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Report Period:	November 1st to November 15th, 2022
Report No.:	2022 Willamette RST Bi-Weekly Report 11/1-11/15 by EAS
Re:	**WILLAMETTE VALLEY FISH PASSAGE MONITORING VIA ROTARY SCREW TRAPS**

Project Schedule

Table 1. Project Schedule

Site	Task	Start	End	Days
Big Cliff Dam RST	Operation	12/01/2021	02/15/2022	292
Big Cliff Dam RST	Operation	03/15/2022	10/15/2022	
Big Cliff Dam Tailrace	Trap Efficiency Release (1,000 Fish)	12/22/2021	12/22/2021	1
Big Cliff Dam Tailrace	Temporary Trap Removal and Install	05/06/2022	05/13/2022	7
Big Cliff Dam Tailrace	Trap Efficiency Release (1,000 Fish)	05/25/2022	05/25/2025	1
Big Cliff Dam Tailrace	Trap Efficiency Release (1,000 Fish)	08/09/2022	08/09/2022	1
Big Cliff Dam Tailrace	Trap Efficiency Release (1,000 Fish)	09/30/2022	09/30/2022	1
Big Cliff Dam Tailrace	Trap Efficiency Release (500 Fish)	10/13/2022	10/13/2022	1
Big Cliff Dam Tailrace	Trap Efficiency Release (535 Fish)	10/24/2022	10/24/2022	1
Big Cliff Dam Tailrace	Trap Efficiency Release (549 Fish)	11/02/2022	11/02/2022	1
Green Peter Tailrace- Middle Santiam River RST	Trap Install	03/02/2022	03/02/2022	1
Green Peter Tailrace- Middle Santiam River RST	Operation	03/03/2022	06/30/2022	120
Green Peter Tailrace- Middle Santiam River RST	Trap Efficiency Release (643 Fish)	03/29/2022	03/29/2022	1
Green Peter Tailrace- Middle Santiam River RST	Trap Efficiency Release (521 Fish)	04/30/2022	04/30/2022	1
Green Peter Tailrace- Middle Santiam River RST	Temporary Trap Removal	05/12/2022	05/12/2022	1
Foster Dam Head of Reservoir- South Santiam River RST	Trap Install	03/16/2022	03/16/2022	1
Foster Dam Head of Reservoir- South Santiam River RST	Operation	03/10/2022	06/30/2022	113
Foster Dam Head of Reservoir- South Santiam River RST	Trap Removal	07/01/2022	07/01/2022	1
Foster Dam Head of Reservoir- South Santiam River RST	Trap Install	09/02/2022	09/02/2022	1
Foster Dam Head of Reservoir- South Santiam River RST	Trapping Efficiency Release (1000 fish)	09/29/2022	09/29/2022	1
Foster Dam Head of Reservoir- South Santiam River RST	Trapping Efficiency Release (840 fish)	10/25/2022	10/25/2022	1

Foster Dam Head of Reservoir-South Santiam River RST	Trapping Efficiency Release (1006 fish)	11/01/2022	11/01/2022	1
Foster Dam Head of Reservoir-South Santiam River RST	Trapping Efficiency Release (1007 fish)	11/09/2022	11/09/2022	1
Foster Dam Head of Reservoir-South Santiam River RST	Trapping Efficiency Release (1009 fish)	11/15/2022	11/15/2022	1
Cougar Dam RST	Operation	11/30/2021	11/30/2022	366
Cougar Dam	Trap Efficiency Release (1,200 Fish, 600 per route)	01/19/2022	01/19/2022	1
Cougar Dam	Trap Efficiency Release (735 Fish, ~365 per route)	04/20/2022	04/20/2022	1
Cougar Dam	Trap Efficiency Release (993 Fish, RO route)	05/15/2022	05/15/2022	1
Cougar Dam	Trap Efficiency Release (500 Fish, PH route)	07/19/2022	07/19/2022	1
Cougar Dam	Trap Efficiency Release (501 Fish, PH route)	08/11/2022	08/11/2022	1
Cougar Dam	Trap Efficiency Release (442 Fish, RO route)	10/14/2022	10/14/2022	1
Cougar Dam Head of Reservoir	Highline and Trap Install	03/07/2022	03/07/2022	1
Cougar Dam Head of Reservoir	Operation	03/08/2022	06/30/2022	115
Cougar Dam Head of Reservoir	Trap Efficiency Release (806 Fish)	03/18/2022	03/18/2022	1
Cougar Dam Head of Reservoir	Trap Efficiency Release (500 Fish)	05/19/2022	05/19/2022	1
Cougar Dam Head of Reservoir	Trap Efficiency Release (515 Fish)	06/23/2022	06/23/2022	1
Cougar Dam Head of Reservoir	Trap Removal	07/01/2022	07/01/2022	1
Cougar Dam Head of Reservoir	Highline Install	09/14/2022	09/14/2022	1
Cougar Dam Head of Reservoir	Trap Install	09/16/2022	09/16/2022	1
Cougar Dam Head of Reservoir	Trap Efficiency Release (551 Fish)	09/22/2022	09/22/2022	1
Cougar Dam Head of Reservoir	Trap Efficiency Release (608 Fish)	10/5/2022	10/5/2022	1
Cougar Dam Head of Reservoir	Trap Efficiency Release (721 Fish)	11/10/2022	11/10/2022	1
Dexter Dam Tailrace RST	Highline Install	03/02/2022	03/02/2022	1
Dexter Dam Tailrace RST	Trap Install	03/03/2022	03/03/2022	1
Dexter Dam Tailrace RST	Operation	03/07/2022	12/16/2022	285
Dexter Dam Tailrace RST	Trap Efficiency Release (988 Fish)	03/23/2022	03/23/2022	1
Dexter Dam Tailrace RST	Trap Efficiency Release (1000 Fish)	05/04/2022	05/04/2022	1
Dexter Dam Tailrace RST	Trap Efficiency Release (1019 Fish)	05/24/2022	05/24/2022	1
Dexter Dam Tailrace RST	Trap Efficiency Release (981 Fish)	07/21/2022	07/21/2022	1
Dexter Dam Tailrace RST	Trap Efficiency Release (1007 Fish)	10/26/2022	10/26/2022	1
Dexter Dam Tailrace RST	Trap Efficiency Release (775 Fish)	11/01/2022	11/01/2022	1
Lookout Dam Tailrace RSTs	Operation	03/15/2022	07/31/2022	139
Lookout Dam Tailrace RSTs	Trap Efficiency Release (1,013 fish, PWR route)	04/13/2022	04/13/2022	1
Lookout Point Head of Reservoir RST	Trap Install	03/06/2022	03/06/2022	1

Lookout Point Head of Reservoir RST	Operation	03/07/2022	12/16/2022	285
Lookout Point Head of Reservoir RST	Trap Efficiency Release (993 fish)	04/05/2022	04/05/2022	1
Lookout Point Head of Reservoir RST	Trap Efficiency Release (989 fish)	04/14/2022	04/14/2022	1
Lookout Point Head of Reservoir RST	Trap Efficiency Release (1007 fish)	05/18/2022	05/18/2022	1
Lookout Point Head of Reservoir RST	Trap Efficiency Release (1005 fish)	07/20/2022	07/20/2022	1
Lookout Point Head of Reservoir RST	Trap Efficiency Release (506 fish)	10/27/2022	10/27/2022	1
Fall Creek Dam Tailrace RST	Operation	03/15/2022	07/15/2022	123
Fall Creek Dam Tailrace RST	Trap Efficiency Release (518 fish)	06/08/2022	06/08/2022	1
Fall Creek Dam Tailrace RST	Trap Efficiency Release (513 fish)	06/30/2022	06/30/2022	1
Fall Creek Dam Tailrace RST	Trap Efficiency Release (500 fish)	07/13/2022	07/13/2022	1
Fall Creek Dam Tailrace RST	Deployment	10/15/2022	10/15/2022	1
Fall Creek Head of Reservoir RST	Trap and Highline Install	01/11/2022	01/11/2022	1
Fall Creek Head of Reservoir RST	Operation	01/02/2022	05/31/2022	150
Fall Creek Head of Reservoir RST	Removal	06/02/2022	06/02/2022	1
Hills Creek Dam RO and PWR	Deployment	10/12/2021	10/12/2021	1
Hills Creek Dam RO	Operation	10/15/2021	03/01/2022	138
Hills Creek Dam PWR	Operation	10/15/2021	03/01/2022	138
Hills Creek Dam	Trap Efficiency Release (1,200 fish, 600 per route)	01/6/2022	01/6/2022	1
Hills Creek Dam	Trap Efficiency Release (1,200 fish, 600 per route)	02/16/2022	02/16/2022	1
Hills Creek Dam	Trap Efficiency Release (1,200 fish, 600 per route)	02/23/2022	02/23/2022	1
Hills Creek Dam RSTs	Trap Removal	03/01/2022	03/01/2022	1
Hills Creek Dam RSTs	Trap Install	09/14/2022	09/14/2022	1
Hills Creek Dam RSTs	Deployment	9/15/2022	9/15/2022	1

Summary of Rotary Screw Trap Data

Rotary screw traps (RSTs) have been operated at eleven locations in the southern Willamette River watershed. For this reporting period, traps were operated at the following nine locations: Big Cliff Dam, Foster Dam Head of Reservoir- South Santiam, Cougar Dam, Cougar Dam Head of Reservoir, Fall creek Dam, Dexter Dam Tailrace, Lookout Dam Tailrace, Lookout Point Head of Reservoir, and Hills Creek Dam. The trap in the Fall Creek Dam RO channel resumed sampling on October 15th. The Green Peter Dam Tailrace- Middle Santiam trap was removed on May 12th due to damage incurred to the highline.

The RST's at Big Cliff Dam and Lookout Dam Tailrace started sampling on March 15th. On March 1st the Middle Fork Willamette River below Hills Creek Dam RST's were removed for the sampling season in conjunction with the end of RO spill and to prioritize the limited number of screw traps to other locations. Sampling at Hills Creek Dam resumed on September 15th.

Below Dam sites that include both RO and PWR to monitor passage routes include South Fork McKenzie River below Cougar Dam and on the Middle Fork of the Willamette River in the Lookout Dam Tailrace, and Hills Creek Dam. Below dam sites that include one RST to monitor passage include Big Cliff Dam, Green Peter Tailrace- Middle Santiam, the Middle Fork of the Willamette River below Dexter Dam and Fall Creek Dam Tailrace which is a tributary on the Middle Fork of the Willamette. At the Green Peter Dam Tailrace, the single RST is placed to sample fish passing through spillways, regulating outlets, and powerhouse outlets. The RST at Dexter Dam is placed to monitor fish passage through the spillways and powerhouse outlets. The RST in the Fall Creek Dam Tailrace is placed in a position to sample fish passing through the regulating outlet.

The RST on the North Santiam River below Big Cliff Dam was not sampled while fish passage measures were not being implemented from 16 February 2022 to 14 March 2022. Sampling resumed on 15 March 2022 in accordance with Task 2.2.

Above reservoir sites include Fall Creek Head of Reservoir, Lookout Point Head of Reservoir on the Middle Fork Willamette River, Foster Dam Head of Reservoir- South Santiam, and Cougar Dam Head of Reservoir on the South Fork McKenzie.

Sampling start dates are included in Table 2, and season total collection numbers are displayed in Table 3. The locations of the RST's are depicted in Figures 1 through 8.

Figure 1. Big Cliff RST Location

Figure 2. Foster Dam Head of Reservoir- South Santiam RST Location

Figure 3. Cougar Dam RST Locations

Figure 4. Cougar Dam Head of Reservoir RST Location

Figure 5. Fall Creek Dam Tailrace RST Location

Figure 6. Dexter Dam RST Location

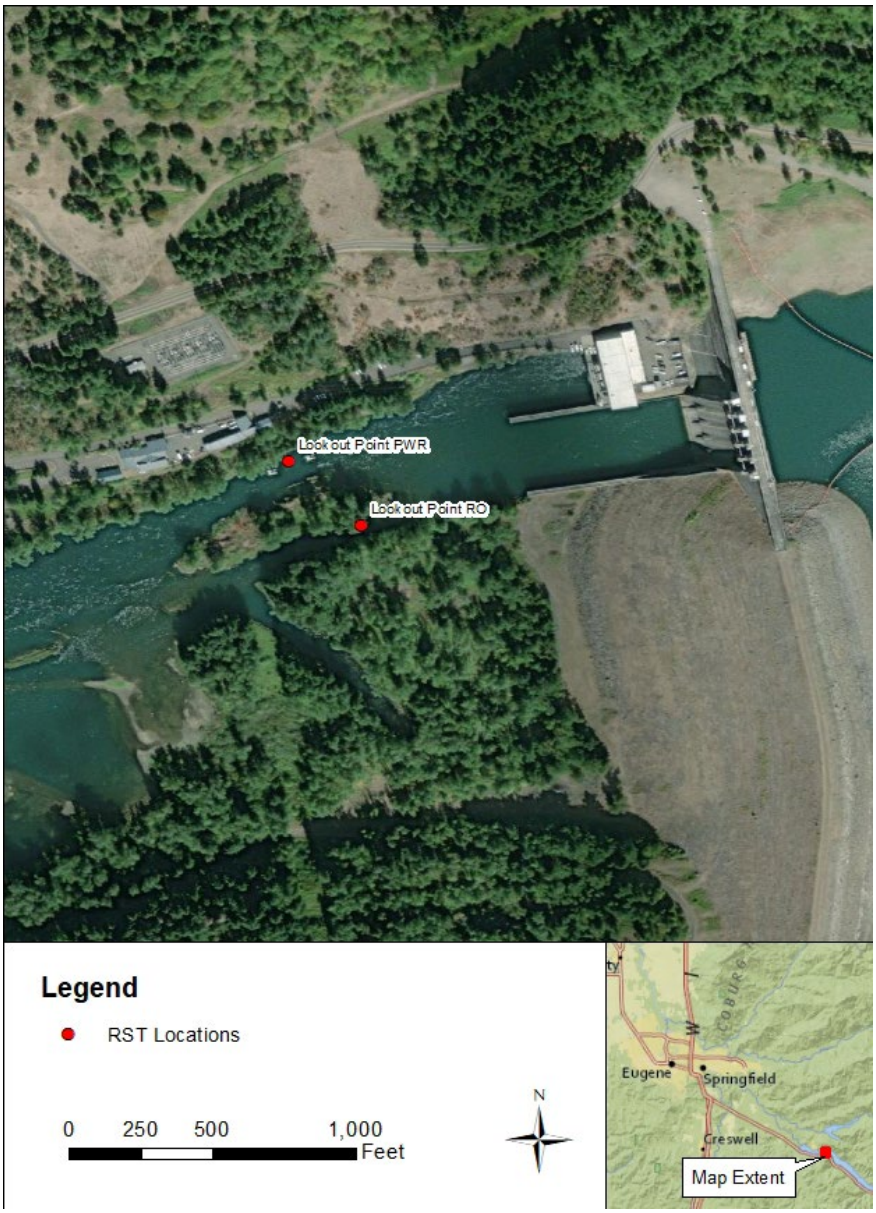


Figure 7. Lookout Point Dam Tailrace RST Location

Figure 8. Lookout Point Head of Reservoir RST Location

Figure 9. Hills Creek Dam RST Locations

Table 2. Sampling Dates for Reporting Period

Site	Total Sampling Period Start	Current Reporting Period Start	Current Reporting Period End	Days Sampled This Period	Total Days Sampled
Big Cliff Dam	12/1/2021	11/1/15	11/15/2022	15	304
Foster Dam Head of Reservoir- South Santiam	3/16/2022	11/1/15	11/15/2022	12	181
Cougar Dam PH	12/1/2021	11/1/15	11/15/2022	0	302
Cougar Dam RO	12/1/2021	11/1/15	11/15/2022	15	342
Cougar Dam Head of Reservoir	3/7/2022	11/1/15	11/15/2022	12	156
Fall Creek Dam Tailrace*	3/15/2022	11/1/15	11/15/2022	15	152
Dexter Dam Tailrace	3/7/2022	11/1/15	11/15/2022	15	243
Lookout Point Dam PH	3/15/2022	11/1/15	11/15/2022	15	215
Lookout Point Dam Spill	3/15/2022	11/1/15	11/15/2022	15	215
Lookout Point Head of Reservoir	3/10/2022	11/1/15	11/15/2022	13	228
Hills Creek Dam	9/16/2022	11/1/15	11/15/2022	15	46

*Fall Creek Dam Tailrace trap was being operated by the Corps until EAS began sampling the site on March 15th per Task 7.1

Table 3. Willamette Valley Rotary Screw Trap Monitoring Catch Summary

Site	Species	Catch (Reporting Period)	Recaptures (Reporting Period)	Total Catch	Total Recaptures
Big Cliff Dam	CHS	38	40	1170	286
Big Cliff Dam	STW	17	0	84	0
Green Peter Tailrace- Middle Santiam	CHS	0	0	0	13
Green Peter Tailrace- Middle Santiam	STW	0	0	6	0
Foster Dam Head of Reservoir- South Santiam	CHS	24	335	97	446
Foster Dam Head of Reservoir- South Santiam	STW	53	5	217	6
Cougar Dam	CHS	700	18	2939	467
Cougar Dam Head of Reservoir	CHS	18	33	693	192
Fall Creek Dam Tailrace	CHS	0	0	1	11
Dexter Dam Tailrace	CHS	0	1	97	114
Lookout Point Dam	CHS	0	0	78	2
Lookout Point Head of Reservoir	CHS	1	0	104	215
Hills Creek Dam	CHS	4	0	108	0

North Santiam – Big Cliff Dam

The RST on the North Santiam River below Big Cliff Dam was not sampled while fish passage measures were not being implemented from February 16th, 2022 to March 14th, 2022. Sampling resumed on March 15th, 2022 in accordance with Task 2.2.

Target Species

This reporting period began on November 1st and ended on November 15th. There were a total of 38 Chinook Salmon (CHS) and 17 Winter Steelhead (STW) captured during the 15-day sampling period (Figure 10). Sampling duration was 100% for the RST. Table 4 provides life stage, length, and weight data for all Chinook Salmon and Winter Steelhead that have been caught at the Big Cliff Dam site to-date and for the reporting period. Figure 11 shows length frequency data to-date.

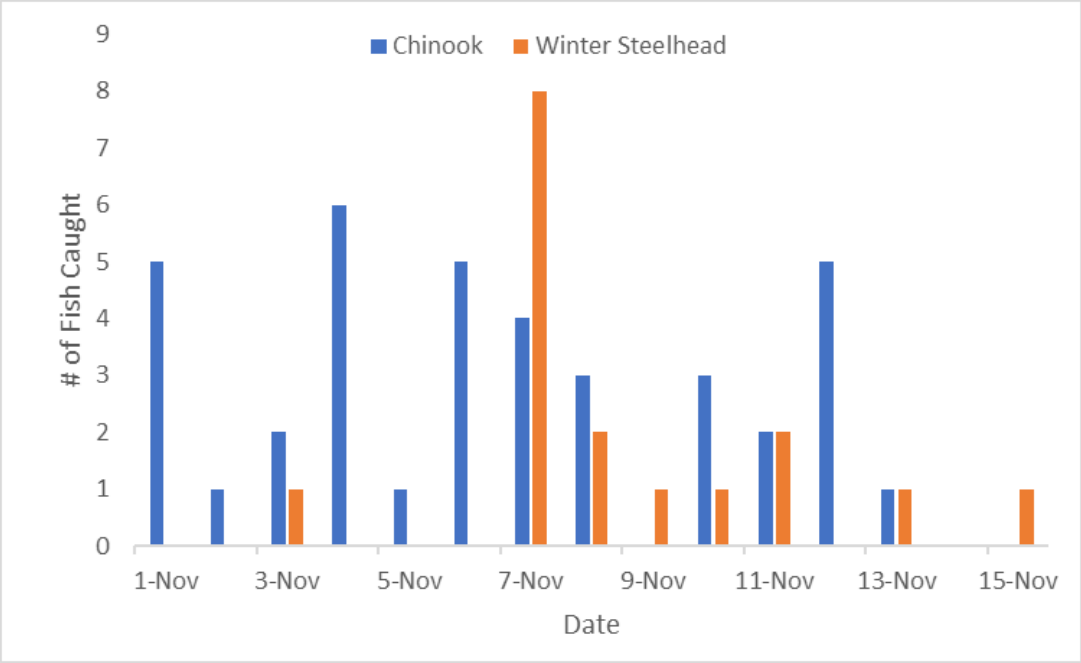


Figure 10. Chinook and Winter Steelhead Captured per day 11/01/2022 to 11/15/2022 (Big Cliff)

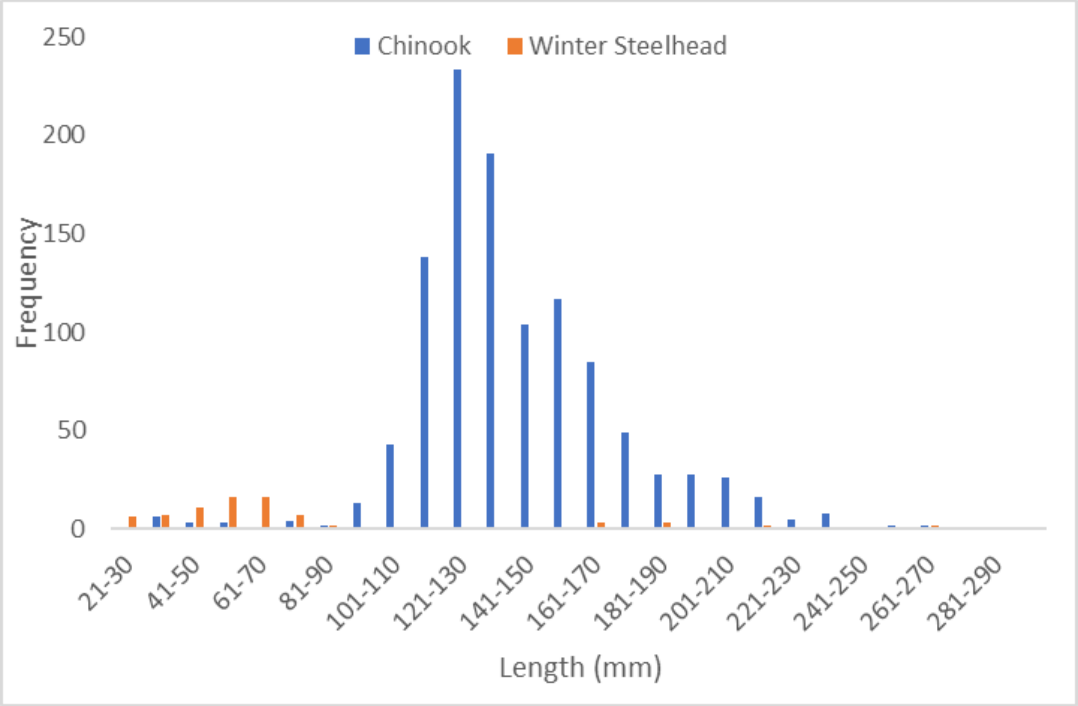


*Figure does not include fish without heads

Figure 11. Length Frequency of Juvenile Chinook and Winter Steelhead Sampled Season To-Date (Big Cliff)

Trapping Efficiency

A total of 549 juvenile hatchery Chinook (sub-yearlings) were bismarck brown dyed, adipose clipped and released on 11/02/2022 below Big Cliff Dam. A total of 40 fish were recaptured in the 8ft trap. Trapping efficiency was 7.3%.

Trapping efficiency fish displayed minor descaling and fin damage. 2 fish displayed bloating.

Big Cliff Dam	Release #	Recapture #	Capture Efficiency
8ft Trap	549	40	7.3% (40/549)

Table 4. Descriptive Statistics of Target Species Captured at Big Cliff Dam Season To-Date

To-Date (Since Dec. 01, 2021)											
Site	Route	Species	Life stage	Collected	Length (mm)*			Weight (g)*			
					Min	Max	Mean	Min	Max	Mean	
Big Cliff	PWR	CHS	Fry	9	31	48	37.5	1.2	1.4	1.4	
		CHS	Parr	27	55	136	94.5	1.8	30.0	10.7	
		CHS	Smolt	1132	74	283	143.6	5.4	253.5	35.0	
		STW	Fry	28	21	69	40.4	1.1	3.4	1.6	
		STW	Parr	39	51	131	68.3	1.3	24.8	4.4	
		STW	Smolt	17	157	284	214.1	36.1	230.5	102.2	

*Fish that were missing heads are not included in length and weight calculations.

November 1-15, 2022											
Site	Route	Species	Life stage	Collected	Length (mm)*			Weight (g)*			
					Min	Max	Mean	Min	Max	Mean	
Big Cliff	PWR	CHS	Fry	0	N/A	N/A	N/A	N/A	N/A	N/A	
		CHS	Parr	3	55	74	64.3	1.8	4.8	3.5	
		CHS	Smolt	35	74	212	165.1	5.4	102.3	55.4	
		STW	Fry	0	N/A	N/A	N/A	N/A	N/A	N/A	
		STW	Parr	17	55	131	71.94	1.8	24.8	5.2	
		STW	Smolt	0	N/A	N/A	N/A	N/A	N/A	N/A	

*Fish that were missing heads are not included in length and weight calculations.

24-Hour Post Collection Holding Trial

27 Spring Chinook and 16 Winter Steelhead were captured during the current reporting period and held for 24 hours. 5 Chinook (18.5%) and 3 Winter Steelhead (18.8%) died in holding.

Injuries and Copepod Infection

Partial descaling <20% was observed in 18 of the 38 Chinook captured (47.4%), 15 displayed descaling >20% (39.5%), 35 displayed body injury (92.1%), 4 had eye injury (10.5%), 27 had copepods present in the branchial cavity (71.1%) and 8 had copepods on fins (21.1%). 11 Chinook displayed gas bubble disease (28.9%) (five level 1 and six level 2. There were 10 mortalities (26.3%).

Partial descaling <20% was observed in 6 of the 17 Winter Steelhead captured (35.3%) and 0 displayed descaling >20% (0.0%), 10 displayed body injury (58.8%), 0 had eye injury (0.0%), 0 had copepods present in the branchial cavity (0.0%) and 0 had copepods on fins (0.0%). There was 1 mortality (5.9%). Injury data is summarized in table 5.

Table 5. Number of Descaled, Bodily/Eye Injured, Copepod Infected and Dead Chinook Salmon and Winter Steelhead for Sampling Period. (Big Cliff Dam).

Site	Species	# Fish Collected	# DSC* <20%	# DSC* >20%	# with Body Injuries	# with Eye Injuries	# with COP* In B.C.	# with COP* on Fins	Mortalities
Big Cliff Dam	Chinook	38	18	15	35	4	27	8	10
Big Cliff Dam	Winter Steelhead	17	6	0	10	0	0	0	1

Collected DNA and Scale Samples

For the reporting period, scales and DNA were collected from 37 Spring Chinook and 17 Winter Steelhead. The other targets captured did not meet length criteria for DNA sampling or were too descaled/damaged to collect samples.

Non-Target Species

2996 non-targets were captured during this sampling period. A summary of to-date non-target species catch and mortality numbers are listed in Table 6.

Table 6. Summary of Non-target Species (Big Cliff Dam)

Species	PWR Capture	PWR Mortality	Season Total	Season Total Mortality
Bass	0	0	1	1
Bluegill	1725	96	2655	124
Bullhead	2	1	7	1
Chinook (Adult)	0	2	2	3
Chinook (clipped)	7	0	16	0
Cutthroat	0	0	3	0
Dace	1	1	1	1
Kokanee	44	20	184	65
Kokanee (clipped)	17	0	17	0
O. mykiss (clipped)	0	0	7	3
Pumpkinseed	1196	14	1569	27
Unknown	0	0	4	1
Mountain Whitefish	3	3	7	3
Sculpin	1	0	1	0
Totals	**2996**	**137**	**4474**	**200**

Stream Statistics

Basic stream statistics at the Big Cliff Dam site were calculated from data downloaded from U.S. Geological Survey stream gauge numbers 14181410 and 14181500. Gauge height (feet) is the only metric provided at gauge 14181410. Total dissolved gas (TDG) saturation data was received from gauge

14181500, 1 rkm downstream of the trap. During the reporting period, daily maximum values for instantaneous gauge height ranged from 1,109.2to 1,114.3 feet (mean: 1,112.7 feet) during the reporting period. Figure 12 shows instantaneous gauge height.

Total dissolved gas saturation ranged from 110 to 125% during the reporting period (mean: 116.1%). Figure 13 shows total dissolved gas saturation.

Stream temperatures were recorded every 2 hours for the length of the reporting period at the RST (Figure 14). The temperature probe malfunctioned 5 days into the reporting period. The remainder of the temperature data reported was obtained from USGS gage number 14181500 – 1 rkm downstream of the trap.

Flows through the Powerhouse and Spill during the reporting period averaged 2,754.0 and 1,097.1 cubic feet per second (cfs), respectively (Figure 15). Catch per unit of effort (CPUE) data are summarized in Table 7. Discharge and capture data for the duration of monitoring efforts at this location are provided in Appendix B.

Table 7. Summary of salmonid CPUE, Big Cliff Dam.

Description	Chinook (8 ft)	Winter Steelhead (8 ft)
Catch	38	17
Effort (hrs)	362.6	362.6
CPUE (fish/hr)	0.105	0.047

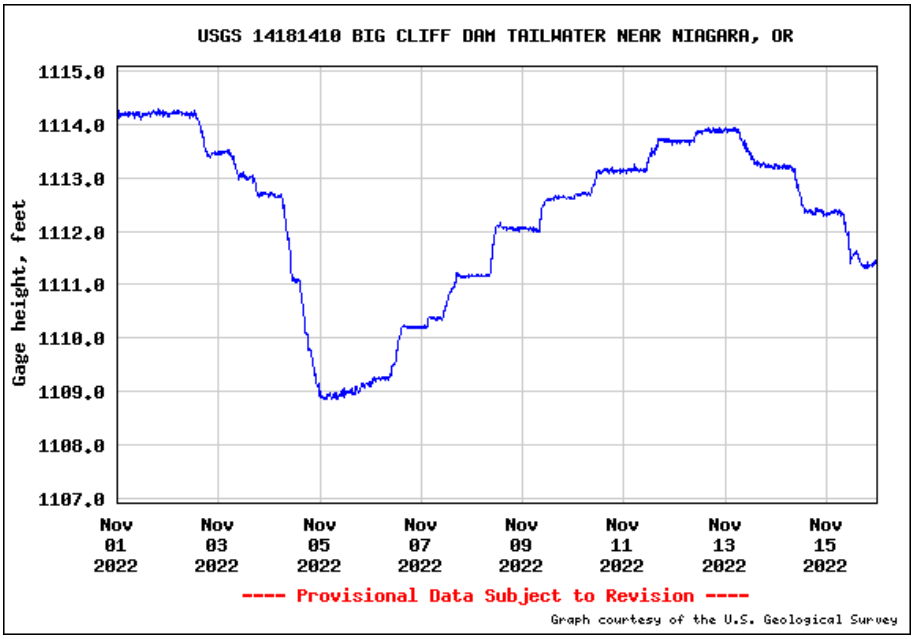


Figure 12. Gauge height (ft); below Big Cliff Dam

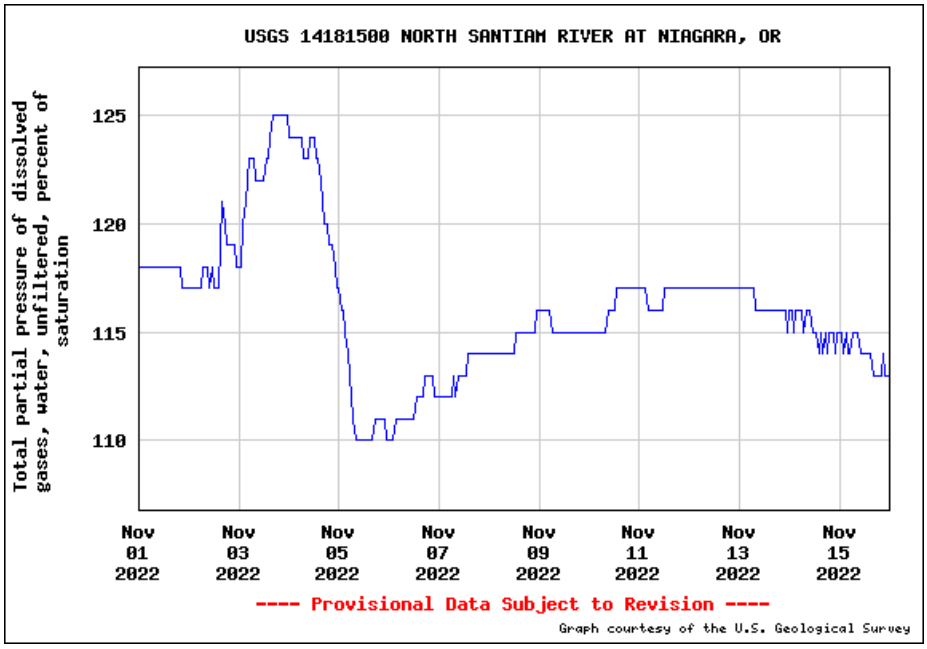


Figure 13. Total Dissolved Gas Saturation (%); below Big Cliff Dam

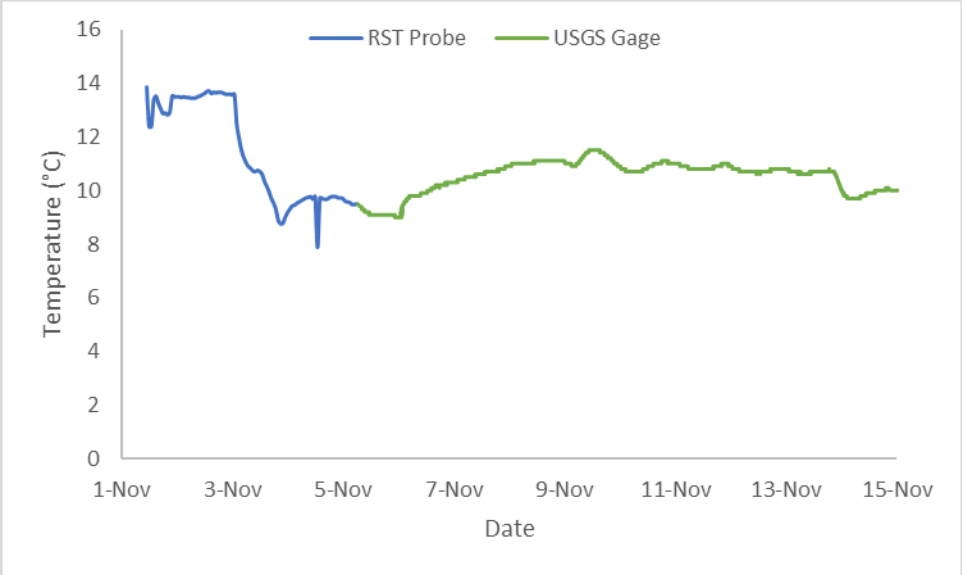


Figure 14. Temperature at RST (Big Cliff Dam)

Note: The temperature probe malfunctioned 5 days into the reporting period. Supplemental temperature data was obtained from USGS stream gage 14181500 – 1 rkm downstream of the trap. Blue line represents the RST temperature probe data; Green line represents the USGS gage temperature data.

