. - Co. Line Br. - Int	USRInt	5/28-6/6	250,000	1/31/24	243408	234,480			250,000		1,000		1,000			
	Sawtooth Weir -Seg	USRSeg		1,450,000	1/31/24	2301260	2,229,865		120,000			18,900	5,700	13,200			
	Yankee Fork	USRSeg		300,000				120,000			8,500	700	7,800				
Irrigon	Yankee Fork ²	USRSeg	Unmarked (PBT only)	NA	4/1/24	211,994	211,000					2,000		2,000			
Totals				2,000,000		2,756,662	2,675,345	-	240,000	250,000	-	30,400	6,400	24,000	0	0	0
PFH	Pahsimeroi Weir - Int	PahInt	5/13-5/21	65,000	2/23/24	103,141	97,984			65,000		1,000					1,000
	Pahsimeroi Weir - Seg ¹	PahSeg	5/13-5/21	935,000	2/23/24	1,043,126	990,970		120,000			22,400	6,400		16,000		
Totals				1,000,000		1,146,267	1,088,954	-	120,000	65,000	-	23,400	6,400	0	16,000	0	1,000
McFH	SFSR Knox Br. - Int	SFSRInt	7/15-7/26	150,000	2/26/24	163,326	161,235			161,235		26,000	26,000				
	SFSR Knox Br. - Seg	SFSRSeg	6/17-6/21, 7/15-7/26	850,000	2/26/24	967,237	965,357	859,168	106,189			26,000	6,000	20,000			
	Johnson Creek	JohnCr	7/15-7/26	150,000	1/31/24	149,950	140,000	-	-	140,000	-	2,100				2,100	
Totals				1,150,000		1,280,513	1,266,592	859,168	106,189	301,235	-	54,100	32,000	20,000	0	2,100	0
Grand Totals				7,150,000		8,515,209	8,205,891	3,914,168	586,189	616,235	-	159,900	76,800	44,000	36,000	2,100	1,000

¹ Total PIT tags (22,400) includes 1,000 tags for the indoor rearing evaluation.

² Fish reared opportunistically at Irrigon to evaluate performance of sub-yearling release strategy in Yankee Fork.

2.4.2. Early Rearing and Marking Plan for 2024 (Smolt BY 2023) – 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 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.
- Meets Release Target - . If projected marking lines up with the current inventory, then no comment is needed at this bullet (enter NC). If current inventory is 10% above or below the projected numbers, provide the projected release, % above/below then explain why.

Release Location	Plan for 2024 (BY 2023)				
	Juvenile Fish Health	Fish Feeding	Rearing Conditions	Marking	Meets Release Target
<i>Rapid River Fish Hatchery (SOP Section 2.2)</i>					
Rapid River Hatchery (RapidR)	NC	NC	NC	NC	NC
Little Salmon R. (RapidR)	Eliminated this release group.				
Hells Canyon (RapidR)	NC	NC	NC	NC	NC
<i>McCall Fish Hatchery (SOP Section 2.3 and 2.4)</i>					
Johnson Cr. (JohnCr)	NC	NC	NC	NC	NC
Knox Bridge Integrated (SFSRIInt)	NC	Will explore options for low phos feed July-Sept	NC	NC	NC
Knox Bridge Segregated (SFSRSeg)	NC	Will explore options for low phos feed July-Sept	NC	NC	NC
<i>Pahsimeroi Fish Hatchery (SOP Section 2.5)</i>					
Pahsimeroi Ponds Integrated (PahInt)	NC	NC	NC	NC	NC

Release Location	Plan for 2024 (BY 2023)				
	Juvenile Fish Health	Fish Feeding	Rearing Conditions	Marking	Meets Release Target
Pahsimeroi Ponds Segregated (PahSeg)	NC	NC	Will repeat well water rearing trial with ~60K SEG smolts	120K CWT will be split 60K well water + 60K pond rearing. 1,000 fish in the well-water study group will be PIT tagged.	NC
<i>Sawtooth Fish Hatchery (SOP Sections 2.6 and 2.8)</i>					
Salmon R - Co Line Bridge Integrated (USRInt)	NC	Fish fed every half hour for initial feeding	NC	NC	NC
Sawtooth Weir Segregated (USRSeg)	NC	Fish fed every half hour for initial feeding	NC	NC	Final rearing/release numbers will be determined at marking
Yankee Fork (USRSeg)	NC	Fish fed every half hour for initial feeding	NC	NC	Final rearing/release numbers will be determined at marking
<i>Irrigon Fish Hatchery</i>					
Yankee Fork (USRSeg)	NC	NC	NC	NC	NC

