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Report Period: July 16<sup>th</sup> to July 31<sup>st</sup>, 2023

Report No.: 2023 Willamette RST Bi-Weekly Report 07/16-07/31 by EAS

**Re: WILLAMETTE VALLEY FISH PASSAGE MONITORING VIA ROTARY SCREW TRAPS**

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## Project Schedule

**Table 1. Project Schedule.**

Site	Task	Start	End	Days
Big Cliff Dam RST	Operation	12/01/2021	02/15/2022	656
Big Cliff Dam RST	Operation	03/15/2022	10/15/2022	
Big Cliff Dam RST	Operation	10/15/2022	12/15/2022	
Big Cliff Dam RST	Operation	12/15/2022	3/15/2023	
Big Cliff Dam RST	Operation	3/16/2023	10/15/2023	
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	8
Big Cliff Dam Tailrace	Trap Efficiency Release (1,000 Fish)	05/25/2022	05/25/2022	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
Big Cliff Dam Tailrace	Trap Efficiency Release (510 Fish)	11/16/2022	11/16/2022	1
Big Cliff Dam Tailrace	Trap Efficiency Release (502 Fish)	12/14/2022	12/14/2022	1
Big Cliff Dam Tailrace	Trap Efficiency Release (1,010 Fish)	12/19/2022	12/19/2022	1
Big Cliff Dam Tailrace	Trap Efficiency Release (1,014 Fish)	12/21/2022	12/21/2022	1
Big Cliff Dam Tailrace	Trap Efficiency Release (704 Fish)	12/27/2022	12/27/2022	1
Big Cliff Dam Tailrace	Trap Efficiency Release (452 Fish)	12/29/2022	12/29/2022	1
Big Cliff Dam Tailrace	Trap Efficiency Release (500 Fish)	01/25/2023	01/25/2023	1
Big Cliff Dam Tailrace	Trap Efficiency Release (500 Fish)	02/17/2023	02/17/2023	1
Big Cliff Dam Tailrace	Trap Efficiency Release (2,968 Fish)	03/07/2023	03/07/2023	1

Big Cliff Dam Tailrace	Trap Efficiency Release (541 Fish)	03/10/2023	03/10/2023	1
Big Cliff Dam Tailrace	Trap Efficiency Release (498 Fish)	04/28/2023	04/28/2023	1
Big Cliff Dam Tailrace	Trap Efficiency Release (500 Fish)	05/23/2023	05/23/2023	1
Big Cliff Dam Tailrace	Trap Efficiency Release (500 Fish)	6/21/2023	6/21/2023	1
Big Cliff Dam Tailrace	Trap Efficiency Release (500 Fish)	7/5/2023	7/5/2023	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	05/07/2022	66
Green Peter Tailrace- Middle Santiam River RST	Operation	03/14/2023	11/30/2023	261
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
Green Peter Tailrace- Middle Santiam River RST	Trap Install	03/14/2023	03/14/2023	1
Green Peter Tailrace- Middle Santiam River RST	Anchor Install	3/23/2023	3/31/2023	8
Green Peter Tailrace- Middle Santiam River RST	Trap Efficiency Release (999 Live Fish)	5/11/2023	5/11/2023	1
Green Peter Tailrace- Middle Santiam River RST	Trap Efficiency Release (1,001 Dead Fish)	5/11/2023	5/11/2023	1
Green Peter Tailrace- Middle Santiam River RST	Trap Efficiency Release (1,000 Fish)	5/25/2023	5/25/2023	1
Green Peter Tailrace- Middle Santiam River RST	Trap Efficiency Release (1000 Dead Fish)	6/30/2023	6/30/2023	1
Green Peter Tailrace- Middle Santiam River RST	Trap Efficiency Release (1000 Live Fish)	6/30/2023	6/30/2023	1
Green Peter Tailrace- Middle Santiam River RST	Trap Efficiency Release (1009 Live Fish)	7/27/2023	7/27/2023	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	03/16/2022	06/30/2022	107
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	Operation	09/02/2022	11/30/2022	90
Foster Dam Head of Reservoir- South Santiam River RST	Trap Removal	12/01/2022	12/01/2022	1
Foster Dam Head of Reservoir- South Santiam River RST	Trap Install	01/30/2023	01/30/2023	1
Foster Dam Head of Reservoir- South Santiam River RST	Operation	02/01/2023	11/30/2023	302
Foster Dam Head of Reservoir- South Santiam River RST	Trapping Efficiency Release (1,000 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 (1,006 fish)	11/01/2022	11/01/2022	1
Foster Dam Head of Reservoir-South Santiam River RST	Trapping Efficiency Release (1,007 fish)	11/09/2022	11/09/2022	1
Foster Dam Head of Reservoir-South Santiam River RST	Trapping Efficiency Release (1,009 fish)	11/15/2022	11/15/2022	1
Foster Dam Head of Reservoir-South Santiam River RST	Trapping Efficiency Release (933 fish)	11/22/2022	11/22/2022	1
Foster Dam Head of Reservoir-South Santiam River RST	Trap Removal	12/06/2022	12/06/2022	1
Foster Dam Head of Reservoir-South Santiam River RST	Trap Install	1/31/2023	1/31/2023	1
Foster Dam Head of Reservoir-South Santiam River RST	Trapping Efficiency Release (1005 fish)	02/27/2023	02/27/2023	1
Foster Dam Head of Reservoir-South Santiam River RST	Trapping Efficiency Release (995 fish)	03/09/2023	03/09/2023	1
Foster Dam Head of Reservoir-South Santiam River RST	Trapping Efficiency Release (1,025 fish)	03/15/2023	03/15/2023	1
Foster Dam Head of Reservoir-South Santiam River RST	Trapping Efficiency Release (985 fish)	05/11/2023	05/11/2023	1
Foster Dam Head of Reservoir-South Santiam River RST	Trapping Efficiency Release (1003 fish)	6/2/2023	6/2/2023	1
Foster Dam Head of Reservoir-South Santiam River RST	Trapping Efficiency Release (1000 fish)	6/29/2023	6/29/2023	1
Foster Dam Head of Reservoir-South Santiam River RST	Trapping Efficiency Release (989 fish)	7/27/2023	7/27/2023	1
Cougar Dam RST	Operation	11/30/2021	11/30/2022	730
Cougar Dam RST	Operation	11/30/2022	11/30/2023	
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	Trap Efficiency Release (504 Fish, RO route)	11/22/2022	11/22/2022	1
Cougar Dam	Trap Efficiency Release (506 Fish, RO route)	12/13/2022	12/13/2022	1
Cougar Dam	Trap Efficiency Release (1,015 Fish, RO route)	12/15/2022	12/15/2022	1
Cougar Dam	Trap Efficiency Release	12/20/2022	12/20/2022	1

	(500 Fish, RO route)			
Cougar Dam	Trap Efficiency Release (445 Fish, RO route)	12/28/2022	12/28/2022	1
Cougar Dam	Trap Efficiency Release (843 Fish, PH route)	01/12/2023	01/12/2023	1
Cougar Dam	Trap Efficiency Release (500 Fish, RO route)	01/30/2023	01/30/2023	1
Cougar Dam	Trap Efficiency Release (511 Fish, RO route)	3/23/2023	3/23/2023	1
Cougar Dam	Trap Efficiency Release (500 Fish, PH route)	3/23/2023	3/23/2023	1
Cougar Dam	Trap Efficiency Release (491 Fish, RO route)	3/30/2023	3/30/2023	1
Cougar Dam	Trap Efficiency Release (497 Fish, PH route)	3/30/2023	3/30/2023	1
Cougar Dam	Trap Efficiency Release (500 Fish, RO route)	4/18/2023	4/18/2023	1
Cougar Dam	Trap Efficiency Release (197 Fish, PH route)	4/18/2023	4/18/2023	1
Cougar Dam	Trap Efficiency Release (499 Fish, RO route)	05/10/2023	05/10/2023	1
Cougar Dam	Trap Efficiency Release (499 Fish, PH route)	05/10/2023	05/10/2023	1
Cougar Dam	Trap Efficiency Release (507 Fish, PH route)	6/6/2023	6/6/2023	1
Cougar Dam	Temporary RO removal	6/8/2023	6/8/2023	1
Cougar Dam	Trap Efficiency Release (510 Fish, PH route)	7/26/2023	7/26/2023	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	Operation	09/16/2022	11/30/2022	76
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
Cougar Dam Head of Reservoir	Trap Efficiency Release (719 Fish)	11/16/2022	11/16/2022	1
Cougar Dam Head of Reservoir	Trap Efficiency Release (752 Fish)	11/23/2022	11/23/2022	1
Cougar Dam Head of Reservoir	Trap Efficiency Release (620 Fish)	11/29/2022	11/29/2022	1
Cougar Dam Head of Reservoir	Trap Removal	11/30/2022	11/30/2022	1
Cougar Dam Head of Reservoir	Trap Install	1/31/2023	1/31/2023	1
Cougar Dam Head of Reservoir	Trap Efficiency Release (506 Fish)	4/14/2023	4/14/2023	1
Cougar Dam Head of Reservoir	Trap Efficiency Release (508 Fish)	05/10/2023	05/10/2023	1

Cougar Dam Head of Reservoir	Trap Efficiency Release (597 Fish)	05/16/2023	05/16/2023	1
Cougar Dam Head of Reservoir	Trap Efficiency Release (510 Fish)	6/8/2023	6/8/2023	1
Cougar Dam Head of Reservoir	Trap Efficiency Release (758 Fish)	7/27/2023	7/27/2023	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	649
Dexter Dam Tailrace RST	Operation	12/16/2022	12/16/2023	
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
Dexter Dam Tailrace RST	Trap Efficiency Release (991 Fish)	11/17/2022	11/17/2022	1
Dexter Dam Tailrace RST	Trap Efficiency Release (1,010 Fish)	12/06/2022	12/06/2022	1
Dexter Dam Tailrace RST	Trap Efficiency Release (1,025 Fish)	12/15/2022	12/15/2022	1
Dexter Dam Tailrace RST	Trap Efficiency Release (1,200 Fish)	3/16/2023	3/16/2023	1
Dexter Dam Tailrace RST	Trap Efficiency Release (1,199 Fish)	3/29/2023	3/29/2023	1
Dexter Dam Tailrace RST	Trap Efficiency Release (4,006 Fish)	5/25/2023	5/25/2023	1
Dexter Dam Tailrace RST	Trap Efficiency Release (4,010 Fish)	6/7/2023	6/7/2023	1
Dexter Dam Tailrace RST	Trap Efficiency Release (4028 Fish)	6/21/2023	6/21/2023	1
Dexter Dam Tailrace RST	Trap Efficiency Release (4000 Fish)	7/6/2023	7/6/2023	1
Lookout Dam Tailrace RSTs	Operation	03/15/2022	07/31/2022	366
Lookout Dam Tailrace RSTs	Operation	08/01/2022	10/17/2022	
Lookout Dam Tailrace RSTs	Operation	10/17/2022	3/15/2023	
Lookout Dam Tailrace RSTs	Trap Efficiency Release (1,013 fish, PWR route)	04/13/2022	04/13/2022	1
Lookout Dam Tailrace RSTs	Trap Efficiency Release (3,999 fish, PWR route)	05/23/2023	05/23/2023	1
Lookout Dam Tailrace RSTs	Trap Efficiency Release (4011 fish, PWR route)	6/1/2023	6/1/2023	1
Lookout Dam Tailrace RSTs	Trap Efficiency Release (4010 fish, PWR route)	6/14/2023	6/14/2023	1
Lookout Dam Tailrace RSTs	Trap Efficiency Release (4010 fish, PWR route)	6/28/2023	6/28/2023	1
Lookout Dam Tailrace RSTs	Trap Efficiency Release (4012 fish, PWR route)	7/18/2023	7/18/2023	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	651
Lookout Point Head of Reservoir RST	Operation	12/16/2022	12/16/2023	
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
Lookout Point Head of Reservoir RST	Trap Efficiency Release (510 fish)	11/17/2022	11/17/2022	1
Lookout Point Head of Reservoir RST	Trap Efficiency Release (510 fish)	12/12/2022	12/12/2022	1
Lookout Point Head of Reservoir RST	Trap Efficiency Release (516 fish)	01/13/2023	01/13/2023	1
Lookout Point Head of Reservoir RST	Trap Efficiency Release (760 fish)	6/2/2023	6/2/2023	1
Lookout Point Head of Reservoir RST	Trap Efficiency Release (765 fish)	6/15/2023	6/15/2023	1
Lookout Point Head of Reservoir RST	Trap Efficiency Release (769 fish)	6/29/2023	6/29/2023	1
Lookout Point Head of Reservoir RST	Trap Efficiency Release (765 fish)	7/19/2023	7/19/2023	1
Fall Creek Dam Tailrace RST	Operation	03/15/2022	07/15/2022	123
Fall Creek Dam Tailrace RST	Operation	10/15/2023	03/15/2023	275
Fall Creek Dam Tailrace RST	Operation	03/15/2023	07/15/2023	
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 Dam Tailrace RST	Trap Efficiency Release (1,000 fish)	05/11/2023	05/11/2023	1
Fall Creek Dam Tailrace RST	Trap Efficiency Release (992 fish)	6/28/2023	6/28/2023	1
Fall Creek Dam Tailrace RST	Trap Efficiency Release (1006 fish)	7/11/2023	7/11/2023	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
Fall Creek Head of Reservoir RST	Highline Install	1/17/2023	1/17/2023	1
Fall Creek Head of Reservoir RST	Trap Install	1/18/2023	1/18/2023	1
Fall Creek Head of Reservoir RST	Operation	1/18/2023	05/30/2023	132
Fall Creek Head of Reservoir RST	Trap Efficiency Release (756 fish)	05/05/2023	05/05/2023	1
Fall Creek Head of Reservoir RST	Trap Efficiency Release (750 fish)	05/10/2023	05/10/2023	1
Fall Creek Head of Reservoir RST	Trap Efficiency Release (511 fish)	05/18/2023	05/18/2023	1
Fall Creek Head of Reservoir RST	Trap Efficiency Release	05/24/2023	05/24/2023	1

	(760 fish)			
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
Hills Creek Dam RO	Operation	09/15/2022	06/30/2023	289
Hills Creek Dam PWR	Operation	09/15/2022	06/30/2023	289
Hills Creek Dam	Trap Efficiency Release (514 fish, PWR Route)	12/07/2022	12/07/2022	1
Hills Creek Dam	Trap Efficiency Release (516 fish, RO Route)	12/13/2022	12/13/2022	1
Hills Creek Dam	Trap Efficiency Release (482 fish, RO Route)	02/25/2023	02/25/2023	1
Hills Creek Dam	Trap Efficiency Release (528 fish, PWR Route)	02/25/2023	02/25/2023	1
Hills Creek Dam	Trap Efficiency Release (506 fish, PWR Route)	4/26/2023	4/26/2023	1
Hills Creek Dam	Trap Efficiency Release (505 fish, PWR Route)	5/17/2023	5/17/2023	1
Hills Creek Dam	Trap Efficiency Release (508 fish, PWR Route)	6/3/2023	6/3/2023	1
Hills Creek Dam	Trap Efficiency Release (760 fish, RO Route)	6/13/2023	6/13/2023	1
Hills Creek Dam	Trap Efficiency Release (507 fish, PWR Route)	6/27/2023	6/27/2023	1
Hills Creek Dam	Removal	6/30/2023	6/30/2023	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 eight locations: Big Cliff Dam, Green Peter Dam Tailrace, Foster Dam Head of Reservoir- South Santiam River, Cougar Dam, Cougar Dam Head of Reservoir, Dexter Dam Tailrace, Lookout Dam Tailrace, and Lookout Point Head of Reservoir. The trap at the Fall Creek Head of Reservoir site was removed at the end of monitoring period on May 31<sup>st</sup>. The traps at Hills Creek Dam were raised into the non-sampling position on June 30<sup>th</sup> at the end of the monitoring period. The trap at Fall Creek Dam was raised to the non-sampling position on July 15<sup>th</sup> at the end of the monitoring period.

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 11.



**FIGURE 1**  
Big Cliff Dam

● RST Locations

500 Feet





**FIGURE 2** Green Peter Tailrace - Middle Santiam River

● RST Locations

500 Feet





**FIGURE 3** Foster Dam Head of Reservoir - South Santiam River

● RST Locations

500 Feet





**FIGURE 4**  
Cougar Dam

● RST Locations

500 Feet





Imagery Source: 2020, NAIP.



**FIGURE 5**  
Cougar Dam Head of Reservoir

● RST Locations

500 Feet





Imagery Source: 2021, ESRI.



**FIGURE 6**  
Fall Creek Dam Tailrace

● RST Locations

500 Feet





**FIGURE 7**  
Fall Creek Head of Reservoir

● RST Locations

500 Feet





Imagery Source: 2021, ESRI.



**FIGURE 8**  
Dexter Dam Tailrace

● RST Locations

500 Feet



**EAS** ENVIRONMENTAL ASSESSMENT SERVICES  
 Wholly Owned Subsidiary of Natives of Kodiak



Imagery Source: 2021, ESRI.



**FIGURE 9**  
Lookout Dam Tailrace

● RST Locations

500 Feet



**EAS** ENVIRONMENTAL ASSESSMENT SERVICES  
 Wholly Owned Subsidiary of Natives of Kodiak



Imagery Source: 2021, ESRI.



**FIGURE 10**  
Lookout Point Head of Reservoir

● RST Locations

500 Feet



**EAS** ENVIRONMENTAL ASSESSMENT SERVICES  
 Wholly Owned Subsidiary of Natives of Kodiak



**FIGURE 11**  
Hills Creek Dam

● RST Locations

500 Feet



**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	7/16/2023	7/31/2023	5	521
Green Peter Dam	3/14/2023	7/16/2023	7/31/2023	15	129
Foster Dam Head of Reservoir	2/1/2023	7/16/2023	7/31/2023	16	176
Cougar Dam PH	12/1/2021	7/16/2023	7/31/2023	16	497
Cougar Dam RO	12/1/2021	7/16/2023	7/31/2023	0	458
Cougar Dam Head of Reservoir	2/1/2023	7/16/2023	7/31/2023	16	157
Fall Creek Dam Tailrace	3/15/2022	7/16/2023	7/31/2023	0	326
Fall Creek Head of Reservoir	1/18/2023	7/16/2023	7/31/2023	0	125
Dexter Dam Tailrace	3/7/2022	7/16/2023	7/31/2023	16	499
Lookout Point Dam PH	3/15/2022	7/16/2023	7/31/2023	16	469
Lookout Point Dam Spill	3/15/2022	7/16/2023	7/31/2023	16	469
Lookout Point Head of Reservoir	3/10/2022	7/16/2023	7/31/2023	16	436
Hills Creek Dam	9/16/2022	7/16/2023	7/31/2023	0	286

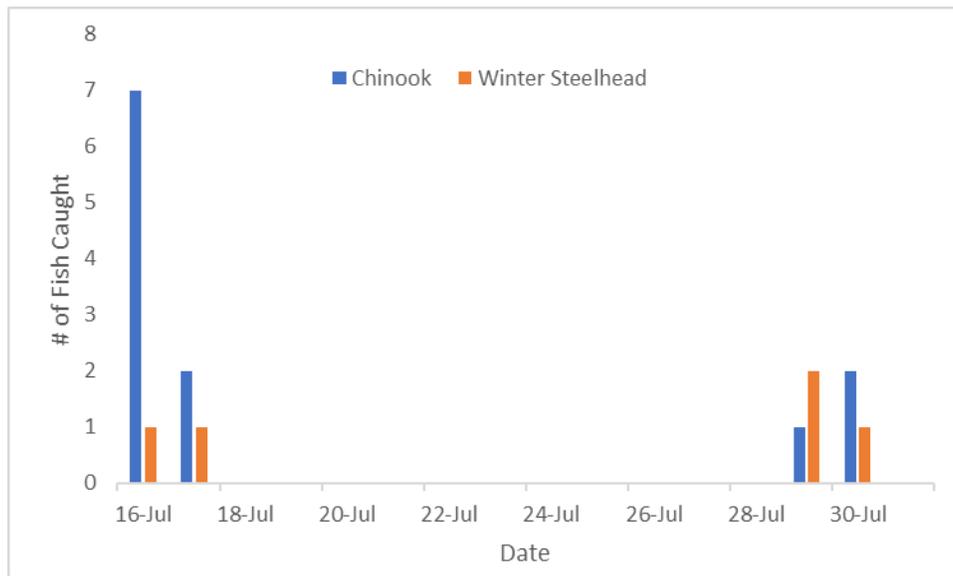
**Table 3. Willamette Valley Rotary Screw Trap Monitoring Catch Summary.**

Site	Species	Catch (Reporting Period)	Recapture (Reporting Period)	Total Catch
Big Cliff Dam	CHS	12	0	399
Big Cliff Dam	STW	5	0	233
Green Peter Tailrace	CHS	0	0	100
Green Peter Tailrace	STW	0	0	11
Foster Dam Head of Reservoir	CHS	0	0	576
Foster Dam Head of Reservoir	STW	0	0	79
Cougar Dam	CHS	26	61	908
Cougar Dam Head of Reservoir	CHS	421	27	5255
Fall Creek Dam Tailrace	CHS	0	0	61
Fall Creek Head of Reservoir	CHS	0	0	148
Dexter Dam Tailrace	CHS	0	0	20
Lookout Point Dam	CHS	0	1	49
Lookout Point Head of Reservoir	CHS	1	1	130
Hills Creek Dam	CHS	0	0	364

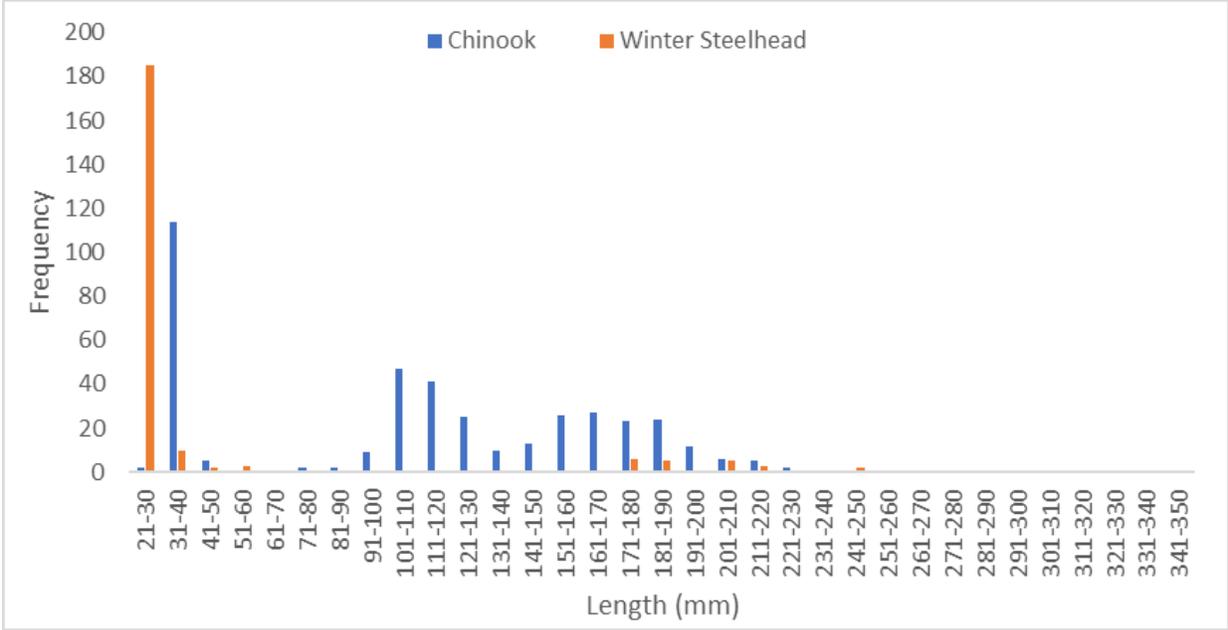
## North Santiam – Big Cliff Dam

### Target Species

This reporting period began on July 16<sup>th</sup> and ended on July 31<sup>st</sup>. There were a total of 12 Chinook Salmon (CHS) and 5 Winter Steelhead (STW) captured during the 16-day sampling period (Figure 12). The trap was raised and secured on July 17<sup>th</sup> for a debris passage event. It was returned to the sampling position on July 28<sup>th</sup>. Sampling duration was 37.5% 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 13 shows length frequency data to-date.



**Figure 12. Chinook and Winter Steelhead Captured per day 07/16/2023 to 07/31/2023 (Big Cliff).**



*\*Figure does not include fish without heads*

**Figure 13. Length Frequency of Juvenile Chinook and Winter Steelhead Sampled in 2023 (Big Cliff)**

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

To-Date (Since Jan. 1, 2023)										
Site	Route	Species	Life stage	Collected	Length (mm)*			Weight (g)*		
					Min	Max	Mean	Min	Max	Mean
Big Cliff	PWR	CHS	Fry	120	29	47	36.2	N/A	N/A	N/A
		CHS	Parr	13	49	112	92.5	1.1	15.8	9.4
		CHS	Smolt	266	85	340	148.3	7.4	328.5	40.9
		STW	Fry	197	24	56	28.5	N/A	N/A	N/A
		STW	Parr	5	47	119	70.0	1.3	49.5	14.7
		STW	Smolt	31	155	335	212.8	21.5	254.4	94.0

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

July 16-31, 2023										
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	0	N/A	N/A	N/A	N/A	N/A	N/A
		CHS	Smolt	12	110	169	125.4	15.1	55	24.0
		STW	Fry	3	26	41	34.3	N/A	N/A	N/A
		STW	Parr	2	58	58	58.0	2.1	2.1	2.1
		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.

### Trapping Efficiency

A total of 500 bismarck brown dyed and adipose clipped juvenile hatchery chinook were released on 7/5/2023 below Big Cliff Dam. 33 fish were recaptured in the 8 ft trap for a trapping efficiency of 6.6%.

Big Cliff Dam	Release #	Recapture #	Capture Efficiency
8ft Trap	500	33	6.6% (33/500)

### 24-Hour Post Collection Holding Trial

11 Spring Chinook and 3 Winter Steelhead were captured during the current reporting period and held for 24 hours. 0 Chinook (0.0%) and 0 Winter Steelhead (0.0%) died in holding. One fish was not held as the trap was raised to a non-sampling position for the debris passage maintenance event.

### Injuries and Copepod Infection

Partial descaling <20% was observed in 11 of the 12 Chinook captured (91.7%), 1 displayed descaling >20% (8.3%), 9 displayed body injury (75.0%), 0 had eye injury (0.0%), 11 had copepods present in the branchial cavity (91.7%) and 7 had copepods on fins (58.3%). 1 Chinook displayed gas bubble disease (level 1) (8.3%). There were 0 mortalities (0.0%).

Partial descaling <20% was observed on 1 of the 5 Winter Steelhead captured (20.0%) and 0 displayed descaling >20% (0.0%), 0 displayed body injury (0.0%), 0 had eye injury (0.0%), 0 had copepods present in the branchial cavity (0.0%) and 0 had copepods on fins (0.0%). 0 Winter Steelhead displayed gas bubble disease (0.0%). There were 0 mortalities (0.0%). 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	12	11	1	9	0	11	7	0
	Winter Steelhead	5	1	0	0	0	0	0	0

### Collected DNA and Scale Samples

For the reporting period, scales and DNA were collected from 12 Spring Chinook and 2 Winter Steelhead. The other targets captured did not meet length criteria for DNA sampling or were too descaled/damaged to collect samples.

### PIT Tags

2 Spring Chinook and 0 Winter Steelhead were PIT tagged during this reporting period. The first 60 target fish per week are prioritized for the 24-Hour Post Collection Holding Study. These fish are not tagged to not bias the results of the holding study. More information regarding PIT tagged fish can be found in Appendix D.

### Non-Target Species

4 non-targets were captured during this sampling period. A summary of non-target species catch and mortality numbers for 2023 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
Bluegill	0	0	24	3
Brown Bullhead	0	0	4	1
Dace	1	0	1	0
Chinook (Adult)	0	0	2	0
Chinook (clipped)	0	0	0	0
Cutthroat Trout	0	0	0	0
Kokanee	0	0	156	18
Kokanee (clipped)	0	0	11	3
<i>O. mykiss</i> (clipped)	0	1	6	2
Pumpkinseed	0	0	49	6
Unknown	0	0	1	1
Mountain Whitefish	3	0	4	0
Sculpin	0	0	0	0
<b>Totals</b>	<b>4</b>	<b>1</b>	<b>258</b>	<b>34</b>

## 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 1,108.9 to 1,109.5 feet (mean: 1,109.1 feet) during the reporting period. Figure 14 shows instantaneous gauge height.

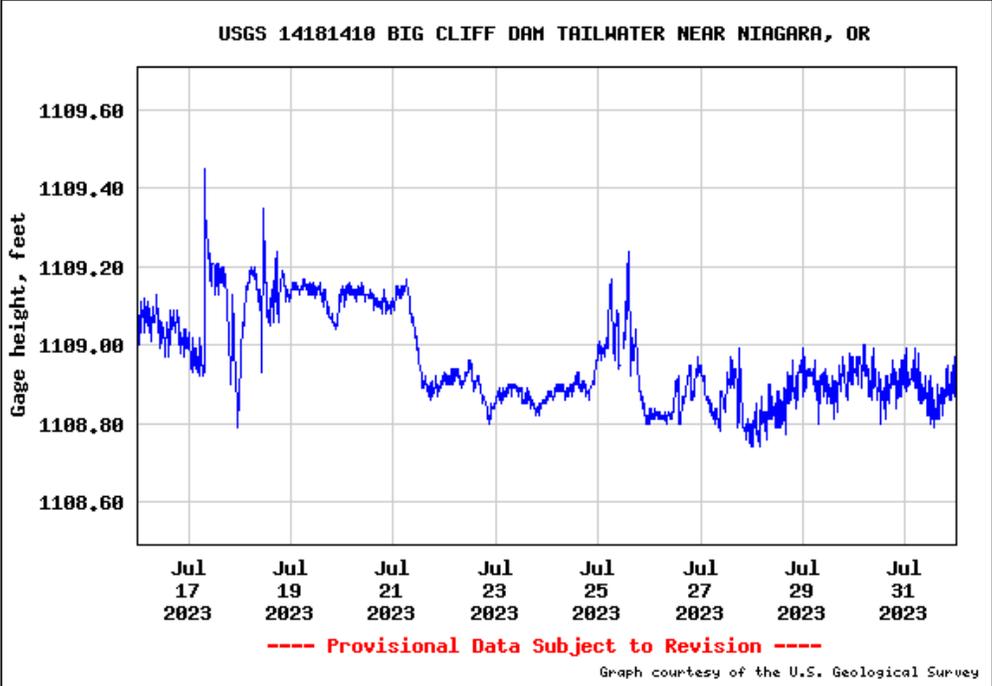
Total dissolved gas saturation ranged from 102 to 122% during the reporting period (mean: 109.5%). Figure 15 shows total dissolved gas saturation.

Stream temperatures were recorded every 2 hours for the length of the reporting period at the RST (Figure 16). The temperature probe for the trap operated normally throughout this reporting period.

