

Metrics				Current (Last 5 Years) Adult Mean		FHMP Adult Goal		Adult Recovery Goal	"By" Variables	Data Collection	Source of Current Data
				Hatchery	Natural	Hatchery	Natural	Natural			
Data to be Collected											
Mature Returns (Numbers)											
Totals	Total Survivors to Maturity (that can be accounted for)			90,083	15,523	73,029	20,798	20,798	Age, Sex	Sum of below	ISIT
	Total Escapement to Cowlitz River			31,391	11,647	12,751	14,868	14,868	Age, Sex	Sum of below	ISIT
Harvest	Fishery Location	Ocean	Commercial Fishery	?	?				Age, Sex	CWT/Scales & Creel	
			Tribal Fishery	?	?						
			Sport Fishery	?	?						
			Total Ocean	38,857	2,185						ISIT - Calculated
		Columbia River	Commercial Fishery	?	?				Age, Sex	CWT/Scales & Creel	
			Tribal Fishery	?	?						
			Sport Fishery	?	?						
			Total Columbia River	19,835	1,691						ISIT - Calculated
		Lower Cowlitz River	Commercial Fishery	?	?				Age, Sex	CWT/Scales & Creel	
			Tribal Fishery	?	?						
			Sport Fishery	6,714	887						
			Total Lower Cowlitz River	6,714	887						ISIT - Calculated for NORs
	Above Mayfield Dam	Cispus River	?	?				Age, Sex	CWT/Scales & Creel		
		Upper Cowlitz River	1,583	37							
		Tilton River	1,150	80							
		Total Above Mayfield Dam	2,733	117						ISIT - Calculated for NORs	
Fishery Type	Total Commercial Harvest			?	?				Age, Sex	CWT/Scales & Creel	
	Total Tribal Harvest			?	?				Age, Sex	CWT/Scales & Creel	
	Total Sport Harvest			9,447	1,004				Age, Sex	CWT/Scales & Creel	ISIT - Partial data
Total Harvest			68,139	4,880				Age, Sex	CWT/Scales & Creel	ISIT - Calculated	
Straying	Stray Origin	Cowlitz River Population		Outside Cowlitz Basin	?	NA			Age, Sex	CWT/Scales	
				In Cowlitz Basin	?	NA			Age, Sex	CWT/Scales	
	Other Population Strays in Cowlitz River		?	NA				Age, Sex	CWT/Scales		

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				Hatchery	Natural	Hatchery	Natural	Natural			
Trapping	Lower Cowlitz Subbasin Tributary Traps	Delameter Creek	Released Below Weir	?	?				Age, Sex	Trap data	
			Released Above Weir	?	?				Age, Sex	Trap data	
			Kept for Broodstock	?	?				Age, Sex	Trap data	
			Mortalities	?	?				Age, Sex	Trap data	
			Killed	?	NA				Age, Sex	Trap data	
			Total Caught	?	?				Age, Sex	Trap data	
		Lacamas Creek	Released Below Weir	?	?				Age, Sex	Trap data	
			Released Above Weir	?	?				Age, Sex	Trap data	
			Kept for Broodstock	?	?				Age, Sex	Trap data	
			Mortalities	?	?				Age, Sex	Trap data	
			Killed	?	NA				Age, Sex	Trap data	
			Total Caught	?	?				Age, Sex	Trap data	
		Olequa Creek	Released Below Weir	?	?				Age, Sex	Trap data	
			Released Above Weir	?	?				Age, Sex	Trap data	
			Kept for Broodstock	?	?				Age, Sex	Trap data	
			Mortalities	?	?				Age, Sex	Trap data	
			Killed	?	NA				Age, Sex	Trap data	
			Total Caught	?	?				Age, Sex	Trap data	
		Ostrander Creek	Released Below Weir	?	?				Age, Sex	Trap data	
			Released Above Weir	?	?				Age, Sex	Trap data	
			Kept for Broodstock	?	?				Age, Sex	Trap data	
			Mortalities	?	?				Age, Sex	Trap data	
			Killed	?	NA				Age, Sex	Trap data	
			Total Caught	?	?				Age, Sex	Trap data	
	Cowlitz Salmon Hatchery	Hatchery Broodstock Collected		1,582	619	629	943	0	Age, Sex	Trap data	TPU data
		Released Below Dams		59	0	0	0	0	Age, Sex	Trap data	TPU data
		Released Above Dams	Upper Cowlitz Subbasin	10,009	2,673	2,811	5,154	>5,100	Age, Sex	Trap data	TPU data
			Tilton Subbasin	5,077	4,187		2,577		Age, Sex	Trap data	TPU data
		Mortalities		2	0	<10%	<10%	<10%	Age, Sex	Trap data	TPU data
		Surplus (Food Bank, Outplant, Nutrient Enhancement,		14,660	0	5,000	0	0	Age, Sex	Trap data	TPU data