3. Fall Chinook

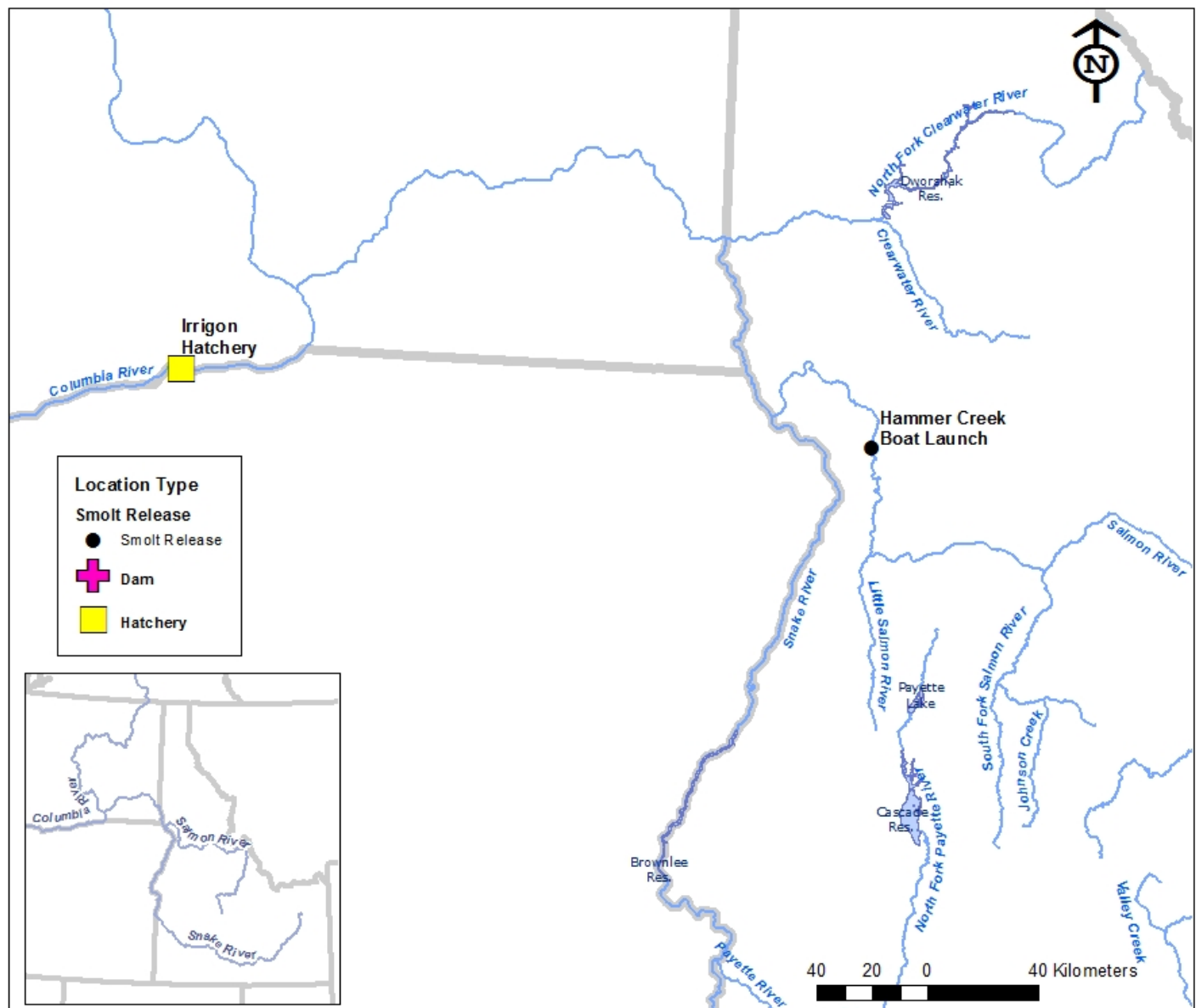


Figure 3.1. Fall Chinook Salmon facilities and smolt release locations.

Table 3.1. Fall Chinook Release Goals.

Hatchery	Release Site	Release Goals
IFH	Salmon R.-Hammer Cr	1,000,000

3.1. Releases in 2024 (Sub-Yearling BY 2023)

3.1.1. Releases in 2024 (Sub-Yearling BY 2023) – Totals

Table 3.2a. BY2023 Fall Chinook Sub-yearling Marking and Releases in 2024.

Hatchery	Release Site	Likely Release Date	Release Goals	Projected Actual Releases					
				Total	Adipose Fin Clip		No Clip		PIT Tag
					No CWT	CWT	CWT	No CWT	
IFH	Salmon R.-Hammer Cr	5/15 and 5/16/24	1,000,000	1,000,000		200,000		800,000	4,500

3.1.2. Releases in 2024 (Sub-Yearling BY 2023) - 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.

Location	Smolt Release Target	Fish Health	Transportation/Releases
<i>Irrigon Fish Hatchery (IDFG) (SOP Section 3.1)</i>			
Salmon R. - Hammer Cr.	NC	NC	NC