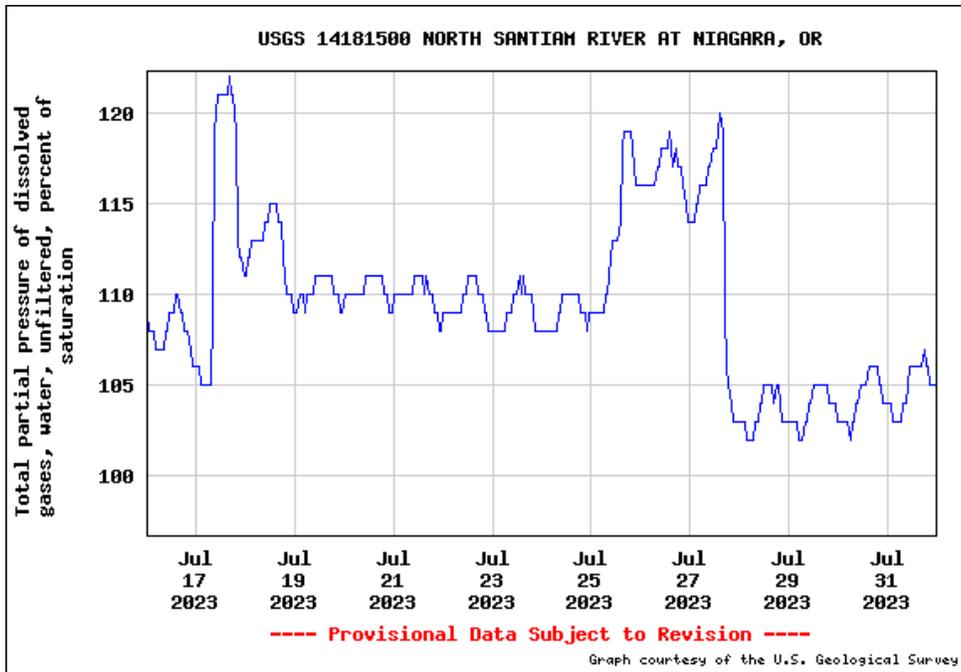
Flows through the Powerhouse and Spill during the reporting period averaged 407.2 and 753.3 cubic feet per second (cfs), respectively (Figure 17). Catch per unit of effort (CPUE) data are summarized in Table 7, Detroit and Big Cliff forebay elevations and TDG at Niagara are shown in appendix B. Discharge 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.**

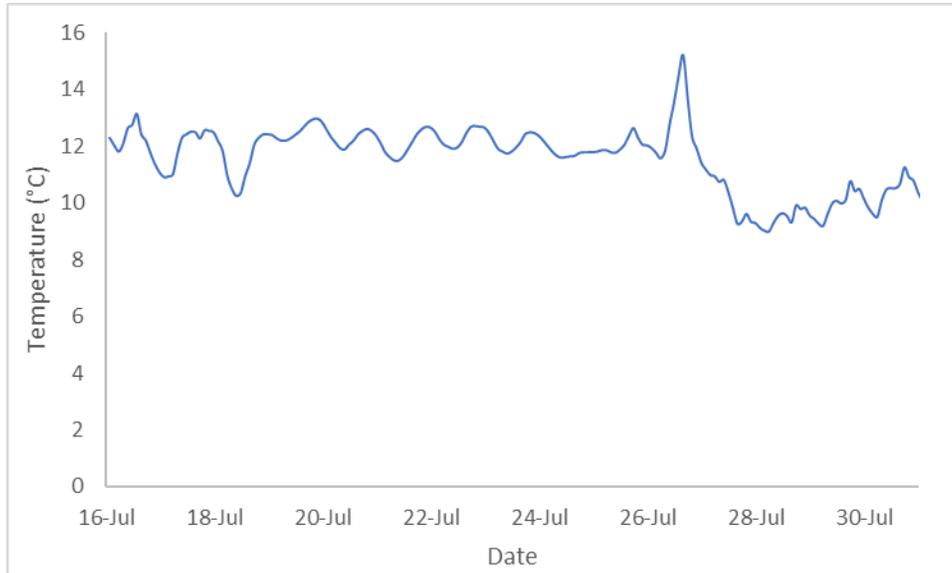
Description	Chinook	Winter Steelhead
Catch	12	5
Effort (hrs)	121.4	121.4
CPUE (fish/hr)	0.099	0.041



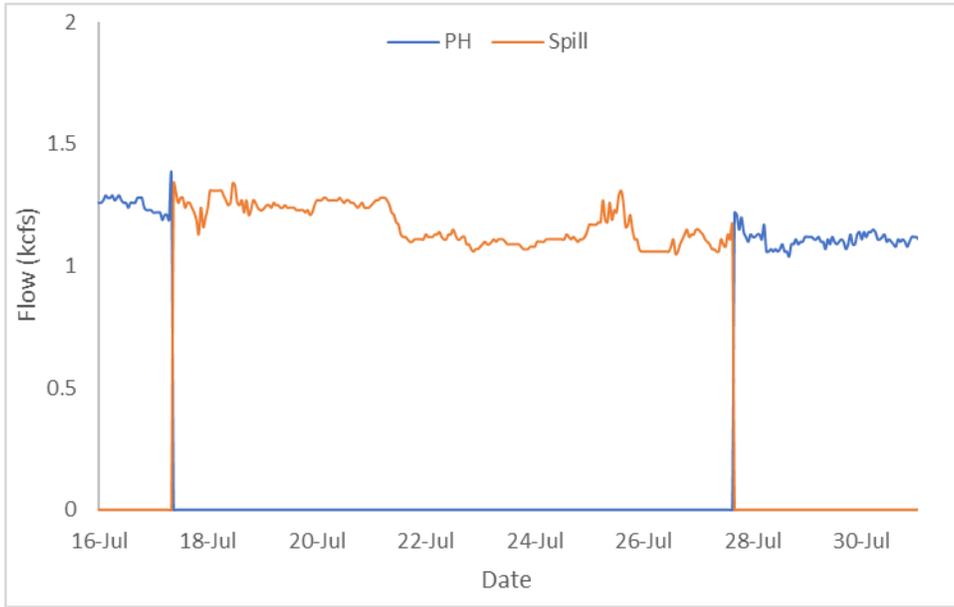
**Figure 14. Gauge height (ft); below Big Cliff Dam.**



**Figure 15. Total Dissolved Gas Saturation (%); below Big Cliff Dam.**



**Figure 16. Temperature at RST (Big Cliff Dam).**

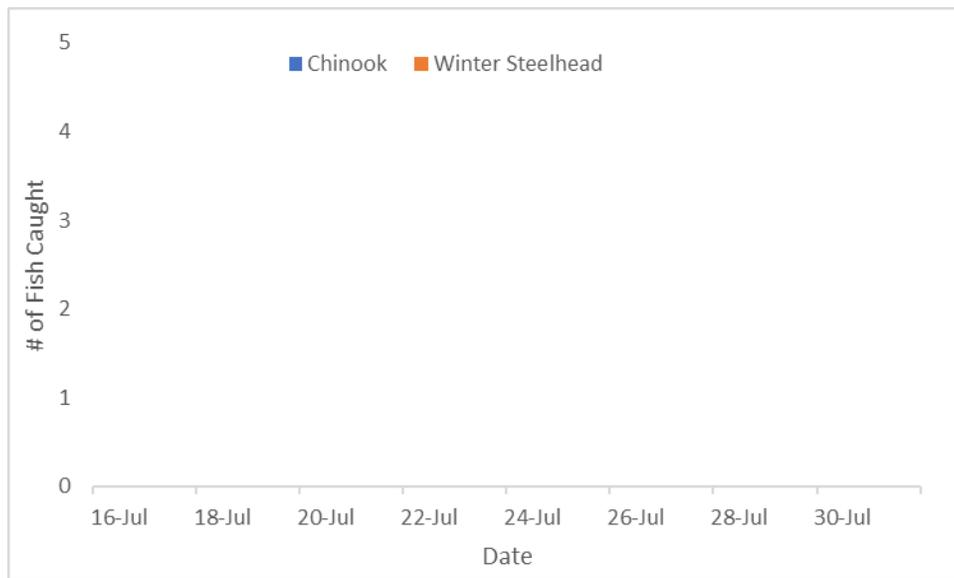


**Figure 17. Hourly Flows PWR vs. Spill (Big Cliff Dam).**

## Middle Fork Santiam– Green Peter Tailrace

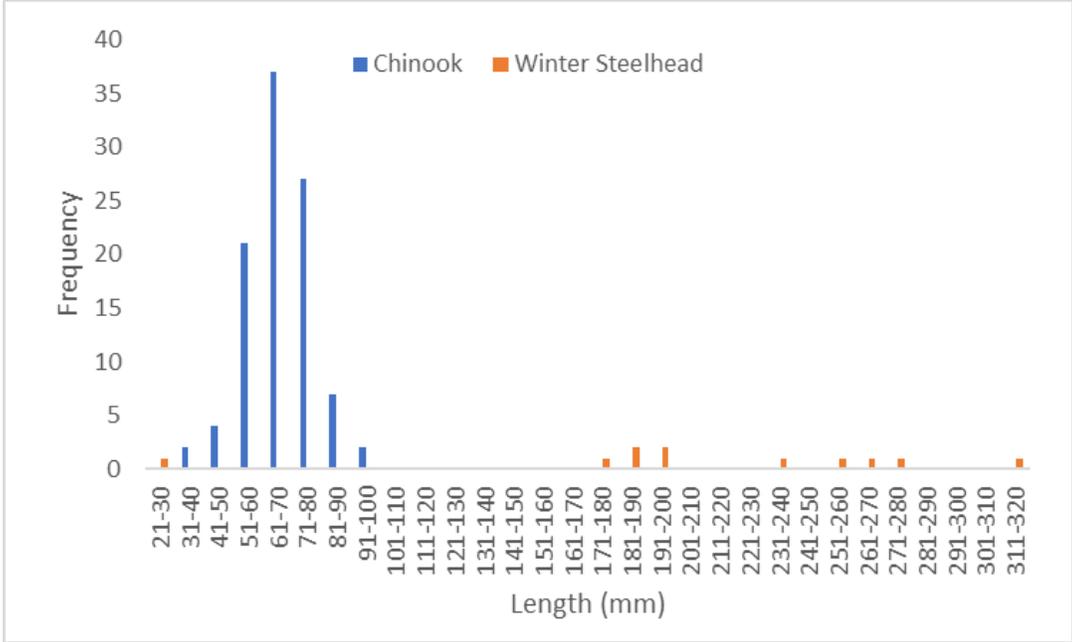
### Target Species

This reporting period began on July 16<sup>th</sup> and ended on July 31<sup>st</sup>. 0 Chinook Salmon (CHS) and 0 Winter Steelhead (STW) were captured during the 16-day sampling period. The trap was raised to a non-sampling position on July 24<sup>th</sup> due to road construction below the dam. It resumed sampling on July 25<sup>th</sup>. Sampling duration was 93.8% for the RST. Table 8 provides life stage, length, and weight data for all target species that have been caught at the Green Peter Dam site to-date and for the reporting period. Figure 18 shows the daily capture numbers for Chinook and Winter Steelhead and Figure 19 shows length frequency data to date.



*\*Recaptured fish for trapping efficiency trials not included.*

**Figure 18. Chinook and Winter Steelhead Captured Per Day 07/16/2023 to 07/31/2023 (Green Peter Tailrace- Middle Santiam).**



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

**Figure 19. Length Frequency of Juvenile Chinook and Winter Steelhead Sampled in 2023 (Green Peter Tailrace- Middle Santiam River)**

**Table 8. Descriptive Statistics of Target Species Captured at the Green Peter Tailrace-Middle Santiam River Season To-Date.**

To-Date (Since Jan. 1, 2023)										
Site	Route	Species	Life stage	Collected	Length (mm)*			Weight (g)*		
					Min	Max	Mean	Min	Max	Mean
Green Peter Dam Tailrace	Spill	CHS	Fry	15	33	66	52.8	1.0	4.4	2.5
		CHS	Parr	82	44	97	68.6	1.1	10.8	3.8
		CHS	Smolt	3	73	98	85.0	3.3	9.6	6.7
		STW	Fry	1	29	29	29	N/A	N/A	N/A
		STW	Parr	0	N/A	N/A	N/A	N/A	N/A	N/A
		STW	Smolt	10	174	318	228.6	54.4	340.0	122.3

July 16-31, 2023										
Site	Route	Species	Life stage	Collected	Length (mm)*			Weight (g)*		
					Min	Max	Mean	Min	Max	Mean
Green Peter Dam Tailrace	Spill	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
		STW	Fry	0	N/A	N/A	N/A	N/A	N/A	N/A
		STW	Parr	0	N/A	N/A	N/A	N/A	N/A	N/A
		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.

### Trapping Efficiency

A total of 1,009 juvenile hatchery Chinook (parr) were adipose fin clipped and released for fish trapping efficiency on 7/27/2023 below Green Peter Dam. 13 Chinook were recaptured for a trap efficiency of 1.3%.

Green Peter Dam Tailrace	Release #	Recapture #	Capture Efficiency
8ft Trap	1,009	13	1.3% (13/1009)

### 24-Hour Post Collection Holding Trial

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

## Injuries and Copepod Infection

Partial descaling <20% was observed in 0 of the 0 Spring Chinook captured (0.0%) and 0 displayed descaling >20% (0.0%), 0 displayed body injury (0.0%), 0 had eye injury (0.0%), 0 had copepods present in the branchial cavity (0.0%) and 0 had copepods on fins (0.0%). 0 Spring Chinook displayed gas bubble disease (0.0%). There were 0 mortalities (0.0%).

Partial descaling <20% was observed in 0 of the 0 Winter Steelhead captured (0.0%) and 0 displayed descaling >20% (0.0%), 0 displayed body injury (0.0%), 0 had eye injury (0.0%), 0 had copepods present in the branchial cavity (0.0%) and 0 had copepods on fins (0.0%). 0 Winter Steelhead displayed gas bubble disease (0.0%). There were 0 mortalities (0.0%).

A summary of injuries observed on Chinook Salmon and Winter Steelhead during the reporting period is provided in Table 9, and target species injuries 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 (Green Peter Tailrace- Middle Santiam River).**

Site	Species	# Collected	# DSC* <20%	# DSC* >20%	# with Body Injuries	# with Eye Injuries	# with COP* In B.C.	# with COP* on Fins	Mortalities
Green Peter Tailrace	CHS	0	0	0	0	0	0	0	0
	STW	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/or DNA were collected from 0 Spring Chinook and 0 Winter Steelhead. The other targets captured did not meet length criteria for DNA sampling or were too descaled/damaged to collect samples.

## PIT Tags

No Spring Chinook or Winter Steelhead were PIT tagged during this reporting period. The first 60 target fish per week are prioritized for the 24-Hour Post Collection Holding Study. These fish are not tagged to not bias the results of the holding study. More information regarding PIT tagged fish can be found in Appendix D.

## Non-Target Species

0 non-targets were captured during this sampling period. A summary of non-target species catch and mortality numbers for 2023 are listed in table 10.

**Table 10. Summary of Non-target Species (Green Peter Tailrace- Middle Santiam River).**

Species	Capture	Mortality	Season Total Capture	Season Total Mortality
Bluegill	0	0	121	66
Crappie	0	0	28	17
Cutthroat Trout	0	0	1	0
Kokanee	0	0	2516	1398
Kokanee (clipped)	0	0	10	2
Largemouth Bass	0	0	1	0
<i>O. mykiss</i> (clipped)	0	0	26	6
Smallmouth Bass	0	0	5	3
Dace	0	0	1	1
Sculpin	0	0	2	1
Unknown	0	0	1	1
<b>Totals</b>	<b>0</b>	<b>0</b>	<b>2712</b>	<b>1495</b>

### Stream Statistics

Basic stream statistics at the Green Peter Dam Tailrace- Middle Santiam site were calculated from data downloaded from the U.S. Geological Survey stream gage number 14186110 and 14186200. Gage height (feet) is the only metric provided at gage 14186110. Total dissolved gas saturation data was received from gage number 14186200, 50 meters upstream of the trap. During the reporting period, daily maximum values for instantaneous gage height ranged from 698.6 feet to 699.1 feet (mean: 698.7 feet). Figure 20 shows instantaneous gage height.

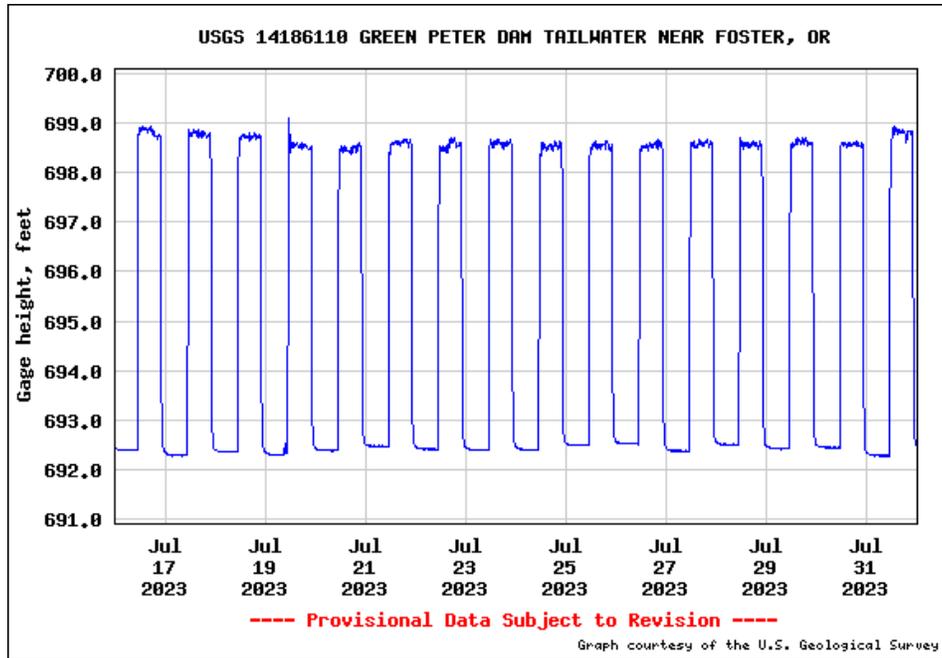
Total dissolved gas saturation ranged from 102 to 105% (mean: 102.6%) during the reporting period. Figure 21 shows the total dissolved gas saturation.

Stream temperatures were recorded every 2 hours for the length of the report period for the RST (Figure 22). Temperature probes operated normally throughout this reporting period.

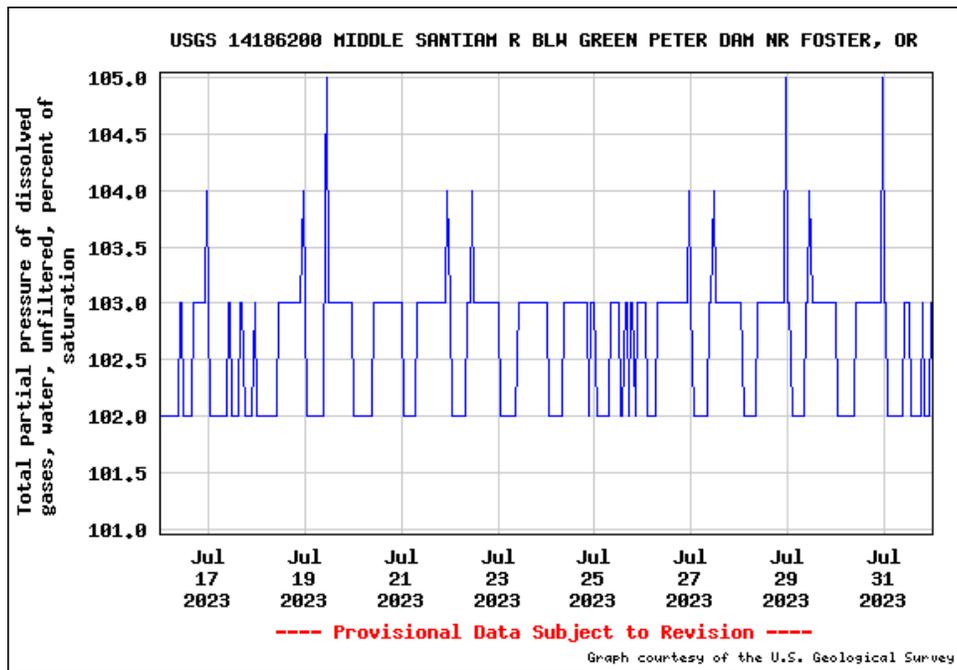
Flows through the Powerhouse and Spillway during the reporting period averaged 910.7 and 29.4 cubic feet per second (cfs) respectively (Figure 23). Catch per unit of effort (CPUE) data are summarized in Table 11. Discharge and capture data for the duration of monitoring efforts at this location are provided in Appendix B.

**Table 11. Summary of salmonid CPUE, Green Peter Tailrace- Middle Santiam River.**

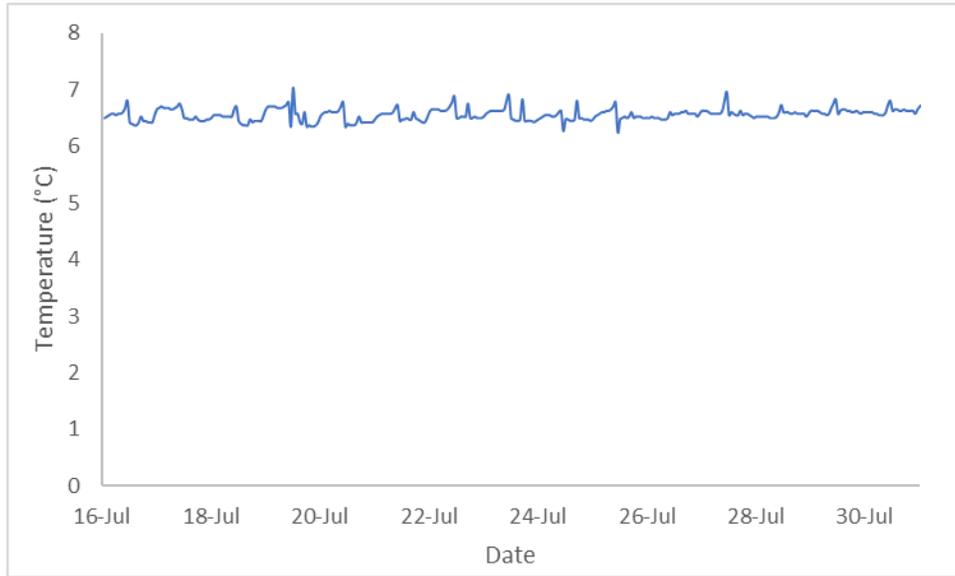
Description	Chinook	Winter Steelhead
Catch	0	0
Effort (hrs)	349.5	349.5
CPUE (fish/hr)	0	0



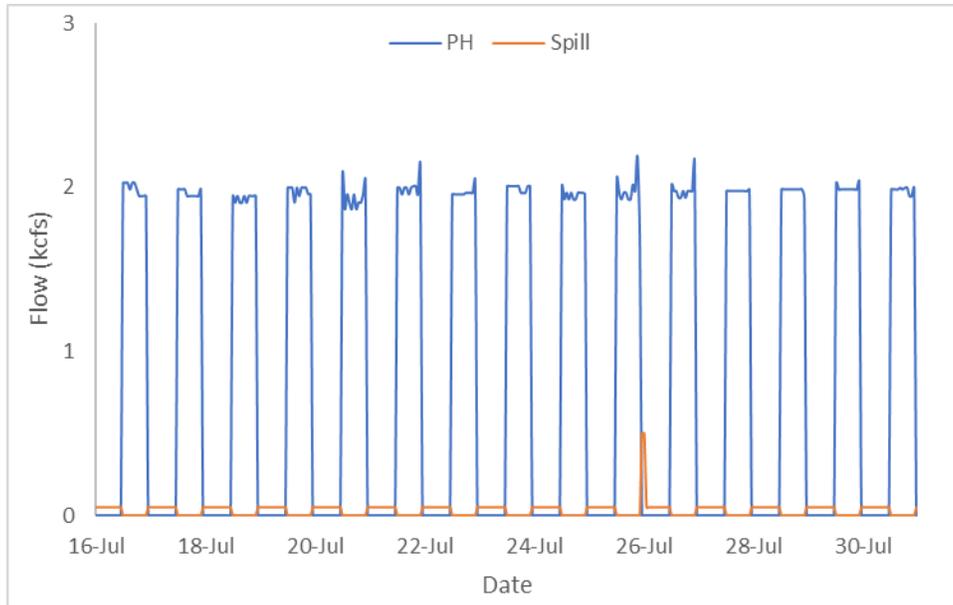
**Figure 20. Gage Height (feet); below Green Peter Dam.**



**Figure 21. Total Dissolved Gas Saturation (%); below Green Peter Dam.**



**Figure 22. Temperature at RST (Green Peter Tailrace- Middle Santiam River).**

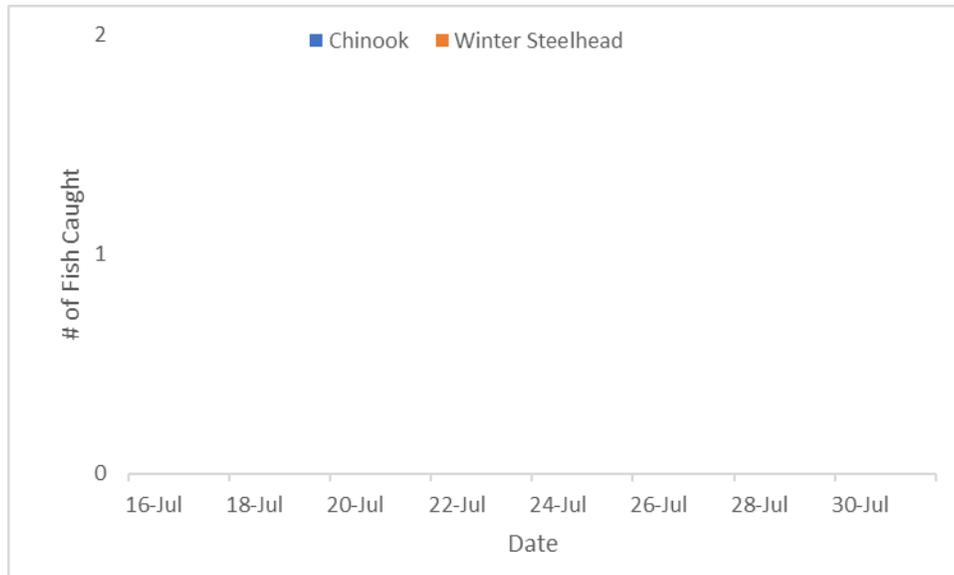


**Figure 23. Hourly Flows PWR vs. Spill (Green Peter Dam).**

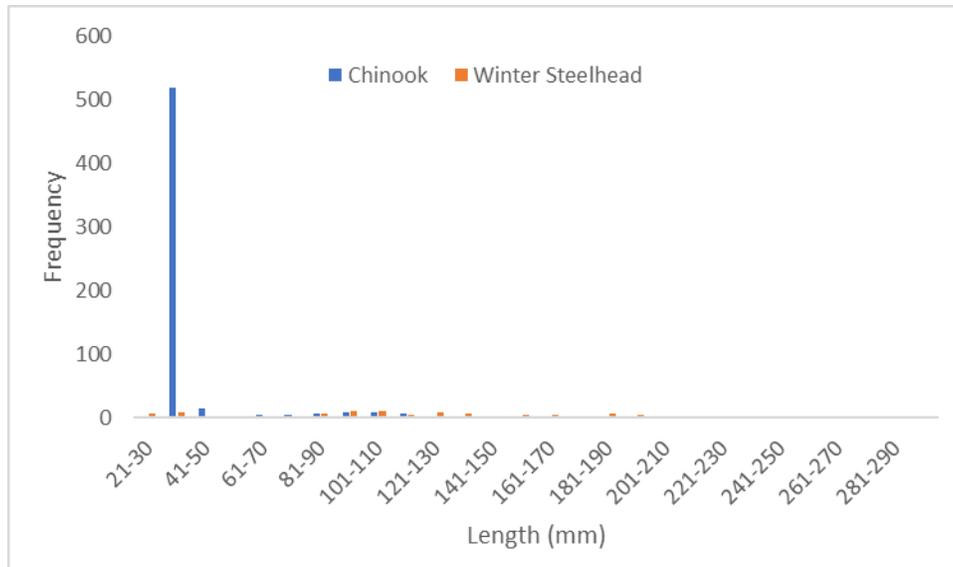
## South Fork Santiam– Foster Dam Head of Reservoir

### Target Species

This reporting period began on July 16<sup>th</sup> and ended on July 31<sup>st</sup>. There were 0 Chinook salmon (CHS) and 0 Winter Steelhead (STW) captured during the 16-day sampling period. Sampling duration was 100% for the RST. Table 12 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 24 shows the daily capture numbers for Chinook and Winter Steelhead and Figure 25 shows length frequency data to-date for both species.



**Figure 24. Chinook and Winter Steelhead Captured Per Day 07/16/2023 to 07/31/2023 (Foster Dam Head of Reservoir- South Santiam).**



**Figure 25. Length Frequency of Juvenile Chinook and Winter Steelhead Sampled in 2023 (Foster Dam Head of Reservoir- South Santiam).**

**Table 12. Descriptive Statistics of Target Species Captured at Foster Dam Head of Reservoir-South Santiam Season To-Date.**

To-Date (Since Jan. 1, 2023)										
Site	Trap	Species	Life stage	Collected	Length (mm)*			Weight (g)*		
					Min	Max	Mean	Min	Max	Mean
Foster Dam Head of Reservoir	5 ft	CHS	Fry	535	30	50	36.1	N/A	N/A	N/A
		CHS	Parr	25	56	110	84.8	1.4	16.0	8.0
		CHS	Smolt	16	87	134	108.8	7.4	24.3	14.8
		STW	Fry	15	22	37	31.5	N/A	N/A	N/A
		STW	Parr	30	51	122	97.9	1.7	24.7	12.6
		STW	Smolt	34	109	199	151.5	13.8	91	39.0

July 16-31, 2023										
Site	Trap	Species	Life stage	Collected	Length (mm)*			Weight (g)*		
					Min	Max	Mean	Min	Max	Mean
Foster Dam Head of Reservoir	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
		STW	Fry	0	N/A	N/A	N/A	N/A	N/A	N/A
		STW	Parr	0	N/A	N/A	N/A	N/A	N/A	N/A
		STW	Smolt	0	N/A	N/A	N/A	N/A	N/A	N/A

## Trapping Efficiency

A total of 989 juvenile hatchery Chinook (yearlings) were bismarck brown dyed, adipose clipped and released on 7/27/2023 at Cascadia Park above the Foster Dam Head of Reservoir- South Santiam trap. 0 fish were recaptured in the 5ft trap. Trapping efficiency was 0.0%. MHE noted Northern Pikeminnow feeding on schooling fish at the drop site.

Foster Dam Head of Reservoir	Release #	Recapture #	Capture Efficiency
5 ft Trap	989	0	0.0% (0/989)

## 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. This year, 27 Spring Chinook and 9 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.

Due to low catch numbers, run of river trapping efficiency trials have been suspended until catch rates increase.

Foster Dam Head of Reservoir	Release #	Recapture #
Chinook	0	0
Winter Steelhead	0	0

## Injuries and Copepod Infection

Partial descaling <20% was observed on 0 of the 0 Spring Chinook captured (0.0%). Body injuries were present on 0 Spring Chinook (0.0%) and 0 displayed eye injury (0.0%). 0 copepods were present in the branchial cavity (0.0%) and 0 fish displayed copepods on the fins (0.0%). There were 0 mortalities (0.0%).