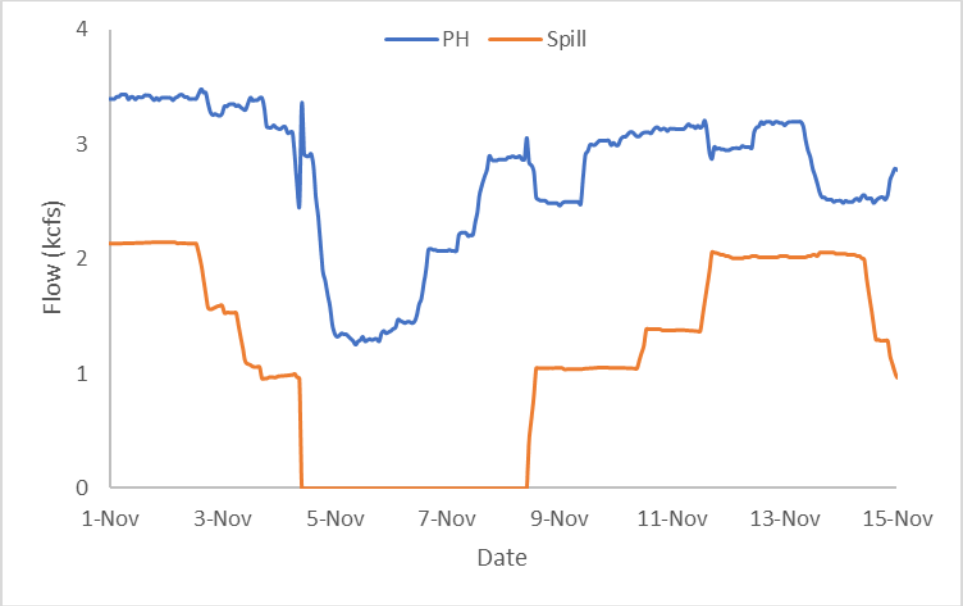


Figure 15. Hourly Flows PWR vs. Spill (Big Cliff Dam)

South Fork Santiam– Foster Dam Head of Reservoir

Target Species

This reporting period began on November 1st and ended on November 15th. There were 24 Chinook salmon (CHS) and 53 Winter Steelhead (STW) captured during the 15-day sampling period. A major rain event caused high flow and high debris loads during this reporting period. The cone was raised to a non-sampling position on November 4th and was lowered again on November 7th. Sampling duration was 80.0% for the RST. Table 8 provides life stage, length, and weight data for all Chinook Salmon and Winter Steelhead that have been caught at the Foster Dam Head of Reservoir- South Santiam site to-date and for the reporting period. Figure 16 shows the daily capture numbers for Chinook and Winter Steelhead and Figure 17 shows length frequency data to-date for both species.

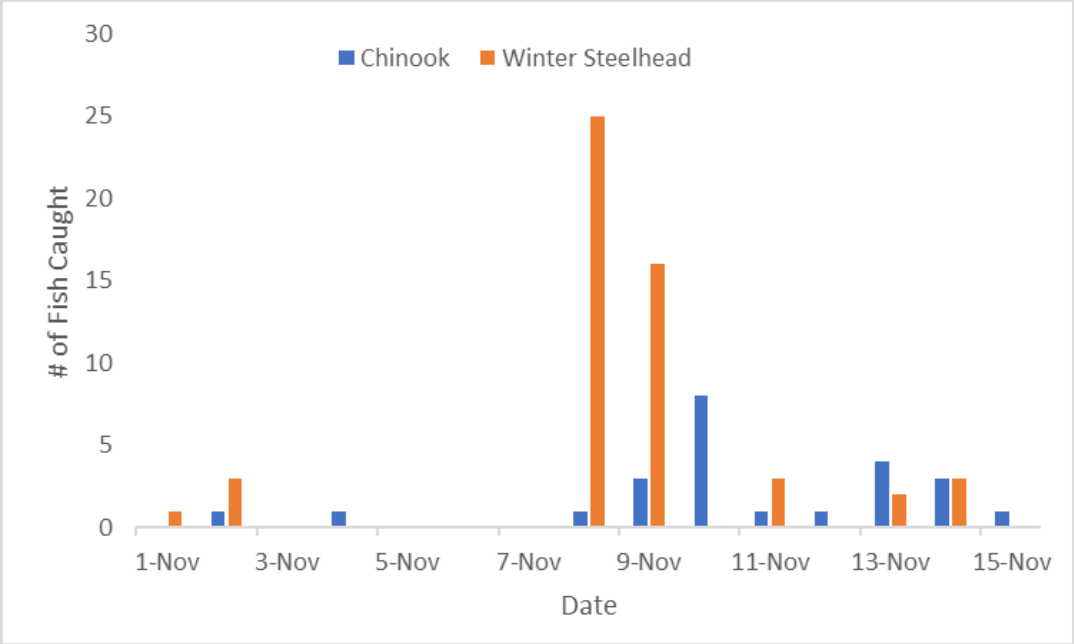


Figure 16. Chinook and Winter Steelhead Captured Per Day 11/01/2022 to 11/15/2022 (Foster Dam Head of Reservoir- South Santiam)

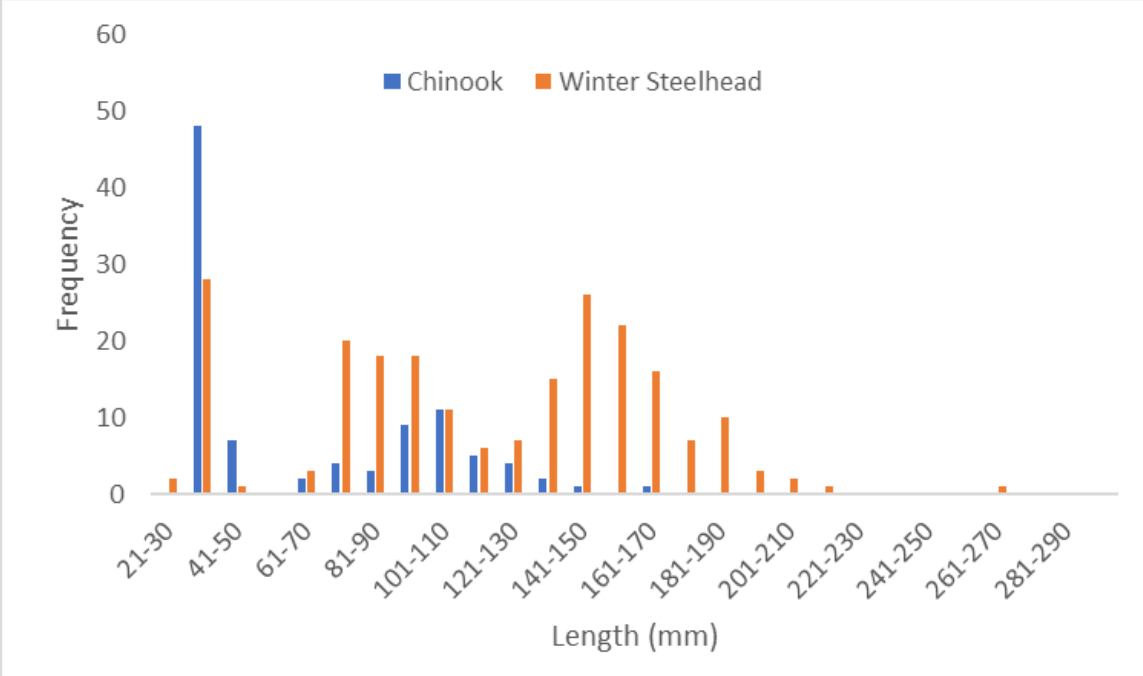


Figure 17. Length Frequency of Juvenile Chinook and Winter Steelhead Sampled Season To-Date (Foster Dam Head of Reservoir- South Santiam)

Trapping Efficiency

A total of 1006 juvenile hatchery Chinook (sub-yearlings) were bismarck brown dyed, adipose clipped and released on 11/01/2022 at Cascadia Park above the Foster Dam Head of Reservoir- South Santiam trap. 263 fish have been recaptured to date.

Foster Dam Head of Reservoir- South Santiam	Release #	Recapture #	Capture Efficiency
5 ft Trap	1006	263	26.1% (263/1006)

A total of 1007 juvenile hatchery Chinook (sub-yearlings) were adipose clipped and released on 11/09/2022 at Cascadia Park above the Foster Dam Head of Reservoir- South Santiam trap. 68 fish have been recaptured to date.

Foster Dam Head of Reservoir- South Santiam	Release #	Recapture #	Capture Efficiency
5 ft Trap	1007	68	6.8% (68/1007)

Run of River Trapping Efficiency

Run of river fish captured in the RST have been caudal clipped and released upstream to perform run of river trapping efficiency trials. Only fish large enough to be safely caudal clipped have been used for run of river efficiency trials. To date, 46 Chinook and 186 Winter Steelhead have been caudal clipped and released upstream for the purpose of conducting run of river trapping efficiency trials. Release numbers and recaptures for this reporting period are summarized below.

Foster Dam Head of Reservoir- South Santiam	Release #	Recapture #
Chinook	24	4
Winter Steelhead	52	5

To-Date (Since Dec. 01, 2021)											
Site	Trap	Species	Life stage	Collected	Length (mm)*			Weight (g)*			
					Min	Max	Mean	Min	Max	Mean	
Foster Dam Head of Reservoir-South Santiam	5 ft	CHS	Fry	55	32	49	35.9	N/A	N/A	N/A	
		CHS	Parr	26	70	161	897.7	3.1	44.3	14.4	
		CHS	Smolt	16	94	146	116.4	8.5	34.9	17.4	
		STW	Fry	31	28	46	34.6	N/A	N/A	N/A	
		STW	Parr	105	65	183	106.6	2.4	63.6	17.0	
		STW	Smolt	81	100	213	160.3	11.2	164.0	43.5	

November 1-15, 2022											
Site	Trap	Species	Life stage	Collected	Length (mm)*			Weight (g)*			
					Min	Max	Mean	Min	Max	Mean	
Foster Dam Head of Reservoir-South Santiam	5 ft	CHS	Fry	0	N/A	N/A	N/A	N/A	N/A	N/A	
		CHS	Parr	16	89	161	104.6	7.3	44.3	18.3	
		CHS	Smolt	8	94	110	112.5	8.5	23.3	14.9	
		STW	Fry	0	N/A	N/A	N/A	N/A	N/A	N/A	
		STW	Parr	35	75	134	100.4	4.6	52	17.1	
		STW	Smolt	18	143	167	159.6	30.4	164.0	58.1	

Injuries and Copepod Infection

Partial descaling <20% was observed on 17 of the 24 Spring Chinook captured (70.8%). Body injuries were present on 9 Spring Chinook (37.5%) and 0 displayed eye injury (0.0%). No copepods were present in the branchial cavity (0.0%) and 1 fish displayed copepods on the fins (4.2%). There were no mortalities.

Partial descaling <20% was observed on 20 of the 53 Winter Steelhead captured (37.7%). Body injuries were present on 21 Winter Steelhead (39.6%) and 0 displayed eye injury (0.0%). No copepods were found in the branchial cavity(0.0%) and 1 fish displayed copepods on the fins (1.9%). There were no mortalities. A summary of injuries observed during the reporting period are provided in Table 9, and for the duration of the season are provided in Appendix A.

Table 9. Number of Descaled, Bodily/Eye Injured, Copepod Infected and Dead Chinook Salmon and Winter Steelhead for Sampling Period. (Foster Dam Head of Reservoir- South Santiam).

Site	Species	# Fish Collected	# DSC* <20%	# DSC* >20%	# with Body Injuries	# with Eye Injuries	# with COP* In B.C.	# with COP* on Fins	Mortalities
Foster Dam Head of Reservoir-South Santiam	Chinook	24	17	0	9	0	0	1	0
	Winter Steelhead	53	20	0	21	0	0	1	0

Collected DNA and Scale Samples

For the reporting period, scales and DNA were collected from 23 Spring Chinook and 53 Winter Steelhead. The other targets captured did not meet length criteria for DNA sampling.

Non-Target Species

25 non-target species fish were captured during the reporting period; the data is summarized below in Table 10.

Table 10. Summary of Non-target Species (Foster Dam Head of Reservoir).

Species	5 ft Capture	5 ft Mortality	Season Total	Season Total Mortality
Dace	21	0	379	11
Sculpin	0	0	2	1
Northern Pikeminnow	3	0	5	0
Largescale Sucker	0	0	5	1
Cutthroat	0	0	28	0
Brook Lamprey	1	0	1	0
Unknown	0	0	4	0
Totals	**25**	**0**	**424**	**13**

Stream Statistics

Basic stream statistics at the Foster Dam Head of Reservoir- South Santiam site were calculated from data downloaded from the U.S. Geological Survey stream gauge number 14185000. Discharge (cfs) and Gauge height (feet) are available at this gauge. During the reporting period, daily maximum values for instantaneous discharge ranged from 230.0 cfs to 8,750.0 cfs (mean: 1,430.9 cfs). Figure 18 shows instantaneous discharge.

Stream temperatures were recorded every 2 hours for the length of the report period for the RST (Figure 19). Temperature probes for the trap operated normally throughout this reporting period.

Catch per unit of effort (CPUE) data are summarized in Table 11. Discharge and capture data for the duration of monitoring efforts at this location are provided in Appendix B.

Table 11. Summary of salmonid CPUE, Foster Dam Head of Reservoir- South Santiam.

	Chinook	Winter Steelhead
Description	**(5 ft)**	
Catch	24	53
Effort (hrs)	292.5	292.5
CPUE (fish/hr)	0.082	0.181

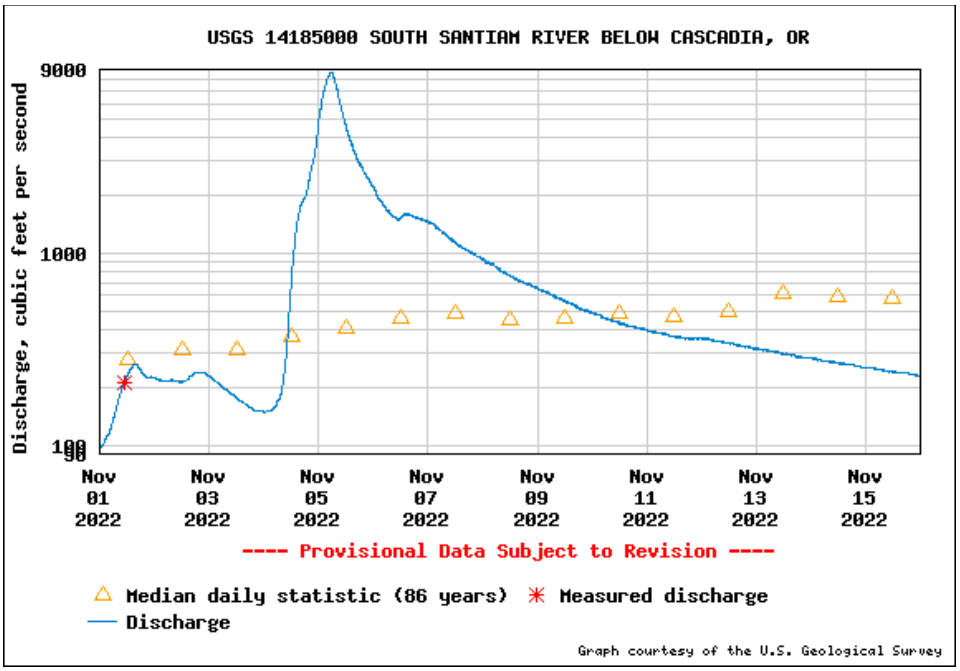


Figure 18. Discharge (cfs); Foster Dam Head of Reservoir – S. Santiam)

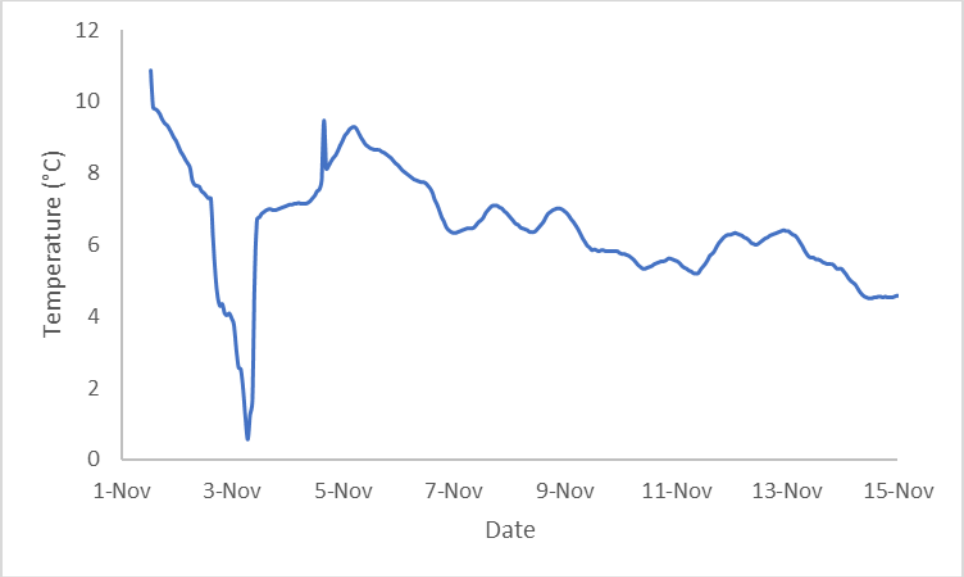
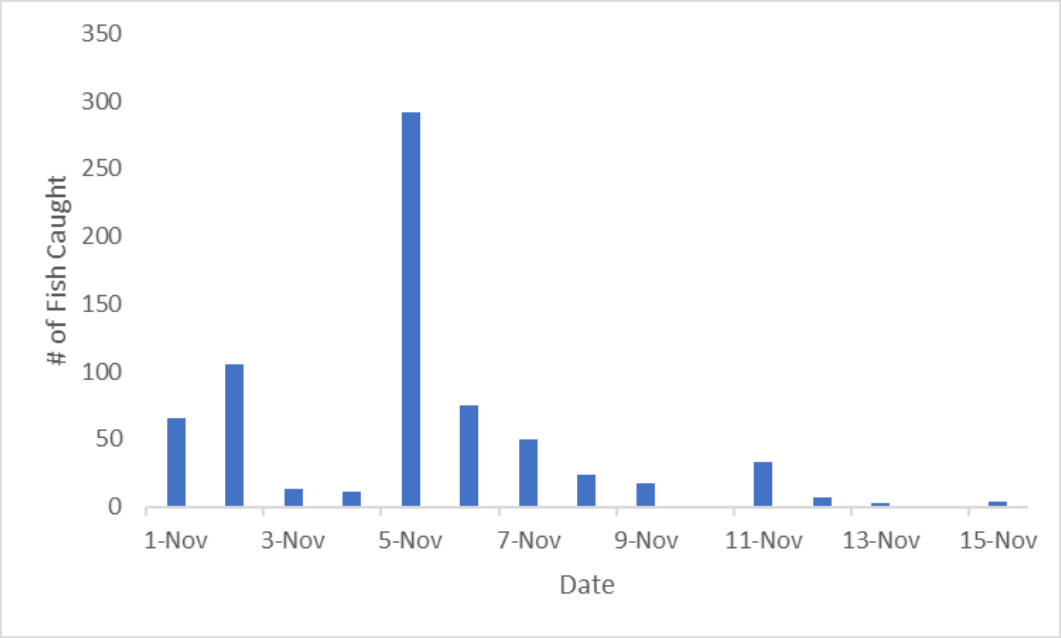


Figure 19. Temperature at RST (Foster Dam Head of Reservoir – S. Santiam)

South Fork McKenzie – Cougar Dam

Target Species

This reporting period began on November 1st and ended on November 15th. There was a total of 700 Chinook Salmon (CHS) captured during the 15-day sampling period. The flow in the powerhouse was lowered on 10/8/2022 in order to prioritize flow from the regulating outlet. The powerhouse traps were raised on 10/8/2022 in anticipation of this event to avoid damage to the cones. The flow is too low to continue fishing the powerhouse channel currently. Sampling duration was 100% for the RO RST and 0.0% for the Powerhouse RSTs. Table 12 provides life stage, length, and weight data for all Chinook salmon that have been caught at the Cougar Dam site to-date and for the reporting period. Figure 20 shows the daily capture numbers for chinook and Figure 21 shows length frequency data to-date.



*Recaptured fish for trapping efficiency trials not included.

Figure 20. Chinook Captured Per Day 11/01/2022 to 11/15/2022 (Cougar Dam)

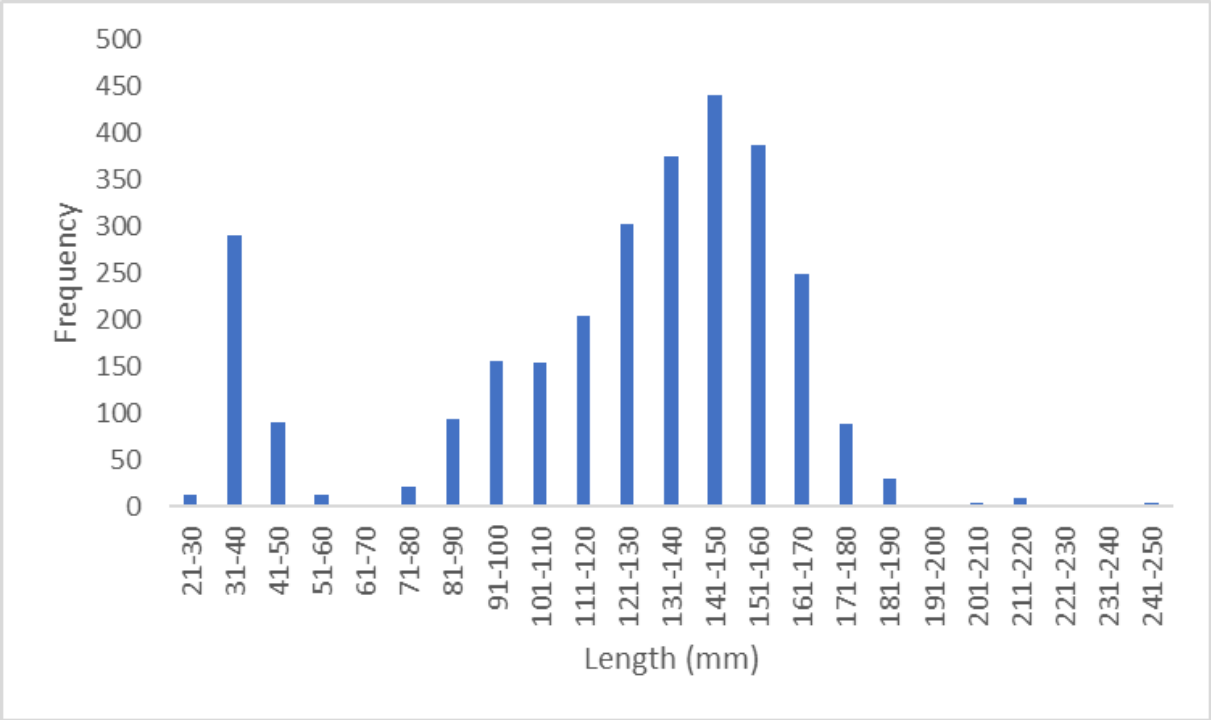


*Figure does not include fish without heads or fish used for trapping efficiency trials.

Figure 21. Length Frequency of Juvenile Chinook Sampled Season To-Date (Cougar Dam)

Trapping Efficiency

A total of 442 juvenile hatchery Chinook (sub-yearlings) were bismarck brown dyed, adipose clipped, left ventral clipped and released on 10/14/2022. 48 fish were recaptured for an efficiency of 10.9%. Trapping efficiency fish displayed injuries, primarily descaling, fin damage, and bloating. Hatchery staff noted that fish may have PKD at time of pickup.

Cougar Dam	Release #	Recapture #	Capture Efficiency
RO Route	442	48	10.9% (48/442)

Run of River Trapping Efficiency

Run of river fish were captured, caudal clipped and released for the purpose of conducting run of river trapping efficiency trials at Cougar Dam. Numbers of fish released and recaptured by route for the reporting period are listed below.

Cougar Dam	Release #	Recapture #
PH	0	0
RO	832	18

Table 12. Descriptive Statistics of Target Species Captured at Cougar Dam Season To-Date

To-Date (Since Dec. 01, 2021)										
Site	Route	Species	Life stage	Collected	Length (mm)*			Weight (g)*		
					Min	Max	Mean	Min	Max	Mean
Cougar Dam	RO	CHS	Fry	21	34	48	40.8	N/A	N/A	N/A
		CHS	Parr	195	56	164	107.8	1.2	41.1	14.6
		CHS	Smolt	1535	92	247	145.7	4.7	142.4	35.0
Cougar Dam	PWR	CHS	Fry	382	25	55	38.0	1.0	1.8	1.2
		CHS	Parr	266	54	165	99.2	1.6	41.0	10.7
		CHS	Smolt	538	76	223	138.9	4.2	113.5	30.0

*Fish that were missing heads are not included in length and weight calculations.

November 1-15, 2022										
Site	Route	Species	Life stage	Collected	Length (mm)*			Weight (g)*		
					Min	Max	Mean	Min	Max	Mean
Cougar Dam	RO	CHS	Fry	0	N/A	N/A	N/A	N/A	N/A	N/A
		CHS	Parr	35	78	136	104.3	5.2	31.2	13.4
		CHS	Smolt	665	94	245	145.0	8.8	130.9	35.2
Cougar Dam	PWR	CHS	Fry	0	N/A	N/A	N/A	N/A	N/A	N/A
		CHS	Parr	0	N/A	N/A	N/A	N/A	N/A	N/A
		CHS	Smolt	0	N/A	N/A	N/A	N/A	N/A	N/A

*Fish that were missing heads are not included in length and weight calculations.

24-Hour Post Collection Holding Trial

A total of 67 Chinook captured in the RSTs, 0 fish from the PWR RST and 67 from the RO RST, were held for ~24 hours in holding tanks and then evaluated for survival rates. In total, 4 of the fish (6.0%) held during this period died during holding. 0 of the 0 PWR RST captured fish (0.0%) died during holding and 4 of the 67 RO RST captured fish (6.0%) died during holding.

Injuries and Copepod Infection

Partial descaling <20% was observed on 410 of the 700 Chinook collected at the RO RST (58.6%). Descaling >20% was observed on 253 of the Chinook (36.1%). There were 582 fish with bodily injuries (83.1%) and 74 had eye injuries (10.6%). 652 fish had copepods present in the branchial cavity (93.1%) and 503 had copepods present on fins (71.9%). 234 fish displayed Gas Bubble Disease (169 level 1, 42 level 2, 11 level 3, and 12 level 4) (33.4%). There were 150 chinook mortalities collected in the RO RST (21.4%).

Partial descaling <20% was observed on 0 of the 0 Chinook collected at the PWR RST (0.0%). Descaling >20% was observed on 0 of the Chinook (0.0%). There were 0 fish with bodily injuries (0.0%) and 0 had

eye injuries (0.0%). 0 fish had copepods present in the branchial cavity (0.0%) and 0 had copepods present on fins (0.0%). 0 fish displayed Gas Bubble Disease (0.0%). There were 0 chinook mortalities collected in the PWR RST (0.0%). Data is summarized below in Table 13. A summary of injuries observed during the reporting period, and for the duration of the season are provided in Appendix A.

Table 13. Number of Descaled, Bodily/Eye Injured, Copepod Infected and Dead Chinook Salmon for Sampling Period. (Cougar Dam).

Site	Route	# CHS Collected	# DSC* <20%	# DSC* >20%	# with Body Injuries	# with Eye Injuries	# with COP* In B.C.	# with COP* on Fins	Mortalities
Cougar	RO	700	410	253	582	74	652	503	150
Cougar	PWR	0	0	0	0	0	0	0	0

*DSC=Descaled, COP=Copepods, B.C.=Branchial Cavity

Collected DNA and Scale Samples

For the reporting period, scales and DNA were collected from 575 Spring Chinook. The other targets captured did not meet length criteria for DNA sampling or were too damaged to remove scales.

Non-Target Species

A total of 28 non-target species fish were captured during the reporting period; the data is summarized below in Table 14. Adipose clipped Chinook captured were from previous TE releases. They are not ODFW PIT tagged fish.

Table 14. Summary of Non-target Species (Cougar Dam).

Species	RO Capture	RO Mortality	PWR Capture	PWR Mortality	Season Total Capture	Season Total Mortality
Brook Lamprey	0	0	0	0	3	0
Bluegill	1	0	0	0	2	0
Bull Trout	0	0	0	0	1	0
Chinook (AD clipped)	19	13	0	0	42	14
Chinook (Adult)	0	0	0	0	1	0
Crappie	1	1	0	0	1	1
Cutthroat	1	0	0	0	72	3
Dace	0	0	0	0	2502	8
Largescale Sucker	0	0	0	0	55	0
Mountain Whitefish	1	0	0	0	51	2
Northern Pikeminnow	0	0	0	0	2	0
O. mykiss	1	0	0	0	308	3
Sculpin	0	0	0	0	207	4
Smallmouth Bass	1	0	0	0	3	0
Spotted Bass	3	0	0	0	4	0
Unknown	0	0	0	0	21	2
Totals	**28**	**14**	**0**	**0**	**3321**	**37**

Stream Statistics

Basic stream statistics at the Cougar Dam site were calculated from data downloaded from U.S. Geological Survey stream gauge numbers 14159410 and 14181500. Gauge height (feet) is the only metric provided at gauge 14159410. Total dissolved gas saturation data was received from gauge 14181500, 500 meters downstream of the trap. During the reporting period, daily maximum values for instantaneous gauge height ranged from 1,251.5 to 1,253.2 feet (mean: 1,252.1 feet). Figure 22 shows instantaneous gauge height.

Total dissolved gas saturation ranged from 99 to 115% (mean: 107.3%). Figure 23 shows total dissolved gas saturation.

Stream temperatures were recorded every 2 hours for the length of the report period for the RO and PWR RST's (Figure 24 and 25 respectively). Temperature probes for the RO and PWR RST operated normally throughout this reporting period.

Flows through the Powerhouse and RO during the reporting period averaged 0 and 881.5 cubic feet per second (cfs) respectively (Figure 26). Catch per unit of effort (CPUE) data are summarized in Table 15. Discharge and capture data for the duration of monitoring efforts at this location are provided in Appendix B.

Table 15. Summary of salmonid CPUE, Cougar Dam.