3.2. Trap Operations and Production Planning for 2024 (Sub-Yearling BY 2024)

Refer to Lyons Ferry AOP

3.3. Marking and Rearing Plan for 2024 (Sub-Yearling BY 2023)

Refer to Lyons Ferry AOP

4. Sockeye

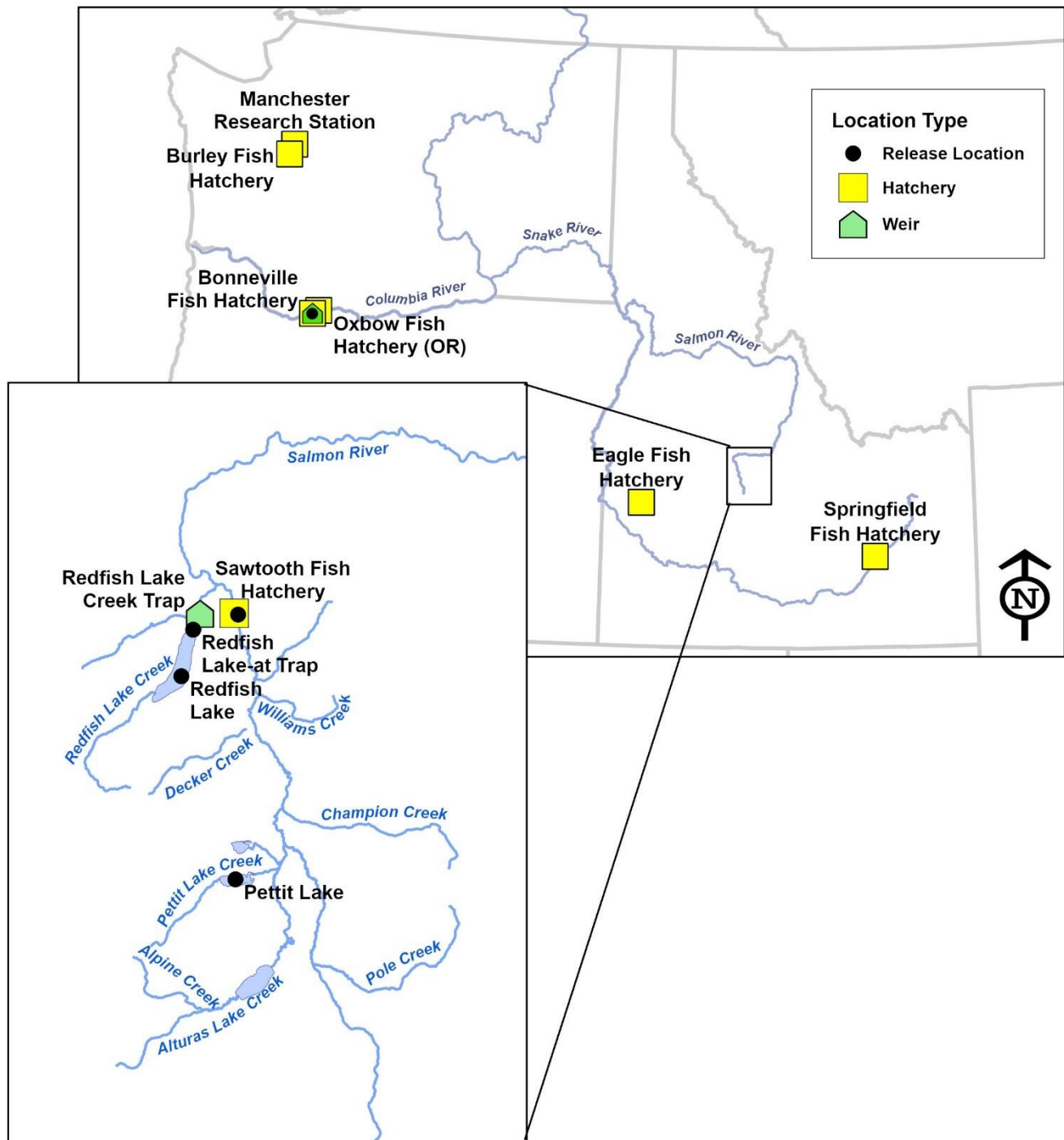


Figure 4.1. Sockeye salmon traps, hatchery facilities, and smolt and adult release locations.

Table 4.1. Sockeye 2024 Release Goals.

Rearing Facility	Release Site	Parent Stock	2024 Smolt Release Goal (BY 2022)
Springfield	Redfish Lake Cr. ¹	Snake R.	1,000,000
Oxbow FH (OR)	Tanner Creek ²	Snake R.	40,000
Grand Total			1,040,000

Rearing Facility	Release Site	Parent Stock	Brood Year	2024 Captive-Reared Minimum Adult Release Goal ³
NOAA - Burley Creek	Redfish Lake	Snake R.	2019	0
	Redfish Lake	Snake R.	2020	50
	Redfish Lake	Snake R.	2021	100
	Pettit Lake	Snake R.	2021	100
Total				250
Eagle Fish Hatchery	Redfish Lake	Snake R.	2020	-
	Redfish Lake	Snake R.	2021	100
Total				100
Grand Total				350

¹ Smolts are acclimated at Sawtooth Fish Hatchery for ~2 weeks prior to release.

² Smolts are transferred to Bonneville FH and acclimated on Tanner Creek water before volitional release.

³ The minimum release target for the Sockeye captive broodstock program is 250 adults to Redfish Lake and 100 captive adults to Pettit Lake. Additionally, any anadromous adults that assign to Pettit Lake will be released to Pettit Lake.