Partial descaling <20% was observed on 0 of the 0 Winter Steelhead captured (0.0%). Body injuries were present on 0 Winter Steelhead (0.0%) and 0 displayed eye injury (0.0%). 0 copepods were present in the branchial cavity (0.0%) and 0 fish displayed copepods on the fins (0.0%). There were 0 mortalities (0.0%).

A summary of injuries observed during the reporting period are provided in table 13, 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 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	Chinook	0	0	0	0	0	0	0	0
	Winter Steelhead	0	0	0	0	0	0	0	0

## Collected DNA and Scale Samples

For the reporting period, DNA and scales were collected from 0 Spring Chinook and 0 Winter Steelhead. The other targets captured did not meet length criteria for DNA sampling or were too descaled/damaged to collect samples.

## PIT Tags

0 Spring Chinook and 0 Winter Steelhead were PIT tagged during this reporting period. More information regarding PIT tagged fish can be found in Appendix D.

## Non-Target Species

2 non-target species fish were captured during the reporting period; the data is summarized below in Table 14.

**Table 14. Summary of Non-target Species (Foster Dam Head of Reservoir).**

Species	Capture	Mortality	Season Total	Season Total Mortality
Brook Lamprey	0	0	0	0
Cutthroat Trout	0	0	2	0
Dace	1	0	203	0
Largescale Sucker	0	0	10	0
Northern Pikeminnow	1	1	1	1
Sculpin	0	0	4	0
Unknown	0	0	1	0
<b>Totals</b>	<b>2</b>	<b>1</b>	<b>221</b>	<b>0</b>

## Stream Statistics

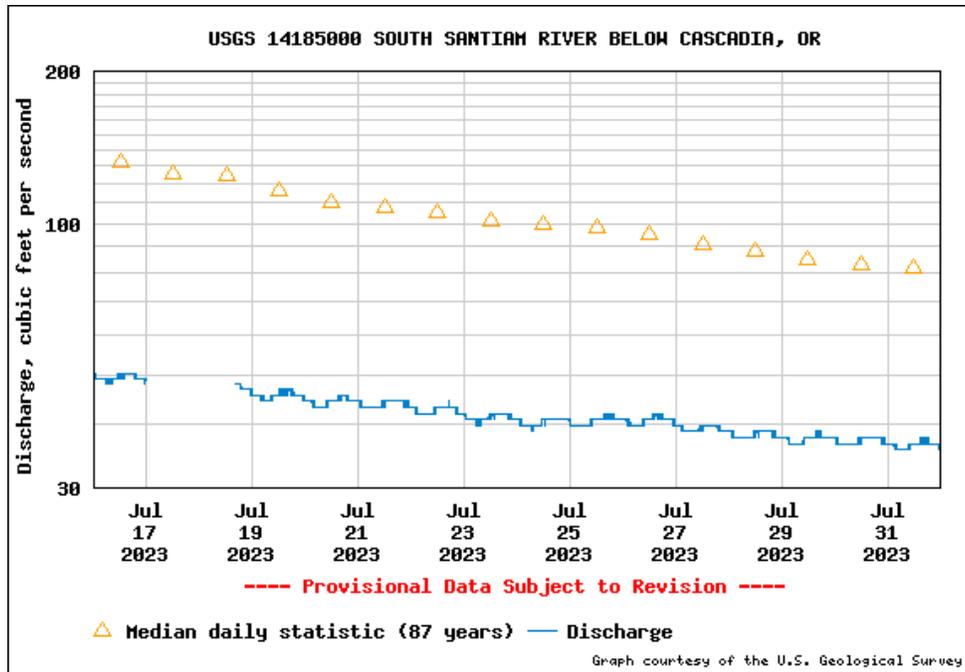
Basic stream statistics at the Foster Dam Head of Reservoir- South Santiam site were calculated from data downloaded from the U.S. Geological Survey stream gauge number 14185000. Discharge (cfs) and Gauge height (feet) are available at this gauge. During the reporting period, daily maximum values for instantaneous discharge ranged from 53.2 cfs to 83.9 cfs (mean: 66.5 cfs). Figure 26 shows instantaneous discharge. Discharge data was not recorded at the gage between 23:25 July 16<sup>th</sup> and 16:10 July 18<sup>th</sup>.

Stream temperatures were recorded every 2 hours for the length of the report period for the RST (Figure 27). Temperature probes for the trap operated normally throughout this reporting period.

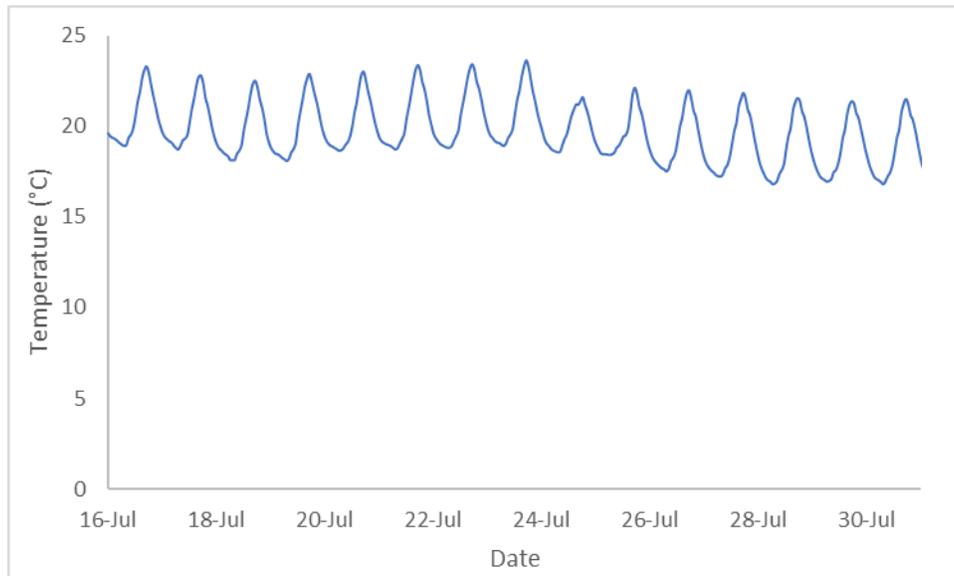
Catch per unit of effort (CPUE) data are summarized in Table 15. Discharge and capture data for the duration of monitoring efforts at this location are provided in Appendix B.

**Table 15. Summary of salmonid CPUE, Foster Dam Head of Reservoir- South Santiam.**

Description	Chinook	Winter Steelhead
Catch	0	0
Effort (hrs)	384.4	384.4
CPUE (fish/hr)	0	0



**Figure 26. Discharge (cfs); Foster Dam Head of Reservoir – S. Santiam).**  
*Note: Discharge data was not recorded at the gage between 23:25 July 16<sup>th</sup> and 16:10 July 18<sup>th</sup>.*

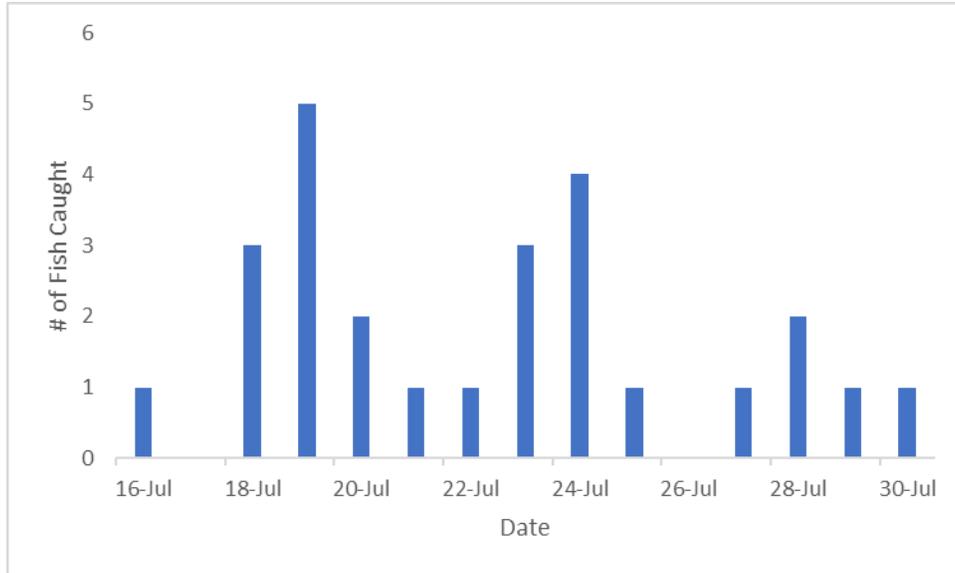


**Figure 27. Temperature at RST (Foster Dam Head of Reservoir – S. Santiam).**

## South Fork McKenzie – Cougar Dam

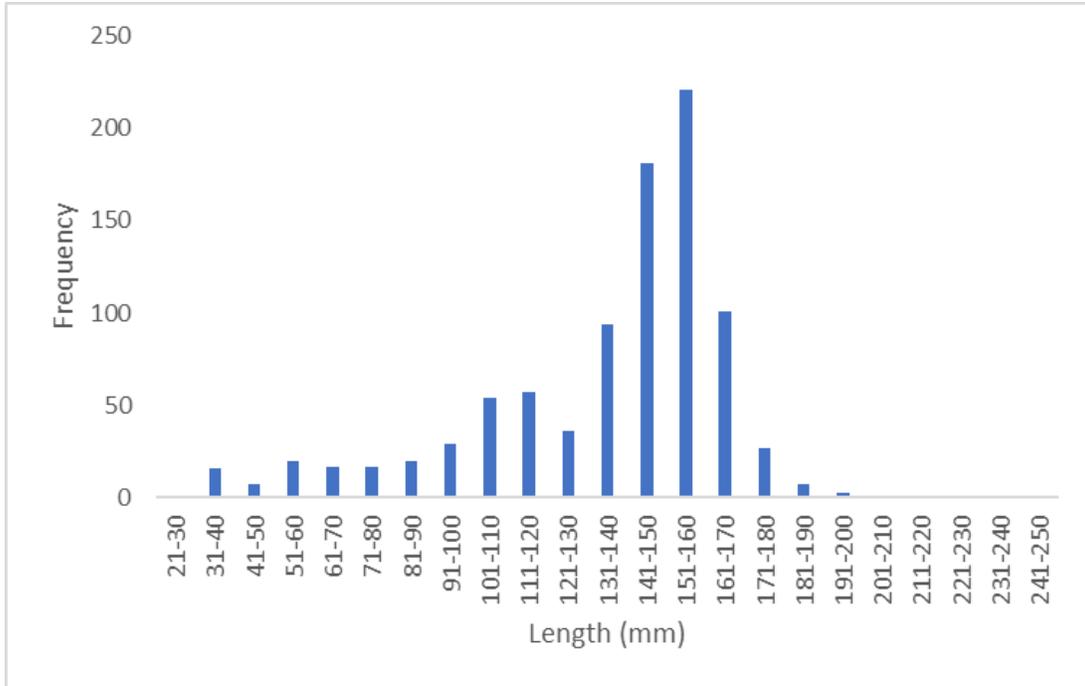
### Target Species

This reporting period began on July 16<sup>th</sup> and ended on July 31<sup>st</sup>. There were a total of 26 Chinook Salmon (CHS) captured during the 16-day sampling period. The Cougar Dam RO trap was removed on June 8<sup>th</sup> to allow for resurfacing of the regulating outlet. Sampling duration was 0% for the RO RST and 100.0% for the Powerhouse RSTs. Table 16 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 28 shows the daily capture numbers for chinook and Figure 29 shows length frequency data to-date.



*\*Recaptured fish for trapping efficiency trials not included.*

**Figure 28. Chinook Captured Per Day 07/16/2023 to 07/31/2023 (Cougar Dam).**



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

**Figure 29. Length Frequency of Juvenile Chinook Sampled in 2023 (Cougar Dam).**

**Table 16. Descriptive Statistics of Target Species Captured at Cougar Dam Season To-Date.**

To-Date (Since Jan. 1, 2023)										
Site	Route	Species	Life stage	Collected	Length (mm)*			Weight (g)*		
					Min	Max	Mean	Min	Max	Mean
Cougar Dam	RO	CHS	Fry	18	33	52	38.1	N/A	N/A	N/A
		CHS	Parr	53	62	135	103.0	3.0	29.2	12.9
		CHS	Smolt	720	90	195	147.2	8.1	72.1	35.2
Cougar Dam	PWR	CHS	Fry	7	33	55	43.7	N/A	N/A	N/A
		CHS	Parr	72	50	103	73.3	1.1	15.0	5.2
		CHS	Smolt	38	73	196	103.1	4.6	80.0	27.9

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

July 16-31, 2023										
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	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
Cougar Dam	PWR	CHS	Fry	0	N/A	N/A	N/A	N/A	N/A	N/A
		CHS	Parr	22	53	94	69.6	1.2	9.4	4.2
		CHS	Smolt	4	95	117	101.0	9.7	17.9	12.2

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

### Trapping Efficiency

A total of 510 juvenile hatchery Chinook (sub-yearlings) were adipose clipped, right vent clipped and released in the PWR channel on 7/26/23. 61 fish were recaptured in the PWR RST for an efficiency of 12.0%.

Cougar Dam (06/6/2023)	Release #	Recapture #	Capture Efficiency
PWR Route	510	61	12.0% (61/510)

### Run of River Trapping Efficiency

Run of river fish were captured, caudal clipped or PIT tagged 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	0	0

## 24-Hour Post Collection Holding Trial

A total of 19 Chinook captured in the RSTs, 19 fish from the PWR RST and 0 from the RO RST, were held for ~24 hours in holding tanks and then evaluated for survival rates. In total, 3 of the 19 fish (15.8%) held during this period died during holding. 3 of the 18 PWR RST captured fish (15.8%) died during holding and 0 of the 0 RO RST captured fish (0.0%) died during holding.

## Injuries and Copepod Infection

Partial descaling <20% was observed on 13 of the 26 Chinook collected at the PWR RST (50.0%). Descaling >20% was observed on 3 of the Chinook (11.5%). There were 15 fish with bodily injuries (57.7%) and 1 had eye injuries (3.8%). 3 fish had copepods present in the branchial cavity (11.5%) and 9 had copepods present on fins (34.6%). 1 fish displayed Gas Bubble Disease (level 1) (3.8%). There were 7 chinook mortalities collected in the PWR RST (26.9%).

Partial descaling <20% was observed on 0 of the 0 Chinook collected at the RO 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 RO RST (0.0%).

Data is summarized below in table 17 . A summary of injuries observed during the reporting period, and for the duration of the season are provided in Appendix A.

**Table 17. 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 Dam	RO	0	0	0	0	0	0	0	0
Cougar Dam	PWR	26	13	3	15	1	3	9	7

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

## Collected DNA and Scale Samples

For the reporting period, scales and DNA were collected from 26 Spring Chinook. The other targets captured did not meet length criteria for DNA sampling or were too damaged to remove scales.

## PIT Tags

0 Spring Chinook were PIT tagged during this reporting period. The first 60 target fish per week are prioritized for the 24-Hour Post Collection Holding Study. These fish are not tagged to not bias the results of the holding study. More information regarding PIT tagged fish can be found in Appendix D.

## VIE Marking

No VIE marked Spring Chinook have been detected at this site to date.

## Non-Target Species

299 non-target fish were captured during the reporting period; the data is summarized below in table 18.

**Table 18. 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	0	0
Bluegill	0	0	0	0	0	0
Bull Trout	0	0	0	0	2	0
Chinook (clipped)	0	0	2	1	34	2
Chinook (Adult)	0	0	0	0	0	0
Crappie	0	0	0	0	0	0
Cutthroat Trout	0	0	4	0	16	0
Dace	0	0	222	0	1348	1
Largescale Sucker	0	0	0	0	6	0
Mountain Whitefish	0	0	0	0	14	2
Northern Pikeminnow	0	0	0	0	0	0
<i>O. mykiss</i>	0	0	7	0	93	0
Pacific Lamprey	0	0	1	0	1	0
Sculpin	0	0	42	1	188	4
Smallmouth Bass	0	0	0	0	0	0
Spotted Bass	0	0	18	0	18	0
Unknown Bass	0	0	3	0	3	0
<b>Totals</b>	<b>0</b>	<b>0</b>	<b>299</b>	<b>2</b>	<b>1723</b>	<b>9</b>

## 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 1,252.7 to 1,252.7 feet (mean: 1,252.7 feet). Figure 30 shows instantaneous gauge height.

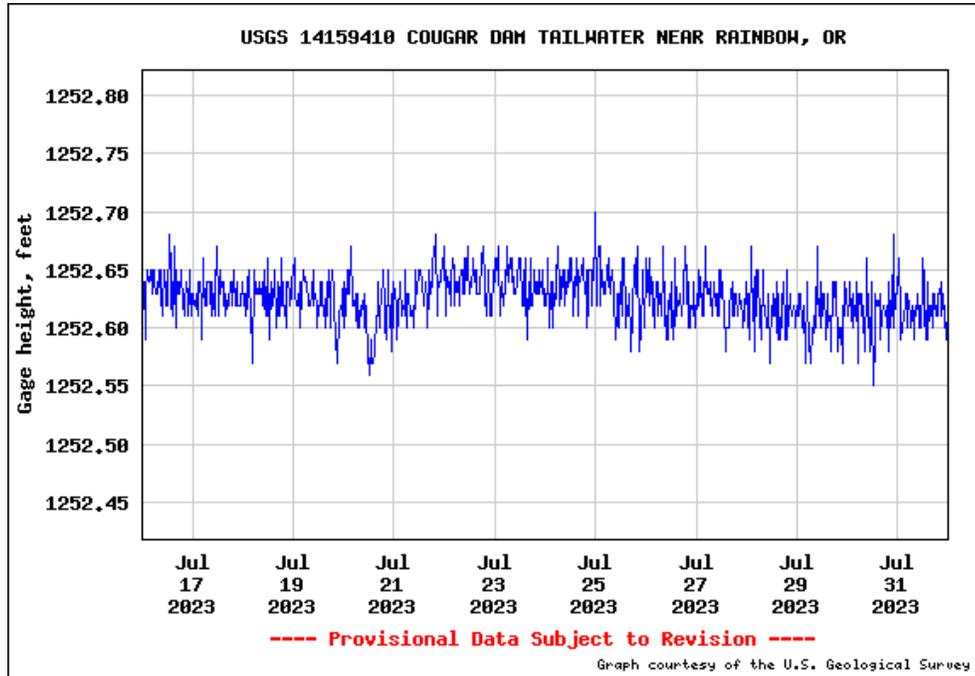
Total dissolved gas saturation ranged from 101 to 106% (mean: 103.2%). Figure 31 shows total dissolved gas saturation.

Stream temperatures were obtained from USGS data (gage # 14159500) for the RO trap site and recorded every 2 hours for the length of the reporting period for the PWR RST (Figure 32 and Figure 33 respectively). The temperature probe for the PWR RST operated normally throughout this reporting period.

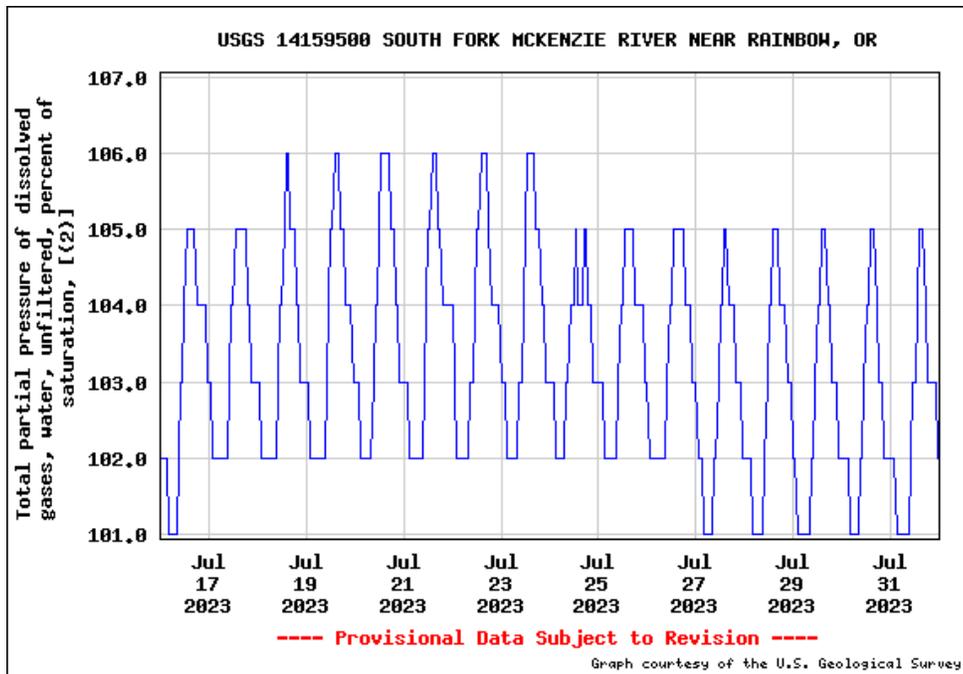
Flows through the Powerhouse and RO during the reporting period averaged 371.7 and 0 cubic feet per second (cfs) respectively (Figure 34). Catch per unit of effort (CPUE) data are summarized in Table 19. Discharge and capture data for the duration of monitoring efforts at this location are provided in Appendix B.

**Table 19. Summary of salmonid CPUE, Cougar Dam.**

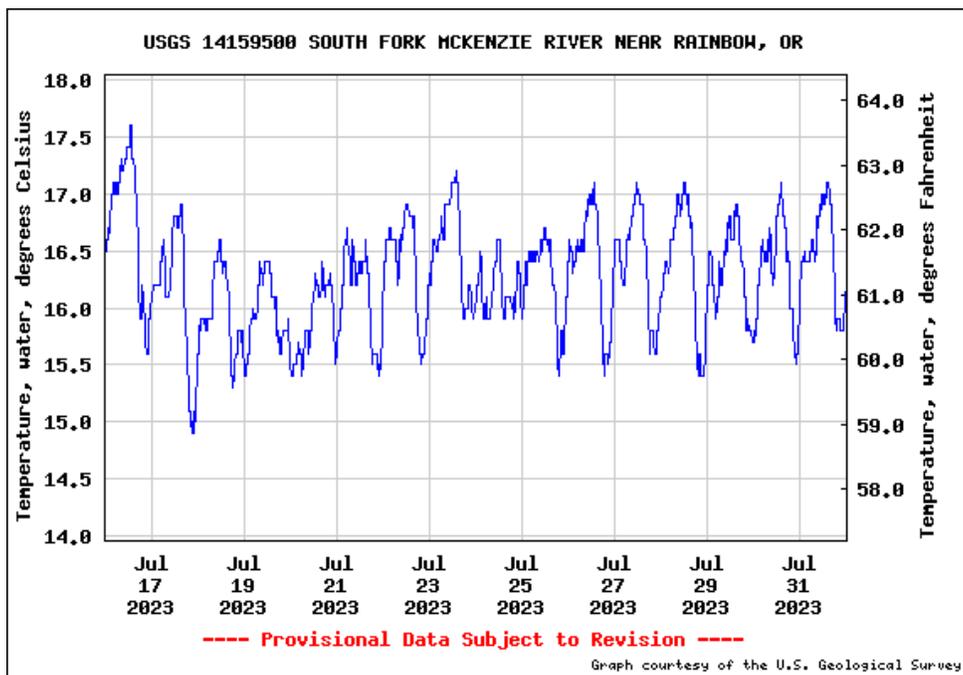
Description	RO (5ft)	PWR (8ft)
Catch	0	26
Effort (hrs)	0	765.5
CPUE (fish/hr)	0	0.034



**Figure 30. Gauge Height (feet); below Cougar Dam, South Fork McKenzie River.**

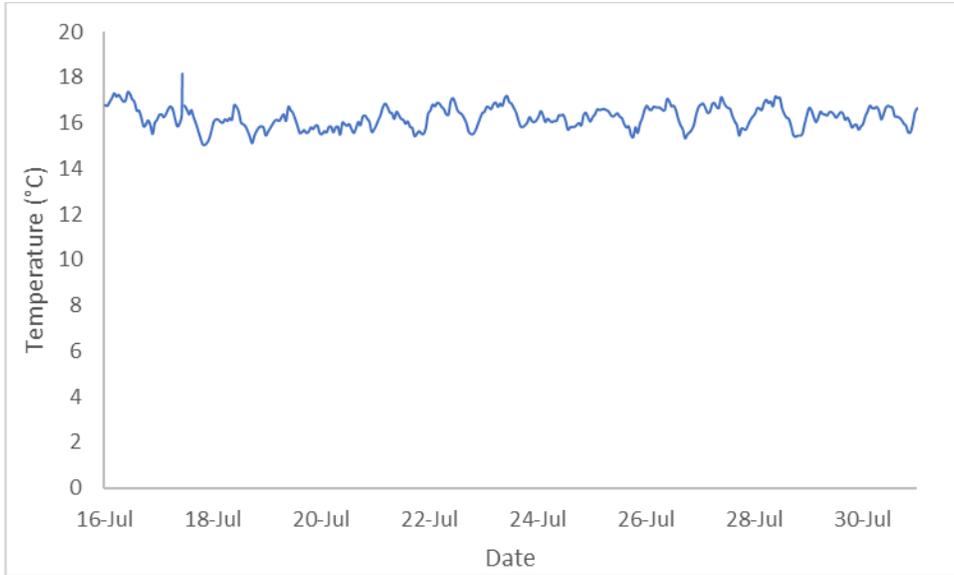


**Figure 31. Total Dissolved Gas Saturation (%); below Cougar Dam, South Fork McKenzie River.**

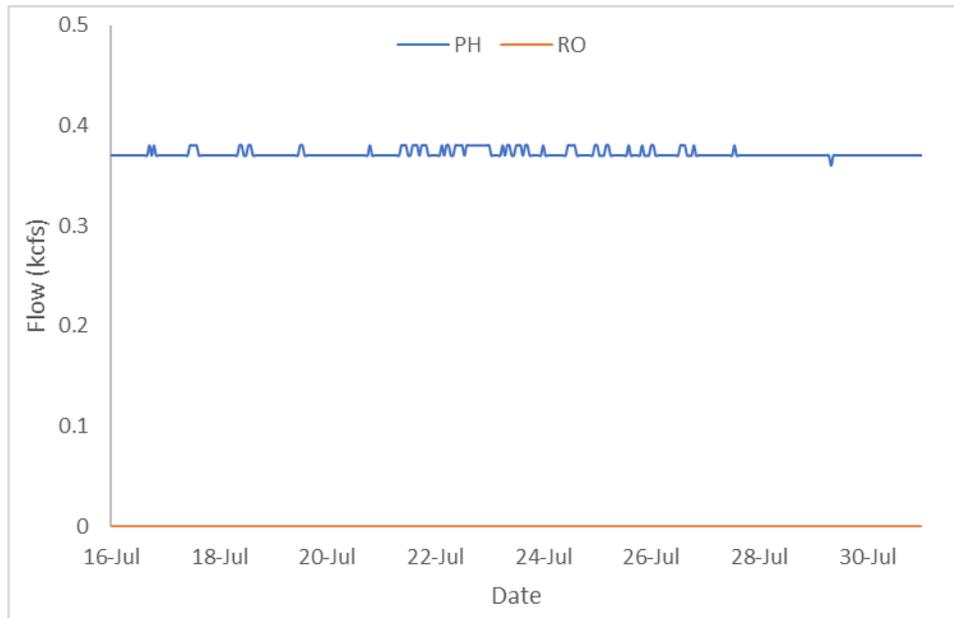


**Figure 32. Temperature at RO RST (Cougar Dam).**

*Note: Temperatures were obtained from USGS gage # 14159500 to supplement the temperature data for the RO RST while it is out of service.*



**Figure 33. Temperature at PWR RST (Cougar Dam).**

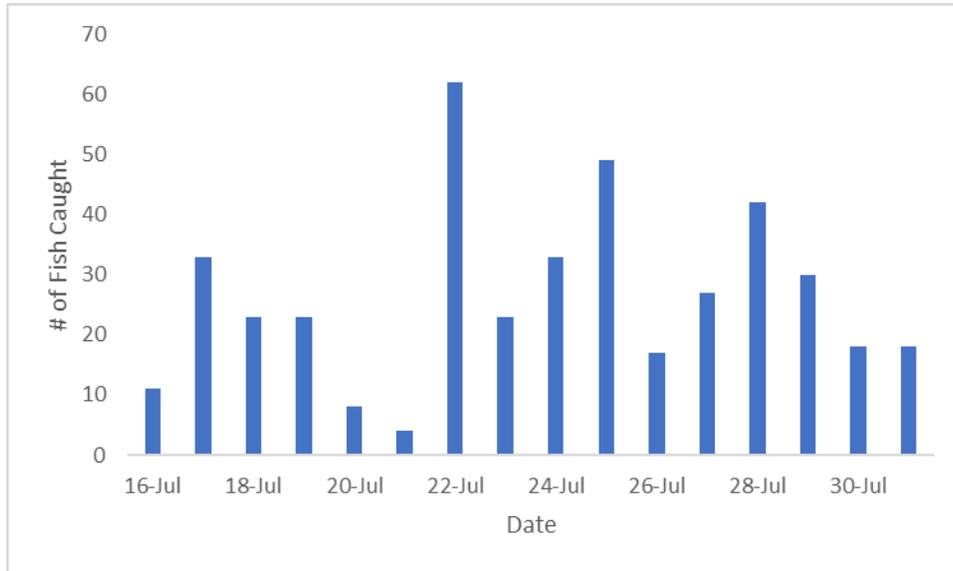


**Figure 34. Hourly Flows PWR vs. RO (Cougar Dam).**

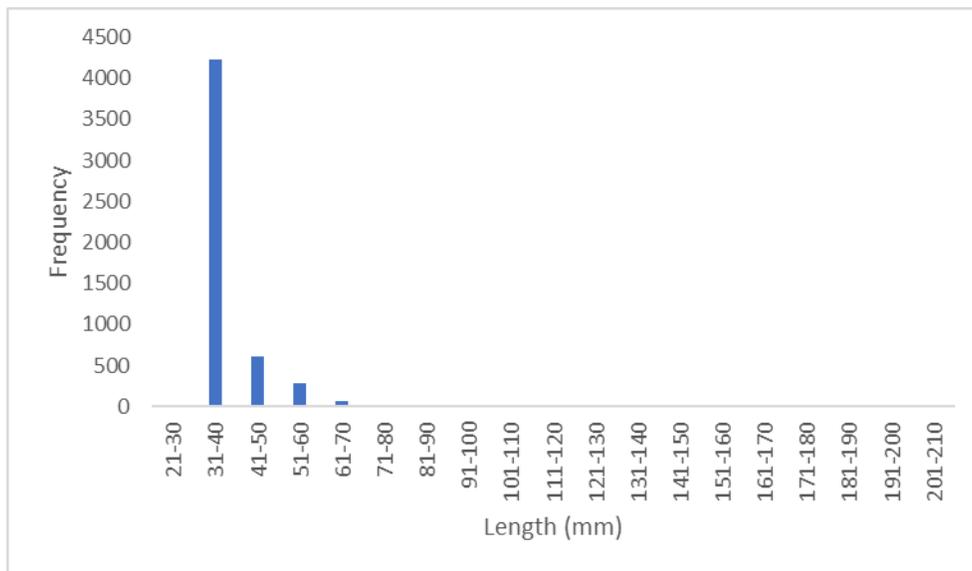
# South Fork of the McKenzie–Cougar Dam Head of Reservoir

## Target Species

The reporting period began July 16<sup>th</sup> and ended on July 31<sup>st</sup>. There were 421 Chinook salmon captured during the 16-day sampling period (Figure 35). The trap was operated 100% of the reporting period. Table 20 provides life stage, length, and weight data for all Chinook salmon that have been caught at the site to-date and Figure 36 shows length frequency data to-date.



