

Table 1: Program Specifics

Program	Program Type	Broodstock Needs HOR/NOR*	Timing of Broodstock Collection	Allowable Incidental Handling of ESA-listed NOR during Broodstock Collection						Marking/tagging (AD, CWT, Vent)	Number Released ^b			Average Size Goal (fpp)	Release Time ^c	Votionally Released	Release Location	Precocity		PHOS/PNI					
				Fall Chinook	Spring Chinook	Coho	Chum	Summer Steelhead	Winter Steelhead		Annual Release Goal	5-year Average Production Level	Annual Max Production Level					Annual	5-year max	Site-Specific Measures	Year of Measure Implementation	First Year of Expected Effect	Limits	Year for pHOS/PNI to Meet Expected Value	
Grays River fall Chinook ^{d1}	Conservation	154 NOR	Aug - Nov	850	-	1,050	8,750	-	-	100% CWT	361,000	368,220	379,050	80-90	May - July	No	Grays and/or WF Grays R.	<5%	≤3%	Install and operate an improved weir in Grays	2027	2027	PHOS <50%	2030	
Beaver Creek coho salmon	Integrated	337 NOR	Sept - Dec	770	-	2,500	1,500	-	-	180,000 AD, 45,000 AD+CWT	225,000	229,500	236,250	15	April - May	No	Beaver Creek @ Rkm 0.7	<5%	≤3%	Continue operation of Etchoman R. weir	2025	2025	PHOS <30%	2028	
Beaver Creek summer steelhead	Segregated	See Washougal Summer Steelhead								100% AD	30,000	30,600	31,500	5.5	April - May	No	Beaver Creek @ Rkm 0.7	<5%	≤3%	-	-	-	-	-	
Beaver Creek winter steelhead	Segregated	140 HOR	Late Nov - Jan	20	-	500	500	-	-	100% AD	130,000	132,600	136,500	5.5	April - May	No	Beaver Creek @ Rkm 0.7	<5%	≤3%	-	-	-	-	-	
Abernathy fall Chinook ^{d1}	Conservation	48 NOR	Aug - Nov	850	-	1,750	300	-	-	100% CWT	113,000	115,260	118,650	80-90	May - July	TBD	Abernathy Creek @ Rkm 4.9	<5%	≤3%	Install and operate weir in Abernathy Creek	2027	2027	PHOS <50%	2030	
Coweman winter steelhead	Segregated	See Kalama Winter Steelhead (segregated)								100% AD	12,000	12,240	12,600	5.5	April - May	Yes	Coweman R.	<5%	≤3%	Continue pHOS control for winter steelhead program	2025	2025	pHOS <5.0%	2028	
South Toulte summer steelhead	Segregated	See Washougal Summer Steelhead								100% AD	25,000	25,500	26,250	5.5	April - May	Yes	SF Toulte R. @ Rkm 16.1	<5%	≤3%	Continue pHOS control for summer steelhead program	2025	2025	pHOS <5.0%	2028	
North Fork Toulte coho salmon	Integrated	96 NOR	Mid Aug - Dec	3,400	360	18,300	520	80	80	45,000 AD, 45,000 AD+CWT	90,000	91,800	94,500	15	April - May	Yes	Green R. @ Rkm 1.3	<5%	≤3%	Continue status quo pHOS control	2025	2025	pHOS <30.0%	2028	
North Fork Toulte fall Chinook salmon	Integrated	814 NOR	Mid Aug - Nov	3,400	360	18,300	520	80	80	1,000,000 AD, 100,000 AD+CWT	1,100,000	1,122,000	1,155,000	80	May - July	Yes	Green R. @ Rkm 1.3	<5%	≤3%	Continue operation of SF Toulte and Green R. weirs	2025	2025	pHOS <30.0%	2029	
Kalama fall Chinook salmon	Segregated	1200 HOR	July - Oct	9,200	550	3,150	275	1,500	3,000	1,800,000 AD, 200,000 AD+CWT	2,000,000	2,040,000	2,100,000	80	May - July	Yes	Kalama R. @ Rkm 8.2	<5%	≤3%	-	-	-	-	-	
Kalama coho salmon	Segregated	585 HOR	Oct - Dec	2,000	500	2,000	25	1,000	3,000	255,000 AD, 45,000 AD+CWT	300,000	306,000	315,000	17	April - May	No	Kalama R. @ Rkm 16.1	<5%	≤3%	-	-	-	-	-	
Kalama spring Chinook salmon	Segregated	569 HOR	Apr - July	2,000	500	2,000	25	1,000	3,000	425,000 AD, 225,000 AD+CWT Phase 1 ^e 100,000 AD+CWT 625,000 AD, 125,000 AD+CWT Phase 2 ^e	750,000	765,000	787,500	Phase 1 ^e : 10 80 Phase 2 ^e : 10	Last wk of March June Last wk of March	Yes	Kalama R. @ Rkm 16.1 and/or Fall Creek Hatchery @ Rkm 8.2	<5%	≤3%	Continue operation of sorting facility at Kalama Falls H.	2025	2025	pHOS <10.0%	2028	