	Chinook	
Description	**RO (5ft)**	**PWR (8ft)**
Catch	700	0
Effort (hrs)	363.1	0
CPUE (fish/hr)	1.928	0

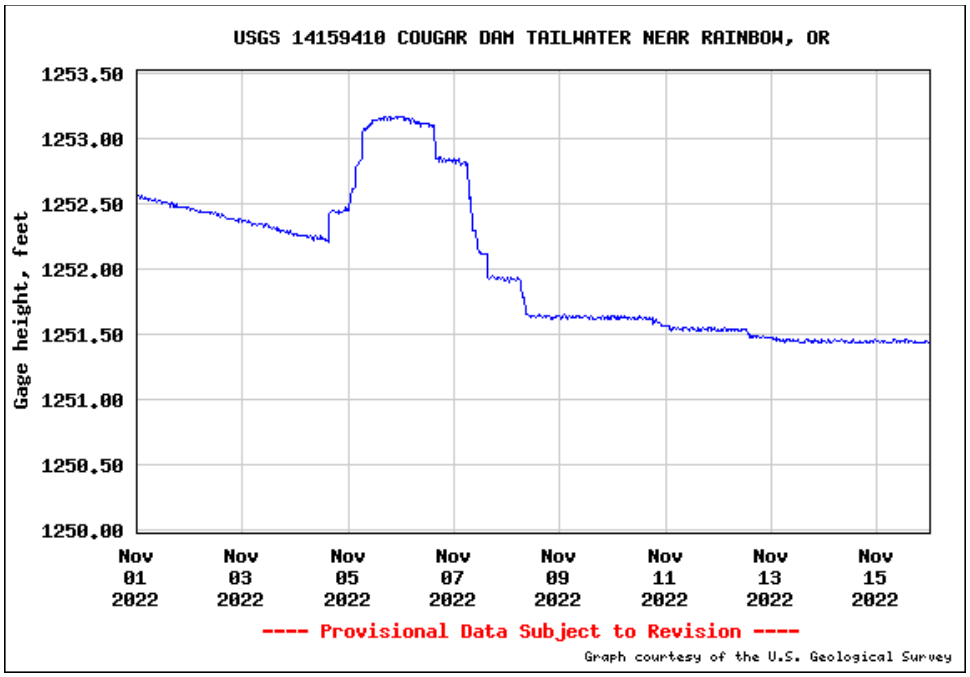


Figure 22. Gauge Height (feet); below Cougar Dam, South Fork McKenzie River

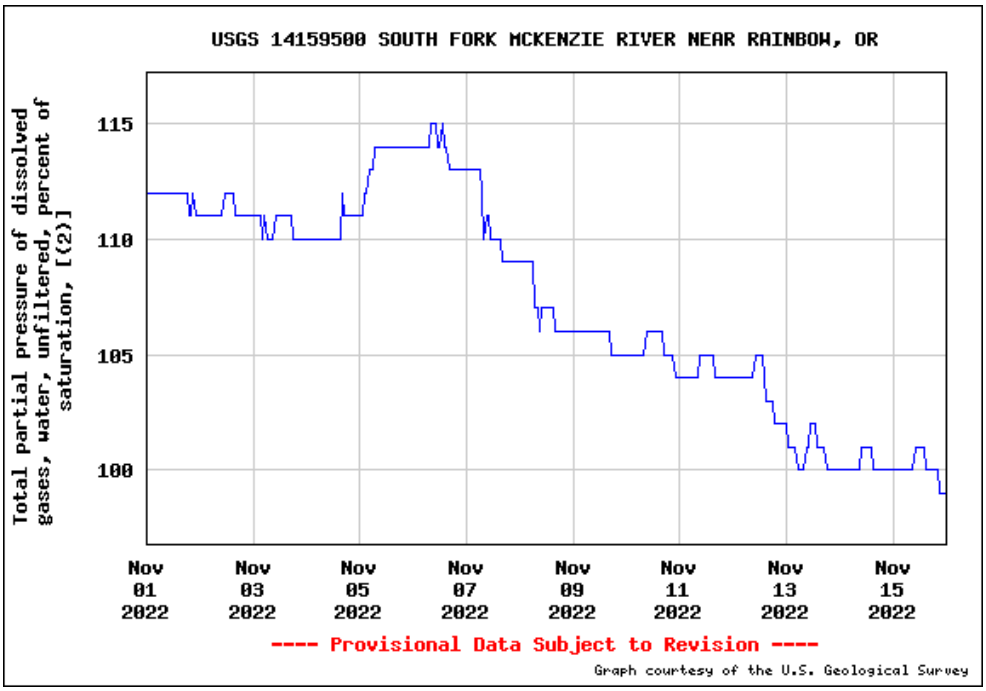


Figure 23. Total Dissolved Gas Saturation (%); below Cougar Dam, South Fork McKenzie River

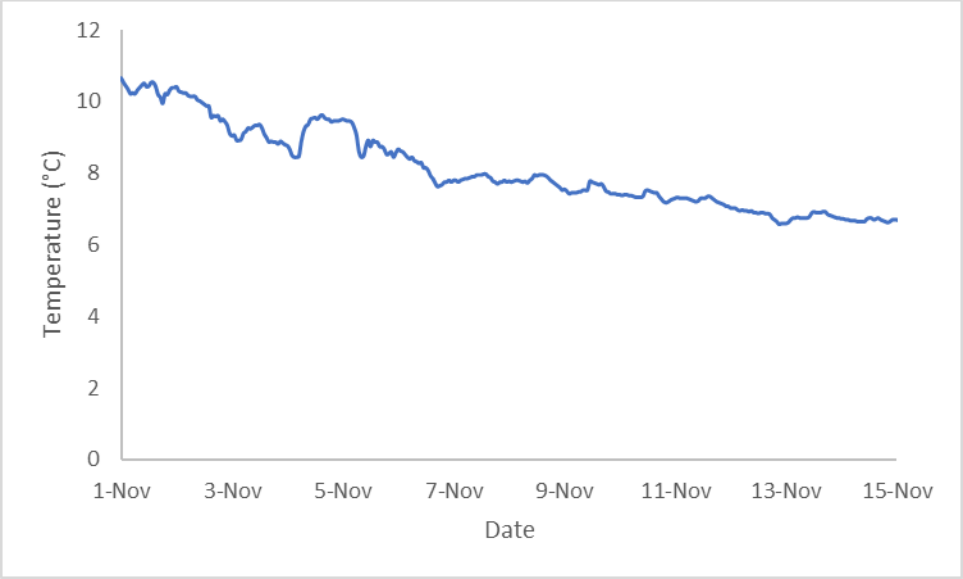


Figure 24. Temperature at RO RST (Cougar Dam)

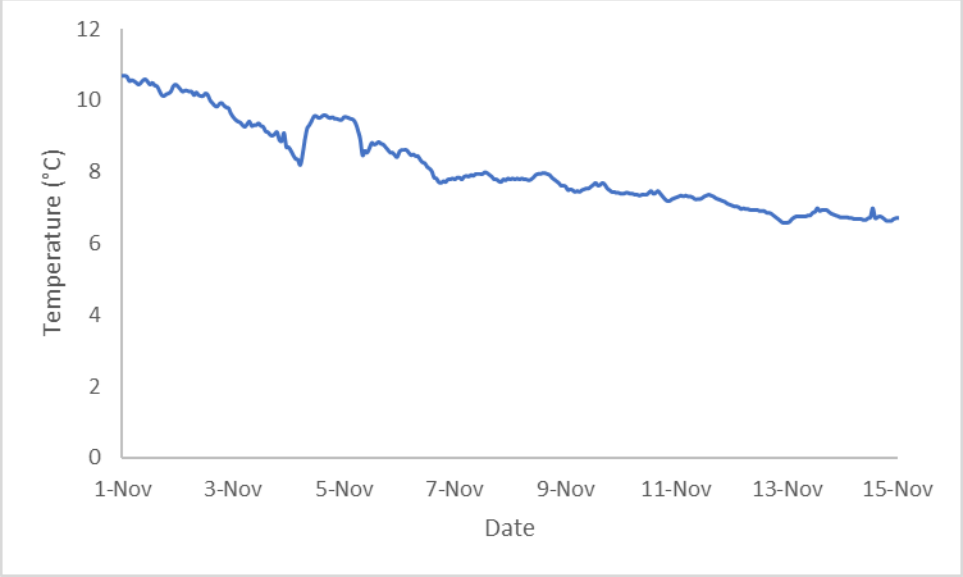


Figure 25. Temperature at PWR RST (Cougar Dam)

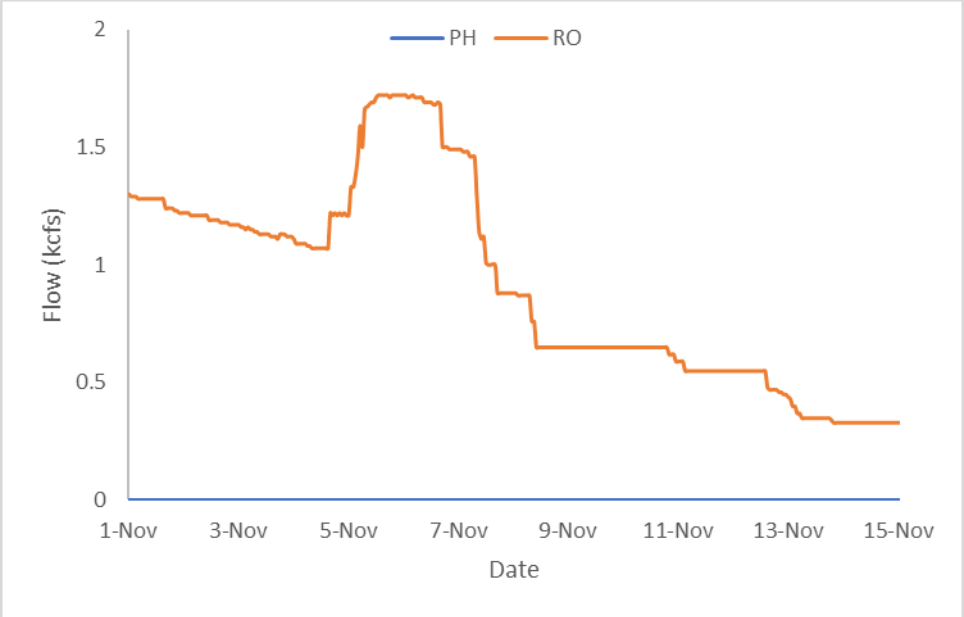


Figure 26. Hourly Flows PWR vs. RO (Cougar Dam)

South Fork of the McKenzie–Cougar Dam Head of Reservoir

Target Species

The reporting period began November 1st and ended on November 15th. There were 18 Chinook salmon captured during the 15-day sampling period (Figure 27). A major rain event caused high flow and high debris loads this reporting period. The cone was raised to a non-sampling position on November 4th and was lowered again on November 7th. 25 mph gusts from a windstorm caused high debris loads on November 13th. Storm Sampling protocol was performed from November 14th through November 15th. The trap was operated 86.7% of the reporting period. Table 16 provides life stage, length, and weight data for all Chinook salmon that have been caught at the site to-date and Figure 28 shows length frequency data to-date.

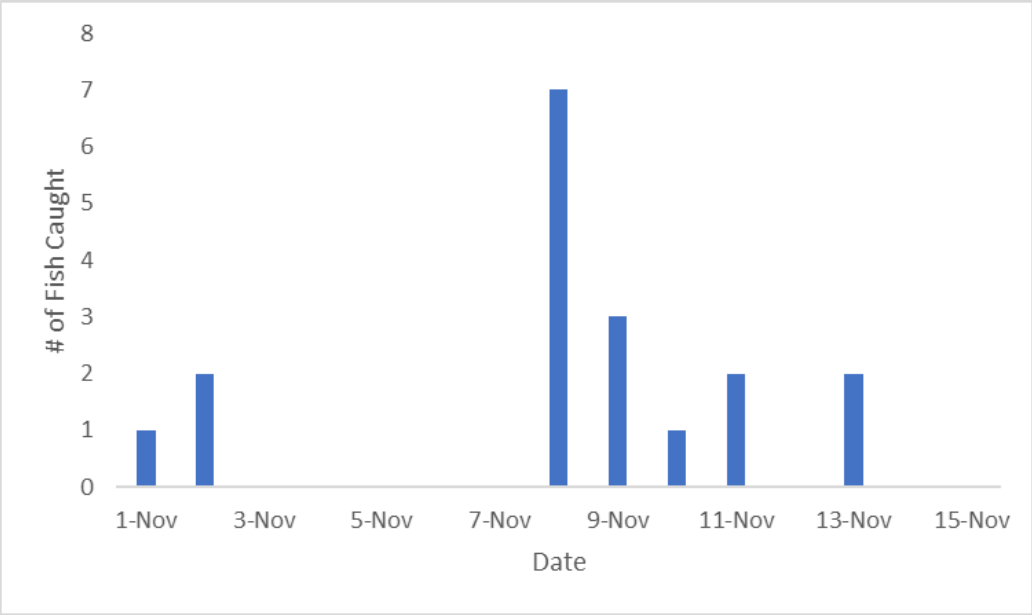


Figure 27. Chinook Captured Per Day 11/01/2022 to 11/15/2022 (Cougar Dam Head of Reservoir)

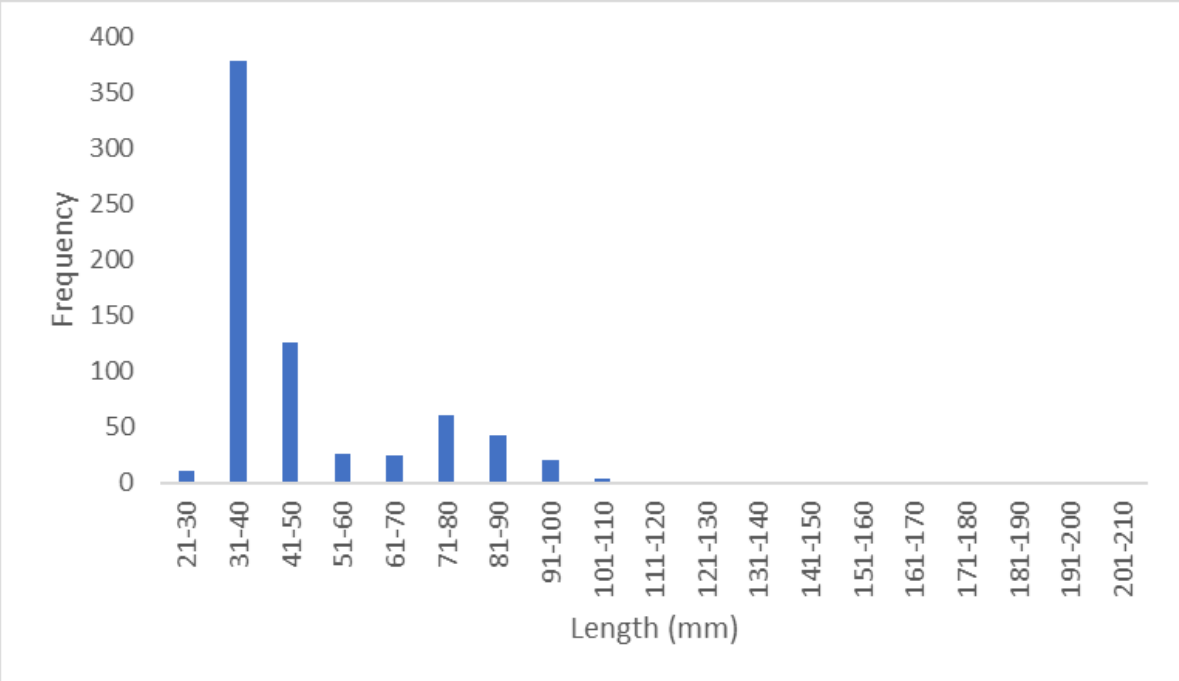


Figure 28. Length Frequency of Juvenile Chinook Sampled Season To-Date (Cougar Dam Head of Reservoir)

Table 16. Descriptive Statistics of Target Species Captured at Cougar Dam Head of Reservoir, Season To-Date and for the Reporting Period

To-Date (Since March 07, 2022)										
Site	Route	Species	Life stage	Collected	Length (mm)*			Weight (g)*		
					Min	Max	Mean	Min	Max	Mean
Cougar Dam Head of Reservoir	5 ft	CHS	Smolt	4	70	94	82	3.3	9.4	6.2
		CHS	Parr	161	43	150	78.6	1.0	11.2	5.5
		CHS	Fry	528	27	63	38.6	0.6	2.8	1.4

November 1-15, 2022										
Site	Route	Species	Life stage	Collected	Length (mm)*			Weight (g)*		
					Min	Max	Mean	Min	Max	Mean
Cougar Dam Head of Reservoir	5 ft	CHS	Smolt	0	N/A	N/A	N/A	N/A	N/A	N/A
		CHS	Parr	18	64	92	80.6	1.8	8.7	5.8
		CHS	Fry	0	N/A	N/A	N/A	N/A	N/A	N/A

***Most fry are too small to collect accurate weights and thus some metrics are not available for them.**

Trapping Efficiency

A total of 721 juvenile hatchery Chinook were adipose clipped, PIT tagged, and released on 11/10/2022 upstream of the Cougar Head of Reservoir trap site. A total of 33 fish were recaptured in the 5 ft trap. Trapping efficiency was 4.6%.

Cougar Dam Head of Reservoir	Release #	Recapture #	Capture Efficiency
5ft trap	721	33	4.6% (33/721)

Injuries and Copepod Infection

18 Chinook were captured for the reporting period. Of the fish captured, partial descaling <20% was observed on 9 fish (50.0%) and descaling >20% was observed on 0 fish (0.0%). 0 had copepods in the branchial cavity (0.0%), 0 had copepods on fins (0.0%), and 6 had bodily injury (33.3%). There was 1 mortality for this reporting period (5.6%). Injury data for the reporting period is summarized in Table 17. To date injury data can be found in Appendix A.

Table 17. Number of Descaled, Bodily/Eye Injured, Copepod Infected and Dead Chinook Salmon for Sampling Period. (Cougar Dam Head of Reservoir)

Site	# CHS Collected	# DSC* <20%	# DSC* >20%	# with Body Injuries	# with Eye Injuries	# with COP* In B.C.	# with COP* on Fins	Mortalities
Cougar Dam Head of Reservoir	18	9	0	6	0	0	2	1

*DSC=Descaled, COP=Copepods, B.C.=Branchial Cavity

Collected DNA and Scale Samples

Scales and DNA were collected from 18 of the Chinook captured. The rest of the captured fish were under the minimum fork length threshold and samples were not collected (less than 45 mm fork length for DNA and less than 50 mm fork length for scales).

VIE Marking

Visual Implant Elastomer (VIE) trials commenced at the Cougar Dam Head of Reservoir site on 6/25/2022. VIE tag color and locations are changed every reporting period to distinctly mark groups of fish by capture date. Since then, 33 Chinook have been VIE marked to the left of their dorsal fin with fluorescent elastomer. No fish with VIE marks have been detected at downstream RST sites to date.

Date Tagged	VIE Color	# Tagged	# Recaptured to Date
6/25/2022-7/15/2022	Yellow	30	0
9/15/2022-9/30/2022	Orange	1	0
10/1/2022-10/15/2022	Pink	1	0
11/1/2022-11/15/2022	Green	1	0

Non-Target Species

A total of 8 non-target fish were captured at the Cougar Dam Head of Reservoir RST during the reporting period; the data is summarized below in Table 18.

Table 18. Summary of Non-target Species (Cougar Dam Head of Reservoir)

Species	5ft Capture	5ft Mortality	Season Total	Season Total Mortality
Bull Trout	0	0	8	0
Cutthroat Trout	2	0	43	1
Dace	0	0	8	0
Sculpin	0	0	5	1
O. mykiss	5	0	340	3
Mountain Whitefish	0	0	21	0
Northern Pikeminnow	1	0	1	0
Unknown	0	0	9	0
Totals	**8**	**0**	**435**	**5**

Stream Statistics

Basic stream statistics at the site were calculated from data downloaded from the U.S. Geological Survey stream gauge number 14159200. During the reporting period, daily maximum values for instantaneous discharge ranged from 256.0 cfs to 2,930.0 cfs (mean: 620.5 cfs). Figure 29 shows instantaneous discharge.

Stream temperatures were recorded every two hours using a temperature probe at the Cougar Dam Head of Reservoir RST site during this reporting period. Temperature probes operated normally, and the data is shown below in Figure 30.

Catch per unit of effort (CPUE) data are summarized in Table 19. Discharge and capture data for the duration of monitoring efforts at this location are provided in Appendix B.

Table 19. Summary of Chinook CPUE, Cougar Dam Head of Reservoir

	Chinook
Description	**5 ft**
Catch	18
Effort (hrs)	245.3
CPUE (fish/hr)	0.073

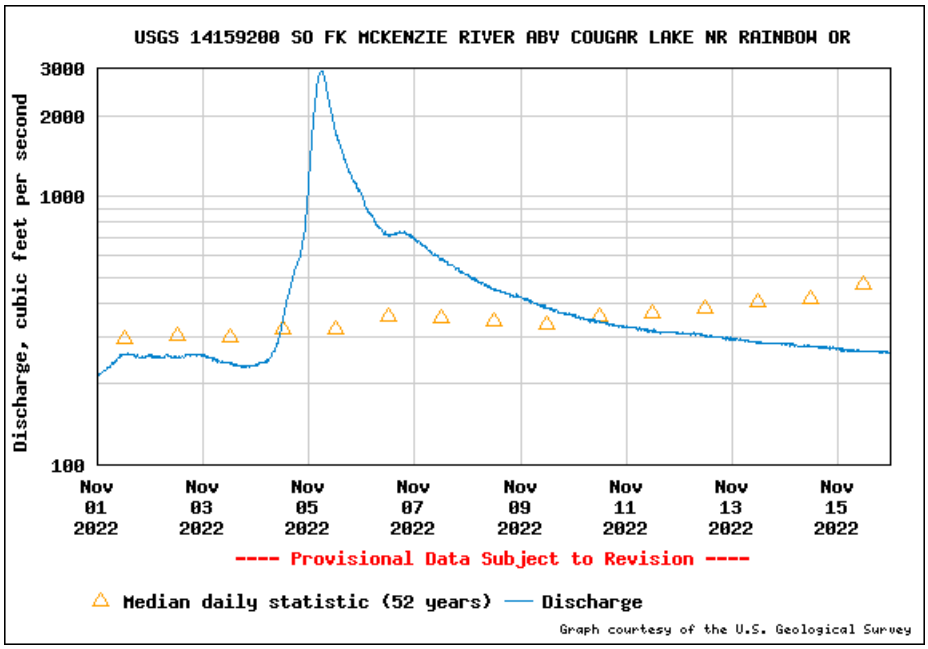


Figure 29. Discharge (cfs); South Fork McKenzie above Cougar Dam

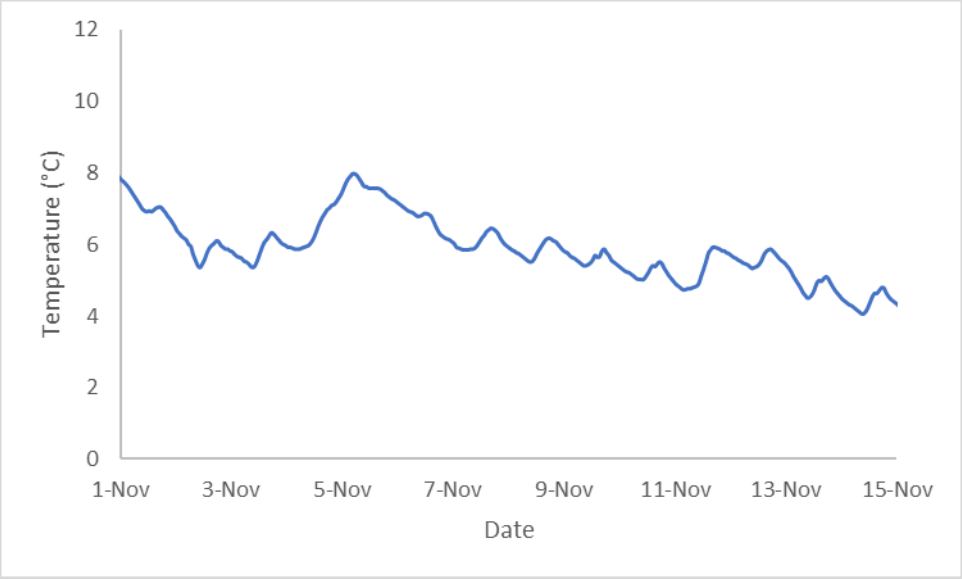


Figure 30. Temperature at RST (Cougar Dam Head of Reservoir)

Fall Creek Dam Tailrace

The Fall Creek Dam Tailrace was installed and secured on October 14th in preparation to start fishing on October 15th per Task 7.7. The trap did not begin sampling until October 16th due to the Cedar Creek fire and hazardous air quality.

The reporting period began November 1st and ended November 15th. 0 Chinook salmon were captured during the 15-day sampling period (Figure 31). The trap was operated 100% of the reporting period. Table 24 provides life stage, length, and weight data for all Chinook salmon that have been caught at the Fall Creek Dam Tailrace site to-date and Figure 32 shows length frequency data to-date.

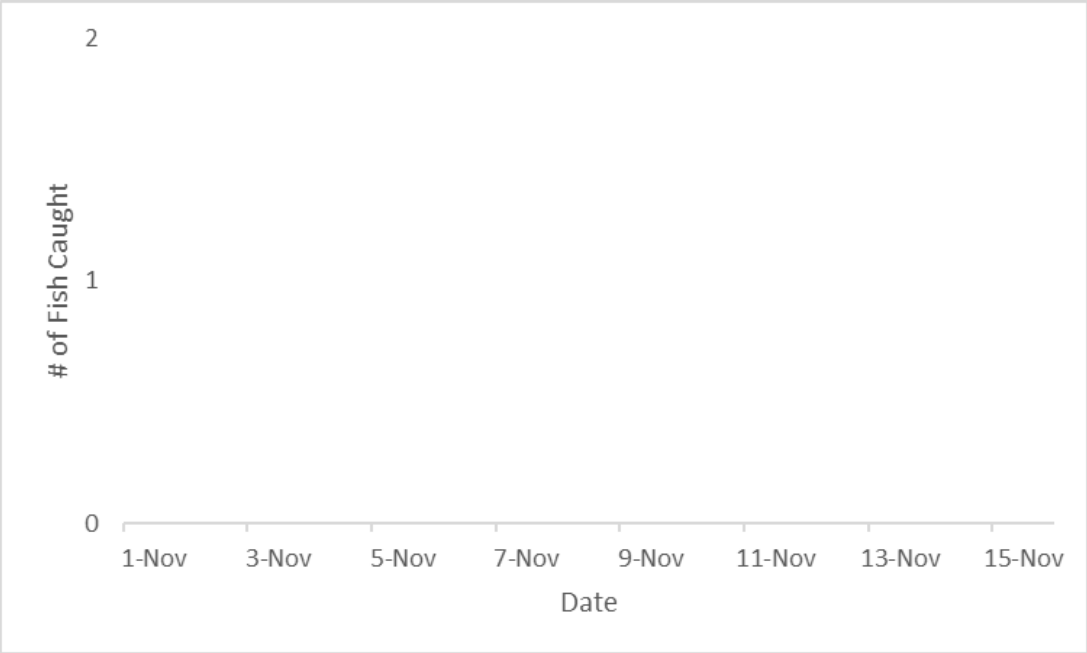


Figure 31. Chinook Captured Per Day 11/01/2022 to 11/15/2022 (Fall Creek Dam Tailrace)

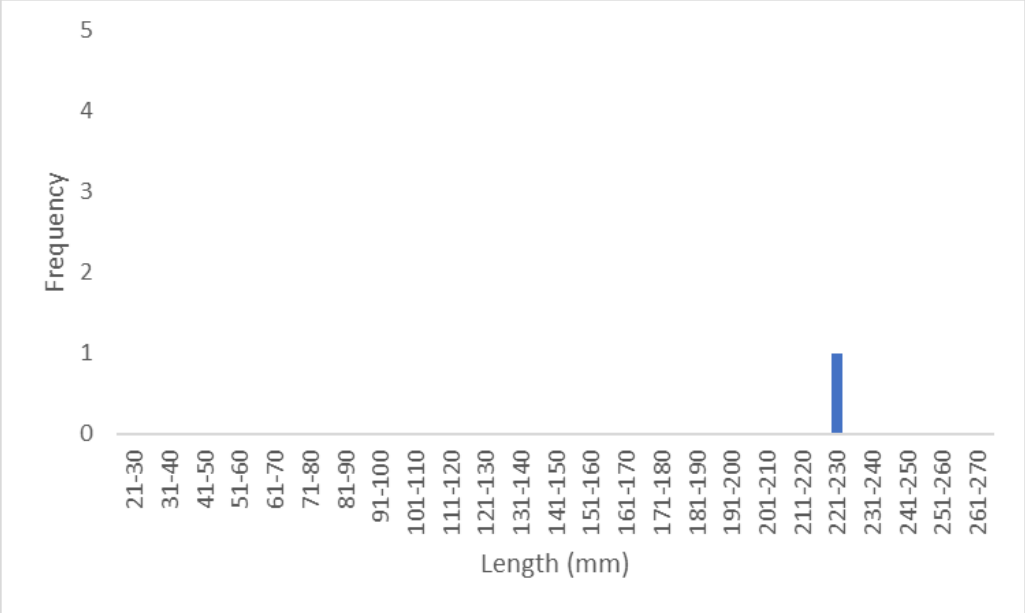


Figure 32. Length Frequency of Juvenile Chinook Sampled Season To-Date (Fall Creek Dam Tailrace)

Table 24. Descriptive Statistics of Target Species Captured at Fall Creek Dam Tailrace, Season To-Date and for the Reporting Period

To-Date											
Site	Route	Species	Life stage	Collected	Length (mm)*			Weight (g)*			
					Min	Max	Mean	Min	Max	Mean	
Fall Creek Dam	RO	CHS	Smolt	1	230	230	230.0	141.1	141.1	141.1	
		CHS	Parr	0	N/A	N/A	N/A	N/A	N/A	N/A	
November 1-15, 2022											
Site	Route	Species	Life stage	Collected	Length (mm)*			Weight (g)*			
					Min	Max	Mean	Min	Max	Mean	
Fall Creek Dam	RO	CHS	Smolt	0	N/A	N/A	N/A	N/A	N/A	N/A	
		CHS	Parr	0	N/A	N/A	N/A	N/A	N/A	N/A	

24-Hour Post Collection Holding Trial

0 Spring Chinook was captured during the current reporting period and held for 24 hours. 0 Chinook (0.0%) died in holding.

Injuries and Copepod Infection

0 Chinook were captured during this reporting period. 0 fish displayed descaling >20% (0.0%) and 0 fish had bodily injuries (0.0%). 0 fish had copepods in the branchial cavity (0.0%). There were no mortalities. The data is summarized in Table 25. To date injury data is listed in Appendix A.

Table 25. Number of Descaled, Bodily/Eye Injured, Copepod Infected and Dead Chinook Salmon for Sampling Period. (Fall Creek)

Site	# CHS Collected	# DSC* <20%	# DSC* >20%	# with Body Injuries	# with Eye Injuries	# with COP* In B.C.	# with COP* on Fins	Mortalities
Fall Creek Dam	0	0	0	0	0	0	0	0

*DSC=Descaled, COP=Copepods, B.C.=Branchial Cavity

Collected DNA and Scale Samples

Scales and DNA were collected from 0 of the Chinook captured. The rest of the captured fish were under the minimum fork length threshold and samples were not collected (less than 45 mm fork length for DNA and less than 50 mm fork length for scales).

Trapping Efficiency

A total of 500 juvenile hatchery Chinook (sub yearlings) were adipose clipped, Bismarck Brown dyed, and released on 07/13/2022 upstream of the Fall Creek Dam Tailrace RO channel trap site. A total of 0 fish were recaptured in the 8 ft trap. Trapping efficiency was 0%.

Fall Creek Dam	Release #	Recapture #	Capture Efficiency
RO	500	0	0% (0/500)

Non-Target Species

1268 non-target fish were captured at the Fall Creek Dam Tailrace site during the reporting period; the data is summarized below in Table 26.

Table 26. Summary of Non-target Species (Fall Creek Dam Tailrace)

Species	8ft Capture	8ft Mortality	Season Total	Season Total Mortality
Bluegill	0	0	1	0
Lamprey	0	0	7	0
Bullhead	42	20	259	31
Bull Trout	0	0	0	0
Chinook (clipped)	0	0	2	0
Crappie	0	0	0	0
Cutthroat Trout	22	0	37	1
Dace	921	58	3049	146
Mosquitofish	31	6	113	6
Peamouth	9	1	15	1
Northern Pikeminnow	0	0	2	0
Red-Sided Shiner	0	0	12	0
Sculpin	2	0	9	0
Spotted Bass	0	0	0	0
Largescale Sucker	46	4	92	10
Lamprey	4	0	4	0
Pacific Lamprey (Adult)	2	0	2	0
Mountain Whitefish	4	0	0	0
O. mykiss	181	0	221	1
Unknown	4	0	5	1
Totals	**1268**	**89**	**3832**	**203**

Stream Statistics

Basic stream statistics at the site were calculated from data downloaded from U.S. Geological Survey stream gage numbers 14151000 and 1415000. Instantaneous discharge (cfs) data was collected from gage 1415100. Dissolved oxygen (mg/L) concentration data was received from gage 1415000, 1.2 rkms downstream of the trap. During the reporting period, daily maximum values for instantaneous discharge ranged from 76.0 cfs to 1,560.0 cfs (mean: 533.1 cfs). Figure 33 shows instantaneous discharge.

Dissolved oxygen concentrations were not available for the duration of the reporting period. No data was recorded from the stream gage after October 19 at 12:00.

Stream temperatures were recorded using temperature probes for the Fall Creek Dam Tailrace RST site during this reporting period. The temperature probe operated normally during this period (Figure 34).

Flows In and Out of reservoir during the reporting period averaged 456.5 cfs and 426.2 cfs respectively (Figure 35).