4.1. Timeline and Flowchart for Sockeye Salmon Production

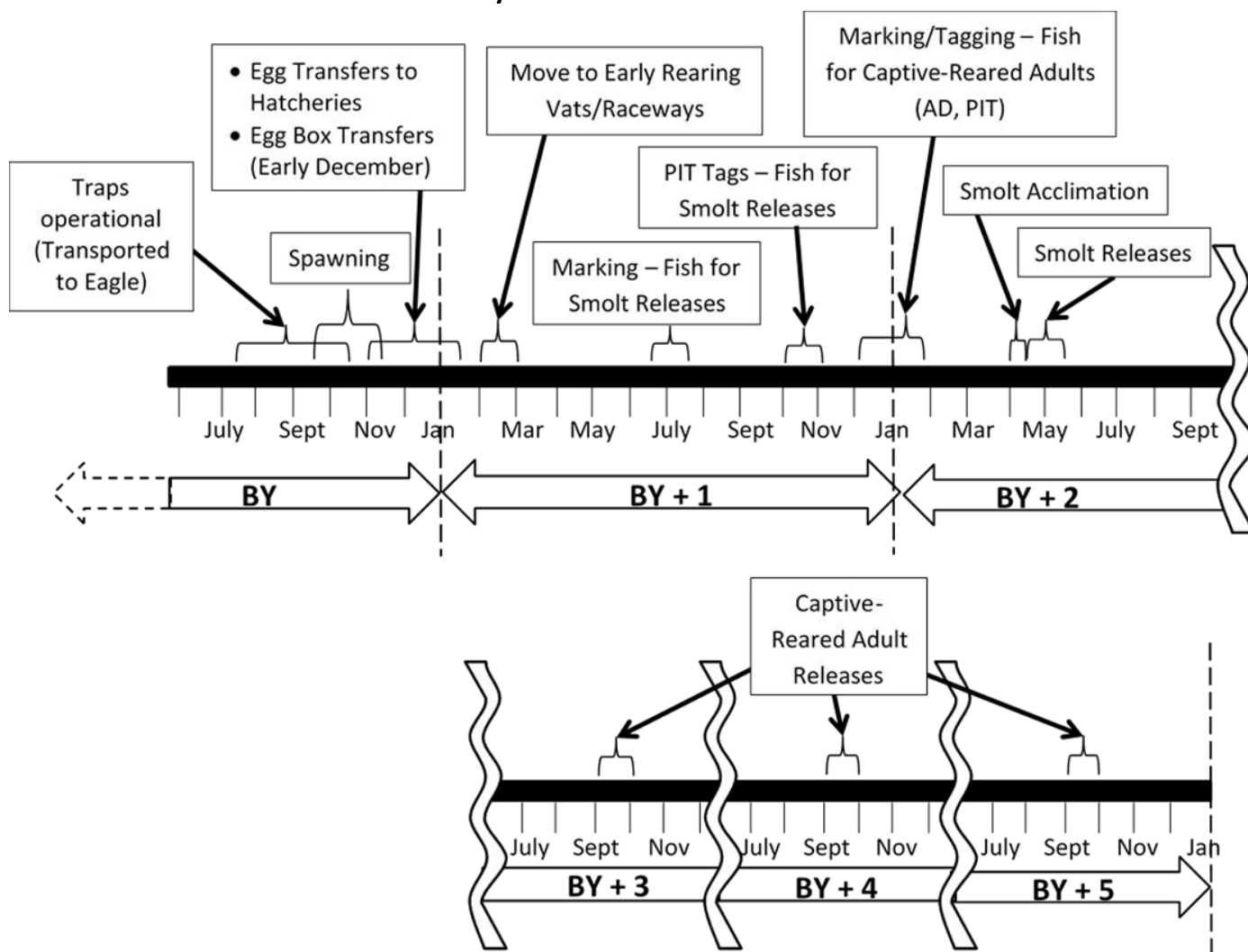


Figure 4.2. Timeline for Sockeye Salmon production. Date ranges are shown to include all facilities' operations.