**Figure 35. Chinook Captured Per Day 07/16/2023 to 07/31/2023 (Cougar Dam Head of Reservoir).**



**Figure 36. Length Frequency of Juvenile Chinook Sampled in 2023 (Cougar Dam Head of Reservoir).**

**Table 20. Descriptive Statistics of Target Species Captured at Cougar Dam Head of Reservoir, Season To-Date and for the Reporting Period.**

To-Date (Since Jan. 1, 2023)										
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	7	51	100	81.0	1.7	10.4	6.2
		CHS	Parr	503	40	106	55.3	1.0	13.7	2.3
		CHS	Fry	4745	25	64	36.5	N/A	N/A	N/A

July 16-31, 2023										
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	3	51	74	64.7	1.7	5.6	3.8
		CHS	Parr	319	41	75	55.4	1.0	5.4	2.1
		CHS	Fry	99	37	50	46.1	1.0	1.7	1.2

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

### Trapping Efficiency

A total of 758 juvenile hatchery Chinook were adipose clipped and released on 7/27/2023 upstream of the Cougar Head of Reservoir trap site. A total of 27 fish were recaptured in the 5 ft trap. Trapping efficiency was 3.6%.

Cougar Dam Head of Reservoir	Release #	Recapture #	Capture Efficiency
5ft trap	758	27	3.6% (27/758)

### Injuries and Copepod Infection

421 Chinook were captured for the reporting period. Of the fish captured, partial descaling <20% was observed on 50 fish (11.9%) and descaling >20% was observed on 2 fish (0.5%). 81 fish had bodily injury (19.2%). 1 fish displayed eye injuries (0.2%). 1 fish had copepods in the branchial cavity (0.2%), 3 had copepods on fins (0.7%). There were 14 mortalities for this reporting period (3.3%). Injury data for the reporting period is summarized 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. (Cougar Dam Head of Reservoir).**

Site	# CHS Collected	# DSC* <20%	# DSC* >20%	# with Bodily Injuries	# with Eye Injuries	# with COP* In B.C.	# with COP* on Fins	Mortalities
Cougar Dam Head of Reservoir	421	50	2	81	1	1	3	14

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

## Collected DNA and Scale Samples

DNA was collected from 388 of the Chinook captured. Scales were collected from 285 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).

## PIT Tags

19 Spring Chinook were PIT tagged during this reporting period. More information regarding PIT tagged fish can be found in Appendix D.

## 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 month to distinctly mark groups of fish by capture date. Since then, 3,594 Chinook have been VIE marked with fluorescent elastomer. No fish with VIE marks have been detected at downstream RST sites to date. Fish still showing an egg sac are not VIE marked.

One Chinook with VIE RDO was captured in the Cougar Dam Head of Reservoir trap this reporting period, approximately two months after its initial tagging and release.

Date Tagged	Tag Location	VIE Color	# Tagged	# Recaptured to Date
6/25/2022-7/15/2022	Left Dorsal	Yellow	30	0
9/15/2022-9/30/2022	Left Dorsal	Orange	1	0
10/1/2022-10/15/2022	Left Dorsal	Pink	1	0
11/1/2022-11/15/2022	Left Dorsal	Green	1	0
2/16/2023-2/28/2023	Right Dorsal	Yellow	1	0
3/1/2023-3/15/2023	Right Dorsal	Red	1	0
3/16/2023-3/31/2023	Right Dorsal	Red	9	0
4/1/2023-4/15/2023	Right Dorsal	Blue	85	0
4/16/2023-4/30/2023	Right Dorsal	Blue	288	0
5/1/2023-5/15/2023	Right Dorsal	Orange	496	0
5/16/2023-5/31/2023	Right Dorsal	Orange	1397	0
6/1/2023-6/15/2023	Right Dorsal	Pink	487	0
6/16/2023-6/30/2023	Right Dorsal	Pink	234	0
7/1/2023-7/15/2023	Right Dorsal	Green	207	0
7/16/2023-7/31/2023	Right Dorsal	Green	356	0

## Non-Target Species

90 non-target fish were captured at the Cougar Dam Head of Reservoir RST during the reporting period; the data is summarized below in Table 22.

**Table 22. Summary of Non-target Species (Cougar Dam Head of Reservoir).**

Species	Capture	Mortality	Season Total	Season Total Mortality
Bull Trout	1	0	5	0
Cutthroat Trout	2	0	5	0
Chinook (clipped)	3	0	6	0
Dace	2	0	4	0
Mountain Whitefish	0	0	2	1
Northern Pikeminnow	0	0	0	0
<i>O. mykiss</i>	78	0	492	0
Sculpin	4	0	14	1
Unknown	0	0	1	1
<b>Totals</b>	<b>90</b>	<b>0</b>	<b>529</b>	<b>3</b>

### 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 211.0 cfs to 223.0 cfs (mean: 216.4 cfs). Figure 37 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. The temperature probe operated normally, and the data is shown below in Figure 38.

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 Chinook CPUE, Cougar Dam Head of Reservoir.**

Description	Chinook
Catch	421
Effort (hrs)	382.8
CPUE (fish/hr)	1.100

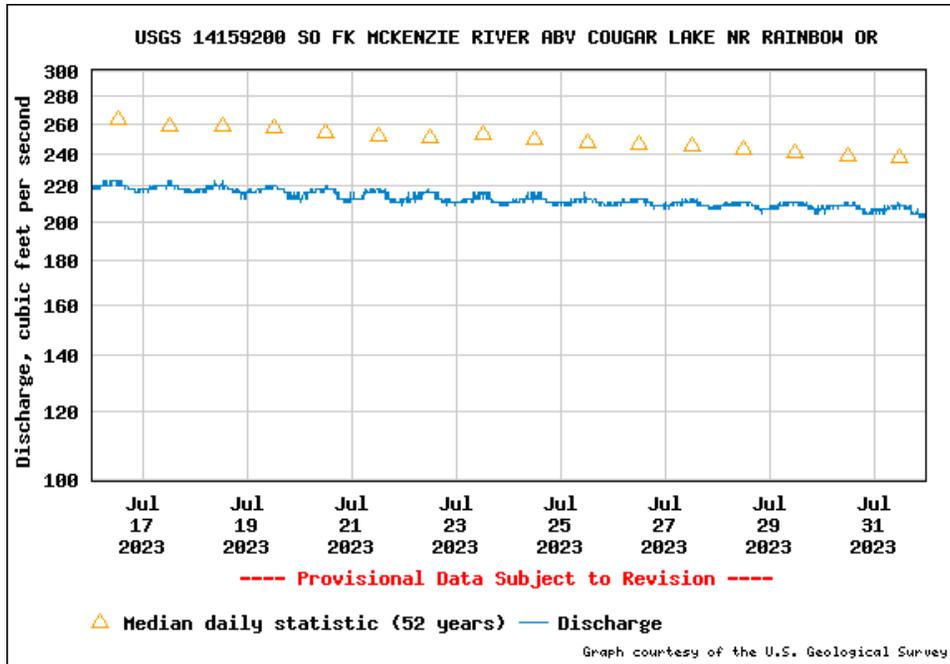


Figure 37. Discharge (cfs); South Fork McKenzie above Cougar Dam.

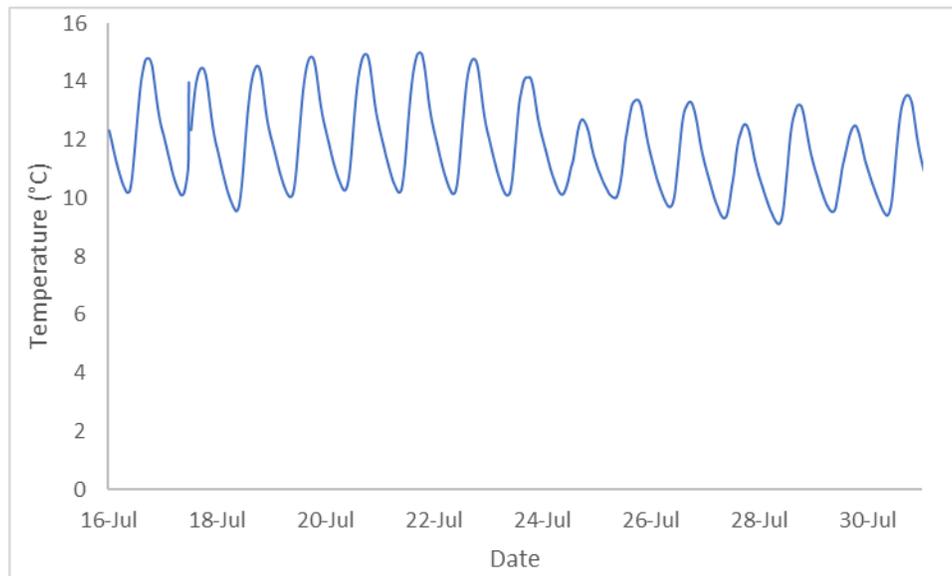
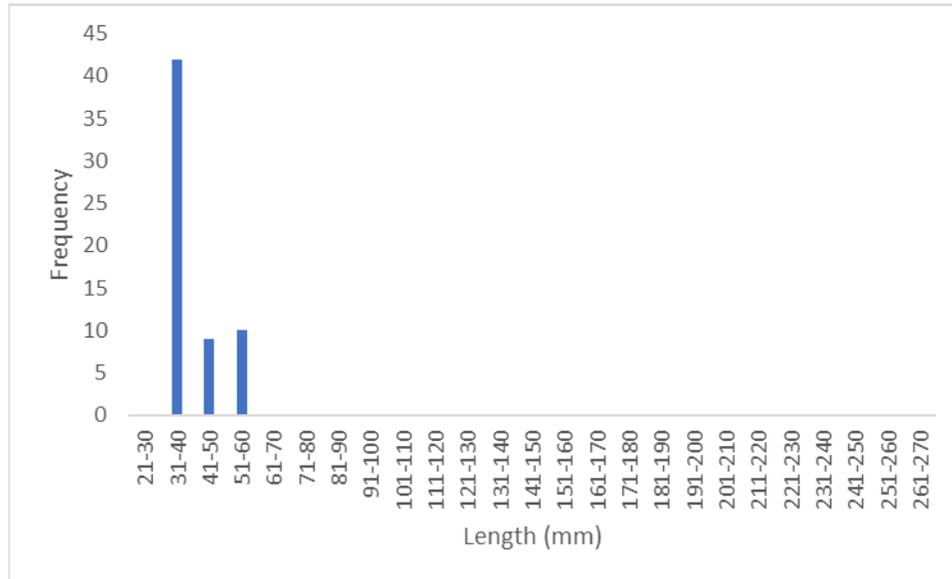


Figure 38. Temperature at RST (Cougar Dam Head of Reservoir).

## Fall Creek Dam Tailrace

Sampling concluded at Fall Creek Dam on July 15<sup>th</sup>. Table 24 provides life stage, length, and weight data for all Chinook Salmon that have been caught at the Fall Creek Dam Tailrace site in 2023 and figure 39 shows length frequency data for Chinook captured in 2023.



**Figure 39. Length Frequency of Juvenile Chinook Sampled in 2023 (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 (Since Jan. 1, 2023)										
Site	Route	Species	Life stage	Collected	Length (mm)*			Weight (g)*		
					Min	Max	Mean	Min	Max	Mean
Fall Creek Dam	RO	CHS	Smolt	0	0	0	0	0	0	0
		CHS	Parr	7	40	60	53.9	2.1	4.5	3.3
		CHS	Fry	54	33	55	39.2	1.3	3.2	1.9

## Trapping Efficiency

Information on trapping efficiency trials at this site are available in appendix C.

## 24-Hour Post Collection Holding Trial

24-hour hold trials were performed on natural origin juvenile Chinook captured in the Fall Creek Dam Tailrace to assess delayed mortality from dam passage. The first fish entered hold trials at Fall Creek Dam Dam Tailrace in March. A total of 58 Chinook were held in 2023 (Table 25). A total of 1 Chinook died during hold (1.7%).

**Table 25. Summary of 24-hour hold trials for fish captured in the RST at the Fall Creek Dam Tailrace site.**

Hold Period	Species	Number of Fish Held	Mortalities	% Survived
3/1/2023-3/15/2023	Chinook	33	0	100%
3/16/2023-3/31/2023	Chinook	9	0	100%
4/1/2023-4/15/2023	Chinook	10	1	90%
4/16/2023-4/30/2023	Chinook	6	0	100%

## Injuries and Copepod Infection

In total, 11 juvenile Chinook captured at the Fall Creek Dam Tailrace site displayed injuries upon capture in 2023. A total of 2 Chinook were dead at the time of capture (3.2%). A summary of injuries by type is shown in table 26.

**Table 26. Percentage of juvenile Chinook displaying injury by type at the Fall Creek Tailrace site in 2023.**

Injury Code	Chinook Injuries
NXI	82.0%
MUNK	0.0%
DS<2	6.6%
DS>2	0.0%
BLO	1.6%
EYB	3.3%
BVT	1.6%
FVB	0.0%
GBD	3.3%
POP	0.0%
HIN	3.3%
OPD	1.6%
TEA	1.6%
BRU	1.6%
HBP	1.6%
HO	0.0%
BO	0.0%
HBO	0.0%
FID	6.6%
PRD	0.0%
COP	0.0%
BKD	0.0%
FUN	0.0%

## Collected DNA and Scale Samples

No Chinook were captured during this reporting period.

## PIT Tags

No Spring Chinook were PIT tagged during 2023 as all captured fish were prioritized for the 24-Hour Post Collection Holding Study. These fish are not tagged to not bias the results of the holding study. More information regarding PIT tagged fish can be found in Appendix D.

## VIE Marking

No VIE marked Spring Chinook have been detected at this site to date.

## Non-Target Species

A total of 313 non-target fish were captured at the Fall Creek Dam Tailrace site during sampling in 2023; the data is summarized below in Table 27.

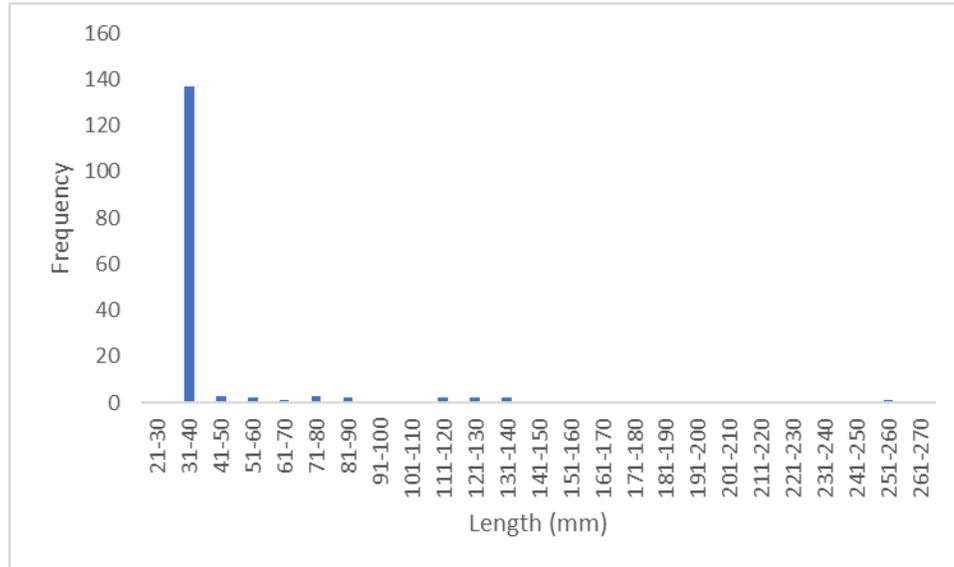
**Table 27. Summary of Non-target Species (Fall Creek Dam Tailrace).**

Species	Season Total	Season Total Mortality
Bluegill	0	0
Brook Lamprey	15	0
Brown Bullhead	33	11
Cutthroat Trout	26	0
Dace	138	5
Largescale Sucker	11	3
Mosquitofish	0	0
Northern Pikeminnow	1	0
<i>O. mykiss</i>	66	3
<i>O. mykiss</i> (clipped)	16	3
Pacific Lamprey	1	0
Sculpin	6	0
<b>Totals</b>	<b>313</b>	<b>25</b>

## Middle Fork Willamette – Fall Creek Head of Reservoir

### Target Species

The Fall Creek Head of Reservoir trap was removed on May 31<sup>st</sup>. Table 28 provides life stage, length, and weight data for all Chinook salmon that have been caught at the Fall Creek Head of Reservoir site to-date and Figure 44 shows length frequency data to-date.



**Figure 44. Length Frequency of Juvenile Chinook Sampled in 2023 (Fall Creek Head of Reservoir).**

**Table 28. Descriptive Statistics of Target Species Captured at Fall Creek 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
Fall Creek Head of Reservoir	8 ft	CHS	Smolt	5	127	255	157.2	21.5	108.5	214.3
		CHS	Parr	10	54	120	81.4	1.3	19.8	7.6
		CHS	Fry	140	31	42	34.7	N/A	N/A	N/A

### Trapping Efficiency

Information regarding trapping efficiency trials at Fall Creek Head of Reservoir are available in appendix C.

### Collected DNA and Scale Samples

Scales and DNA were collected from 0 Chinook captured for the reporting period.

## PIT Tags

A total of 4 Spring Chinook were PIT tagged during sampling in 2023. Refer to Appendix D for further information regarding PIT tags.

## VIE Marking

Visual Implant Elastomer (VIE) trials commenced at Fall Creek Head of Reservoir site on 1/18/2023. VIE tag color and locations are changed every month to distinctly mark groups of fish by capture date. Since then, 48 Chinook have been VIE marked with fluorescent elastomer. 1 fish with VIE marks has been recaptured at the head of reservoir trap site to date. This was a VIE marked fish released above the trap for trapping efficiency trials. A summary of VIE marked fish is shown in table 29.

Fish still showing an egg sac are not VIE marked.

**Table 29. Summary of VIE marked fish at the Fall Creek Head of Reservoir site in 2023.**

Date Tagged	Tag Location	VIE Color	# Tagged	# Recaptured to Date
1/16/2023-1/31/2023	Left Dorsal	Blue	9	0
2/1/2023-2/15/2023	Right Dorsal	Yellow	2	0
2/16/2023-2/28/2023	Right Dorsal	Yellow	1	0
3/1/2023-3/15/2023	Right Dorsal	Red	33	1
5/1/2023-5/15/2023	Right Dorsal	Orange	2	0
5/16/2023-5/31/2023	Right Dorsal	Orange	1	0

## Non-Target Species

A total of 788 non-target fish were captured at the Fall Creek Head of Reservoir site during sampling in 2023; the data is summarized below in table 30.

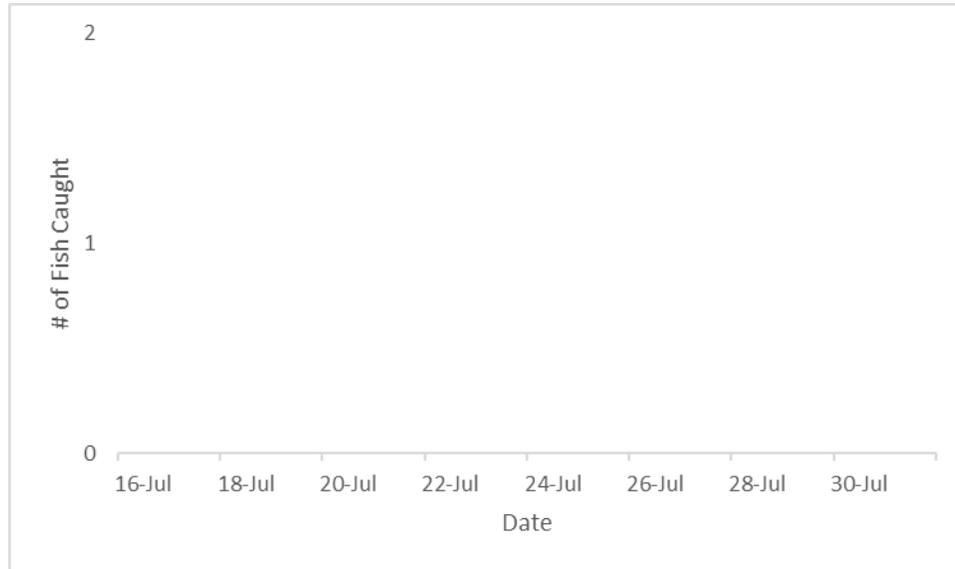
**Table 30. Summary of Non-target Species (Fall Creek Head of Reservoir).**

Species	Capture	Mortality	Season Total	Season Total Mortality
Brook Lamprey	0	0	44	1
Brown Bullhead	0	0	0	0
Cutthroat Trout	0	0	67	0
Dace	0	0	116	1
Largescale Sucker	0	0	9	0
<i>O. mykiss</i>	0	0	436	0
<i>O. mykiss (clipped)</i>	0	0	47	0
Pacific Lamprey	0	0	11	0
Redside Shiner	0	0	0	0
Sculpin	0	0	1	1
Unknown Lamprey	0	0	57	0
<b>Totals</b>	<b>0</b>	<b>0</b>	<b>788</b>	<b>3</b>

## Middle Fork Willamette– Dexter Dam

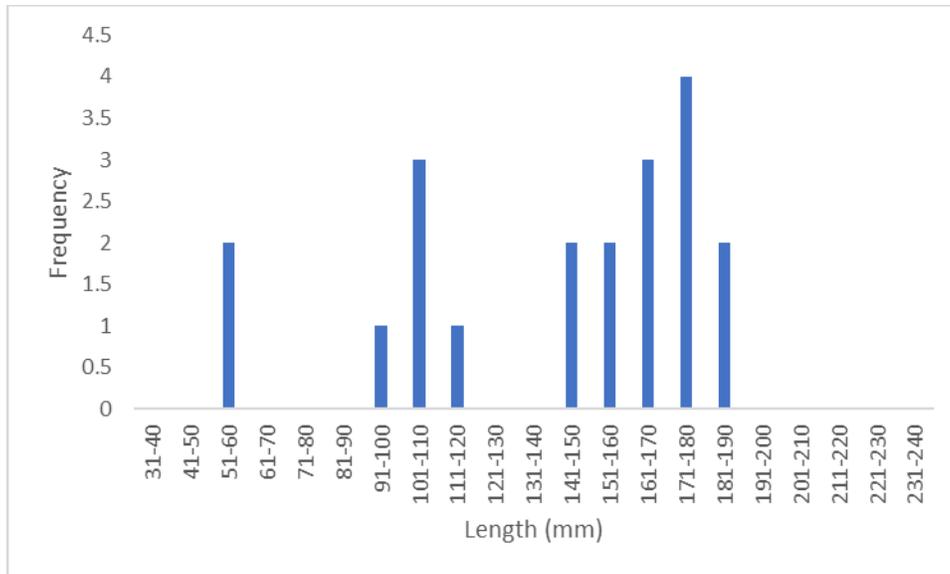
### Target Species

This reporting period began on July 16<sup>th</sup> and ended on July 31<sup>st</sup>. There was 0 Chinook salmon (CHS) captured during the 16-day sampling period. Sampling duration was 100% for the 5 ft RST. Table 31 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 45 shows the daily capture numbers for Chinook and Figure 46 shows length frequency data to-date.



*\*Recaptured fish for trapping efficiency trials not included.*

**Figure 45. Chinook Captured Per Day 07/16/2023 to 07/31/2023 (Dexter Dam)**



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

**Figure 46. Length Frequency of Juvenile Chinook Sampled in 2023 (Dexter Dam).**

**Table 31. Descriptive Statistics of Target Species Captured at the Dexter Dam RST Season To-Date.**

To-Date (Since Jan. 1, 2023)										
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	3	54	103	72.3	1.5	12.9	5.8
		CHS	Smolt	17	100	190	151.9	11.0	65.5	42.2

July 16-31, 2023										
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

A total of 4,000 juvenile hatchery Chinook (sub-yearlings) adipose clipped, upper caudal clipped, and released on 07/6/2023 below Dexter Dam. Fish were released in small groups into the powerhouse flow to evaluate the traps efficiency capturing fish passing through the powerhouse. 5 fish were recaptured in the 5-foot RST for an efficiency of 0.13%.

Dexter Dam	Release #	Recapture #	Capture Efficiency
Powerhouse	4000	5	0.13% (5/4000)

## 24-Hour Post Collection Holding Trial

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

## 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 32. To date injury data can be found in Appendix A.

**Table 32. 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.

## PIT Tags

No Spring Chinook were PIT tagged during this reporting period. The first 60 target fish per week are prioritized for the 24-Hour Post Collection Holding Study. These fish are not tagged to not bias the results of the holding study. More information regarding PIT tagged fish can be found in Appendix D.

## VIE Marking

No VIE marked Spring Chinook have been detected at this site to date.

## Non-Target Species

420 non-target fish were captured during the reporting period; the data is summarized below in Table 33. 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 33. Summary of Non-target Species (Dexter Dam).**

Species	Capture	Mortality	Season Total	Season Total Mortality
Bass Unknown	34	1	34	1
Bluegill	0	0	2	0
Chinook (adult)	1	0	1	0
Chinook (clipped)	3	0	439	0
Crappie	154	1	475	23
Cutthroat Throat	0	0	1	0
Dace	0	0	11	2
Largescale Sucker	0	0	3	1
Largemouth Bass	0	0	2	0
<i>O. mykiss</i>	0	0	3	0
<i>O. mykiss</i> (clipped)	0	0	1	0
Pikeminnow	0	0	0	0
Redside Shiner	0	0	1	0
Sculpin	225	3	467	11
Smallmouth Bass	0	0	1	1
Walleye	3	0	8	0
<b>Totals</b>	<b>420</b>	<b>5</b>	<b>1449</b>	<b>39</b>

### 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 637.9 feet to 638.2 feet (mean: 638.0 feet). Figure 47 shows instantaneous gauge height.

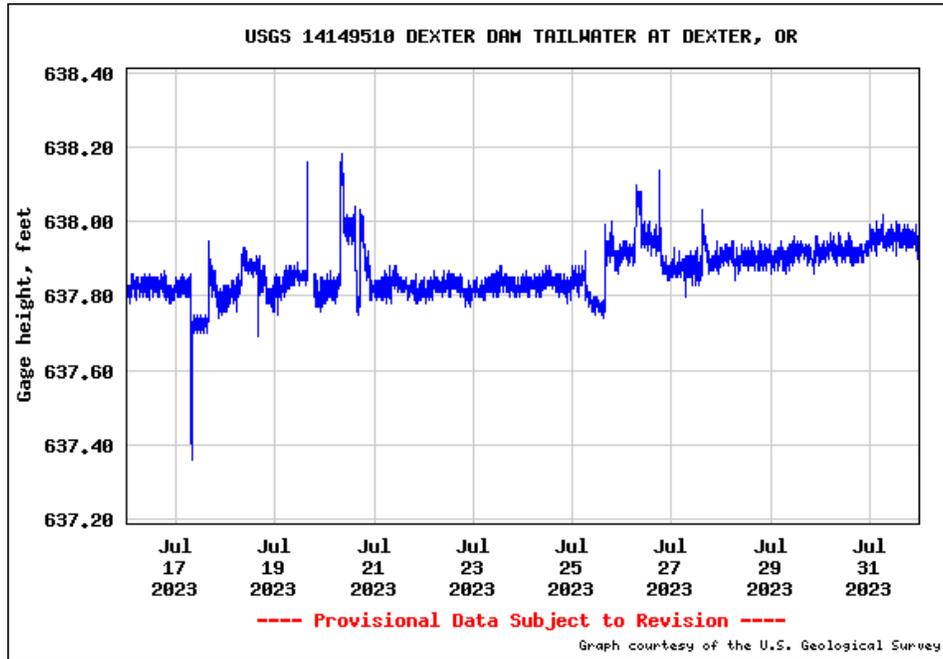
Total dissolved gas saturation ranged from 100 to 112% (mean: 104.2%) during the reporting period. Figure 48 shows total dissolved gas saturation.

Stream temperatures were recorded every 2 hours using a temperature probe at the Dexter Dam RST site during this reporting period. The temperature probe was missing and therefore USGS temperature gage data was used to supplement the missing temperature data in Figure 49.

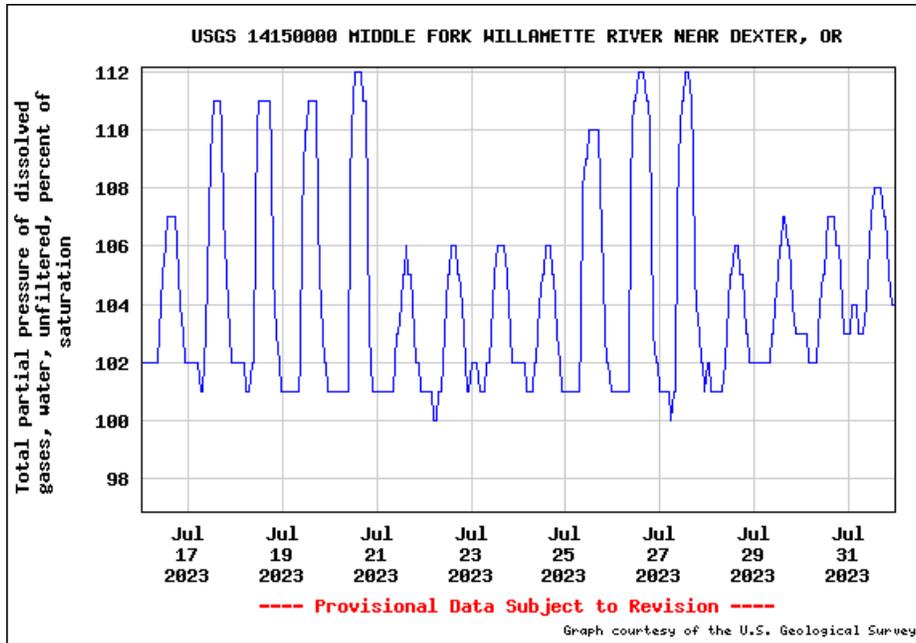
Flows through the Powerhouse and Spill during the reporting period averaged 7,759.6 and 355.4 cubic feet per second (cfs) respectively (Figure 50). Catch per unit of effort (CPUE) data are summarized in Table 34. Discharge and capture data for the duration of monitoring efforts at this location are provided in Appendix B.

