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Report Period: January 1<sup>st</sup> to January 15<sup>th</sup>, 2023

Report No.: 2023 Willamette RST Bi-Weekly Report 01/01-01/15 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 | 443  |
| 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 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 | 05/25/2025 | 1    |
| Big Cliff Dam Tailrace                         | Trap Efficiency Release (1,000 Fish) | 08/09/2022 | 08/09/2022 | 1    |
| Big Cliff Dam Tailrace                         | Trap Efficiency Release (1,000 Fish) | 09/30/2022 | 09/30/2022 | 1    |
| Big Cliff Dam Tailrace                         | Trap Efficiency Release (500 Fish)   | 10/13/2022 | 10/13/2022 | 1    |
| Big Cliff Dam Tailrace                         | Trap Efficiency Release (535 Fish)   | 10/24/2022 | 10/24/2022 | 1    |
| Big Cliff Dam Tailrace                         | Trap Efficiency Release (549 Fish)   | 11/02/2022 | 11/02/2022 | 1    |
| 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    |
| 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 | Trap Efficiency Release (643 Fish)   | 03/29/2022 | 03/29/2022 | 1    |
| Green Peter Tailrace- Middle Santiam River RST | Trap Efficiency Release (521 Fish)   | 04/30/2022 | 04/30/2022 | 1    |

|  |   |            |            |     |
|--|---|------------|------------|-----|
| Green Peter Tailrace- Middle Santiam River RST       | Temporary Trap Removal                              | 05/12/2022 | 05/12/2022 | 1   |
| Foster Dam Head of Reservoir-South Santiam River RST | Trap Install  | 03/16/2022 | 03/16/2022 | 1   |
| Foster Dam Head of Reservoir-South Santiam River RST | Operation   | 03/16/2022 | 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 | Trapping Efficiency Release (1000 fish)             | 09/29/2022 | 09/29/2022 | 1   |
| Foster Dam Head of Reservoir-South Santiam River RST | Trapping Efficiency Release (840 fish)              | 10/25/2022 | 10/25/2022 | 1   |
| Foster Dam Head of Reservoir-South Santiam River RST | Trapping Efficiency Release (1006 fish)             | 11/01/2022 | 11/01/2022 | 1   |
| Foster Dam Head of Reservoir-South Santiam River RST | Trapping Efficiency Release (1007 fish)             | 11/09/2022 | 11/09/2022 | 1   |
| Foster Dam Head of Reservoir-South Santiam River RST | Trapping Efficiency Release (1009 fish)             | 11/15/2022 | 11/15/2022 | 1   |
| 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   |
| 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 (500 Fish, RO route)        | 12/20/2022 | 12/20/2022 | 1   |
| 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 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                         | Operation   | 09/16/2022 | 11/30/2022 | 76  |
| 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                             | 05/19/2022 | 05/19/2022 | 1   |

|                                     |   |            |            |     |
|-------------------------------------|---|------------|------------|-----|
|                                     | (500 Fish)                                      |            |            |     |
| Cougar Dam Head of Reservoir        | Trap Efficiency Release (515 Fish)              | 06/23/2022 | 06/23/2022 | 1   |
| Cougar Dam Head of Reservoir        | Trap Removal                                    | 07/01/2022 | 07/01/2022 | 1   |
| Cougar Dam Head of Reservoir        | Highline Install                                | 09/14/2022 | 09/14/2022 | 1   |
| Cougar Dam Head of Reservoir        | Trap Install                                    | 09/16/2022 | 09/16/2022 | 1   |
| Cougar Dam Head of Reservoir        | Trap Efficiency Release (551 Fish)              | 09/22/2022 | 09/22/2022 | 1   |
| Cougar Dam Head of Reservoir        | Trap Efficiency Release (608 Fish)              | 10/5/2022  | 10/5/2022  | 1   |
| Cougar Dam Head of Reservoir        | Trap Efficiency Release (721 Fish)              | 11/10/2022 | 11/10/2022 | 1   |
| 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   |
| 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   |
| 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 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   |
| 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 | 152 |
| Fall Creek Dam Tailrace RST         | Trap Efficiency Release (518 fish)                  | 06/08/2022 | 06/08/2022 | 1   |
| Fall Creek Dam Tailrace RST         | Trap Efficiency Release (513 fish)                  | 06/30/2022 | 06/30/2022 | 1   |
| Fall Creek Dam Tailrace RST         | Trap Efficiency Release (500 fish)                  | 07/13/2022 | 07/13/2022 | 1   |
| Fall Creek Dam Tailrace RST         | Deployment  | 10/15/2022 | 10/15/2022 | 1   |
| Fall Creek Head of Reservoir RST    | Trap and Highline Install                           | 01/11/2022 | 01/11/2022 | 1   |
| Fall Creek Head of Reservoir RST    | Operation   | 01/02/2022 | 05/31/2022 | 150 |
| Fall Creek Head of Reservoir RST    | Removal   | 06/02/2022 | 06/02/2022 | 1   |
| Hills Creek Dam RO and PWR          | Deployment  | 10/12/2021 | 10/12/2021 | 1   |
| Hills Creek Dam RO                  | Operation   | 10/15/2021 | 03/01/2022 | 138 |
| Hills Creek Dam PWR                 | Operation   | 10/15/2021 | 03/01/2022 | 138 |
| Hills Creek Dam                     | Trap Efficiency Release (1,200 fish, 600 per route) | 01/6/2022  | 01/6/2022  | 1   |
| Hills Creek Dam                     | Trap Efficiency Release (1,200 fish, 600 per route) | 02/16/2022 | 02/16/2022 | 1   |
| Hills Creek Dam                     | Trap Efficiency Release (1,200 fish, 600 per route) | 02/23/2022 | 02/23/2022 | 1   |
| Hills Creek Dam RSTs                | Trap Removal  | 03/01/2022 | 03/01/2022 | 1   |
| Hills Creek Dam RSTs                | Trap Install  | 09/14/2022 | 09/14/2022 | 1   |
| Hills Creek Dam RSTs                | Deployment  | 9/15/2022  | 9/15/2022  | 1   |
| 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   |

## 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 seven locations: Big Cliff Dam, Cougar Dam, Fall Creek Dam, Dexter Dam Tailrace, Lookout Dam Tailrace, Lookout Point Head of Reservoir, and Hills Creek Dam. The trap in the Fall Creek Dam RO channel resumed sampling on October 15<sup>th</sup>. The Green Peter Dam Tailrace- Middle Santiam trap was removed on May 12<sup>th</sup> due to damage incurred to the highline.

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

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 9.



**FIGURE 1**  
Big Cliff Dam

● RST Locations

500 Feet



**EAS** ENVIRONMENTAL ASSESSMENT SERVICES

Wholly Owned Subsidiary of Natives of Kodiak



Imagery Source: 2021, ESRI.



**FIGURE 2** Foster Dam Head of Reservoir - South Santiam River

● RST Locations

500 Feet





**FIGURE 3**  
Cougar Dam

● RST Locations

500 Feet





Portland  
Salem  
Eugene

MAP AREA

OREGON

**FIGURE 4**  
Cougar Dam Head of Reservoir

● RST Locations

500 Feet



**EAS** ENVIRONMENTAL  
ASSESSMENT  
SERVICES



Wholly Owned Subsidiary of Natives of Kodiak



Imagery Source: 2021, ESRI.



**FIGURE 5**  
Fall Creek Dam Tailrace

● RST Locations

500 Feet





Imagery Source: 2021, ESRI.



**FIGURE 6**  
Dexter Dam Tailrace

● RST Locations

500 Feet





Imagery Source: 2021, ESRI.



**FIGURE 7**  
Lookout Dam Tailrace

● RST Locations

500 Feet



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



Imagery Source: 2021, ESRI.



**FIGURE 8**  
Lookout Point Head of Reservoir

● RST Locations      500 Feet



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



**FIGURE 9**  
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                   | 01/01/2023                     | 01/15/2023                   | 0                        | 338                |
| Cougar Dam PH                   | 12/1/2021                   | 01/01/2023                     | 01/15/2023                   | 15                       | 318                |
| Cougar Dam RO                   | 12/1/2021                   | 01/01/2023                     | 01/15/2023                   | 15                       | 403                |
| Fall Creek Dam Tailrace*        | 3/15/2022                   | 01/01/2023                     | 01/15/2023                   | 5                        | 182                |
| Dexter Dam Tailrace             | 3/7/2022                    | 01/01/2023                     | 01/15/2023                   | 15                       | 304                |
| Lookout Point Dam PH            | 3/15/2022                   | 01/01/2023                     | 01/15/2023                   | 15                       | 276                |
| Lookout Point Dam Spill         | 3/15/2022                   | 01/01/2023                     | 01/15/2023                   | 15                       | 276                |
| Lookout Point Head of Reservoir | 3/10/2022                   | 01/01/2023                     | 01/15/2023                   | 9                        | 277                |
| Hills Creek Dam                 | 9/16/2022                   | 01/01/2023                     | 01/15/2023                   | 15                       | 122                |

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

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

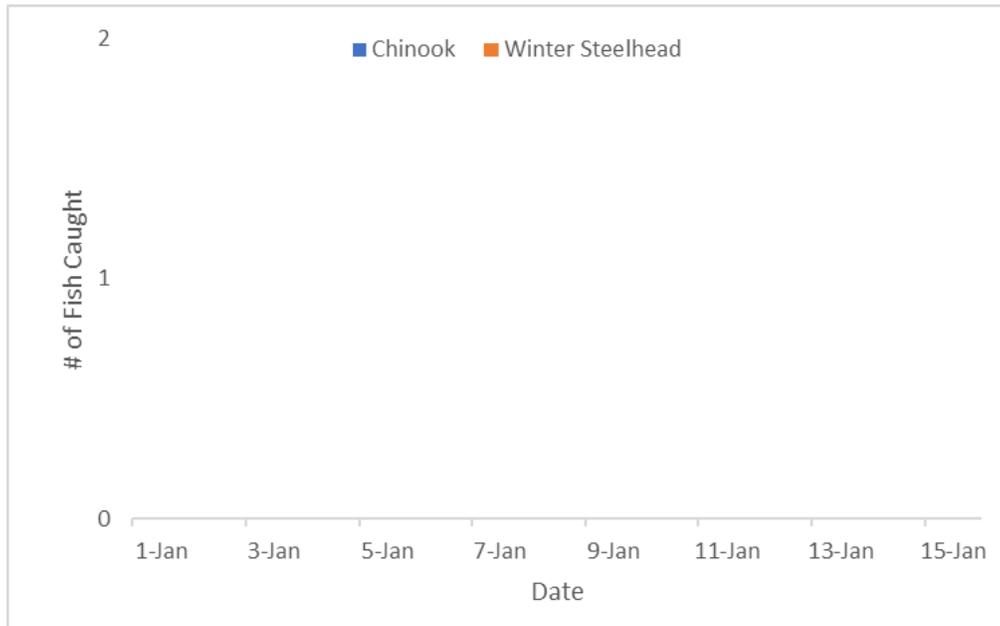
| Site  | Species | Catch (Reporting Period) | Recaptures (Reporting Period) | Total Catch | Total Recaptures |
|---|---------|--------------------------|-------------------------------|-------------|------------------|
| Big Cliff Dam                               | CHS     | 0                        | 0                             | 1253        | 554              |
| Big Cliff Dam                               | STW     | 0                        | 0                             | 107         | 0                |
| Green Peter Tailrace- Middle Santiam        | CHS     | 0                        | 0                             | 0           | 13               |
| Green Peter Tailrace- Middle Santiam        | STW     | 0                        | 0                             | 6           | 0                |
| Foster Dam Head of Reservoir- South Santiam | CHS     | 0                        | 0                             | 128         | 672              |
| Foster Dam Head of Reservoir- South Santiam | STW     | 0                        | 0                             | 224         | 7                |
| Cougar Dam                                  | CHS     | 39                       | 159                           | 3035        | 828              |
| Cougar Dam Head of Reservoir                | CHS     | 0                        | 0                             | 710         | 320              |
| Fall Creek Dam Tailrace                     | CHS     | 0                        | 0                             | 1           | 11               |
| Dexter Dam Tailrace                         | CHS     | 2                        | 0                             | 101         | 128              |
| Lookout Point Dam                           | CHS     | 11                       | 0                             | 90          | 2                |
| Lookout Point Head of Reservoir             | CHS     | 3                        | 10                            | 112         | 225              |
| Hills Creek Dam                             | CHS     | 6                        | 0                             | 146         | 33               |