Sockeye

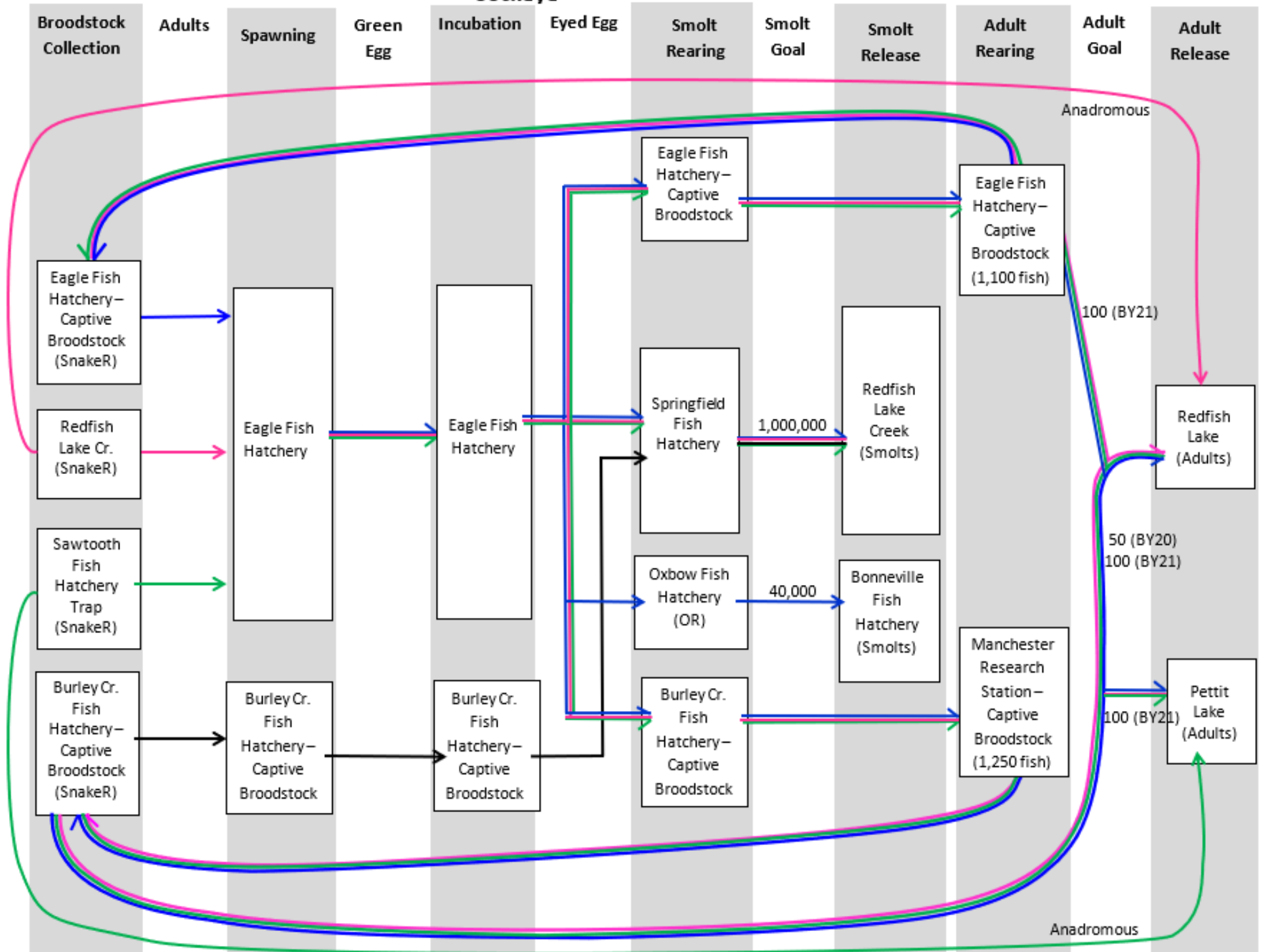


Figure 4.3. Fish and Egg movements for Sockeye. Release numbers reflect 2024 releases.

4.2. Releases in 2024 (Smolt BY22, Captive Adult BY21, BY20, BY19)

4.2.1. Releases in 2024 (Smolt BY22, Captive Adult BY21, BY20, BY19) – Totals

Table 4.2a. Sockeye Captive-Reared Adult Releases in 2024.

Hatchery	Brood year	Release Site	Stock	Likely Release Date	Captive Adult Release Goals ¹
NOAA - Burley Creek	2019	Redfish Lake	Snake R.	Sept.	-
	2020	Redfish Lake	Snake R.	Sept.	50
	2021	Redfish Lake	Snake R.	Sept.	100
	2021	Pettit Lake	Snake R.	Sept.	100
Total					250
Eagle	2020	Redfish Lake	Snake R.	Sept.	-
	2021	Redfish Lake	Snake R.	Sept.	100
Total					100
Grand Total					350

¹ All captive reared adults will be adipose clipped and PIT tagged prior to release

Table 4.2b. BY 2021 Sockeye Smolt Releases in 2024.

Hatchery	Release Site	Stock	Likely Release Date	Release Goals	Projected Actual Releases					PIT Tags		
					Total	Adipose Fin Clip		No Clip		Total # Tags	Funding Source	
						No CWT	CWT	CWT	No CWT		CSS	BPA
Springfield	Redfish Lake Cr. 1	Snake R.	May 7 - 9	1,000,000	1,027,121	0	0	0	1,027,121	55,300	39,800	15,500
Oxbow FH (OR)	Tanner Creek 2	Snake R.	May 10 - 20	40,000	47,500	0	47,500	0	0	0	0	0
Grand Total				1,040,000	1,074,621	0	47,500	0	1,027,121	55,300	39,800	15,500

¹ Smolts are acclimated at Sawtooth Fish Hatchery for ~2 weeks prior to release.

² Smolts are transferred to Bonneville FH and acclimated on Tanner Creek water before volitional release.

4.2.2. Releases in 2024 (Smolt BY22, Captive Adult BY21, BY20, BY19) – 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 your 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.