Kalama summer steelhead	Integrated	90 NOR	Apr - Nov	2,000	500	2,000	25	1,000	3,000	40,000 AD, 50,000 AD+CWT	90,000	91,800	94,500	5.5	April - May	No	Kalama R. @ Rkm 16.1	<5%	≤3%	Continue pHOS control and NOR integration	2025	2025	PNI ≥0.67	2028	
Kalama winter steelhead (integrated)	Integrated	45 NOR	Late Feb - Apr	2,000	500	2,000	25	1,000	3,000	45,000 AD	45,000	45,900	47,250	5.5-7.5	April - May	Yes	Kalama R. @ Rkm 8.2	<5%	≤3%	Continue pHOS control and NOR integration	2025	2025	PNI ≥0.67	2028	
Kalama winter steelhead (segregated)	Segregated	150 HOR	Dec - Mar	2,000	500	2,000	25	1,000	3,000	90,000 AD+CWT	90,000	91,800	94,500	5.5	April - May	No	Kalama R. @ Rkm 16.1	<5%	≤3%	Continue pHOS control	2025	2025	pHOS <5.0% from seg program	2028	
Salmon Creek/Kineline winter steelhead	Segregated	See Kalama Winter Steelhead (segregated)								100% AD	40,000	40,800	42,000	7	April - May	No	Salmon Creek @ Rkm 8.1	<5%	≤3%	Develop monitoring program estimating PHOS and genetic effects from KEWS release at Kineline	-	-	-	-	
Washougal fall Chinook salmon	Integrated	978 NOR	Aug - Oct	4,200	-	1,200	275	450	60	1,100,000 AD, 100,000 AD+CWT	1,200,000	1,224,000	1,260,000	80	June	No	Washougal R. @ Rkm 32.2	<5%	≤3%	Continue operation of Washougal R. weir	2025	2025	pHOS <30.0%	2028	
Washougal coho salmon	Integrated	96 NOR	Oct - Dec	4,200	-	1,200	275	450	60	63,000 AD, 45,000 AD+CWT	108,000	110,160	113,400	15	April-May	No	Washougal R. @ Rkm 32.2	<5%	≤3%	Continue operation of Washougal R. weir	2025	2025	pHOS <30.0%	2028	
Washougal summer steelhead (Skamania H.)	Segregated	400 HOR	Apr - Sept	10	-	25	10	200	200	100% AD	70,000	71,400	73,500	5.5	April - May	No	WF Washougal R. @ Rkm 1.61 and/or Mainstem Washougal @ Rkm 5.63 ^f	<5%	≤3%	Continue pHOS control for summer steelhead program	2025	2025	pHOS <5.0%	2028	
Washougal winter steelhead (Skamania H.)	Integrated	42 NOR	Dec - May	See Wash summer sthd, coho, and fall Chinook						100% AD	60,000	61,200	63,000	5.5	April - May	No	WF Washougal R. @ Rkm 1.61 and/or Mainstem Washougal @ Rkm 5.63 ^f	<5%	≤3%	Terminate isolated winter steelhead hatchery program, conduct additional HOS removal when feasible. Initiate integrated winter steelhead hatchery program	2025	2025	PNI ≥0.67	2028	
Rock Creek winter steelhead	Segregated	See Kalama Winter Steelhead (segregated)								100% AD	20,000	20,400	21,000	5.5	April	No	Rock Creek @ Rkm 0.1	<5%	≤3%	-	-	-	-	-	
Klickitat coho salmon	Segregated	1,900 HOR	See Washougal coho								3,330,000 AD, 170,000 AD+CWT	3,500,000	3,570,000	3,675,000	20	April	Partial	Klickitat R. @ RM 42.3, 17.3 and 9.3	<5%	≤3%	-	-	-	-	-
Klickitat Skamania summer steelhead	Segregated	See Washougal Summer Steelhead								100% AD	90,000	91,800	94,500	5	April - May	No	Klickitat R. @ RM 28, 25, 18, and 10	<5%	≤3%	-	-	-	-	-	
Ringold Springs coho salmon	Segregated	250 HOR	Oct - Dec	2,000	500	2,000	25	1,000	3,000	650,000 AD, 100,000 AD+CWT	750,000	765,000	787,500	15	April - May	Yes	Columbia R. @ Rkm 567	<5%	≤3%	-	-	-	-	-	
Ringold Springs steelhead	Segregated	373 HOR	Dec - May	-	-	-	-	50	-	180,000 AD and RV	180,000	183,600	189,000	5	April - May	Yes	Columbia R. @ Rkm 348.3	<5%	≤3%	-	-	-	-	-	