Catch per unit of effort (CPUE) data are summarized in Table 27. Discharge and capture data for the duration of monitoring efforts at this location are provided in Appendix B

Table 27. Summary of Chinook CPUE, Fall Creek Dam Tailrace

	Chinook
Description	**(8 ft)**
Catch	0
Effort (hrs)	361.6
CPUE (fish/hr)	0

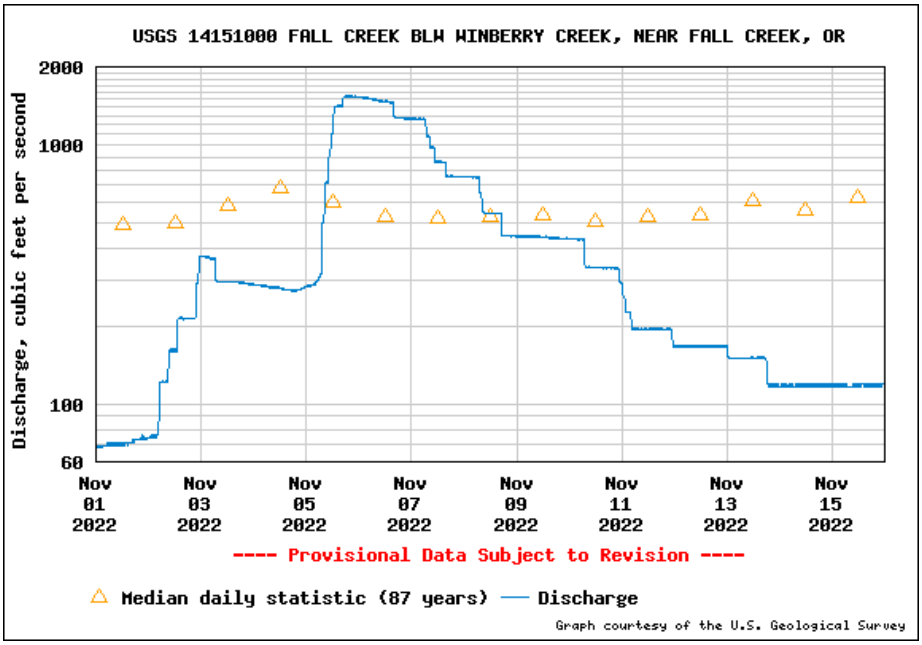


Figure 33. Discharge (cfs); Fall Creek Below Winberry Creek, Near Fall Creek, OR

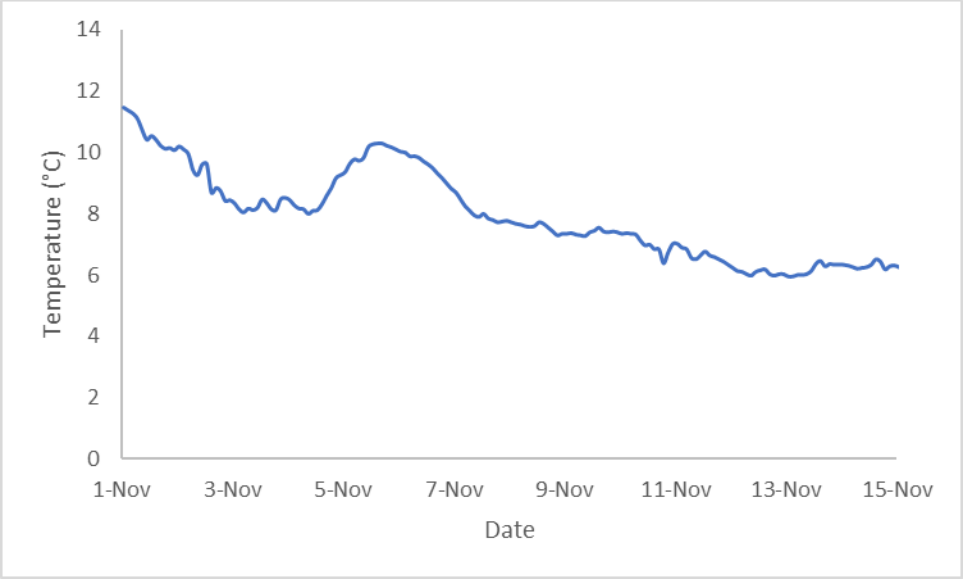


Figure 34. Temperature at RST (Fall Creek Dam Tailrace)

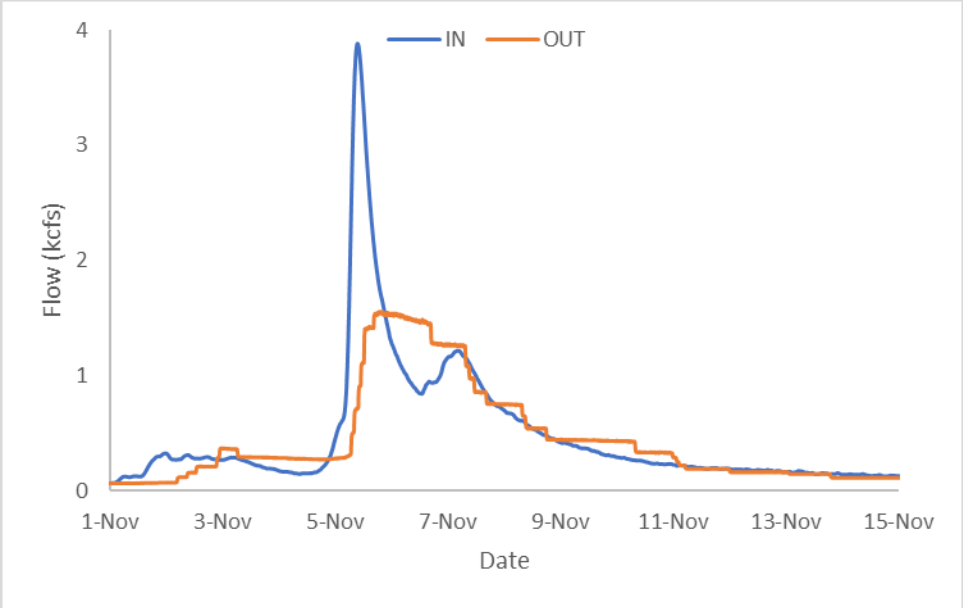
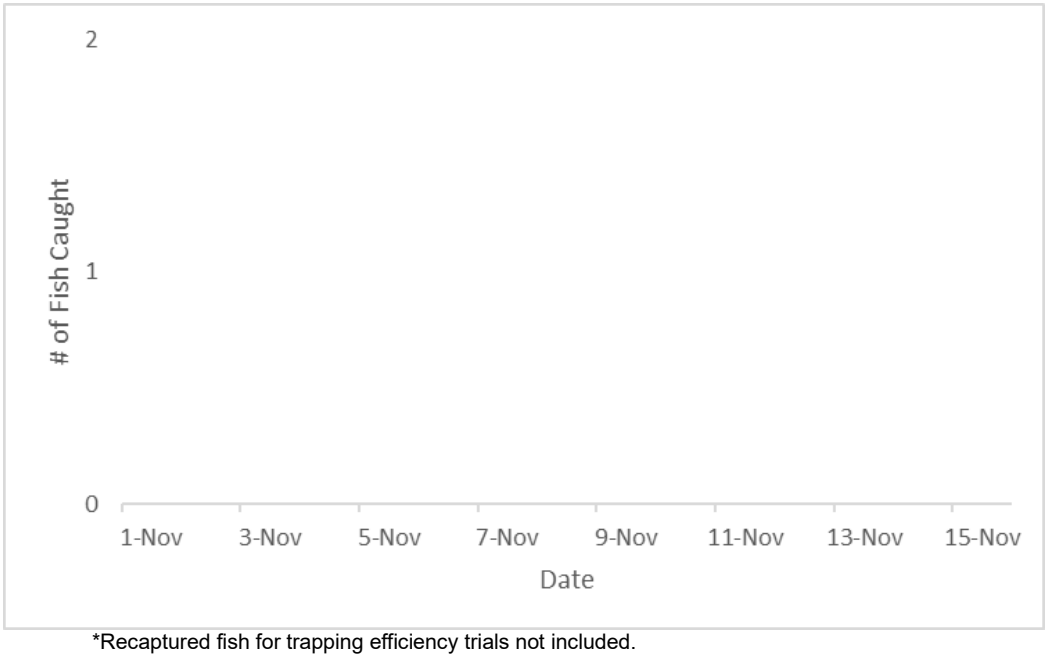


Figure 35. Hourly Flows PWR vs. RO (Fall Creek Tailrace)

Middle Fork Willamette– Dexter Dam

Target Species

This reporting period began on November 1st and ended on November 15th. There were 0 Chinook salmon (CHS) captured during the 15-day sampling period. Sampling duration was 100% for the 5 ft RST. Table 20 provides life stage, length, and weight data for all Chinook salmon that have been caught at the Dexter Dam site to-date and for the reporting period. Figure 36 shows the daily capture numbers for Chinook and Figure 37 shows length frequency data to-date.



*Recaptured fish for trapping efficiency trials not included.

Figure 36. Chinook Captured Per Day 11/01/2022 to 11/15/2022 (Dexter Dam)

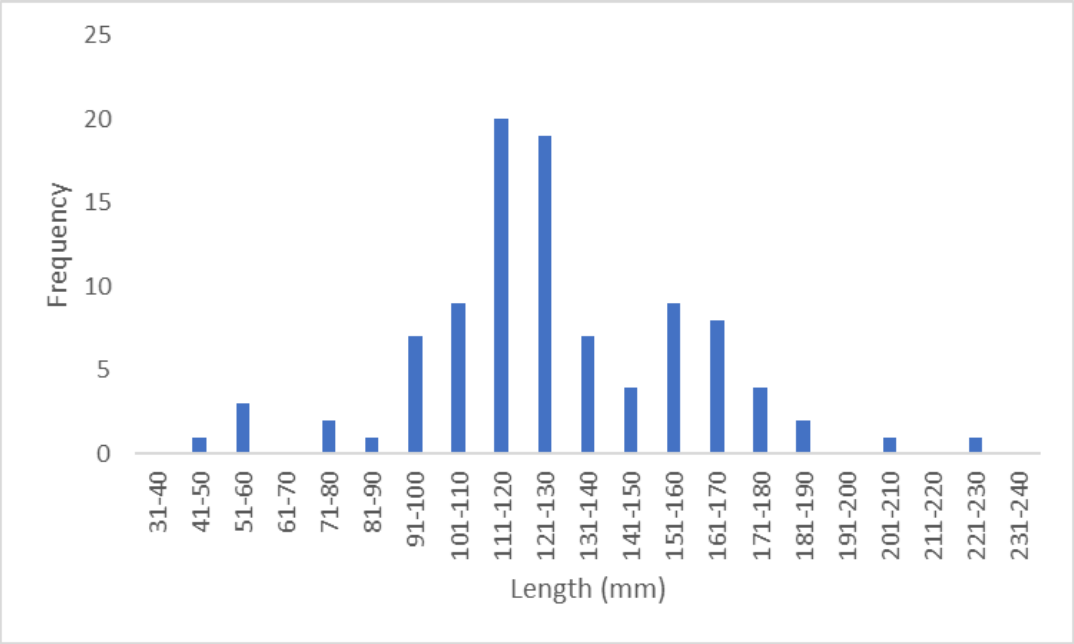


*Figure does not include fish without heads or fish used for trapping efficiency trials.

Figure 37. Length Frequency of Juvenile Chinook Sampled Season To-Date (Dexter Dam)

Table 20. Descriptive Statistics of Target Species Captured at the Dexter Dam RST Season To-Date

To-Date (Since March 07, 2022)											
Site	Trap	Species	Life stage	Collected	Length (mm)*			Weight (g)*			
					Min	Max	Mean	Min	Max	Mean	
Dexter Dam	5 ft	CHS	Fry	3	46	55	51.3	1.4	1.4	1.4	
		CHS	Parr	18	51	159	101.3	2.1	48.3	12.8	
		CHS	Smolt	77	95	224	137.2	9.3	118.4	27.6	

November 1-15, 2022											
Site	Trap	Species	Life stage	Collected	Length (mm)*			Weight (g)*			
					Min	Max	Mean	Min	Max	Mean	
Dexter Dam	5 ft	CHS	Fry	0	N/A	N/A	N/A	N/A	N/A	N/A	
		CHS	Parr	0	N/A	N/A	N/A	N/A	N/A	N/A	
		CHS	Smolt	0	N/A	N/A	N/A	N/A	N/A	N/A	

*Fish that were missing heads are not included in length and weight calculations.

Trapping Efficiency

On November 1st, 2022 EAS staff picked up 1020 juvenile hatchery Chinook (sub-yearlings) from the Dexter fish facility for a trapping efficiency release at the Dexter Dam Powerhouse channel. During the transport and marking process an error occurred in the oxygen supply system. Staff discovered the issue and implemented their backup oxygen supply. 265 mortalities occurred during this event. EAS notified USACE staff, ODFW, and NOAA of the incident and have taken corrective actions and implemented additional backups to prevent such an event in the future. The above groups have been notified of the actions taken and agreed that they are sufficient to allow for continued trapping efficiency trials to be conducted.

A total of 775 juvenile hatchery Chinook (sub-yearlings) adipose clipped, upper caudal clipped and released on 11/01/2022 below Dexter Dam. Fish were released in small groups into powerhouse flow to evaluate the traps efficiency capturing fish passing through the powerhouse. 1 fish was recaptured in the 5-foot RST for an efficiency of 0.1%.

Dexter Dam	Release #	Recapture #	Capture Efficiency
Spill	N/A	N/A	N/A
Powerhouse	775	1	0.1% (1/775)

24-Hour Post Collection Holding Trial

No Chinook were captured this reporting period.

Injuries and Copepod Infection

0 Chinook was captured during this reporting period. Partial descaling <20% was observed in 0 of the 0 Chinook captured (0.0%) and 0 displayed descaling >20% (0.0%). 0 displayed body injury (0.0%) and 0 Chinook had eye injury (0.0%). 0 Chinook had copepods present in the branchial cavity (0.0%) and 0 had copepods on fins (0.0%). 0 displayed gas bubble disease (0.0%). There were 0 mortalities this reporting period (0.0%). Injuries are displayed in Table 21. To date injury data can be found in Appendix A.

Table 21. Number of Descaled, Bodily/Eye Injured. Copepod Infected and dead Chinook Salmon for Sampling Period (Dexter Dam).

Site	Route	# CHS Collected	# DSC* <20%	# DSC* >20%	# with Body Injuries	# with Eye Injuries	# with COP* In B.C.	# with COP* on Fins	Mortalities
Dexter Dam	PWR	0	0	0	0	0	0	0	0

*DSC=Descaled, COP=Copepods, B.C.=Branchial Cavity

Collected DNA and Scale Samples

For the reporting period, scales and DNA were collected from 0 Spring Chinook. The other targets captured did not meet length criteria for DNA sampling.

Non-Target Species

11 non-target species fish were captured during the reporting period; the data is summarized below in Table 22. Dexter Fish Facility releases adipose clipped Chinook near our trapping site. Adipose clipped Chinook caught in our trap are being counted as non-target fish to provide better clarity on data concerning run of river Chinook.

Table 22. Summary of Non-target Species (Dexter Dam).

Species	Capture	Mortality	Season Total	Season Total Mortality
Bass	0	0	99	1
Bluegill	0	0	10	1
Chinook (clipped)	1	0	358	7
Chinook (adult)	0	0	2	2
Crappie	5	0	92	5
Cutthroat	0	0	3	0
Dace	0	0	31	6
O. mykiss	0	0	16	0
O. mykiss (clipped)	0	0	34	2
Pikeminnow	0	0	1	0
Red-Sided Shiner	0	0	3	0
Sculpin	4	0	463	15
Sucker	0	0	3	1
Unknown	0	0	14	4
Totals	**11**	**0**	**1131**	**38**

Stream Statistics

Basic stream statistics at the Dexter Dam site were calculated from data downloaded from the U.S. Geological Survey stream gauge numbers 14149510 and 14150000. Gauge height (feet) is the only metric provided at gauge 14149510. Total dissolved gas saturation data was received from gauge 14150000, 4.75 rkms downstream of the trap. During the reporting period, daily maximum values for instantaneous gauge height ranged from 638.6 feet to 638.9 feet (mean: 638.7 feet). Figure 38 shows instantaneous gauge height.

Total dissolved gas saturation ranged from 96 to 100% (mean: 97.4%) during the reporting period. Figure 39 shows total dissolved gas saturation.

Stream temperatures were recorded every two hours using a temperature probe at the Dexter Dam RST site during this reporting period. Temperature probes operated normally, and the data is shown below in Figure 40.

Flows through the Powerhouse and Spill during the reporting period averaged 3,408.8 and 0 cubic feet per second (cfs) respectively (Figure 41). Catch per unit of effort (CPUE) data are summarized in Table 23. Discharge and capture data for the duration of monitoring efforts at this location are provided in Appendix B.

Table 23. Summary of salmonid CPUE, Dexter Dam.

	Chinook
Description	8 ft
Catch	0
Effort (hrs)	362.0
CPUE (fish/hr)	0

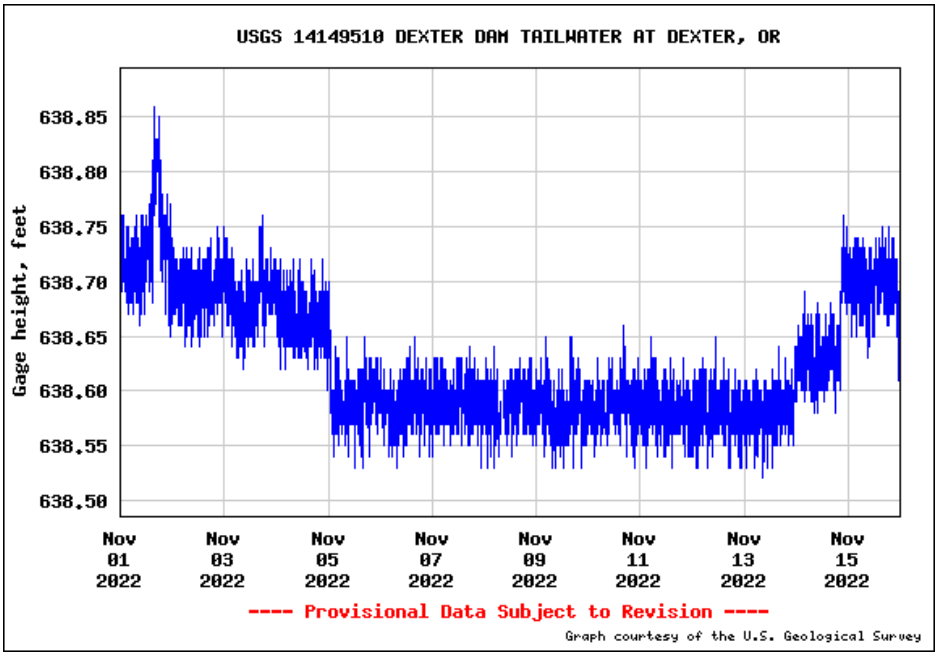


Figure 38. Gauge Height (feet); below Dexter Dam, Middle Fork Willamette

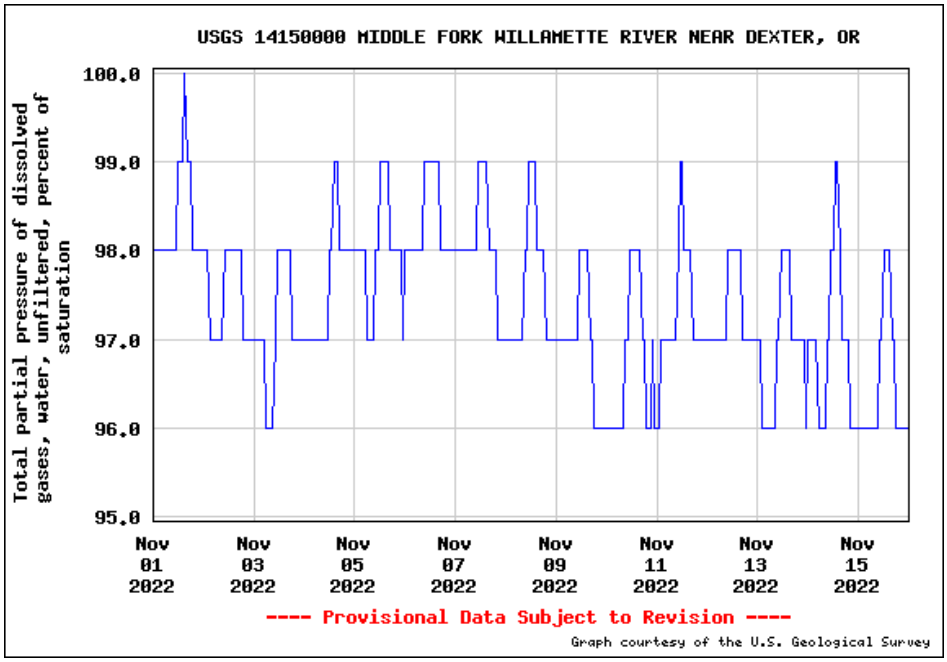


Figure 39. Total Dissolved Gas Saturation (%); Middle Fork Willamette River, Near Dexter, OR

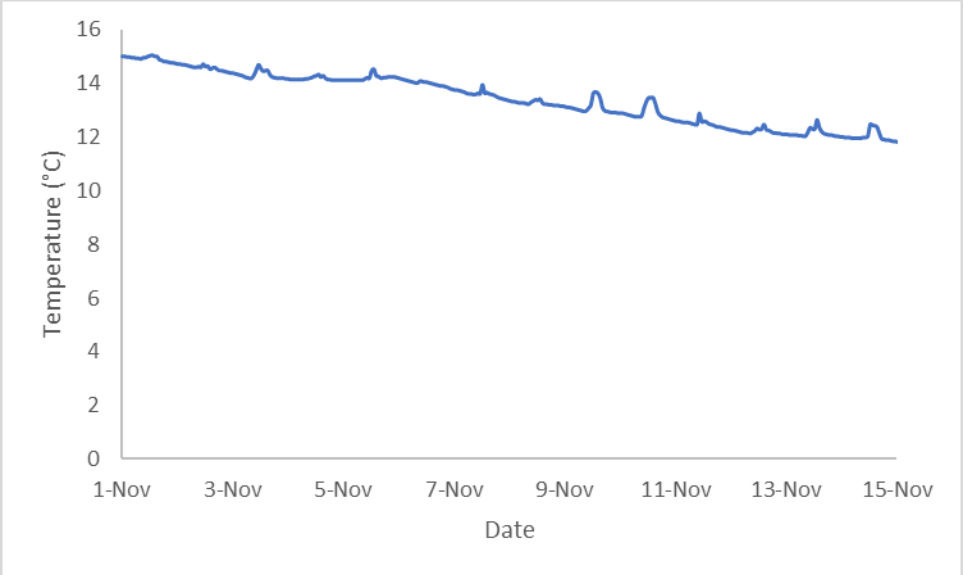


Figure 40. Temperature at RST (Dexter Dam)

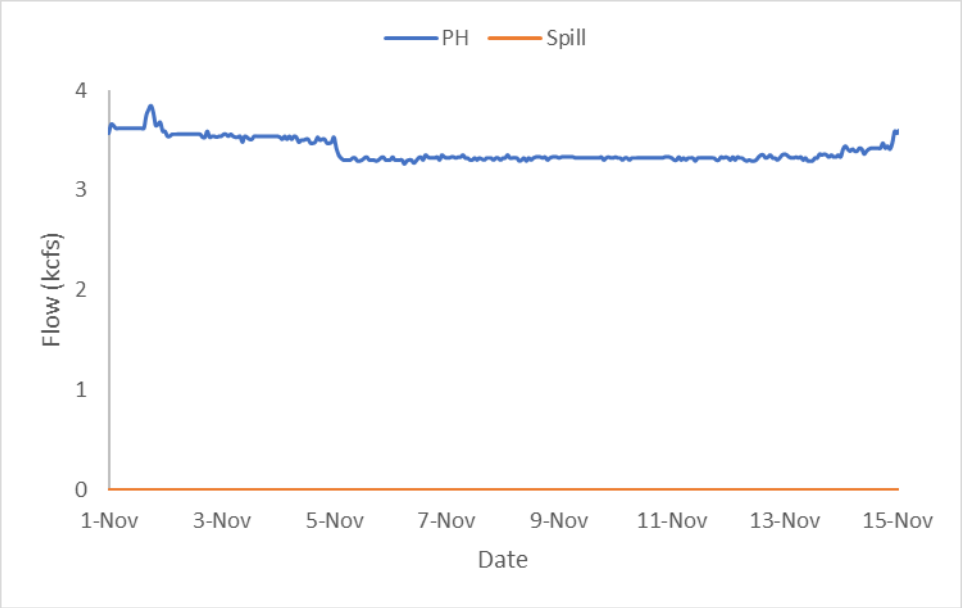


Figure 41. Hourly Flows PWR vs. Spill (Dexter Dam)

Middle Fork Willamette – Lookout Dam Tailrace

Target Species

The reporting period began November 1st and ended on November 15th. 0 Chinook salmon were captured during the 15-day sampling period (Figure 42). The traps were operated 100.0% of the reporting period. Table 24 provides life stage, length, and weight data for all Chinook salmon that have been caught at the Lookout Point Dam Tailrace site to-date and Figure 43 shows length frequency data to-date.

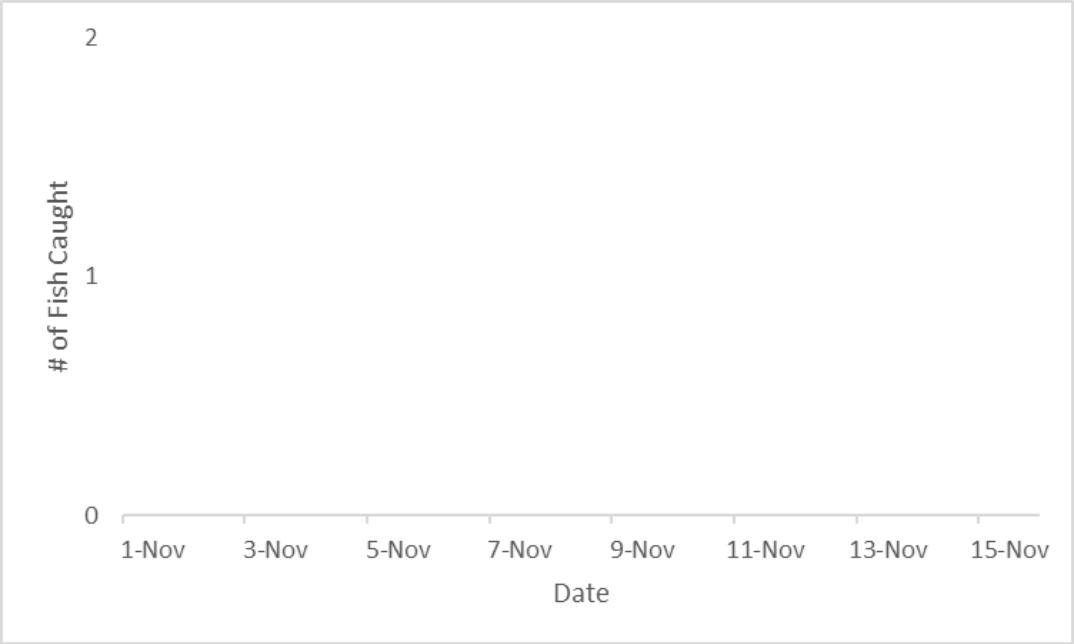


Figure 42. Chinook Captured Per Day 11/01/2022 to 11/15/2022 (Lookout Point Dam Tailrace)

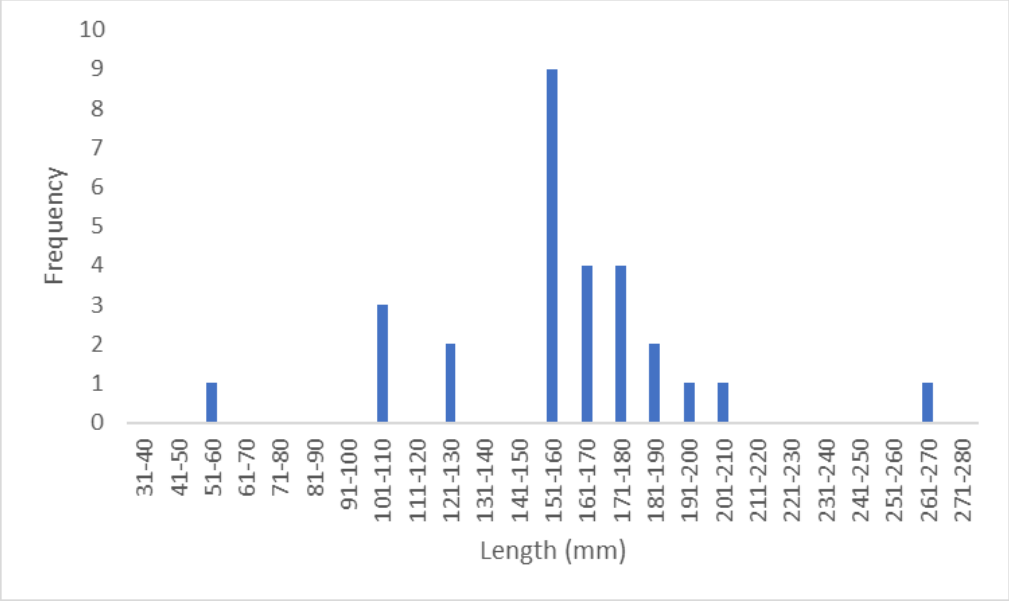


Figure 43. Length Frequency of Juvenile Chinook Sampled Season To-Date (Lookout Point Dam Tailrace)

Table 24. Descriptive Statistics of Target Species Captured at Lookout Point Dam Tailrace, Season To-Date and for the Reporting Period

To-Date (Since March 15, 2022)										
Site	\Route	Species	Life stage	Collected	Length (mm)*			Weight (g)*		
					Min	Max	Mean	Min	Max	Mean
Lookout Point Dam	PH 1	CHS	Smolt	25	112	266	150.3	15.0	108.9	40.6
		CHS	Parr	3	84	107	94.3	3.8	10.5	6.5
		CHS	Fry	0	0	0	0	0	0	0
	PH 2	CHS	Smolt	8	95	141	119.6	8.4	32.3	19.9
		CHS	Parr	4	58	108	86.0	2.2	13.4	6.7
		CHS	Fry	0	0	0	0	0	0	0
	Spill	CHS	Smolt	32	94	194	133.8	7.6	63.0	27.2
		CHS	Parr	6	77	126	96.5	5.4	26.1	12.1
		CHS	Fry	0	0	0	0	0	0	0
November 1-15, 2022										
Site	Route	Species	Life stage	Collected	Length (mm)*			Weight (g)*		
					Min	Max	Mean	Min	Max	Mean
Lookout Point Dam	PH 1	CHS	Smolt	0	N/A	N/A	N/A	N/A	N/A	N/A
		CHS	Parr	0	N/A	N/A	N/A	N/A	N/A	N/A
		CHS	Fry	0	N/A	N/A	N/A	N/A	N/A	N/A
	PH 2	CHS	Smolt	0	N/A	N/A	N/A	N/A	N/A	N/A
		CHS	Parr	0	N/A	N/A	N/A	N/A	N/A	N/A
		CHS	Fry	0	N/A	N/A	N/A	N/A	N/A	N/A
	\Spill	CHS	Smolt	0	N/A	N/A	N/A	N/A	N/A	N/A
		CHS	Parr	0	N/A	N/A	N/A	N/A	N/A	N/A
		CHS	Fry	0	N/A	N/A	N/A	N/A	N/A	N/A

*Some fry are too small to accurately weigh and are omitted from the above tables.

24-Hour Post Collection Holding Trial

0 Chinook captured in the RSTs was held during this reporting period. 0 fish were held from the PWR RST and 0 fish were held from the Spill RST. 0 hold fish died from the PWR RSTs (0 from PH 1 and 0 from PH 2) (0.0%). 0 of the fish from Spill RST died during holding (0.0%).

Trapping Efficiency

A total of 1,013 juvenile hatchery Chinook (parr) were bismarck brown dyed and adipose clipped, right ventral fin clipped and released on 04/13/2022 below Lookout Point Dam. Fish were released in small groups directly into powerhouse flow at 17:00 to 19:00. 2 fish were recaptured in the PH 1 RST for an

efficiency of 0.2%. 1 Lookout Point Dam trap efficiency fish was captured downstream in the Dexter RST on 4/15/2022.

Mt. Hood Environmental staff noted that fish appeared to be in good condition upon retrieval from the hatchery but did note some descaling and fin damage present as is common among hatchery fish of this age.

Lookout Dam	Release #	Recapture #	Capture Efficiency
Powerhouse	1,013	2	0.2% (2/1,013)

Injuries and Copepod Infection

There were 0 Chinook captured in the Spill Channel RST. Partial descaling <20% was observed on 0 of 0 Chinook collected at the Spill RST (0.0%), and descaling >20% was observed on 0 of the Chinook collected (0.0%). 0 displayed body injuries (0.0%) and 0 had eye injuries (0.0%). None of the Spill RST Chinook had copepods present in the branchial cavity (0.0%) and 0 had copepods present on fins (0.0%). 0 of the fish captured in the Spill RST displayed Gas Bubble Disease (0.0%).

There were 0 Chinook captured in the Powerhouse channel RSTs. Partial descaling <20% was observed on 0 of the 0 Chinook collected at the PWR RSTs (0.0%). Descaling >20% was observed on 0 of the Chinook collected (0.0%). 0 PWR RST fish had bodily injury (0.0%) and 0 had eye injuries (0.0%). 0 of the fish had copepods present in the branchial cavity (0.0%) and 0 had copepods present on fins (0.0%). 0 fish displayed Gas Bubble Disease (0.0%). There were 0 chinook mortality collected in the Spill RST (0.0%) and 0 in the PWR RST (0.0%). Injuries are displayed in Table 25. To date injury data can be found in Appendix A.

Table 25. Number of Descaled, Bodily/Eye Injured, Copepod Infected and Dead Chinook Salmon for Sampling Period (Lookout Point Dam Tailrace).

Site	Route	# CHS Collected	# DSC* <20%	# DSC* >20%	# with Body Injuries	# with Eye Injuries	# with COP* In B.C.	# with COP* on Fins	Mortalities
Lookout Point Dam Tailrace	PWR	0	0	0	0	0	0	0	0
	Spill	0	0	0	0	0	0	0	0

*DSC=Descaled, COP=Copepods, B.C.=Branchial Cavity

Collected DNA and Scale Samples

For the reporting period, scales and DNA were collected from 0 Spring Chinook. The other targets captured did not meet length criteria for DNA sampling.

Non-Target Species

1,624 non-target species were captured during the reporting period; the data is summarized below in Table 26.

Table 26. Summary of Non-target Species (Lookout Point Dam Tailrace).

Species	PWR Capture	PWR Mortality	Spill Capture	Spill Mortality	Season Total	Season Total Mortality
Bass Unknown	2	1	0	0	4969	3664
Bluegill	21	3	4	0	32	6
Bullhead	0	0	0	0	3	1
Chinook (clipped)	0	0	0	0	4	0
Crappie	1535	840	45	10	39609	21897
Cutthroat	0	0	0	0	1	0
Dace	5	0	1	0	6	0
Largemouth Bass	0	0	0	0	1	0
Smallmouth Bass	0	0	0	0	1	1
Largescale Sucker	0	0	0	0	25	15
Northern Pikeminnow	1	0	6	1	53	10
O. mykiss	0	0	0	0	8	1
O. mykiss (clipped)	0	0	0	0	2	1
Red-Sided Shiner	1	0	0	0	3	0
Sculpin	2	0	0	0	109	12
Walleye	0	0	0	0	10	3
Unknown	1	0	0	0	4	2
Totals	**1568**	**844**	**56**	**11**	**44702**	**25613**

Stream Statistics

Basic stream statistics at Lookout Dam Tailrace site were calculated from data downloaded from the U.S. Geological Survey stream gauge number 14149010. Total dissolved gas saturation or dissolved oxygen concentration measurements are not available at this stream gauge site, or any nearby stream gauges. Gauge height (feet) is the only metric provided at this gauge. During the reporting period, daily maximum values for instantaneous gauge height ranged from 693.2 feet to 694.3 feet (mean: 693.6 feet). Figure 44 shows instantaneous gauge height.

Stream temperatures were recorded every two hours using a temperature probe at the Lookout Dam RST site during this reporting period. Temperature probes operated normally, and the data is shown below in (figures 45 and 46).

Flows through the Powerhouse and Spill during the reporting period averaged 3,339.1 and 0 cubic feet per second (cfs) respectively (Figure 47). Catch per unit of effort (CPUE) data are summarized in Table 27. Discharge and capture data for the duration of monitoring efforts at this location are provided in Appendix B.

Table 27. Summary of Chinook CPUE at Lookout Point Dam Tailrace.