## North Santiam – Big Cliff Dam

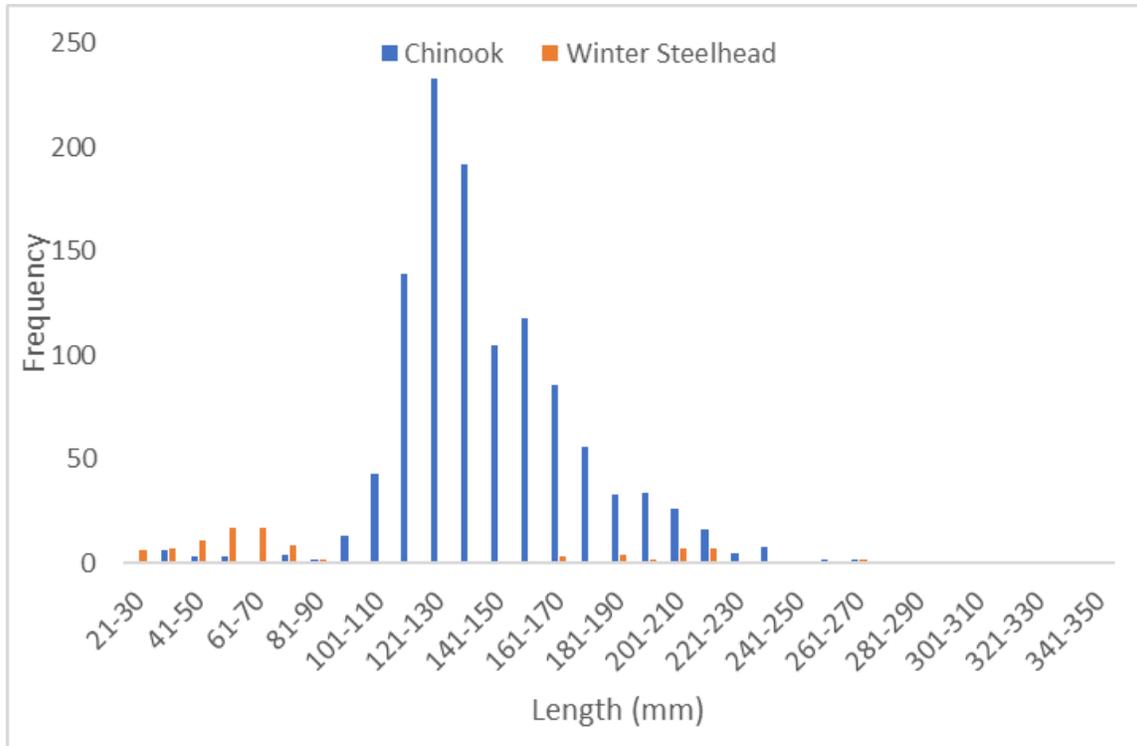
The RST on the North Santiam River below Big Cliff Dam was not sampled while fish passage measures were not being implemented from February 16<sup>th</sup>, 2022 to March 14<sup>th</sup>, 2022. Sampling resumed on March 15<sup>th</sup>, 2022.

## Target Species

This reporting period began on January 1st and ended on January 15th. There were a total of 0 Chinook Salmon (CHS) and 0 Winter Steelhead (STW) captured during the 15-day sampling period (Figure 10). A rain event caused increase flow below Big Cliff Dam. The trap was raised on 12/31/2022 when flows increased to levels that were unsafe for crew to access the trap. The trap was removed from the river on 01/05/2023 as flows were expected to exceed 10,000 cfs. Sampling duration was 0% for the RST. Table 4 provides life stage, length, and weight data for all Chinook Salmon and Winter Steelhead that have been caught at the Big Cliff Dam site to-date and for the reporting period. Figure 11 shows length frequency data to-date.



**Figure 10. Chinook and Winter Steelhead Captured per day 01/01/2023 to 01/15/2023 (Big Cliff)**



\*Figure does not include fish without heads

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

### Trapping Efficiency

A total of 1,010 juvenile hatchery Chinook (sub-yearlings) were adipose and upper caudal clipped and released on 12/19/2022 below Big Cliff Dam. A total of 92 fish were recaptured in the 8ft trap. Trapping efficiency was 9.1%.

Trapping efficiency fish displayed minor descaling and fin damage.

| Big Cliff Dam | Release # | Recapture # | Capture Efficiency |
|---------------|-----------|-------------|--------------------|
| 8ft Trap      | 1,010     | 92          | 9.1%<br>(92/1,010) |

A total of 1,014 juvenile hatchery Chinook (sub-yearlings) were adipose clipped and released on 12/21/2022 below Big Cliff Dam. A total of 32 fish were recaptured in the 8ft trap. Trapping efficiency was 3.2%.

Trapping efficiency fish displayed minor descaling and fin damage.

| <b>Big Cliff Dam</b> | <b>Release #</b> | <b>Recapture #</b> | <b>Capture Efficiency</b> |
|----------------------|------------------|--------------------|---------------------------|
| 8ft Trap             | 1,014            | 32                 | 3.2%<br>(32/1,014)        |

A total of 704 juvenile hatchery Chinook (sub-yearlings) were adipose and upper caudal clipped and released on 12/27/2022 below Big Cliff Dam. A total of 47 fish were recaptured in the 8ft trap. Trapping efficiency was 6.68%.

Trapping efficiency fish displayed minor descaling and fin damage.

| <b>Big Cliff Dam</b> | <b>Release #</b> | <b>Recapture #</b> | <b>Capture Efficiency</b> |
|----------------------|------------------|--------------------|---------------------------|
| 8ft Trap             | 704              | 47                 | 6.68%<br>(47/704)         |

A total of 452 juvenile hatchery Chinook (sub-yearlings) were adipose clipped and released on 12/29/2022 below Big Cliff Dam. A total of 22 fish were recaptured in the 8ft trap. Trapping efficiency was 4.87%.

Trapping efficiency fish displayed minor descaling and fin damage.

| <b>Big Cliff Dam</b> | <b>Release #</b> | <b>Recapture #</b> | <b>Capture Efficiency</b> |
|----------------------|------------------|--------------------|---------------------------|
| 8ft Trap             | 452              | 22                 | 4.87%<br>(22/452)         |

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

| To-Date (Since Dec. 01, 2021) |       |         |            |           |              |     |       |             |       |       |
|-------------------------------|-------|---------|------------|-----------|--------------|-----|-------|-------------|-------|-------|
| Site                          | Route | Species | Life stage | Collected | Length (mm)* |     |       | Weight (g)* |       |       |
|                               |       |         |            |           | Min          | Max | Mean  | Min         | Max   | Mean  |
| Big Cliff                     | PWR   | CHS     | Fry        | 9         | 31           | 48  | 37.5  | 1.2         | 1.4   | 1.4   |
|                               |       | CHS     | Parr       | 27        | 55           | 136 | 94.5  | 1.8         | 30.0  | 10.7  |
|                               |       | CHS     | Smolt      | 1215      | 74           | 283 | 145.8 | 5.4         | 253.5 | 36.7  |
|                               |       | STW     | Fry        | 28        | 21           | 69  | 40.4  | 1.1         | 3.4   | 1.6   |
|                               |       | STW     | Parr       | 45        | 51           | 131 | 69.1  | 1.3         | 24.8  | 4.5   |
|                               |       | STW     | Smolt      | 34        | 157          | 350 | 214.6 | 36.1        | 442.0 | 107.0 |

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

| January 1-15, 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      | 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.

### 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 Chinook captured (0.0%), 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 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%). 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          | 0                | 0           | 0           | 0                    | 0                   | 0                   | 0                   | 0           |
| Big Cliff Dam | Winter Steelhead | 0                | 0           | 0           | 0                    | 0                   | 0                   | 0                   | 0           |

### Collected DNA and Scale Samples

For the reporting period, scales and 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 6.

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

| Species                    | PWR Capture | PWR Mortality | Season Total | Season Total Mortality |
|----------------------------|-------------|---------------|--------------|------------------------|
| Bass                       | 0           | 0             | 0            | 0                      |
| Bluegill                   | 0           | 0             | 0            | 0                      |
| Brown Bullhead             | 0           | 0             | 0            | 0                      |
| Chinook (Adult)            | 0           | 0             | 0            | 0                      |
| Chinook (clipped)          | 0           | 0             | 0            | 0                      |
| Cutthroat                  | 0           | 0             | 0            | 0                      |
| Dace                       | 0           | 0             | 0            | 0                      |
| Kokanee                    | 0           | 0             | 0            | 0                      |
| Kokanee (clipped)          | 0           | 0             | 0            | 0                      |
| <i>O. mykiss</i> (clipped) | 0           | 0             | 0            | 0                      |
| Pumpkinseed                | 0           | 0             | 0            | 0                      |
| Unknown                    | 0           | 0             | 0            | 0                      |
| Mountain Whitefish         | 0           | 0             | 0            | 0                      |
| Sculpin                    | 0           | 0             | 0            | 0                      |
| <b>Totals</b>              | 0           | 0             | 0            | 0                      |

## 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 1,112.8 to 1,117.9 feet (mean: 1,115.6 feet) during the reporting period. Figure 12 shows instantaneous gauge height.

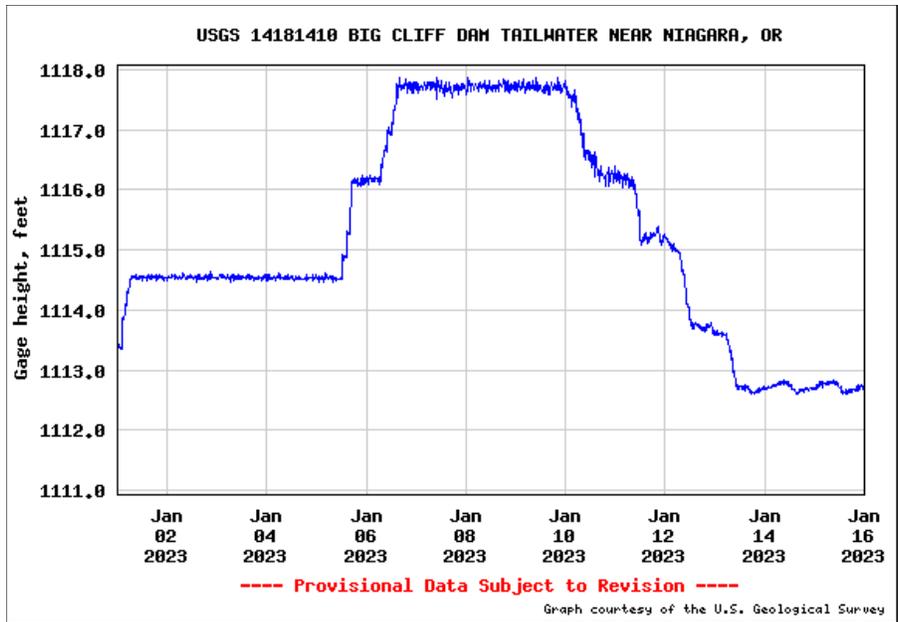
Total dissolved gas saturation ranged from 108 to 136% during the reporting period (mean: 121.2%). Figure 13 shows total dissolved gas saturation.

Stream temperatures were recorded every 2 hours for the length of the reporting period at the RST (Figure 14). The temperature probe operated normally for the duration of the reporting period.

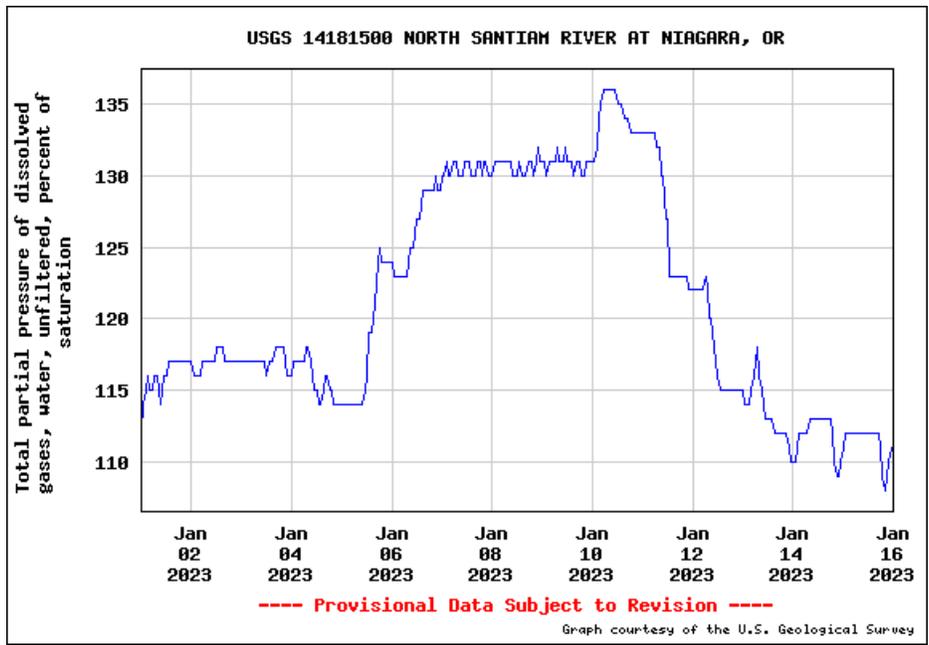
Flows through the Powerhouse and Spill during the reporting period averaged 3,532.8 and 3,376.6 cubic feet per second (cfs), respectively (Figure 15). Catch per unit of effort (CPUE) data are summarized in Table 7. Discharge and capture data for the duration of monitoring efforts at this location are provided in Appendix B.

