

**Calendar Year 2018
Annual Operation Plan
for
Salmon and Steelhead
Production Programs
in the
Salmon and Snake River Basins**

**Prepared by
Idaho Department of Fish and Game
Nez Perce Tribe
Shoshone-Bannock Tribes
U.S. Fish and Wildlife Service
Idaho Power Company**

1. Summer Steelhead

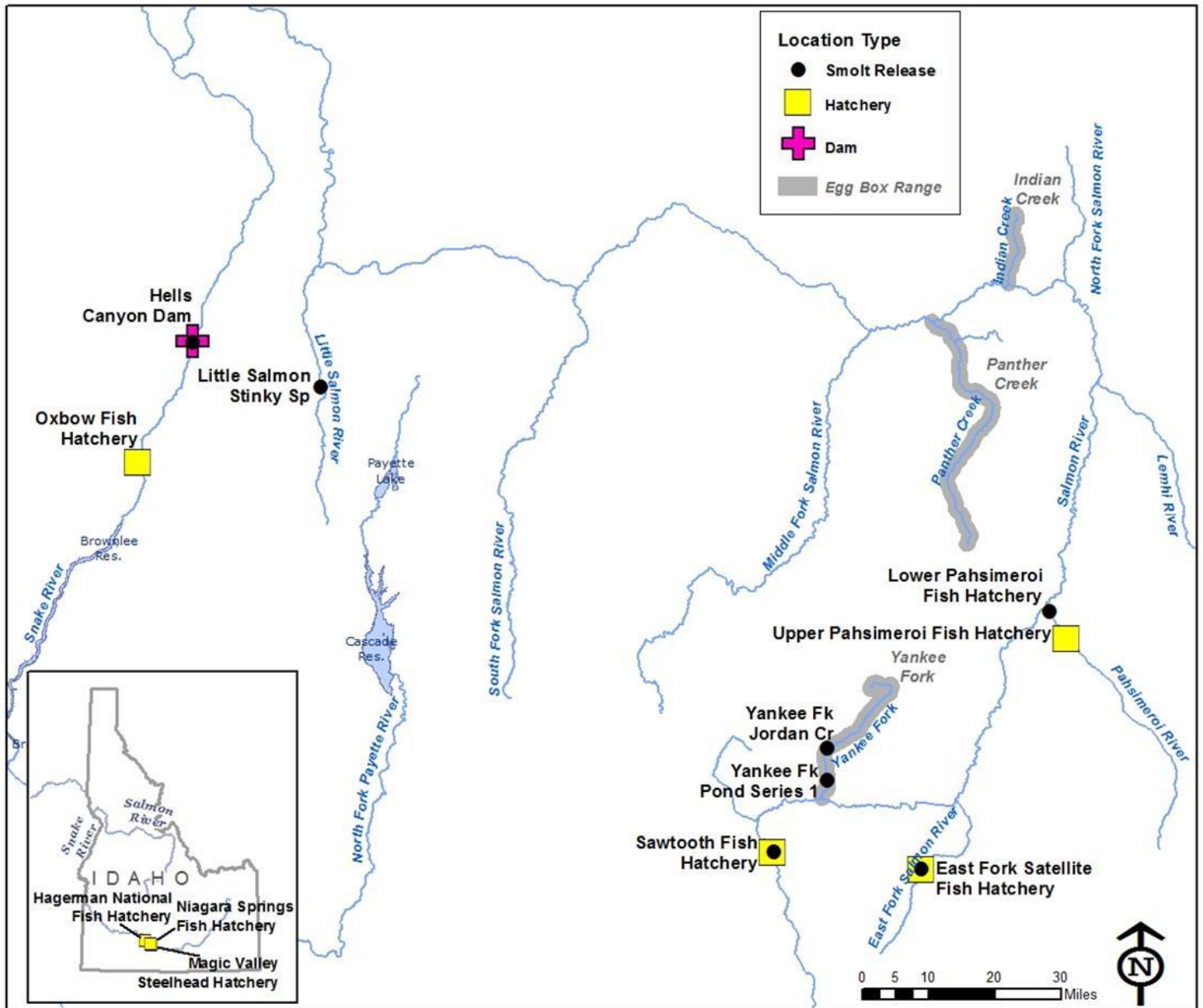


Figure 1. Steelhead facilities, smolt releases and egg box locations.

Table 1. Steelhead Release Goals.

Smolt Release Program	Rearing Facility	Release Site	Parent Stock	BY 2017 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.	PahA	186,000
	MVFH	Pahsimeroi Weir	USRB	155,000
	MVFH	Pahsimeroi Weir	DworB	93,000
	MVFH	Yankee Fork	USRB/DworB	620,000
	MVFH	Little Salmon - Stinky Sp.	USRB/DworB	217,000
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 BY2018 Outplant Goals
SBT	PFH	Yankee Fork	USRB/DworB ¹	500,000
		Panther Creek	PahA	400,000
		Indian Creek	PahA	100,000
		Total		1,000,000

¹ If smolt releases for Yankee Fork and Pahsimeroi are met and egg box needs cannot be met with USRB eggs, then DworB eggs will be considered for the SBT egg box program if available

1.1. Timeline and Flowchart for Steelhead Production

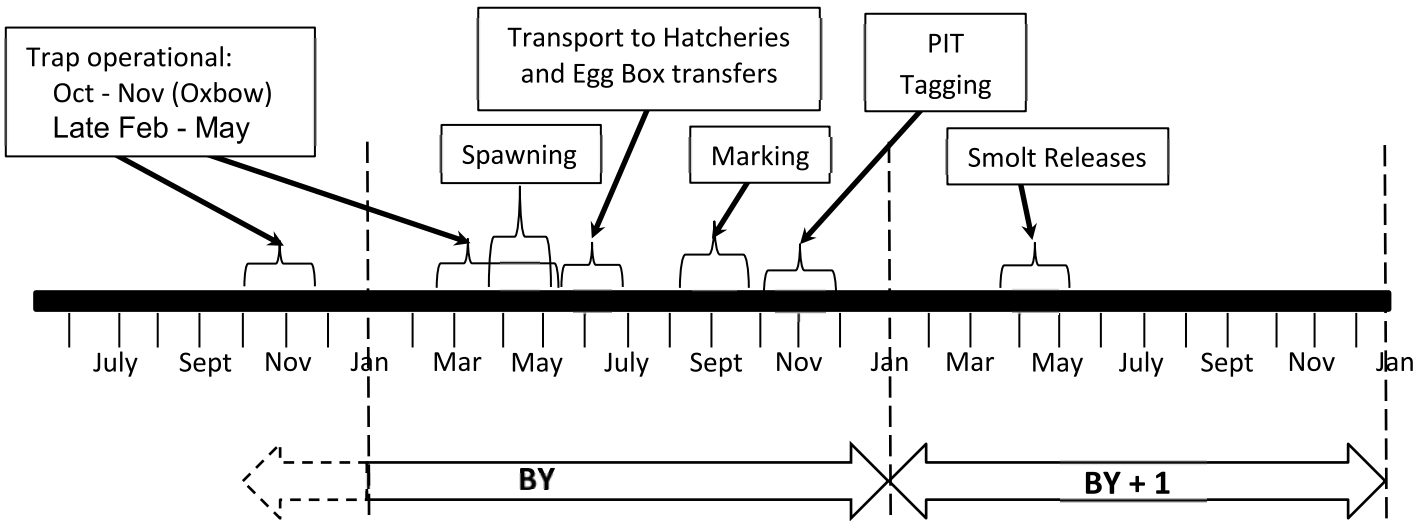


Figure 1.1a. Timeline for Steelhead Production. Date ranges are shown to include all facilities' operations

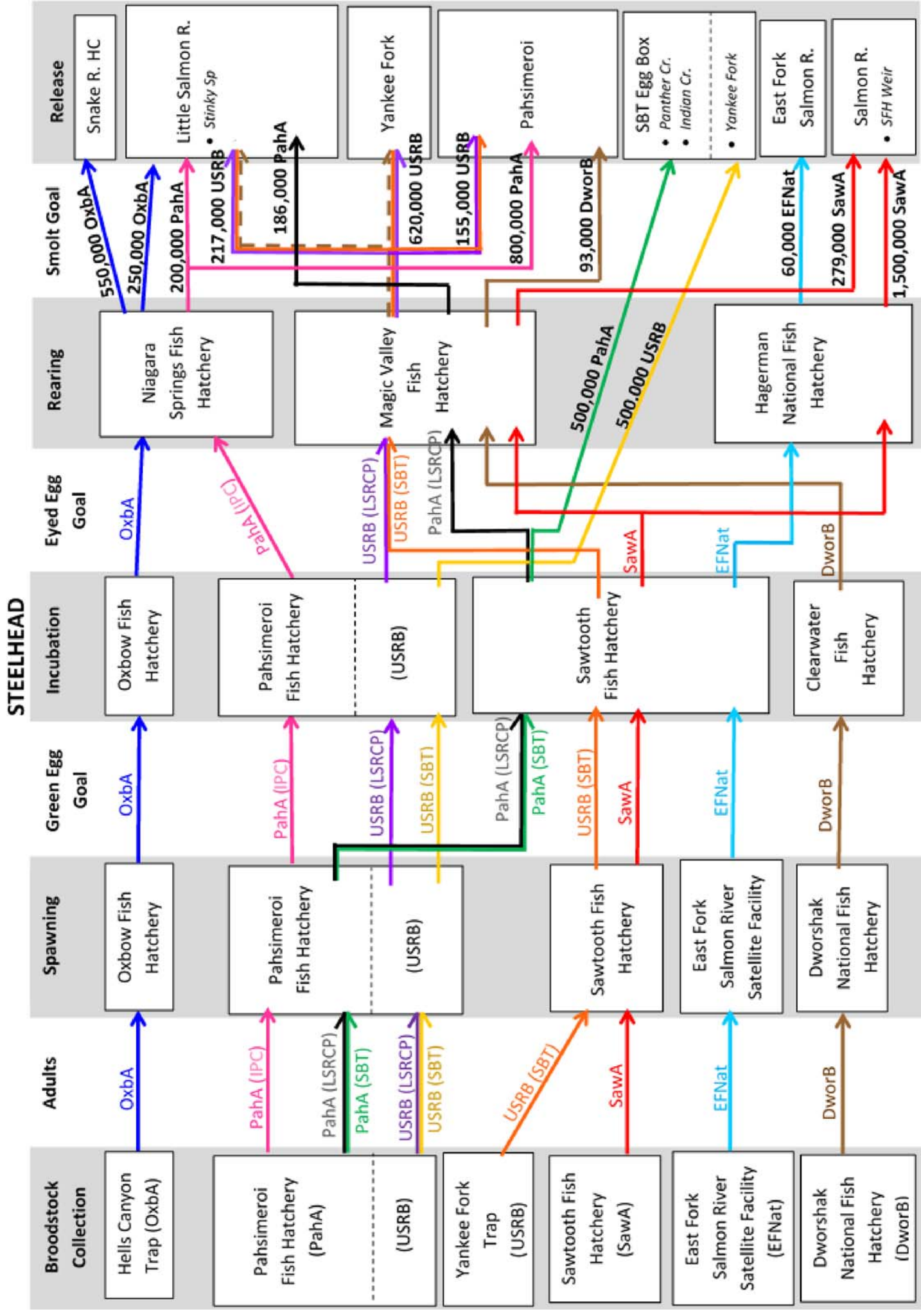


Figure 1.1b. Fish and egg movements for Steelhead. Numbers reflect 2018 releases.