	Chinook		
Description	PH 1	PH 2	Spill
Catch	0	0	0
Effort (hrs)	360.4	360.1	359.9
CPUE (fish/hr)	0	0	0

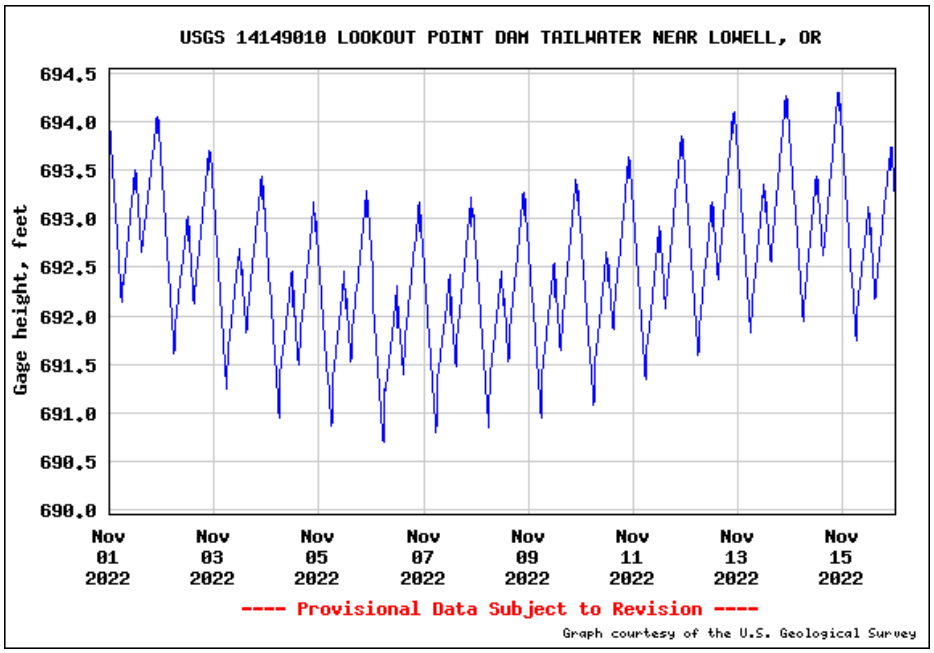


Figure 44. Gauge Height (feet); below Lookout Dam

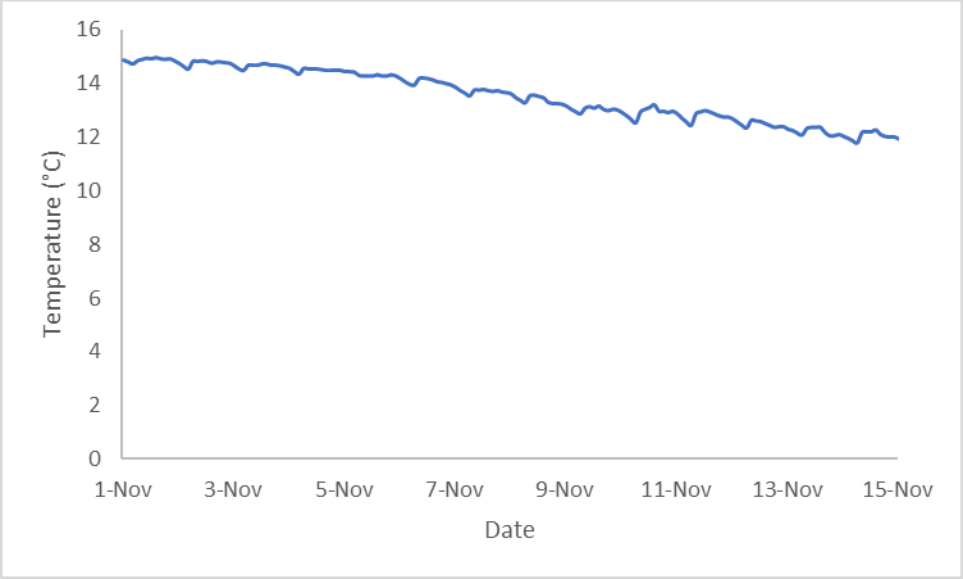


Figure 45. Temperature at RST (Lookout Dam PWR)

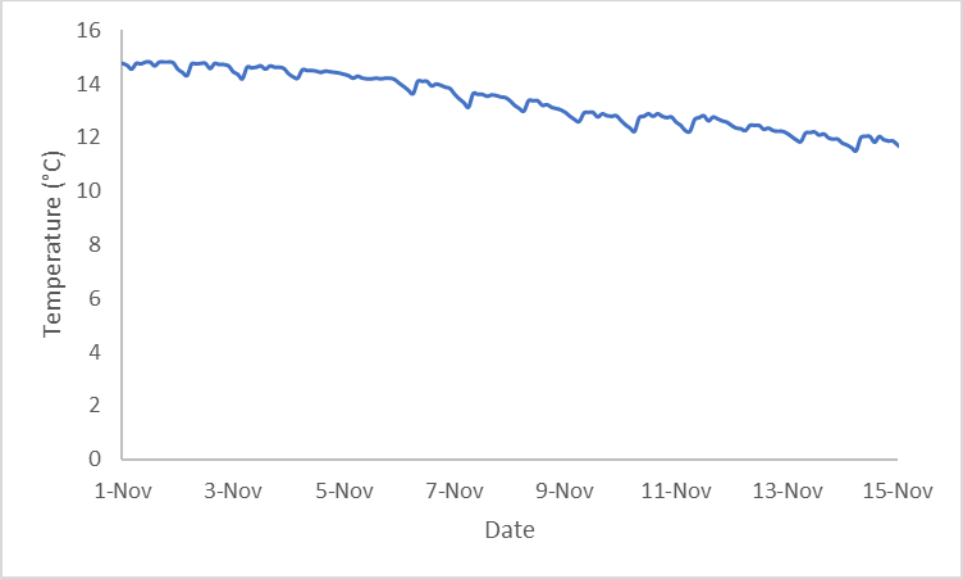


Figure 46. Temperature at RST (Lookout Dam Spill)

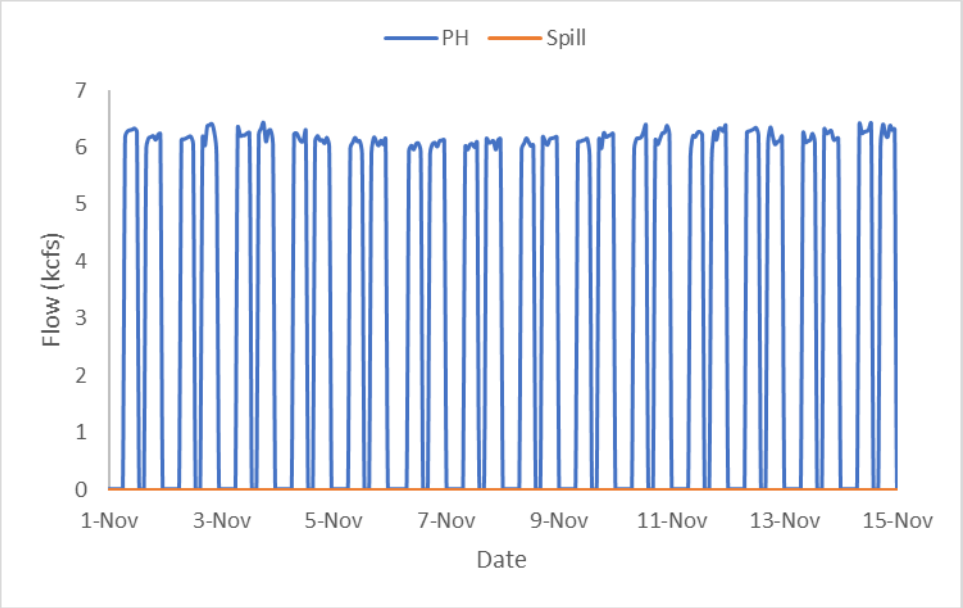


Figure 47. Hourly Flows PWR vs. Spill (Lookout Dam Tailrace)

Middle Fork Willamette – Lookout Point Head of Reservoir

Target Species

The reporting period began November 1st and ended on November 15th. 1 Chinook salmon was captured during the 15-day sampling period (Figure 48). A major rain event caused high flow and high debris loads this reporting period. The cone was raised to a non-sampling position on November 5th and was lowered again on November 7th. The trap was operated 86.7% of the reporting period. Table 28 provides life stage, length, and weight data for all Chinook salmon that have been caught at the Middle Fork Willamette - Lookout Point Head of Reservoir site to-date and Figure 49 shows length frequency data to-date.

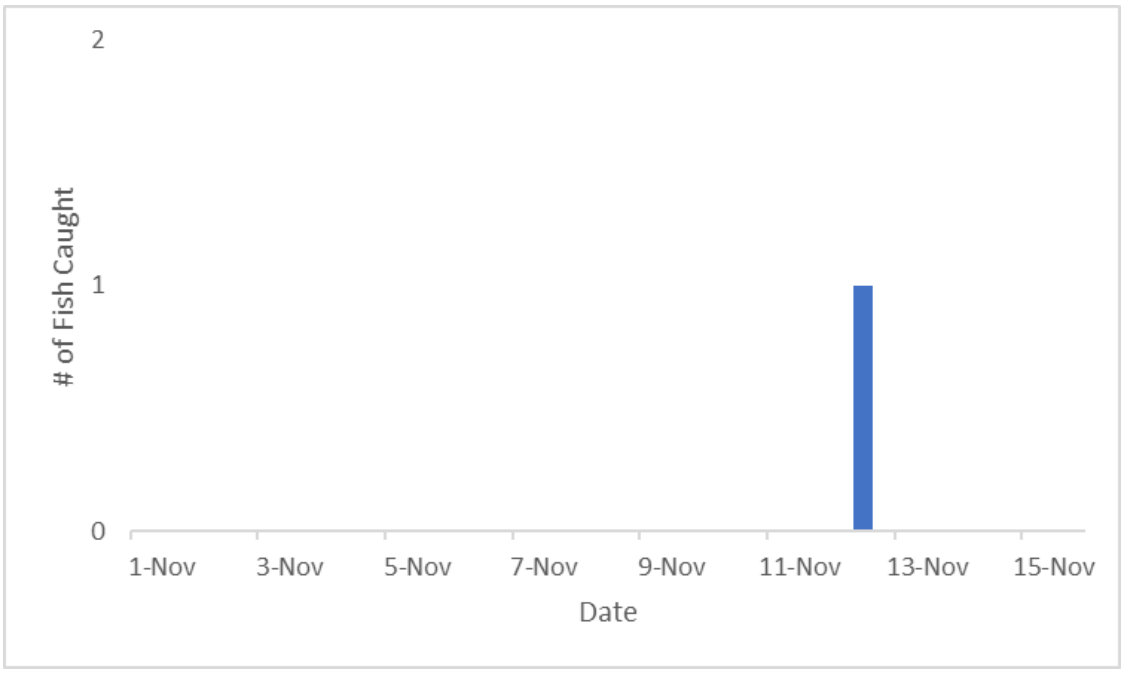


Figure 48. Chinook Captured Per Day 11/01/2022 to 11/15/2022 (Lookout Point Head of Reservoir)

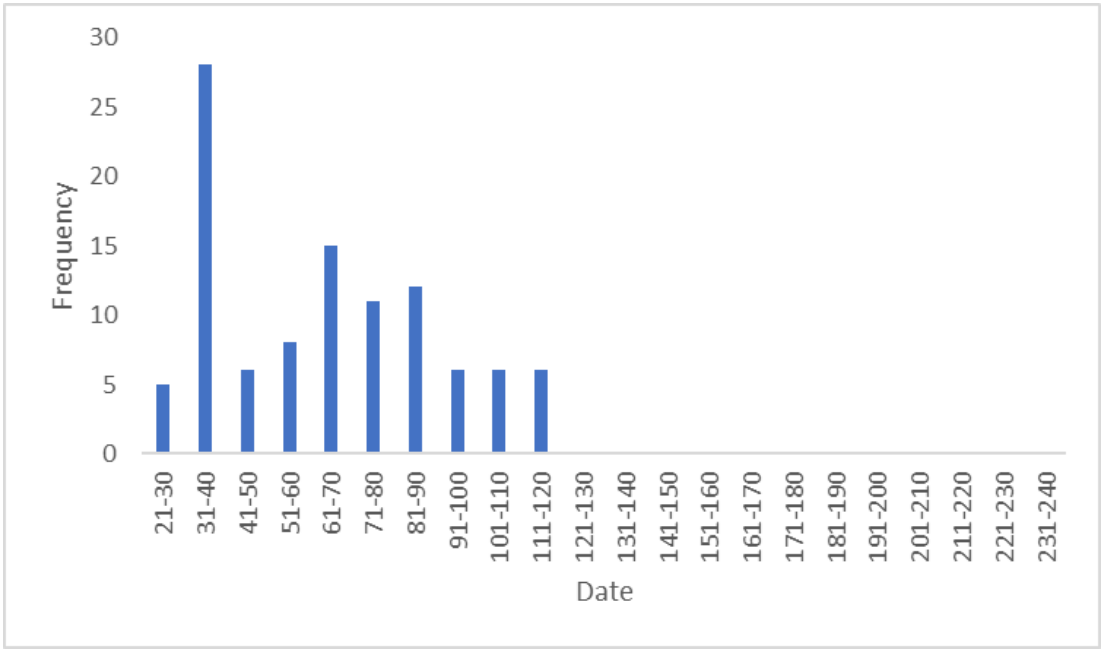


Figure 49. Length Frequency of Juvenile Chinook Sampled Season To-Date (Lookout Point Head of Reservoir)

Table 28. Descriptive Statistics of Target Species Captured at Lookout Point Head of Reservoir, Season To-Date and for the Reporting Period

To-Date											
Site	Route	Species	Life stage	Collected	Length (mm)*			Weight (g)*			
					Min	Max	Mean	Min	Max	Mean	
Lookout Point Head of Reservoir	5 ft	CHS	Smolt	4	98	118	109.0	15.0	17.5	16.2	
		CHS	Parr	59	59	115	80.0	1.0	19.8	5.9	
		CHS	Fry	41	28	69	37.2	N/A	N/A	N/A	
November 1-15, 2022											
Site	Route	Species	Life stage	Collected	Length (mm)*			Weight (g)*			
					Min	Max	Mean	Min	Max	Mean	
Lookout Point Head of Reservoir	5 ft	CHS	Smolt	1	98	98	98.0	16.0	16.0	16.0	
		CHS	Parr	0	N/A	N/A	N/A	N/A	N/A	N/A	
		CHS	Fry	0	N/A	N/A	N/A	N/A	N/A	N/A	

*Some fry are too small to accurately weigh and are omitted from the above tables.

Trapping Efficiency

A total of 506 juvenile hatchery Chinook (sub-yearlings) were bismarck brown dyed and adipose clipped and released on 10/27/2022 above the Lookout Point Head of Reservoir trap. Fish were released in small groups to evaluate the traps efficiency capturing fish migrating downstream. 9 fish were recaptured in the 5-ft RST for an efficiency of 1.8%.

Of the 9 fish recaptured, 1 was dead. Injuries were descaling and fin damage.

Lookout Point Head of Reservoir	Release #	Recapture #	Capture Efficiency
10/27/2022	506	9	1.8% (9/506)

Injuries and Copepod Infection

There were 1 Chinook captured during this reporting period. 1 had partial descaling <20% (100.0%) and 1 had body injuries (100.0%). There was 0 incidental mortality (0.0%). Injury data for the reporting period is shown in table 29. To date data can be found in Appendix A.

Table 29. Number of Descaled, Bodily/Eye Injured, Copepod Infected and Dead Chinook Salmon for Sampling Period (Lookout Point Head of Reservoir).

Site	# CHS Collected	# DSC* <20%	# DSC* >20%	# with Body Injuries	# with Eye Injuries	# with COP* In B.C.	# with COP* on Fins	Mortalities
Lookout Point Head of Reservoir	1	1	0	1	0	0	0	0

*DSC=Descaled, COP=Copepods, B.C.=Branchial Cavity

Collected DNA and Scale Samples

Scales and DNA were collected from 1 Chinook captured for the reporting period.

VIE Marking

Visual Implant Elastomer (VIE) trials commenced at the Lookout Point Head of Reservoir site on 6/25/2022. VIE tag color and locations are changed every reporting period to distinctly mark groups of fish by capture date. Since then, 4 Chinook have been VIE marked to the left of the dorsal fin with fluorescent elastomer. No fish with VIE marks have been detected at downstream RST sites to date.

Date Tagged	VIE Color	# Tagged	# Recaptured to Date
6/25/2022-7/15/2022	Yellow	3	0
7/16/2022-7/31/2022	Red	1	0

Non-Target Species

12 non-target species were captured during the reporting period; the data is summarized below in Table 30.

Table 30. Summary of Non-target Species (Lookout Point Head of Reservoir).

Species	5ft Capture	5ft Mortality	Season Total	Season Total Mortality
Bass Unknown	2	1	4	1
Bluegill	0	0	2	0
Chinook (clipped)	1	0	27	0
Cutthroat Trout	0	0	10	0
Dace	3	0	131	0
Lamprey	0	0	2	0
Largescale Sucker	0	0	17	1
Mountain Whitefish	0	0	3	0
Northern Pikeminnow	0	0	24	0
O. mykiss	1	0	89	3
O. mykiss (clipped)	0	0	2	0
Peamouth	0	0	1	0
Pumpkinseed	0	0	1	1
Red-Sided Shiner	0	0	2	0
Sculpin	4	0	28	7
Spotted Bass	1	0	1	0
Smallmouth Bass	0	0	8	0
Unknown	0	0	16	0
Totals	**12**	**1**	**350**	**13**

Stream Statistics

Basic stream statistics for the Lookout Point Head of Reservoir RST site were calculated from data downloaded from the U.S. Geological Survey stream gauge number 14148000. During the reporting period, daily maximum values for instantaneous discharge ranged from 1,590.0 cfs to 6,920.0 cfs (mean: 2,424.7 cfs). Figure 50 shows instantaneous discharge.

Stream temperatures were recorded every two hours using a temperature probe at the Lookout Point Head of Reservoir RST site during this reporting period. The probe operated normally during this period. (Figure 51).

Flows into Lookout Point Reservoir averaged 2,028.6 cfs (Figure 52). Catch per unit of effort (CPUE) data are summarized in Table 31. Discharge and capture data for the duration of monitoring efforts at this location are provided in Appendix B.

Table 31. Summary of Chinook CPUE at Lookout Point Head of Reservoir.

	Chinook
Description	5 ft
Catch	1
Effort (hrs)	314.4
CPUE (fish/hr)	0.003

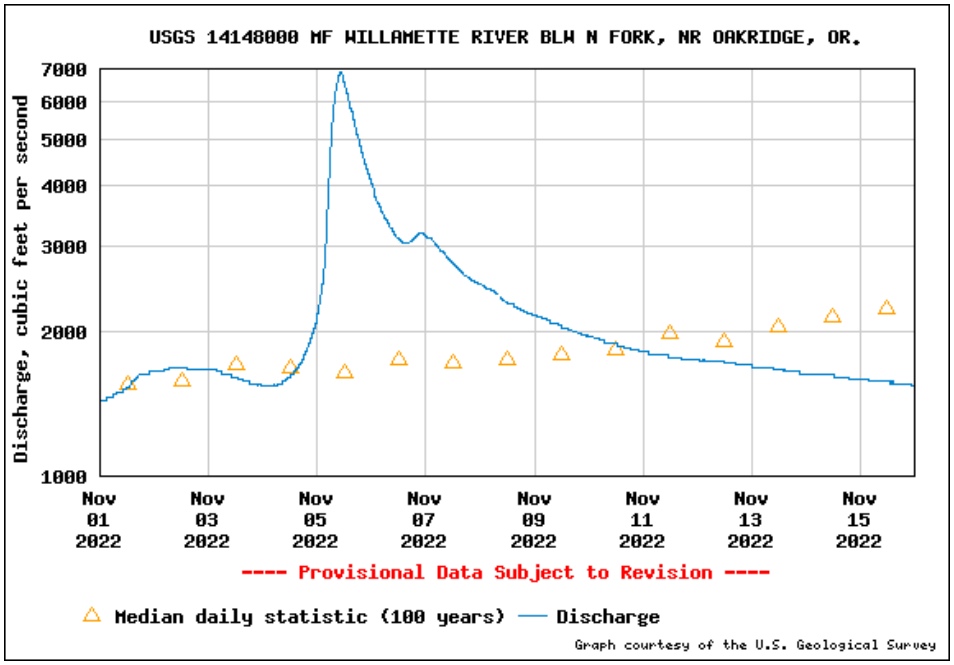


Figure 50. Discharge (cfs); above Lookout Point Reservoir, Below Oakridge, OR

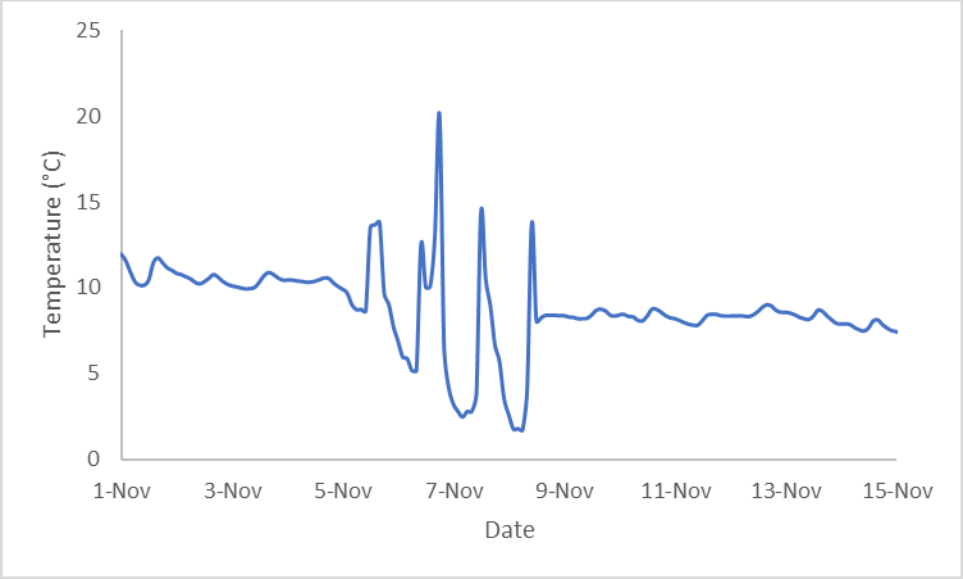


Figure 51. Temperature at RST (Lookout Point Head of Reservoir)

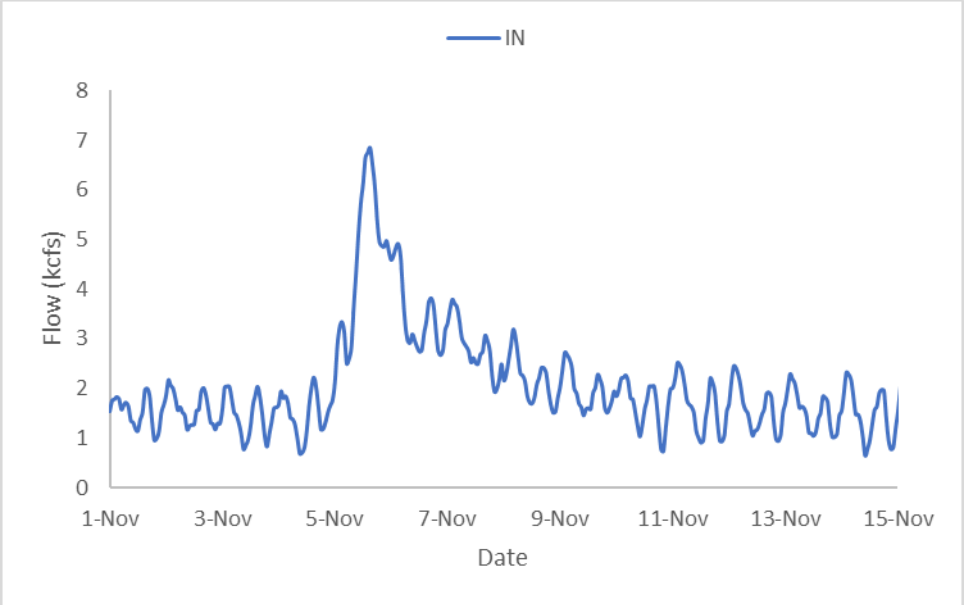


Figure 52. Hourly Flows (Lookout Point Head of Reservoir site)

Middle Fork Willamette – Hills Creek Dam

Target Species

This reporting period began on November 1st and ended on November 15th. There were 4 Chinook salmon (CHS) captured during the 15-day sampling period (Figure 53). Sampling durations were 100% for both the RO RST and Powerhouse RST. Table 4 provides life stage, length, and weight data for all Chinook salmon that have been caught at the Hills Creek Dam site to-date and Figure 54 shows length frequency data to-date.

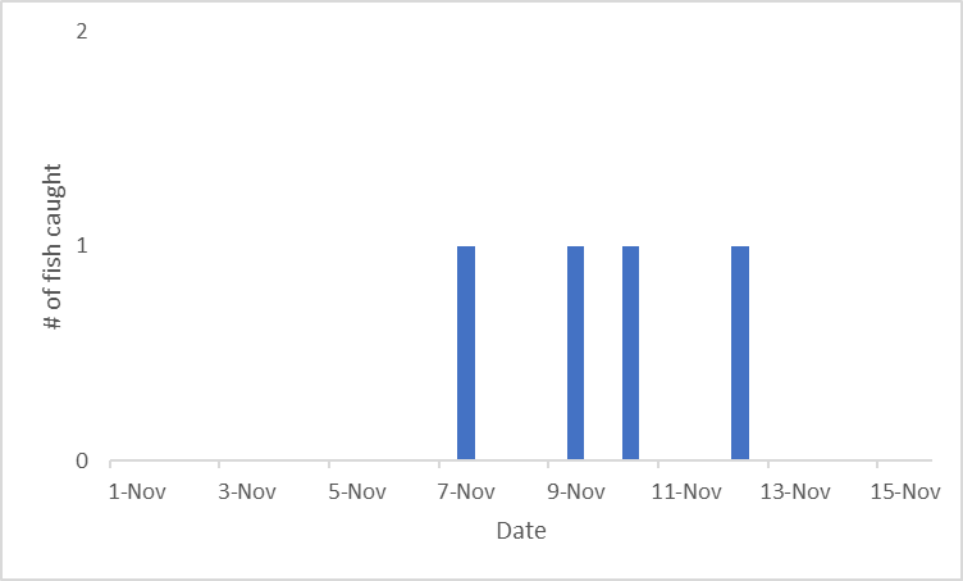


Figure 53. Chinook Captured Per Day 11/01/2022 to 11/15/2022 (Hills Creek Dam)

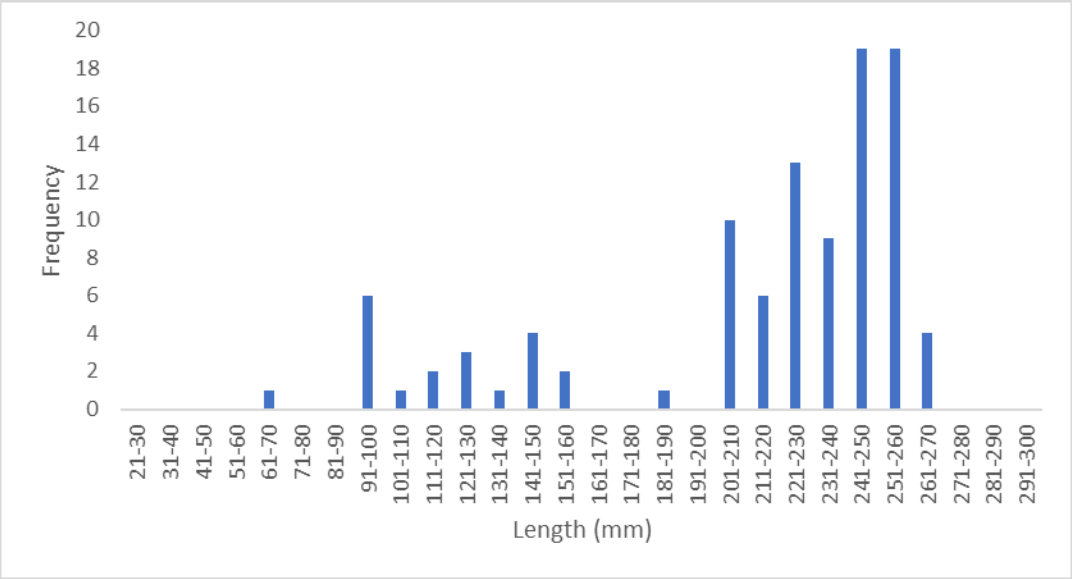


*Figure does not include fish without heads or fish used for trapping efficiency

Figure 54. Length Frequency of Juvenile Chinook Sampled Season To-Date (Hills Creek Dam)

24-Hour Post Collection Holding Trial

3 Chinook captured in the RSTs were held during this reporting period. 0 fish were held from the PWR RST and 3 fish were held from the RO RST. 0 hold fish died from the PWR RST (0.0%). 0 of the fish from RO RST died during holding (0.0%).

Trapping Efficiency

2 trapping efficiency trials have been conducted at Hills Creek Dam. The first being on 2/16/2022 and the second being on 2/25/2022.

During the first Trapping Efficiency trial, a total of 600 juvenile Chinook (parr) were dyed, clipped and released on 02/16/2022 below Hills Creek PWR and 593 below the RO to evaluate the efficiency of the screw trap at those locations. A total of 8 fish were recaptured in the 8ft PWR trap on 2/16/2022 and an additional 4 captured on 2/17/2022 for a total of 12 chinook recaptures in the PWR trap. A total of 19 chinook were captured in the 5ft RO trap on 02/17/2022. No PWR route fish were captured in the RO trap. Route-specific trapping efficiency was 2.0% at the PWR trap and 3.2% at the RO.

Of the fish recaptured,1 was dead and an additional 27 were injured of the total 31 recaptures. Injuries were primarily descaling (16) and fin damage (26). Mt. Hood Environmental staff noted that most fish appeared to have minor descaling with some fin damage, but in good condition overall upon retrieval from the hatchery.

Hills Creek Dam	Release #	Recapture #	Capture Efficiency
PWR Route	600	12	2.0% (12/600)
RO Trap	593	19	3.2% (19/593)

*Live fish captured at the PWR trap are released just downstream of the PWR trap, upstream of the RO trap and therefore retained in the capture efficiency estimates for the RO Trap if they arrive in the lower trap.
*Any dead fish captured at the PWR trap are excluded from the RO trap capture efficiency estimate as they are not alive at time of re-release.

During the second Trapping Efficiency trial, a total of 604 juvenile Chinook (parr) were dyed, clipped and released on 02/25/2022 below Hills Creek PWR and 625 below the RO to evaluate the efficiency of the screw trap at those locations. A total of 5 fish were recaptured in the 8ft PWR trap on 2/26/2022 and an additional 1 captured on 2/27/2022 for a total of 6 chinook recaptures in the PH trap. A total of 6 chinook were captured in the 5ft RO trap on 02/26/2022 and an additional 1 captured on 2/27/2022 for a total of 7 chinook recaptures in the RO trap. No PWR route fish were captured in the RO trap. Route-specific trapping efficiency was 0.99% at the PH trap and 1.12% at the RO.

Of the fish recaptured,1 was dead and an additional 11 were injured of the total 13 recaptures. Injuries were primarily descaling (11) and fin damage (12). Mt. Hood Environmental staff noted that most fish appeared to have minor descaling with some fin damage, but in good condition overall upon retrieval from the hatchery.

Hills Creek Dam	Release #	Recapture #	Capture Efficiency
PWR Route	604	6	0.99% (6/604)
RO Trap	625	7	1.12% (7/625)

*Live fish captured at the PWR trap are released just downstream of the PWR trap, upstream of the RO trap and therefore retained in the capture efficiency estimates for the RO Trap if they arrive in the lower trap.
*Any dead fish captured at the PWR trap are excluded from the RO trap capture efficiency estimate as they are not alive at time of re-release.

Table 32. Descriptive Statistics of Target Species Captured at Hills Creek Dam Season To-Date and for the Reporting Period

To-Date										
Site	Route	Species	Life stage	Collected	Length (mm)*			Weight (g)*		
					Min	Max	Mean	Min	Max	Mean
Hills Creek	RO	CHS	Parr	6	90.0	141.0	110.7	7.4	23.4	13.3
		CHS	Smolt	70	137.0	265.0	231.5	27.4	192.3	143.3
Hills Creek	PWR	CHS	Parr	7	69.0	127.0	98.1	3.7	24.5	11.2
		CHS	Smolt	25	128.0	265.0	224.3	26.2	188.7	130.6

*Fish that were missing heads are not included in length and weight calculations. One fish was a head only and could not be assigned a life stage.

November 1-15, 2022										
Site	Route	Species	Life stage	Collected	Length (mm)*			Weight (g)*		
					Min	Max	Mean	Min	Max	Mean
Hills Creek	RO	CHS	Parr	0	N/A	N/A	N/A	N/A	N/A	N/A
		CHS	Smolt	4	225	257	234.2	121.1	176.7	140.3
Hills Creek	PWR	CHS	Parr	0	N/A	N/A	N/A	N/A	N/A	N/A
		CHS	Smolt	0	N/A	N/A	N/A	N/A	N/A	N/A

Injuries and Copepod Infection

There were 4 Chinook captured in the RO RST. Partial descaling <20% was observed on 2 of 4 Chinook collected at the RO RST (50.0%), and descaling >20% was observed on 2 of the Chinook collected (50.0%). 4 displayed body injuries (100.0%) and 0 had eye injuries (0.0%). 4 of the RO RST Chinook had copepods present in the branchial cavity (100.0%) and 3 had copepods present on fins (75.0%). There was 1 mortality (25.0%). 0 of the fish captured in the Spill RST displayed Gas Bubble Disease (0.0%).

There were 0 Chinook captured in the Powerhouse channel RST. Partial descaling <20% was observed on 0 of the 0 Chinook collected at the PWR RSTs (0.0%). Descaling >20% was observed on 0 of the Chinook collected (0.0%). 0 PWR RST fish had bodily injury (0.0%) and 0 had eye injuries (0.0%). 0 of the fish had copepods present in the branchial cavity (0.0%) and 0 had copepods present on fins (0.0%). 0 fish displayed Gas Bubble Disease (0.0%). There were 0 chinook mortalities collected in the RO RST (0.0%) and 0 in the PWR RST (0.0%). Injuries are displayed in Table 5. To date injury data can be found in Appendix A.

Table 33. Number of Descaled, Bodily/Eye Injured, Copepod Infected and Dead Chinook Salmon for Sampling Period. (Hills Creek Dam)

Site	Route	# CHS Collected	# DSC* <20%	# DSC* >20%	# with Body Injuries	# with Eye Injuries	# with COP* In B.C.	# with COP* on Fins	Mortalities
Hills Creek	RO	4	2	2	4	0	4	3	1
Hills Creek	PWR	0	0	0	0	0	0	0	0

*DSC=Descaled, COP=Copepods, B.C.=Branchial Cavity

Collected DNA and Scale Samples

For the reporting period, scales and DNA were collected from 4 Spring Chinook. The other targets captured did not meet length criteria for DNA sampling or were captured before new protocols were put in place.

Non-Target Species

A total of 32 non-target fish were captured at Hills Creek during the reporting period; the data is summarized below in Table 6.

Table 34. Summary of Non-target Species (Hills Creek Dam).