	Metrics			Current (Last 5 Years) Adult Mean		FHMP Adult Goal		Adult Recovery Goal	"By" Variables	Data Collection	Source of Current Data	
				Hatchery	Natural	Hatchery	Natural	Natural				
				etc.)								
	Total			21,380	4,806	9,378	9,637	>6,700	Age, Sex	Trap data	TPU data	
Nature (prior to Spawning)	Location	Below Dams	Cowlitz River	564	5,836	1,762	4,111	>4,111	Age, Sex	SGS & CWT/Scales	ISIT	
			Out-of-Program Strays	?	?	0	0	0				
		Above Dams	Upper Cowlitz/Cispus Rivers		8,771	2,315	1,905	4,444	>4,444	Age, Sex	Release, Harvest, & SGS data	ISIT
			Tilton River		3,318	3,605	952	2,222	>2,222	Age, Sex		ISIT
		Total			12,653	11,756	4,619	10,778	>10,778	Age, Sex		ISIT
		Hatchery Production										
Spawners	Integrated Hatchery Program	Prespawn Mortalities		19	71	<63	<94		Age, Sex	Hatchery data	ISIT	
		Killed, Not Spawned		?	0	0	0		Age, Sex	Hatchery data		
		Spawned		274	556	629	943		Age, Sex	Hatchery data	ISIT	
	Segregated Hatchery Program	Prespawn Mortalities		139	NA	<63	<94		Age, Sex	Hatchery data	ISIT	
		Killed, Not Spawned		?	NA	0	0		Age, Sex	Hatchery data		
		Spawned		1,241	NA	629	943		Age, Sex	Hatchery data	ISIT	
	Total Hatchery	Prespawn Mortalities		152	62	<63	<94		Age, Sex	Hatchery data	ISIT	
		Killed, Not Spawned		?	?	0	0		Age, Sex	Hatchery data		
		Spawned		1,515	471	629	943		Age, Sex	Hatchery data	ISIT	
Offspring	Integrated Hatchery Program	Green Eggs Collected (Total Fecundity)		?		1,080,753	1,620,270		Female Age	Hatchery data		
		Total		?		2,701,023						
		Eyed Eggs (Total Eyed Fecundity)		?		1,026,715	1,539,257		Female Age	Hatchery data		
		Total		?		2,565,972						
		Fry Produced		?		2,437,673				Hatchery data		
		Parr Produced		?		2,315,789				Hatchery data		
	Smolts Produced		?		2,200,000				Hatchery data			
	Segregated Hatchery Program	Green Eggs Collected (Total Fecundity)		?	NA	0	0		Female Age	Hatchery data		
		Eyed Eggs (Total Eyed Fecundity)		?	NA	0	0		Female Age	Hatchery data		
Fry Produced		?	NA	0				Hatchery data				

Metrics			Current (Last 5 Years) Adult Mean		FHMP Adult Goal		Adult Recovery Goal	"By" Variables	Data Collection	Source of Current Data
			Hatchery	Natural	Hatchery	Natural	Natural			
Total Hatchery	Parr Produced		?	NA	0				Hatchery data	
	Smolts Produced		?	NA	0				Hatchery data	
	Green Eggs Collected (Total Fecundity)			2,393,300	753,352	1,080,753	1,620,270	Female Age	Hatchery data	WDFW, 25-26 SEP 2019
			Total	3,146,652		2,701,023				
	Eyed Eggs (Total Eyed Fecundity)			?	?	1,026,715	1,539,257	Female Age	Hatchery data	
			Total	?		2,565,972				
	Fry Produced			?		2,437,673			Hatchery data	
	Parr Produced			?		2,315,789			Hatchery data	
	Smolts Produced			2,279,449		2,200,000			Hatchery data	WDFW, 25-26 SEP 2019
	Releases	Integrated Hatchery Program	Released	Eyed Eggs	1		0		Female Age, Release Group	Hatchery data
Fry				?		0		Release Group		Hatchery data
Parr				?		0			Hatchery data	
Smolts				?		2,200,000			Hatchery data	
Total				?		2,200,000			Hatchery data	
Marks and Tags			Type (CWT, PIT, etc.)	-				Hatchery data		
		Number	?				Hatchery data			
Segregated Hatchery Program		Released	Eyed Eggs	?		0		Female Age, Release Group	Hatchery data	
			Fry	?		0			Release Group	Hatchery data
			Parr	?		0		Hatchery data		
			Smolts	?		0		Hatchery data		
			Total	?		0		Hatchery data		
		Marks and Tags	Type (CWT, PIT)	-				Hatchery data		
		Number	?				Hatchery data			
Total Hatchery	Released		Eyed Eggs	0		0		Female	Hatchery data	WDFW, 25-26