Location	Plan for 2024		Changes/Conditions that Occurred 2023-Early 2024
	Release Target Smolt BY22, Adult BY21, BY20, BY19	Transport/Release Smolt BY22, Adult BY21, BY20, BY19	Fish/Egg Health BY23, BY22, BY21, BY20, BY19
<i>Eagle Fish Hatchery (SOP Section 4.3)</i>			
Redfish Lake – Adult Releases (SnakeR)	NC	NC	IHNv was present in the anadromous returning adults during 2023.
Pettit Lake – Egg Releases (SnakeR)	NC	NC	Eyed eggs from two anadromous females testing positive for BKD (Moderate ELISA values) were released in egg boxes to Pettit Lake.
<i>Burley Creek Fish Hatchery (NOAA) (SOP Section 4.3)</i>			
Redfish Lake – Adult Releases (SnakeR)	NC	NC	NC
Pettit Lake - Adult Releases (Snake River)	NC	NC	NC
<i>Springfield Fish Hatchery (SOP Section 4.4)</i>			
Redfish Lake Creek– Smolt Releases (SnakeR)	NC	NC	BY22 Springfield FH smolts are not marked or tagged (No Ad clip or PITs).
<i>Oxbow/Bonneville Fish Hatcheries</i>			
Tanner Creek - Smolt Releases	Approximately 47,000 BY22 smolts will be released from Bonneville FH in 2024.	BY22 juveniles reared at Oxbow FH were transferred to Bonneville FH in December 2023 for final rearing. Smolts will be acclimated on Tanner Cr. water before volitional release.	BY23 Sockeye juveniles currently rearing at Oxbow FH.

4.3. Trap Operations and Production Planning for 2024 (BY 2024 for Smolt and Captive Adult Programs)

4.3.1. Trap Operations and Production Planning for 2024 (BY 2024 for Smolt and Captive Adult Programs) – TOTALS

Table 4.3a. Sockeye Spawning for BY 2024.

Site	Stock	Type	Forecast return/ Available Broodstock	Trapping period	Broodstock Need ¹			
					M:F Ratio	Female	Male	Total
Redfish Lake	Snake R.	Anad	662	July 15 - Oct. 15	1:1	121	121	242
Pettit Lake	Snake R.	Anad	21	July 15 - Oct. 1	1:1	0	0	0
Eagle FH ²	Snake R.	Captive	1,350	NA	1:1	375	375	750
Burley Creek ²	Snake R.	Captive	1,250	NA	1:1	401	401	802
Grand Total			3283			897	897	1794

¹ Broodstock needs are estimates based on anadromous run forecast. Proportion of anadromous and captive broodstocks may be adjusted realtime based on actual number of anadromous Sockeye trapped.

² This number reflects estimated number of captive broodstock available for spawning.

4.3.2. Trap Operations and Production Planning for 2024 (BY 2024 for Smolt and Captive Adult Programs) – 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 2024 (BY 2024)					
Location	Adult Fish Health	Trap Ops	Forecast Returns	Broodstock Needs	Spawning protocol changes	Disposition of adults
<i>Eagle Fish Hatchery (SOP Section 4.3)</i>						
Eagle FH Captive Broodstock (SnakeR)	NC	NC	NC	NC	NC	NC
<i>Burley Creek Fish Hatchery (SOP Section 4.3)</i>						
Burley Cr. FH Captive Broodstock (SnakeR)	NC	NC	NC	NC	NC	NC
<i>Sawtooth Fish Hatchery (SOP Sections 4.2 and 4.5)</i>						
Redfish Lake Creek (SnakeR)	NC	NC	NC	NC	NC	NC
Sawtooth Trap (SnakeR)	NC	Continue using West adult holding pond as trap with potential for altering ladder entry; proposing to fill in the scour hole below the weir in FY 24 to facilitate better passage; other possible FY 24 trapping and weir operation changes to benefit sockeye still TBD	NC	NC	NC	NC
Pettit Lake Creek Trap (SnakeR)	NC	NC	NC	NC	NC	NC

4.4. Marking and Rearing Plan for 2024 (Smolt BY 2023)

4.4.1. Marking and Rearing Plan for 2024 (Smolt BY 2023)– TOTALS

Table 4.4a. BY 2023 Sockeye Marking in 2024.

Hatchery	Release Site	Stock	Likely Release Date	Release Goals for 2025	Projected Actual Releases					PIT Tags ¹		
					Total	Adipose Fin Clip		No Clip		Total # Tags	Funding Source	
						No CWT	CWT	CWT	No CWT		CSS	BPA
Springfield	Redfish Lake Cr.	Snake R.	May 7 - 9	1,000,000	872,085	872,085	0	0	0	58,800	39,800	19,000
Oxbow FH (OR)	Tanner Creek ²	Snake R.		40,000	40,000	0	40,000	0	0	0	0	0
Grand Total				1,040,000	912,085	872,085	40,000	0	0	58,800	39,800	19,000

¹ PIT tag distribution between release groups is currently being discussed.

² Smolts are transferred to Bonneville FH and acclimated on Tanner Creek water before volitional release.