Notes:

- ^aFor integrated programs, NOR collection limited to 33% of annual NOR return for each NOAA population; HORs will be used to backfill to broodstock need
- ^bRelease location and size at release may be found in the most current Future Brood Document. See link below.
- ^cFuture Brood Document
- ^dEarly release may occur on the recommendation of fish health specialist or due to environmental conditions (e.g., drought)
- ^e2029-2040 Juvenile fall Chinook by migrant trapping will be conducted from day 20-70 (each calendar year). Up to 50% of out-migrating natural origin fry will be used for short-term rearing at Abernathy FTC. Less than 450 chum may be inadvertently collected, transported, and reared.
- ^fJuveniles may be trucked to a lower portion of the mainstem when conditions at the release site are not conducive to fish release.
- ^gInitial implementation will require ~100,000 fish to be released as sub-yearling at 80fpp.
- ^hLong term implementation
- ⁱThe target number of juvenile Chinook released will vary based on the projected abundance of natural-origin adults.
- ^jBecause the intention of the Grays River Fall Chinook Salmon Conservation Program and Abernathy Fall Chinook Salmon Conservation Program is to produce naturally-spawning hatchery fish, returning adult fish from these programs will not be counted against the pHOS levels identified here.

Table 2: Proposed Measures and Expected pHOS/PNI levels by Watershed. Required actions by hatchery facility and authorized take for Trout Reinroduction program also included.

Lower Columbia River Watersheds	Proposed Measures		Expected pHOS/PNI level			Authorized Take Associated with Trout Reinroduction Program ^{1,2}			Hatchery Facility Site Specific Actions	
	Action	Year of Implementation	Chinook	Coho	Steelhead	NOR Adults			Facility	Action
						Spring Chinook	Fall Chinook	Coho		
Grays/Chinook	Installation and operation of an improved weir in Grays River	2027								
	Discontinue Grays River coho hatchery program	2025	pHOS = <50%	pHOS = <10%	-	-	-	-	-	-
	Discontinue Deep River coho net pen program	2027								
Elochoman/Skamokawa	Continued operation of Elochoman River weir	2025	pHOS = <50%	pHOS = <30%	-	-	-	Beaver Creek	WDFW will evaluate intake screens and address as needed	
Mil/Abernathy/Germany	Installation and operation of weir in Germany and Abernathy Creek	2026 (Germany Cr.), 2027 (Abernathy Cr.)	pHOS = <50%	-	-	-	-	-	-	
Cowemen	Continued operation of Coweman River weir	2025	pHOS = <10%	pHOS = <10%	pHOS = <5% for segregated winter steelhead	-	-	-	-	
South Fork Toutle	Continued operation of South Fork Toutle River weir/Continue pHOS control	2025	pHOS = <30%	pHOS = <10%	pHOS = <5%	-	-	SF Toutle Acclimation Pond	WDFW will evaluate intake screens and address as needed	
North Fork Toutle	Continue operation of North Fork Toutle (Green) River weir	2025	pHOS = <30%	pHOS = <30% ³	pHOS = <5%	300 ⁴	300 ⁴	450 ^{4,7}	North Toutle ⁶	Surface intake upgrade - 10 year capital plan
Cowlitz	-	-	pHOS = <30%	pHOS = <30%	-	-	-	-	-	-
Kalama	Continued operation of Kalama River weir/Continue pHOS control	2025	Spring Run: pHOS = <10%	-	pHOS = <5% for seg programs and PNI ≥0.67 for int programs	-	-	-	Kalama	WDFW will evaluate intake screens and address as needed
	Continue NOR integration for SU SH and WI SH programs	-	Fall Run: No pHOS limit	-	-	-	-	-	Fallert Creek	Surface intake upgrade - 10 year capital plan
Lewis	Reduce Fallert Creek fall Chinook releases to 2 million smolts	2025								
	Initiate Lewis River coho program through HGMP submission	2027	pHOS = <10%	EF: pHOS = <10%	-	-	-	-	-	-
	Continued operation of Cedar Creek weir and Grist Mill trap; Conduct additional HOS removal when feasible.	2025								
Washougal	Continue operation of Washougal River weir	2025	pHOS = <30%	pHOS = <30%	pHOS = <5% for seg programs and PNI ≥0.67 for int programs	-	-	-	Washougal	Intake upgrade to be completed 2029
	Continue pHOS control								Skamania	WDFW will evaluate intake screens and address as needed
Toutle	-	-	-	-	-	-	-	-	-	-