Metrics				Current (Last 5 Years) Adult Mean		FHMP Adult Goal		Adult Recovery Goal	"By" Variables	Data Collection	Source of Current Data			
				Hatchery	Natural	Hatchery	Natural	Natural						
Lower Cowlitz River Mainstem	Spawners	Prespawn Mortalities in Nature	Lower Cowlitz River	56	584	<159	<370	<370	Age, Sex	SGS & CWT/Scales	ISIT - Calculated			
			Out-of-Program Strays in Lower Cowlitz River	?	NA	0	0	0						
			Spawners in Nature	Lower Cowlitz River	508	5,253	1,586	3,700			>3,700	Age, Sex	SGS & CWT/Scales	ISIT
				Out-of-Basin Strays Into Lower Cowlitz River	?	NA	0	0			0			
			Offspring	Total Eggs Laid		?	?						Female Age	Hatchery & SGS data
	Smolts Produced			?		NA	158,665	74,000		Smolt traps				
	Smolts Trapped & Released	Trapped		NA		NA	NA	NA		Smolt traps				
		Released		NA		NA	NA	NA						
		Marks and Tags		Type (CWT, PIT)	NA		NA	NA			NA		Smolt traps	
	Number		NA		NA	NA	NA		Smolt traps					
Lower Cowlitz River Tributaries	Spawners	Prespawn Mortalities in Nature	Lower Cowlitz River Tributaries	?	?				Age, Sex	SGS & CWT/Scales				
			Out-of-Program Strays in Cowlitz River Tributaries	?	NA									
		Spawners in Nature	Lower Cowlitz River Tributaries	?	?				Age, Sex	SGS&CWT/Scal es				
			Out-of-Basin Strays Into Cowlitz River Tributaries	?	NA									
	Offspring	Total Eggs Laid		?	?				Age	Hatchery & SGS data				
		Smolts Produced		?						Smolt traps				

				Current (Last 5 Years) Adult Mean		FHMP Adult Goal		Adult Recovery Goal	"By" Variables	Data Collection	Source of Current Data	
Metrics				Hatchery	Natural	Hatchery	Natural	Natural				
	Smolts Trapped & Released	Trapped		NA		NA	NA	NA		Smolt traps		
		Released		NA		NA	NA	NA				
		Marks and Tags	Type (CWT, PIT)		NA		NA	NA	NA		Smolt traps	
			Number		NA		NA	NA	NA			
Natural Production Above Dams												
Cispus River	Spawners	Prespawn Mortalities in Nature	Cispus River		?	?				Age, Sex	SGS & CWT/Scales	
			Out-of-Program Strays in Cispus River		?	-						
		Spawners in Nature	Cispus River		?	?				Age, Sex	SGS & CWT/Scales	
			Out-of-Basin Strays Into Cispus River		?	-						
	Offspring	Total Eggs Laid		?	?				Female Age	Trap data/genetics		
		Smolts Produced		NA	?	NA				Trap data/genetics		
		Smolts Trapped & Released	Trapped		NA	?	NA			Trap data		
			Released		NA	?	NA			Trap data		
Marks and Tags			Type (CWT, PIT)		NA	?				Cowlitz Falls Fish Facility		
	Number		NA	?	0							
Upper Cowlitz River/Subbasin	Spawners	Prespawn Mortalities in Nature	Upper Cowlitz River/Subbasin		877	232	<171	<400	<400	Age, Sex	SGS & CWT/Scales	ISIT - Calculated
			Out-of-Program Strays in Upper Cowlitz River/Subbasin		?	-	0	0	0			
		Spawners in Nature	Upper Cowlitz River/Subbasin		7,894	2,084	1,714	4,000	>4,000	Age, Sex	SGS & CWT/Scales	ISIT - Calculated
			Out-of-Basin Strays Into Upper Cowlitz River/Subbasin		?	-	0	0	0			
	Offspring	Total Eggs Laid		?	?				Female Age	Trap data/genetics		
		Smolts Produced		145,455		NA	133,279	133,279		Trap data/genetics	TPU/WDFW Cowlitz Falls data - Calculated	
		Smolts Trapped & Released	Trapped		118,138		NA	86,631	86,631	Cowlitz Falls Fish Facility	TPU/WDFW Cowlitz Falls data	
			Released		116,957		NA	85,765	85,765			
Marks and Tags		Type (CWT, PIT)		-								