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

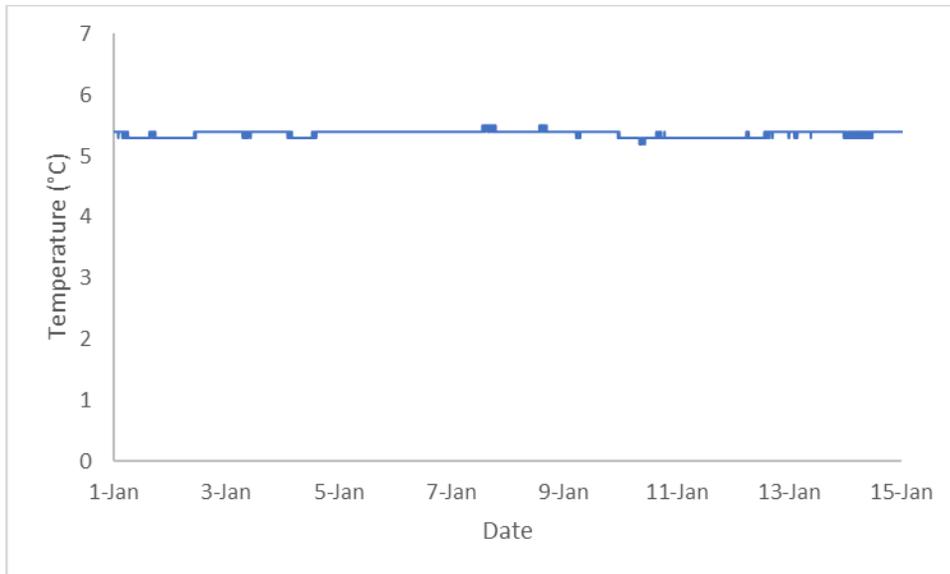
|                    | <b>Chinook</b> | <b>Winter Steelhead</b> |
|--------------------|----------------|-------------------------|
| <b>Description</b> | <b>(8 ft)</b>  | <b>(8 ft)</b>           |
| Catch              | 0              | 0                       |
| Effort (hrs)       | 0              | 0                       |
| CPUE (fish/hr)     | 0              | 0                       |



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

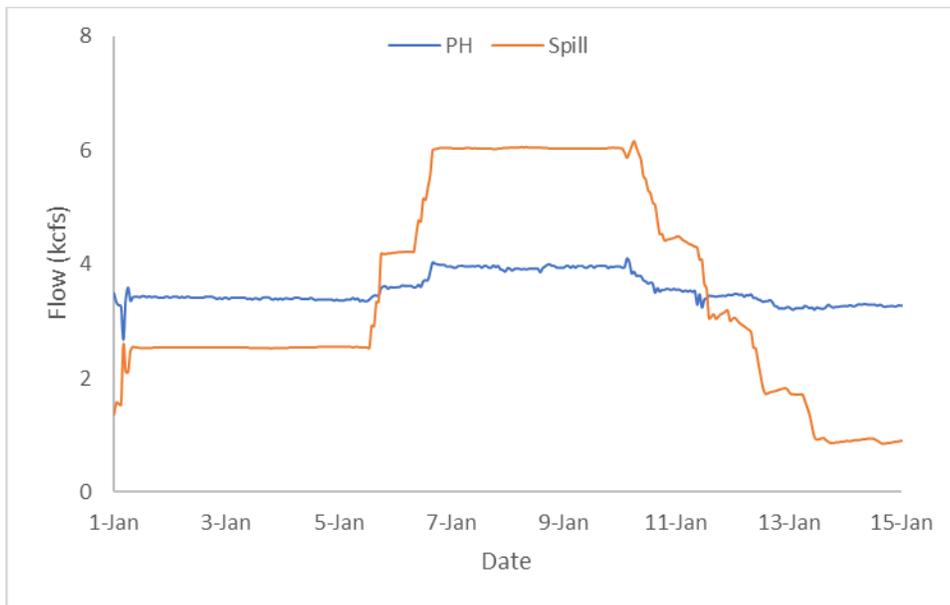


**Figure 13. Total Dissolved Gas Saturation (%); below Big Cliff Dam**



**Figure 14. Temperature at RST (Big Cliff Dam)**

Note: The Big Cliff RST was removed for all of the reporting period due to high flows. The temperature logger was removed along with the RST. The above temperature data was gathered from USGS gage 14181500.

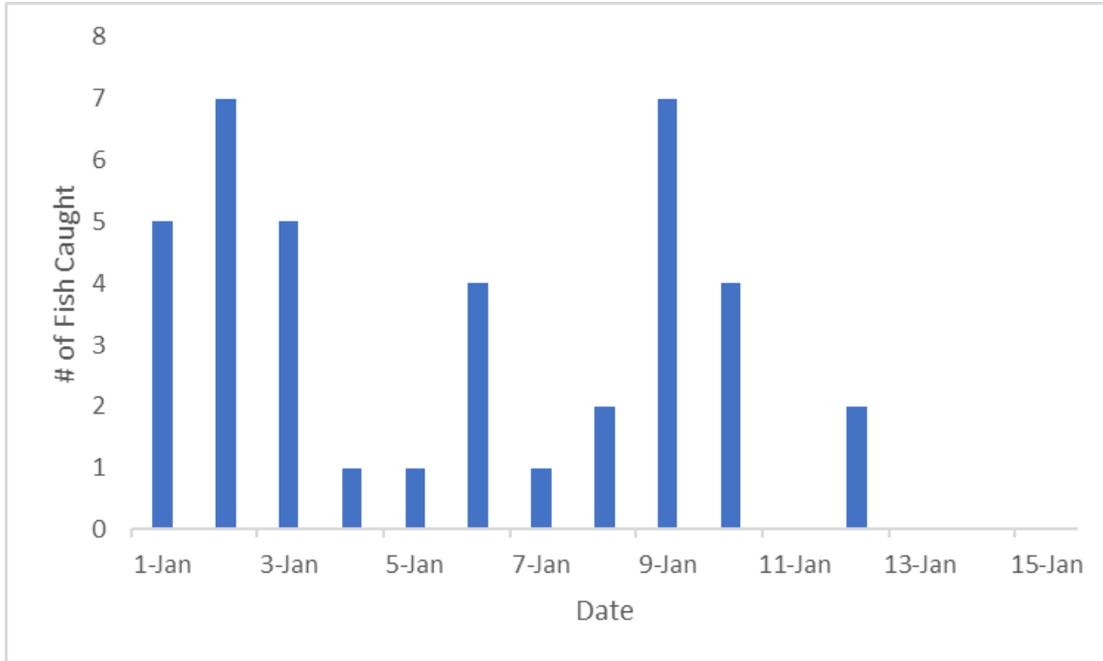


**Figure 15. Hourly Flows PWR vs. Spill (Big Cliff Dam)**

## South Fork McKenzie – Cougar Dam

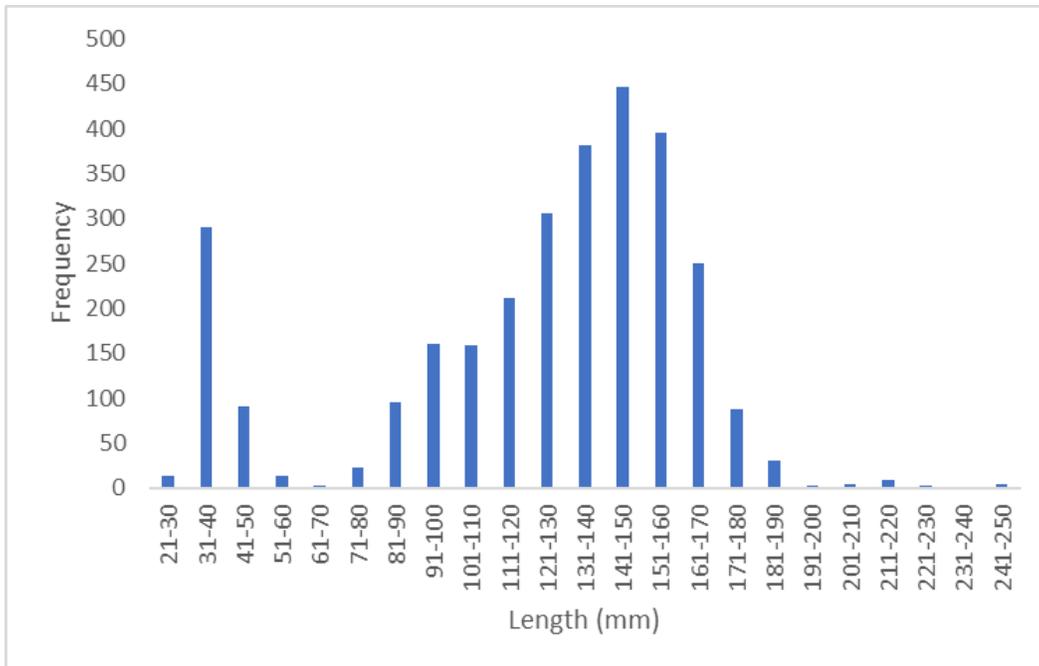
### Target Species

This reporting period began on January 1<sup>st</sup> and ended on January 15<sup>th</sup>. There were a total of 39 Chinook Salmon (CHS) captured during the 15-day sampling period. Sampling duration was 100.0% for the RO RST and 100.0% for the Powerhouse RSTs. Table 8 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 16 shows the daily capture numbers for chinook and Figure 17 shows length frequency data to-date.



\*Recaptured fish for trapping efficiency trials not included.

**Figure 16. Chinook Captured Per Day 01/01/2023 to 01/15/2023 (Cougar Dam)**



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

**Figure 17. Length Frequency of Juvenile Chinook Sampled Season To-Date (Cougar Dam)**

### Trapping Efficiency

A total of 843 juvenile hatchery Chinook (sub-yearlings) were PIT tagged, adipose clipped and released on 01/12/2023 in the PH channel. 159 fish were recaptured for an efficiency of 18.9%.

| Cougar Dam<br>(01/12/2023) | Release # | Recapture # | Capture Efficiency |
|----------------------------|-----------|-------------|--------------------|
| PH Route                   | 843       | 159         | 18.9%<br>(159/843) |

### Run of River Trapping Efficiency

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

| Cougar Dam | Release # | Recapture # |
|------------|-----------|-------------|
| PH         | 0         | 0           |
| RO         | 0         | 0           |

**Table 8. Descriptive Statistics of Target Species Captured at Cougar Dam Season To-Date**

| To-Date (Since Dec. 01, 2021) |       |         |            |           |              |     |       |             |       |      |
|-------------------------------|-------|---------|------------|-----------|--------------|-----|-------|-------------|-------|------|
| Site                          | Route | Species | Life stage | Collected | Length (mm)* |     |       | Weight (g)* |       |      |
|                               |       |         |            |           | Min          | Max | Mean  | Min         | Max   | Mean |
| Cougar Dam                    | RO    | CHS     | Fry        | 21        | 34           | 48  | 40.8  | N/A         | N/A   | N/A  |
|                               |       | CHS     | Parr       | 204       | 56           | 164 | 107.3 | 1.2         | 41.1  | 14.4 |
|                               |       | CHS     | Smolt      | 1599      | 92           | 247 | 145.2 | 4.7         | 142.4 | 34.7 |
| Cougar Dam                    | PWR   | CHS     | Fry        | 382       | 25           | 55  | 38.0  | 1.0         | 1.8   | 1.2  |
|                               |       | CHS     | Parr       | 271       | 54           | 165 | 99.0  | 1.6         | 41.0  | 10.6 |
|                               |       | CHS     | Smolt      | 556       | 76           | 223 | 138.6 | 4.2         | 113.5 | 29.8 |

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

| January 1-15, 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       | 6         | 76           | 116 | 98.8  | 4.2         | 19.2 | 10.5 |
|                    |       | CHS     | Smolt      | 15        | 118          | 165 | 141.3 | 18.4        | 46.4 | 31.3 |
| Cougar Dam         | PWR   | CHS     | Fry        | 0         | N/A          | N/A | N/A   | N/A         | N/A  | N/A  |
|                    |       | CHS     | Parr       | 5         | 80           | 103 | 92.6  | 6.1         | 9.9  | 8.7  |
|                    |       | CHS     | Smolt      | 13        | 102          | 158 | 135.1 | 11.9        | 47.2 | 27.8 |

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

### 24-Hour Post Collection Holding Trial

A total of 39 Chinook captured in the RSTs, 18 fish from the PWR RST and 21 from the RO RST, were held for ~24 hours in holding tanks and then evaluated for survival rates. In total, 1 of the fish (2.6%) held during this period died during holding. 1 of the 18 PWR RST captured fish (5.6%) died during holding and 0 of the 21 RO RST captured fish (0.0%) died during holding.