4.4.2. Marking and Rearing Plan for 2024 (Smolt BY 2023) – 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
- 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.

Location	Fish Health	Fish Feeding	Rearing Conditions	Marking
<i>Springfield Fish Hatchery (SOP Section 4.4)</i>				
Springfield (SnakeR)	NC	Growth trajectory modified by maintaining constant delta L or by feeding a constant % body weight.	Delay ponding in one study group by use of chilled water during incubation to allow accelerated growth through fall and winter to meet release targets.	NC

5. Appendices

5.1. BY2024 Brood Calculator

5.1.1. BY2024 Brood Calculator – SMOLT RELEASES

PROGRAM INPUTS							HISTORICAL HATCHERY PERFORMANCE METRICS (5-YR AVG)						FORM CALCULATED VALUES										
				PREFERED TRAPPING SITE	FORMAL SMOLT 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	
SPECIES	HATCHERY	RELEASE SITE	STOCK	SITE	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)	(T)	(U)	(V)	(W)	(X)	
STLHD	HNFH	Sawtooth Weir	SawA	SFH	1,410,000	1.20%	50%	0.00%	5,050	100.00%	92.50%	92.00%	1,426,920	1,551,000	1,676,757	1,676,757	333	333	666	666	666	2,143	
		Sawtooth Weir (RAS Eval)	SawA	SFH	90,000	1.20%	50%	0.00%	5,050	100.00%	92.50%	92.00%	91,080	99,000	107,027	107,027	22	22	44	44	44	2,070	
		E. Fork Salmon R. - Upper	EFNat	EFSRSF	60,000	3.75%	50%	0.00%	5,775	100.00%	90.00%	88.90%	62,250	70,022	77,803	77,803	14	14	28	28	28	2,223	
	MVFH	Sawtooth Weir	SawA	SFH	279,000	0.00%	50%	0.00%	5,050	100.00%	92.50%	84.00%	279,000	332,143	359,073	359,073	72	72	144	144	144	1,938	
		Little Salmon R. - Stinky Sp.	SawA	SFH	403,000	0.00%	50%	0.00%	5,050	100.00%	92.50%	84.00%	403,000	479,762	518,662	518,662	103	103	206	206	206	1,956	
		Pahsimeroi Weir	USRB	PFH	434,000	0.00%	60%	5.00%	6,200	100.00%	90.00%	84.00%	434,000	516,667	574,074	574,074	93	62	155	164	245	2,646	
	NSFH	Yankee Fork	USRB	YFT	434,000	0.00%	60%	5.00%	6,200	100.00%	90.00%	84.00%	434,000	516,667	574,074	574,074	93	62	155	164	245	2,646	
		Pahsimeroi Weir	PahA	PFH	800,000	10.00%	50%	0.00%	6,200	100.00%	93.00%	90.00%	880,000	977,778	1,051,374	1,051,374	170	170	340	340	340	2,588	
		Little Salmon R. - Stinky Sp.	PahA	PFH	200,000	10.00%	50%	0.00%	6,200	100.00%	93.00%	90.00%	220,000	244,444	262,843	262,843	43	43	86	86	86	2,558	
		Little Salmon R. - Stinky Sp.	OxbA	HCT	250,000	20.00%	50%	36.00%	6,201	96.00%	87.80%	97.00%	300,000	309,278	352,253	366,930	60	60	120	188	188	1,596	
		Snake R. Hells Canyon	OxbA	HCT	550,000	20.00%	50%	36.00%	6,201	96.00%	87.80%	97.00%	660,000	680,412	774,957	807,247	131	131	262	410	410	1,610	
SP/SU CH	RRFH	Rapid River Hatchery	RapidR	RRFH	2,650,000	10.00%	50%	6.00%	3,570	94.00%	92.30%	94.80%	2,915,000	3,074,895	3,331,413	3,544,057	993	993	1986	2113	2113	1,380	
		Hells Canyon	RapidR	RRFH	350,000	10.00%	50%	6.00%	3,570	94.00%	92.30%	94.80%	385,000	406,118	439,998	468,083	132	132	264	281	281	1,370	
	SFH	Salmon R. - Co. Line Br. - Integr	USRIInt	SFH	250,000	0.00%	50%	3.00%	4,350	96.00%	92.00%	89.00%	250,000	280,899	305,325	318,047	74	74	148	153	153	1,634	
		Sawtooth Weir -Segregated	USRSeg	SFH	1,450,000	3.00%	50%	3.00%	4,200	96.00%	93.00%	96.00%	1,493,500	1,555,729	1,672,827	1,742,528	415	415	830	856	856	1,745	
	PFH	Yankee Fork	USRSeg	SFH	300,000	3.00%	50%	3.00%	4,200	96.00%	93.00%	96.00%	309,000	321,875	346,102	360,523	86	86	172	178	178	1,736	
		Pahsimeroi Weir - Integrated	PahInt	PFH	65,000	0.00%	50%	14.00%	4,500	94.00%	90.00%	96.00%	65,000	67,708	75,231	80,033	18	18	36	42	42	1,548	
		Pahsimeroi Weir - Segregated	PahSeg	PFH	935,000	10.00%	50%	15.00%	4,500	94.00%	90.00%	96.00%	1,028,500	1,071,354	1,190,394	1,266,376	282	282	564	664	664	1,549	
	McFH	SFSR Knox Br. - Integrated	SFSRIInt	SFSRW	150,000	0.00%	50%	10.00%	3,800	95.00%	91.70%	85.00%	150,000	176,471	192,443	202,572	54	54	108	120	120	1,250	
		SFSR Knox Br. - Segregated	SFSRSeg	SFSRW	850,000	10.00%	50%	10.00%	3,800	95.00%	91.70%	85.00%	935,000	1,100,000	1,199,564	1,262,699	333	333	666	740	740	1,264	
		Johnson Creek	JohnCr	JCW	150,000	10.00%	55%	10.00%	4,200	97.00%	86.00%	87.00%	165,000	189,655	220,529	227,350	55	46	101	112	135	1,473	
FALL CH	IFH	Salmon R.-Hammer Cr			1,000,000								1,000,000	#DIV/0!	#DIV/0!	#DIV/0!	#VALUE!	#VALUE!	#DIV/0!	#VALUE!	#VALUE!	#DIV/0!	
SOCKEYE	SpFH	Redfish Lake Creek	Redfish Lk	RFLC/SFH	175,000	0.00%	50.00%	5.00%	2,200	95.00%	75.00%	93.00%	175,000	188,172	250,896	264,101	121	121	242	255	255	686	
		Redfish Lake Creek	Redfish Lk	EFH CB	390,000	0.00%	50.00%	2.00%	1,600	100.00%	70.00%	93.00%	390,000	419,355	599,078	599,078	375	375	750	766	766	509	
		Redfish Lake Creek	Redfish Lk	NOAA CB	475,000	0.00%	50.00%	2.00%	1,700	100.00%	75.00%	93.00%	475,000	510,753	681,004	681,004	401	401	802	819	819	580	
In the 2013 AOP process, the co-managers approved a 10% cushion to meet release targets											CELL FORMULAS		G*(1+H)	O/(N)	P/(M)	Q/(L)	ROUNDUP (R/K,O)	S/(I)-S	T+S	ROUNDUP P(U/(1-	ROUNDUP(S/(1-I)/(1-	O/V	
Culling of eggs for BKD, IHN, etc.																							