		Metrics	Number	Current (Last 5 Years) Adult Mean		FHMP Adult Goal		Adult Recovery Goal	"By" Variables	Data Collection	Source of Current Data
				Hatchery	Natural	Hatchery	Natural	Natural			
Tilton River	Spawners	Prespawn Mortalities in Nature	Tilton River	332	360	<86	<200	<200	Age, Sex	SGS & CWT/Scales	ISIT - Calculated
			Out-of-Program Strays in Tilton River	?	NA	0	0	0			
		Spawners in Nature	Tilton River	2,986	3,244	857	2,000	>2,000	Age, Sex	SGS & CWT/Scales	ISIT - Calculated
			Out-of-Basin Strays Into Tilton River	?	NA	0	0	0			
	Offspring	Total Eggs Laid		?	?				Female Age	Trap data/genetics	
		Smolts Produced		?		NA	133,279	133,279		Trap data/genetics	
		Smolts Trapped & Released	Trapped		28,223		NA	86,631	86,631	Mayfield Counting House	TPU Mayfield Counting House data
			Released		27,940		NA	85,765	85,765		
			Marks and Tags	Type	-						
		Number		?		0					
Smolt Migration											
Smolts	Location	Number of Smolts in Lower Cowlitz River	Lower Cowlitz River		2,279,449	?	2,200,000	158,665	74,000	Smolt monitoring - tags/genetics	ISIT
			Cispus River		NA	-	0	NA	NA		
			Upper Cowlitz River		NA	116,957	0	133,279	133,279		
			Tilton River		NA	27,940	0	133,279	133,279		
			Total		2,279,449	144,897	2,200,000	425,223	340,558		
		Number of Smolts at Mouth of Cowlitz River	Lower Cowlitz River		?	?				Smolt monitoring - tags/genetics	
			Cispus River		NA	?					
			Upper Cowlitz River		NA	?					
			Tilton River		NA	?					
		Number of Smolts in Columbia River	Total		?	?				Smolt monitoring - tags/genetics	
			Lower Cowlitz River		?	?					
			Cispus River		NA	?					
				Upper Cowlitz River		NA	?				

				Current (Last 5 Years) Adult Mean		FHMP Adult Goal		Adult Recovery Goal	"By" Variables	Data Collection	Source of Current Data	
Metrics			Hatchery	Natural	Hatchery	Natural	Natural					
Estuary	Tilton River		NA	?								
Total			?	?								
Management Metrics (Rates to be Calculated Using the Data Collected Above)												
Adult Salmon	Harvest Rate	Ocean	Commercial	-	-				Age, Sex			
			Tribal	-	-							
			Sport	-	-							
			Total Ocean	47.6%	13.5%					ISIT		
		Columbia River	Commercial	-	-				Age, Sex			
			Tribal	-	-							
			Sport	-	-							
			Total Columbia River	20.5%	7.7%					ISIT		
		Cowlitz River	Lower Cowlitz River	Commercial	-	-				Age, Sex		ISIT - Calculated
				Tribal	-	-						
				Sport	6.3%	5.3%						
				Total Cowlitz River	6.3%	5.3%						
	Above Mayfield Dam - Sport		Upper Cowlitz Subbasin	1.8%	0.2%				Age, Sex			
			Tilton Subbasin	1.7%	0.7%							
	Stray Rate	Cowlitz River Salmon	Out-of-Basin Straying	?	NA	<5%	<5%	<5%	Age, Sex			
Cowlitz Basin Straying			?	NA	<5%	<5%	<5%	Age, Sex				
Total Straying			?	NA	<5%	<5%	<5%	Age, Sex				
Out-of-Basin Strays Into Cowlitz River		?	NA	<5%	<5%	<5%	Age, Sex					
Trapped at Barrier Dam	Lower Cowlitz River	Trapping Rate (% of Total Run)		?	NA			Age, Sex				
		Hatchery Broodstock Collection	% of Total Caught at Hatchery	?	NA			Age, Sex				
		Released Below Mayfield Dam		?	NA			Age, Sex				
		Released into Lower Cowlitz Subbasin		?	NA			Age, Sex				
		Mortalities		?	NA			Age, Sex				
		Surplus		?	NA			Age, Sex				
	Upper	Trapping Rate (% of Total Run)		?	?			Age, Sex				