### Injuries and Copepod Infection

Partial descaling <20% was observed on 17 of the 18 Chinook collected at the PWR RST (94.4%). Descaling >20% was observed on 0 of the Chinook (0.0%). There were 14 fish with bodily injuries (77.8%) and 0 had eye injuries (0.0%). 13 fish had copepods present in the branchial cavity (72.2%) and 9 had copepods present on fins (50.0%). 1 fish displayed Gas Bubble Disease (level 1) (5.6%). There were 0 chinook mortalities collected in the PWR RST (0.0%).

Partial descaling <20% was observed on 16 of the 21 Chinook collected at the RO RST (76.2%). Descaling >20% was observed on 4 of the Chinook (19.0%). There were 18 fish with bodily injuries (85.7%) and 2 had eye injuries (9.5%). 11 fish had copepods present in the branchial cavity (52.4%) and

9 had copepods present on fins (42.9%). 11 fish displayed Gas Bubble Disease (five level 1, four level 2, and two level 3) (52.4%). There were 0 chinook mortalities collected in the RO RST (0.0%).

Data is summarized below in Table 13. A summary of injuries observed during the reporting period, and for the duration of the season are provided in Appendix A.

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

| Site       | Route | # CHS Collected | # DSC* <20% | # DSC* >20% | # with Body Injuries | # with Eye Injuries | # with COP* In B.C. | # with COP* on Fins | Mortalities |
|------------|-------|-----------------|-------------|-------------|----------------------|---------------------|---------------------|---------------------|-------------|
| Cougar Dam | RO    | 21              | 16          | 4           | 18                   | 2                   | 11                  | 9                   | 0           |
| Cougar Dam | PWR   | 18              | 17          | 0           | 14                   | 0                   | 13                  | 9                   | 0           |

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

### Collected DNA and Scale Samples

For the reporting period, scales and DNA were collected from 39 Spring Chinook. The other targets captured did not meet length criteria for DNA sampling or were too damaged to remove scales.

### 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

A total of 5 non-target fish were captured during the reporting period; the data is summarized below in Table 9. Adipose clipped Chinook captured were from previous TE releases. They are not ODFW PIT tagged fish.

**Table 9. 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             | 0                    | 0                      |
| Chinook (AD clipped) | 0          | 0            | 0           | 0             | 0                    | 0                      |
| Chinook (Adult)      | 0          | 0            | 0           | 0             | 0                    | 0                      |
| Crappie              | 0          | 0            | 0           | 0             | 0                    | 0                      |
| Cutthroat            | 0          | 0            | 0           | 0             | 0                    | 0                      |
| Dace                 | 0          | 0            | 0           | 0             | 0                    | 0                      |
| Largescale Sucker    | 0          | 0            | 0           | 0             | 0                    | 0                      |
| Mountain Whitefish   | 1          | 0            | 2           | 0             | 3                    | 0                      |
| Northern Pikeminnow  | 0          | 0            | 0           | 0             | 0                    | 0                      |
| <i>O. mykiss</i>     | 0          | 0            | 0           | 0             | 0                    | 0                      |
| Sculpin              | 0          | 0            | 2           | 0             | 2                    | 0                      |
| Smallmouth Bass      | 0          | 0            | 0           | 0             | 0                    | 0                      |
| Spotted Bass         | 0          | 0            | 0           | 0             | 0                    | 0                      |
| Unknown              | 0          | 0            | 0           | 0             | 0                    | 0                      |
| <b>Totals</b>        | <b>1</b>   | <b>0</b>     | <b>4</b>    | <b>0</b>      | <b>5</b>             | <b>0</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 1,252.9 to 1,253.9 feet (mean: 1,253.4 feet). Figure 18 shows instantaneous gauge height.

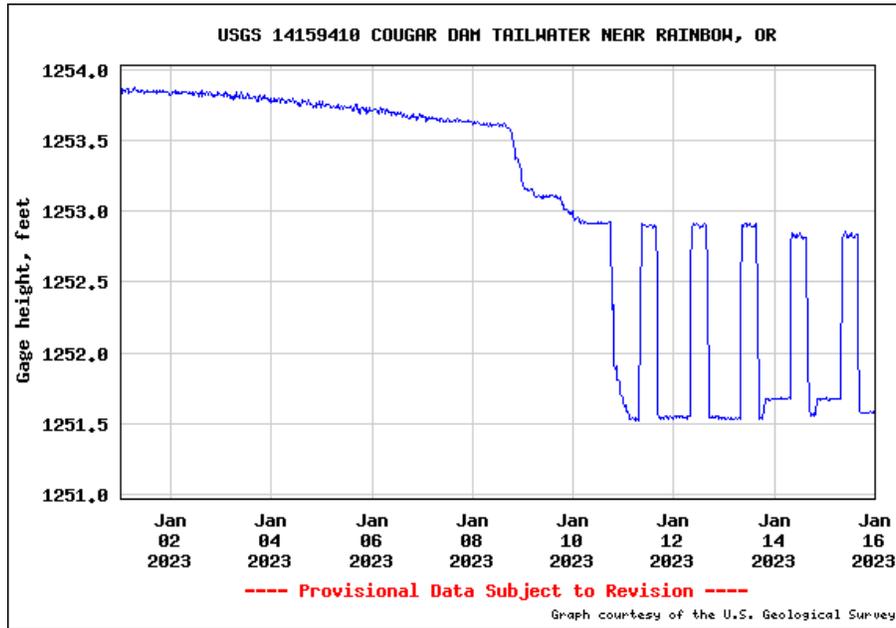
Total dissolved gas saturation ranged from 100 to 112% (mean: 105.6%). Figure 19 shows total dissolved gas saturation.

Stream temperatures were recorded every 2 hours for the length of the report period for the RO and PWR RST's (Figure 20 and 21 respectively). Temperature probes for the RO and PWR RST operated normally throughout this reporting period.

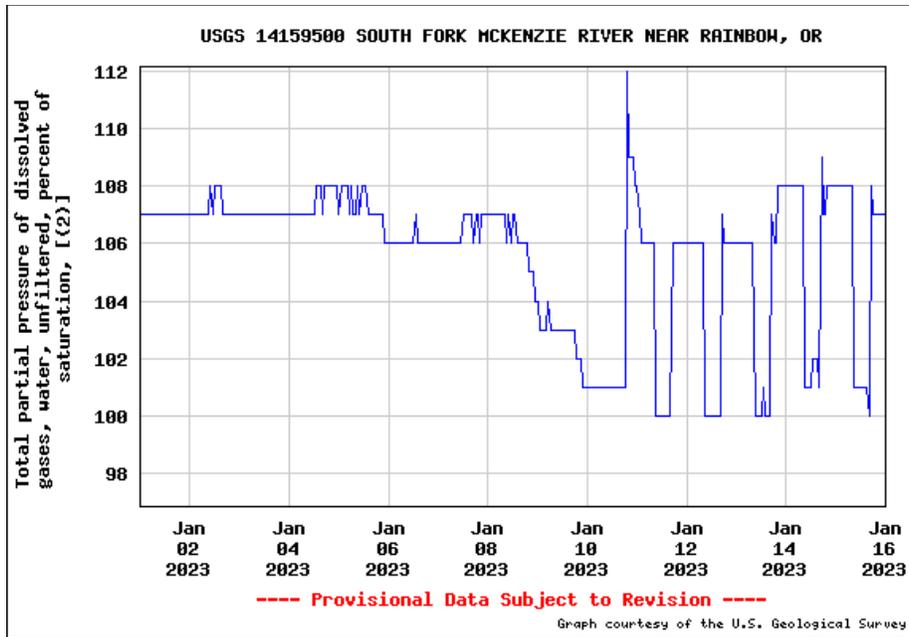
Flows through the Powerhouse and RO during the reporting period averaged 367.5 and 1,003.7 cubic feet per second (cfs) respectively (Figure 22). Catch per unit of effort (CPUE) data are summarized in Table 10. Discharge and capture data for the duration of monitoring efforts at this location are provided in Appendix B.

**Table 10. Summary of salmonid CPUE, Cougar Dam.**

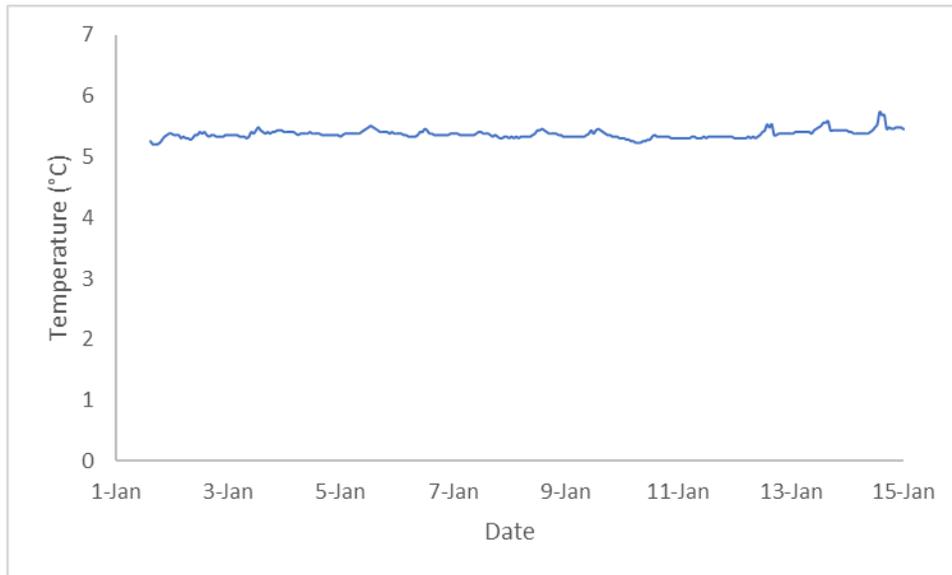
| Description    | Chinook  |           |
|----------------|----------|-----------|
|                | RO (5ft) | PWR (8ft) |
| Catch          | 21       | 18        |
| Effort (hrs)   | 359.3    | 718.3     |
| CPUE (fish/hr) | 0.058    | 0.025     |



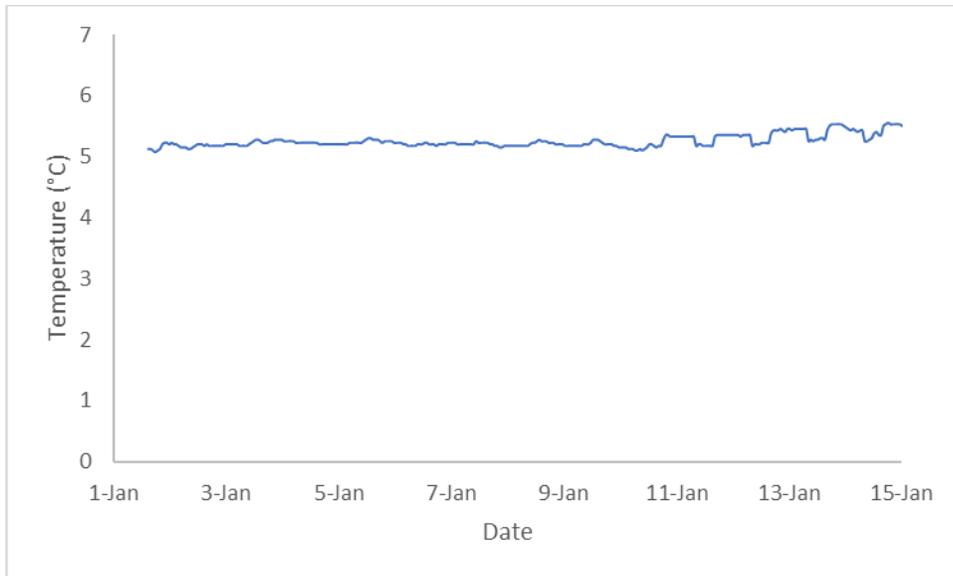
**Figure 18. Gauge Height (feet); below Cougar Dam, South Fork McKenzie River**