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.

5.1.3. BY2024 Brood Calculator – EGG RELEASES

PROGRAM INPUTS							HISTORICAL HATCHERY PERFORMANCE METRICS (5-YR AVG)						FORM CALCULATED VALUES									
SPECIES	HATCHERY	RELEASE SITE	STOCK	PREFERRED TRAPPING SITE	FORMAL EGG RELEASE GOAL	COMANAGER APPROVED CUSHION % ¹	% FEMALES IN BROODSTOCK	% MORTALITY DURING HOLDING	GREEN EGG FECUNDITY	% SURVIVAL AFTER DISEASE CULLING ²	% SURVIVAL GREEN TO EYED EGG	% SURVIVAL EYED EGG TO RELEASE	EGG 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
					(G)	(H)		(I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)	(T)	(U)	(V)	(W)
STHD	PFH	SBT Egg Box-Yankee Fork	USRB/SawA	PFH	500,000	0%	60%	5.00%	6,200	100.00%	84.00%	NA	500,000	500,000	595,238	595,238	97	64.66667	161.6667	171	256	2,924
		SBT Egg Box-Panther Creek	PahA	PFH	400,000	10%	50%	0.00%	6,200	100.00%	88.00%	NA	440,000	440,000	500,000	500,000	81	162	162	162	2,716	
		SBT Egg Box-Indian Creek	PahA	PFH	100,000	10%	50%	0.00%	6,200	100.00%	88.00%	NA	110,000	110,000	125,000	125,000	21	21	42	42	42	2,619
SP/SU CH	PFH	Panther Creek - EGG BOX	PahSeg	PFH	800,000	0%	50%	15.00%	4,500	95%	91.70%	NA	800,000	800,000	872,410	918,326	205	205	410	483	483	1,656
	McFH	Curtis/Cabin Creek - EGG BOX	SFSRSeg	McFH	300,000	0%	50%	10.00%	3,800	95%	91.70%	NA	300,000	300,000	327,154	344,372	91	91	182	203	203	1,478

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.

5.2. Steelhead Alternate Broodstock Sources

Release Site	Preferred Stock	Alternate Stock
<i>Smolt</i>		
Snake R. Hells Canyon	OxbA	PahA
Little Salmon R. Stinky Sp.	PahA	-
	OxbA	PahA
	SawA	PahA
Yankee Fork	USRB (PFH Trap)	USRB (YF Trap)
PFH Weir	PahA	-
	USRB (PFH Trap)	USRB (YF Trap)
SFH Weir	SawA	-
East Fork Salmon R.	EFNat	-
<i>SBT Egg Box</i>		
Panther Cr	PahA	-
Indian Cr	PahA	-
Yankee Fork	USRB	SawA