**Table 34. Summary of salmonid CPUE, Dexter Dam.**

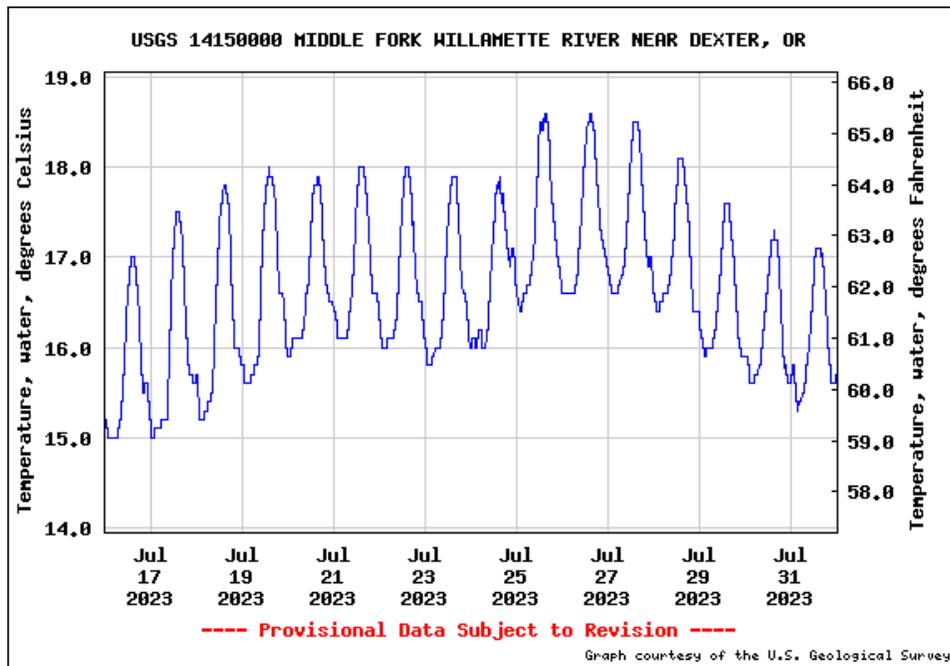
Description	Chinook
Catch	0
Effort (hrs)	381.5
CPUE (fish/hr)	0



**Figure 47. Gauge Height (feet); below Dexter Dam, Middle Fork Willamette.**

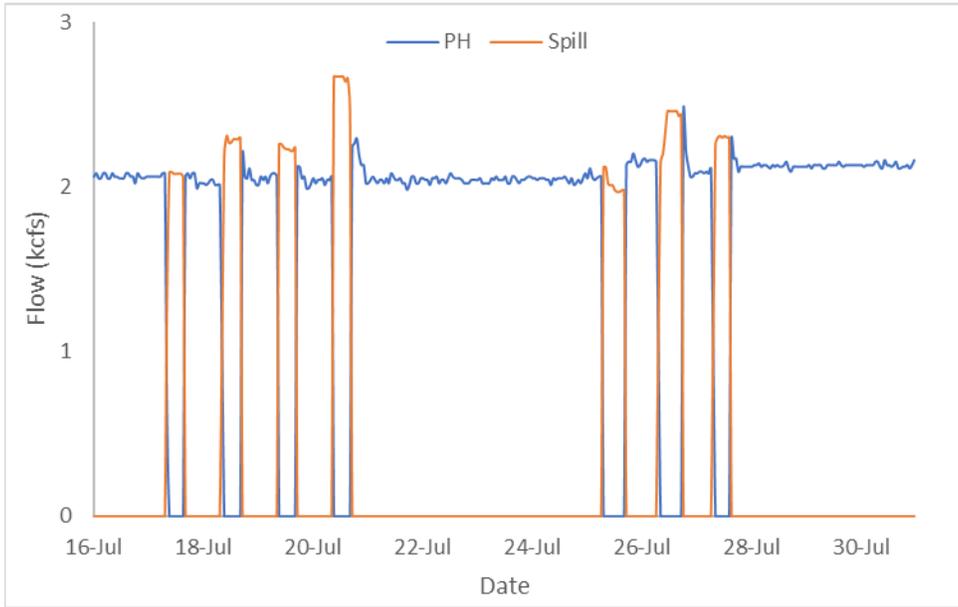


**Figure 48. Total Dissolved Gas Saturation (%); Middle Fork Willamette River, Near Dexter, OR.**



**Figure 49. Temperature at RST (Dexter Dam).**

Note: Temperatures at Dexter Dam were obtained from the USGS site downstream (USGS gage # 14150000).

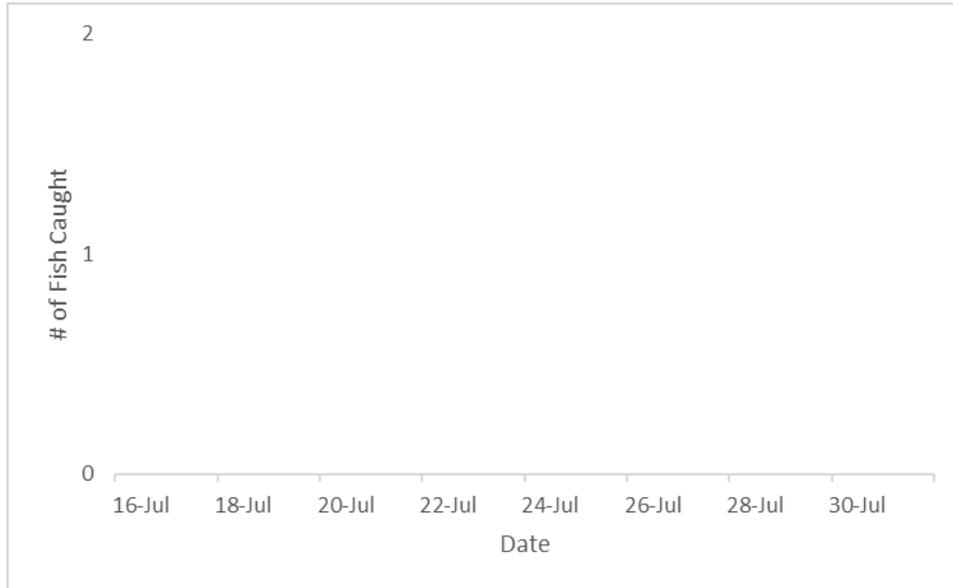


**Figure 50. Hourly Flows PWR vs. Spill (Dexter Dam).**

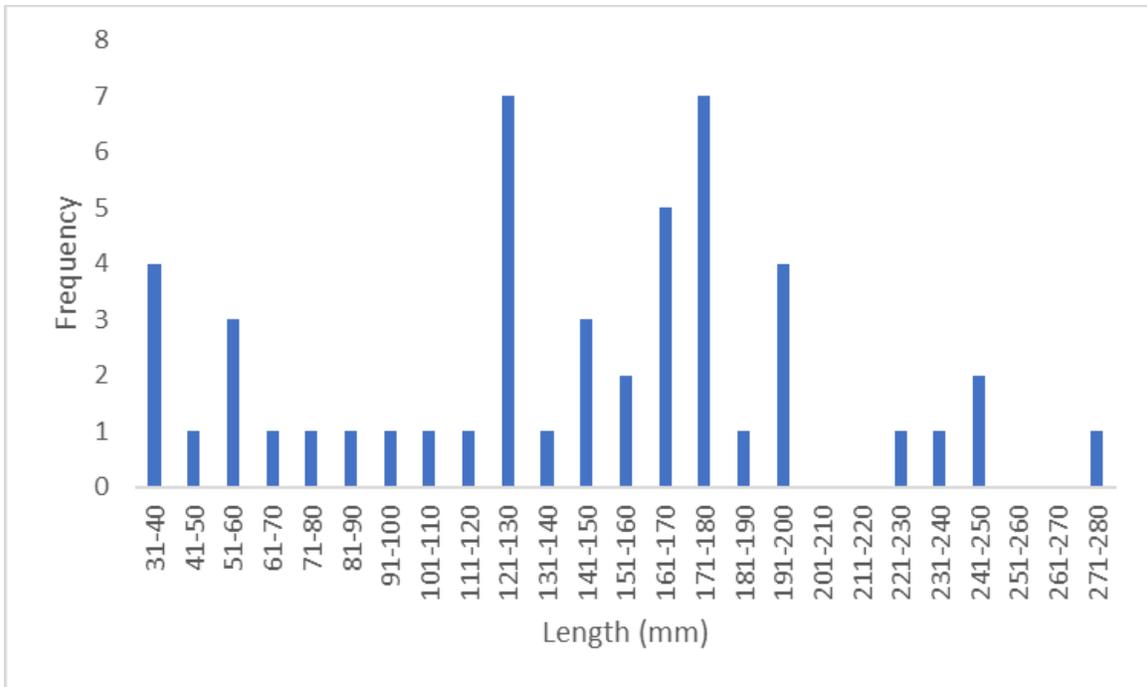
## Middle Fork Willamette – Lookout Dam Tailrace

### Target Species

The reporting period began July 16<sup>th</sup> and ended on July 31<sup>st</sup>. 0 Chinook salmon was captured during the 16-day sampling period (Figure 51). The traps were operated 100% of the reporting period. Table 35 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 52 shows length frequency data to-date.



**Figure 51. Chinook Captured Per Day 07/16/2023 to 07/31/2023 (Lookout Point Dam Tailrace).**



**Figure 52. Length Frequency of Juvenile Chinook Sampled in 2023 (Lookout Point Dam Tailrace).**

**Table 35. Descriptive Statistics of Target Species Captured at Lookout Point Dam Tailrace, Season To-Date and for the Reporting Period.**

To-Date (Since Jan. 1, 2023)										
Site	Route	Species	Life stage	Collected	Length (mm)*			Weight (g)*		
					Min	Max	Mean	Min	Max	Mean
Lookout Point Dam	PH 1	CHS	Smolt	13	109	275	167.6	14.8	269.0	66.6
		CHS	Parr	1	96	96	96	9.4	9.4	9.4
		CHS	Fry	1	52	52	52	3.0	3.0	3.0
	PH 2	CHS	Smolt	4	113	250	160.3	16.5	194.6	69.9
		CHS	Parr	4	57	86	71.0	1.8	7.6	5.3
		CHS	Fry	4	33	37	34.8	N/A	N/A	N/A
	Spill	CHS	Smolt	19	122	247	172.2	19.7	161.4	60.7
		CHS	Parr	1	125	125	125	17.6	17.6	17.6
		CHS	Fry	2	44	55	49.5	1.0	1.6	1.3
July 16-31, 2023										
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.

### Trapping Efficiency

A total of 4,012 juvenile hatchery Chinook (parr) were adipose clipped and released on 7/18/2023 below Lookout Point Dam. Fish were released in small groups directly into powerhouse flow. A total of 1 fish were recaptured in the traps for an efficiency of 0.02%. Trap specific efficiencies are as follows: 0 recaptured at the PH 1 RST for an efficiency of 0%, 0 recaptured at PH 2 for an efficiency of 0%, and 1 recaptured at the Spill RST for an efficiency of 0.02%.

Lookout Dam (7/18/2023)	Release #	Recapture #	Capture Efficiency
Powerhouse	4,012	1	0.02% (1/4,012)

## 24-Hour Post Collection Holding Trial

0 Spring Chinook was captured during the current reporting period and held for 24 hours. 0 fish was held from the PWR RST and 0 fish were held from the Spill RST. 0 hold fish died from the PWR RSTs (0.0%). 0 of the fish from Spill RST died during holding (0.0%).

## 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%). 0 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 was 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 was 0 chinook mortality collected in the Spill RST (0.0%) and 0 in the PWR RSTs (0.0%). Injuries are displayed in Table 36. To date injury data can be found in Appendix A.

**Table 36. 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.

## PIT Tags

No Spring Chinook were PIT tagged during this reporting period. The first 60 target fish per week are prioritized for the 24-Hour Post Collection Holding Study. These fish are not tagged to not bias the results of the holding study. More information regarding PIT tagged fish can be found in Appendix D.

## VIE Marking

No VIE marked Spring Chinook have been detected at this site to date.

## Non-Target Species

16,738 non-target species were captured during the reporting period; the data is summarized below in Table 37.

**Table 37. 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	15771	15637	172	62	17825	16779
Bluegill	0	0	0	0	59	11
Brown Bullhead	1	0	0	0	3	1
Chinook (clipped)	0	0	0	0	14	2
Crappie	661	346	89	27	154653	109657
Cutthroat Trout	0	0	0	0	0	0
Dace	0	0	0	0	0	0
Largemouth Bass	0	0	0	0	23	23
Largescale Sucker	0	0	0	0	6	4
Northern Pikeminnow	0	0	0	0	4	3
<i>O. mykiss</i>	0	0	0	0	6	0
<i>O. mykiss</i> (clipped)	0	0	0	0	1	1
Pumpkinseed	0	0	0	0	1	0
Redside Shiner	0	0	0	0	1	0
Sculpin	4	1	3	1	133	8
Smallmouth Bass	35	35	2	2	114	107
Spotted Bass	0	0	0	0	1	0
Unknown	0	0	0	0	7	0
Walleye	0	0	0	0	35	7
<b>Totals</b>	16,472	16,019	266	92	172,886	126,603

## Stream Statistics

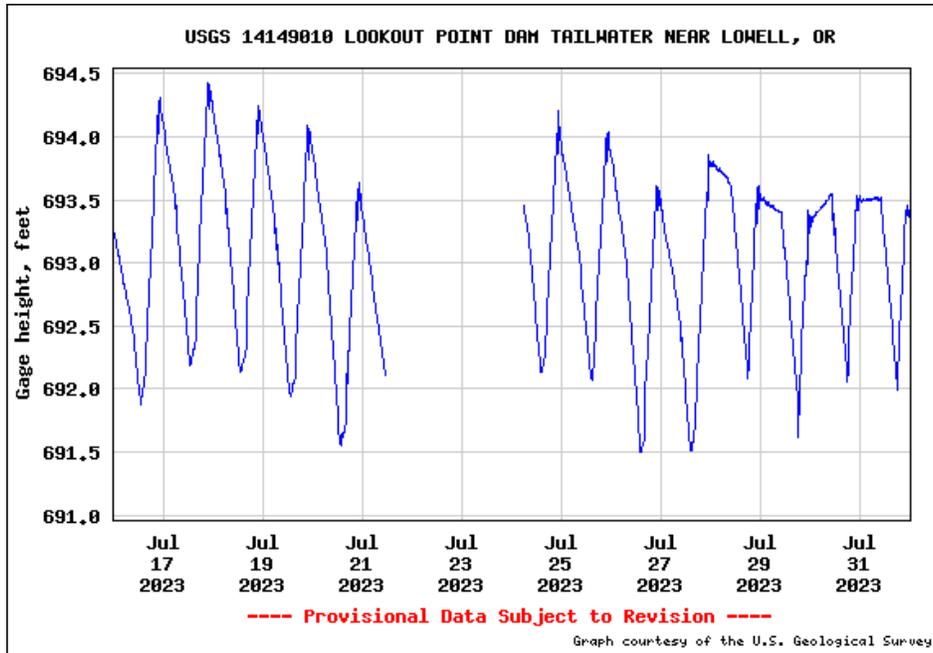
Basic stream statistics at Lookout Dam Tailrace site were calculated from data downloaded from the U.S. Geological Survey stream gauge number 14149010. Total dissolved gas saturation or dissolved oxygen concentration measurements are not available at this stream gauge site, or any nearby stream gauges. Gauge height (feet) is the only metric provided at this gauge. During the reporting period, daily maximum values for instantaneous gauge height ranged from 693.4 feet to 394.4 feet (mean: 393.9 feet). Figure 53 shows instantaneous gauge height. Gage data was not recorded at the site between 11:30 July 21<sup>st</sup> and 5:45 July 24<sup>th</sup>.

Stream temperatures were recorded every 2 hours using temperature probes at the PWR and Spill Lookout Dam RST's during this reporting period. Temperature probes operated normally, and the data is shown below in (Figure 54 and Figure Figure 55).

Flows through the Powerhouse and Spill during the reporting period averaged 1,517.3 and 619.8 cubic feet per second (cfs) respectively (Figure 56). Catch per unit of effort (CPUE) data are summarized in Table 38. Discharge and capture data for the duration of monitoring efforts at this location are provided in Appendix B.

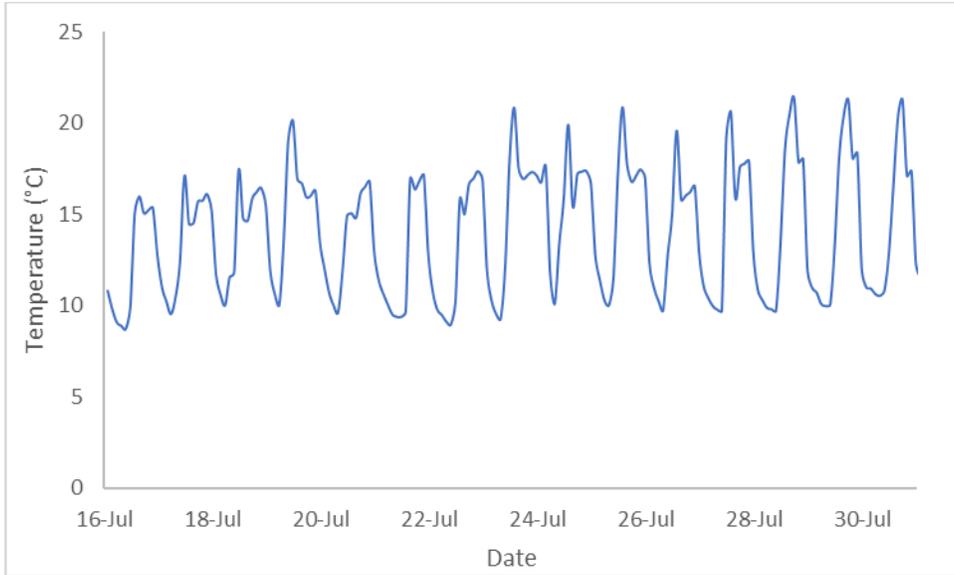
**Table 38. Summary of Chinook CPUE at Lookout Point Dam Tailrace.**

Description	Chinook		
	PH 1	PH 2	Spill
Catch	0	0	0
Effort (hrs)	385.6	385.9	385.9
CPUE (fish/hr)	0	0	0

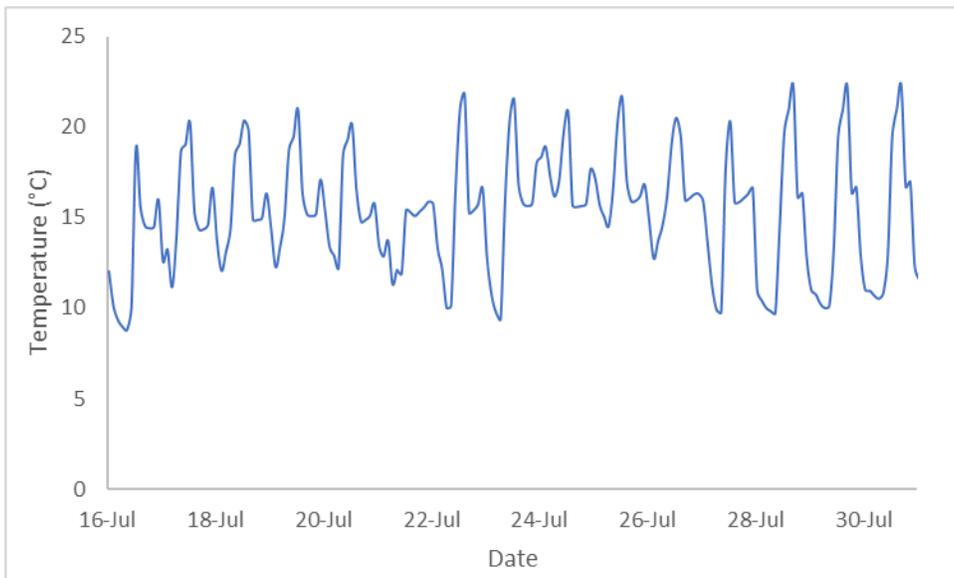


**Figure 53. Gauge Height (feet); below Lookout Dam.**

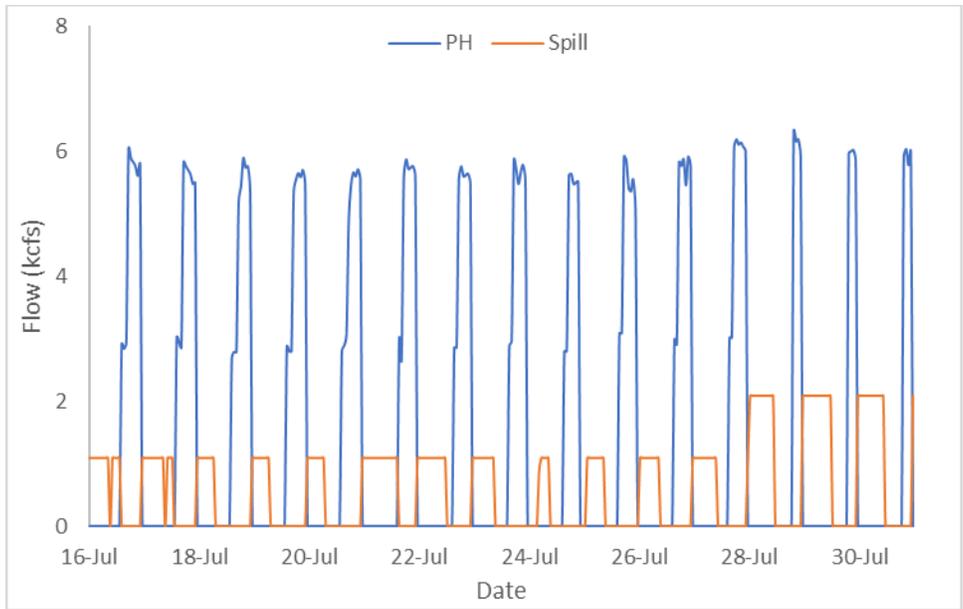
*Note: Gage data was not recorded at the site between 11:30 July 21<sup>st</sup> and 5:45 July 24<sup>th</sup>.*



**Figure 54. Temperature at RST (Lookout Dam PWR).**



**Figure 55. Temperature at RST (Lookout Dam Spill).**

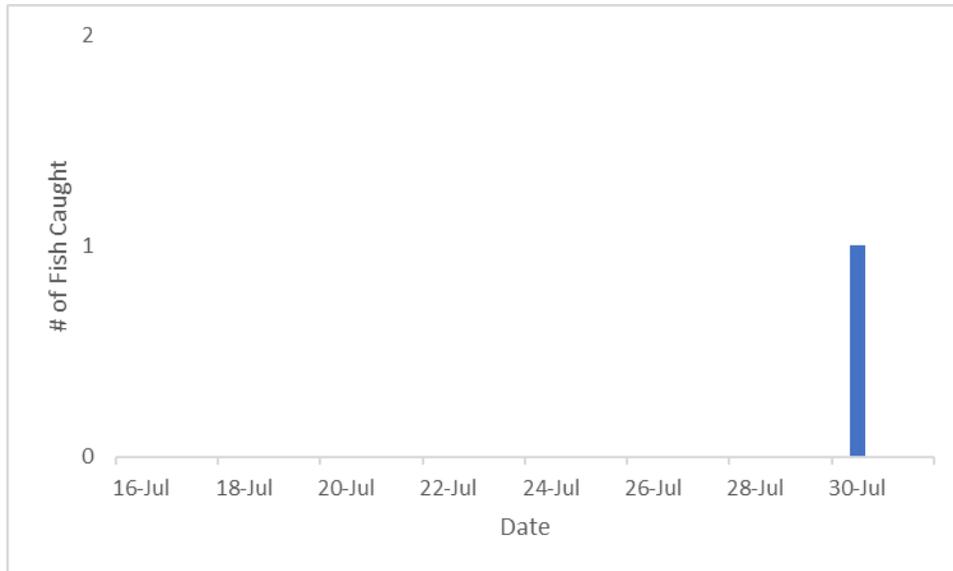


**Figure 56. Hourly Flows PWR vs. Spill (Lookout Dam Tailrace)**

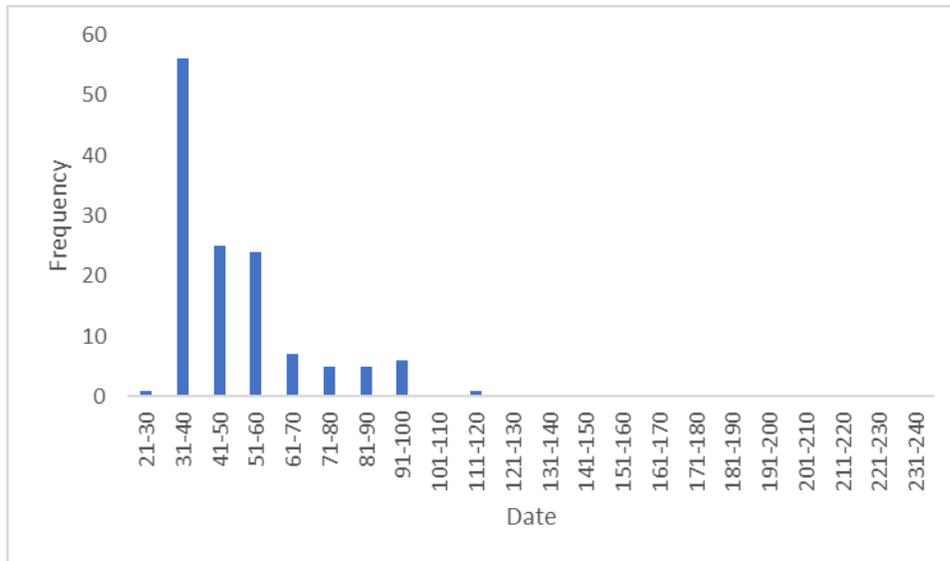
## Middle Fork Willamette – Lookout Point Head of Reservoir

### Target Species

The reporting period began July 16<sup>th</sup> and ended on July 31<sup>st</sup>. 1 Chinook salmon was captured during the 16-day sampling period (Figure 57). The trap was operated 100.0% of the reporting period. Table 39 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 58 shows length frequency data to-date.



**Figure 57. Chinook Captured Per Day 07/16/2023 to 07/31/2023 (Lookout Point Head of Reservoir).**



**Figure 58. Length Frequency of Juvenile Chinook Sampled in 2023 (Lookout Point Head of Reservoir).**

**Table 39. Descriptive Statistics of Target Species Captured at Lookout Point Head of Reservoir, Season To-Date and for the Reporting Period.**

To-Date (Since Jan. 1, 2023)										
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	5	69	113	93.2	4.1	14.5	10.3
		CHS	Parr	38	41	99	64.8	1.0	11.1	3.6
		CHS	Fry	87	30	57	39.6	1.0	4.0	2.0
July 16-31, 2023										
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	0	N/A	N/A	N/A	N/A	N/A	N/A
		CHS	Parr	1	94	94	94.0	9.1	9.1	9.1
		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 765 juvenile hatchery Chinook (sub-yearlings) were adipose and upper caudal clipped and released on 7/19/2023 above the Lookout Point Head of Reservoir trap. Fish were released in small groups to evaluate the traps' efficiency capturing fish migrating downstream. 1 fish were recaptured in the 5-ft RST for an efficiency of 0.1%.

Lookout Point Head of Reservoir	Release #	Recapture #	Capture Efficiency
5 ft	765	1	0.1% (1/765)

## Injuries and Copepod Infection

There was 1 Chinook captured during this reporting period. 1 had partial descaling <20% (100.0%) and 0 had descaling >20% (0.0%). 1 had body injuries (100.0%) and 0 fish displayed eye injuries (0.0%). 0 fish had copepods in the branchial cavity (0.0%). There were 0 mortalities (0.0%). Injury data for the reporting period is shown in Table 40. To date data can be found in Appendix A.

**Table 40. 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/or DNA were collected from 1 Chinook captured for the reporting period.

## PIT Tags

1 Spring Chinook was PIT tagged during this reporting period. Refer to Appendix D for further information regarding PIT tags during this 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 month to distinctly mark groups of fish by capture date. Since then, 68 Chinook have been VIE marked with fluorescent elastomer. No fish with VIE marks have been detected at downstream RST sites to date. Fish still showing an egg sac are not VIE marked. A summary of VIE marked fish at the Lookout Point Head of Reservoir site is available in table 41.

**Table 41. Summary of VIE Marked Chinook at the Lookout Point Head of Reservoir site.**

Date Tagged	Tag Location	VIE Color	# Tagged	# Recaptured to Date
6/25/2022-7/15/2022	Left Dorsal	Yellow	3	0
7/16/2022-7/31/2022	Left Dorsal	Red	1	0
1/1/2023-1/31/2023	Left Dorsal	Blue	7	0
2/1/2023-2/15/2023	Right Dorsal	Yellow	2	0
2/16/2023-2/28/2023	Right Dorsal	Yellow	1	0
3/1/2023-3/15/2023	Right Dorsal	Red	3	0
5/16/2023-5/31/2023	Right Dorsal	Orange	33	0
6/1/2023-6/15/2023	Right Dorsal	Pink	9	0
6/16/2023-6/30/2023	Right Dorsal	Pink	9	0

## Non-Target Species

237 non-target species were captured during the reporting period; the data is summarized below in Table 42.

**Table 42. Summary of Non-target Species (Lookout Point Head of Reservoir).**

Species	5ft Capture	5ft Mortality	Season Total	Season Total Mortality
Chinook (clipped)	1	0	9	0
Crappie	0	0	2	2
Cutthroat Trout	4	0	14	0
Dace	158	4	397	4
Lamprey	0	0	0	0
Largescale Sucker	31	0	69	0
Mountain Whitefish	1	0	3	0
Northern Pikeminnow	9	0	30	0
<i>O. mykiss</i>	25	1	203	2
<i>O. mykiss</i> (clipped)	0	0	0	0
Redside Shiner	1	0	5	0
Sculpin	7	0	19	0
Unknown	0	0	0	0
<b>Totals</b>	<b>237</b>	<b>5</b>	<b>751</b>	<b>8</b>

### 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 1,010.0 cfs to 1,180.0 cfs (mean: 1,080.6 cfs). Figure 59 shows instantaneous discharge.

Stream temperatures were recorded every 2 hours using a temperature probe at the Lookout Point Head of Reservoir RST site during this reporting period. Temperature probe at the RST operated normally throughout the reporting period (Figure 60).

Flows into Lookout Point Reservoir averaged 1,104.7 cfs (Figure 61). Catch per unit of effort (CPUE) data are summarized in Table 43. Discharge and capture data for the duration of monitoring efforts at this location are provided in Appendix B.

**Table 43. Summary of Chinook CPUE at Lookout Point Head of Reservoir.**

Description	Chinook
Catch	1
Effort (hrs)	386.2
CPUE (fish/hr)	0.003

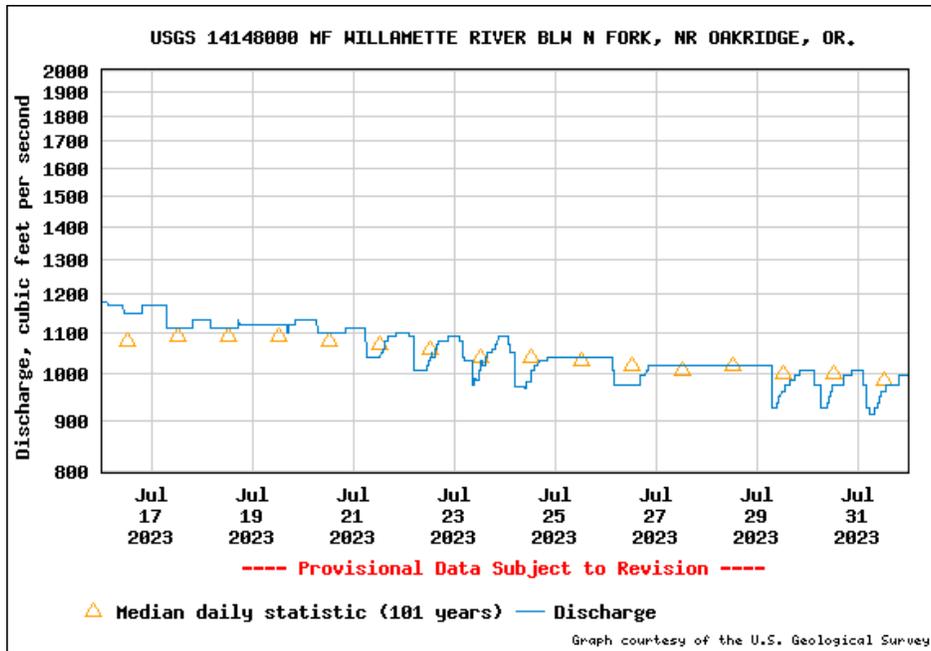


Figure 59. Discharge (cfs); above Lookout Point Reservoir, Below Oakridge, OR.