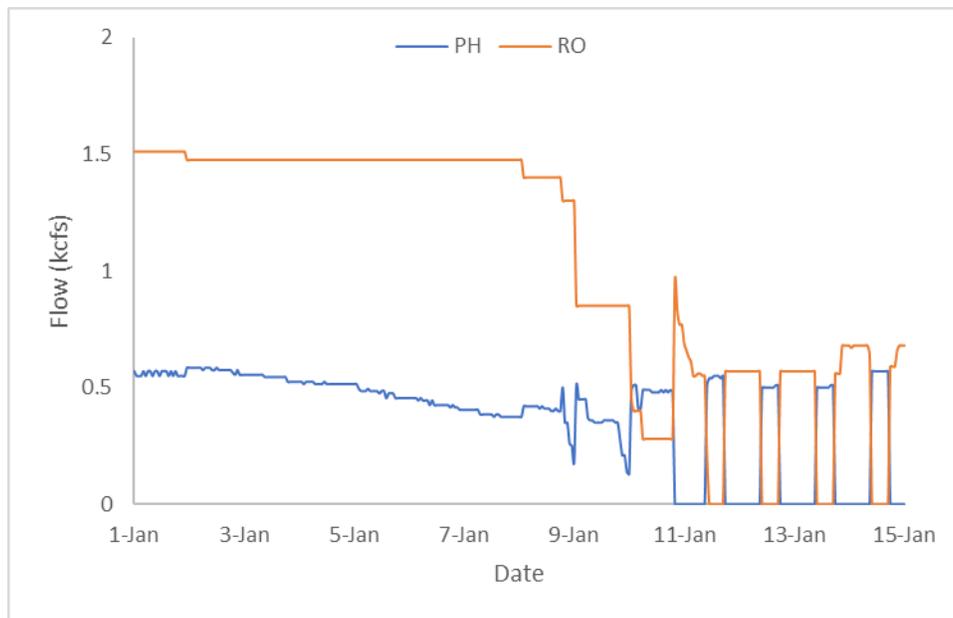
**Figure 19. Total Dissolved Gas Saturation (%); below Cougar Dam, South Fork McKenzie River**



**Figure 20. Temperature at RO RST (Cougar Dam)**



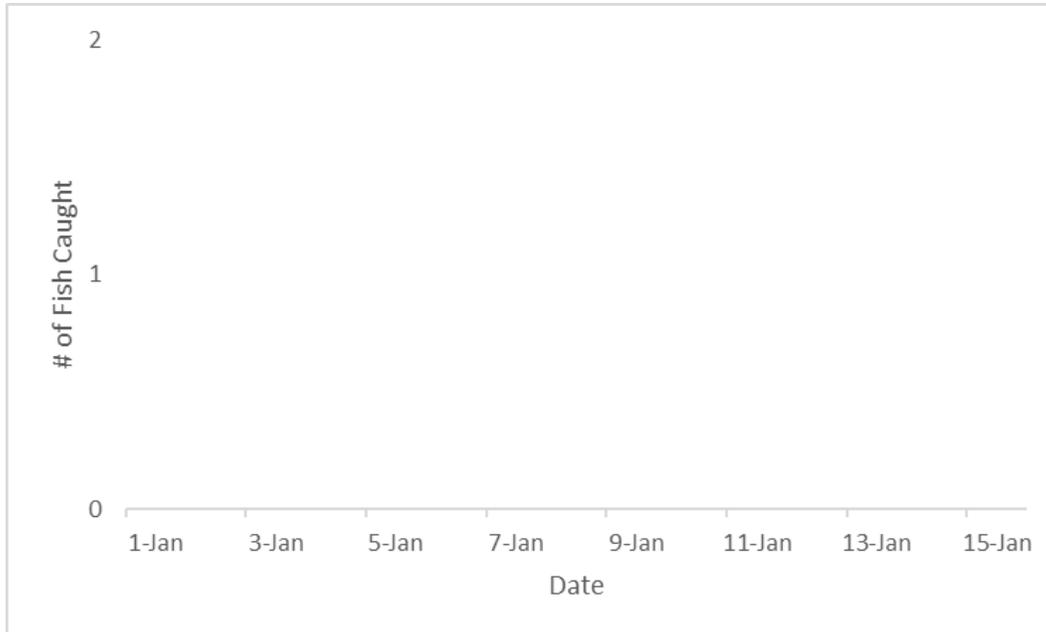
**Figure 21. Temperature at PWR RST (Cougar Dam)**



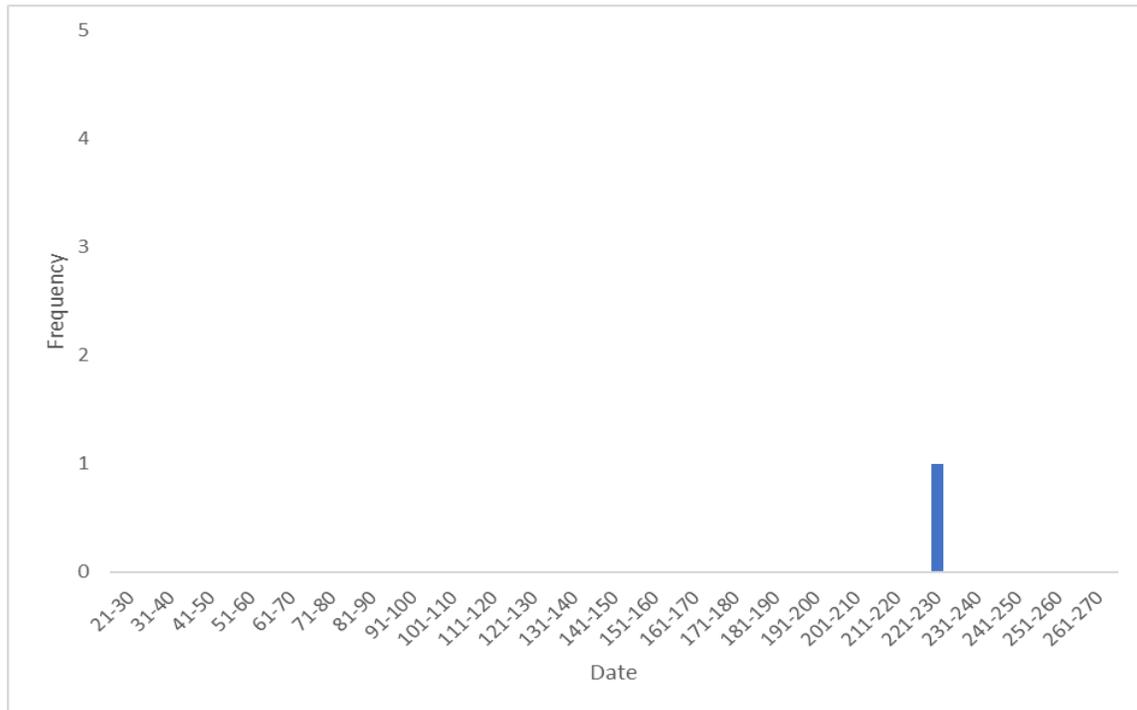
**Figure 22. Hourly Flows PWR vs. RO (Cougar Dam)**

## Fall Creek Dam Tailrace

The reporting period began January 1st and ended January 15th. 0 Chinook salmon were captured during the 15-day sampling period (Figure 23). Sediment has filled the channel where the RST operates making it necessary to storm sample the trap so as not to create hazardous conditions for captured fish. The trap was lowered for full sampling on 1/10/2023. The trap sampled 33.0% of the days during this reporting period. Table 11 provides life stage, length, and weight data for all Chinook salmon that have been caught at the Fall Creek Dam Tailrace site to-date and Figure 24 shows length frequency data to-date.



**Figure 23. Chinook Captured Per Day 01/01/2023 to 01/15/2023 (Fall Creek Dam Tailrace)**



**Figure 24. Length Frequency of Juvenile Chinook Sampled Season To-Date (Fall Creek Dam Tailrace)**

**Table 11. Descriptive Statistics of Target Species Captured at Fall Creek Dam Tailrace, Season To-Date and for the Reporting Period**

| To-Date            |       |         |            |           |              |     |       |             |       |       |
|--------------------|-------|---------|------------|-----------|--------------|-----|-------|-------------|-------|-------|
| Site               | Route | Species | Life stage | Collected | Length (mm)* |     |       | Weight (g)* |       |       |
|                    |       |         |            |           | Min          | Max | Mean  | Min         | Max   | Mean  |
| Fall Creek Dam     | RO    | CHS     | Smolt      | 1         | 230          | 230 | 230.0 | 141.1       | 141.1 | 141.1 |
|                    |       | CHS     | Parr       | 0         | N/A          | N/A | N/A   | N/A         | N/A   | N/A   |
| January 1-15, 2023 |       |         |            |           |              |     |       |             |       |       |
| Site               | Route | Species | Life stage | Collected | Length (mm)* |     |       | Weight (g)* |       |       |
|                    |       |         |            |           | Min          | Max | Mean  | Min         | Max   | Mean  |
| Fall Creek Dam     | RO    | CHS     | Smolt      | 0         | N/A          | N/A | N/A   | N/A         | N/A   | N/A   |
|                    |       | CHS     | Parr       | 0         | N/A          | N/A | N/A   | N/A         | N/A   | N/A   |

## 24-Hour Post Collection Holding Trial

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

## Injuries and Copepod Infection

0 Chinook were captured during this reporting period. 0 fish displayed descaling >20% (0.0%) and 0 fish had bodily injuries (0.0%). 0 fish had copepods in the branchial cavity (0.0%). There were no mortalities. The data is summarized in Table 12. To date injury data is listed in Appendix A.

**Table 12. Number of Descaled, Bodily/Eye Injured, Copepod Infected and Dead Chinook Salmon for Sampling Period. (Fall Creek)**

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

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

## Collected DNA and Scale Samples

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

## 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 so as 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.

## Trapping Efficiency

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

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

## Non-Target Species

39 non-target fish were captured at the Fall Creek Dam Tailrace site during the reporting period; the data is summarized below in Table 13.

**Table 13. Summary of Non-target Species (Fall Creek Dam Tailrace)**

| Species             | 8ft Capture | 8ft Mortality | Season Total | Season Total Mortality |
|---------------------|-------------|---------------|--------------|------------------------|
| Bluegill            | 0           | 0             | 0            | 0                      |
| Brook Lamprey       | 10          | 0             | 10           | 0                      |
| Brown Bullhead      | 2           | 0             | 2            | 0                      |
| Bull Trout          | 0           | 0             | 0            | 0                      |
| Chinook (clipped)   | 0           | 0             | 0            | 0                      |
| Crappie             | 0           | 0             | 0            | 0                      |
| Cutthroat Trout     | 3           | 0             | 3            | 0                      |
| Dace                | 17          | 2             | 17           | 2                      |
| Mosquitofish        | 0           | 0             | 0            | 0                      |
| Peamouth            | 0           | 0             | 0            | 0                      |
| Northern Pikeminnow | 0           | 0             | 0            | 0                      |
| Redside Shiner      | 0           | 0             | 0            | 0                      |
| Sculpin             | 0           | 0             | 0            | 0                      |
| Spotted Bass        | 0           | 0             | 0            | 0                      |
| Largescale Sucker   | 2           | 0             | 2            | 0                      |
| Pacific Lamprey     | 0           | 0             | 0            | 0                      |
| Mountain Whitefish  | 0           | 0             | 0            | 0                      |
| <i>O. mykiss</i>    | 5           | 0             | 5            | 0                      |
| Unknown             | 0           | 0             | 0            | 0                      |
| <b>Totals</b>       | <b>39</b>   | <b>2</b>      | <b>39</b>    | <b>2</b>               |

## Stream Statistics

Basic stream statistics at the site were calculated from data downloaded from U.S. Geological Survey stream gage numbers 14151000 and 1415000. Instantaneous discharge (cfs) data was collected from gage 1415100. Dissolved oxygen (mg/L) concentration data was received from gage 1415000, 1.2 rkms downstream of the trap. During the reporting period, daily maximum values for instantaneous discharge ranged from 331.0 cfs to 2,080.0 cfs (mean: 699.3 cfs). Figure 25 shows instantaneous discharge.

Dissolved oxygen concentrations were not available for the duration of the reporting period. No data has been recorded from the stream gage after October 19, 2022 at 12:00.

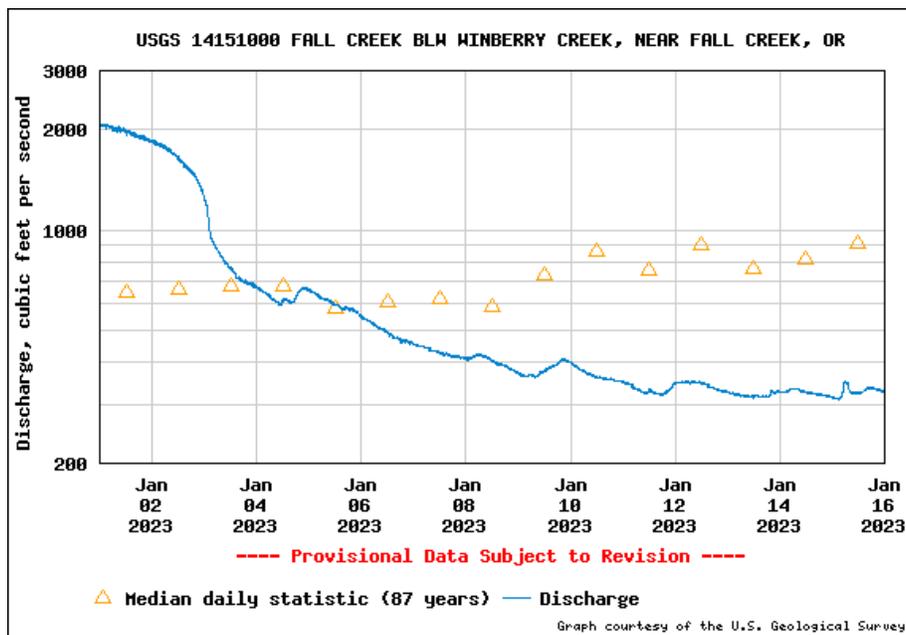
Stream temperatures were recorded using temperature probes for the Fall Creek Dam Tailrace RST site during this reporting period. The temperature probe operated normally during this period (Figure 26).