Species	RO Capture	RO Mortality	PWR Capture	PWR Mortality	Season Total	Season Total Mortality
Bass Unknown	5	1	0	0	6	2
Bluegill	0	0	0	0	56	28
Brook Lamprey	0	0	0	0	2	0
Bullhead	0	0	0	0	1	0
Bull Trout	0	0	0	0	1	0
Crappie	2	0	0	0	73	41
Longnose Dace	0	0	0	0	2	0
Red-Sided Shiner	0	0	0	0	19	2
Sculpin	0	0	0	0	47	0
Spotted Bass	23	0	0	0	29	1
Sucker	0	0	0	0	2	1
Mountain Whitefish	0	0	0	0	1	1
O. mykiss	1	0	0	0	68	22
Unknown	1	0	0	0	14	2
Totals	**32**	**1**	**0**	**0**	**342**	**102**

Stream Statistics

Basic stream statistics at the Hills Creek site were calculated from data downloaded from the U.S. Geological Survey stream gauge numbers 14145110 and 14145500. Gauge height (feet) is the only metric provided at this gauge. Total dissolved gas saturation data was received from gauge 14145500, 1.4 rkms downstream of the trap. During the reporting period, daily maximum values for instantaneous

gauge height ranged from 1,224.6 feet to 1,224.8 feet (mean: 1,224.7 feet). Figure 55 shows instantaneous gauge height.

Total dissolved gas saturation ranged from 102 to 104% (mean: 102.7%) during the reporting period. Figure 56 shows total dissolved gas saturation.

Stream temperatures were recorded every 2 hours for both the RO RST and the PWR RST (Figures 57 and 58). The probes operated normally throughout the reporting period.

Flows through the PWR and RO during the reporting period averaged 0 and 981.4 cfs respectively (Figure 59). Catch per unit of effort (CPUE) data are summarized in Table 7. Discharge and capture data for the duration of monitoring efforts at this location are provided in Appendix B.

Table 35. Summary of Chinook CPUE, Hills Creek Dam.

	Chinook	
Description	**RO (5ft)**	**PWR (8ft)**
Catch	4	0
Effort (hrs)	364.9	364.4
CPUE (fish/hr)	0.011	0

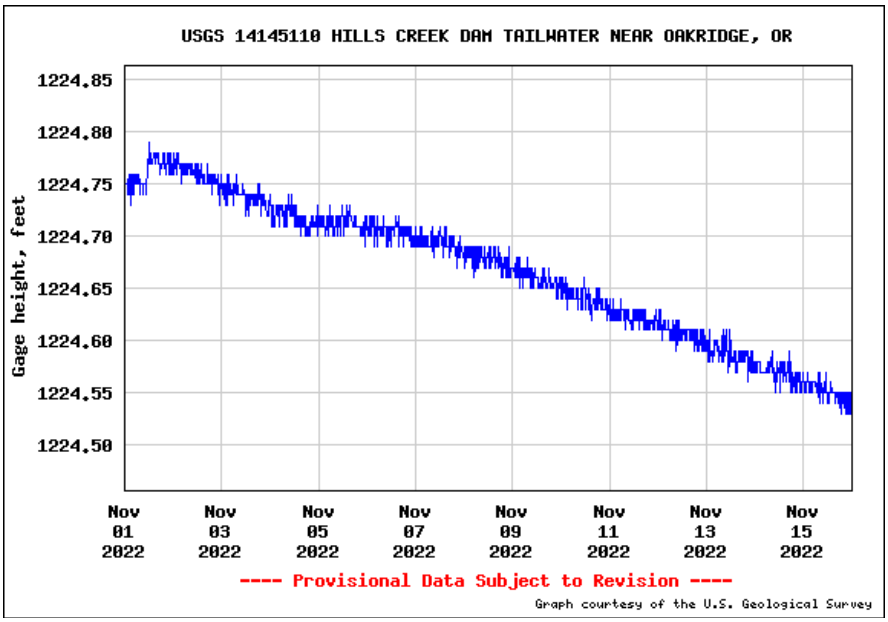


Figure 55. Gauge Height (feet); below Hills Creek Dam PWR - Middle Fork Willamette River

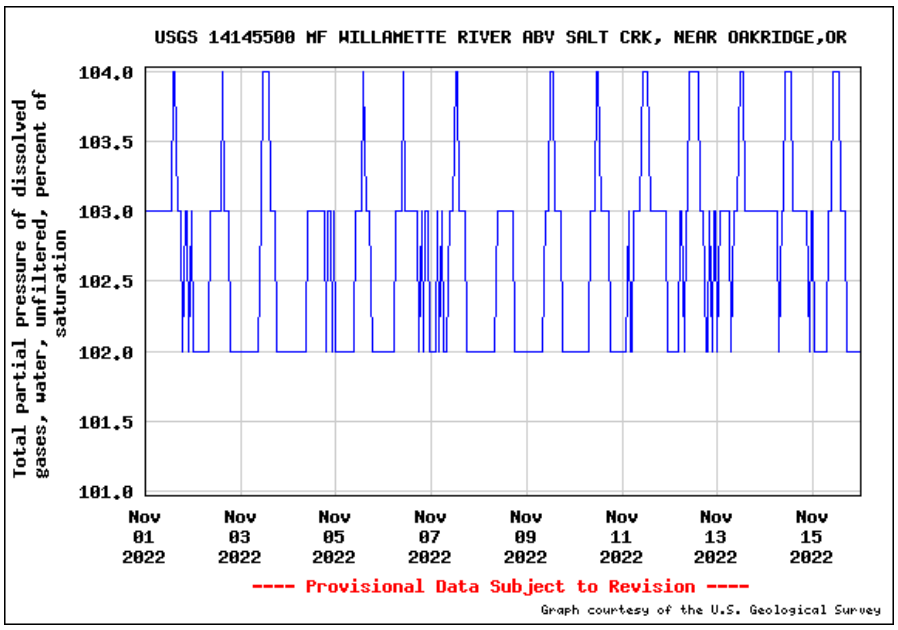


Figure 56. Total Dissolved Gas Saturation (%); below Hills Creek Dam – Middle Fork Willamette River

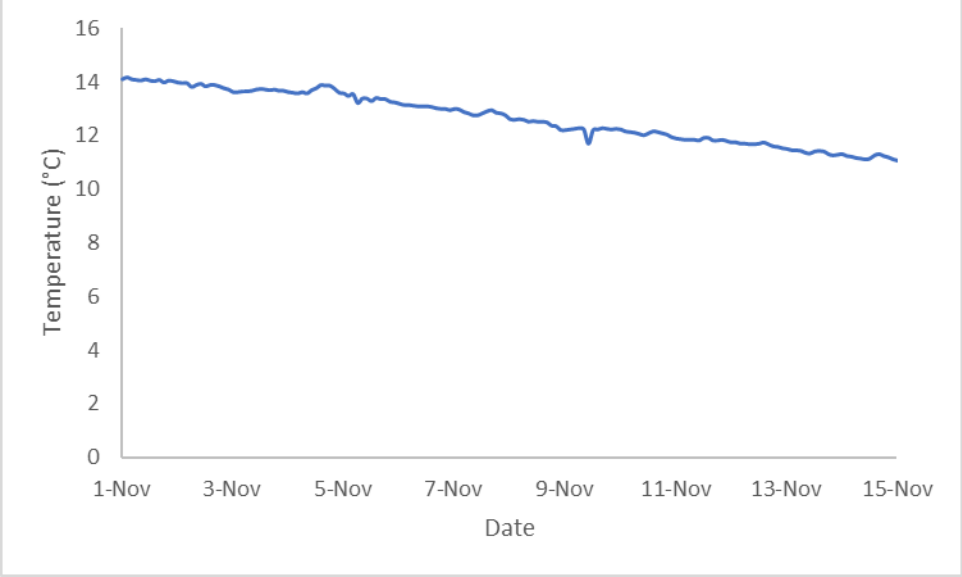


Figure 57. Temperature at RO RST (Hills Creek Dam)

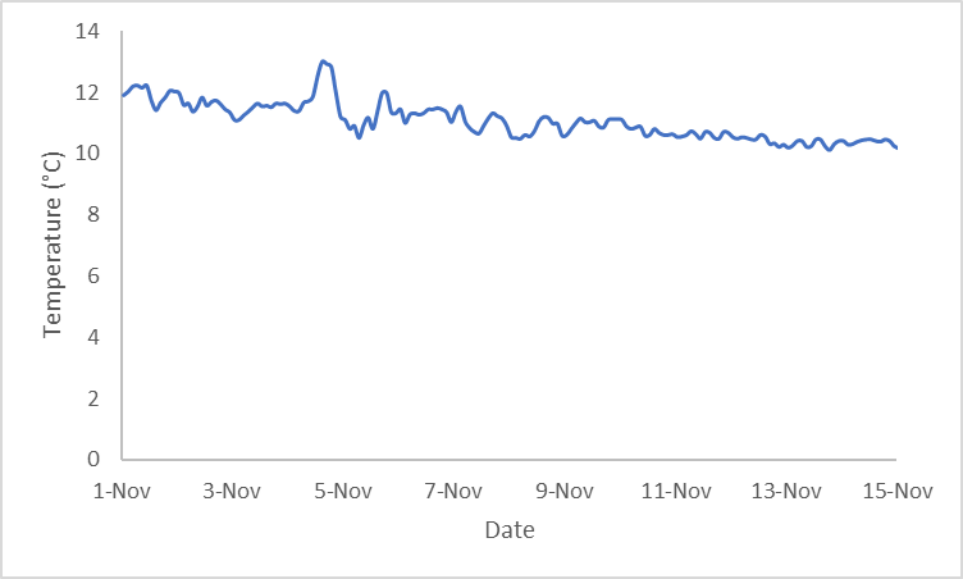


Figure 58. Temperature at Powerhouse RST (Hills Creek Dam)

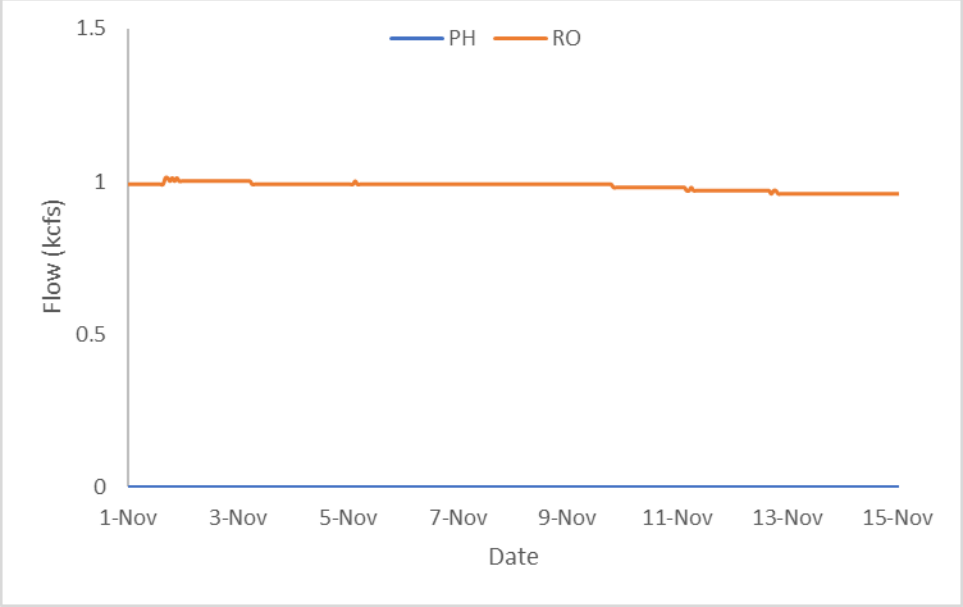


Figure 59. Hourly Flows PWR vs. RO (Hills Creek Dam)

Issues Encountered

A major rain event caused high flow and high debris loads this reporting period. Safe access concerns and fish safety resulted in the Cougar Dam Head of Reservoir and Foster Dam Head of Reservoir traps to be raised to a non-sampling position on November 4th and were lowered again on November 7th. Lookout

Point Head of Reservoir was raised on November 5th and lowered again on November 7th. 25 mph gusts from a windstorm caused significant debris loads on November 13th in the South Fork Mckenzie River. The Cougar Dam Head of Reservoir trap was storm sampled from November 14th until November 15th.

Upcoming USACE Support Services

None at this time.

Appendix A

Chinook (CHS) To Date

Chinook Injuries to-date																							
p/Life Stage	Total Fish	MUNK	DS<2	BLO	EYB	FUN	BKD	COP	DS>2	PRD	FID	HBO	BO	HO	BVT	HBP	BRU	TEA	OPD	HIN	FVB	POP	GBD
Big Cliff Dam	1171		717	9	83	5	1	894	277	4	610	5	11	4	38	7	78	41	144	74	73	14	47
8 ft	1171		717	9	83	5	1	894	277	4	610	5	11	4	38	7	78	41	144	74	73	14	47
Adult	1		1								1						1	1	1		1		
Parr	27		6		1	1		15	3		6					2			1				
Smolt	1132		710	9	81	4		879	273	4	602	5	11	2	38	5	76	40	141	73	72	13	47
Unknown	2													2								1	
Fry	9				1		1		1		1						1		1	1			
Foster Dam HOR	97		31		1			1			13												
5 ft	97		31		1			1			13												
Parr	26		18					1			6												
Smolt	16		12								7												
Fry	55		1		1																		
Cougar Dam	2939	10	1549	35	270	11	3	2147	681	3	1464	3	7	2	89	33	151	65	282	103	214	17	436
RO	1751		1036	30	238	8	3	1579	561	3	1158	3	2		55	31	124	36	233	82	152	13	432
Parr	195		100	5	31	1		129	50		96				4	1	8	2	13	12	4	1	19
Smolt	1535		936	25	204	7	3	1450	510	3	1061	3	2		51	30	115	34	219	68	148	12	413
Fry	21				3				1		1						1		1	2			
PH	1188	10	513	5	32	3		568	120		306		5	2	34	2	27	29	49	21	62	4	4
Parr	266		146		11	1		104	25		67		1		5		3	5	11	6	5		
Smolt	538		365	5	17	2		464	89		234		4		28	2	22	17	35	12	57	1	4
Unknown	2													2									
Fry	382	10	2		4				6		5				1		2	7	3	3		3	
Cougar Dam HOR	693	3	83			1		10	2	2	50						1	6	8	7	1	1	
5 ft	693	3	83			1		10	2	2	50						1	6	8	7	1	1	
Parr	161		80			1		10	2	1	42						1	6	1	1	1		
Smolt	4		1																				
Fry	528	3	2							1	8								7	6		1	
Fall Creek Dam Tail.	1								1		1						1						
8 ft	1								1		1						1						
Smolt	1								1		1						1						
Fall Creek HOR	7		3					2			1												
8 ft	7		3					2			1												
Parr	2		2					1			1												
Smolt	5		1					1															
Dexter Dam Tail.	98		59		6			11	23		46				1		3	4	6	6	4		20
5 ft	98		59		6			11	23		46				1		3	4	6	6	4		20
Parr	18		6		3			2	6		8							2	3	2			6
Smolt	77		53		3			9	17		37				1		3	2	3	4	4		14
Fry	3										1												

Chinook (CHS) To Date - Continued

Chinook Injuries to-date (Cont.)

Site/Trap/Life Stage	Total Fish	MUNK	DS<2	BLO	EYB	FUN	BKD	COP	DS>2	PRD	FID	HBO	BO	HO	BVT	HBP	BRU	TEA	OPD	HIN	FVB	POP	GBD
Lookout Dam Tail.	78		41	1	15	1		14	28		44				2	2	9	1	15	9	6		8
PH 1	28		11	1	7			7	14		19				2	2	6		8	2	1		2
Parr	3				1				2		2					1	1		1				
Smolt	25		11	1	6			7	12		17				2	1	5		7	2	1		2
PH 2	12		10		3			2	2		9						1	1	2	4	1		
Parr	4		4		3				1		4						1	1	1	3			
Smolt	8		6					2	1		5								1	1	1		
Spill	38		20		5	1		5	12		16						2		5	3	4		6
Parr	6		1						3		1												
Smolt	32		19		5	1		5	9		15						2		5	3	4		6
Lookout Point HOR	104		32					2			13						1		1				
5 ft	104		32					2			13						1		1				
Parr	59		29					1			9						1		1				
Smolt	4		2					1			2												
Fry	41		1								2												
Hills Creek Dam	108	1	57		13			83	41		32		8	1	32	8	7	3	10	5	6	1	2
RO	76	1	39		7			62	30		25		6		26	6	6	2	9	3	3	1	2
Parr	6		1					1									1						
Smolt	70	1	38		7			61	30		25		6		26	6	5	2	9	3	3	1	2
PH	32		18		6			21	11		7		2	1	6	2	1	1	1	2	3		
Parr	7		4					1	1							1				1			
Smolt	25		14		6			20	10		7		2	1	6	1	1	1	1	1	3		

Chinook (CHS) During Reporting Period

Chinook Injuries During Reporting Period (11-01-2022 to 11-15-2022)

Site/Trap/Life Stage	Total Fish	MUNK	DS<2	BLO	EYB	FUN	BKD	COP	DS>2	PRD	FID	HBO	BO	HO	BVT	HBP	BRU	TEA	OPD	HIN	FVB	POP	GBD
Big Cliff Dam	38		18	4	4	2		25	16		34		1		11	1	9	1	19	3	8	1	11
8 ft	38		18	4	4	2		25	16		34		1		11	1	9	1	19	3	8	1	11
Parr	3																						
Smolt	35		18	4	4	2		25	16		34		1		11	1	9	1	19	3	8	1	11
Foster Dam HOR	24		17					1			9												
5 ft	24		17					1			9												
Parr	16		12					1			5												
Smolt	8		5								4												
Cougar Dam	700		410	17	74	4		672	253		546	1			20	16	44	19	115	34	69	5	234
RO	700		410	17	74	4		672	253		546	1			20	16	44	19	115	34	69	5	234
Parr	35		12	4	5	1		28	18		29				2	1	2		1	2	2	1	7
Smolt	665		398	13	69	3		644	235		517	1			18	15	42	19	114	32	67	4	227
Cougar Dam HOR	18		9					2			6								1	1			
5 ft	18		9					2			6								1	1			
Parr	18		9					2			6								1	1			
Lookout Point HOR	1		1								1												
5 ft	1		1								1												
Smolt	1		1								1												
Hills Creek Dam	4		2					4	2		4				1		2		1	1	1	2	
RO	4		2					4	2		4				1		2		1	1	1	2	
Smolt	4		2					4	2		4				1		2		1	1	1	2	

Steelhead (O. mykiss) To Date

O. mykiss Injuries To Date

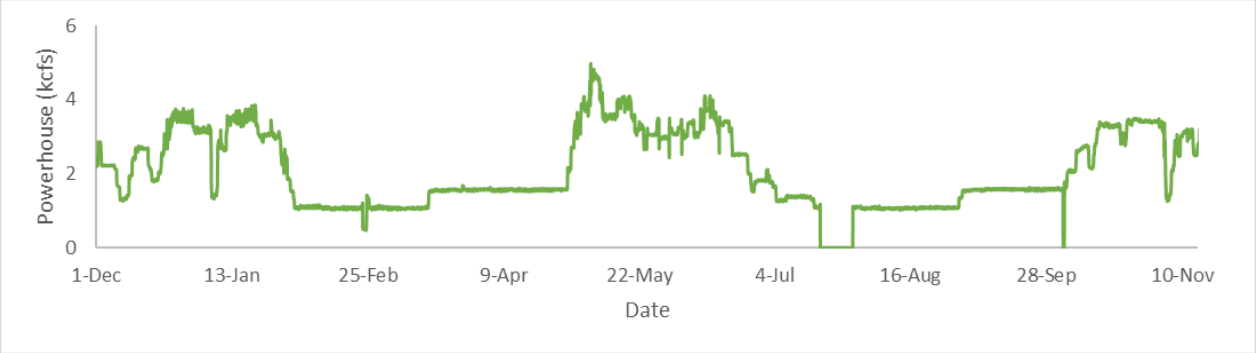
Site/Trap/Life Stage	Total Fish	MUNK	DS<2	BLO	EYB	FUN	BKD	COP	DS>2	PRD	FID	HBO	BO	HO	BVT	HBP	BRU	TEA	OPD	HIN	FVB	POP	GBD
Big Cliff Dam	84		23	4	1	1		10	5		24		1		1		5	3	6	6	1		2
8 ft	84		23	4	1	1		10	5		24		1		1		5	3	6	6	1		2
Adult	1								1		1		1										
Parr	39		10	4	1	1					13						1		1	1	1		1
Smolt	16		10					10	4		9				1		3	3	5	5			1
Fry	28		3								1						1						
Green Peter Tail.	6		3		1			1	2		4						4		1	1			5
8 ft	6		3		1			1	2		4						4		1	1			5
Smolt	6		3		1			1	2		4						4		1	1			5
Foster Dam HOR	217		64			2		2		2	58						3	1	2	1	1	1	
5 ft	217		64			2		2		2	58						3	1	2	1	1	1	
Adult	7		1								2												
Parr	105		28			2		1			31						3		2		1	1	
Smolt	74		35					1		2	25							1		1			
Fry	31																						

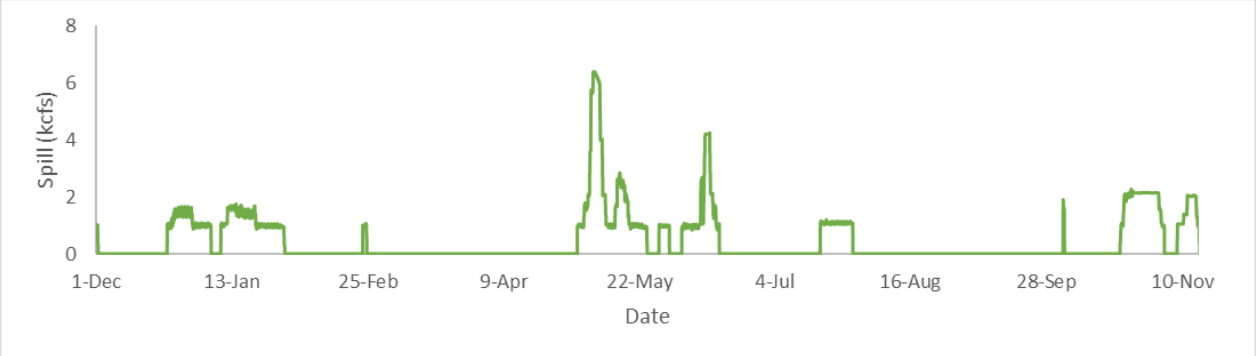
Steelhead (O. mykiss) During Reporting Period

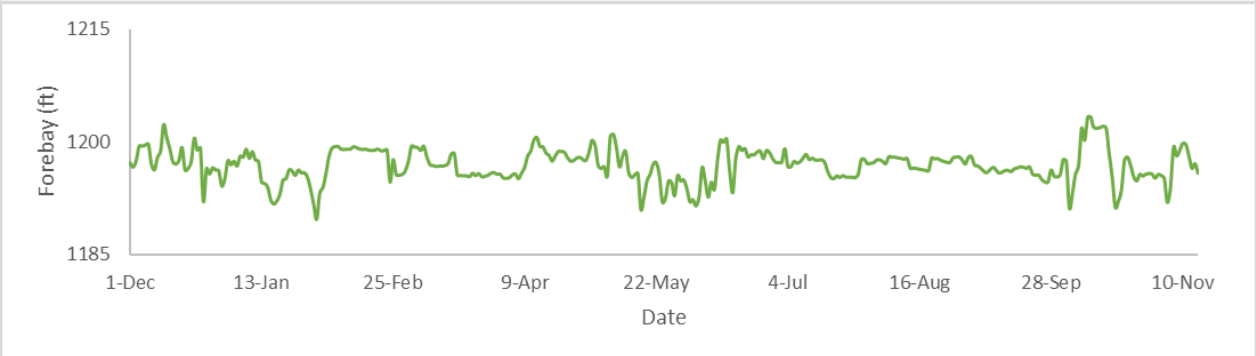
O. mykiss Injuries During Reporting Period (11-01-2022 to 11-15-2022)																							
Site/Trap/Life Stage	Total Fish	MUNK	DS<2	BLO	EYB	FUN	BKD	COP	DS>2	PRD	FID	HBO	BO	HO	BVT	HBP	BRU	TEA	OPD	HIN	FVB	POP	GBD
Big Cliff Dam	17		6	4		1					8						1		1		1		1
8 ft	17		6	4		1					8						1		1		1		1
Parr	17		6	4		1					8						1		1		1		1
Foster Dam HOR	53		20			1		1		1	21						1			1	1		
5 ft	53		20			1		1		1	21						1			1	1		
Parr	35		11			1					14						1				1		
Smolt	18		9					1		1	7									1			

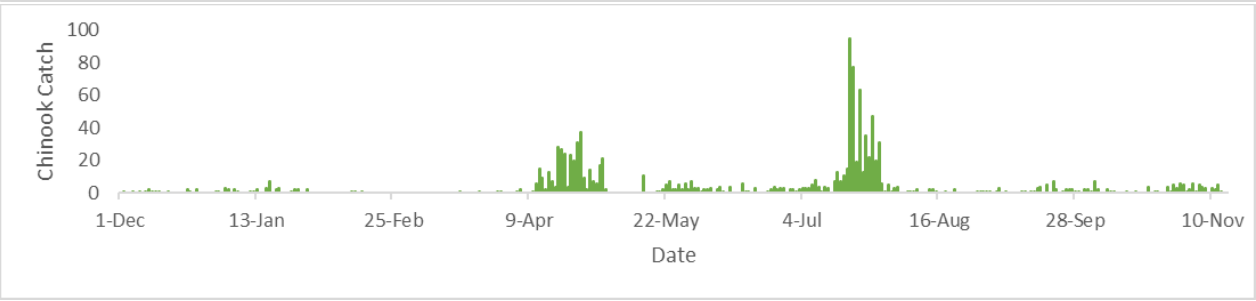
Appendix B

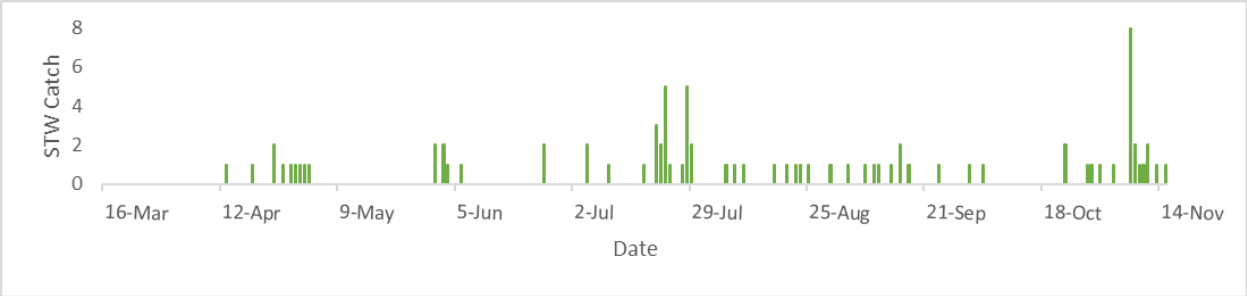
Big Cliff Dam Operational and Capture Data Since Start of Monitoring



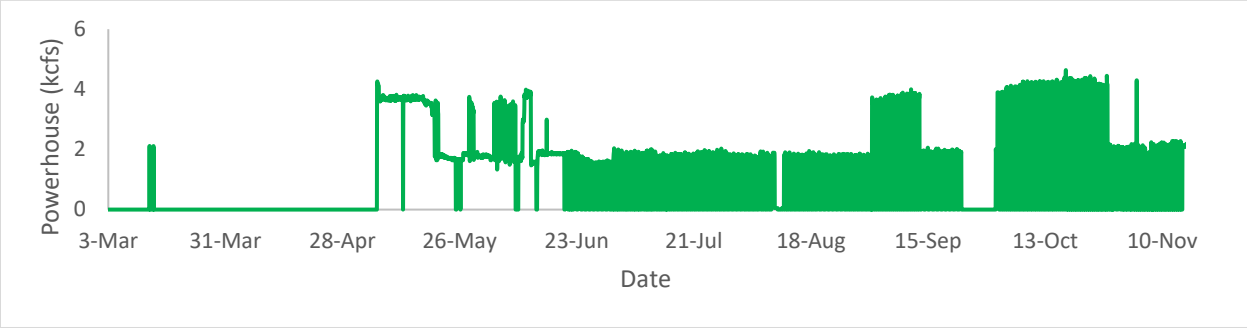


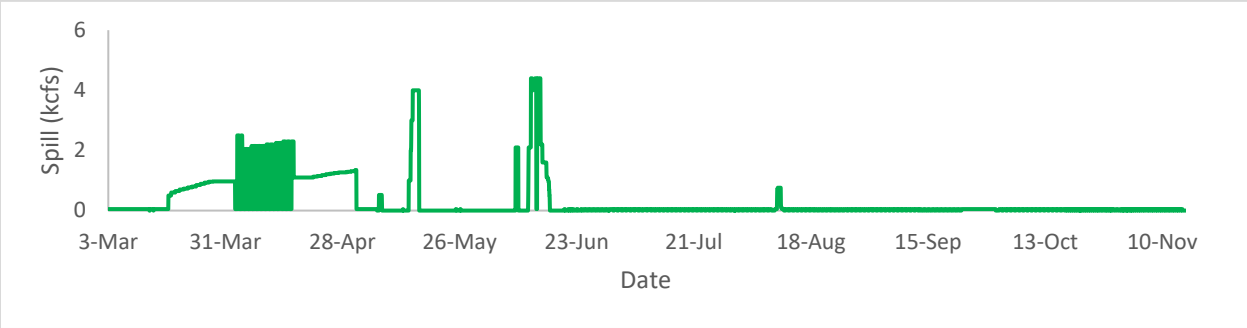


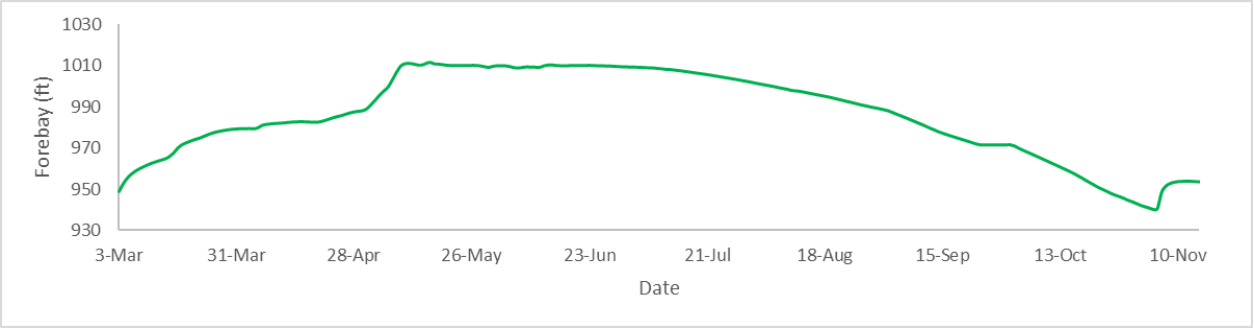


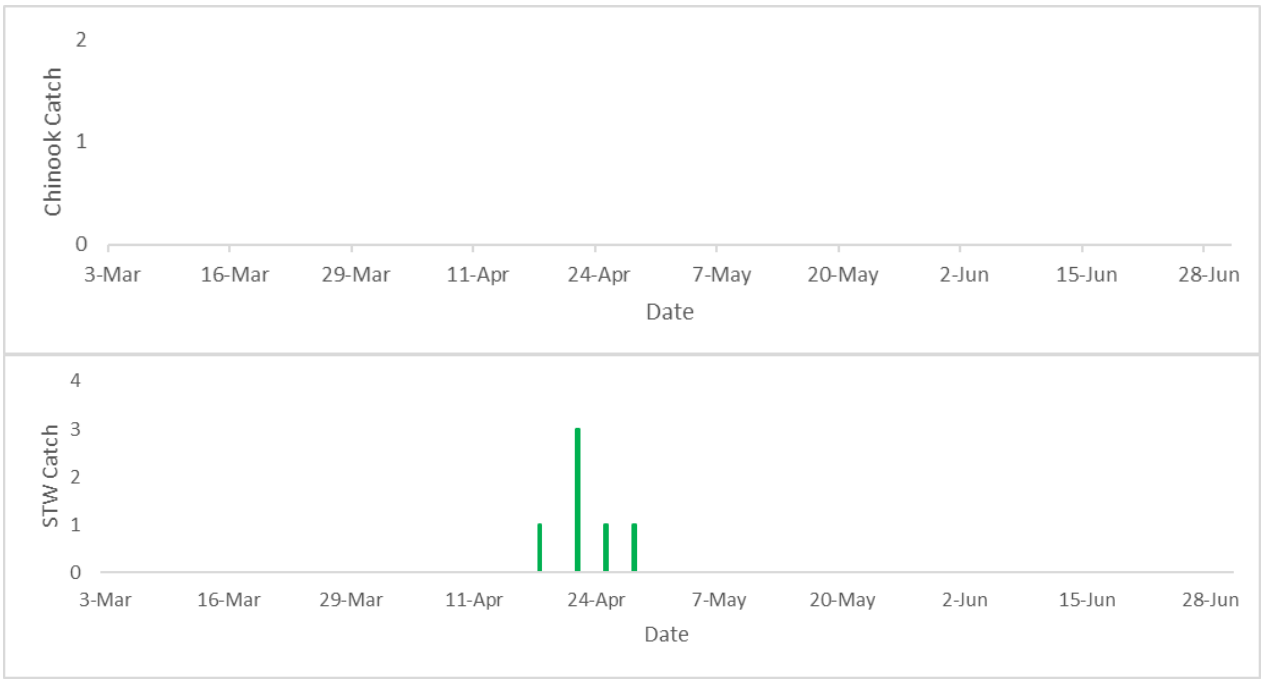


Green Peter Dam Operational and Green Peter Tailrace- Middle Santiam River Capture Data Since Start of Monitoring