1.2. Releases in 2018 (Smolt BY 2017, Egg Box BY 2018)
1.2.1. Releases in 2018 (Smolt BY 2017, Egg Box BY 2018) – Totals

Table 1.2a. Steelhead Rearing Metrics for BY 2017 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 ¹	SawA	1,554,024	12/31/2017	1,390,139	1,410,000	4.5				4/2-30/18	1,390,000	4.5
HNFH	Sawtooth Weir (PRAS Eval)	SawA	99,207	12/31/2017	89,328	90,000	4.5				4/2-4/18	89,000	4.5
HNFH	E. Fork Salmon R. - Upper	EFNat	63,347	12/31/2017	56,719	60,000	4.5				5/1-4/18	56,500	4.5
Totals			1,716,578		1,536,186	1,560,000						1,535,500	
MV/FH	Little Salmon R. - Stinky Sp.	PahA	662,706	12/31/2017	414,833	186,000	4.5	221,970	Roseworth, Oakley, Magic Res		4/4-10/18	408,000	4.5
MV/FH	Pahsimeroi Weir	USRB	184,398	12/31/2017	159,100	155,000	4.5				4/3-4/18	156,000	4.5
MV/FH	Pahsimeroi Weir	DworB	108,488	12/31/2017	95,521	93,000	4.5				4/2/18	94,000	4.5
MV/FH	Sawtooth Weir	SawA	330,065	12/31/2017	286,801	279,000	4.5	19,180	Roseworth		4/11-13/18	282,000	4.5
MV/FH	Yankee Fork	USRB/DworB	618,375	12/31/2017	502,441	620,000	4.5				4/16-23/18	495,000	4.5
MV/FH	Little Salmon - Stinky Sp.	USRB/DworB	0			217,000	4.5						
Totals			1,904,032		1,458,696	1,550,000		241,150				1,435,000	
NSFH	Pahsimeroi Weir	PahA	957,175	12/31/2017	810,513	800,000	4.5	156,770	Salmon Falls Creek Res.		4/1-4/21/18	807,000	4.5
NSFH	Little Salmon R. - Stinky Sp.	PahA	298,691	12/31/2017	206,476	200,000	4.5				4/24-4/27/18	205,000	4.5
NSFH	Little Salmon R. - Stinky Sp.	OxbA	290,990	12/31/2017	261,709	250,000	4.5	92,900	Salmon Falls Creek Res.		4/21-4/24/18	260,000	4.5
NSFH	Snake R. Hellis Canyon	OxbA	589,681	12/31/2017	562,657	550,000	4.5				3/26-4/1/18	560,000	4.5
Totals			2,136,537		1,841,355	1,800,000		249,670				1,832,000	
Grand Total			5,757,147		4,836,237	4,910,000		490,820				4,802,500	

¹Totals include two 90k groups for PRAS evaluation

Table 1.2b. BY 2017 Steelhead Inventory to Date by Mark Type in 2018

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 ³	SawA	12/31/2017	1,390,139	1,213,585	176,554				8,676	2,600	6,000	
HNFH	Sawtooth Weir (PRAS Eval)	SawA	12/31/2017	89,328	89,328					21,463		21,500	
HNFH	E. Fork Salmon R. - Upper	EFNat	12/31/2017	56,719			56,719			8,552	2,600	6,000	
Totals				1,536,186	1,213,585	265,882	56,719	-	38,691	5,200	33,500	-	-
MV/FH	Little Salmon R. - Stinky Sp.	PahA	12/31/2018	414,833	414,833				2,201	2,200			
MV/FH	Pahsimeroi Weir	USRB	12/31/2018	159,100			159,100		7,191	2,100	5,100		
MV/FH	Pahsimeroi Weir	DworB	12/31/2018	95,521			95,521		4,191	1,300	2,900		
MV/FH	Sawtooth Weir	SawA	12/31/2018	286,801	286,801				5,692	5,700			
MV/FH	Yankee Fork	USRB/DworB	12/31/2018	502,441	273,964		228,477		15,484	5,600	8,000		
MV/FH	Little Salmon - Stinky Sp.	USRB/DworB	12/31/2018	-	-								
Totals				1,458,696	975,598	-	483,098	-	34,759	16,900	16,000	-	-
NSFH	Pahsimeroi Weir	PahA	12/31/2017	810,513	810,513				8,994	3,000		6,000	
NSFH	Little Salmon R. - Stinky Sp.	PahA	12/31/2017	206,476	206,476				2,299	1,800		500	
NSFH	Little Salmon R. - Stinky Sp.	OxbA	12/31/2017	261,709	261,709				2,800	2,300		500	
NSFH	Snake R. Hells Canyon	OxbA	12/31/2017	562,657	562,657				8,597	2,600		6,000	
Totals				1,841,355	1,841,355	-	-	-	22,690	9,700	-	13,000	-
Grand Total				4,836,237	4,030,538	265,882	539,817	-	96,140	31,800	49,500	13,000	-

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 Totals include two 90k groups for PRAS evaluation

See **Table 1** for BY 2018 Steelhead Egg box transfers in 2018

1.2.2. Releases in 2018 (Smolt BY 2017, Egg Box BY 2018) - Narrative

Examples for discussion of 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 2018		Changes/Conditions that Occurred 2017-Early 2018		
	Release Target Smolt BY17, Egg BY18	Transport/Release Smolt BY17, Egg BY18	Fish Feeding BY17	Fish/Egg Health BY17	Marking BY17
<i>Niagara Springs Fish Hatchery (SOP Section 1.2)</i>					
Pahsimeroi Weir (PahA)	NC	NC	NC	All juvenile fish were given a Furunculosis vaccine 1 month prior to clipping/hatch house move out. Raceways,12,13 were fed a 10 day treatment of Aquaflor for Coldwater disease. 9/1- 9/10/17	NC
L. Salmon R. Stinky Springs (PahA/OxbA)	NC	NC	NC	All juvenile fish were given a Furunculosis vaccine 1 month prior to clipping/hatch house move out. Raceways 9,10,11 were fed a 10 day treatment of Aquaflor for Coldwater disease. 9/1- 9/10/17	NC
Snake R. Hells Canyon (OxbA)	NC	NC	NC	All juvenile fish were given a Furunculosis vaccine 1 month prior to clipping/hatch house move out. Raceway 2 was fed a 10 day treatment of Aquaflor for Coldwater disease. 9/1- 9/10/17	NC
<i>Sawtooth Fish Hatchery - Egg transfers to SBT - BY 2018 (SOP Sections 1.4 and 1.10)</i>					
Yankee Fork (USRB)	NC	NC			

Release Location	Plan for 2018		Changes/Conditions that Occurred 2017-Early 2018		
	Release Target Smolt BY17, Egg BY18	Transport/Release Smolt BY17, Egg BY18	Fish Feeding BY17	Fish/Egg Health BY17	Marking BY17
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
Sawtooth Weir (SawA)	NC	NC	NC	NC	NC
<i>Magic Valley Fish Hatchery (SOP Section 1.6)</i>					
Sawtooth Weir (SawA)	NC	NC	NC	Raceways 11 and 13 were fed a 10 day treatment of Aquaflor for Coldwater disease.	NC
L. Salmon R. Stinky Springs (PahA)	Release target increased from 186K to 403K to replace DWOR/USRB that were not available in BY17	NC	NC	NC	NC
Pahsimeroi Weir (USRB)	NC	NC	NC	NC	NC
Pahsimeroi Weir (DworB)	NC	NC	NC	NC	NC
Yankee Fork (USRB/DworB)	B stock were not available for SBT egg box program in BY17.	NC	NC	Raceways 14, 15 and 19 were fed a 10 day treatment of Aquaflor for Coldwater disease.	NC

Release Location	Plan for 2018		Changes/Conditions that Occurred 2017-Early 2018		
	Release Target	Transport/Release	Fish Feeding	Fish/Egg Health	Marking
L. Salmon R. Stinky Springs (USRB/DworB)	Smolt BY17, Egg BY18 BY17 B stock was not available for this site.	Smolt BY17, Egg BY18 BY17 B stock was not available for this site.	BY17 B stock was not available for this site.	BY17 B stock was not available for this site.	BY17 B stock was not available for this site.

1.3. Trap Operations and Production Planning for 2018 (Smolt BY 2018, Egg Box BY 2018)
1.3.1. Trap Operations and Production Planning for 2018 (Smolt BY 2018, Egg Box BY 2018) – TOTALS

Table 1.3a. Steelhead Projected BY 2018 Smolt Production Goals for Release in 2019

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.	PahA	186,000
	Pahsimeroi Weir	USRB	155,000
	Pahsimeroi Weir	DworB	93,000
	Yankee Fork	USRB (DworB)	620,000
	Little Salmon - Stinky Sp.	USRB	217,000
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 2018 - 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		Projected Return to LGD ⁶	Trapping period		Trapping Goal ¹		
								Females	Males ⁵		Season	Dates	Female	Male	Total
SFH	SawA	HNFH	Sawtooth Weir	1,741,913	SawA	HNFH	5,000	349	349	5,689			349	349	698
		MVFF	Sawtooth Weir (RAS Eval)	111,186		MVFF	5,000	23	23				23	23	46
		MVFF	Sawtooth Weir	372,169		MVFF	5,000	75	75				75	75	150
EFSR Sat.	EFNat	HNFH	E. Fork Salmon R. - Upper	84,364	EFNat	HNFH	6,252	14	14	142			14	14	28
		MVFF	Little Salmon R. - Stinky Sp.	261,905		MVFF	4,800	55	55				55	55	110
		NSFH	Pahsimeroi Weir	1,051,374		NSFH	4,800	220	220				220	220	440
PFH	PahA	NSFH	Little Salmon R. - Stinky Sp.	262,843	PahA	NSFH	4,800	55	55	4,273			55	55	110
		SFH	SBT Egg Box-Panther Creek	479,826		SFH	4,800	100	100				100	100	200
		SFH	SBT Egg Box-Indian Creek	119,956		SFH	4,800	25	25				25	25	50
OFH	USRB (DworB) ³	MVFF	Pahsimeroi Weir	205,026	USRB (DworB)	MVFF	6,200	34	23	190			36	24	60
		MVFF	Yankee Fork	820,106		MVFF	6,200	133	89				140	93	234
		SFH ²	Little Salmon - Stinky Sp.	292,778		SFH	6,200	48	32				51	34	85
DNFH	DworB	MVFF	SBT Egg Box-Yankee Fork	611,111	DworB ⁴	MVFF	6,200	99	99				104	104	209
		NSFH	Little Salmon R. - Stinky Sp.	388,151		NSFH	5,500	71	71			fall '17	Nov 6-22, 2017	95	95
			Snake R. Hells Canyon	853,931		NSFH	5,500	156	156		spr '18	April 3-4, 2018	208	208	416
			Pahsimeroi Weir	144,983		MVFF	6,681	22	11				22	11	33

¹ Broodstock trapping need is dictated by number of females needed

² If smolt releases for Yankee Fork and Pahsimeroi are met and egg box needs cannot be met with USRB eggs, then DworB eggs will be considered for the SBT egg box program if available

³ Sequence of priority for USRB eggs: Pahsimeroi Weir, Yankee Fork Salmon River, Yankee Fork Egg Box Program, Little Salmon River releases. DWOR eggs will be used to backfill program needs.

⁴ The minimum number of DWOR females to spawn for the USAL-B program is 23, but returns of USAL-B adults to Pahsimeroi Weir may require additional eggs from DWOR.

⁵ this is actually the # of Males collected while getting the # of Females needed, based on % of F in Broodstock

⁶ Projected Return to LGD includes only BY13 and BY14 for USRB/DWOR.

Table 1.3c. BY2018 Steelhead adult female broodstock acquisition schedules for hatchery programs.

Season	Date	Hells Canyon Trap		Pahsimeroi Fish Hatchery		Sawtooth Fish Hatchery		East Fork Salmon River Satellite		Dworshak National Fish Hatchery		
		OxbA	PahA	USRB	SawA	EFNat	DworB ¹	OxbA	PahA	USRB	EFNat	DworB
		Wkly	Cum	Wkly	Cum	Wkly	Cum	Wkly	Cum	Wkly	Cum	Wkly
Fall	Oct	0	0	0	0	0	0	0	0	0	0	0
	Nov	242	242	0	0	0	0	0	0	0	0	0
	Dec	0	242	0	0	0	0	0	0	0	0	0
Spring	16-Feb	0	242	0	0	0	0	0	0	0	0	0
	23-Feb	0	242	0	0	0	0	0	0	0	0	0
	1-Mar	0	242	0	0	0	0	0	0	0	0	0
	8-Mar	0	242	0	0	0	0	0	0	0	0	0
	15-Mar	0	242	0	0	0	0	0	0	0	0	0
	22-Mar	61	303	0	0	0	0	0	0	0	0	22
	29-Mar	0	303	101	26	26	34	34	0	0	0	0
	5-Apr	0	303	46	147	78	104	147	181	0	0	0
	12-Apr	0	303	88	235	130	234	133	314	0	0	0
	19-Apr	0	303	88	323	78	312	58	373	3	3	0
	26-Apr	0	303	87	410	19	331	75	447	7	10	0
	3-May	0	303	45	455	0	331	0	447	4	14	0
	10-May											
17-May												

Total Females to Trap (from Brood Calculator)	OxbA	PahA	USRB	SawA	EFNat	DworB
	303	455	331	447	14	22

¹ The minimum number of DWOR females to spawn for the USAL-B program is 22, but anticipated returns of USAL-B females to Pahsimeroi Weir in 2016 may require up to 64 DWOR females spawned.