Flows In and Out of reservoir during the reporting period averaged 562.0 cfs and 630.4 cfs respectively (Figure 27).

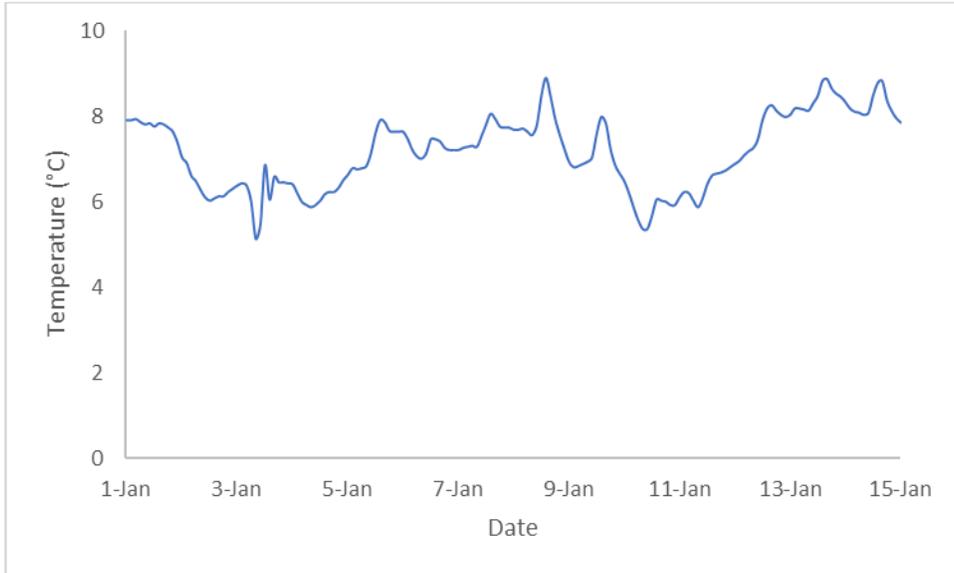
Catch per unit of effort (CPUE) data are summarized in Table 14. Discharge and capture data for the duration of monitoring efforts at this location are provided in Appendix B

**Table 14. Summary of Chinook CPUE, Fall Creek Dam Tailrace**

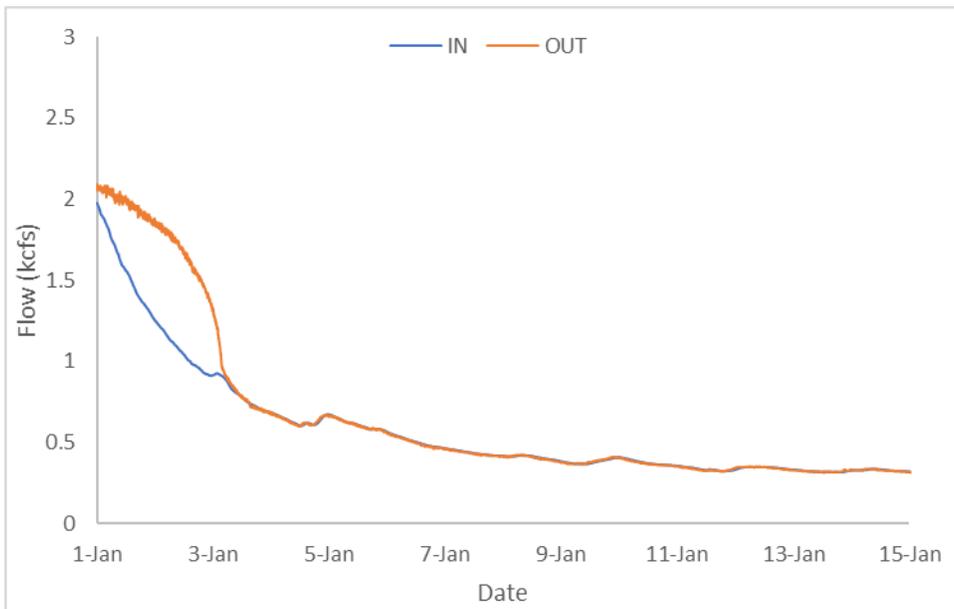
|                | Chinook |
|----------------|---------|
| Description    | (8 ft)  |
| Catch          | 0       |
| Effort (hrs)   | 125.7   |
| CPUE (fish/hr) | 0       |



**Figure 25. Discharge (cfs); Fall Creek Below Winberry Creek, Near Fall Creek, OR**



**Figure 26. Temperature at RST (Fall Creek Dam Tailrace)**

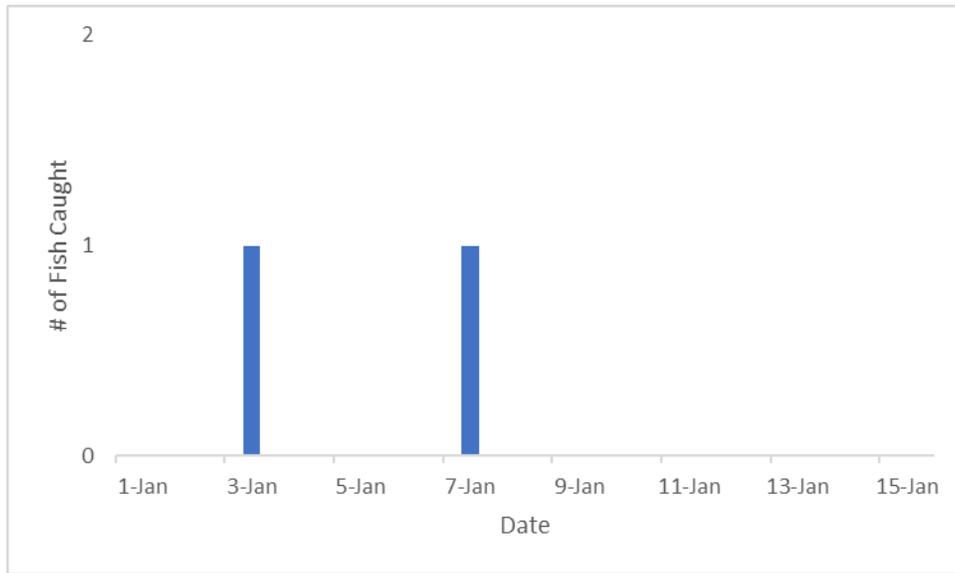


**Figure 27. Hourly Flows PWR vs. RO (Fall Creek Tailrace)**

## Middle Fork Willamette– Dexter Dam

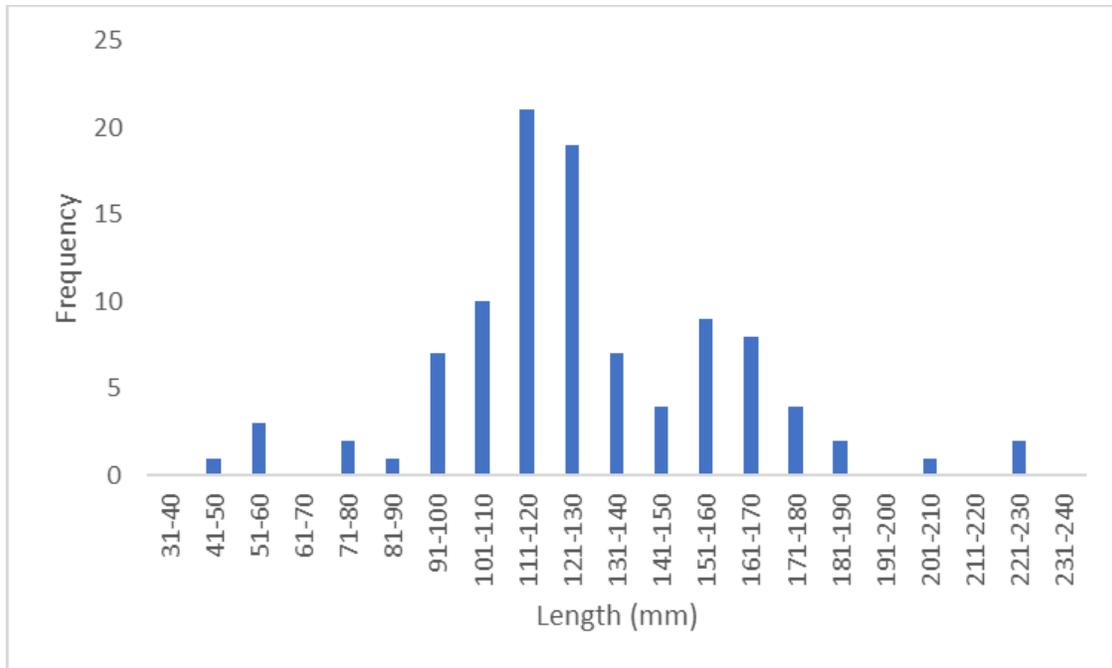
### Target Species

This reporting period began on January 1st and ended on January 15th. There were 2 Chinook salmon (CHS) captured during the 15-day sampling period. Sampling duration was 100% for the 5 ft RST. Table 15 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 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 01/01/2023 to 01/15/2023 (Dexter Dam)**



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

**Figure 29. Length Frequency of Juvenile Chinook Sampled Season To-Date (Dexter Dam)**

**Table 15. Descriptive Statistics of Target Species Captured at the Dexter Dam RST Season To-Date**

| To-Date (Since March 07, 2022) |      |         |            |           |              |     |       |             |       |      |
|--------------------------------|------|---------|------------|-----------|--------------|-----|-------|-------------|-------|------|
| Site                           | Trap | Species | Life stage | Collected | Length (mm)* |     |       | Weight (g)* |       |      |
|                                |      |         |            |           | Min          | Max | Mean  | Min         | Max   | Mean |
| Dexter Dam                     | 5 ft | CHS     | Fry        | 3         | 46           | 55  | 51.3  | 1.4         | 1.4   | 1.4  |
|                                |      | CHS     | Parr       | 19        | 51           | 159 | 101.4 | 2.1         | 48.3  | 12.8 |
|                                |      | CHS     | Smolt      | 79        | 95           | 226 | 138.0 | 9.3         | 162.3 | 29.2 |

| January 1-15, 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       | 1         | 103          | 103 | 103.0 | 12.9        | 12.9 | 12.9 |
|                    |      | CHS     | Smolt      | 1         | 115          | 115 | 115.0 | 16.1        | 16.1 | 16.1 |

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

### Trapping Efficiency

A total of 1010 juvenile hatchery Chinook (sub-yearlings) adipose clipped, upper caudal clipped and released on 12/06/2022 below Dexter Dam. Fish were released in small groups into powerhouse flow to

evaluate the traps efficiency capturing fish passing through the powerhouse. 10 fish were recaptured in the 5-foot RST for an efficiency of 1.0%.

| Dexter Dam | Release # | Recapture # | Capture Efficiency |
|------------|-----------|-------------|--------------------|
| Spill      | N/A       | N/A         | N/A                |
| Powerhouse | 1010      | 10          | 1.0%<br>(10/1010)  |

### 24-Hour Post Collection Holding Trial

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

### Injuries and Copepod Infection

2 Chinook was captured during this reporting period. Partial descaling <20% was observed in 2 of the 2 Chinook captured (100.0%) and 0 displayed descaling >20% (0.0%). 1 displayed body injury (50.0%) 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 16. To date injury data can be found in Appendix A.

**Table 16. 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   | 2               | 2           | 0           | 1                    | 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 2 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

125 non-target species fish were captured during the reporting period; the data is summarized below in Table 17. 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 17. Summary of Non-target Species (Dexter Dam).**

| Species                    | Capture    | Mortality | Season Total | Season Total Mortality |
|----------------------------|------------|-----------|--------------|------------------------|
| Bass                       | 0          | 0         | 0            | 0                      |
| Bluegill                   | 1          | 0         | 1            | 0                      |
| Chinook (clipped)          | 4          | 0         | 4            | 0                      |
| Chinook (adult)            | 0          | 0         | 0            | 0                      |
| Crappie                    | 104        | 9         | 104          | 9                      |
| Cutthroat                  | 0          | 0         | 0            | 0                      |
| Dace                       | 0          | 0         | 0            | 0                      |
| <i>O. mykiss</i>           | 1          | 0         | 1            | 0                      |
| <i>O. mykiss</i> (clipped) | 0          | 0         | 0            | 0                      |
| Pikeminnow                 | 0          | 0         | 0            | 0                      |
| Redside Shiner             | 1          | 0         | 1            | 0                      |
| Sculpin                    | 14         | 1         | 14           | 1                      |
| Largescale Sucker          | 0          | 0         | 0            | 0                      |
| Unknown                    | 0          | 0         | 0            | 0                      |
| <b>Totals</b>              | <b>125</b> | <b>10</b> | <b>125</b>   | <b>10</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 638.3 feet to 640.5 feet (mean: 639.6 feet). Figure 30 shows instantaneous gauge height.