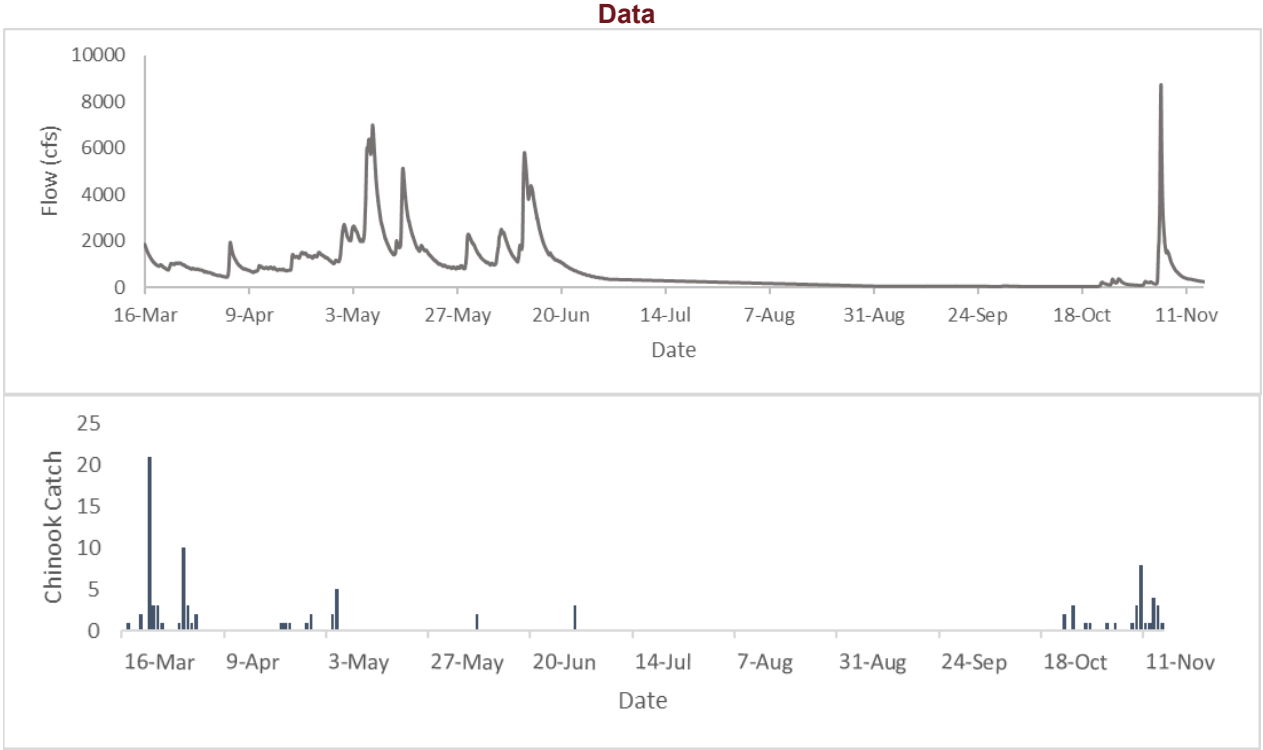


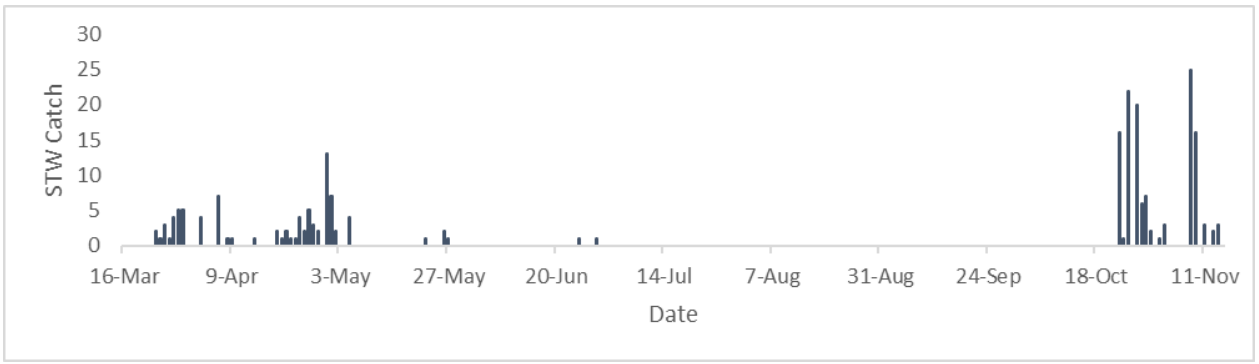




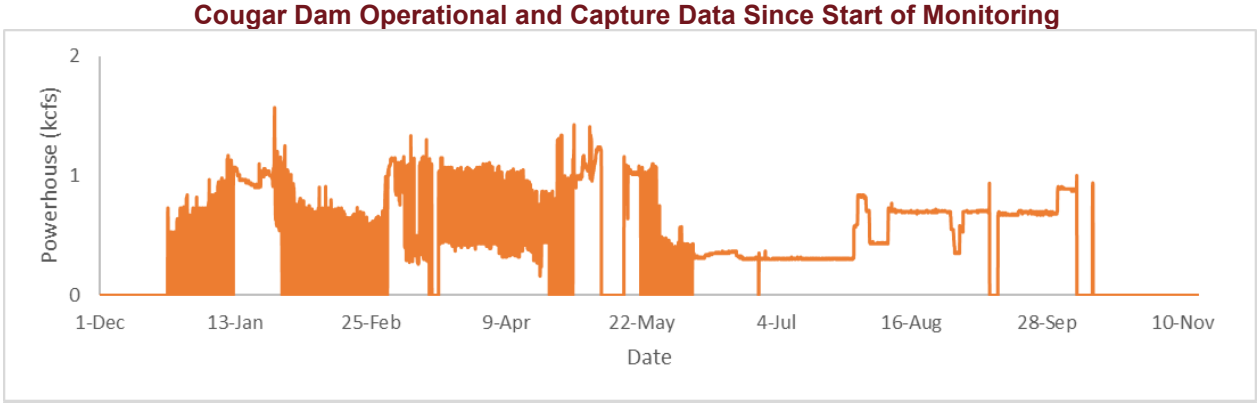


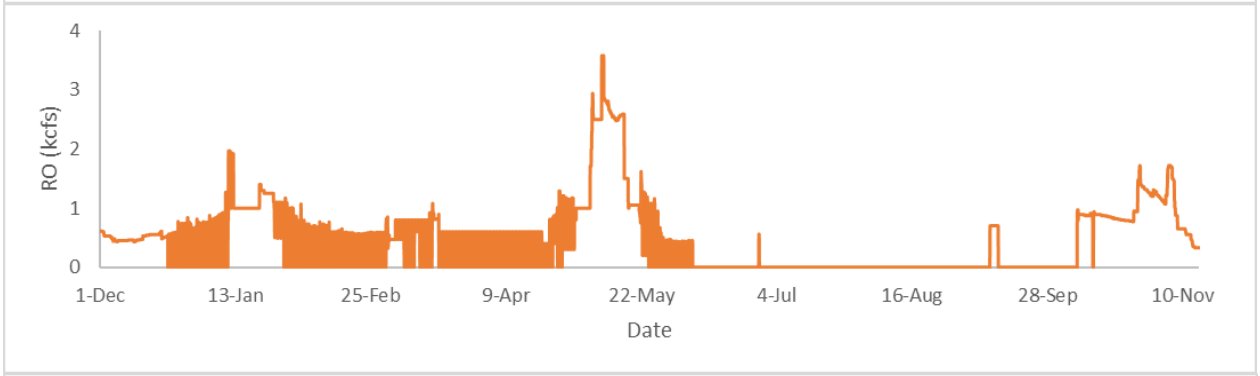
South Santiam River Above Foster Dam Discharge and Foster Dam Head of Reservoir Capture Data

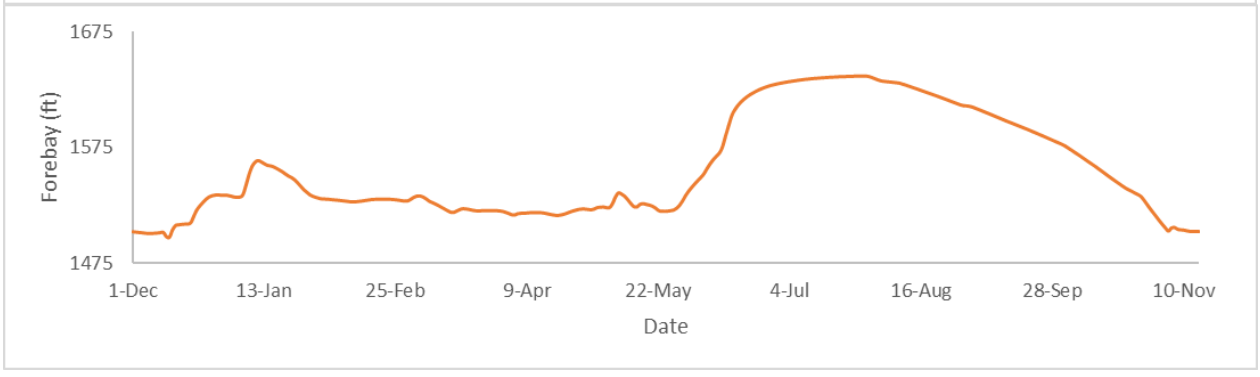


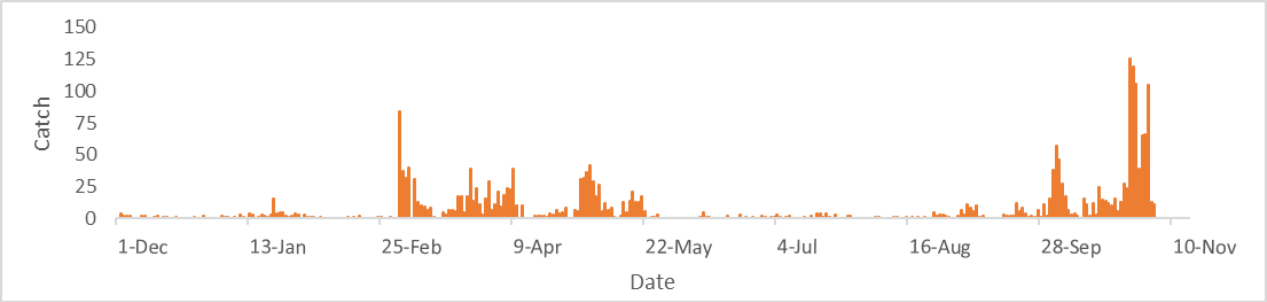


Cougar Dam Operational and Capture Data Since Start of Monitoring

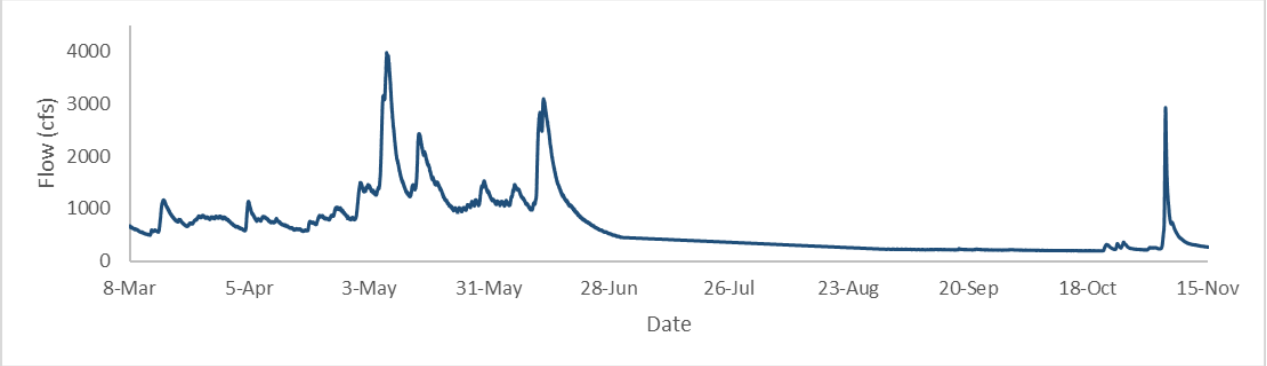




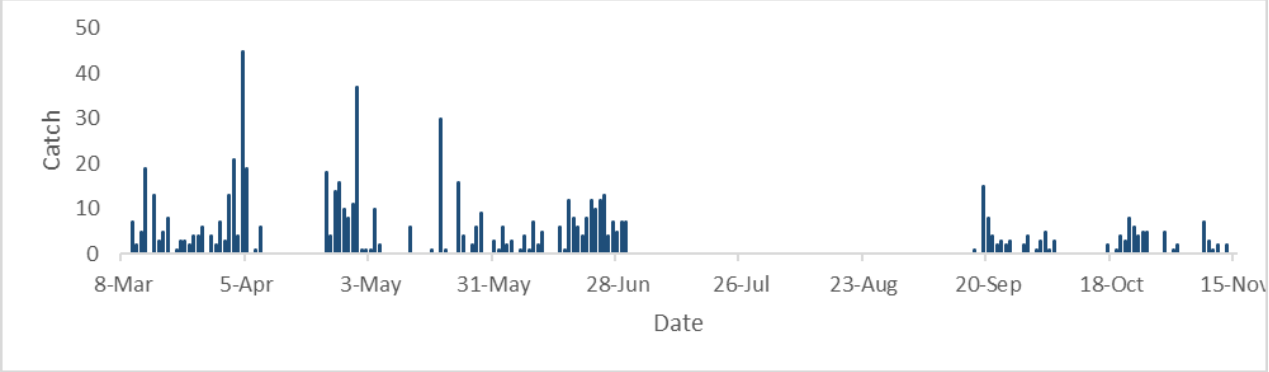




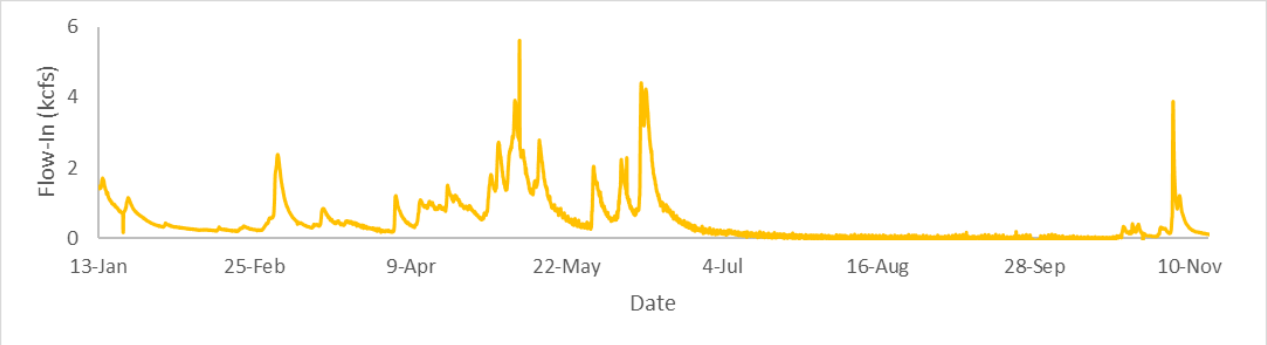
South Fork McKenzie above Cougar Dam Discharge and Cougar Dam Head of Reservoir Capture Data Since Start of Monitoring

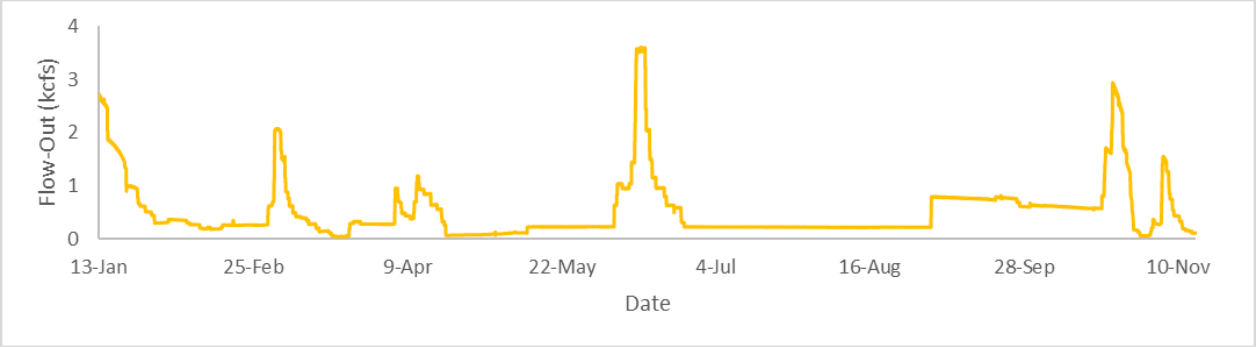


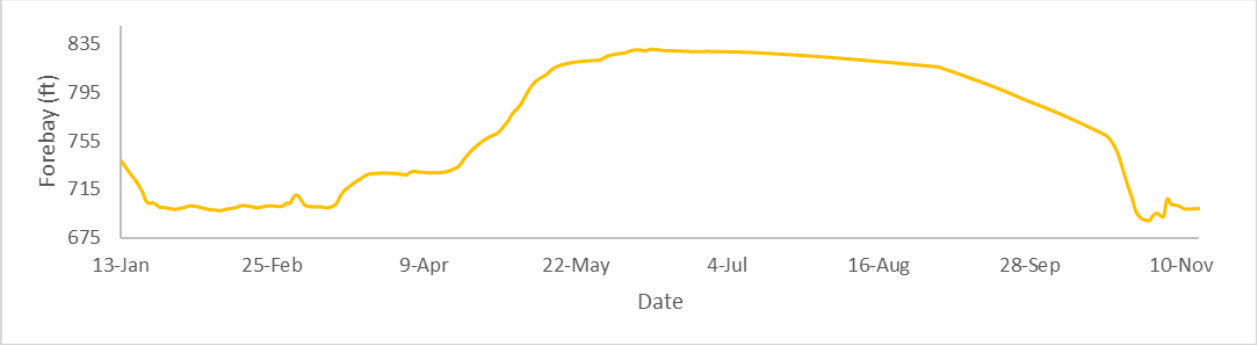
Note: Discharge data was taken from USGS gauge site number 14159200, 250 meters upstream.



Fall Creek Dam Tailrace Operational and Capture Data Since Start of Monitoring

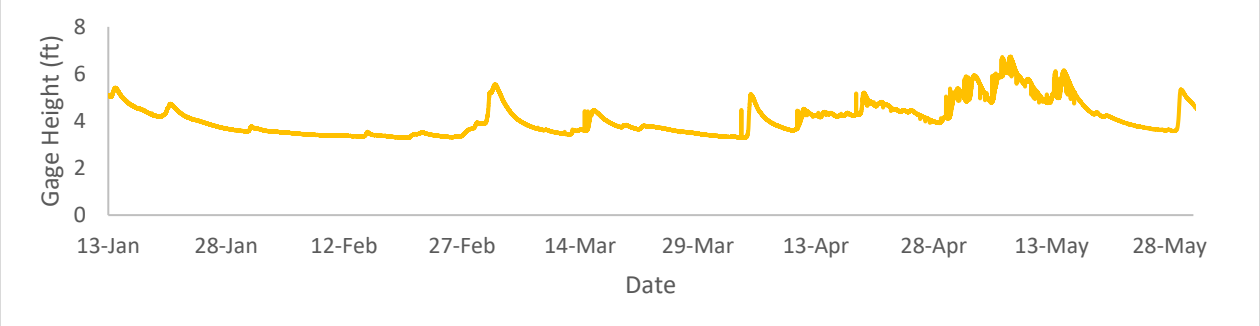




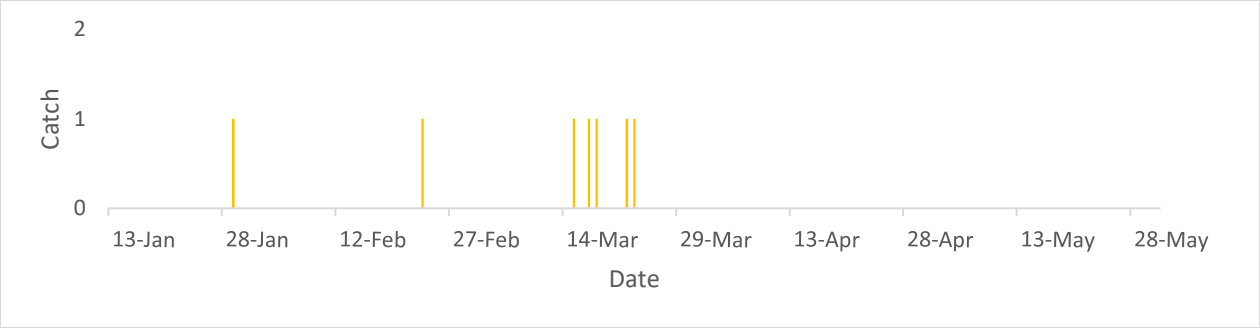


Note: Operational data was being tracked for Fall Creek Head of Reservoir site prior to initiation of Fall Creek Dam monitoring.

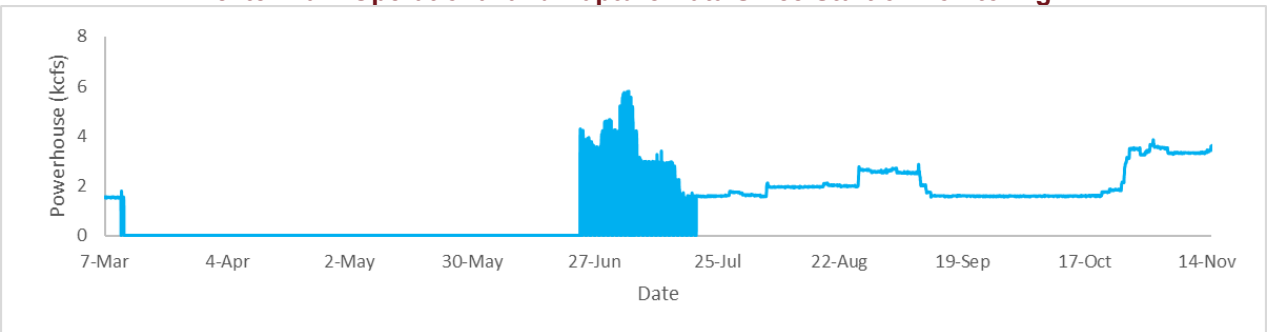
Fall Creek Head of Reservoir Operational and Capture Data Since Start of Monitoring

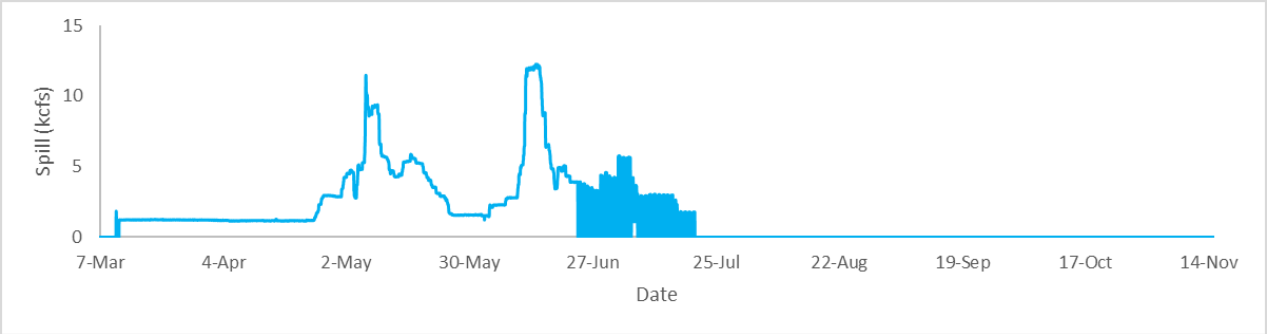


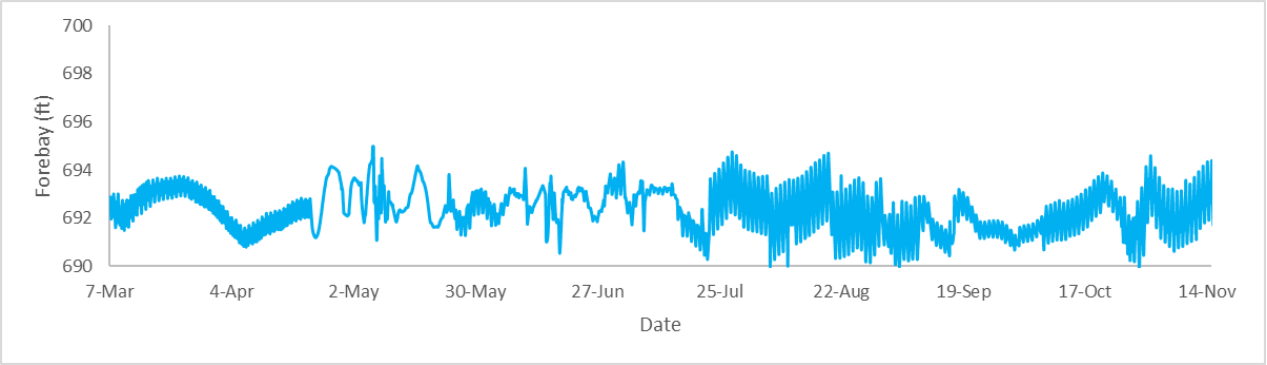
Note: Gauge height data was taken from USGS stream gauge number 14150290, 1.2 rkms downstream.

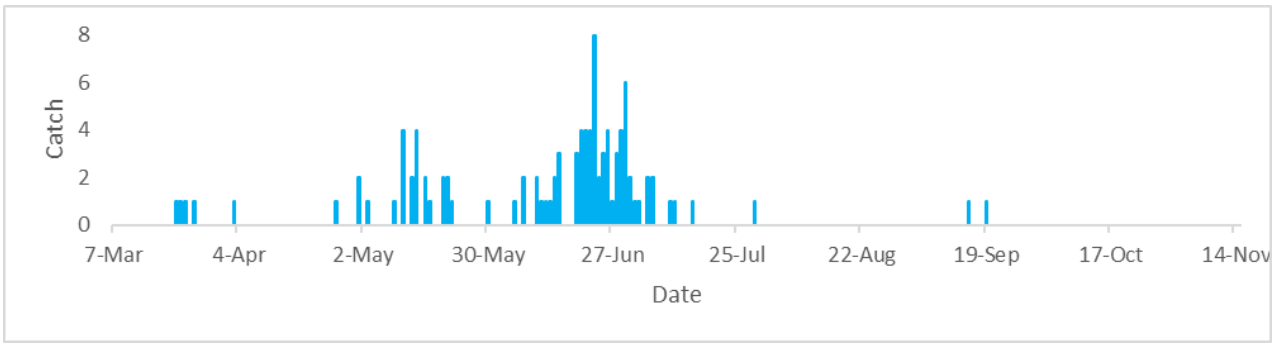


Dexter Dam Operational and Capture Data Since Start of Monitoring

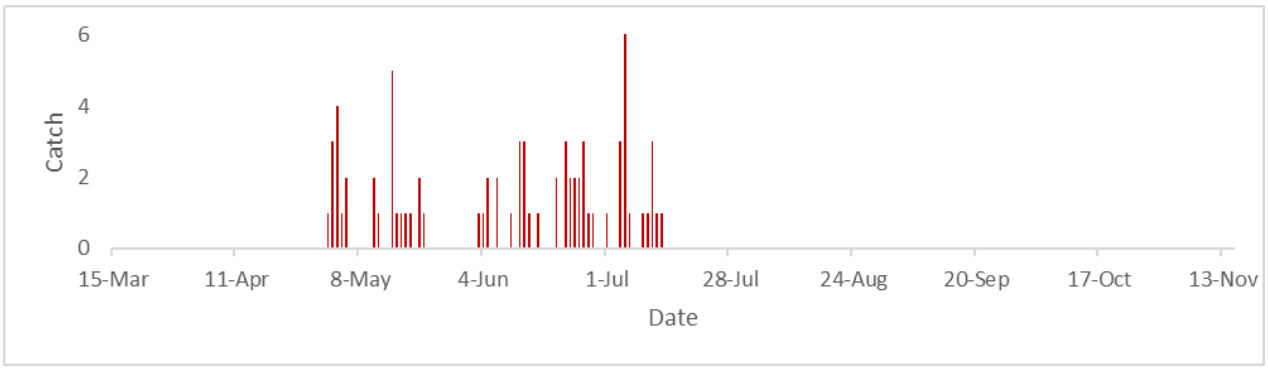




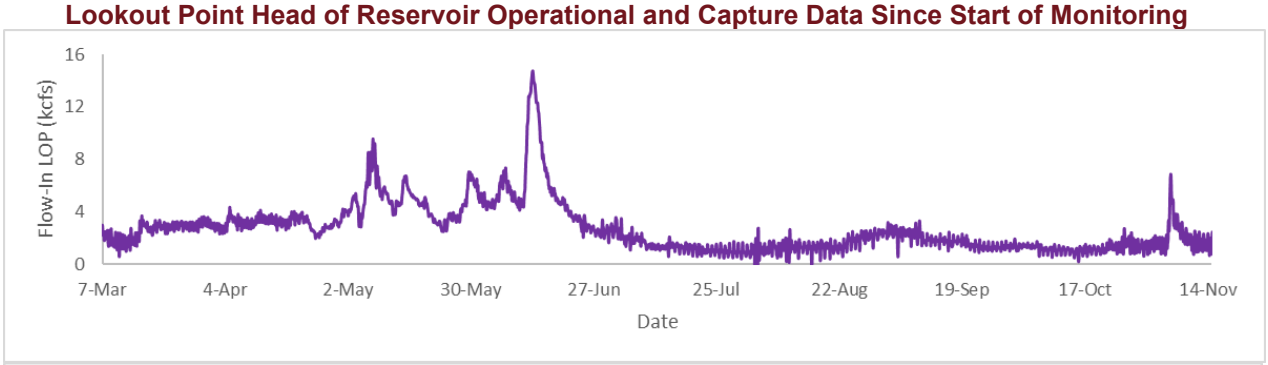


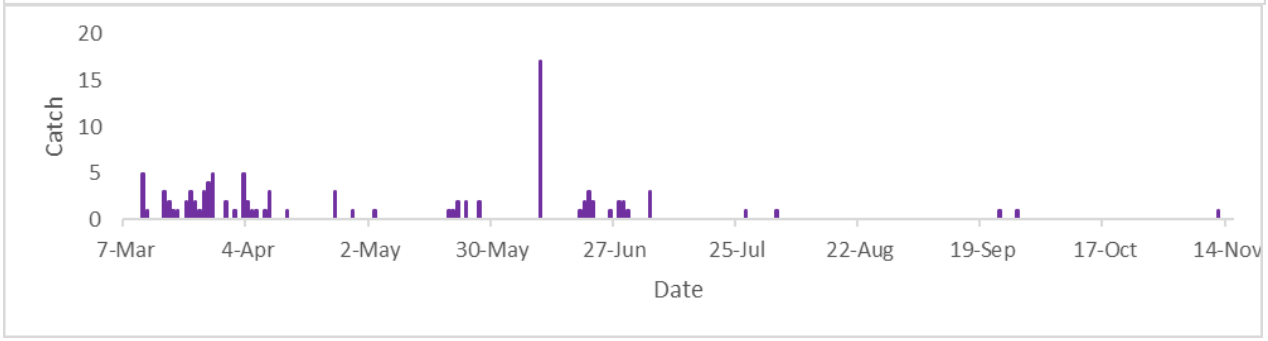


Lookout Dam Tailrace Operational and Capture Data

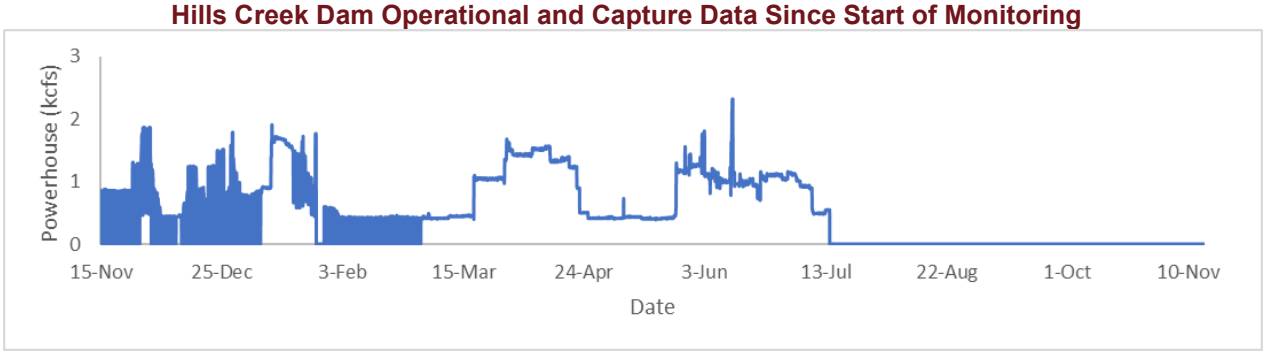


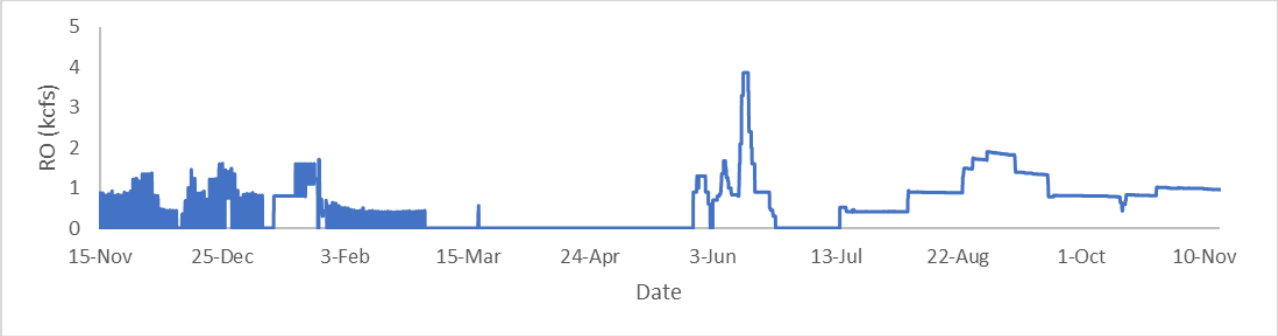
Lookout Point Head of Reservoir Operational and Capture Data Since Start of Monitoring