	Proportion of brood acquisition over season					
	OxbA	PahA	USRB	SawA	EFNat	DworB
Oct	0	0	0	0	0	0
Nov	0.8	0	0	0	0	0
Dec	0	0	0	0	0	0
16-Feb	0	0	0	0	0	0
23-Feb	0	0	0	0	0	0
1-Mar	0	0	0	0	0	0
8-Mar	0	0	0	0	0	0
15-Mar	0	0	0	0	0	0
22-Mar	0.2	0	0	0	0	1
29-Mar	0	0.2227	0.0786	0.0766	0	0
5-Apr	0	0.1002	0.2358	0.3288	0	0
12-Apr	0	0.1938	0.3931	0.2973	0	0
19-Apr	0	0.1938	0.2358	0.1306	0.2308	0
26-Apr	0	0.1915	0.0566	0.1667	0.4615	0
3-May	0	0.098	0	0	0.3077	0

1.3.2. Trap Operations and Production Planning for 2018 (Smolt BY 2018, Egg Box BY 2018) – 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 2018 (BY 2018)					
Rearing Location	Adult Fish Health	Trap Ops	Production target changes	Spawning protocol changes	Disposition of adults
<i>Hells Canyon Trap/Oxbow Hatchery (Fall 2017-Spring 2018) (SOP Section 1.3)</i>					
Niagara Springs (OxbA)	NC	NC	NC	NC	NC
<i>Pahsimeroi Weir (SOP Section 1.4)</i>					
Niagara Springs (PahA)	NC	NC	NC	NC	NC
Magic Valley (PahA)	NC	NC	NC	NC	NC
SBT Egg Box (PahA)	NC	NC	NC	NC	NC
SBT Egg Box (USRB)	NC	NC	NC	If there are sufficient returning adults, Ovaplant injections will be utilized.	NC
Magic Valley (USRB)	NC	NC	NC	If there are sufficient returning adults, Ovaplant injections will be utilized.	NC
<i>Sawtooth and East Fork Weirs (SOP Sections 1.7 and 1.8)</i>					
Hagerman National (EFNat)	NC	NC	NC	Pursuing oviplant injections in the EF	NC

Plan for 2018 (BY 2018)						
Rearing Location	Adult Fish Health	Trap Ops	Production target changes	Spawning protocol changes	Disposition of adults	
Hagerman National (SawA)	NC	Continue scanning all returning adult SH for CWT, for PRAS evaluation.	NC	NC	NC	
Magic Valley (Saw)	NC	Continue scanning all returning adult SH for CWT, for PRAS evaluation	NC	Requesting earlier egg delivery	NC	
<i>Dworshak National Fish Hatchery Ladder (Fall 2017-Spring 2018) (SOP Section 1.9)</i>						
Magic Valley (DworB)						

1.4. Marking and Rearing Plan for 2018 (Smolt BY 2108)
1.4.1. Marking and Rearing Plan for 2018 (Smolt BY 2018) – TOTALS

Table 1.4a. Steelhead Projected marking of BY 2018 Production for release in 2019

Hatchery	Release Site	Stock	Smolt Release Goals	Projected Marking				Total # Tags	PIT Tags			
				Adipose Fin Clip		No Clip			CSS	LSRCP	IPC	USFWS
				No CWT	CWT	CWT	No CWT					
HNFH	Sawtooth Weir	SawA	1,410,000	1,232,800	177,200			8,600	2,600	6,000		
	Sawtooth Weir (RAS Eval)	SawA	90,000	90,000			21,500		21,500			
	E. Fork Salmon R. - Upper	EFNat	60,000			60,000	8,600	2,600	6,000			
Totals			1,560,000	1,232,800	267,200	60,000	38,700	5,200	33,500		-	
MVFH	Sawtooth Weir	SawA	279,000	279,000			5,700	5,700				
	Little Salmon R. - Stinky Sp.	PahA	186,000	186,000			2,200	2,200				
	Pahsimeroi Weir	USRB	155,000			155,000	7,200	2,100	5,100			
	Pahsimeroi Weir	DworB	93,000			93,000	4,200	1,300	2,900			
	Yankee Fork	USRB (DworB)	620,000	403,000		217,000	13,300	5,300	8,000			
Totals			217,000	217,000			2,200	2,200				
NSFH	Little Salmon - Stinky Sp.	USRB	1,550,000	1,085,000	-	465,000	34,800	18,800	16,000		-	
	Pahsimeroi Weir	PahA	800,000	800,000			9,000	3,000	6,000			
	Little Salmon R. - Stinky Sp.	PahA	200,000	200,000			2,300	1,800	500			
	Little Salmon R. - Stinky Sp.	OxbA	250,000	250,000			2,800	2,300	500			
	Snake R. Hells Canyon	OxbA	550,000	550,000			8,600	2,600	6,000			
Totals			1,800,000	1,800,000	-	-	22,700	9,700	-	13,000	-	
Grand Totals			4,910,000	4,117,800	267,200	525,000	96,200	33,700	49,500	13,000	-	

1.4.2. Marking and Rearing Plan for 2018 (Smolt BY 2018) – 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.

Plan for 2018 (BY 2018)				
Release Location	Juvenile Fish Health	Fish Feeding	Rearing Conditions	Marking
Niagara Springs Fish Hatchery (SOP Section 1.2)				
L. Salmon R. Stinky Springs (OxbA)	Continue with Furunculosis vaccine in hatch house until outdoor raceway bird screen is repaired.	NC	NC	NC
Snake R. Hells Canyon (OxbA)	Continue with Furunculosis vaccine in hatch house until outdoor raceway bird screen is repaired.	NC	NC	NC
L. Salmon R. Stinky Springs (PahA)	Continue with Furunculosis vaccine in hatch house until outdoor raceway bird screen is repaired.	NC	NC	NC
Pahsimeroi Weir (PahA)	Continue with Furunculosis vaccine in hatch house until outdoor raceway bird screen is repaired.	NC	NC	NC
Hagerman National Fish Hatchery (SOP Section 1.5)				
East Fork Weir (EFnat)		NC	NC	NC
Sawtooth Weir (SawA)		NC	NC	NC
Magic Valley Fish Hatchery (SOP Section 1.6)				
Sawtooth Weir (SawA)		NC	NC	NC

Plan for 2018 (BY 2018)				
Release Location	Juvenile Fish Health	Fish Feeding	Rearing Conditions	Marking
L. Salmon R. Stinky Springs (PahA)	NC	NC	NC	NC
Pahsimeroi Weir (USRB)	NC	NC	NC	NC
Pahsimeroi Weir (DworB)	NC	NC	NC	NC
Yankee Fork Salmon R., Lower (USRB/DworB)	NC	NC	NC	NC
L. Salmon R. Stinky Springs (USRB)	NC	NC	NC	NC

2. Spring/Summer Chinook

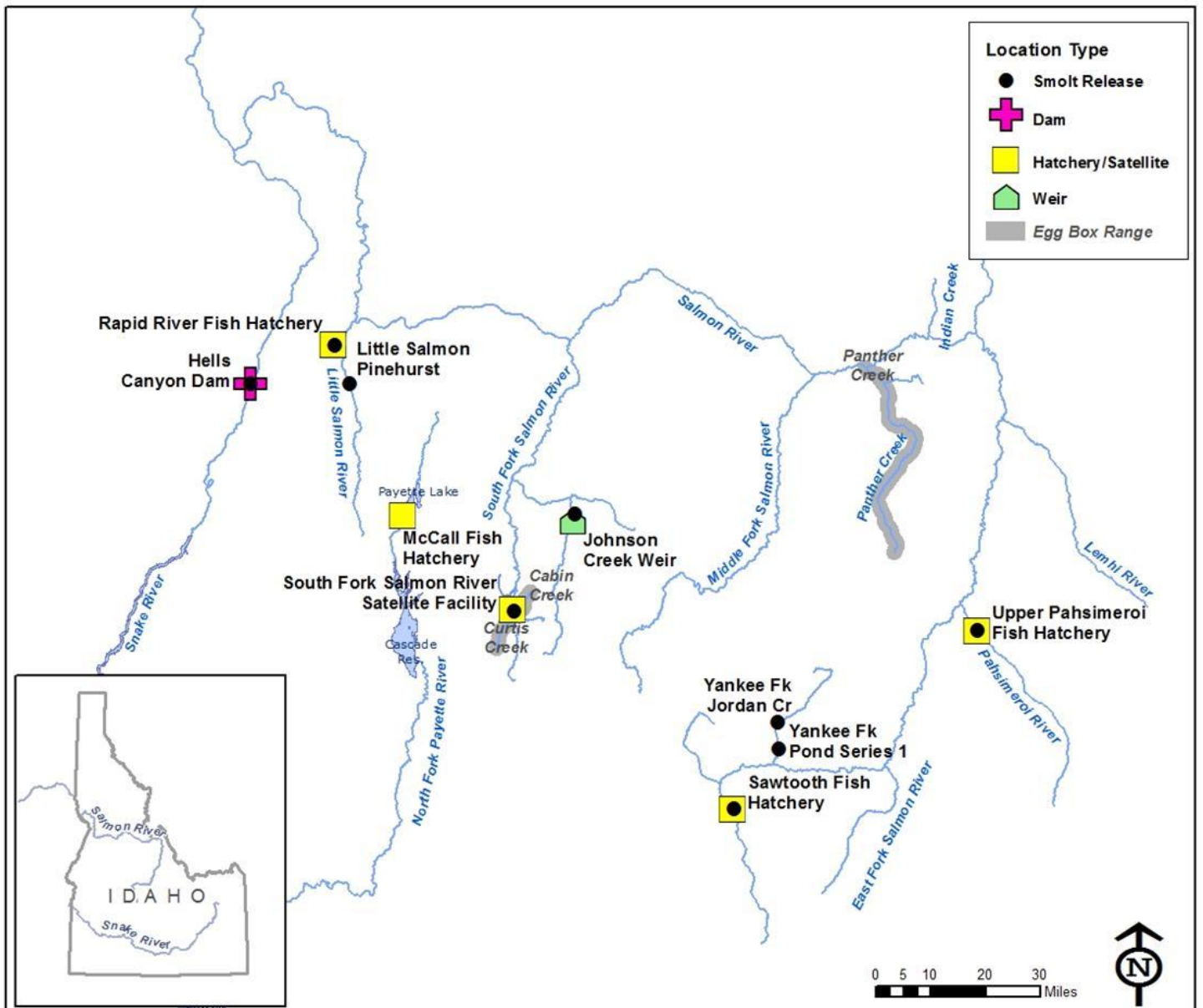


Figure 2. Spring/Summer Chinook salmon hatchery facilities and smolt release and egg box locations.

Table 2. Sp/Su Chinook Release Goals.

Smolts				
Release Program	Release Site	Rearing Facility	Stock	BY2016 Smolt Release
IPC / IDFG	Rapid River Hatchery	RRFH	RapidR	2,500,000
	Little Salmon (@ Pinehurst)		RapidR	150,000
	Hells Canyon		RapidR	350,000
Total				3,000,000
LSRCP / IDFG	Sawtooth Weir - Integrated	SFH	USRInt	150,000
	Sawtooth Weir -Segregated		USRSeg	1,550,000
	Yankee Fork		USRSeg	300,000
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	SFSRInt	150,000
	SFSR Knox Br. - Segregated		SFSRSeg	850,000
NPT	Johnson Creek		Johnson Cr.	100,000
Total				1,100,000
Grand Total				7,100,000

Eggs						
Program	Release Location	Hatchery Egg Source	Stock	Green Egg Target	Eyed Egg BY2018	Smolt BY2018 Release Goal
Egg Box Release						
SBT Eggbox	Curtis/Cabin Creek	McFH	SFSRSeg	344,372	300,000	NA
SBT Eggbox ¹	Panther Creek	PFH	PahSeg	918,326	800,000	NA
Egg Transfer						
Clearwater Su Chinook ¹	Powell Ponds	McFH/CFH	SFSRSeg	770,891	666,667	640,000

¹Brood for these eggs are not included in stated brood goals and will come from fish trapped in excess of brood needs for onsite smolt and egg box programs. Prioritization of excess fish between recycling to fisheries, Tribal C&S, foodbank, outplants and the Clearwater Hatchery Summer Run Program will occur in-season between State and Tribal managers.