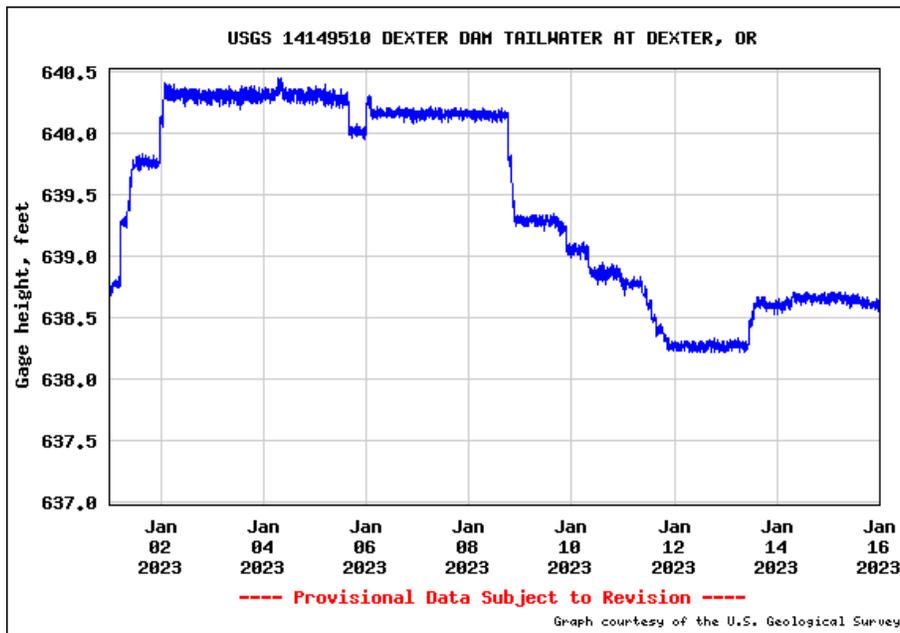
Total dissolved gas saturation ranged from 99 to 112% (mean: 105.0%) during the reporting period. Figure 31 shows total dissolved gas saturation.

Stream temperatures were recorded every two hours using a temperature probe at the Dexter Dam RST site during this reporting period. Temperature probes operated normally, and the data is shown below in Figure 32.

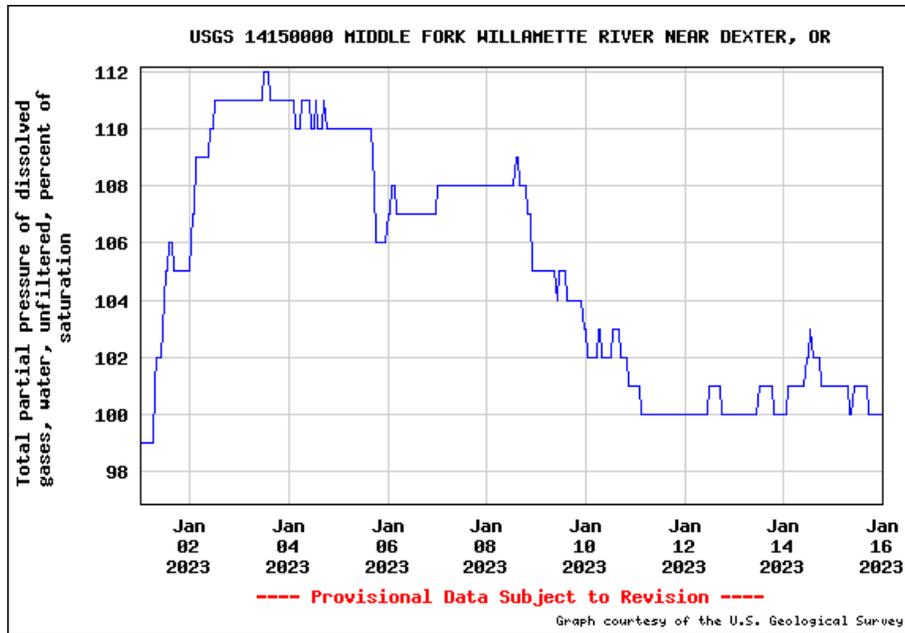
Flows through the Powerhouse and Spill during the reporting period averaged 3,627.7 and 1,865.6 cubic feet per second (cfs) respectively (Figure 33). Catch per unit of effort (CPUE) data are summarized in Table 18. Discharge and capture data for the duration of monitoring efforts at this location are provided in Appendix B.

**Table 18. Summary of salmonid CPUE, Dexter Dam.**

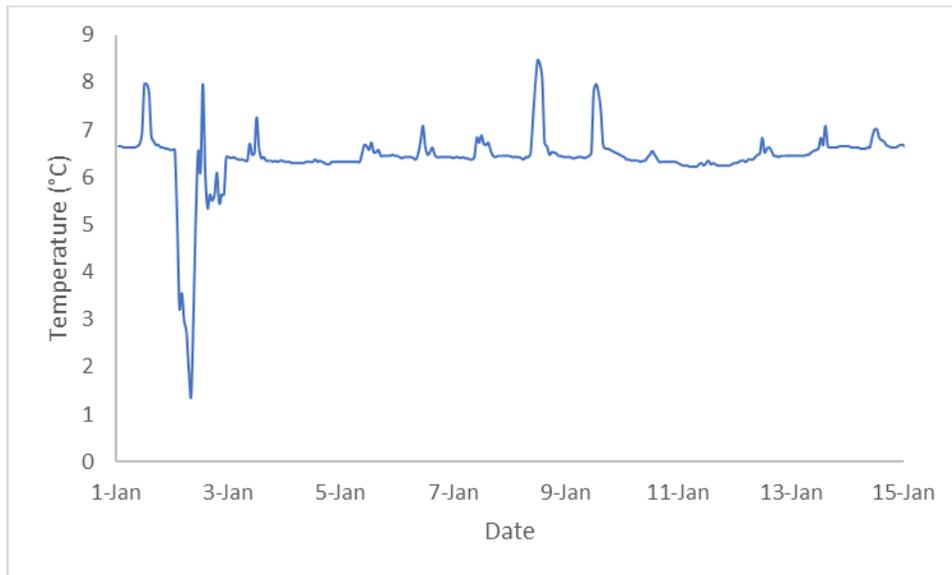
|                | Chinook |
|----------------|---------|
| Description    | 8 ft    |
| Catch          | 2       |
| Effort (hrs)   | 363.0   |
| CPUE (fish/hr) | 0.006   |



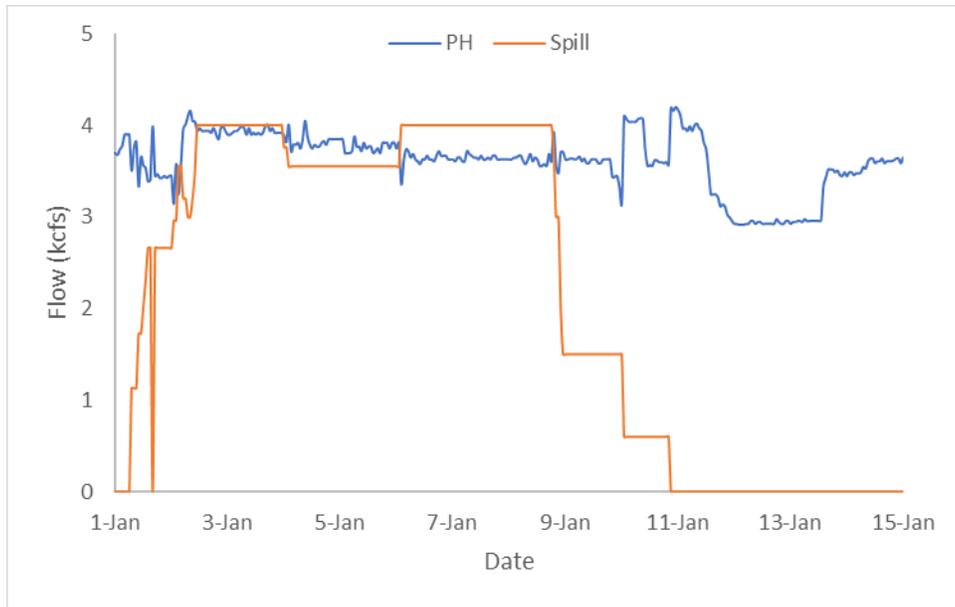
**Figure 30. Gauge Height (feet); below Dexter Dam, Middle Fork Willamette**



**Figure 31. Total Dissolved Gas Saturation (%); Middle Fork Willamette River, Near Dexter, OR**



**Figure 32. Temperature at RST (Dexter Dam)**

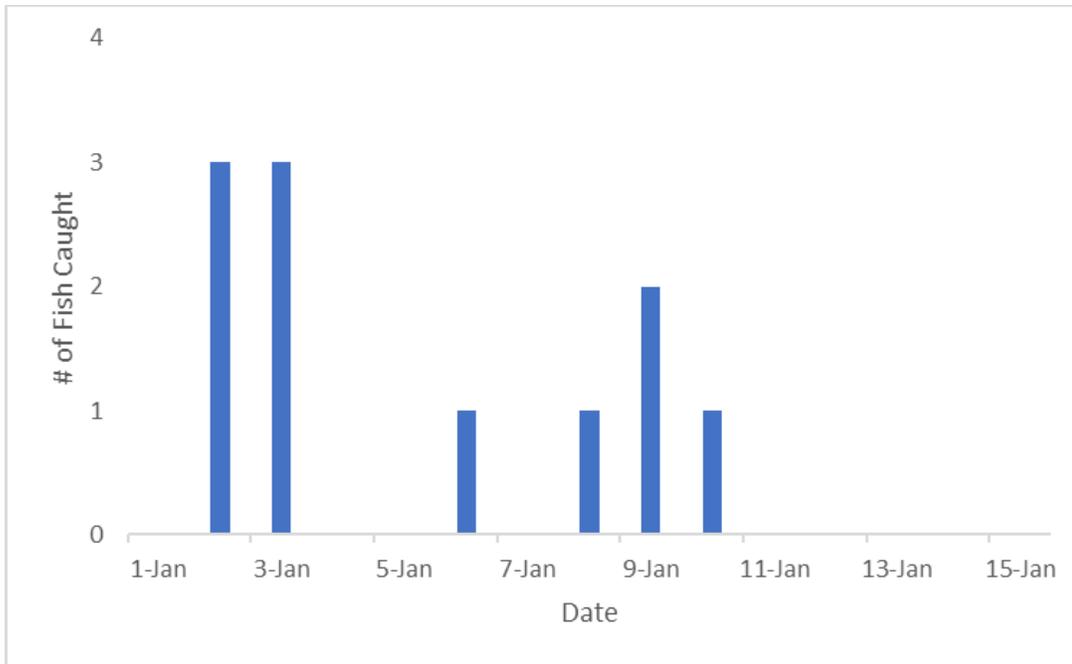


**Figure 33. Hourly Flows PWR vs. Spill (Dexter Dam)**

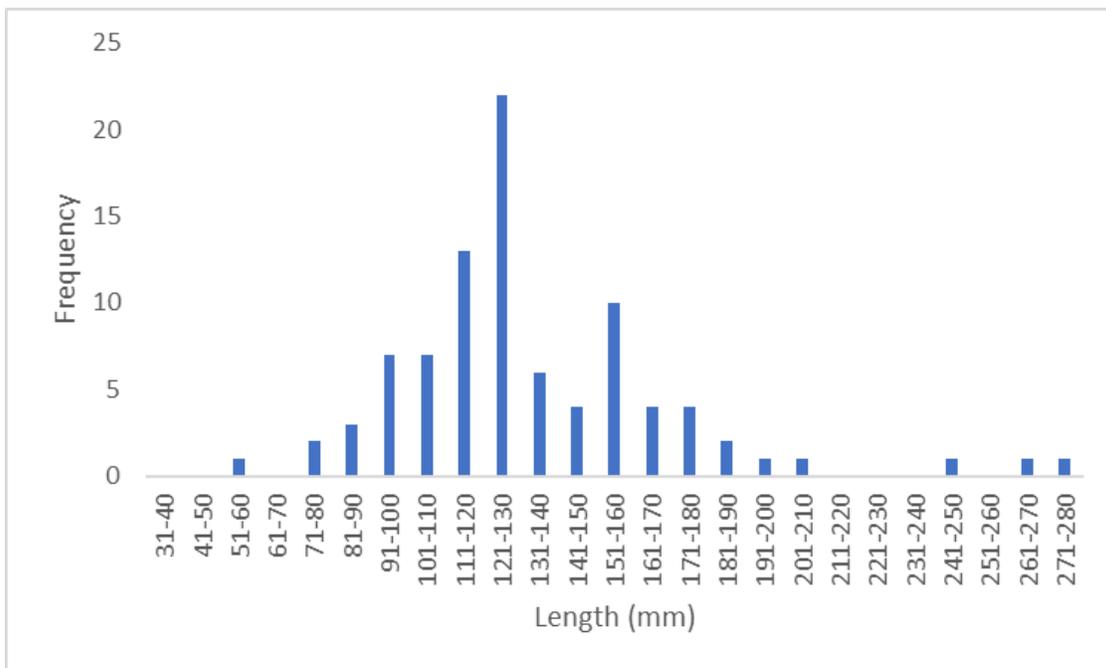
## **Middle Fork Willamette – Lookout Dam Tailrace**

### **Target Species**

The reporting period began January 1st and ended on January 15th. 11 Chinook salmon were captured during the 15-day sampling period (Figure 34). The traps were operated 100.0% of the reporting period. Table 19 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 35 shows length frequency data to-date.