				Current (Last 5 Years) Adult Mean		FHMP Adult Goal		Adult Recovery Goal	"By"		Source of	
Metrics				Hatchery	Natural	Hatchery	Natural	Natural	Variables	Data Collection	Current Data	
	Cowlitz/Cispus Rivers	Hatchery Broodstock Collection		?	?				Age, Sex			
		Released Below Mayfield Dam		?	?				Age, Sex			
		Released into Upper Cowlitz Subbasin		?	?				Age, Sex			
		Mortalities		?	?				Age, Sex			
		Surplus		?	NA				Age, Sex			
	Tilton River	Trapping Rate (% of Total Run)			?	?				Age, Sex		
		Hatchery Broodstock Collection		% of Total Caught at Hatchery	?	?				Age, Sex		
		Released Below Mayfield Dam			?	?				Age, Sex		
		Released into Tilton Subbasin			?	?				Age, Sex		
		Mortalities			?	?				Age, Sex		
		Surplus			?	NA				Age, Sex		
	Total	Trapping Rate (% of Total Run)			21.1%	35.0%				Age, Sex		ISIT and TPU data - Calculated
		Hatchery Broodstock Collection		16.0%	15.1%				Age, Sex			
		Released Below Mayfield Dam		0.5%	0.0%				Age, Sex			
		Released into Upper Cowlitz Subbasin		53.3%	41.7%				Age, Sex			
		Released into Tilton Subbasin		39.5%	84.9%				Age, Sex			
		Mortalities		0.0%	0.0%				Age, Sex			
		Surplus		43.9%	0.0%				Age, Sex			
	Age (Recovery Year - Brood Year)	Integrated Hatchery Program	Mean Age (Total Run)		?	NA				Sex		
Composition (% of mature salmon in each age class of Total Run)			Age-2		?	NA				Sex		
			Age-3		?	NA						
			Age-4		?	NA						
			Age-5		?	NA						
			Age-6		?	NA						

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		Hatchery	Natural	Hatchery	Natural	Natural				
	Age-7	?	NA							
Segregated Hatchery Program	Mean Age (Total Run)	?	NA				Sex			
	Composition (% of mature salmon in each age class of Total Run)	Age-2	?	NA				Sex		
		Age-3	?	NA						
		Age-4	?	NA						
		Age-5	?	NA						
		Age-6	?	NA						
	Age-7	?	NA							
Total Hatchery	Mean Age (Total Run)	2.92	NA				Sex		RMIS	
	Composition (% of mature salmon in each age class of Total Run)	Age-2	0.000	NA				Sex		RMIS
		Age-3	0.085	NA						RMIS
		Age-4	0.914	NA						RMIS
		Age-5	0.001	NA						RMIS
		Age-6	0.000	NA						RMIS
	Age-7	0.000	NA					RMIS		
Lower Cowlitz Subbasin	Mean Age (Total Run)	NA	?				Sex			
	Composition (% of mature salmon in each age class of Total Run)	Age-2	NA	?				Sex		
		Age-3	NA	?						
		Age-4	NA	?						
		Age-5	NA	?						
		Age-6	NA	?						
	Age-7	NA	?							
Upper Cowlitz Subbasin	Mean Age (Total Run)	NA	?				Sex			
	Composition (% of mature salmon in each age class of Total Run)	Age-2	NA	?				Sex		
		Age-3	NA	?						
		Age-4	NA	?						
		Age-5	NA	?						
		Age-6	NA	?						
	Age-7	NA	?							
Tilton Subbasin	Mean Age (Total Run)	NA	?				Sex			
	Composition (% of	Age-2	NA	?			Sex			