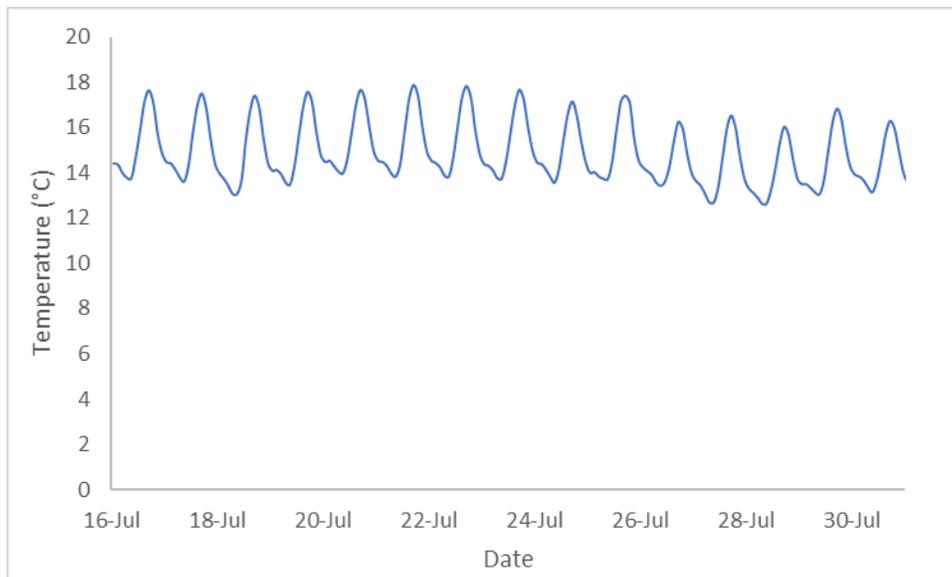
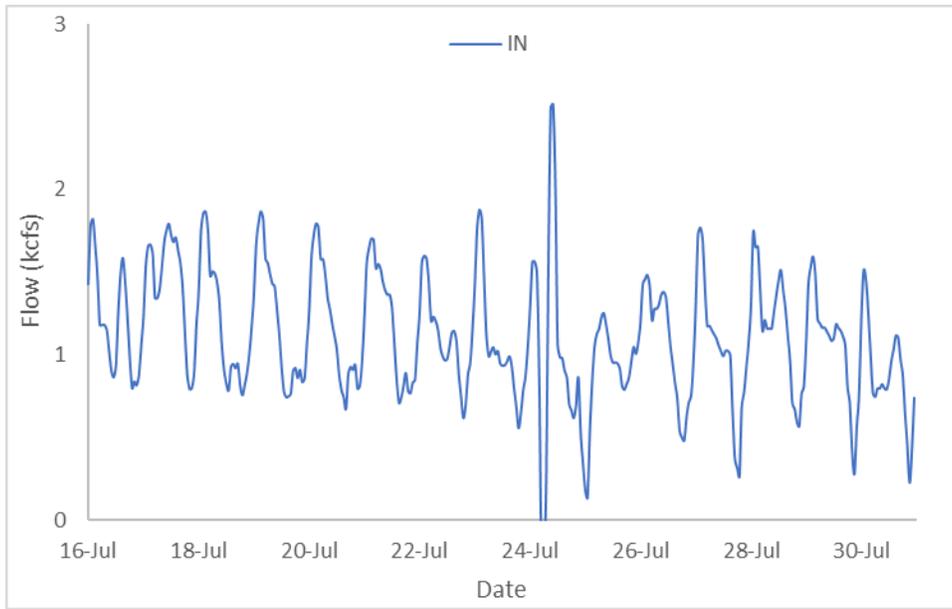


Figure 60. Temperature at RST (Lookout Point Head of Reservoir).

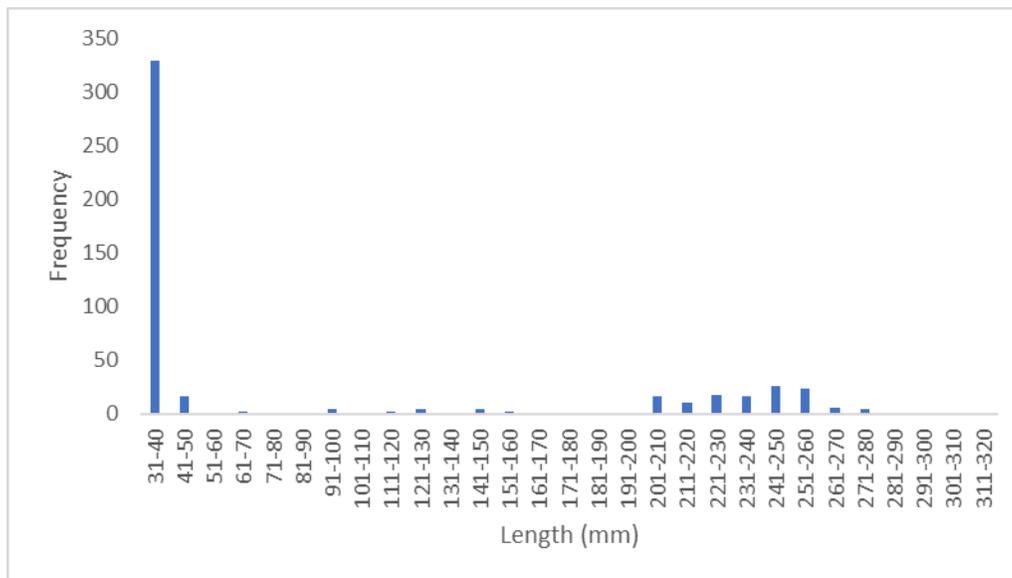


**Figure 61. Hourly Flows (Lookout Point Head of Reservoir site).**

## Middle Fork Willamette – Hills Creek Dam

### Target Species

Spring sampling at Hills Creek Dam concluded on June 30, 2023. Sampling will resume at this site in September. Table 44 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 62 shows length frequency data to-date.



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

**Figure 62. Length Frequency of Juvenile Chinook Sampled in 2023 (Hills Creek Dam).**

### Trapping Efficiency

A total of 507 juvenile Chinook (parr) were adipose clipped, left vent clipped and released on 6/27/23 below Hills Creek PWR to evaluate the efficiency of the screw trap. A total of 22 fish were recaptured in the traps for an efficiency of 4.3%. 22 fish were recaptured at the 8 ft PWR trap for a trapping efficiency of 4.3% and 0 were captured in the RO trap for an efficiency of 0.0%.

Hills Creek Dam (6/27/2023)	Release #	Recapture #	Capture Efficiency
PWR Trap	507	22	4.3% (22/507)
RO Trap	507 (PWR Release)	0	0.0% (0/507)

**Table 44. Descriptive Statistics of Target Species Captured at Hills Creek Dam Season To-Date and for the Reporting Period.**

To-Date (Since Jan. 1, 2023)										
Site	Route	Species	Life stage	Collected	Length (mm)*			Weight (g)*		
					Min	Max	Mean	Min	Max	Mean
Hills Creek	RO	CHS	Fry	126	31	55	35.6	N/A	N/A	N/A
		CHS	Parr	1	61	61	61	2.5	2.5	2.5
		CHS	Smolt	8	234	273	255.0	143.3	196.3	172.0
Hills Creek	PWR	CHS	Fry	220	31	48	36.1	N/A	N/A	N/A
		CHS	Parr	0	N/A	N/A	N/A	N/A	N/A	N/A
		CHS	Smolt	9	122	314	244.6	19.6	290.2	166.4

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

### 24-Hour Post Collection Holding Trial

24-hour hold trials were performed at the Hills Creek Dam site to assess delayed mortality resulting from dam passage. The first fish entered hold trials at Hills Creek Dam in January 2023. A total of 260 fish, 93 from the RO and 167 from the Powerhouse traps, were held (Table 45). A total of 2 fish died during hold (0.8%), 1 of the RO Chinook (1.1%) and 1 of the Powerhouse Chinook (0.6%). Mortality rates across the two-week periods in which fish were held ranged from 0 to 25.0%.

**Table 45. Summary of 24-hour hold trials for fish captured in the RSTs at the Hills Creek Dam site.**

Hold Period	Trap	Number of Fish Held	Mortalities	% Survived
1/1/2023-1/15/2023	PH	2	1	50%
1/1/2023-1/15/2023	RO	2	0	100%
1/16/2023-1/31/2023	PH	1	0	100%
1/16/2023-1/31/2023	RO	3	0	100%
2/1/2023-2/15/2023	PH	3	0	100%
2/16/2023-2/28/2023	PH	4	0	100%
2/16/2023-2/28/2023	RO	4	0	100%
3/1/2023-3/15/2023	PH	6	0	100%
3/1/2023-3/15/2023	RO	3	0	100%
3/16/2023-3/31/2023	PH	75	0	100%
3/16/2023-3/31/2023	RO	54	0	100%
4/1/2023-4/15/2023	PH	45	0	100%
4/1/2023-4/15/2023	RO	18	0	100%
4/16/2023-4/30/2023	PH	31	0	100%
4/16/2023-4/30/2023	RO	8	1	87.5%
6/1/2023-6/15/2023	RO	1	0	100%

### Non-Target Species

A total of 1,257 non-target fish were captured at Hills Creek in 2023; the data is summarized below in Table 46.

**Table 46. Summary of Non-target Species (Hills Creek Dam).**

<b>Species</b>	<b>Season Total</b>	<b>Season Total Mortality</b>
Bass Unknown	5	1
Bluegill	142	58
Brook Lamprey	0	0
Brown Bullhead	6	0
Crappie	375	215
Dace	42	2
Redside Shiner	1	1
Sculpin	279	0
Largemouth Bass	7	23
Northern Pikeminnow	1	0
Spotted Bass	92	46
Smallmouth Bass	2	2
Largescale Sucker	35	4
<i>O. mykiss</i>	58	20
<i>O. mykiss (clipped)</i>	12	45
Unknown	1	1
<b>Totals</b>	<b>1058</b>	<b>418</b>

## **Issues Encountered**

The Foster Head of Reservoir- South Santiam and Lookout Dam Tailrace sites are approaching temperature thresholds and may result in sampling outages soon.

Road closures from the Bedrock Fire are nearing the Cougar Dam Head of Reservoir site as well as the Lookout Point Head of Reservoir site. This may affect future sampling.

## **Upcoming USACE Support Services**

USACE Crane support will be required in August when the Cougar Dam Regulating Outlet trap will be installed.

## Appendix A

### Chinook (CHS) To Date

		Chinook 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		1653	993	12	117	15	16	1197	357	5	882	6	13	5	49	9	116	57	202	100	102	25	76	
8 ft		1653	993	12	117	15	16	1197	357	5	882	6	13	5	49	9	116	57	202	100	102	25	76	
Adult	1		1								1						1	1	1		1			
Parr	40		14	1	4	2		20	5		14					2			1	1		1		
Smolt	1481		973	11	111	13	15	1177	351	5	864	6	13	3	48	7	112	53	199	96	101	21	74	
Unknown	2													2								1		
Fry	129		5		2		1		1		3				1		3	3	1	3		2	2	
Green Peter Tail.		100	3	49	1	14	2	7	28		66				8		9	5	13	14	11	2	30	
8 ft		100	3	49	1	14	2	7	28		66				8		9	5	13	14	11	2	30	
Parr	82	3	43		9	2		5	21		53				4		6	3	11	10	11	2	25	
Smolt	3		1					1	2		3												1	
Fry	15		5	1	5			1	5		10				4		3	2	2	4			4	
Foster Dam HOR		711		82		3		3	5		64		1	1	3		5	12	4	15	1		6	
5 ft		711		82		3		3	5		64		1	1	3		5	12	4	15	1		6	
Parr	69		47					3			21				1				1					
Smolt	45		32								23						1			2				
Fry	597		3		3				5		20		1	1	2		4	12	3	13	1		6	
Cougar Dam		3901	11	2176	43	370	45	12	2884	917	6	2214	3	8	2	##	44	209	##	429	132	333	34	815
RO		2592	1	1587	34	331	39	12	2269	781	5	1849	3	3		92	39	172	93	366	107	261	30	808
Parr	251		135	5	39	3	1	155	68		142				9	2	10	6	18	17	7	5	37	
Smolt	2302	1	1451	29	289	36	11	2114	712	5	1705	3	3		83	37	161	87	347	88	253	25	771	
Fry	39		1		3				1		2						1		1	2	1			
PH		1309	10	589	9	39	6	615	136	1	365		5	2	43	5	37	42	63	25	72	4	7	
Parr	337		184	2	12	3		120	34	1	97		1		10	2	6	14	16	8	10		1	
Smolt	581		401	7	21	3		494	95		262		4		32	3	28	21	43	14	62	1	6	
Unknown	2													2										
Fry	389	10	4		6			1	7		6				1		3	7	4	3		3		
Cougar Dam HOR		6013	9	191	7	12	4	20	28	16	196	2	1		6		35	44	57	47	14		27	
5 ft		6013	9	191	7	12	4	20	28	16	196	2	1		6		35	44	57	47	14		27	
Parr	681		162	7	1	4		18	7	7	126				4		5	16	6	7	4	6		
Smolt	11		4								2													
Fry	5321	9	25		11			2	21	9	68	2	1		2		30	28	51	40	10	21		
Fall Creek Dam Tail.		62		4		2			1		5				1		2	1	2	3			2	
8 ft		62		4		2			1		5				1		2	1	2	3			2	
Parr	7		1		1						1				1			1	1	1			2	
Smolt	1								1		1						1							
Fry	54		3		1						3						1		1	2				
Fall Creek HOR		155		5	1			2	4		5	1					2	3		2			1	
8 ft		155		5	1			2	4		5	1					2	3		2			1	
Parr	10		3					1	2		3						1							
Smolt	5		1					1																
Fry	140		1	1					2		2	1					1	3		2		1		
Dexter Dam Tail.		119		69		7		19	32		60				1		4	4	6	6	6	1	21	
5 ft		119		69		7		19	32		60				1		4	4	6	6	6	1	21	
Parr	21		7		3			2	6		9							2	3	2			6	
Smolt	95		62		4			17	26		50				1		4	2	3	4	6	1	15	
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.	128		62	1	21	2	5	32	48		83				5	2	13	8	20	19	21	3	16
PH 1	43		18	1	8	1	1	14	19		31				4	2	8	3	9	7	4		5
Parr	4		1		1				2		2					1	1		1				
Smolt	38		17	1	7	1	1	14	17		29				4	1	7	3	8	7	4		5
Fry	1																						
PH 2	25		14		6		1	3	7		16				1		2	3	2	5	3		
Parr	8		6		4				2		6						1	1	1	3			
Smolt	13		8		2		1	3	4		10				1		1		1	1	2		
Fry	4								1								2			1	1		
Spill	60		30		7	1	3	15	22		36						3	2	9	7	14	3	11
Parr	7		2						3		2												
Smolt	51		27		6	1	3	15	19		33						3	2	9	7	14	3	11
Fry	2		1		1						1												
Lookout Point HOR	239	1	56		3			3	3		33						4	3	4		1		
5 ft	239	1	56		3			3	3		33						4	3	4		1		
Parr	100		46					1			18						1		2				
Smolt	11		8					1	1		6												
Fry	128	1	2		3			1	2		9						3	3	2		1		
Hills Creek Dam	504	2	81	1	26			130	70		83	1	12	3	55	8	28	11	30	16	16	7	20
RO	219	2	49		9			77	37		43		7		29	6	12	2	18	9	7	4	8
Parr	7		2					1									1						
Smolt	86	1	45		8			76	37		41		7		29	6	8	2	16	6	6	2	8
Fry	126	1	2		1						2						3	3	2	3	1	2	
PH	285		32	1	17			53	33		40	1	5	3	26	2	16	9	12	7	9	3	12
Parr	7		4					1	1							1				1			
Smolt	58		23	1	13			52	32		35	1	5	3	21	1	10	4	8	4	9		12
Fry	220		5		4						5				5		6	5	4	2		3	

**Chinook (CHS) During Reporting Period**

Chinook Injuries During Reporting Period (07-16-2023 to 07-31-2023)																							
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	12		11			1		12	1		9						1	3			2		1
8 ft	12		11			1		12	1		9						1	3			2		1
Smolt	12		11			1		12	1		9						1	3			2		1
Cougar Dam	26		14	1	1	2		10	3		10				3	1	1	4	3	2	2		1
PH 1	20		12					9	2		8				1			2	2	1			1
Parr	16		8					8	2		5				1			2	2	1			1
Smolt	4		4					1			3												
PH 2	6		2	1	1	2		1	1		2				2	1	1	2	1	1	2		
Parr	6		2	1	1	2		1	1		2				2	1	1	2	1	1	2		
Cougar Dam HOR	421		50	7	1			5	2	3	70				3		6	12	5	5	3	6	
5 ft	421		50	7	1			5	2	3	70				3		6	12	5	5	3	6	
Fry	99		4					1	1		9						3	3	1				
Parr	319		45	7	1			4	1	3	61				3		3	9	4	5	3	6	
Smolt	3		1																				
Lookout Point HOR	1		1								1												
5 ft	1		1								1												
Parr	1		1								1												

### Steelhead (O. mykiss) To Date

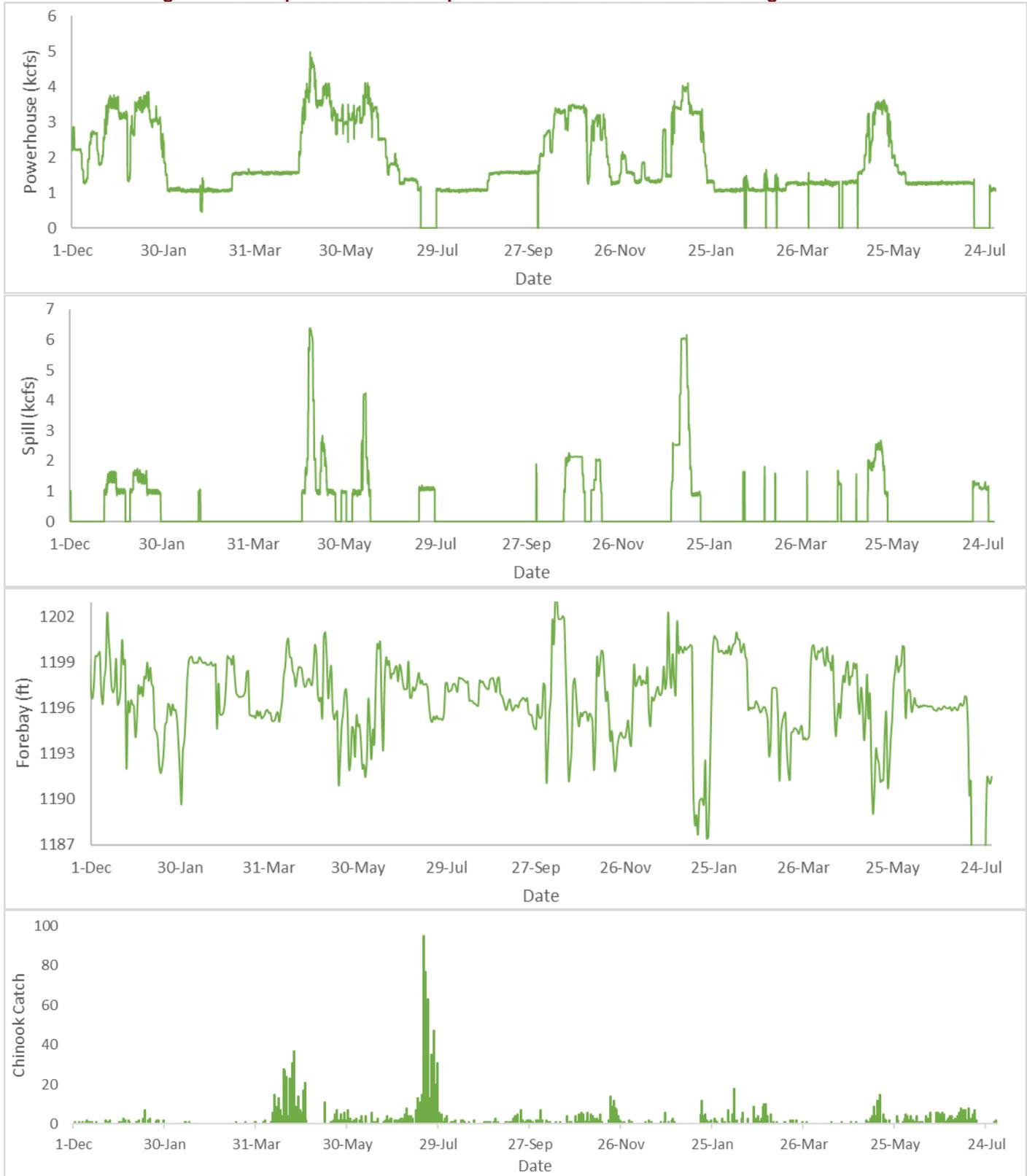
		O. mykiss Injuries to-Date																					
Site/Trap/Life Stage	Total Fish	MUNK	DS<2	BLO	EVB	FUN	BKD	COP	DS>2	PRD	FID	HBO	BO	HO	BVT	HBP	BRU	TEA	OPD	HIN	FVB	POP	GBD
Big Cliff Dam	340	1	55	4	7	4	6	51	22	1	71	1	1		5		15	7	17	16	12	3	13
8 ft	340	1	55	4	7	4	6	51	22	1	71	1	1		5		15	7	17	16	12	3	13
Adult	1								1		1		1										
Parr	50	1	12	4	1	1	1	1			16						2	1	1	1	1		1
Smolt	64		38		6	3	5	50	21		50	1			5		10	5	15	15	11	3	11
Fry	225		5							1	4						3	1	1				1
Green Peter Tail.	17		7		3			4	8		13				1		4		5	3	1	5	12
8 ft	17		7		3			4	8		13				1		4		5	3	1	5	12
Adult	1		1								1												1
Smolt	15		6		3			4	8		12				1		4		5	3	1	5	11
Fry	1																						
Foster Dam HOR	265		90		2	5		6		2	80						3	2	3	3	1		2
5 ft	265		90		2	5		6		2	80						3	2	3	3	1		2
Adult	7		1								2												
Parr	125		38		1	3		4			43						3		2		1	1	
Smolt	93		51		1	2		2		2	34							1	1	2		1	
Fry	40										1							1		1			

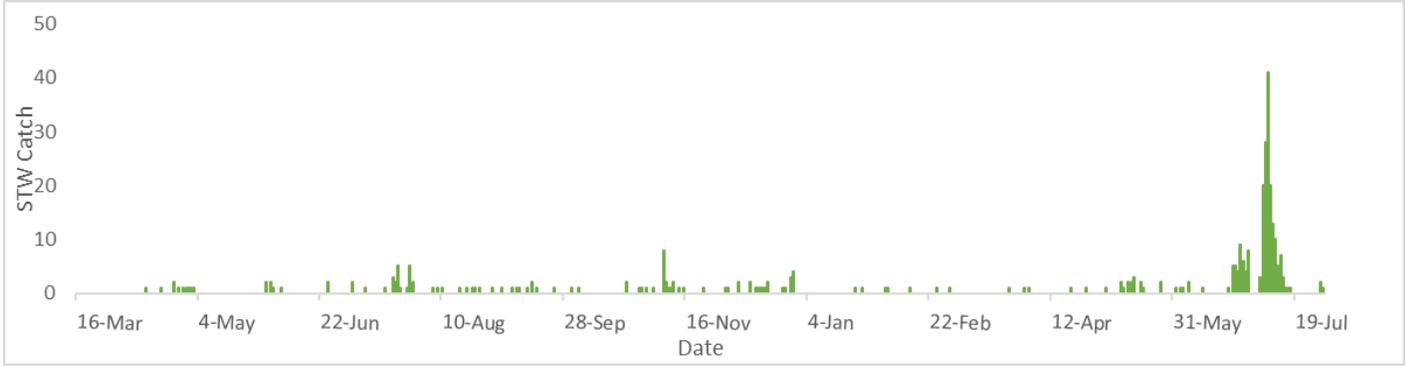
### Steelhead (O. mykiss) During Reporting Period

		O. mykiss Injuries During Reporting Period (07-16-2023 to 07-31-2023)																					
Site/Trap/Life Stage	Total Fish	MUNK	DS<2	BLO	EVB	FUN	BKD	COP	DS>2	PRD	FID	HBO	BO	HO	BVT	HBP	BRU	TEA	OPD	HIN	FVB	POP	GBD
Big Cliff Dam	5		1																				
8 ft	5		1																				
Fry	3		1																				
Parr	2																						

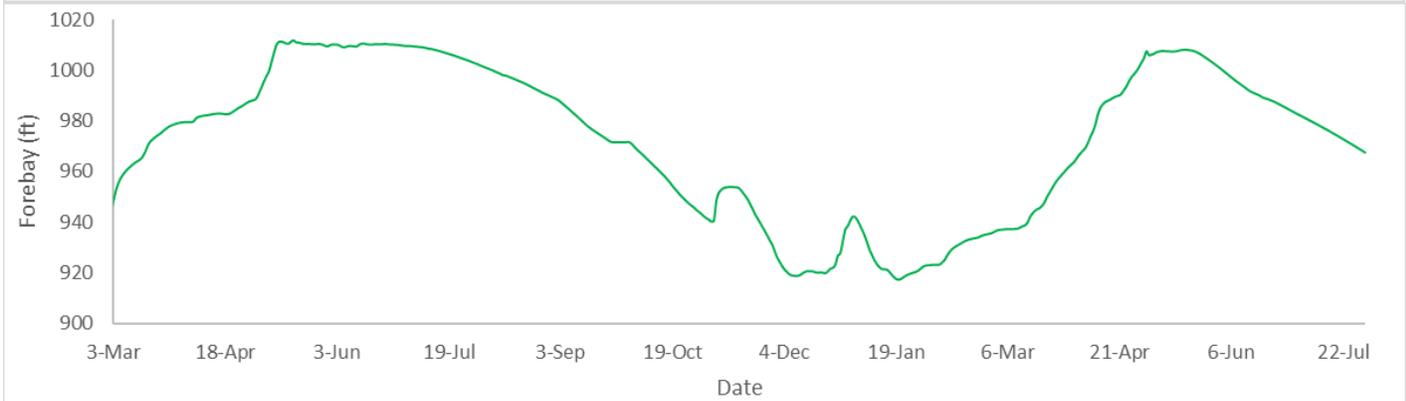
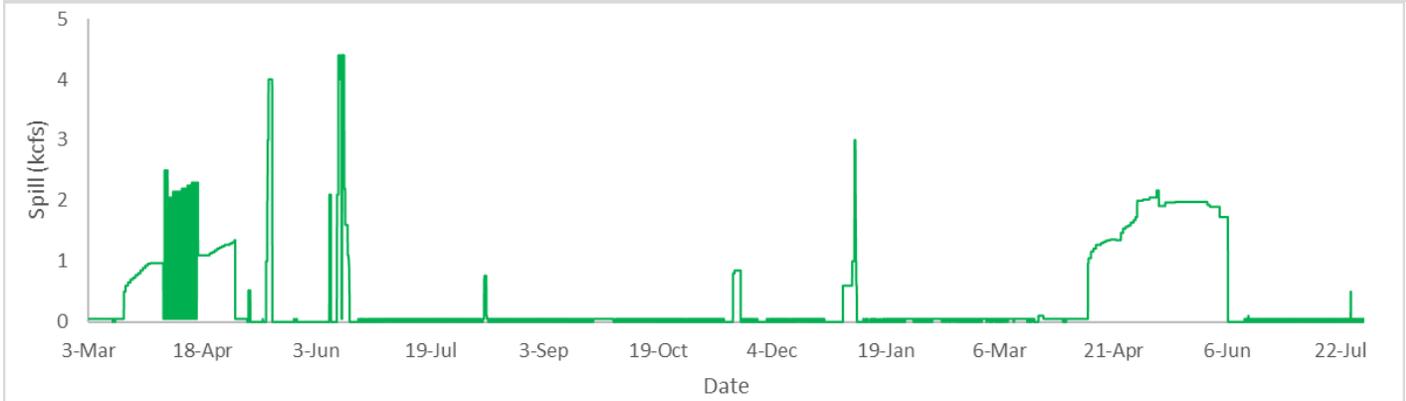
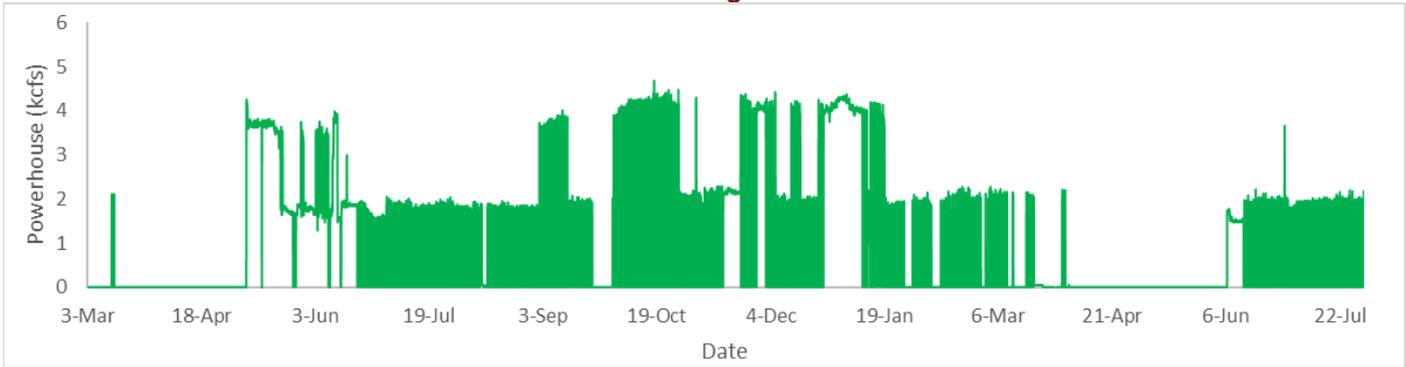
## Appendix B