¹ Incidental take of juvenile Coho at the North Toutle Hatchery is no more than 1,000 encounters and 50 mortalities.

² pHOS only applies to river reaches below the SRS on the NF Toutle.

³ Sometimes referred to as isolated

⁴ Five-year period; after five-years HOR's may be passed upstream to supplement NOR's up to 200 fish.

⁵ Kalama Hatchery stock

⁶ North Fork Toutle Hatchery stock

⁷ Released above the North Toutle SRS

⁸ WDFW required to monitor distribution of spawners and progress of program.

Table 3: Authorized weir encounters and mortalities for Adults, Jacks and Juveniles by watershed.

Lower Columbia River Watersheds	Authorized Weir Encounters and Mortalities ^{1,2}																							
	NOR Adult & Jack Encounters						NOR Juvenile Encounters						NOR Adult & Jack Mortalities						NOR Juvenile Mortalities					
	Fall Chinook	Spring Chinook	Coho	Chum	Winter Steelhead	Summer Steelhead	Fall Chinook	Spring Chinook	Coho	Chum	Winter Steelhead	Summer Steelhead	Fall Chinook	Spring Chinook	Coho	Chum	Winter Steelhead	Summer Steelhead	Fall Chinook	Spring Chinook	Coho	Chum	Winter Steelhead	Summer Steelhead
Grays/Chinook	750	-	800	8,500	-	-	100	-	100	0	-	-	≤23	-	≤24	≤255	-	-	≤3	-	≤3	0	-	-
Elochoman/Skamokawa	750	-	2,000	1,000	-	-	100	-	100	0	-	-	≤23	-	≤60	≤30	-	-	≤3	-	≤3	0	-	-
Mil/Abernathy/Germany	750	-	1,500	250	-	-	100	-	100	0	-	-	≤23	-	≤45	≤8	-	-	≤3	-	≤3	0	-	-
Cowemen	1,600	-	800	100	50	10	100	-	100	0	100	0	≤48	-	≤24	≤3	≤2	1	≤3	-	≤3	0	≤3	0
South Fork Toutle	350	50	5,500	250	50	50	50	50	100	0	50	50	≤11	≤2	≤165	≤8	≤2	≤2	≤2	≤2	≤3	0	≤2	≤2
North Fork Toutle	2,700	250	12,300	250	10	10	100	100	100	0	100	0	≤81	≤8	≤369	≤8	1	1	≤3	≤3	≤3	0	≤3	0
Cowlitz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kalama	7,200	50	1,150	250	0	500	50	50	100	0	50	50	≤216	≤2	≤35	≤8	0	≤15	≤2	≤2	≤3	0	≤2	≤2
Lewis	1,200	50	1,200	250	250	50	100	50	100	0	50	50	≤36	≤2	≤36	≤8	≤8	≤2	≤3	≤2	≤3	0	≤2	≤2
Washougal	3,000	-	200	250	10	200	100	-	100	0	100	100	≤90	-	≤6	≤8	1	≤6	≤3	-	≤3	0	≤3	≤3
Toutle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

¹ During broodstock collection and adult management activities.

² Adult management activities include, but are not limited to, broodstock collection, biodata collection, genetic sampling, marking and/or tagging.

Table 4: Authorized encounters and mortalities via other adult collection methods for Adults, Jacks and Juveniles by watershed.