2.1. Timeline and Flowchart for Spring/Summer Chinook Production

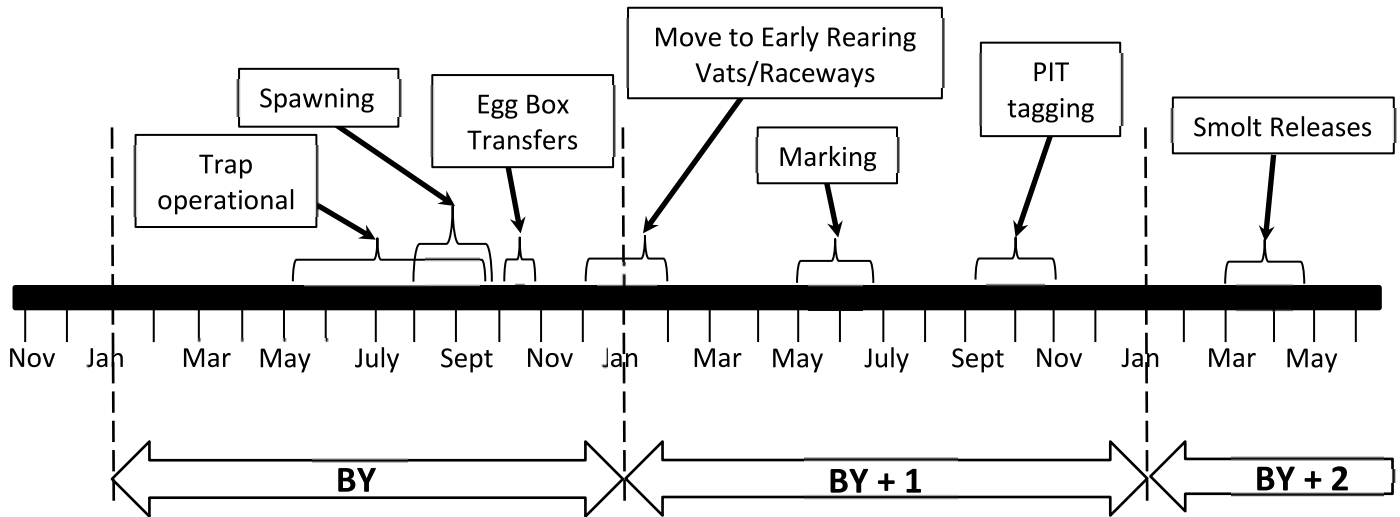
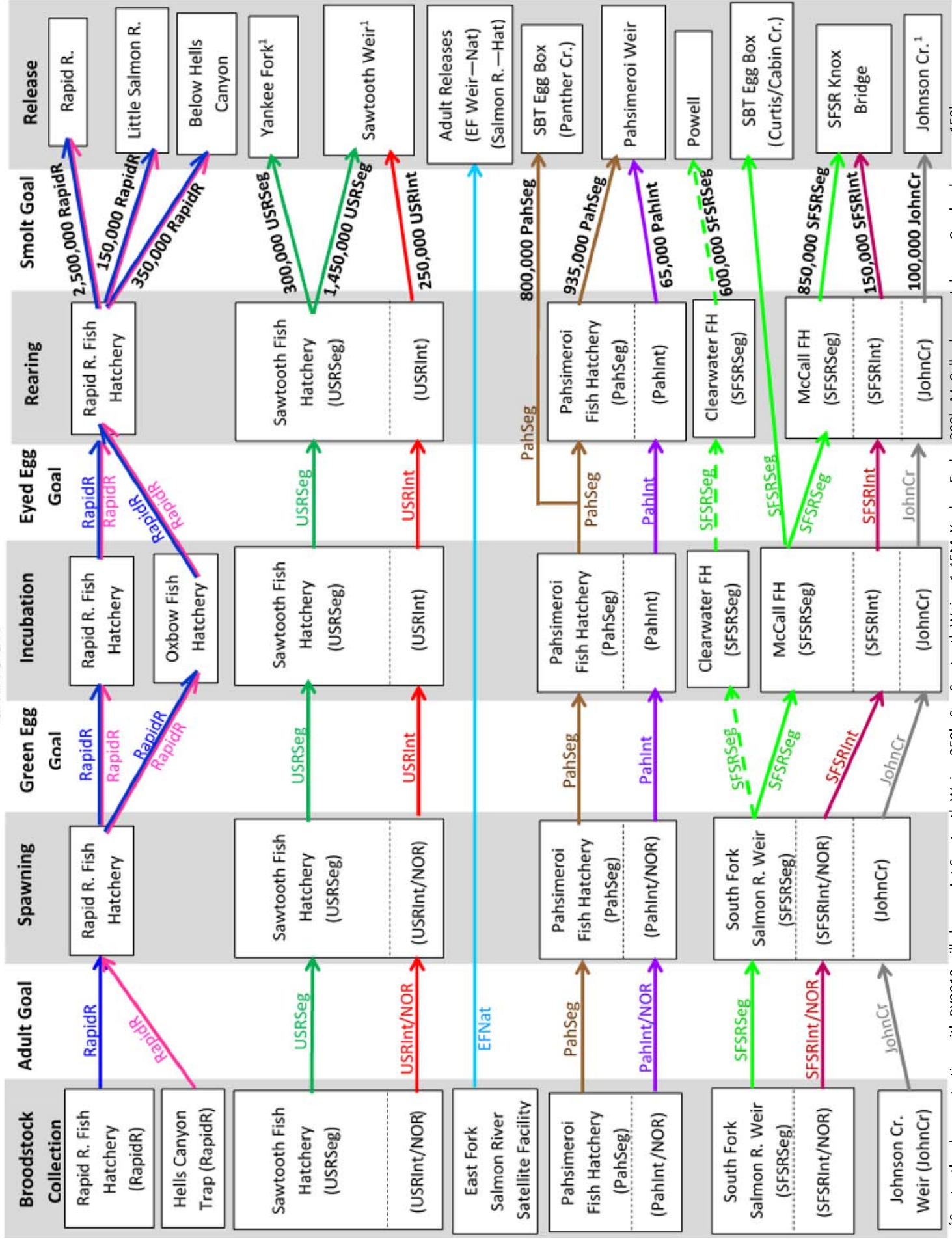


Figure 2.1a. Timeline for Spring/Summer Chinook Production. Date ranges are shown to include all facilities' operations.

CHINOOK



¹Sawtooth releases starting with BY2018 will change: Int Sawtooth Weir – 250k; Seg Sawtooth Weir – 1.45M; Yankee Fork – 300k. McCall releases: Johnson Creek releases – 150k

Figure 2.1b. Fish and Egg movements for Sp and Su Chinook. Numbers reflect 2018 releases. See footnote for future changes to release goals.

2.2. Releases in 2018 (Smolt BY 2016, Egg Box BY 2018)
2.2.1. Releases in 2018 (Smolt BY 2016, Egg Box BY 2018) – Totals

Table 2.2a. BY2016 SMOLTS - Sp/Su Chinook Salmon inventories by life stage , smolts release goals and projected releases in 2018.

Hatchery	Release Site	Stock	Eyed Eggs to Rear ¹	Inventory To Date		Release Goals		Projected Smolt Release		
				Date	Number	Number	Size (FPP)	Dates	Number	Size (FPP)
RRFH ²	Rapid River Hatchery	RapidR				2,500,000	20.0	03/12/2018	2,500,000	20.0
	Little Salmon (@ Pinehurst)	RapidR	3,251,318	12/31/2017	3,161,718	150,000	20.0	03/16/2018	200,000	20.0
	Hells Canyon	RapidR				350,000	20.0	03/12/2018	461,718	20.0
Total			3,251,318		3,161,718	3,000,000			3,161,718	
SFH	Sawtooth Weir - Integrated	USRInt	171,052	1/15/2018	169,677	150,000	20.0	3/30/18	169,000	20.0
	Sawtooth Weir - Segregated	USRSeg	1,966,525	1/15/2018	1,938,734	1,550,000	20.0	3/28/18	1,937,500	20.0
	Yankee Fork	USRSeg	317,872	1/15/2018	276,590	300,000	20.0	4/6 and 4/17	276,300	20.0
Total			2,455,449		2,385,001	2,000,000			2,382,800	
PFH	Pahsimeroi Weir - Integrated	PahInt	68,757	2/1/2018	68,675	65,000	15.0	4/16/2018	68,650	13.5
	Pahsimeroi Weir - Segregated	PahSeg	996,364	2/1/2018	992,150	935,000	15.0	4/16/2018	991,150	13.5
	Total		1,065,121		1,060,825	1,000,000			1,059,800	
McFH	SFSR Knox Br. - Integrated	SFSRInt	169,574	12/31/2017	157,461	150,000	20.0	4/1/2018	157,181	18.8
	SFSR Knox Br. - Segregated	SFSRSeg	1,011,574	12/31/2017	970,830	850,000	20.0	4/1/18	968,721	18.8
	Johnson Creek	Johnson Cr.	118,515	12/31/2017	105,031	100,000	25.0	3/29/18	104,000	24.0
Total			1,299,663		1,233,322	1,100,000			1,229,902	
Grand Total			8,071,551		7,840,866	7,100,000			7,834,220	

¹ Eyed Eggs to Rear = (Total Green Eggs) - (Eggs culled for disease) - (Dead eggs picked) - (Eggs culled for hatchery capacity) - (Eggs transferred out)

² Rapid River eyed eggs and inventory are not partitioned by release site prior to release

Table 2.2b. BY2016 SMOLTS for release in 2018 - Sp/Su Chinook Salmon Inventory to Date by Mark Type in 2018

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	12/31/2017	3,161,718	3,041,718	120,000				52,000	32,000	0	20,000	0	0
	Little Salmon (@ Pinehurst)	RapidR									0	0	0	0	0
	Hells Canyon	RapidR									0	0	0	0	0
Totals				3,161,718	3,041,718	120,000				52,000	32,000	0	20,000	0	0
SFH	Sawtooth Weir - Integrated	USRInt	1/15/2018	169,677			169,677			1,000	1,000	0	0	0	0
	Sawtooth Weir - Segregated	USRSeg	1/15/2018	1,938,734	1,818,783	119,951				18,900	5,700	13,200	0	0	0
	Yankee Fork	USRSeg	1/15/2018	276,590	156,273	120,317				2,500	700	1,800	0	0	0
Totals				2,385,001	1,975,056	240,268	169,677			22,400	6,400	16,000	0	0	0
Pah	Pahsimeroi Weir - Integrated	PahInt	2/1/2018	68,675			68,675			825	0	0	0	0	825
	Pahsimeroi Weir - Segregated	PahSeg	2/1/2018	992,150	871,375	120,775				21,400	6,400	0	15,000	0	0
Totals				1,060,825	871,375	120,775	68,675			22,225	6,400	0	15,000	0	825
McFH	SFSR Knox Br. - Integrated	SFSRInt	12/31/2017	157,461			157,461			26,000	26,000	0	0	0	0
	SFSR Knox Br. - Segregated	SFSRSeg	12/31/2017	970,830	851,681	119,149				26,000	6,000	20,000	0	0	0
	Johnson Creek	Johnson Cr.	12/31/2017	105,031			105,031			2,193	0	0	0	2,193	0
Totals				1,233,322	851,681	119,149	262,492			54,193	32,000	20,000	0	2,193	0
Grand Total				7,840,866	6,739,830	600,192	500,844			150,818	76,800	36,000	35,000	2,193	825

See Table 2 for BY 2018 Sp/Su Chinook salmon egg transfers to streamside egg boxes in 2018.

2.2.2. Releases in 2018 (Smolt BY 2016, Egg Box BY 2018) – 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 2018		Changes/Conditions that Occurred 2017-Early 2018		
	Release Target Smolt BY16, Egg BY18	Transport/Release Smolt BY16, Egg BY18	Fish Feeding BY16	Fish/Egg Health BY16	Marking BY16
<i>Rapid River Fish Hatchery (SOP Section 2.2)</i>					
Rapid River Hatchery (RapidR)	NC	NC	NC	NOAAF to sample 300 smolts pre-liberation for precosity evaluation (March 2018)	NC
Little Salmon R. (RapidR)	NC	NC	NC	NC	NC
Hells Canyon (RapidR)	NC	NC	NC	NC	NC
<i>McCall Fish Hatchery (SOP Sections 2.3, 2.4 and 2.9)</i>					
SFSR Knox Bridge (SFSRInt)	NC	NC	NC	NOAAF to sample 300 smolts pre-liberation for precosity evaluation (March 2018). BKD related chronic elevated mortality observed	NC

Plan for 2018		Changes/Conditions that Occurred 2017-Early 2018			
Location	Release Target Smolt BY16, Egg BY18	Transport/Release Smolt BY16, Egg BY18	Fish Feeding BY16	Fish/Egg Health BY16	Marking BY16
SFSR Knox Bridge (SFSRSeg)	Projected release 13% above goal - above average survival	Projected transport 13% above goal - above average survival	NC	NOAAF to sample 300 smolts pre-liberation for precosity evaluation (March 2018) BKD related chronic elevated mortality observed	NC
Johnson Cr. (JohnCr)	NC	NC	NC	Fish were diagnosed with BKD in November. No feed treatment due to cold water temps.	NC
Curtis/Cabin Cr. Egg Box (SFSRSeg)	NC	NC			
<i>Pahsimeroi Fish Hatchery (SOP Section 2.5)</i>					
Pahsimeroi Weir Integrated (PahInt)	NC	NC	BY16 RECEIVED 2 MEDICATED FEED TREATMENTS FOR BKD CONTROL	BY16 RECEIVED 2 MEDICATED FEED TREATMENTS FOR BKD CONTROL NOAAF to sample 300 smolts pre-liberation for precosity evaluation (March 2018)	NC
Pahsimeroi Weir Segregated (PahSeg)	NC	NC	BY16 RECEIVED 2 MEDICATED FEED TREATMENTS FOR BKD CONTROL	BY16 RECEIVED 2 MEDICATED FEED TREATMENTS FOR BKD CONTROL NOAAF to sample 300 smolts pre-liberation for precosity evaluation (March 2018)	NC