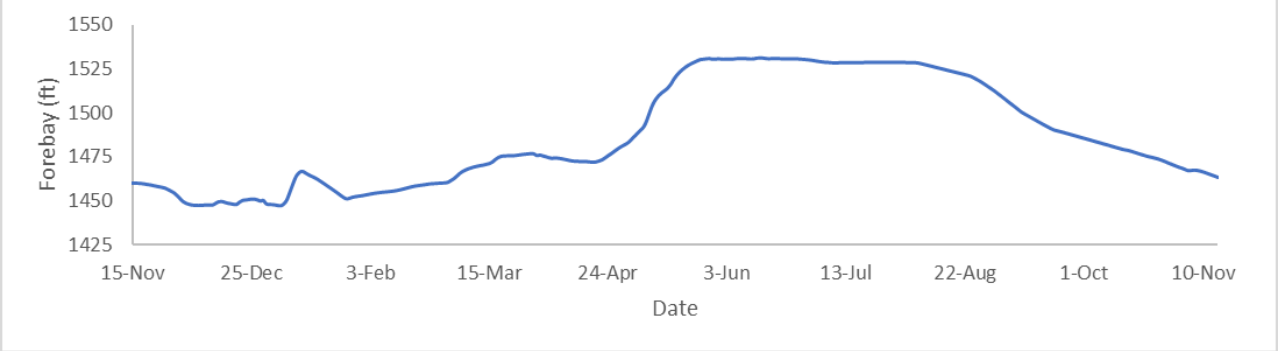


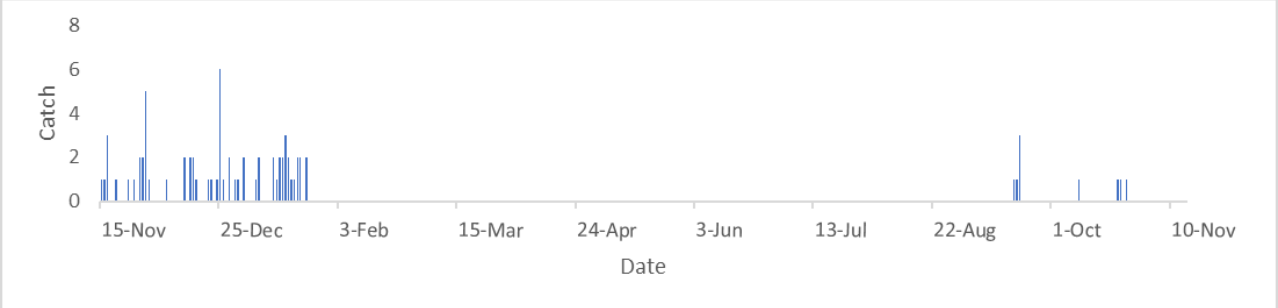


Hills Creek Dam Operational and Capture Data Since Start of Monitoring




RO (kcfs)
5
4
3
2
1
0
15-Nov
25-Dec
3-Feb
15-Mar
24-Apr
3-Jun
13-Jul
22-Aug
1-Oct
10-Nov
Date


Forebay (ft)
1550
1525
1500
1475
1450
1425
15-Nov
25-Dec
3-Feb
15-Mar
24-Apr
3-Jun
13-Jul
22-Aug
1-Oct
10-Nov
Date


Catch
8
6
4
2
0
15-Nov
25-Dec
3-Feb
15-Mar
24-Apr
3-Jun
13-Jul
22-Aug
1-Oct
10-Nov
Date

Appendix C

Hills Creek Dam	Release #	Recapture #	Capture Efficiency
PH Route	596	20	3.36% (20/596)
RO Trap	RO Route- 605	13	2.15% (13/605)
	PH Route- 592	5	0.84% (5/592)

Cougar Dam	Release #	Recapture #	Capture Efficiency
PH Route	405	40	9.88% (40/405)
RO Route	410	28	6.83% (28/410)

Dexter Dam	Release #	Recapture #	Capture Efficiency
Spill	988	2	0.2% (2/988)
Powerhouse	N/A	N/A	N/A

Green Peter Dam Tailrace- Middle Santiam	Release #	Recapture #	Capture Efficiency
8ft Trap	643	4	0.62% (4/643)

Big Cliff Dam	Release #	Recapture #	Capture Efficiency
8ft Trap	996	40	4.01% (40/996)

Cougar Dam Head of Reservoir	Release #	Recapture #	Capture Efficiency
5ft trap	806	41	5.1% (41/806)

Cougar Dam Head of Reservoir	Release #	Recapture #	Capture Efficiency
5ft trap	515	7	1.4% (7/515)

Cougar Dam	Release #	Recapture #	Capture Efficiency
PH Route	357	62	17.37% (62/357)
RO Route	378	21	5.56% (21/378)

Dexter Dam	Release #	Recapture #	Capture Efficiency
Spill	1000	43	4.3% (43/1000)
Powerhouse	N/A	N/A	N/A

Lookout Point Head of Reservoir	Release #	Recapture #	Capture Efficiency
04/05/2022	993	53	5.3% (53/993)
04/14/2022	989	19	1.9% (19/989)

Fall Creek Dam	Release #	Recapture #	Capture Efficiency
RO	518	11	2.1% (11/518)

Fall Creek Dam	Release #	Recapture #	Capture Efficiency
RO	513	0	0% (0/513)

Cougar Dam	Release #	Recapture #	Capture Efficiency
RO Route	993	63	6.34% (63/993)

Dexter Dam	Release #	Recapture #	Capture Efficiency
Spill	1019	67	6.6% (67/1,019)
Powerhouse	N/A	N/A	N/A

Lookout Point Head of Reservoir	Release #	Recapture #	Capture Efficiency
05/24/2022	1007	125	12.4% (125/1007)

Big Cliff Dam	Release #	Recapture #	Capture Efficiency
8ft Trap	1000	21	2.1% (21/1000)

Cougar Dam	Release #	Recapture #	Capture Efficiency
PH Route	500	148	29.6% (148/500)

Cougar Dam Head of Reservoir	Release #	Recapture #	Capture Efficiency
5ft trap	551	56	10.2% (56/551)

Big Cliff Dam	Release #	Recapture #	Capture Efficiency
8ft Trap	1000	92	9.2% (92/1000)

Cougar Dam	Release #	Recapture #	Capture Efficiency
PH Route	501	31	6.2% (31/501)

Big Cliff Dam	Release #	Recapture #	Capture Efficiency
8 ft Trap	500	14	2.8% (14/500)

Foster Dam Head of Reservoir- South Santiam	Release #	Recapture #	Capture Efficiency
5 ft Trap	1063	0	0% (0/1063)

Dexter Dam	Release #	Recapture #	Capture Efficiency
Spill	N/A	N/A	N/A
Powerhouse	981	1	0.1% (1/981)

Lookout Point Head of Reservoir	Release #	Recapture #	Capture Efficiency
07/20/2022	1005	9	0.9% (9/1005)

Run of River Trapping Efficiency

Foster Dam Head of Reservoir- South Santiam To-Date	Release #	Recapture #
Chinook	46	4
Winter Steelhead	186	16

Cougar Dam 10/15/2022-10/31/2022	Release #	Recapture #
PH	126	8
RO	20	1

Cougar Dam 11/1/2022-11/15/2022	Release #	Recapture #
PH	0	0
RO	464	22

Appendix D

Summary of Project PIT Tagged Fish for Reporting Period

Site	Trap	# of PIT Tagged Fish
Big Cliff Dam	8 ft	0
Foster Dam Head of Reservoir- South Santiam	5 ft	76
Cougar Dam	PWR	0
Cougar Dam	RO	476
Cougar Dam Head of Reservoir	5 ft	14
Green Peter Tailrace- Middle Santiam	8 ft	0
Dexter Dam Tailrace	5 ft	0
Lookout Point Head of Reservoir	5 ft	1
Lookout Dam Tailrace	Spill	0
Lookout Dam Tailrace	PWR	0
Hills Creek Dam Tailrace	PWR	0
Hills Creek Dam Tailrace	RO	1

To Date Summary of Captured Fish Containing PIT Tags

Site	Trap	PIT Tag #	Date	Species
Cougar Dam	RO	3DD.0077780789	1/8/2022	Chinook
Cougar Dam	RO	384.36F2B2C55F	1/14/2022	Chinook
Cougar Dam	PH	3DD.003DA4DC74	3/3/2022	Chinook
Cougar Dam	PH	3DD.003E14CA70	3/4/2022	Chinook
Cougar Dam	PH	384.36F2B2C5D2	3/4/2022	Chinook
Cougar Dam	PH	3DD.003E14CC20	3/5/2022	Chinook
Cougar Dam	PH	3DD.003E14C9D6	3/6/2022	Chinook
Cougar Dam	PH	3DD.003E14CD8D	3/8/2022	Chinook
Cougar Dam	RO	3DD.003BD59645	4/7/2022	Chinook
Cougar Dam	PH	3DD.003BD21883	7/23/2022	O. mykiss
Cougar Dam	PH	3DD.003BD21883	7/26/2022	O. mykiss
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE1849	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE22CE	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE2AAF	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE1885	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE24AD	9/23/2022	Chinook

Cougar Dam Head of Reservoir	5 ft	3DD.003BEE2293	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE26D4	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE2422	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE2AB1	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE227B	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE22B9	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE24D6	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE22B8	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE223A	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE18C0	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE1965	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE224D	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE242B	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE2464	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE244B	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE2443	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE26F9	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE2449	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE2519	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE2517	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE2AF3	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE18D2	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE18E3	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE185B	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE223F	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE270D	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE16F5	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE2284	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE175F	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE2252	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE223B	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE240E	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE26D0	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE2253	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE2489	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE244E	9/23/2022	Chinook

Cougar Dam Head of Reservoir	5 ft	3DD.003BEE190D	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE18D8	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE2AC4	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE176A	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE1917	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE2AEF	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE192E	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE2266	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE1916	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE16D7	9/23/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE2216	9/24/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE1741	9/24/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE2AFB	9/24/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE16BC	9/25/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE26CC	9/27/2022	Chinook
Cougar Dam	PH	3DD.003BEE22C0	10/4/2022	Chinook
Cougar Dam	PH	3DD.003BEE2C55	10/7/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE192F	10/6/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE241F	10/6/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE2711	10/6/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE26FE	10/6/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE18AA	10/6/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE22C8	10/6/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE1933	10/6/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE224B	10/6/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE2474	10/6/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE170A	10/6/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE16F8	10/6/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE2291	10/6/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE1953	10/6/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE226B	10/6/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE1757	10/6/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE2506	10/6/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE225E	10/6/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE18D4	10/6/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE1857	10/6/2022	Chinook

Cougar Dam Head of Reservoir	5 ft	3DD.003BEE2418	10/6/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE18B6	10/6/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE2492	10/6/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE18EA	10/6/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE26BE	10/6/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE172B	10/6/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE2713	10/6/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE26C4	10/6/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE1706	10/6/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE18CA	10/6/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE2AA7	10/6/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE18E2	10/6/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE18F0	10/6/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE26EA	10/6/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE176B	10/6/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE1957	10/6/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE226D	10/6/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE1901	10/6/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE18B5	10/7/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE16D3	10/7/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE16EC	10/7/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE186E	10/7/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE23FC	10/7/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE1910	10/8/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE192B	10/9/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE16C5	10/10/2022	Chinook
Cougar Dam	RO	3DD.003BEE2494	10/26/2022	Chinook
Cougar Dam	RO	3DD.003BEE2482	10/26/2022	Chinook
Cougar Dam	RO	3DD.003BEE29DE	10/29/2022	Chinook
Cougar Dam	RO	3DD.003BEE17FB	10/29/2022	Chinook
Cougar Dam	RO	3DD.003BEE181A	10/29/2022	Chinook
Cougar Dam	RO	3DD.003BEE242F	10/29/2022	Chinook
Cougar Dam	RO	3DD.003BEE1837	10/29/2022	Chinook
Cougar Dam	RO	3DD.003BEE1828	10/29/2022	Chinook
Cougar Dam	RO	3DD.003BD226D3	10/30/2022	Chinook
Cougar Dam	RO	3DD.003BEE29F6	10/30/2022	Chinook

Cougar Dam	RO	3DD.003BEE29FB	10/30/2022	Chinook
Cougar Dam	RO	3DD.003BD226A9	10/30/2022	Chinook
Cougar Dam	RO	3DD.003BD226D5	10/30/2022	Chinook
Cougar Dam	RO	3DD.003BD226DE	10/30/2022	Chinook
Cougar Dam	RO	3DD.003BEE29F2	10/30/2022	Chinook
Cougar Dam	RO	3DD.003BEE264C	10/31/2022	Chinook
Cougar Dam	RO	3DD.003BEE2483	10/31/2022	Chinook
Cougar Dam	RO	3DD.003BEE2213	10/31/2022	Chinook
Cougar Dam	RO	3DD.003BEE2A13	10/28/2022	Chinook
Cougar Dam	RO	3DD.003BEE1928	10/28/2022	Chinook
Cougar Dam	RO	3DD.003BEE24D7	10/28/2022	Chinook
Cougar Dam	RO	3DD.003BEE26D4	10/28/2022	Chinook
Cougar Dam	RO	3DD.003BEE2A19	10/28/2022	Chinook
Cougar Dam	RO	3DD.003BEE2C5E	10/28/2022	Chinook
Cougar Dam	RO	3DD.003BEE2C57	10/28/2022	Chinook
Cougar Dam	RO	3DD.003BEE2C57	10/28/2022	Chinook
Cougar Dam	RO	3DD.003BEE2A34	10/28/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	384.3515E4B149	10/16/2022	Bull Trout
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE2C4C	10/26/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE16FD	10/26/2022	Chinook
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BEE1651	10/25/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BEE1676	10/25/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BEE167B	10/25/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BEE1678	10/25/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BEE167D	10/25/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BEE1684	10/28/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BEE1674	10/28/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BEE166C	10/28/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BEE1691	10/28/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BEE17F5	10/30/2022	O. mykiss
Cougar Dam	RO	3DD.003BD39723	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BD3974B	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BD39734	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CEA	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CB0	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BEE172A	11/2/2022	Chinook

Cougar Dam	RO	3DD.003BEE2AF1	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CA9	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD23008	11/3/2022	Chinook
Cougar Dam	RO	3DD.003BEE2485	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BEE26F1	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BEE1939	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD23012	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BEE174C	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BEE1DD4	11/6/2022	Chinook
Cougar Dam	RO	3DD.003BD2275D	11/8/2022	Chinook
Cougar Dam	RO	3DD.003BD22794	11/8/2022	Chinook
Cougar Dam	RO	3DD.003BD22792	11/8/2022	Chinook
Cougar Dam	RO	3DD.003BD2276F	11/8/2022	Chinook
Cougar Dam	RO	3DD.003BEE1DE9	11/11/2022	Chinook
Cougar Dam	RO	3DD.003BD22797	11/12/2022	Chinook
Cougar Dam	RO	3DD.003BEE22AB	11/12/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE12B9	11/11/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE0DE6	11/11/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE0F51	11/11/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE0BFC	11/11/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE1474	11/11/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE12BB	11/11/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE12DC	11/11/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE0F62	11/11/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE07FC	11/11/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE147E	11/11/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BRR1319	11/11/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE1311	11/11/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE0AAB	11/11/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE0C58	11/11/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE127E	11/11/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE0B97	11/11/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE0B75	11/11/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE0705	11/11/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE0DBE	11/11/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE0AC4	11/11/2022	Chinook

Cougar Dam Head of Reservoir	5 ft	3DD.003BEE0BA3	11/11/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE1323	11/11/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE0C82	11/11/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.033BEE0AA2	11/11/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE0F79	11/11/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE127A	11/11/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE15FD	11/11/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE0B4B	11/11/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE1616	11/11/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE0C72	11/11/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE0FC8	11/11/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE12C5	11/11/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BD39634	11/11/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BD39610	11/11/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE7640	11/12/2022	Chinook
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BEE17E8	11/2/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD226AE	11/2/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD22787	11/9/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD2272F	11/10/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD22734	11/10/2022	Chinook
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD39710	11/11/2022	Chinook
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BEE1DF7	11/14/2022	Chinook
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD. 003BEE2A9E	11/3/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BEE2A44	11/3/2022	Chinook

List of EAS PIT Tagged Fish for Reporting Period

Site	Trap	PIT Tag #	Date	Species
Cougar Dam	RO	3DD.003BEE1CEB	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CC8	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CD4	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CF2	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CA4	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CE0	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CB7	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CDA	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CB1	11/1/2022	Chinook

Cougar Dam	RO	3DD.003BEE1CC2	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CA6	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CE4	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CC4	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CC5	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CDE	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CA9	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CDC	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CCF	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CA2	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CAE	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CBF	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CE7	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CD8	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1C94	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CB5	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CEA	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CED	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CD5	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CEF	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CE9	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CC7	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CBA	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1C9C	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CE6	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CC6	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CE1	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CEC	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CB0	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1C90	11/1/2022	Chinook
Cougar Dam	RO	3DD. 003BEE1CF0	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CBB	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CAA	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CE5	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CDB	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1C9F	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CCA	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CB8	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CA1	11/1/2022	Chinook

Cougar Dam	RO	3DD.003BEE1C8F	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1C93	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CB6	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CD2	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CCD	11/1/2022	Chinook
Cougar Dam	RO	3DD.003BD226C8	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD226CB	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD2269C	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD22694	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD226AF	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD22690	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD226B2	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD22695	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD226C3	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD2268E	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD22696	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD2269A	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD2269E	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD22698	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD226BA	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD226A0	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD226B7	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD2269F	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD226B0	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD226B4	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD22699	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD226B1	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD226A6	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD226A7	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD226AA	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD2268B	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD2269D	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD2268A	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD2268C	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD22692	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD22691	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD226A2	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD226CC	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD2268D	11/2/2022	Chinook

Cougar Dam	RO	3DD.003BD226AB	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD2268F	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD226A3	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD23049	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD23047	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD23003	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD23022	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD23029	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD2301E	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD2303D	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD23041	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD2300C	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD23001	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD2300A	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD2300B	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD23048	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD23040	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD23014	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD23018	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD22FFC	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD2300E	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD22FFB	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD23005	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD23019	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD23027	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD23024	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD23031	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD23030	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD23034	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD2301C	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD23037	11/2/2022	Chinook
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Cougar Dam	RO	3DD.003BD2300D	11/2/2022	Chinook
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Cougar Dam	RO	3DD.003BD22FF0	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD22FEB	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD2302B	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD22FED	11/2/2022	Chinook

Cougar Dam	RO	3DD.003BD22FEF	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD23009	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD23046	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD23045	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD2304C	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD22FF4	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD22FEC	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD22FFF	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD23004	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD22FF7	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD2304B	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD2303A	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD23043	11/2/2022	Chinook
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Cougar Dam	RO	3DD.003BD23013	11/2/2022	Chinook
Cougar Dam	RO	3DD.003BD2304A	11/3/2022	Chinook
Cougar Dam	RO	3DD.003BD23020	11/3/2022	Chinook
Cougar Dam	RO	3DD.003BD23042	11/3/2022	Chinook
Cougar Dam	RO	3DD.003BD23044	11/3/2022	Chinook
Cougar Dam	RO	3DD.003BD23032	11/3/2022	Chinook
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Cougar Dam	RO	3DD.003BD22FF2	11/3/2022	Chinook
Cougar Dam	RO	3DD.003BD2303C	11/3/2022	Chinook
Cougar Dam	RO	3DD.003BD226A2	11/3/2022	Chinook
Cougar Dam	RO	3DD.003BD23010	11/3/2022	Chinook
Cougar Dam	RO	3DD.003BD22FF8	11/3/2022	Chinook
Cougar Dam	RO	3DD.003BD23016	11/3/2022	Chinook
Cougar Dam	RO	3DD.003BD2302B	11/3/2022	Chinook
Cougar Dam	RO	3DD.003BD2301D	11/4/2022	Chinook
Cougar Dam	RO	3DD.003BD23006	11/4/2022	Chinook
Cougar Dam	RO	3DD.003BD22FF1	11/4/2022	Chinook
Cougar Dam	RO	3DD.003BD2302F	11/4/2022	Chinook
Cougar Dam	RO	3DD.003BD22FFD	11/4/2022	Chinook
Cougar Dam	RO	3DD.003BD23012	11/4/2022	Chinook
Cougar Dam	RO	3DD.003BD2301F	11/4/2022	Chinook
Cougar Dam	RO	3DD.003BD22FEA	11/4/2022	Chinook
Cougar Dam	RO	3DD.003BD2300F	11/4/2022	Chinook
Cougar Dam	RO	3DD.003BD23002	11/4/2022	Chinook

Cougar Dam	RO	3DD.003BD22FF6	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD22FF5	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD23021	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD23000	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD23023	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD23028	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD23038	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD23036	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD23033	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD23035	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD23026	11/5/2022	Chinook
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Cougar Dam	RO	3DD.003BD23039	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD23025	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD2302A	11/5/2022	Chinook
Cougar Dam	RO	3DD.003B0398F3	11/5/2022	Chinook
Cougar Dam	RO	3DD.003B03989D	11/5/2022	Chinook
Cougar Dam	RO	3DD.003B0398A1	11/5/2022	Chinook
Cougar Dam	RO	3DD.003B0398C3	11/5/2022	Chinook
Cougar Dam	RO	3DD.003B039898	11/5/2022	Chinook
Cougar Dam	RO	3DD.003B0398D8	11/5/2022	Chinook
Cougar Dam	RO	3DD.003B0398C8	11/5/2022	Chinook
Cougar Dam	RO	3DD.003B039897	11/5/2022	Chinook
Cougar Dam	RO	3DD.003B0398D2	11/5/2022	Chinook
Cougar Dam	RO	3DD.003B03989C	11/5/2022	Chinook
Cougar Dam	RO	3DD.003B0398F9	11/5/2022	Chinook
Cougar Dam	RO	3DD.003B0398EB	11/5/2022	Chinook
Cougar Dam	RO	3DD.003B0398BC	11/5/2022	Chinook
Cougar Dam	RO	3DD.003B0398F6	11/5/2022	Chinook
Cougar Dam	RO	3DD.003B0398C6	11/5/2022	Chinook
Cougar Dam	RO	3DD.003B0398B6	11/5/2022	Chinook
Cougar Dam	RO	3DD.003B0398AD	11/5/2022	Chinook
Cougar Dam	RO	3DD.003B0398B4	11/5/2022	Chinook
Cougar Dam	RO	3DD.003B0398D7	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BEE1E17	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BEE1E19	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BEE1DFE	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BEE1DD7	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BEE1DCB	11/5/2022	Chinook

Cougar Dam	RO	3DD.003BEE1DCF	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BEE1DCD	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BEE1DC2	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BEE1DD1	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BEE1DFE	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BEE1DD4	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BEE1DF6	11/5/2022	Chinook
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Cougar Dam	RO	3DD.003BEE1DEE	11/5/2022	Chinook
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Cougar Dam	RO	3DD.003BEE1CD7	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BEE1CF1	11/5/2022	Chinook
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Cougar Dam	RO	3DD.003BEE1CA8	11/5/2022	Chinook
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Cougar Dam	RO	3DD.003BEE1DC6	11/5/2022	Chinook
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Cougar Dam	RO	3DD.003BD398A4	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398B7	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398D5	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398C9	11/5/2022	Chinook

Cougar Dam	RO	3DD.003BD398E8	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398EE	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398E9	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398BB	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398F4	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398F8	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398ED	11/5/2022	Chinook
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Cougar Dam	RO	3DD.003BD23015	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD23011	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD2302E	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD2304D	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD23017	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD22FFE	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD23007	11/5/2022	Chinook
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Cougar Dam	RO	3DD.003BD22FFA	11/5/2022	Chinook
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Cougar Dam	RO	3DD.003BD23007	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD22FF9	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD22FEE	11/5/2022	Chinook

Cougar Dam	RO	3DD.003BD22FFA	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398CB	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398C0	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398CC	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398AA	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398E3	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398EA	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398B5	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398BB	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398CA	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398C1	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398DF	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398C2	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398DE	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398B8	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398D8	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398DB	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398B1	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398F1	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398D3	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398EF	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398DD	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398E0	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398E7	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398A5	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398E6	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398D4	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398B7	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398BF	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398DC	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398E7	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398E4	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398F2	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398BE	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398B2	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398C7	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398E2	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398A9	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398AB	11/5/2022	Chinook

Cougar Dam	RO	3DD.003BD398A6	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD3989A	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398BA	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398AE	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD398A0	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BEE1DC1	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BEE1E07	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BEE1DF8	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BEE1E14	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BEE1DBF	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BEE1E16	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BEE1E0C	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BEE1E00	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BEE1E0D	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BEE1BC9	11/5/2022	Chinook
Cougar Dam	RO	3DD.003BD22783	11/6/2022	Chinook
Cougar Dam	RO	3DD.003BD22778	11/6/2022	Chinook
Cougar Dam	RO	3DD.003BD2278B	11/6/2022	Chinook
Cougar Dam	RO	3DD.003BD227B1	11/6/2022	Chinook
Cougar Dam	RO	3DD.003BD22767	11/6/2022	Chinook
Cougar Dam	RO	3DD.003BD2278F	11/6/2022	Chinook
Cougar Dam	RO	3DD.003BD2277B	11/6/2022	Chinook
Cougar Dam	RO	3DD.003BD22766	11/6/2022	Chinook
Cougar Dam	RO	3DD.003BD22752	11/6/2022	Chinook
Cougar Dam	RO	3DD.003BD22763	11/6/2022	Chinook
Cougar Dam	RO	3DD.003BD22758	11/6/2022	Chinook
Cougar Dam	RO	3DD.003BD22757	11/6/2022	Chinook
Cougar Dam	RO	3DD.003BD22780	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD2276F	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD22776	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD2275A	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD2275D	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD22792	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD22789	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD2279E	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD22751	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD22784	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD22791	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD2279C	11/7/2022	Chinook

Cougar Dam	RO	3DD.003BD22790	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD22793	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD22770	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD2278D	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD227AC	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD227A7	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD22775	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD227A5	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD227AB	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD22796	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD2278C	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD22794	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD2277F	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD22773	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD22768	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD22772	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD2279B	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD2276D	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD2278E	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD22771	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD22781	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD2279F	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD22759	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD22799	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD227B0	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD227A4	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD2279A	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD227AA	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD227A3	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD227A8	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD22785	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD227A6	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD22788	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD227A9	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD227AF	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD22797	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD227A1	11/7/2022	Chinook
Cougar Dam	RO	3DD.003BD398B9	11/8/2022	Chinook
Cougar Dam	RO	3DD.003BD3989F	11/8/2022	Chinook

Cougar Dam	RO	3DD.003BD398A7	11/8/2022	Chinook
Cougar Dam	RO	3DD.003BD398D0	11/8/2022	Chinook
Cougar Dam	RO	3DD.003BD398EC	11/8/2022	Chinook
Cougar Dam	RO	3DD.003BD398E5	11/8/2022	Chinook
Cougar Dam	RO	3DD.003BD398AC	11/8/2022	Chinook
Cougar Dam	RO	3DD.003BD398CF	11/8/2022	Chinook
Cougar Dam	RO	3DD.003BD398A3	11/8/2022	Chinook
Cougar Dam	RO	3DD.003BD3989B	11/8/2022	Chinook
Cougar Dam	RO	3DD.003BD398CE	11/8/2022	Chinook
Cougar Dam	RO	3DD.003BEE1DDE	11/8/2022	Chinook
Cougar Dam	RO	3DD.003BEE1DE3	11/8/2022	Chinook
Cougar Dam	RO	3DD.003BD398CD	11/8/2022	Chinook
Cougar Dam	RO	3DD.003BD398C5	11/8/2022	Chinook
Cougar Dam	RO	3DD.003BEE1DFA	11/8/2022	Chinook
Cougar Dam	RO	3DD.003BEE1DE6	11/8/2022	Chinook
Cougar Dam	RO	3DD.003BEE1DEF	11/8/2022	Chinook
Cougar Dam	RO	3DD.003BEE1E15	11/8/2022	Chinook
Cougar Dam	RO	3DD.003BEE1E0A	11/8/2022	Chinook
Cougar Dam	RO	3DD.003BEE1DE8	11/8/2022	Chinook
Cougar Dam	RO	3DD.003BEE1E0E	11/8/2022	Chinook
Cougar Dam	RO	3DD.003BEE1E02	11/8/2022	Chinook
Cougar Dam	RO	3DD.003BEE1DE5	11/9/2022	Chinook
Cougar Dam	RO	3DD.003BEE1E18	11/9/2022	Chinook
Cougar Dam	RO	3DD.003BEE1DC4	11/9/2022	Chinook
Cougar Dam	RO	3DD.003BEE1DBE	11/9/2022	Chinook
Cougar Dam	RO	3DD.003BEE1DCS	11/9/2022	Chinook
Cougar Dam	RO	3DD.003BEEIEIE	11/9/2022	Chinook
Cougar Dam	RO	3DD.003BEE1DD2	11/9/2022	Chinook
Cougar Dam	RO	3DD.003BEE1E03	11/9/2022	Chinook
Cougar Dam	RO	3DD.003BEE1DE9	11/9/2022	Chinook
Cougar Dam	RO	3DD.003BEE1DD3	11/9/2022	Chinook
Cougar Dam	RO	3DD.003BEE1E0B	11/9/2022	Chinook
Cougar Dam	RO	3DD.003BEE1DFF	11/9/2022	Chinook
Cougar Dam	RO	3DD.003BEE1E0F	11/9/2022	Chinook
Cougar Dam	RO	3DD.003BEE1DBC	11/9/2022	Chinook
Cougar Dam	RO	3DD.003BEE1DF1	11/9/2022	Chinook
Cougar Dam	RO	3DD.003BEE1DCE	11/9/2022	Chinook
Cougar Dam	RO	3DD.003BD3961B	11/11/2022	Chinook
Cougar Dam	RO	3DD.003BD39606	11/11/2022	Chinook

Cougar Dam	RO	3DD.003BD39625	11/11/2022	Chinook
Cougar Dam	RO	3DD.003BD395E6	11/11/2022	Chinook
Cougar Dam	RO	3DD.003BD395F2	11/11/2022	Chinook
Cougar Dam	RO	3DD.003BD395ED	11/11/2022	Chinook
Cougar Dam	RO	3DD.003BD3961E	11/11/2022	Chinook
Cougar Dam	RO	3DD.003BD3962D	11/11/2022	Chinook
Cougar Dam	RO	3DD.003BD39622	11/11/2022	Chinook
Cougar Dam	RO	3DD.003BD39607	11/11/2022	Chinook
Cougar Dam	RO	3DD.003BD39631	11/11/2022	Chinook
Cougar Dam	RO	3DD.003BD3961F	11/11/2022	Chinook
Cougar Dam	RO	3DD.003BD39636	11/11/2022	Chinook
Cougar Dam	RO	3DD.003BD3962A	11/11/2022	Chinook
Cougar Dam	RO	3DD.003BD39628	11/11/2022	Chinook
Cougar Dam	RO	3DD.003BD39614	11/11/2022	Chinook
Cougar Dam	RO	3DD.003BD39603	11/11/2022	Chinook
Cougar Dam	RO	3DD.003BD395FC	11/11/2022	Chinook
Cougar Dam	RO	3DD.003BD3962C	11/11/2022	Chinook
Cougar Dam	RO	3DD.003BD395FB	11/11/2022	Chinook
Cougar Dam	RO	3DD.003BD395FD	11/11/2022	Chinook
Cougar Dam	RO	3DD.003BD39672	11/11/2022	Chinook
Cougar Dam	RO	3DD.003BD3960E	11/11/2022	Chinook
Cougar Dam	RO	3DD.003BD39611	11/11/2022	Chinook
Cougar Dam	RO	3DD.003BD3960F	11/11/2022	Chinook
Cougar Dam	RO	3DD.003BD3960B	11/11/2022	Chinook
Cougar Dam	RO	3DD.003BD39615	11/11/2022	Chinook
Cougar Dam	RO	3DD.003BD395FB	11/11/2022	Chinook
Cougar Dam	RO	3DD.003BD3960A	11/11/2022	Chinook
Cougar Dam	RO	3DD.003BD39618	11/11/2022	Chinook
Cougar Dam	RO	3DD.003BD395F3	11/11/2022	Chinook
Cougar Dam	RO	3DD.003BD3963B	11/11/2022	Chinook
Cougar Dam	RO	3DD.003BD39635	11/11/2022	Chinook
Cougar Dam	RO	3DD.003BD3961D	11/12/2022	Chinook
Cougar Dam	RO	3DD.003BD39637	11/12/2022	Chinook
Cougar Dam	RO	3DD.003BD39623	11/12/2022	Chinook
Cougar Dam	RO	3DD.003BD3963A	11/12/2022	Chinook
Cougar Dam	RO	3DD.003BD39633	11/12/2022	Chinook
Cougar Dam	RO	3DD.003BD39626	11/12/2022	Chinook
Cougar Dam	RO	3DD.003BD395DD	11/12/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BD226AC	11/2/2022	Chinook

Cougar Dam Head of Reservoir	5 ft	3DD.003BD226CA	11/2/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BD398AF	11/8/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BD39899	11/8/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BD3989E	11/8/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BD398F5	11/8/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BD398B3	11/8/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BD398AZ	11/8/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE1DF0	11/9/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE1E05	11/9/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE1E09	11/9/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BD39602	11/13/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE1CE3	11/1/2022	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BD39624	11/10/2022	Chinook
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD226AE	11/1/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BEE2A99	11/2/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BEE2A9E	11/2/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BEE2A4D	11/2/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BEE2A44	11/2/2022	Chinook
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD39715	11/4/2022	Chinook
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD2276B	11/8/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD227AE	11/8/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD22798	11/8/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD2279D	11/8/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD22754	11/8/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD22756	11/8/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD2277C	11/8/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD22761	11/8/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD22795	11/8/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD2277E	11/8/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD22769	11/8/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD227B3	11/8/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD22787	11/8/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD2277D	11/8/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD2276E	11/8/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD22774	11/8/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD22786	11/8/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD227AD	11/8/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD227A0	11/8/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD2276A	11/8/2022	O. mykiss

Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD22779	11/8/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD22762	11/8/2022	Chinook
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD22753	11/8/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD227B2	11/8/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD2275E	11/8/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD2277A	11/8/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD22741	11/9/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD2273F	11/9/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD22734	11/9/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD2272F	11/9/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD2271B	11/9/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD2274D	11/9/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD22740	11/9/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD22733	11/9/2022	Chinook
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD22730	11/9/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD226F9	11/9/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD22747	11/9/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD22750	11/9/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD22701	11/9/2022	Chinook
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD2270B	11/9/2022	Chinook
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD226FC	11/9/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD226FE	11/9/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD226F2	11/9/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD22723	11/9/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BEE1E11	11/10/2022	Chinook
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BEE1DDF	11/10/2022	Chinook
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BEE1DD5	11/10/2022	Chinook
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BEE1E06	11/10/2022	Chinook
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BEE1DE2	11/10/2022	Chinook
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BEE1DBE	11/10/2022	Chinook
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BEE1DDD	11/10/2022	Chinook
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BEE1E08	11/10/2022	Chinook
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD39712	11/11/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD39717	11/11/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD39711	11/11/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD3972A	11/11/2022	Chinook
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD39724	11/12/2022	Chinook
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BEE1DF3	11/13/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BEE1DCA	11/13/2022	O. mykiss

Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BEE1DC0	11/13/2022	Chinook
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BEE1DEB	11/13/2022	Chinook
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BEE1DF7	11/13/2022	Chinook
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BEE1DE1	11/13/2022	Chinook
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD39763	11/14/2022	Chinook
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD39731	11/14/2022	Chinook
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD39726	11/14/2022	Chinook
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD39722	11/14/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD3971C	11/14/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BD3971C	11/14/2022	O. mykiss
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BEE2A3F	11/15/2022	Chinook
Hills Creek Dam	RO	3DD.003BEE1DCC	11/12/2022	Chinook
Lookout Point Head of Reservoir	5 ft	3DD.003BEE1DD9	11/12/2022	Chinook