		Metrics	Current (Last 5 Years) Adult Mean		FHMP Adult Goal		Adult Recovery Goal	"By" Variables	Data Collection	Source of Current Data			
			Hatchery	Natural	Hatchery	Natural	Natural						
Spawning		mature salmon in each age class of Total Run)	Age-3	NA	?								
			Age-4	NA	?								
			Age-5	NA	?								
			Age-6	NA	?								
			Age-7	NA	?								
		Total Natural	Mean Age (Total Run)	NA	?				Sex				
			Composition (% of mature salmon in each age class of Total Run)	Age-2	NA	?				Sex			
				Age-3	NA	?							
				Age-4	NA	?							
				Age-5	NA	?							
				Age-6	NA	?							
		Age-7	NA	?									
		Spawning	In Hatchery	Integrated Hatchery Program	Prespawn Mortality Rate	8.9%					Age		ISIT
					Mean Fecundity	?	?				Age		
Mean Eyed Fecundity	?				?				Age				
Fertility	?				?				Age, Sex				
Segregated Hatchery Program	Prespawn Mortality Rate			12.7%	NA				Age		ISIT		
	Mean Fecundity			?	NA				Age				
	Mean Eyed Fecundity			?	NA				Age				
	Fertility			?	NA				Age, Sex				
Total Hatchery	Prespawn Mortality Rate			10.8%					Age		ISIT		
	Mean Fecundity			3,071	?				Age		WDFW, 25-26 SEP 2019		
	Mean Eyed Fecundity			?	?				Age				
	Fertility			?	?				Age, Sex				
In Nature	Lower Cowlitz River			Prespawn Mortality Rate	?	?				Age			
				Mean Fecundity	?	?				Age			
	Cispus River	Prespawn Mortality Rate	?	?				Age					
		Mean Fecundity	?	?				Age					
	Upper Cowlitz River / Subbasin	Prespawn Mortality Rate	?	?				Age					
		Mean Fecundity	?	?				Age					

		Metrics	Current (Last 5 Years) Adult Mean		FHMP Adult Goal		Adult Recovery Goal	"By" Variables	Data Collection	Source of Current Data	
			Hatchery	Natural	Hatchery	Natural	Natural				
Survival	Tilton River	Prespawn Mortality Rate	?	?				Age			
		Mean Fecundity	?	?				Age			
	Integrated Hatchery Program	Eyed Egg-to-Fry Survival	?	NA				Age			
		Fry-to-Parr Survival	?	NA							
		Parr-to-Smolt Survival	?	NA							
		Green Egg-to-Smolt Survival	?	NA							
	Segregated Hatchery Program	Eyed Egg-to-Fry Survival	?	NA							
		Fry-to-Parr Survival	?	NA							
		Parr-to-Smolt Survival	?	NA							
		Green Egg-to-Smolt Survival	?	NA							
	Total Hatchery	Eyed Egg-to-Fry Survival	?	NA				Age			
		Fry-to-Parr Survival	?	NA							
		Parr-to-Smolt Survival	?	NA							
		Green Egg-to-Smolt Survival	72.7%	NA							
		Smolts/Female		NA							
	In Nature	Lower Cowlitz River	Green Egg-to-Smolt Survival	NA	?						
			Smolts/Female	NA	?						
		Cispus River	Green Egg-to-Smolt Survival	NA	?						
			Smolts/Female	NA	?						
		Upper Cowlitz River / Subbasin	Green Egg-to-Smolt Survival	NA	?						
			Smolts/Female	NA	?						
		Tilton River	Green Egg-to-Smolt Survival	NA	?						
			Smolts/Female	NA	?						
	Marking/ Tagging Rate	Integrated Hatchery Program		?	NA						
		Segregated Hatchery Program		?	NA						
		Lower Cowlitz River		NA	?						
		Cispus River		NA	?						
		Upper Cowlitz River / Subbasin		NA	?						
Tilton River		NA	?								
Hatchery	Freshwater Survival/Conversion/Collection Efficiency		?	NA							
	Smolt Passage (Transport) Survival		?	NA							