Plan for 2018		Changes/Conditions that Occurred 2017-Early 2018			
Location	Release Target	Transport/Release	Fish Feeding	Fish/Egg Health	Marking
Panther Cr. Egg Box (PahSeg)	Smolt BY16, Egg BY18 BY16 ~450,000 EYED EGGS SHIPPED TO SAW	Smolt BY16, Egg BY18 BY16 ~450,000 EYED EGGS SHIPPED TO SAW	BY16	BY16	BY16
Sawtooth Fish Hatchery (SOP Sections 2.6 and 2.8)					
Sawtooth Weir Integrated (USRInt)	Projected release is 169,000 which is 11.3% above release goal. Overage is due to above average on-station survival.	Smolts will be released directly at the Sawtooth weir two days after USRSeg smolts to prevent BKD transmission to USRSeg smolts.	NC	BY16 smolts diagnosed with BKD in late November; no feed treatment due to low water temps/ice on raceways. NOAAF to sample 300 smolts pre-liberation for precosity evaluation (March 2018)	16,144 Integrated fish were ad clipped due to overage; marking crew didn't have enough CWT to cover the overage.
Sawtooth Weir Segregated (USRSeg)	Projected release is 1,937,500 which is 20% above the release goal. Overage is due to above average on-station survival.	NC	NC	NOAAF to sample 300 smolts pre-liberation for precosity evaluation (March 2018)	NC
Yankee Fork (USRSeg)	NC	NC	NC	NC	NC

2.3. Trap Operations and Production Planning for 2018 (Smolt BY 2018)
2.3.1. Trap Operations and Production Planning for 2018 (Smolt BY 2018) – TOTALS

Table 2.3a. BY 2018 Sp/Su Chinook Smolt Production Goals for Release in 2020.

Hatchery	Release Site	Stock	2020 Smolt Release Goals
RRFH	Rapid River Hatchery	RapidR	2,500,000
	Little Salmon	RapidR	150,000
	Hells Canyon	RapidR	350,000
	Total		3,000,000
SFH	Sawtooth Weir - Integrated	USRInt	250,000
	Sawtooth Weir - Segregated	USRSeg	1,450,000
	Yankee Fork	USRSeg	300,000
	Total		2,000,000
PFH	Pahimeroi Weir - Integrated	PahInt	65,000
	Pahimeroi Weir - Segregated	PahSeg	935,000
	Total		1,000,000
	McFH	SFSR Knox Br. - Integrated	SFSRInt
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 2018 and Egg Transfers used for BY 2018 Smolt Production (Release in 2020).

Program	Release Location	Hatchery Egg Source	Stock	Green Egg Target	Eyed Egg BY2018 Goal	Smolt BY2018 Release Goal
Egg Box Release						
SBT Eggbox	Curtis/Cabin Creek	McFH	SFSRSeg	344,372	300,000	NA
SBT Eggbox ¹	Panther Creek	PFH	PahSeg	918,326	800,000	NA
Egg Transfer						
Clearwater Su Chinook ²	Powell Ponds	McFH/CFH	SFSRSeg/CFH	770,891	666,667	640,000

¹ Brood for these eggs are not included in stated brood goals and will come from fish trapped in excess of brood needs for onsite smolt production

² Brood for these eggs are not included in stated brood goals and will come from fish trapped in excess of brood needs for onsite smolt and egg box programs. Prioritization of excess fish between recycling to fisheries, Tribal C&S, foodbank outplants and green egg needs for the Clearwater Hatchery Summer Run Program will occur in-season between State and Tribal managers.

Table 2.3c. BY2018 SMOLTS -Chinook Spawning for BY 2018 - Based on Brood Calculator.

		Green Egg Goal				Spawning Goal						Broodstock Trapping Goals by Brood Source														
Spawning Facility	Stock	Rearing Hatchery	Release Site	Green Egg Goal	Fecundity		Spawn Goal				Projected Returns			Trapping Goal ³			Total									
					Female	Male	HORSeg ⁴	Female	Male	HORInt ⁵	NOR ⁶	Female	Male	NOR ⁶	Female	Male		NOR ⁶								
RRFH	RapidR	RRFH	Rapid River Trap		3,824	1012	1012																		1,881	
			Little Salmon	3,865,349																						114
			Hells Canyon Trap																							264
SFH	USRIInt	SFH	Sawtooth Weir - Int	302,653	4,700			0	0	65	65															133
	USRSeg	SFH	Sawtooth Weir - Seg	1,769,164	4,700	377	377																			778
			Yankee Fork	366,034	4,700	78	78																			161
PFH	PahInt	PFH	Pahsimeroi - Int	80,033	4,500	282	282	0	0	18	18															42
	PahSeg	PFH	Pahsimeroi - Seg	1,266,376	4,500	TBD	TBD																			664
			SBT Eggbox - Panther Cr. ²																							0
SFSR	SFSRIInt	McFH	SFSR - Int ⁷	202,572	4,500			4	4	43	43															104
			SFSR - Seg ⁷	1,262,699	4,500	281	281																			625
			SBT Eggbox - Curtis/Cabin Cr. ⁷	344,372	4,500	77	77																			172
			Clearwater Su Chinook ²	770,891	4,000	193	193																			407
			Johnson Creek	212,523	4,500					48	48	48														115

¹ These trap projections are only for natural origin returns (NORs) and integrated hatchery origin fish (HORInt)

² Brood for these eggs are not included in stated brood goals and will come from fish trapped in excess of brood needs for onsite smolt and egg box programs. Prioritization of excess fish between recycling to fisheries, Tribal C&S, foodbank, outplants and green egg needs for the Clearwater Hatchery Summer Run Program will occur in-season between State and Tribal managers.

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.

Table 2.3d. BY2018 - Sp/Su Chinook Adult broodstock acquisition schedules for hatchery programs.

Proportion of brood acquisition over season													
Date	Rapid River Fish Hatchery		Sawtooth Fish Hatchery		Pahsimeroi Fish Hatchery		South Fork Salmon River Weir		Johnson Creek Weir				
	RapidR	USR	HORSeg	HORInt	NOR	HORSeg	HORInt	NOR	HORSeg	HORInt	NOR	JohnCr	NOR
2-May	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9-May	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
16-May	0.018	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
23-May	0.041	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30-May	0.079	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6-Jun	0.138	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
13-Jun	0.226	0.039	0.125	0.069	0.003	0.000	0.122	0.005	0.000	0.000	0.000	0.000	0.025
20-Jun	0.385	0.119	0.250	0.119	0.077	0.000	0.317	0.046	0.000	0.000	0.000	0.000	0.050
27-Jun	0.580	0.300	0.375	0.458	0.301	0.000	0.537	0.115	0.091	0.129	0.129	0.125	0.125
4-Jul	0.773	0.539	0.500	0.611	0.507	0.000	0.634	0.230	0.273	0.419	0.419	0.275	0.275
11-Jul	0.880	0.680	0.625	0.694	0.648	0.000	0.707	0.345	0.455	0.677	0.677	0.400	0.400
18-Jul	0.927	0.768	0.750	0.764	0.738	0.000	0.780	0.500	0.636	0.806	0.806	0.463	0.463
25-Jul	0.956	0.829	0.750	0.833	0.755	0.000	0.780	0.552	0.727	0.882	0.882	0.513	0.513
1-Aug	0.983	0.850	0.750	0.917	0.803	0.000	0.780	0.645	0.818	0.957	0.957	0.538	0.538
8-Aug	0.990	0.859	0.750	0.958	0.844	0.000	0.854	0.736	0.818	0.978	0.978	0.638	0.638
15-Aug	0.995	0.900	0.750	1.000	0.865	0.000	0.878	0.828	0.909	0.978	0.978	0.788	0.788
22-Aug	0.998	0.959	0.875	1.000	0.893	0.000	0.902	0.899	1.000	1.000	1.000	0.913	0.913
29-Aug	1.000	0.990	1.000	1.000	0.903	0.000	0.927	0.921	1.000	1.000	1.000	0.975	0.975
5-Sep	1.000	1.000	1.000	1.000	0.927	0.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
12-Sep	1.000	1.000	1.000	1.000	0.962	0.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
19-Sep	1.000	1.000	1.000	1.000	0.988	0.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
26-Sep	1.000	1.000	1.000	1.000	1.000	0.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Date	Rapid River Fish Hatchery		Sawtooth Fish Hatchery		Pahsimeroi Fish Hatchery		South Fork Salmon River Weir		Johnson Creek Weir	
	RapidR	USR	HORSeg	HORInt	NOR	HORSeg	HORInt	NOR	JohnCr	NOR
2-May	15	0	0	0	0	0	0	0	0	0
9-May	22	0	0	0	0	0	0	0	0	0
16-May	41	0	0	0	0	0	0	0	0	0
23-May	93	0	0	0	0	0	0	0	0	0
30-May	178	0	0	0	0	0	0	0	0	0
6-Jun	312	0	0	0	0	0	0	0	0	0
13-Jun	511	37	0	9	2	0	5	6	0	3
20-Jun	868	112	0	33	51	0	13	56	0	6
27-Jun	1,309	282	0	61	200	0	23	138	1	12
4-Jul	1,745	506	0	81	336	0	27	276	3	39
11-Jul	1,986	638	0	92	430	0	30	414	5	64
18-Jul	2,093	721	0	102	490	0	33	601	6	76
25-Jul	2,158	778	0	111	501	0	33	664	7	83
1-Aug	2,220	798	0	122	533	0	33	775	8	90
8-Aug	2,236	806	0	127	560	0	36	884	8	92
15-Aug	2,247	844	0	133	574	0	37	995	9	92
22-Aug	2,253	900	0	133	592	0	38	1081	10	94
29-Aug	2,257	929	0	133	599	0	39	1106	10	94
5-Sep	2,257	938	0	133	615	0	42	1202	10	94
12-Sep	2,257	938	0	133	638	0	42	1202	10	94
19-Sep	2,257	938	0	133	655	0	42	1202	10	94
26-Sep	2,257	938	0	133	664	0	42	1202	10	94
Total	2,257	938	0	133	664	0	42	1202	10	94
Forecast	13,372	3,197	425	880	1,713	90	227	5,638	1,956	974
										110

2.3.2. Trap Operations and Production Planning for 2018 (Smolts BY 2018) – 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 2018 (BY 2018)					
Juvenile/Egg Release Location	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	NC	NC	NC
Little Salmon R. (RapidR)	NC	NC	NC	NC	NC
Hells Canyon (RapidR)	NC	NC	NC	NC	NC
<i>South Fork Salmon River and Johnson Creek Weirs (SOP Sections 2.3 and 2.4)</i>					
Johnson Cr. (JohnCr)	NC	NC	Increase in smolt goal to 150,000	NC	NC
SFSR Knox Bridge Integrated (SFSRInt)	NC	NC	NC	NC	NC
SFSR Knox Bridge Segregated (SFSRSeg)	NC	NC	NC	NC	NC
SBT Egg Box – Curtis/Cabin Cr. (SFSRSeg)	NC	NC	NC	NC	NC
Clearwater Fish Hatchery Egg Transfer Segregated-SUM (SFSRSeg-CFH)	NC	NC	NC	NC	NC

Plan for 2018 (BY 2018)					
Juvenile/Egg Release Location	Adult Fish Health	Trap Ops	Production target changes	Spawning protocol changes	Disposition of adults
<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	NC	NC	NC
<i>Sawtooth Fish Hatchery (SOP Sections 2.6, 2.7 and 2.8)</i>					
East Fork Salmon River Weir (EFNat)	NC	NC	NC	NC	NC
Sawtooth Weir Integrated (USRInt)	NC	NC	Increase smolt goal to 250,000	NC	NC
Sawtooth Weir Segregated (USRSeg)	NC	NC	Adjust smolt goal to 1,450,000	NC	NC
Yankee Fork (USRSeg)	NC	NC	NC	NC	NC

2.4. Early Rearing and Marking Plan for 2018 (Smolt BY 2017)

2.4.1. Early Rearing and Marking Plan for 2018 (Smolt BY 2017) – TOTALS

Table 2.4a. Sp/Su Chinook Projected Marking of BY 2017 juveniles to be marked in 2018 (released in 2019).