### Big Cliff Dam Operational and Capture Data Since Start of Monitoring



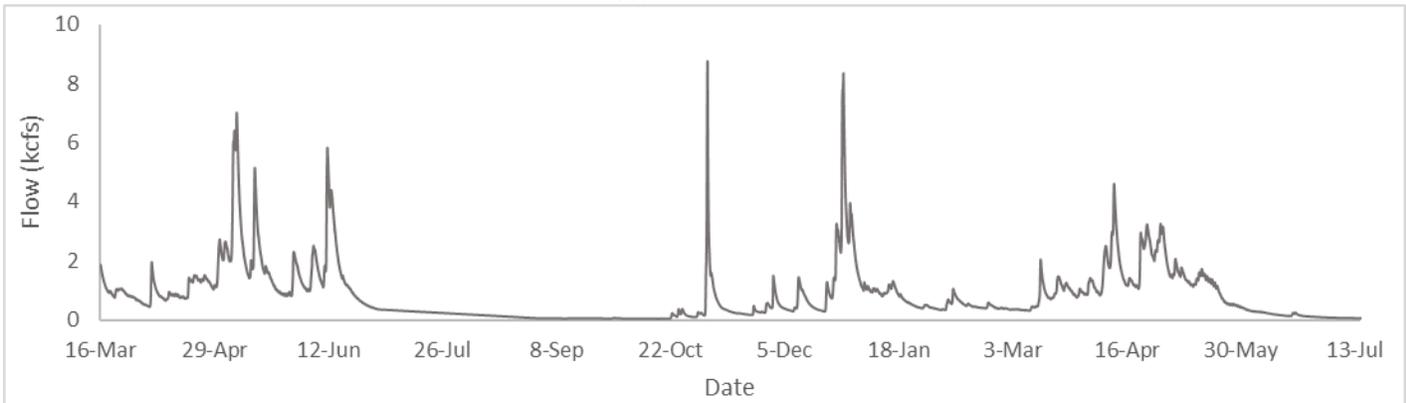


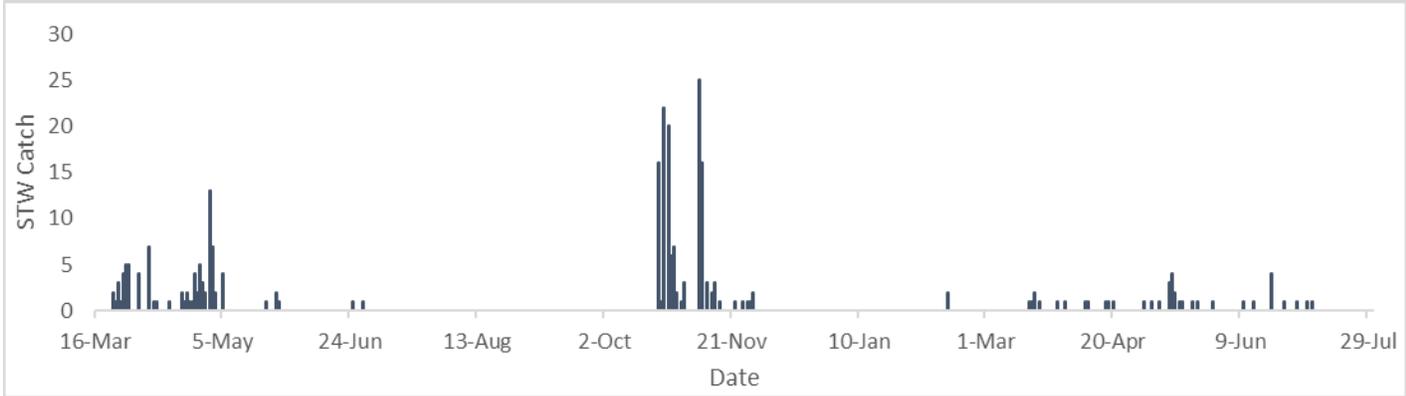
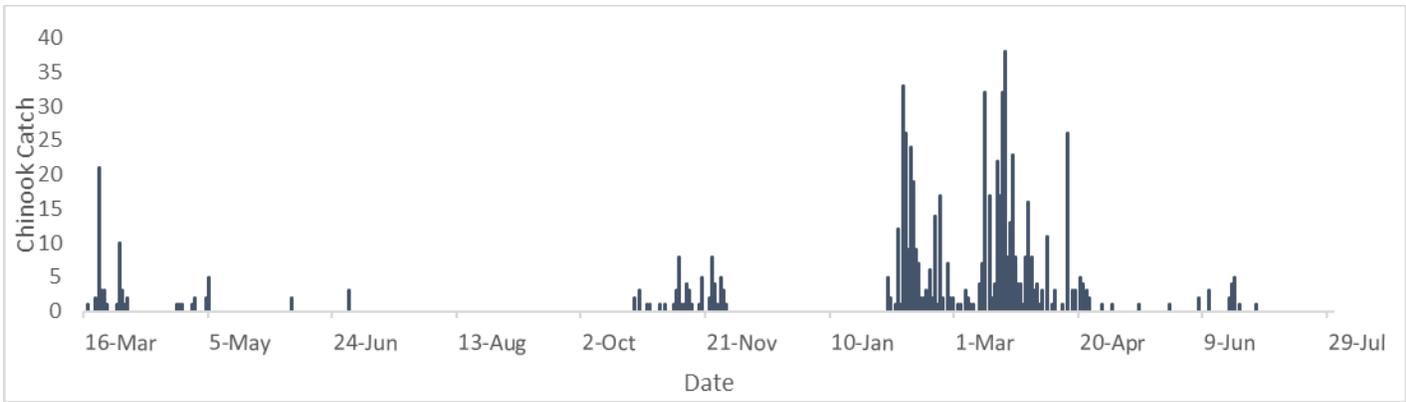
**Green Peter Dam Operational and Green Peter Tailrace- Middle Santiam River Capture Data Since Start of Monitoring**



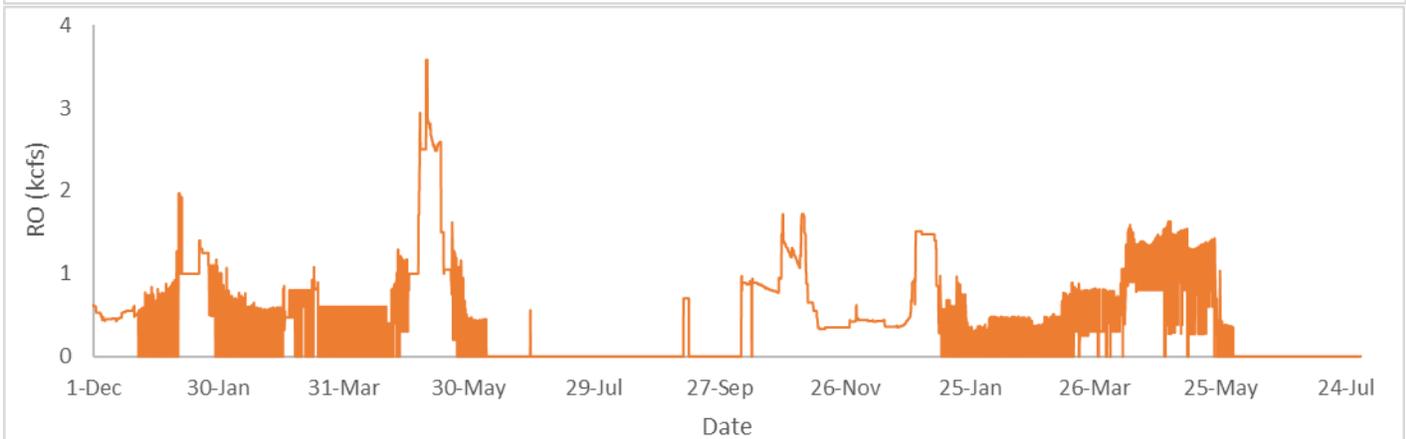
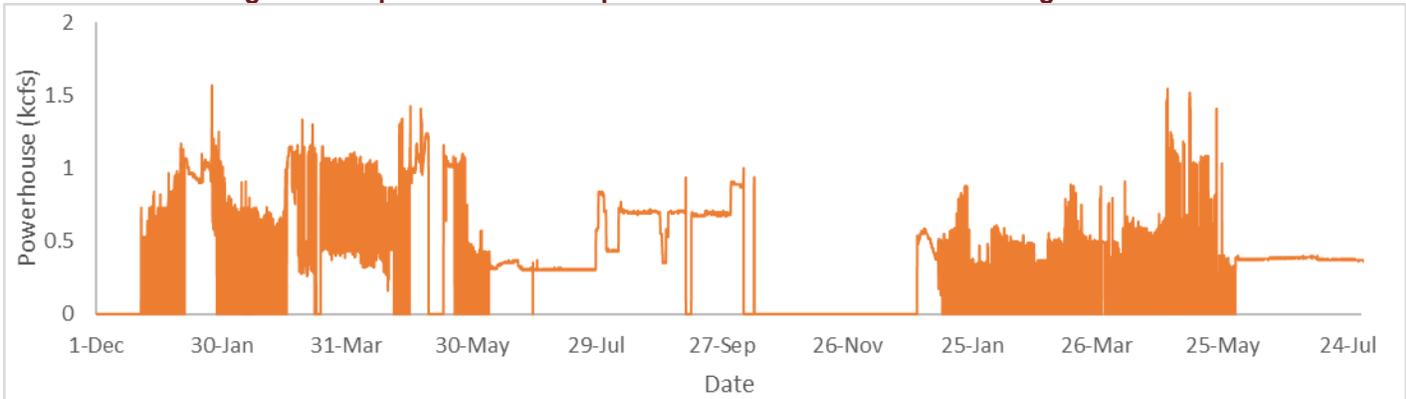


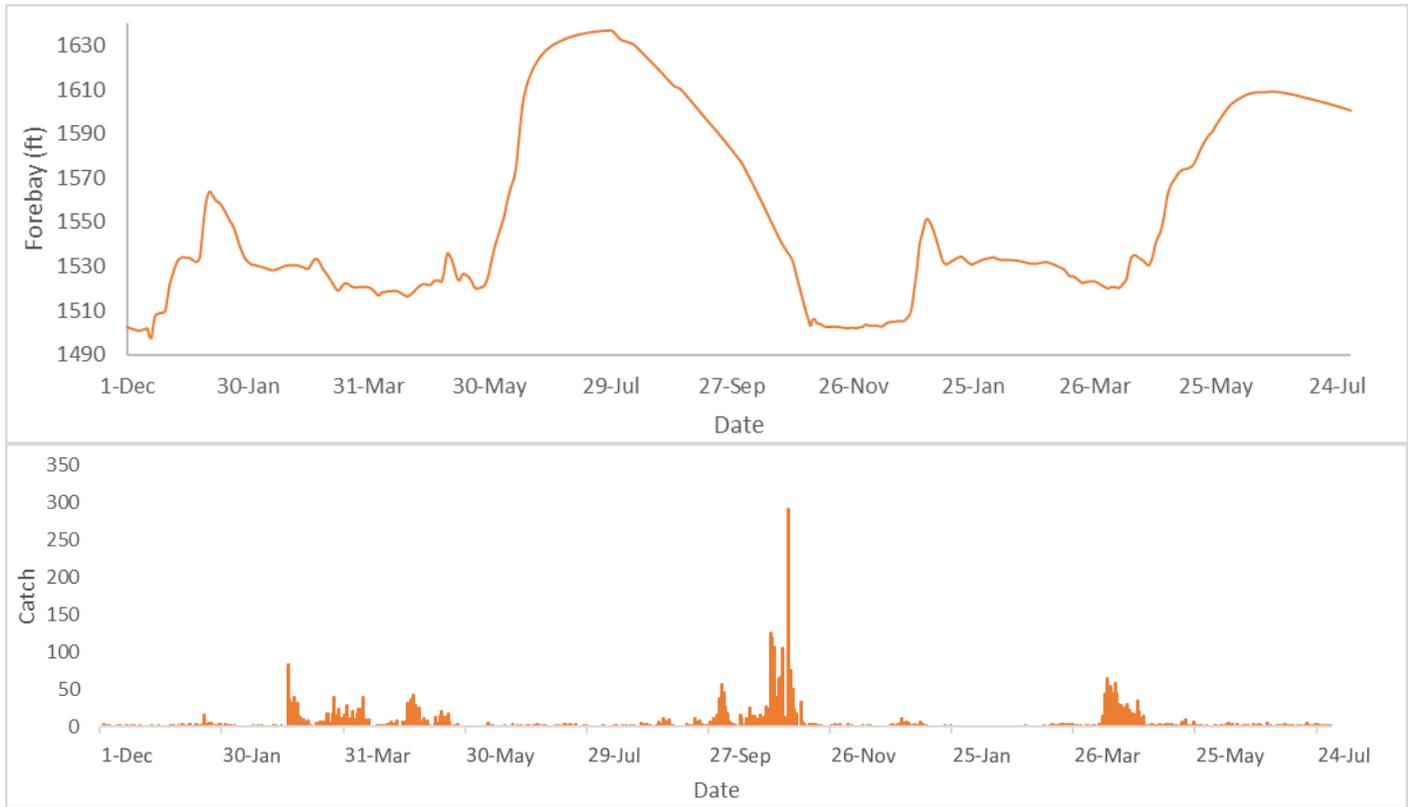
**South Santiam River Above Foster Dam Discharge and Foster Dam Head of Reservoir Capture Data**



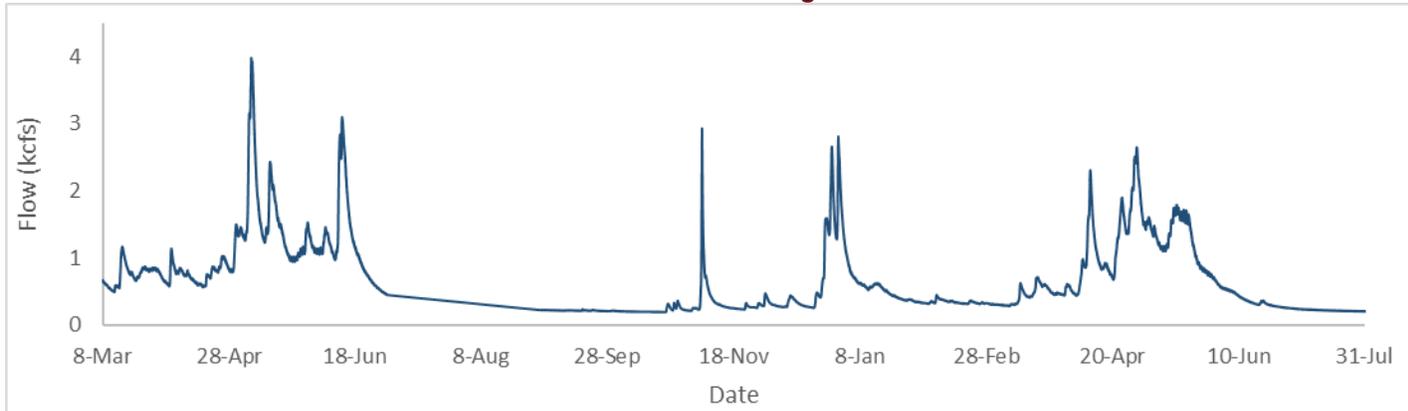


**Cougar Dam Operational and Capture Data Since Start of Monitoring**

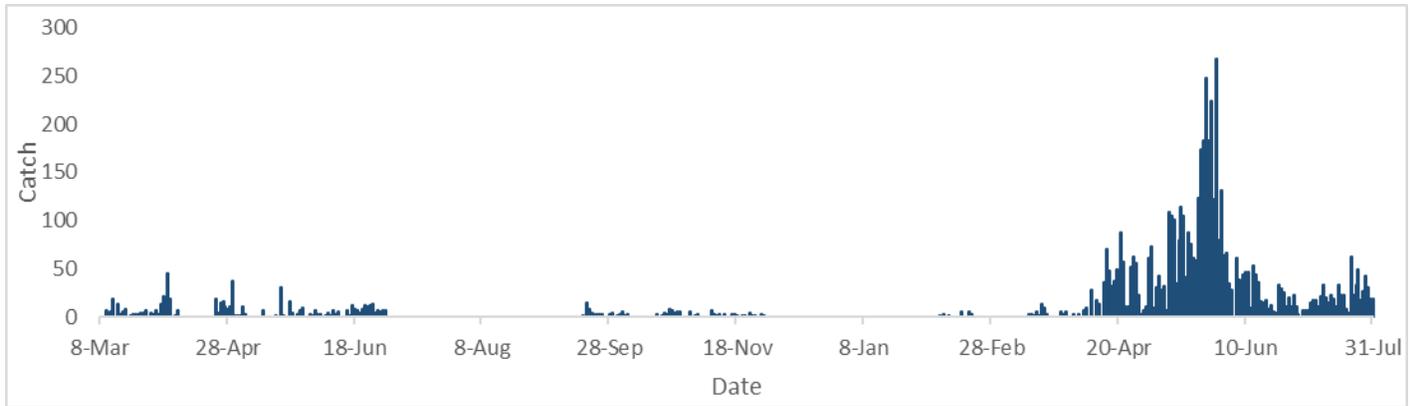




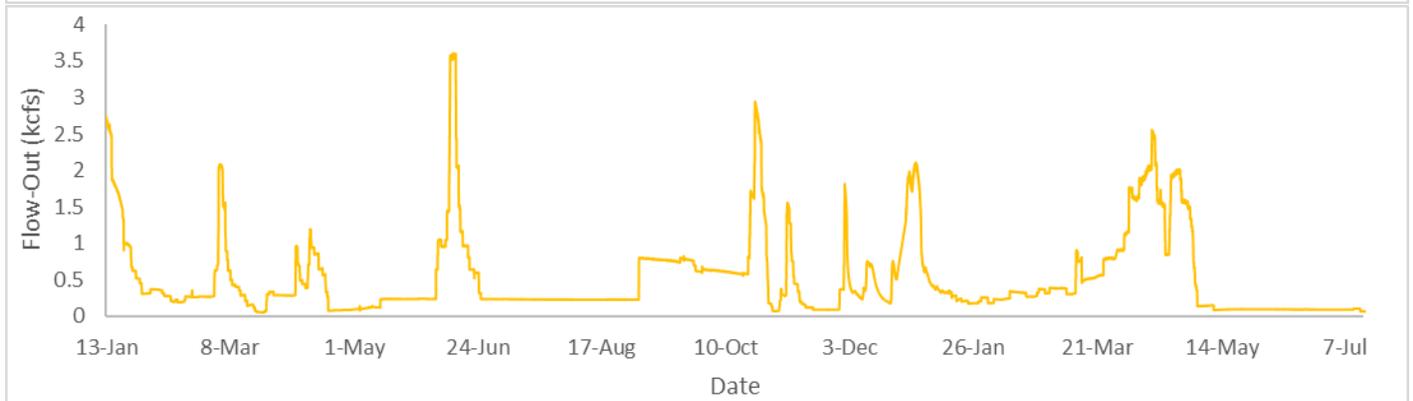
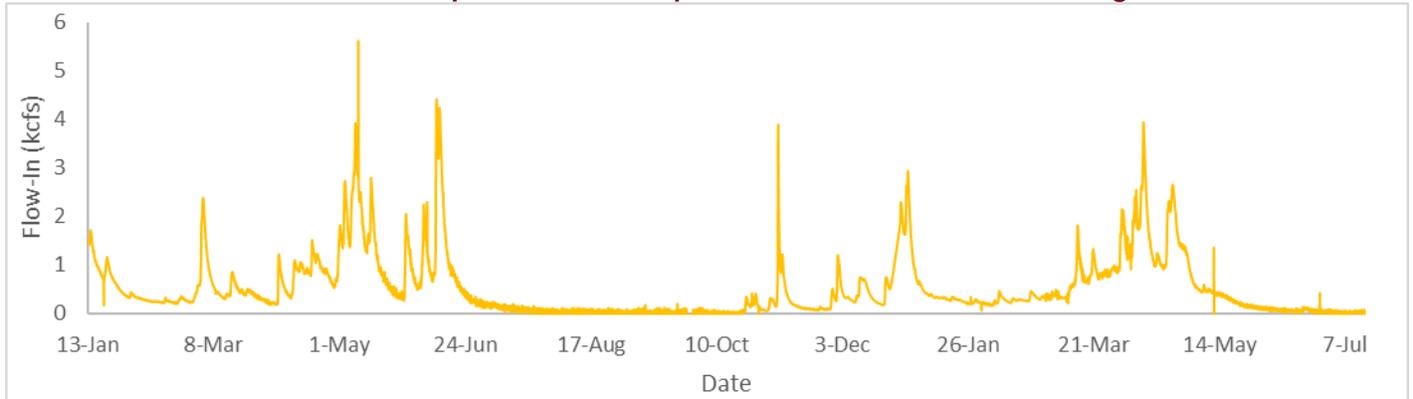
**South Fork McKenzie above Cougar Dam Discharge and Cougar Dam Head of Reservoir Capture Data Since Start of Monitoring**



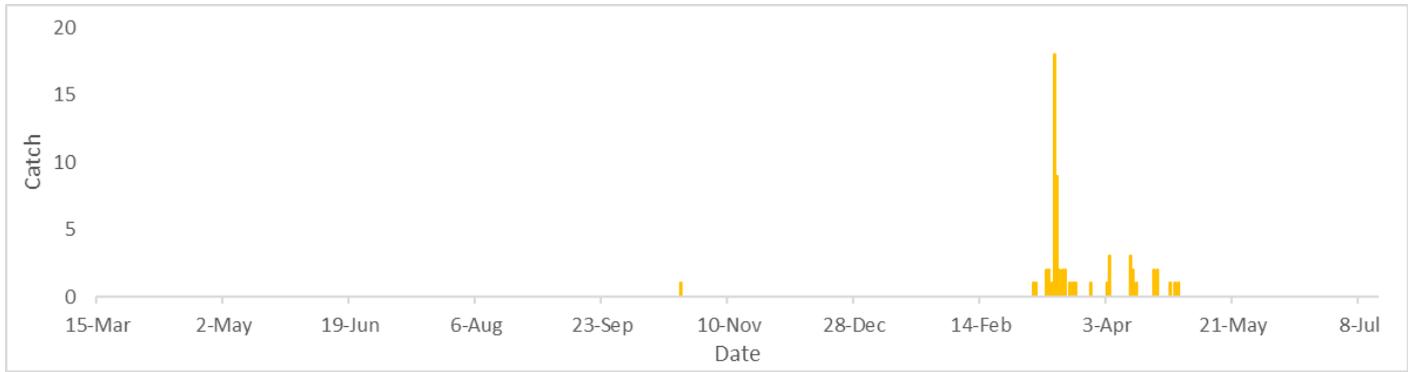
Note: Discharge data was taken from USGS gauge site number 14159200, 250 meters upstream.



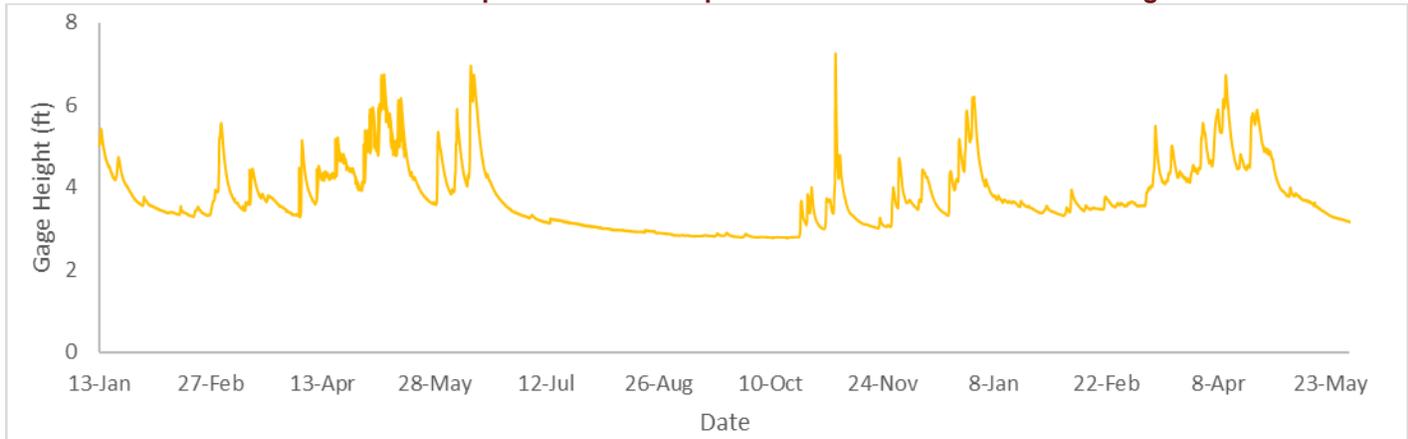
**Fall Creek Dam Tailrace Operational and Capture Data Since Start of Monitoring**



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



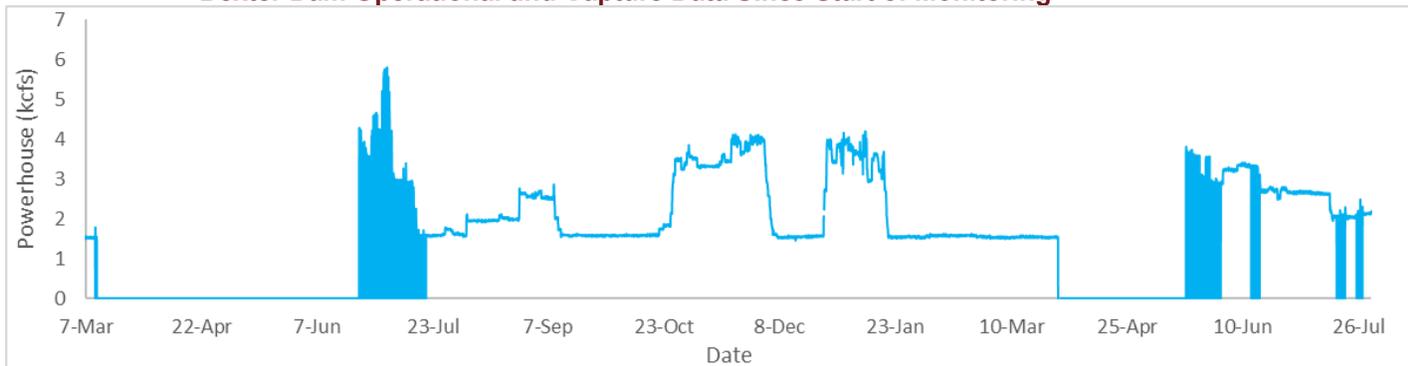
**Fall Creek Head of Reservoir Operational and Capture Data Since Start of Monitoring**



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

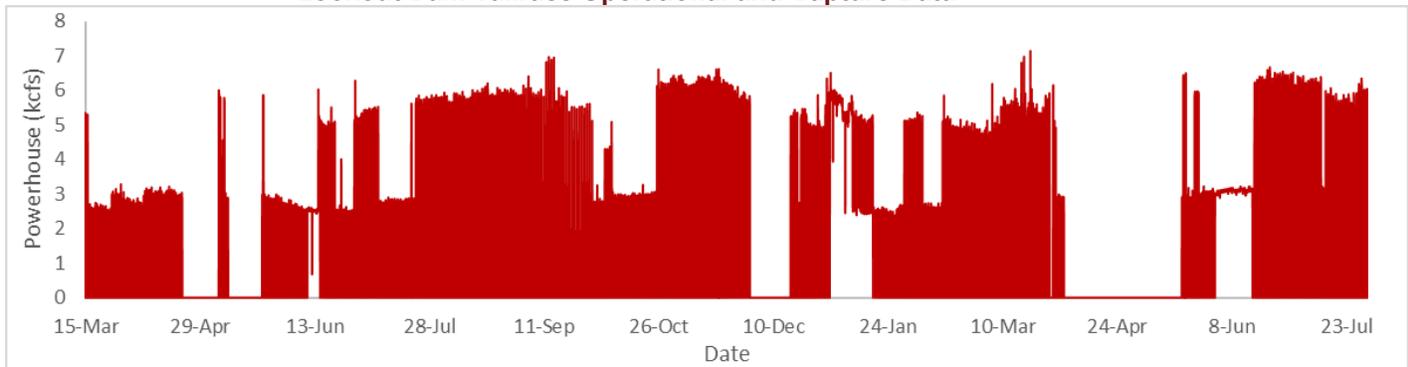


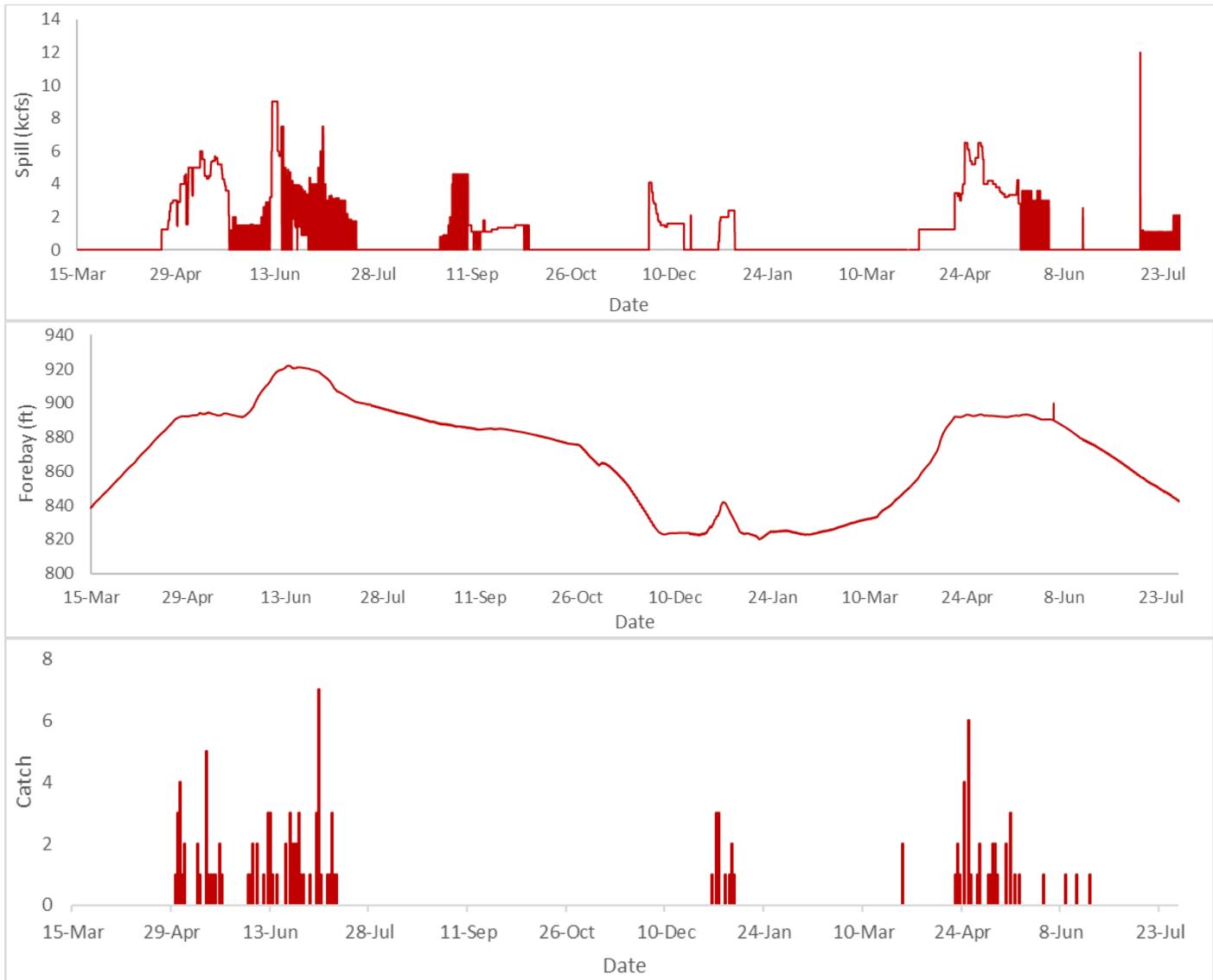
**Dexter Dam Operational and Capture Data Since Start of Monitoring**