Lower Columbia River Watersheds	Authorized Encounters and Mortalities via other Adult Collection Methods (e.g., seining, angling, etc.)																							
	NOR Adult & Jack Encounters						NOR Juvenile Encounters						NOR Adult & Jack Mortalities						NOR Juvenile Mortalities					
	Fall Chinook	Spring Chinook	Coho	Chum	Winter Steelhead	Summer Steelhead	Fall Chinook	Spring Chinook	Coho	Chum	Summer Steelhead	Winter Steelhead	Fall Chinook	Spring Chinook	Coho	Chum	Winter Steelhead	Summer Steelhead	Fall Chinook	Spring Chinook	Coho	Chum	Summer Steelhead	Winter Steelhead
Grays/Chinook	100	-	250	250	-	-	100	-	100	0	-	-	≤3	-	≤8	≤8	-	-	≤3	-	≤3	0	-	-
Elochoman/Skamokawa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mil/Abernathy/Germany	100	-	250	50	-	-	100	-	100	0	-	-	≤3	-	≤8	≤2	-	-	≤3	-	≤3	0	-	-
Cowemen	100	-	250	10	10	10	100	-	100	0	0	100	≤3	-	≤8	1	1	1	≤3	-	≤3	0	0	≤3
South Fork Toutle	100	10	250	10	10	10	50	50	100	0	50	50	≤3	1	≤8	1	1	1	≤2	≤2	≤3	0	≤2	≤2
North Fork Toutle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cowlitz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kalama	500	50	250	10	10	50	50	50	100	0	50	50	≤16	≤2	≤8	1	1	1	≤2	≤2	≤3	0	≤2	≤2
Lewis	600	-	800	50	10	50	200	-	200	0	100	100	≤12	≤2	≤12	≤2	1	≤2	≤6	0	≤6	0	≤3	≤3
Washougal	250	-	250	50	50	50	100	-	100	0	100	100	≤8	-	≤8	≤2	≤2	≤2	≤3	-	≤3	0	≤3	≤3
Toutle	250	50	250	10	10	10	100	100	100	0	0	100	≤8	≤2	≤8	1	1	1	≤3	≤3	≤3	0	≤3	≤3

Table 8: Reporting Requirements

	Reported Data	Reporting Specifications	Timeframe
Release Data	Number released Dates ^b Locations Size at release Precocial males Tag/mark information	Actual and proposed Average Estimated proportion released from each program Include proportion of unmarked fish released	
Adult Data	Spawning distribution among populations Origin Survival Contribution to fisheries Escapement pHOS and/or gene flow Incidental take	By brood year and program For ESA-listed salmonid populations affected by straying MA programs	Annually - Including prior Fiscal Year ^a
Facility Operations	Detected pathogens Frequency of pathogen detection Water withdrawal ^c	Report in tables grouped by operators Report on each hatchery and acclimation Facility, including monthly estimates of surface water withdrawals (in cfs) and ratio of withdrawal compared to the maximum water rights permit.	
	Intake screen	For intake screens that are not in compliance with current NMFS screening criteria, by January 1, 2027, develop and submit, for NMFS concurrence, plans for upgrading the facility to meet the criteria	One-Time Report
	NPDES compliance records Number of fish encountered and killed at weirs Deviation of weir operation from HOF Population productivity and spawner distribution at weirs Incidental take	HOS removal activities and broodstock collection locations/activities. Report on species, origin, life stage, and release condition; including handling-related mortality by species. Communicate any changes by April 30th of that year. Estimates	Annually - Including prior Fiscal Year ^a
RM&E Activities	Kalama River Research Program North Fork Toutle FCF operations Spring/fall Chinook and coho reintroduction above SRS LCR fall Chinook salmon conservation programs Lower Columbia River and tributary fishery monitoring Incidental take PHOS survey protocols, geneflow monitoring methods and RM&E protocols and statements of work	Report on Results/Important Findings: e.g. estimate changes in spawner distribution at weirs (when applicable), population productivity and handling mortalities by species at each weir. On, or before January 1 of each year for NMFS concurrence. On, or before, March 1 of each year if protocols and methods deviate from methods used in the analysis of the Opinion.	
Other	Findings on annual surveys, or other acceptable methods, to determine timing, abundance, origin and distribution of Chinook, coho, chum, and summer/winter steelhead.		
	Describes methods and models used to estimate/predict pHOS for LCR coho and Chinook	If methods or models are modified, NMFS will be notified within the calendar year of performing the modification. Completed prior to 2026	One-Time Report

Notes:

^a Reporting timeframe and duration may be adjusted by NMFS.

^b If feasible communicate early release of hatchery fish prior to release, but after release is allowable in cases of emergency.

^c Refer to [Hatchery Operation Framework for the Mitchell Act-funded hatchery programs \(12-2024\)](#), within the Biological Assessment, for water rights and allowances.