Hatchery	Release Site	Stock	Likely Marking Date(s)	Release Goals for 2019	Inventory to Date		Projected Release				Projected Marking				PIT Tags ¹											
					Date	Number	Number	No CWT	CWT	Adipose Fin Clip	CWT	No CWT	No Clip	Total # Tags	Funding Source											
															CS	LSRCP	IPC	BPA								
RRFH	Rapid River Hatchery	RapidR	6/12-6/29	2,500,000																						
	Little Salmon	RapidR		150,000		3,217,755																				
	Hells Canyon	RapidR		350,000																						
Totals				3,000,000		3,217,755		3,071,347	2,880,000	120,000																
SFH	Sawtooth Weir - Integrated ²	USRInt	5/9-5/16	150,000		88,828		84,920																		
	Sawtooth Weir - Segregated	USRSeg	5/9-5/16	1,550,000		943,123		901,626	815,000	120,000																
	Yankee Fork	USRSeg	5/9-5/16	300,000		101,181		96,729		101,181																
Springfield	Yankee Fork	USRSeg	7/5-7/13	N/A		104,260		90,000		104,260																
Totals				2,000,000		1,237,392		1,173,274	815,000	325,441																
PFH	Pahsimeroi Weir - Integrated ²	PahInt	5/21-5/27	65,000		67,971		64,572																		
	Pahsimeroi Weir - Segregated	PahSeg	5/21-5/27	935,000		836,769		794,931	710,000	120,000																
Totals				1,000,000		904,740		859,503	710,000	120,000																
McFH	SFSR Knox Br. - Integrated ²	SFSRInt	7/9-7/20	150,000		173,337		164,670																		
	SFSR Knox Br. - Segregated	SFSRSeg	6/11-6/15:7/9-7/20	850,000		948,891		901,446	828,891	120,000																
	Johnson Creek	JohnCr	7/9-7/20	150,000		130,508		123,983																		
Totals				1,150,000		1,252,736		1,190,099	828,891	120,000																
Grand Totals				7,150,000		6,612,623		6,294,223	5,233,891	685,441																

¹ PIT Tagging occurs in fall 2018

² See AOP text (2.4.2. Early Rearing and Marking Plan section) for explanation of reduction in integrated program size and marking/release plan

2.4.2. Early Rearing and Marking Plan for 2018 (Smolt BY 2017) – NARRATIVE

Examples for discussion: 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 2018 (BY 2017)					Meets Release Target
	Juvenile Fish Health	Fish Feeding	Rearing Conditions	Marking		
<i>Rapid River Fish Hatchery (SOP Section 2.2)</i>						
Rapid River Hatchery (RapidR)	NC	NC	NC	NC	NC	NC
Little Salmon R. (RapidR)	NC	NC	NC	NC	NC	NC
Hells Canyon (RapidR)	NC	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	NC
Knox Bridge Integrated (SFSRInt)	NC	NC	NC	NC	NC	Current inventory is 15% above release target - 3% increase in eye up and improved eye to ponding survival.
Knox Bridge Segregated (SFSRSeg)	NC	NC	NC	NC	NC	NC
<i>Pahsimeroi Fish Hatchery (SOP Section 2.5)</i>						
Pahsimeroi Ponds Integrated (PahInt)	NC	NC	NC	NC	NC	NC

Plan for 2018 (BY 2017)					
Release Location	Juvenile Fish Health	Fish Feeding	Rearing Conditions	Marking	Meets Release Target
Pahsimeroi Ponds Segregated (PahSeg)	NC	NC	NC	NC	BY17 ~795,000 SMOLTS, 15% BELOW TARGET DUE TO LOW BROOD RETURNS
<i>Sawtooth Fish Hatchery (SOP Sections 2.6 and 2.8)</i>					
Sawtooth Weir Integrated (USRInt)	NC	NC	NC	NC	BY17 ~84,900 smolts, 43% below target due to low adult returns and lower than average fecundity and % eye-up
Sawtooth Weir Segregated (USRSeg)	Broodstock from segregated females injected with Draxxin are being reared separately from non-injected broodstock to track any possible effects of the drug to the offspring	NC	NC	NC	BY17 ~901,600 smolts, 42% below target due to low adult returns and lower than average fecundity and % eye-up
Yankee Fork (USRSeg)	NC	NC	Rearing split between Sawtooth and Springfield Fish Hatcheries to test post release survival	NC	Release Target was decreased from 300,000 to 200,000 due to low adult returns
<i>Springfield Fish Hatchery</i>					
Yankee Fork (USRSeg)	NC	Feed regime will change to meet release size on a constant rearing water temp	NC	Marking from 7/5-7/13	NC

3. Fall Chinook

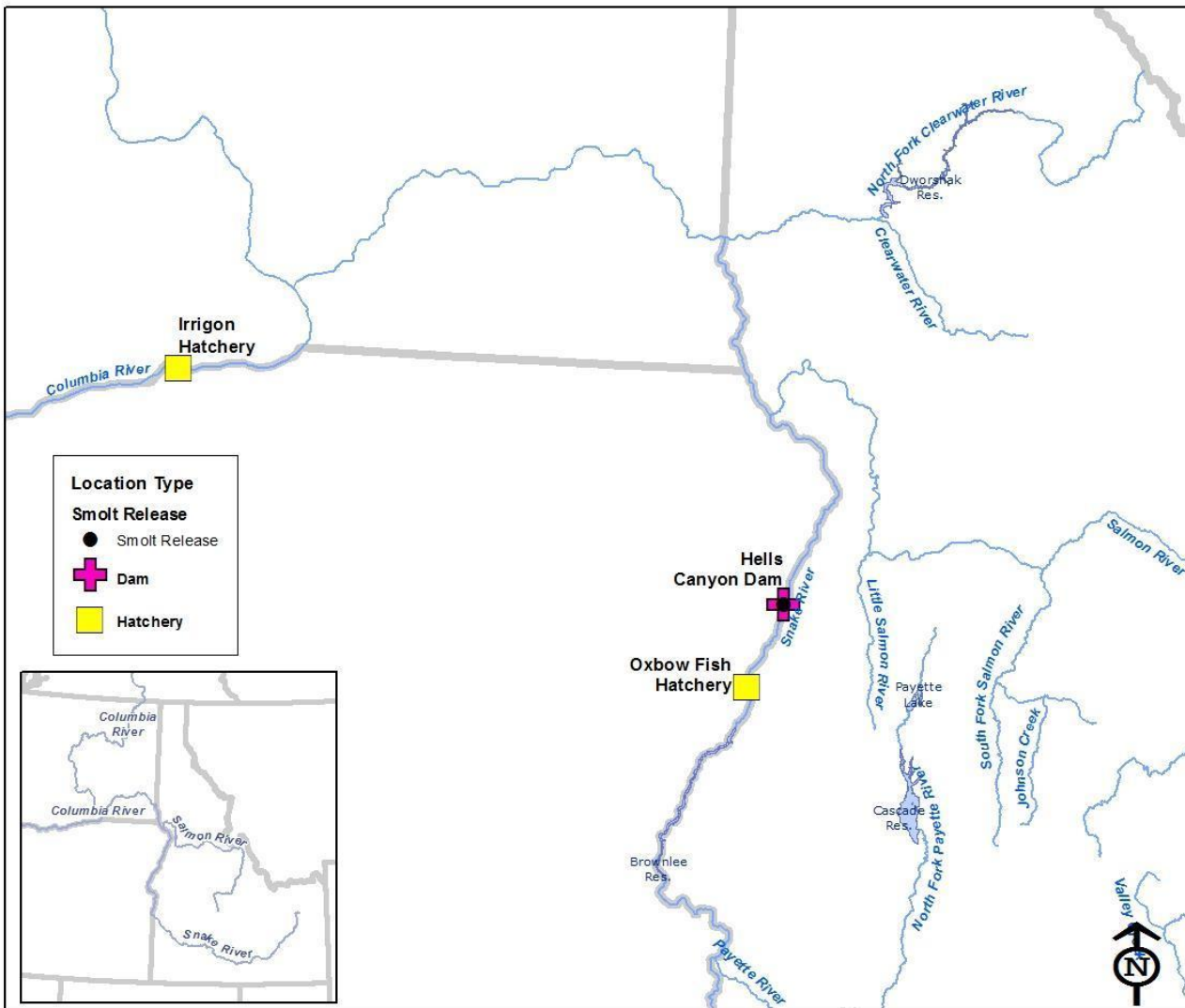


Figure 3. Fall Chinook Salmon facilities and smolt release locations.

Table 3. Fall Chinook Release Goals.

Hatchery	Release Site	Release Goals
Irrigon	Hells Canyon	1,000,000

3.1. Releases in 2018 (Sub-Yearling BY 2017)

3.1.1. Releases in 2018 (Sub-Yearling BY 2017) – Totals

Table 3.1a. BY2017 Fall Chinook Sub-yearling Marking and Releases in 2018.

Hatchery	Release Site	Likely Release Date	Release Goals	Total	Projected Actual Releases				PIT Tag
					Adipose Fin Clip		No Clip		
					No CWT	CWT	CWT	No CWT	
Irrigon	Hells Canyon	5/15-5/17	1,000,000	1,000,000	200,000	-	-	3,000	

3.1.2. Releases in 2018 (Sub-Yearling BY 2017) - 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>Oxbow Fish Hatchery (IDFG) (SOP Section 3.1)</i>			
Hells Canyon Dam Release	NC	NC	NC

3.2. Trap Operations and Production Planning for 2018 (Sub-Yearling BY 2018)

Refer to Lyons Ferry AOP

3.3. Marking and Rearing Plan for 2018 (Sub-Yearling BY 2017)

Refer to Lyons Ferry AOP

4. Sockeye

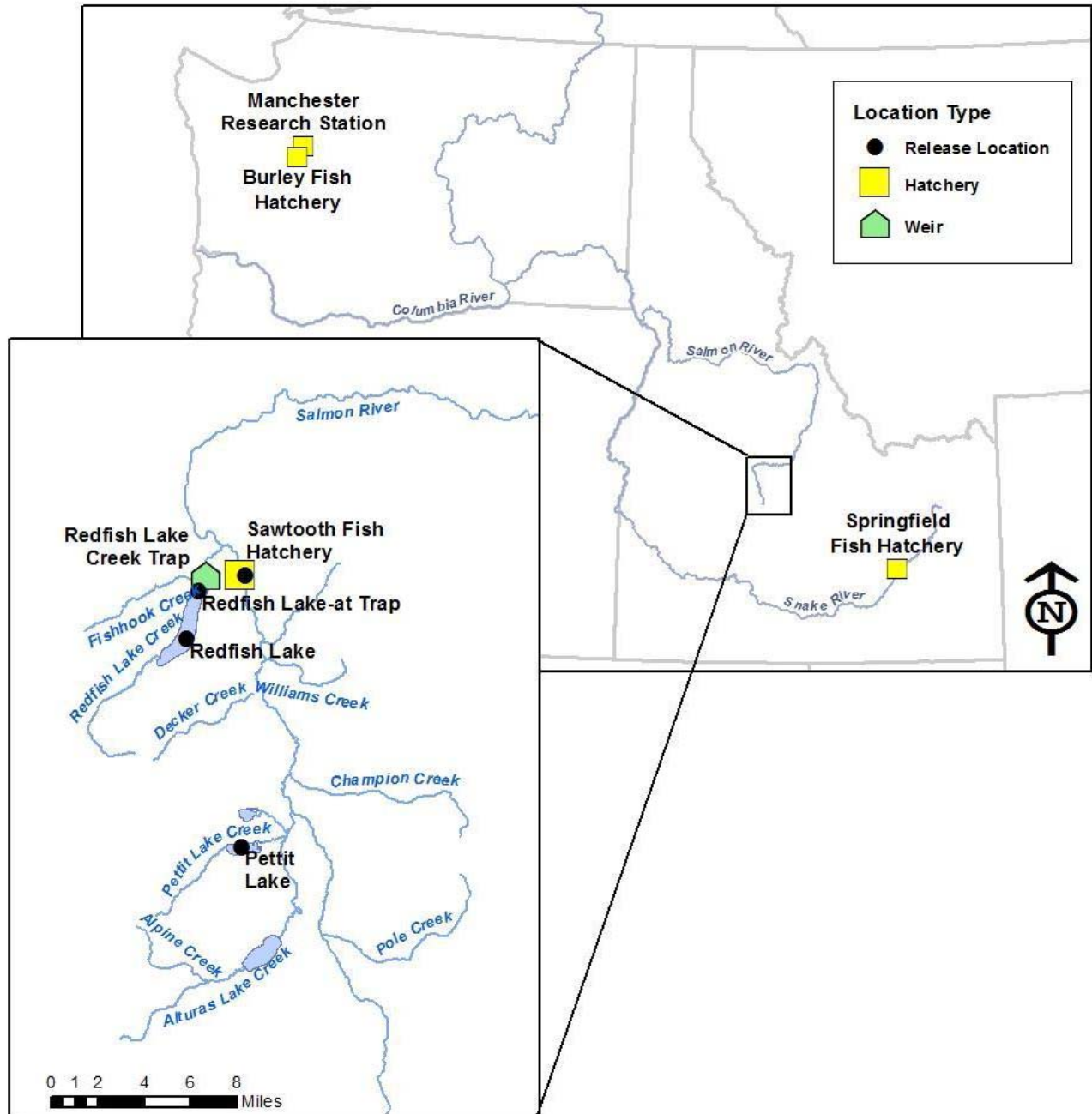


Figure 4. Sockeye salmon traps, hatchery facilities, and smolt and adult release locations.