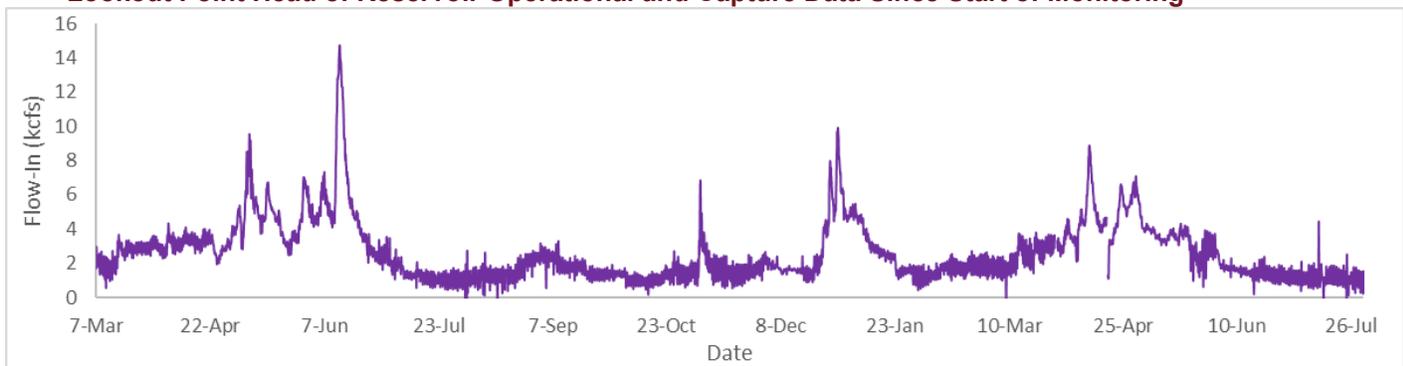


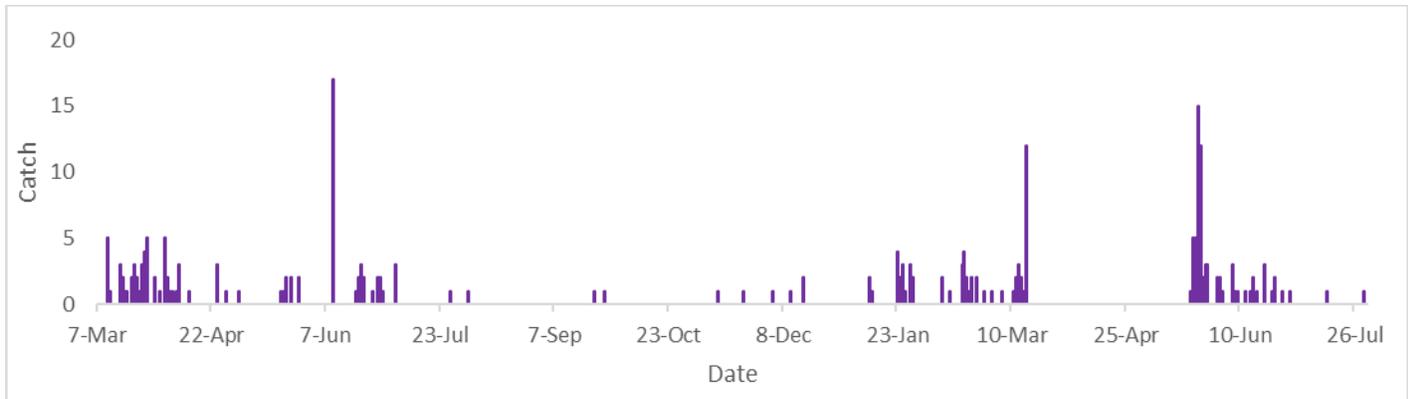
**Lookout Dam Tailrace Operational and Capture Data**



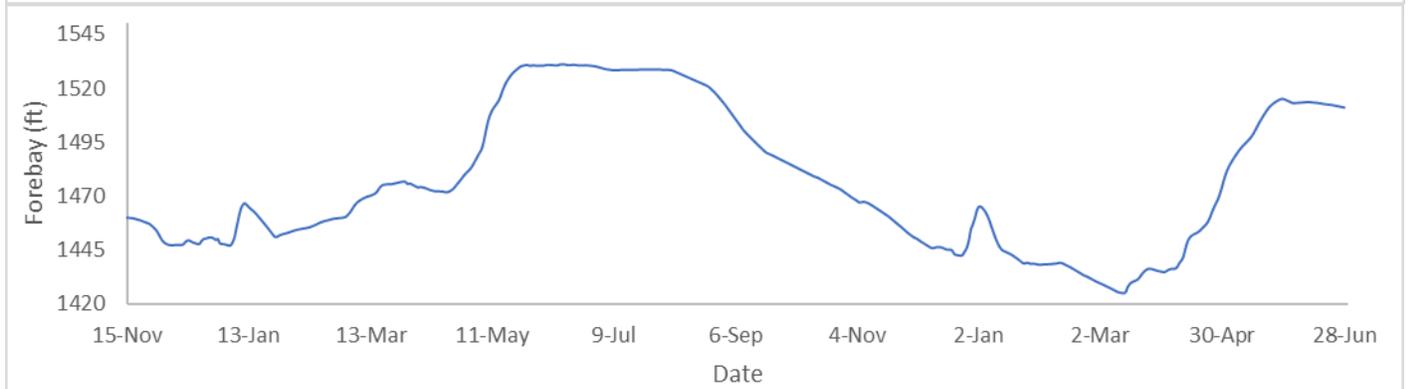
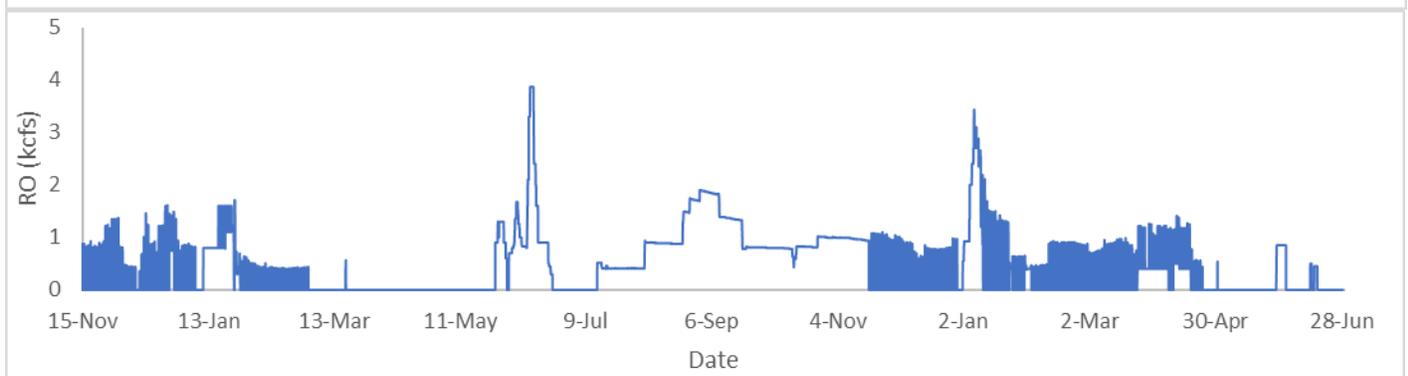


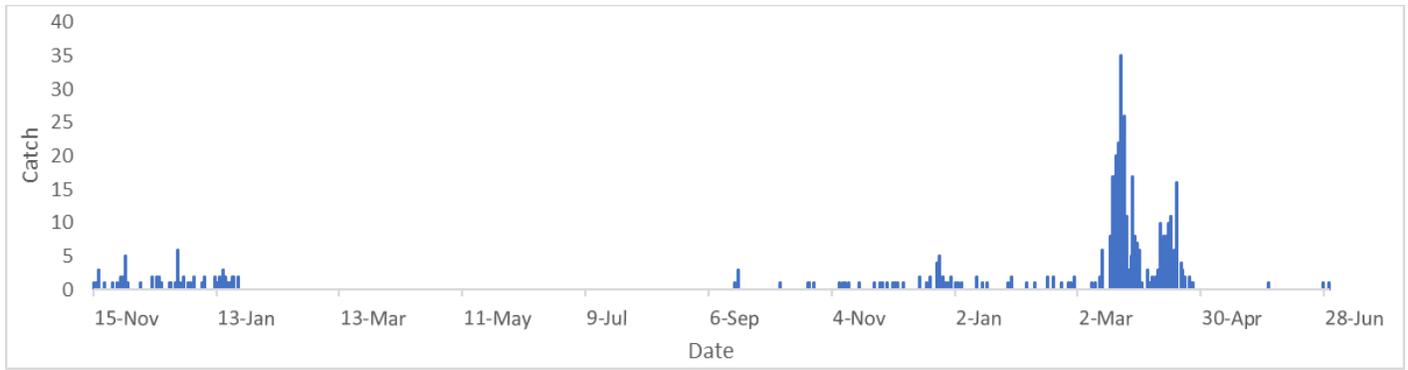
**Lookout Point Head of Reservoir Operational and Capture Data Since Start of Monitoring**



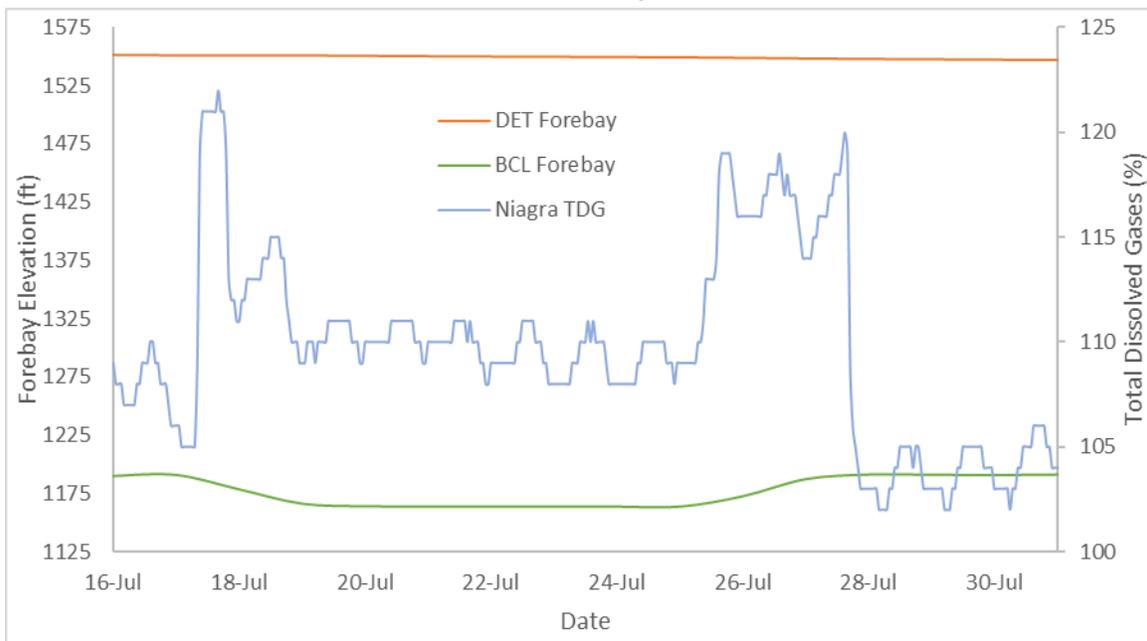


**Hills Creek Dam Operational and Capture Data Since Start of Monitoring**





### Detroit Dam Forebay Elevation



## Appendix C

Release Location	Date of Release	# of Fish Released	# of Fish Recaptured	% Efficiency
Big Cliff Dam Tailrace	12/22/2021	997	39	3.9%
Big Cliff Dam Tailrace	5/25/2022	995	21	2.1%
Big Cliff Dam Tailrace	8/9/2022	1000	92	9.2%
Big Cliff Dam Tailrace	9/30/2022	995	48	4.8%
Big Cliff Dam Tailrace	10/13/2022	500	15	3.0%
Big Cliff Dam Tailrace	10/24/2022	535	25	4.7%
Big Cliff Dam Tailrace	11/2/2022	949	40	4.2%
Big Cliff Dam Tailrace	11/16/2022	509	15	2.9%
Big Cliff Dam Tailrace	12/14/2022	502	60	12.0%
Big Cliff Dam Tailrace	12/19/2022	1010	92	9.1%
Big Cliff Dam Tailrace	12/21/2022	1014	33	3.3%
Big Cliff Dam Tailrace	12/27/2022	704	47	6.7%
Big Cliff Dam Tailrace	12/29/2022	452	22	4.9%
Big Cliff Dam Tailrace	1/25/2023	500	56	11.2%
Big Cliff Dam Tailrace	2/17/2023	499	37	7.4%
Big Cliff Dam Tailrace	3/7/2023	2,968	61	2.1%
Big Cliff Dam Tailrace	3/10/2023	541	112	20.7%
Big Cliff Dam Tailrace	4/28/2023	498	34	6.8%
Big Cliff Dam Tailrace	5/23/2023	500	6	1.2%
Big Cliff Dam Tailrace	6/21/2023	500	8	1.6%
Big Cliff Dam Tailrace	7/5/2023	500	33	6.6%
Green Peter Dam Tailrace- Spill	3/29/2022	643	4	0.6%
Green Peter Dam Tailrace- Spill	4/30/2022	518	9	1.7%
Green Peter Dam Tailrace- Spill (Dead Fish)	5/11/2023	1,001	0	0%
Green Peter Dam Tailrace- Spill	5/11/2023	999	9	0.9%
Green Peter Dam Tailrace- PWR	5/25/2023	1,000	10	1.0%
Green Peter Dam Tailrace- PWR	6/23/2023	1000	23	2.3%
Green Peter Dam Tailrace- PWR	7/27/2023	1,009	13	1.3%
Foster Dam Head of Reservoir	9/29/2022	1,063	0	0%
Foster Dam Head of Reservoir	10/25/2022	821	116	14.1%
Foster Dam Head of Reservoir	11/1/2022	1006	263	26.1%
Foster Dam Head of Reservoir	11/9/2022	1007	68	6.8%
Foster Dam Head of Reservoir	11/15/2022	1009	55	5.5%
Foster Dam Head of Reservoir	11/22/2022	933	163	17.5%
Foster Dam Head of Reservoir	2/27/2023	1,002	21	2.1%
Foster Dam Head of Reservoir	3/9/2023	995	62	6.2%
Foster Dam Head of Reservoir	3/15/2023	1,025	0	0%
Foster Dam Head of Reservoir	5/11/2023	985	20	2.0%
Foster Dam Head of Reservoir	6/2/2023	1,003	79 <sup>a</sup>	7.9%
Foster Dam Head of Reservoir	6/29/2023	1,000	16	1.6%
Foster Dam Head of Reservoir	7/27/2023	989	0	0.0%
Cougar Dam Powerhouse Channel	1/19/2022	997	37	3.7%
Cougar Dam Regulating Outlet Channel	1/19/2022	995	26	2.6%
Cougar Dam Powerhouse Channel	4/20/2022	1000	67	6.7%
Cougar Dam Regulating Outlet Channel	4/20/2022	995	16	1.6%
Cougar Dam Regulating Outlet Channel	5/15/2022	500	64	12.8%
Cougar Dam Powerhouse Channel	7/19/2022	535	148	27.7%
Cougar Dam Powerhouse Channel	8/11/2022	949	29	3.1%
Cougar Dam Regulating Outlet Channel	10/14/2022	509	49	9.6%
Cougar Dam Regulating Outlet Channel	12/13/2022	502	42	8.4%
Cougar Dam Regulating Outlet Channel	12/15/2022	1010	56	5.5%
Cougar Dam Regulating Outlet Channel	12/20/2022	1014	61	6.0%
Cougar Dam Regulating Outlet Channel	12/28/2022	704	14	2.0%
Cougar Dam Powerhouse Channel	1/12/2023	843	159	18.9%
Cougar Dam Regulating Outlet Channel	1/30/2023	509	6	1.2%
Cougar Dam Powerhouse Channel	3/23/2023	500	49	9.8%
Cougar Dam Regulating Outlet Channel	3/23/2023	511	4	0.8%
Cougar Dam Powerhouse Channel	3/30/2023	497	12	2.4%
Cougar Dam Regulating Outlet Channel	3/30/2023	491	31	6.3%
Cougar Dam Powerhouse Channel	4/18/2023	297	14	4.7%
Cougar Dam Regulating Outlet Channel	4/18/2023	501	2	0.4%
Cougar Dam Powerhouse Channel	5/10/2023	499	5	1.0%

Release Location	Date of Release	# of Fish Released	# of Fish Recaptured	% Efficiency
Cougar Dam Regulating Outlet Channel	5/10/2023	499	0	0%
Cougar Dam Powerhouse Channel	6/6/2023	507	65	12.8%
Cougar Dam Powerhouse Channel	7/26/2023	510	61	12.0%
Cougar Dam Head of Reservoir	3/18/2022	806	40	5.0%
Cougar Dam Head of Reservoir	5/19/2022	498	23	4.6%
Cougar Dam Head of Reservoir	6/23/2022	486	7	1.4%
Cougar Dam Head of Reservoir	9/22/2022	551	56	10.2%
Cougar Dam Head of Reservoir	10/5/2022	608	47	7.7%
Cougar Dam Head of Reservoir	11/10/2022	704	33	4.7%
Cougar Dam Head of Reservoir	11/16/2022	719	28	3.9%
Cougar Dam Head of Reservoir	11/23/2022	752	48	6.4%
Cougar Dam Head of Reservoir	11/29/2022	620	48	7.7%
Cougar Dam Head of Reservoir	4/14/2023	506	10	2.0%
Cougar Dam Head of Reservoir	5/10/2023	508	7	1.4%
Cougar Dam Head of Reservoir	5/16/2023	497	23	4.6%
Cougar Dam Head of Reservoir	6/8/2023	510	23	4.5%
Cougar Dam Head of Reservoir	7/27/2023	758	27	3.6%
Fall Creek Dam Regulating Outlet	06/08/2022	517	11	2.1%
Fall Creek Dam Regulating Outlet	06/30/2022	513	0	0%
Fall Creek Dam Regulating Outlet	07/13/2022	498	0	0%
Fall Creek Dam Regulating Outlet	5/11/2023	998	0	0%
Fall Creek Dam Regulating Outlet	6/28/2023	992	0	0%
Fall Creek Head of Reservoir	5/5/2023	756	15	2.0%
Fall Creek Head of Reservoir	5/10/2023	750	23	3.1%
Fall Creek Head of Reservoir	5/18/2023	511	7	1.4%
Fall Creek Head of Reservoir	5/24/2023	760	4	0.5%
Dexter Dam Spillway	3/23/2022	988	2	0.2%
Dexter Dam Spillway	5/4/2022	995	43	4.3%
Dexter Dam Spillway	5/24/2022	1018	67	6.6%
Dexter Dam Powerhouse	7/21/2022	976	2	0.2%
Dexter Dam Powerhouse	10/26/2022	1007	1	0.1%
Dexter Dam Powerhouse	11/1/2022	755	1	0.1%
Dexter Dam Powerhouse	11/17/2022	991	4	0.4%
Dexter Dam Powerhouse	12/6/2022	1010	10	1.0%
Dexter Dam Powerhouse	12/15/2022	1025	1	0.1%
Dexter Dam Powerhouse	3/16/2023	1,200	2	0.2%
Dexter Dam Spillway	3/29/2023	1,199	5	0.4%
Dexter Dam Powerhouse	5/25/2023	4,003	14	0.3%
Dexter Dam Powerhouse	6/7/2023	4,010	4	0.1%
Dexter Dam Powerhouse	6/21/2023	4,028	15	0.4%
Dexter Dam Powerhouse	7/6/2023	4,000	5	0.13%
Lookout Dam Powerhouse	4/13/2022	998	0	0%
Lookout Dam Powerhouse	5/23/2023	3,999	32	0.8%
Lookout Dam Powerhouse	6/1/2023	4,011	6	0.1%
Lookout Dam Powerhouse	6/14/2023	4,010	4	0.1%
Lookout Dam Powerhouse	6/28/2023	4,010	3	0.1%
Lookout Dam Powerhouse	7/18/2023	4,012	1	0.02%
Lookout Point Head of Reservoir	4/5/2022	993	53	5.3%
Lookout Point Head of Reservoir	4/14/2022	987	19	1.9%
Lookout Point Head of Reservoir	5/18/2022	1004	125	12.5%
Lookout Point Head of Reservoir	7/20/2022	1005	9	0.9%
Lookout Point Head of Reservoir	10/27/2022	506	9	1.8%
Lookout Point Head of Reservoir	11/17/2022	510	0	0%
Lookout Point Head of Reservoir	12/12/2022	510	0	0%
Lookout Point Head of Reservoir	1/13/2023	516	10	1.9%
Lookout Point Head of Reservoir	6/2/2023	760	15	2.0%
Lookout Point Head of Reservoir	6/15/2023	765	6	0.7%
Lookout Point Head of Reservoir	6/29/2023	769	2	0.3%
Lookout Point Head of Reservoir	7/19/2023	765	1	0.13%
Hills Creek Dam Powerhouse	1/6/2022	596	20	3.4%
Hills Creek Dam Regulating Outlet	1/6/2022	605	13	2.1%
Hills Creek Dam Powerhouse	2/16/2022	600	12	2.0%
Hills Creek Dam Regulating Outlet	2/16/2022	593	19	3.2%
Hills Creek Dam Powerhouse	2/25/2022	604	6	1.0%

Release Location	Date of Release	# of Fish Released	# of Fish Recaptured	% Efficiency
Hills Creek Dam Regulating Outlet	2/25/2022	625	6	1.0%
Hills Creek Dam Powerhouse	12/7/2022	514	29	5.6%
Hills Creek Dam Regulating Outlet	12/13/2022	516	1	0.2%
Hills Creek Dam Powerhouse- RO Trial	1/6/2022	596	5	0.8%
Hills Creek Dam Powerhouse- RO Trial	2/16/2022	600	0	0%
Hills Creek Dam Powerhouse- RO Trial	2/25/2022	604	1	0.2%
Hills Creek Dam Powerhouse- RO Trial	12/7/2022	514	3	0.6%
Hills Creek Dam Powerhouse	2/25/2023	519	15	2.9%
Hills Creek Dam Powerhouse- RO Trial	2/25/2023	519	0	0%
Hills Creek Dam Regulating Outlet	2/25/2023	478	0	0%
Hills Creek Dam Powerhouse	4/26/2023	506	62	12.3%
Hills Creek Dam Powerhouse- RO Trial	4/26/2023	506	12	2.4%
Hills Creek Dam Powerhouse	5/17/2023	505	57	11.3%
Hills Creek Dam Powerhouse- RO Trial	5/17/2023	505	2	0.4%
Hills Creek Dam Powerhouse	6/3/2023	508	36	7.1%
Hills Creek Dam Powerhouse- RO Trial	6/3/2023	508	2	0.4%
Hills Creek Dam Regulating Outlet	6/13/2023	760	0	0%
Hills Creek Dam Powerhouse	6/27/2023	507	22	4.3%
Hills Creek Dam Powerhouse- RO Trial	6/27/2023	507	0	0%

## Appendix D

### Summary of PIT Tagged Fish for Reporting Period

Site	Trap	# of PIT Tagged Fish
Big Cliff Dam	8 ft	2
Foster Dam Head of Reservoir- South Santiam	5 ft	0
Cougar Dam	PWR	0
Cougar Dam	RO	0
Cougar Dam Head of Reservoir	5 ft	19
Fall Creek Head of Reservoir	8 ft	0
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	0

### List of Captured Fish Containing PIT Tags This Season

Site	Trap	PIT Tag #	Date	Species
Cougar Dam	RO	3DD.003BEE14EC	1/1/2023	Chinook
Cougar Dam	RO	3DD.003BEE1565	1/2/2023	Chinook
Cougar Dam	RO	3DD.003BEE0B3B	1/4/2023	Chinook
Cougar Dam	RO	3DD.003BEE0F24	1/5/2023	Chinook
Cougar Dam	PH	3DD.003BEE1B78	1/14/2023	Chinook
Cougar Dam	PH	3DD.003BEE19BF	1/14/2023	Chinook
Cougar Dam	PH	3DD.003BEE29B1	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE23CE	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE23AF	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE19C3	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE19A0	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE17CA	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE17A5	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE1C21	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2748	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE1C16	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2B5C	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE1BC9	1/13/2023	Chinook

Cougar Dam	PH	3DD.003BEE19AE	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE1BE3	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2BA3	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE1BF3	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE27B4	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2D74	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2DB5	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE1B8C	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2B8B	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2D68	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE1B92	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2D86	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE27A5	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2B1B	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE1C26	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE27A3	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE19B9	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE17BA	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE1B75	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2B42	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2D88	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2DAF	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE1C28	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2DAD	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2D6B	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE25BA	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2DAG	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE1C0E	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE177C	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2BAB	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE279D	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2BA4	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE23BC	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2B84	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE27BF	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE1B91	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE19C7	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2BCA	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE1BE1	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE25C1	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE272B	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2B23	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE25A7	1/13/2023	Chinook

Cougar Dam	PH	3DD.003BEE25B1	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE27CD	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE29C5	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE19BD	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE19C2	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE1BA7	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE23A1	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE199A	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE17C7	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2997	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE25B3	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2991	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE17C3	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2BA6	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE27CB	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2B6C	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2755	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE1B90	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE25DC	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE1BD2	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE299F	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2BB1	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE29AA	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE27BC	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2766	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE27BD	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE1C06	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE1B8B	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE271E	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2B92	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE1C22	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE29C1	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE1B85	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2753	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE25CB	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE1794	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2D76	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2D6C	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE17AD	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE17A2	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE179E	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2BAA	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2BC0	1/13/2023	Chinook

Cougar Dam	PH	3DD.003BEE1C1D	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2B24	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE1986	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE23FA	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2B55	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE271C	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE19BD	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE275B	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE1995	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE29C1	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE17D6	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE1BC7	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE29D4	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE1C0C	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2D7C	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE277A	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2B8A	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE179A	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2BA9	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2B4C	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE277F	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE274D	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE1778	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2B51	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE23A8	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2B08	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2725	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE1B86	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2D8F	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2D8E	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2975	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2D93	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2BA5	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE23A7	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE1B82	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE1BF6	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE19BF	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE23C8	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE23E6	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2BB6	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE197B	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2B8D	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE1B78	1/13/2023	Chinook

Cougar Dam	PH	3DD.003BEE179B	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE259A	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE278E	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE1BF0	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2758	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2B1A	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE1972	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE1BE2	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2590	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE27D9	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2B59	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2730	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2B62	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE2B36	1/13/2023	Chinook
Cougar Dam	PH	3DD.003BEE274C	1/13/2023	Chinook
Cougar Dam	RO	3DD.003BEE2C16	1/22/2023	Chinook
Cougar Dam	RO	3DD.003BEE0966	1/20/2023	Chinook
Cougar Dam	RO	3DD.003BEE2345	1/21/2023	Chinook
Cougar Dam	PH	3DD.003BEE23A2	3/14/2023	Chinook
Cougar Dam	RO	3DD.003BEE16B9	3/17/2023	Chinook
Cougar Dam	RO	3DD.0077CF7449	3/20/2023	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BD2275C	3/22/2023	Chinook
Cougar Dam	RO	3DD.003BEE1B2D	4/10/2023	Chinook
Cougar Dam	RO	3DD.003BD22B12	4/12/2023	Chinook
Cougar Dam	RO	3DD.003BD22CE0	4/13/2023	Chinook
Cougar Dam	RO	3DD.003B332C11	4/13/2023	Chinook
Cougar Dam	RO	3DD.003BD22B0D	4/13/2023	Chinook
Cougar Dam	RO	3DD.003BD227D4	4/13/2023	Chinook
Cougar Dam	RO	3DD.003BD22B30	4/14/2023	Chinook
Cougar Dam	RO	3DD.003BEE2CE7	4/15/2023	Chinook
Cougar Dam	RO	3DD.003BEE1D22	4/15/2023	Chinook
Cougar Dam	RO	3DD.003BEE1B0A	4/29/2023	Chinook
Cougar Dam	RO	3DD.003BEE1B14	4/27/2023	Chinook
Cougar Dam	RO	3DD.003BEE1B3A	4/26/2023	Chinook
Cougar Dam	RO	3DD.003BEE1D8D	4/26/2023	Chinook
Cougar Dam	RO	3DD.003BEE2286	4/25/2023	Chinook
Cougar Dam	RO	3DD.003BEE2562	4/19/2023	Chinook
Cougar Dam	RO	3DD.003BEE2581	4/26/2023	Chinook
Cougar Dam	RO	3DD.003BEE28AC	4/18/2023	Chinook
Cougar Dam	RO	3DD.003BEE28C7	4/27/2023	Chinook
Cougar Dam	RO	3DD.003BEE28D9	4/27/2023	Chinook
Cougar Dam	RO	3DD.003BEE2923	4/18/2023	Chinook
Cougar Dam	RO	3DD.003BEE2C03	4/23/2023	Chinook

Cougar Dam	RO	3DD.003BEE2D54	4/23/2023	Chinook
Cougar Dam	RO	3DD.003BEE24F8	5/9/2023	Chinook
Cougar Dam	RO	3DD.003BEE2C02	5/9/2023	Chinook
Cougar Dam	RO	3DD.003BEE2CF1	5/19/2023	Chinook
Cougar Dam	RO	3DD.003BEE2385	5/18/2023	Chinook
Green Peter Tailrace - Middle Santiam River	8 ft	3D6.15348025F1	5/28/2023	Chinook
Cougar Dam	RO	3DD.003BEE2910	5/25/2023	Chinook
Foster Dam Head of Reservoir- South Santiam River	5 ft	3DD.003BEE164D	5/27/2023	O. mykiss
Cougar Dam	PH 1	3DD.003BD21883	6/7/2023	O. mykiss

### List of EAS PIT Tagged Fish for Reporting Period

Site	Trap	PIT Tag	Date	Species
Big Cliff Dam	8 ft	3DD.003BEE09E1	7/17/2023	Chinook
Big Cliff Dam	8 ft	3DD.003BEE09D7	7/17/2023	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BD226ED	7/22/2023	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BD22704	7/22/2023	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BD22715	7/17/2023	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BD2271F	7/17/2023	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BD22700	7/17/2023	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BD22717	7/29/2023	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BD2270E	7/29/2023	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BD2271D	7/29/2023	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE1066	7/30/2023	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE100E	7/30/2023	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE101C	7/31/2023	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE1069	7/30/2023	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE106E	7/30/2023	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BEE100C	7/31/2023	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BD2274F	7/28/2023	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BD22707	7/28/2023	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BD22712	7/24/2023	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BD226EE	7/24/2023	Chinook
Cougar Dam Head of Reservoir	5 ft	3DD.003BD226F8	7/25/2023	Chinook
Lookout Point Head of Reservoir	5 ft	3DD.003BD2271F	7/30/2023	Chinook

### Summary of EAS VIE Marked Fish for Reporting Period

Site	Trap	Species	VIE Mark Code	# VIE
Cougar Dam Head of Reservoir	5 ft	Chinook	RDG	356
Fall Creek Head of Reservoir	8 ft	Chinook	RDG	0
Lookout Point Head of Reservoir	5 ft	Chinook	RDG	0

\*RDG denote location and color (Right Dorsal Green)