Metrics			Current (Last 5 Years) Adult Mean		FHMP Adult Goal		Adult Recovery Goal	"By" Variables	Data Collection	Source of Current Data	
			Hatchery	Natural	Hatchery	Natural	Natural				
Downstream Smolt Migration Survival	to Mouth of Cowlitz River		?	NA							
	to Columbia River Estuary		?	NA							
Smolt-to-Adult Return Rate (SAR; return to Cowlitz Salmon Hatchery)	Fry		?	NA							
	Parr		?	NA							
	Smolts		?	NA							
Total Smolt-to-Adult Survival Rate (TSAR; all recoveries)	Fry		?	NA							
	Parr		?	NA							
	Smolts		?	NA							
Productivity (Recruits / Spawner)	Smolts / Female		?	NA							
	Smolts / Mature		?	NA							
	Female-to-Female		?	NA							
	Adult-to-Adult		?	NA							
	Mature-to-Mature		?	NA							
Segregated Hatchery Program	Freshwater Survival/Conversion/ Collection Efficiency		?	NA							
	Smolt Passage (Transport) Survival		?	NA							
	Downstream Smolt Migration Survival	to Mouth of Cowlitz River		?	NA						
		to Columbia River Estuary		?	NA						
	Smolt-to-Adult Return Rate (SAR; return to Cowlitz Salmon Hatchery)	Fry		?	NA						
		Parr		?	NA						
		Smolts		?	NA						
	Total Smolt-to-Adult Survival Rate (TSAR; all recoveries)	Fry		?	NA						
		Parr		?	NA						
		Smolts		?	NA						
	Productivity (Recruits / Spawner)	Smolts / Female		?	NA						
		Smolts / Mature		?	NA						
		Female-to-Female		?	NA						
		Adult-to-Adult		?	NA						
		Mature-to-Mature		?	NA						

Metrics			Current (Last 5 Years) Adult Mean		FHMP Adult Goal		Adult Recovery Goal	"By" Variables	Data Collection	Source of Current Data	
			Hatchery	Natural	Hatchery	Natural	Natural				
Total Hatchery	Freshwater Survival/Conversion/ Collection Efficiency		?	NA							
	Smolt Passage (Transport) Survival		?	NA							
	Downstream Smolt Migration Survival	to Mouth of Cowlitz River	?	NA							
		to Columbia River Estuary	?	NA							
	Smolt-to-Adult Return Rate (SAR; return to Cowlitz Salmon Hatchery)	Fry	?	NA							
		Parr	?	NA							
		Smolts	?	NA							
	Total Smolt-to-Adult Survival Rate (TSAR; all recoveries)	Fry	?	NA							
		Parr	?	NA							
		Smolts	1.09%	NA						RMIS	
	Productivity (Recruits / Spawner)	Smolts / Female		2,650	NA						WDFW, 25-26 SEP 2019
		Smolts / Mature		1,323	NA						WDFW, 25-26 SEP 2019
		Female-to-Female		NA	NA						
		Adult-to-Adult		NA	NA						
		Mature-to-Mature		NA	NA						
Lower Cowlitz River	Freshwater Survival/Conversion/ Collection Efficiency		NA	NA							
	Smolt Passage (Transport) Survival		NA	NA							
	Downstream Smolt Migration Survival	to Mouth of Cowlitz River	NA	?							
		to Columbia River Estuary	NA	?							
	Smolt-to-Adult Return Rate (SAR; return to Cowlitz Salmon Hatchery)	Fry	NA	?							
		Parr	NA	?							
		Smolts	NA	?							
	Total Smolt-to-Adult Survival Rate (TSAR; all recoveries)	Fry	NA	?							
		Parr	NA	?							
		Smolts	NA	?							
Productivity (Recruits / Spawner)	Smolts / Female		NA	?							
	Smolts / Mature		NA	?							