Table 4. Sockeye 2018 Release Goals.

Rearing Facility	Release Site	Parent Stock	2018 Smolt Release Goal (BY 2016)
Sawtooth	Redfish Lake Cr.	Snake R.	0
Springfield	Sawtooth ¹	Snake R.	331,000
Springfield	Redfish Lake Cr. ¹	Snake R.	331,000
Grand Total			662,000

Rearing Facility	Release Site	Parent Stock	Brood Year	2018 Captive-Reared Minimum Adult Release Goal ²
NOAA - Burley Creek	Redfish Lake	Snake R.	2013	-
	Redfish Lake	Snake R.	2014	50
	Redfish Lake	Snake R.	2015	100
	Pettit Lake	Snake R.	2015	100
Total				250
Eagle Fish Hatchery	Redfish Lake	Snake R.	2014	-
	Redfish Lake	Snake R.	2015	100
Total				100
Grand Total				350

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

²The minimum release target for the Sockeye captive broodstock program is 250 adults to Redfish Lake and 100 adults to Pettit Lake. This can be made up of anadromous returns, captive broodstock from Eagle FH, and captive broodstock from Burley Creek FH (NOAA Fisheries).

4.1. Timeline and Flowchart for Sockeye Salmon Production

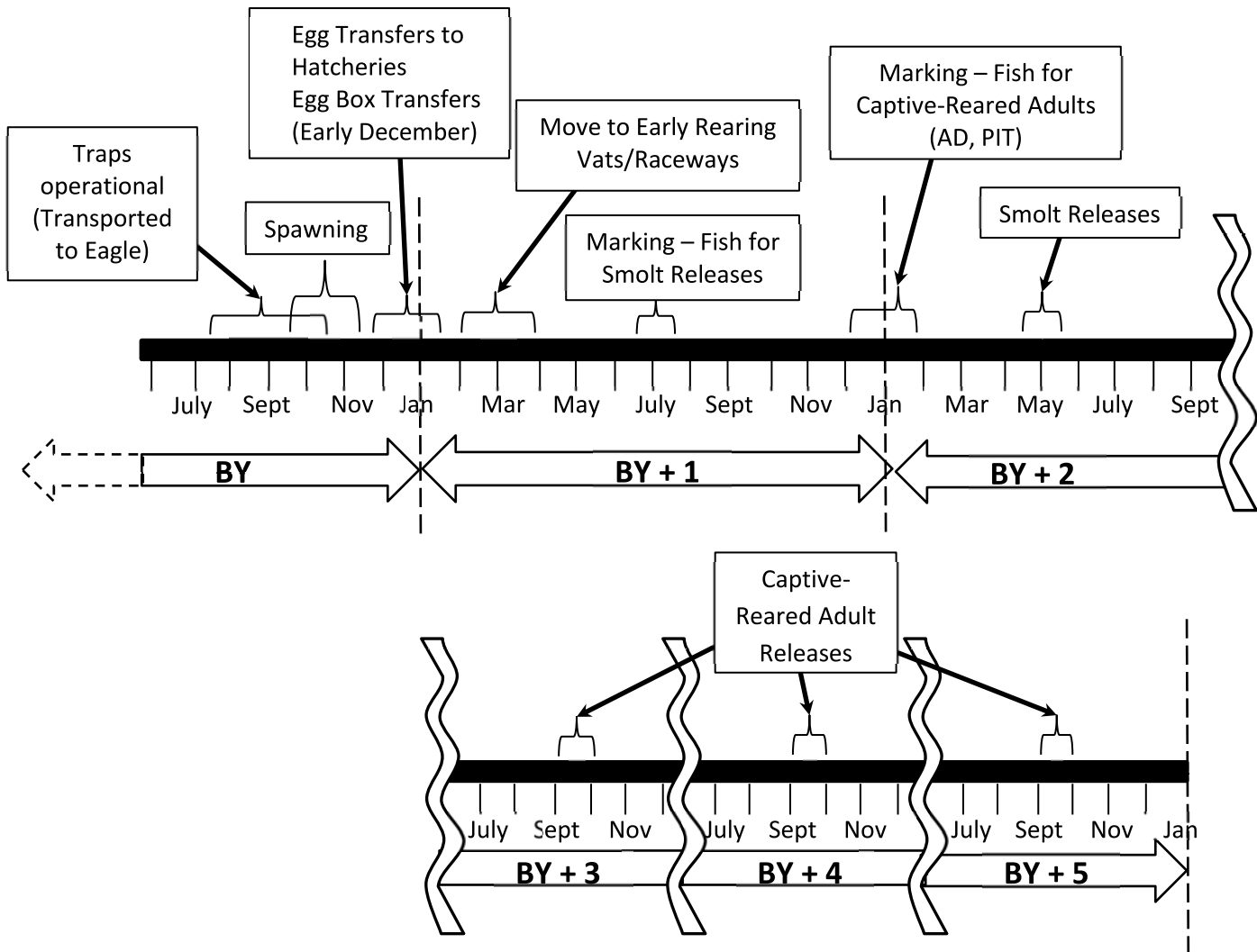


Figure 4.1a. Timeline for Sockeye Salmon production. Date ranges are shown to include all facilities' operations.

Sockeye

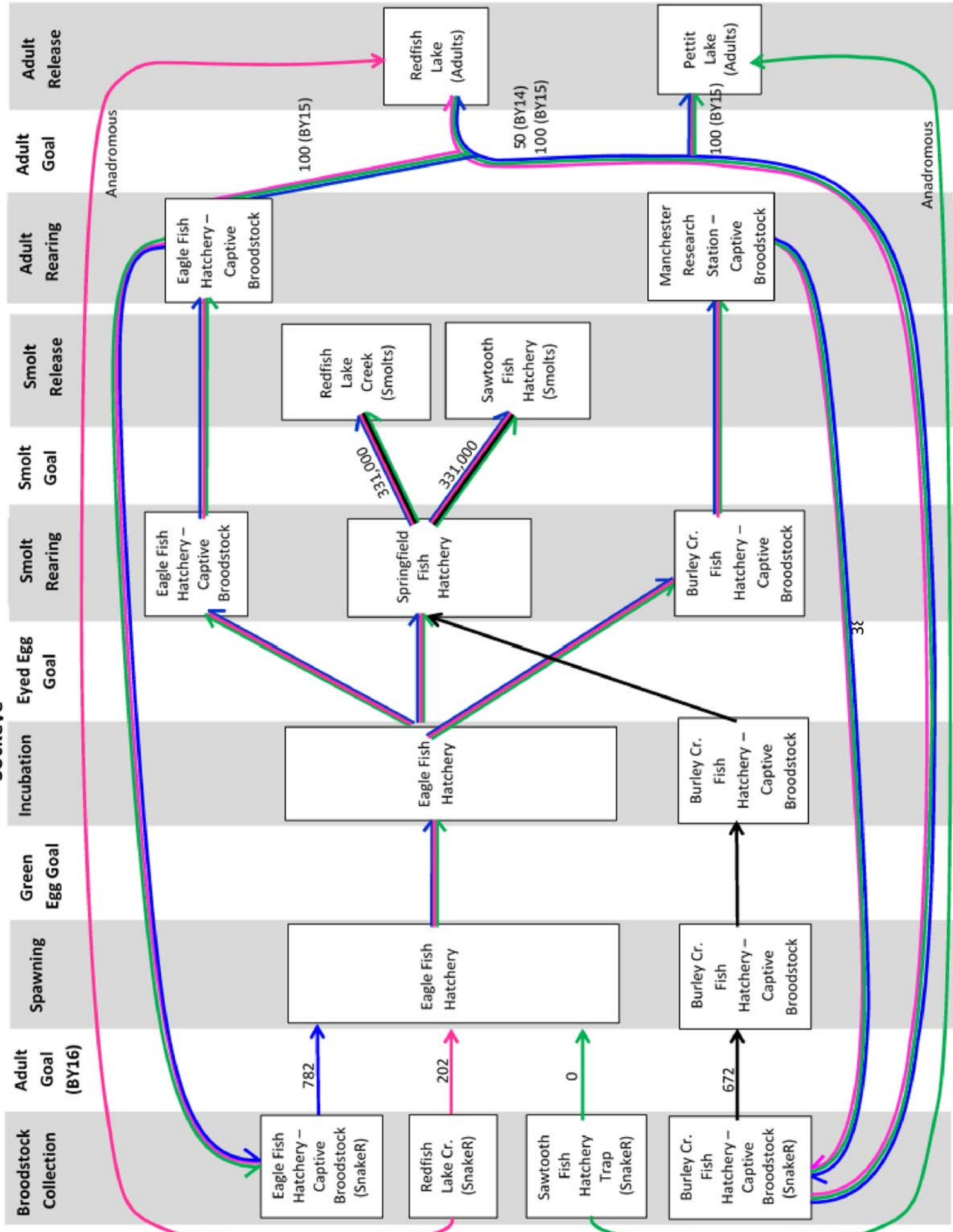


Figure 4.1b. Fish and Egg movements for Sockeye. Numbers reflect 2018 adult/smolt releases and adult broodstock collection.

4.2. Releases in 2018 (Smolt BY16, Captive Adult BY15, BY14, BY13)

4.2.1. Releases in 2018 (Smolt BY16, Captive Adult BY15, BY14, BY13) – Totals

Table 4.2a. Sockeye Captive-Reared Adult Releases in 2018.

Hatchery	Brood year	Release Site	Stock	Likely Release Date	Adult Release Goals ¹
NOAA - Burley Creek	2013	Redfish Lake	Snake R.	mid-Sept.	-
	2014	Redfish Lake	Snake R.	mid-Sept.	50
	2015	Redfish Lake	Snake R.	mid-Sept.	100
	2015	Pettit Lake	Snake R.	mid-Sept.	100
Total					250
Eagle	2014	Redfish Lake	Snake R.	mid-Sept.	-
	2015	Redfish Lake	Snake R.	mid-Sept.	100
Total					100
Grand Total					350

¹ All adults will receive a PIT tag prior to release

Table 4.2b. BY 2016 Sockeye Smolt Releases in 2018.

Hatchery	Release Site	Stock	Likely Release Date	Release Goals	Projected Actual Releases						PIT Tags			
					Adipose Fin Clip		No Clip		Total # Tags	Funding Source				
					No CWT	CWT	CWT	No CWT		CSS	BPA			
Sawtooth	Redfish Lake Cr.	Snake R.		0						0				
Springfield	Sawtooth ¹	Snake R.		331,000						25,000		20,000		5,000
Springfield	Redfish Lake Cr. ¹	Snake R.	4/25/18	331,000						24,990		19,990		5,000
Grand Total					662,000	662,000	0	0	0	49,990	39,990	10,000		

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

4.2.2. Releases in 2018 (Smolt BY16, Captive Adult BY15, BY14, BY13) – 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

Location		Plan for 2018		Changes/Conditions that Occurred 2017-Early 2018
		Release Target	Transport/Release	
<i>Eagle Fish Hatchery (SOP Section 4.3)</i>				
Redfish Lake – Adult Releases (SnakeR)	NC	Smolt BY16, Adult BY15, BY14, BY13	Smolt BY16, Adult BY15, BY14, BY13	Fish/Egg Health BY16, BY15, BY14, BY13
Alturas Lake – Egg Releases (SnakeR)	NC			NC
Redfish Lake – Adult Releases (SnakeR)	NC			NC
<i>Burley Creek Fish Hatchery (NOAA) (SOP Section 4.3)</i>				
Redfish Lake – Adult Releases (SnakeR)	NC			NC
<i>Springfield Fish Hatchery (SOP Section 4.4)</i>				
Redfish Lake Creek– Smolt Releases (SnakeR)	239,413 pre smolts were released into Redfish Lake at 45 fpp in October 2017. For 2018 smolt releases, half of SpFH smolts will be released at Sawtooth and half will be released at Redfish Lake Creek (331k at each site).		239,413 pre smolts were released into Redfish Lake at 45 fpp in October 2017. These pre-smolts were acclimated at Sawtooth Fish Hatchery up to 14 days before final release into Redfish Lake. Smolts also will be acclimated for ~2 weeks at SFH prior to release.	NC
Sawtooth - Smolt Releases (SnakeR)	For 2018 smolt releases, half of SpFH smolts will be released at Sawtooth and half will be released at Redfish Lake Creek (331k at each site).		Smolts will be acclimated for ~2 weeks at SFH prior to release.	

4.3. Trap Operations and Production Planning for 2018 (BY 2018 for Smolt and Captive Adult Programs)
4.3.1. Trap Operations and Production Planning for 2018 (BY 2018 for Smolt and Captive Adult Programs) – TOTALS

Table 4.3a. Sockeye Spawning for BY 2018.

Site	Stock	Forecast return	Trapping period	Broodstock Need				
				M:F Ratio	Female	Male	Total	Max Jack %
Redfish Lake Creek	Snake R.	205	7/15 - 10/15	50:50	101	101	202	NA
Sawtooth	Snake R.	4	7/15 - 10/1	50:50			0	NA
Eagle FH	Snake R.	1,050	NA	50:50	391	391	782	NA
Burley Creek	Snake R.	1,100	NA	50:50	336	336	672	NA
Grand Total		2359			828	828	1656	0

Note: 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.

4.3.2. Trap Operations and Production Planning for 2018 (BY 2018 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 2018 (BY 2018)						
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	Redfish Lake Creek trap has been replaced with a new weir and trap. Temporary holding area to accommodate up to 400 adults.	NC	NC	NC	NC
Sawtooth Trap (SnakeR)	NC	NC	NC	NC	NC	NC

4.4. Marking and Rearing Plan for 2018 (Smolt BY 2017)
4.4.1. Marking and Rearing Plan for 2018 (Smolt BY 2017) – TOTALS

Table 4.4a. BY 2017 Sockeye Marking in 2018.

Hatchery	Release Site	Stock	Likely Release Date	Release Goals for 2019	Projected Actual Releases				PIT Tags		
					Total	Adipose Fin Clip	No Clip	No CWT	Total # Tags	Funding Source	BPA
Sawtooth	Redfish Lake Cr.	Snake R.	April/May	300,000	300,000	300,000			20,000	20,000	
Springfield	Redfish Lake Cr.	Snake R.	April 2019	600,000	600,000				80,200	70,000	10,200
Grand Total				900,000	900,000	0	0	0	100,200	90,000	10,200

Note: PIT tag distribution between release groups is currently being discussed.

4.4.2. Marking and Rearing Plan for 2018 (Smolt BY 2017) – 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	NC	NC	NC
<i>Sawtooth Fish Hatchery</i>				
Sawtooth (SnakeR)	Will follow Springfield SOP guidelines for fish health.	Sawtooth to rear approximately 300,000 BY17 Sockeye to smolt.	Sawtooth to rear approximately 300,000 BY17 Sockeye to smolt.	Approximately 300,000 juveniles to mark.

5. Appendices

5.1. BY2018 Brood Calculator

5.1.1. BY2018 Brood Calculator – SMOLT RELEASES

SPECIES	HATCHERY	PROGRAM INPUTS										HISTORICAL HATCHERY PERFORMANCE METRICS (5-YR AVG)										FORM CALCULATED VALUES									
		RELEASE SITE	STOCK	PREFERRED TRAPPING SITE	FORMAL SMOLT RELEASE GOAL (G)	COMANAGER APPROVED CUSHION %1	% FEMALES IN BROODSTOCK	% MORTALITY DURING HOLDING	GREEN EGG FERTILITY	REMAINING AFTER DISEASE CULLING 2	% SURVIVAL GREEN TO EYED EGG	% SURVIVAL EYED EGG TO RELEASE	RELEASE GOAL WITH CUSHION	EYED EGGS (P)	GREEN EGGS (Q)	GREEN EGGS BEFORE DISEASE CULL (R)	GREEN EGGS (S)	FEMALES SPAWNED (T)	MALES SPAWNED (U)	TOTAL ADULTS SPAWNED (V)	TRAPPED ADULTS NEEDED (W)	ADULTS TRAPPED MEET 1:1 RATIO (X)	SMOLTS PER TRAPPED ADULTS NEEDED (Y)								
STLHD	HNPH	Sawtooth Weir	SawA	SFH	1,410,000	6.00%	50%	0.00%	5,000	100.00%	94.60%	90.70%	1,494,600	1,647,850	1,741,913	349	349	23	23	46	46	698	2,141								
		Sawtooth Weir (BAS Eval)	SawA	SFH	90,000	6.00%	50%	0.00%	5,000	100.00%	94.60%	90.70%	95,400	105,182	111,186	23	23	23	23	46	46	698	2,074								
		Salmon R. - McNabb Pt.	0	0	0	0.00%	0%	0.00%	0	0.00%	0.00%	0.00%	0	0	0	0	0	0	0	0	0	0	0								
		E. Fork Salmon R. - Upper	EFNat	60,000	10.00%	50%	0.00%	6,252	4,800	100.00%	88.00%	88.90%	66,000	74,241	84,364	14	14	14	14	28	28	28	2,357								
		Sawtooth Weir	SawA	279,000	6.00%	50%	0.00%	5,000	4,800	100.00%	94.60%	84.00%	295,740	352,071	372,169	75	75	75	75	150	150	150	1,972								
		Little Salmon R. - Stinky Sp.	PaHa	186,000	10.00%	50%	0.00%	4,800	4,800	100.00%	93.00%	84.00%	204,600	243,571	261,905	55	55	55	55	110	110	110	1,860								
		Pahsimeroi Weir	USRB	155,000	0.00%	60%	5.00%	6,200	6,200	100.00%	84.00%	84.00%	155,000	184,524	205,026	34	34	34	34	67	67	67	2,583								
		Pahsimeroi Weir	DNFH	93,000	10.00%	67%	0.00%	6,681	6,681	100.00%	84.00%	84.00%	102,300	124,786	144,983	22	22	22	22	44	44	44	3,100								
		Yankee Fork	YFT	620,000	0.00%	60%	5.00%	6,200	6,200	100.00%	90.00%	84.00%	620,000	738,095	820,106	133	133	133	133	266	266	266	2,650								
		Little Salmon - Stinky Sp.	USRB	217,000	2.00%	60%	5.00%	6,200	6,200	100.00%	90.00%	84.00%	221,340	263,500	292,778	48	48	48	48	96	96	96	2,604								
NSFH		Pahsimeroi Weir	PaHa	800,000	10.00%	50%	0.00%	4,800	4,800	100.00%	93.00%	90.00%	880,000	977,778	1,051,374	220	220	220	220	440	440	440	2,000								
		Little Salmon R. - Stinky Sp.	PaHa	200,000	10.00%	50%	0.00%	4,800	4,800	100.00%	93.00%	90.00%	220,000	244,444	262,843	55	55	55	55	110	110	110	2,000								
		Little Salmon R. - Stinky Sp.	OxBa	250,000	20.00%	50%	25.00%	5,500	5,500	96.00%	83.00%	97.00%	300,000	309,278	372,625	71	71	71	71	142	142	142	1,579								
		Snake R. Hells Canyon	OxBa	550,000	20.00%	50%	25.00%	5,500	5,500	96.00%	83.00%	97.00%	660,000	680,412	819,774	156	156	156	156	312	312	312	1,587								
		Rapid River Hatchery	RapidR	2,500,000	10.00%	50%	10.33%	3,824	3,824	94.84%	94.31%	95.45%	2,750,000	2,881,090	3,054,914	843	843	843	843	1,686	1,686	1,686	1,462								
SP/SU CHIN	RRFH	Little Salmon	RapidR	150,000	10.00%	50%	10.33%	3,824	3,824	94.84%	94.31%	165,000	172,865	183,295	51	51	51	51	102	102	102	1,144									
		Hells Canyon	RapidR	350,000	10.00%	50%	10.33%	3,824	3,824	94.84%	94.31%	385,000	403,353	427,688	118	118	118	118	236	236	236	1,458									
		Sawtooth Weir - Integrated	USRInt	250,000	0.00%	50%	3.00%	4,700	4,700	97.50%	93.10%	250,000	274,725	295,086	65	65	65	65	130	130	135	1,852									
		Sawtooth Weir - Segregated	USRSeg	1,450,000	3.00%	50%	3.00%	4,700	4,700	97.50%	93.10%	1,493,500	1,605,514	1,724,934	377	377	377	377	754	754	778	1,920									
		Yankee Fork	USRSeg	300,000	3.00%	50%	3.00%	4,700	4,700	97.50%	93.00%	309,000	332,258	356,883	78	78	78	78	156	156	161	1,919									
		Pahsimeroi Weir - Integrated	PaHInt	65,000	0.00%	50%	14.00%	4,500	4,500	94.00%	90.00%	65,000	67,708	75,231	18	18	18	18	36	36	42	1,548									
		Pahsimeroi Weir - Segregated	PaHSeg	935,000	10.00%	50%	15.00%	4,500	4,500	94.00%	90.00%	1,028,500	1,071,354	1,190,394	282	282	282	282	564	564	664	1,549									
		SFSR Knox Br. - Integrated	SFSRInt	150,000	0.00%	50%	10.00%	4,500	4,500	95.00%	91.70%	150,000	176,471	192,443	46	46	46	46	92	92	103	1,456									
		SFSR Knox Br. - Segregated	SFSRSeg	850,000	10.00%	50%	10.00%	4,500	4,500	95.00%	91.70%	935,000	1,000,000	1,199,564	281	281	281	281	562	562	625	1,496									
		Johnson Creek	JohnCr	150,000	10.00%	50%	16.00%	4,500	4,500	97.00%	87.00%	165,000	179,348	206,147	48	48	48	48	96	96	115	1,435									
FALL CHIN	IFH	Hells Canyon		1,000,000								1,000,000																			
		NPTH	Snake R.	500,000																											
		Cedar Flats	Snake R.	200,000	10.00%	50.00%	18.00%	4,028	4,028	98.00%	89.00%	1,540,000	1,604,167	1,802,434	457	457	457	457	914	914	1,115	1,381									
		Lukes Gulch	Snake R.	200,000																											
SOCKEYE	SpFH	Redfish Lake Creek	Redfish Lake	190,000	0.00%	50.00%	1.00%	2,500	2,500	99.00%	90.00%	190,000	223,529	248,366	101	101	101	101	202	202	205	927									
		Redfish Lake Creek	EFH CB	425,000	0.00%	50.00%	3.00%	1,600	1,600	100.00%	85.00%	425,000	500,000	625,000	391	391	391	391	782	782	807	527									
		Redfish Lake Creek	NOAA CB	385,000	0.00%	50.00%	3.00%	1,800	1,800	100.00%	75.00%	385,000	452,941	603,922	336	336	336	336	672	672	693	556									
		Redfish Lake Creek																													

5.1.1.2. BY2018 Brood Calculator – EGG RELEASES

SPECIES	HATCHERY	PROGRAM INPUTS					HISTORICAL HATCHERY PERFORMANCE METRICS (5-YR AVG)										FORM CALCULATED VALUES						
		RELEASE SITE	STOCK	PREFERRED TRAPPING SITE	FORMAL EGG RELEASE GOAL (G)	COMANAGER APPROVED CUSHION % ¹	% FEMALES IN BROODSTOCK (I)	% MORTALITY DURING HOLDING (J)	% GREEN EGG FECUNDITY (K)	% SURVIVAL AFTER DISEASE CULLING ² (L)	% SURVIVAL GREEN TO EYED EGG (M)	% SURVIVAL EYED EGG TO RELEASE (N)	EGG RELEASE GOAL WITH CUSHION (O)	EYED EGGS (P)	GREEN EGGS (Q)	GREEN EGGS BEFORE DISEASE CULL (R)	FEMALES SPAWNED (S)	MALES SPAWNED (T)	TOTAL ADULTS (U)	TRAPPED ADULTS NEEDED (V)	ADULTS TRAPPED TO MEET 1:1 RATIO (W)	SMOLTS PER TRAPPED ADULTS NEEDED (X)	
STHD	SBT Egg Box-Yanklee Fork	USRB (DwordB)		PFH	500,000	10%	50%	5.00%	6,200	100.00%	90.00%	NA	550,000	550,000	611,111	99	99	198	209	209	200	2,632	
	SBT Egg Box-Panther Creek	Paha		PFH	400,000	10%	50%	0.00%	4,800	100.00%	91.70%	NA	440,000	440,000	479,826	100	100	200	200	200	200	2,200	
	SBT Egg Box-Indian Creek	Paha		PFH	100,000	10%	50%	0.00%	4,800	100.00%	91.70%	NA	110,000	110,000	119,956	25	25	50	50	50	50	2,200	
SP/SU CHIN	Panther Creek - EGG BOX	PahSeg		PFH	800,000	0%	50%	15.00%	4,500	95%	91.70%	NA	800,000	800,000	872,410	205	205	410	483	483	483	1,656	
	Curtis/Cabin Creek - EGG BOX	SFSRSeg		McFH	300,000	0%	50%	10.00%	4,500	95%	91.70%	NA	300,000	300,000	327,154	77	77	154	172	172	172	1,744	

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.