			Current (Last 5 Years) Adult Mean		FHMP Adult Goal		Adult Recovery Goal	"By" Variables	Data Collection	Source of Current Data
			Hatchery	Natural	Hatchery	Natural	Natural			
Spawner)	Metrics									
	Female-to-Female		NA	?						
	Adult-to-Adult		NA	?						
Mature-to-Mature		NA	?							
Cispus River	Freshwater Survival/Conversion/ Collection Efficiency		NA							
	Smolt Passage (Transport) Survival		NA							
	Downstream Smolt Migration Survival	to Mouth of Cowlitz River		NA						
		to Columbia River Estuary		NA						
	Smolt-to-Adult Return Rate (SAR; return to Cowlitz Salmon Hatchery)	Fry		NA						
		Parr		NA						
		Smolts		NA						
	Total Smolt-to-Adult Survival Rate (TSAR; all recoveries)	Fry		NA						
		Parr		NA						
		Smolts		NA						
	Productivity (Recruits / Spawner)	Smolts / Female		NA						
		Smolts / Mature		NA						
		Female-to-Female		NA						
		Adult-to-Adult		NA						
		Mature-to-Mature		NA						
Upper Cowlitz River/ Subbasin	Freshwater Survival/Conversion/ Collection Efficiency		NA	75.6%						TPU/WDFW Cowlitz Falls data
	Smolt Passage (Transport) Survival		NA	98%						TPU data
	Downstream Smolt Migration Survival	to Mouth of Cowlitz River		NA	?					
		to Columbia River Estuary		NA	?					
	Smolt-to-Adult Return Rate (SAR; return to Cowlitz Salmon Hatchery)	Fry		NA	?					
		Parr		NA	?					
		Smolts		NA	?					
	Total Smolt-to-Adult Survival Rate (TSAR; all recoveries)	Fry		NA	?					
		Parr		NA	?					

Metrics				Current (Last 5 Years) Adult Mean		FHMP Adult Goal		Adult Recovery Goal	"By" Variables	Data Collection	Source of Current Data		
				Hatchery	Natural	Hatchery	Natural	Natural					
Tilton River	Productivity (Recruits / Spawner)	Smolts / Female Smolts / Mature Female-to-Female Adult-to-Adult Mature-to-Mature	Smolts	NA	?								
			NA	?									
			NA	?									
			NA	?									
			NA	?									
			NA	?									
	Freshwater Survival/Conversion/ Collection Efficiency Smolt Passage (Transport) Survival Downstream Smolt Migration Survival Smolt-to-Adult Return Rate (SAR; return to Cowlitz Salmon Hatchery) Total Smolt-to-Adult Survival Rate (TSAR; all recoveries) Productivity (Recruits / Spawner)	to Mouth of Cowlitz River	Fry	NA	?								
			NA	98%								TPU data	
		to Columbia River Estuary	Fry	NA	?								
			NA	?									
		Fry	NA	?									
			NA	?									
			NA	?									
		Parr	NA	?									
			NA	?									
			NA	?									
		Smolts	NA	?									
			NA	?									
			NA	?									
		Smolts / Female Smolts / Mature Female-to-Female Adult-to-Adult Mature-to-Mature	NA	?									
NA	?												
NA	?												
NA	?												
NA	?												
Proportional Natural Influence	Lower Cowlitz River	Collected/ Released	pHOS	NA		NA					ISIT, TPU, & other WDFW data		
			pNOB	NA		NA							
			PNI	NA		NA							
		Actual Spawners	pHOS	0.096		<0.3							
			pNOB	0.195		NA							
			PNI	0.597		NA							
	Cispus River	Collected/ Released	pHOS	?		<0.35						ISIT, TPU, & other WDFW data	
			pNOB	NA		NA							
			PNI	NA		NA							

	Metrics		Current (Last 5 Years) Adult Mean		FHMP Adult Goal		Adult Recovery Goal	"By" Variables	Data Collection	Source of Current Data
			Hatchery	Natural	Hatchery	Natural	Natural			
				Actual Spawners	pHOS	?				
		pNOB	NA		NA					
		PNI	NA		NA					
Upper Cowlitz River/Subbasin	Collected/ Released	pHOS	0.775		<0.35				ISIT, TPU, & other WDFW data	
		pNOB	0.579		>0.6					
		PNI	0.407		>0.63					
	Actual Spawners	pHOS	0.775		<0.3					
		pNOB	0.000		>0.6					
		PNI	0.000		>0.67					
Tilton River	Collected/ Released	pHOS	0.665		<0.35			ISIT, TPU, & other WDFW data		
		pNOB	NA		NA					
		PNI	NA		NA					
	Actual Spawners	pHOS	0.502		<0.3					
		pNOB	NA		NA					
		PNI	NA		NA					
Total	Collected/ Released	pHOS	0.585		<0.35			ISIT, TPU, & other WDFW data		
		pNOB	0.287		>0.6					
		PNI	0.332		>0.63					
	Actual Spawners	pHOS	0.514		<0.3					
		pNOB	0.195		>0.6					
		PNI	0.265		>0.67					