**Figure 34. Chinook Captured Per Day 01/01/2023 to 01/15/2023 (Lookout Point Dam Tailrace)**



**Figure 35. Length Frequency of Juvenile Chinook Sampled Season To-Date (Lookout Point Dam Tailrace)**

**Table 19. Descriptive Statistics of Target Species Captured at Lookout Point Dam Tailrace, Season To-Date and for the Reporting Period**

| To-Date (Since March 15, 2022) |       |         |            |           |              |     |       |             |       |       |
|--------------------------------|-------|---------|------------|-----------|--------------|-----|-------|-------------|-------|-------|
| Site                           | Route | Species | Life stage | Collected | Length (mm)* |     |       | Weight (g)* |       |       |
|                                |       |         |            |           | Min          | Max | Mean  | Min         | Max   | Mean  |
| Lookout Point Dam              | PH 1  | CHS     | Smolt      | 30        | 112          | 275 | 152.2 | 15.0        | 269.0 | 46.9  |
|                                |       | CHS     | Parr       | 4         | 84           | 107 | 94.8  | 3.8         | 10.5  | 7.3   |
|                                |       | CHS     | Fry        | 0         | 0            | 0   | 0     | 0           | 0     | 0     |
|                                | PH 2  | CHS     | Smolt      | 11        | 95           | 250 | 133.6 | 8.4         | 194.6 | 133.6 |
|                                |       | CHS     | Parr       | 4         | 58           | 108 | 86.0  | 2.2         | 13.4  | 6.7   |
|                                |       | CHS     | Fry        | 0         | 0            | 0   | 0     | 0           | 0     | 0     |
|                                | Spill | CHS     | Smolt      | 34        | 94           | 194 | 133.9 | 7.6         | 63.0  | 27.4  |
|                                |       | CHS     | Parr       | 7         | 77           | 126 | 100.6 | 5.4         | 26.1  | 12.9  |
|                                |       | CHS     | Fry        | 0         | 0            | 0   | 0     | 0           | 0     | 0     |
| January 1-15, 2023             |       |         |            |           |              |     |       |             |       |       |
| Site                           | Route | Species | Life stage | Collected | Length (mm)* |     |       | Weight (g)* |       |       |
|                                |       |         |            |           | Min          | Max | Mean  | Min         | Max   | Mean  |
| Lookout Point Dam              | PH 1  | CHS     | Smolt      | 5         | 109          | 275 | 161.8 | 14.8        | 269.0 | 75.9  |
|                                |       | CHS     | Parr       | 1         | 96           | 96  | 96.0  | 9.4         | 9.4   | 9.4   |
|                                |       | CHS     | Fry        | 0         | N/A          | N/A | N/A   | N/A         | N/A   | N/A   |
|                                | PH 2  | CHS     | Smolt      | 2         | 135          | 250 | 192.5 | 33.0        | 194.6 | 113.8 |
|                                |       | 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      | 2         | 127          | 142 | 134.5 | 23.5        | 39.0  | 31.3  |
|                                |       | CHS     | Parr       | 1         | 125          | 125 | 125   | 17.6        | 17.6  | 17.6  |
|                                |       | CHS     | Fry        | 0         | N/A          | N/A | N/A   | N/A         | N/A   | N/A   |

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

### 24-Hour Post Collection Holding Trial

9 Spring Chinook were captured during the current reporting period and held for 24 hours. 6 fish were held from the PWR RST and 3 fish were held from the Spill RST. 0 hold fish died from the PWR RSTs (0 from PH 1 and 0 from PH 2) (0.0%). 0 of the fish from Spill RST died during holding (0.0%).

### Trapping Efficiency

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

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

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

| Lookout Dam | Release # | Recapture # | Capture Efficiency |
|-------------|-----------|-------------|--------------------|
| Powerhouse  | 1,013     | 2           | 0.2%<br>(2/1,013)  |

### Injuries and Copepod Infection

There were 3 Chinook captured in the Spill Channel RST. Partial descaling <20% was observed on 2 of 3 Chinook collected at the Spill RST (66.7%), and descaling >20% was observed on 0 of the Chinook collected (0.0%). 3 displayed body injuries (100.0%) and 0 had eye injuries (0.0%). 1 of the Spill RST Chinook had copepods present in the branchial cavity (33.3%) and 1 had copepods present on fins (33.3%). 0 of the fish captured in the Spill RST displayed Gas Bubble Disease (0.0%).

There were 8 Chinook captured in the Powerhouse channel RSTs. Partial descaling <20% was observed on 5 of the 8 Chinook collected at the PWR RSTs (62.5%). Descaling >20% was observed on 1 of the Chinook collected (12.5%). 6 PWR RST fish had bodily injury (75.0%) and 2 had eye injuries (25.0%). 2 of the fish had copepods present in the branchial cavity (25.0%) and 1 had copepods present on fins (12.5%). 1 fish displayed Gas Bubble Disease (level 1) (12.5%). There were 0 chinook mortality collected in the Spill RST (0.0%) and 2 in the PWR RST (25.0%). Injuries are displayed in Table 20. To date injury data can be found in Appendix A.

**Table 20. 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   | 8               | 5           | 1           | 6                    | 2                   | 2                   | 1                   | 2           |
|                            | Spill | 3               | 2           | 0           | 3                    | 0                   | 1                   | 1                   | 0           |

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

### Collected DNA and Scale Samples

For the reporting period, scales and DNA were collected from 11 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 so as 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

135,434 non-target species were captured during the reporting period; the data is summarized below in Table 21.

**Table 21. 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               | 0             | 0             | 0             | 0               | 0             | 0                      |
| Bluegill                   | 33            | 8             | 0             | 0               | 33            | 8                      |
| Brown Bullhead             | 1             | 0             | 0             | 0               | 1             | 0                      |
| Chinook (clipped)          | 1             | 0             | 1             | 0               | 2             | 0                      |
| Crappie                    | 133543        | 97289         | 1749          | 1287            | 135292        | 98576                  |
| Cutthroat                  | 0             | 0             | 0             | 0               | 0             | 0                      |
| Dace                       | 0             | 0             | 0             | 0               | 0             | 0                      |
| Largemouth Bass            | 0             | 0             | 0             | 0               | 0             | 0                      |
| Smallmouth Bass            | 56            | 56            | 1             | 1               | 57            | 57                     |
| Spotted Bass               | 1             | 0             | 0             | 0               | 1             | 0                      |
| Largescale Sucker          | 1             | 0             | 1             | 1               | 2             | 1                      |
| Northern Pike minnow       | 0             | 0             | 1             | 1               | 1             | 1                      |
| <i>O. mykiss</i>           | 3             | 0             | 1             | 0               | 4             | 0                      |
| <i>O. mykiss</i> (clipped) | 0             | 0             | 0             | 0               | 0             | 0                      |
| Pumpkinseed                | 1             | 0             | 0             | 0               | 1             | 0                      |
| Redside Shiner             | 0             | 0             | 0             | 0               | 0             | 0                      |
| Sculpin                    | 5             | 1             | 13            | 1               | 18            | 2                      |
| Walleye                    | 14            | 2             | 8             | 2               | 22            | 4                      |
| Unknown                    | 0             | 0             | 0             | 0               | 0             | 0                      |
| <b>Totals</b>              | <b>133659</b> | <b>97356</b>  | <b>1775</b>   | <b>1293</b>     | <b>135434</b> | <b>98649</b>           |

## 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

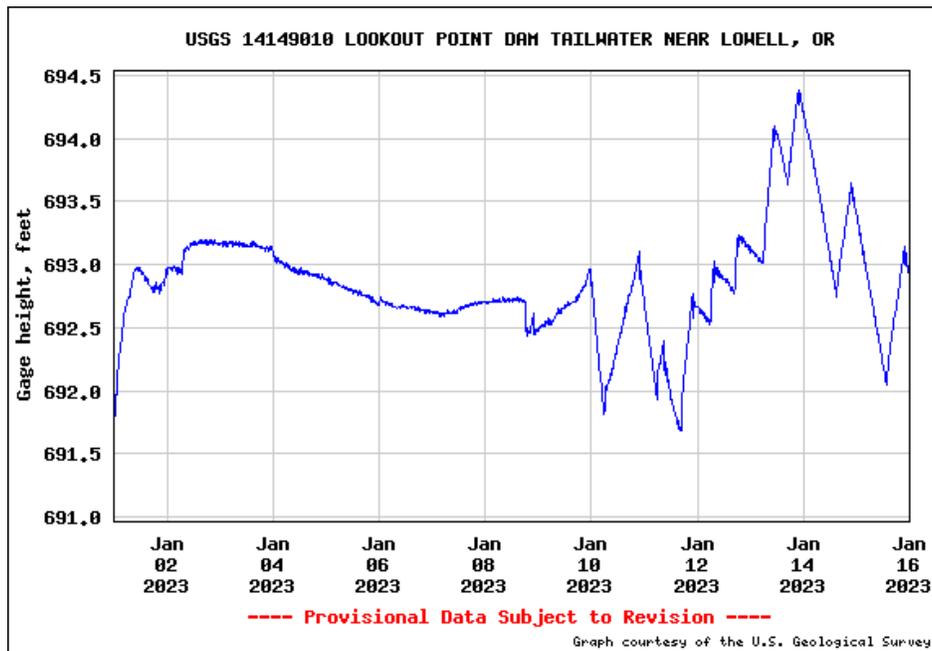
values for instantaneous gauge height ranged from 692.7 feet to 694.4 feet (mean: 693.2 feet). Figure 36 shows instantaneous gauge height.

Stream temperatures were recorded every two hours using a temperature probe at the Lookout Dam RST site during this reporting period. Temperature probes operated normally, and the data is shown below in (figures 37 and 38).

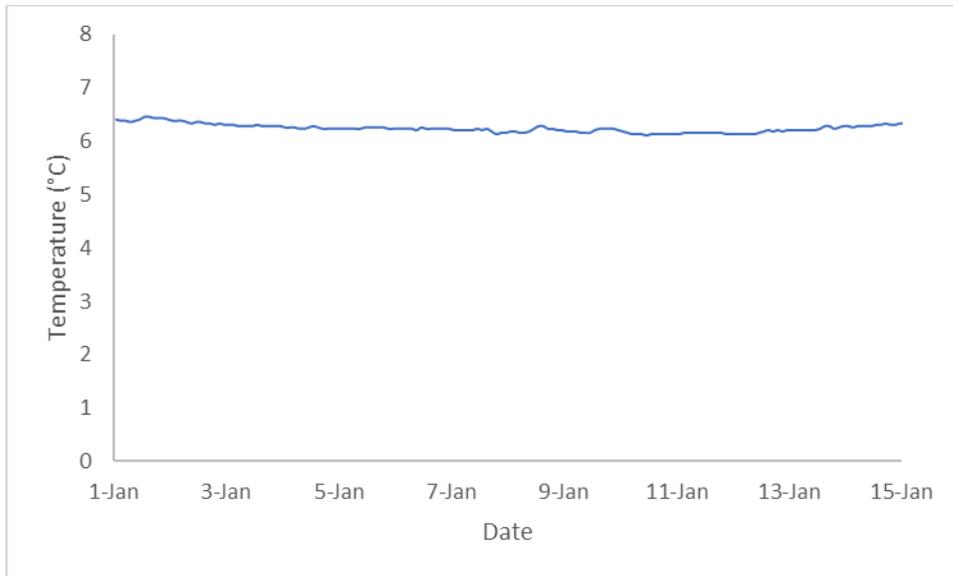
Flows through the Powerhouse and Spill during the reporting period averaged 4,636.6 and 946.9 cubic feet per second (cfs) respectively (Figure 39). Catch per unit of effort (CPUE) data are summarized in Table 22. Discharge and capture data for the duration of monitoring efforts at this location are provided in Appendix B.

**Table 22. Summary of Chinook CPUE at Lookout Point Dam Tailrace.**

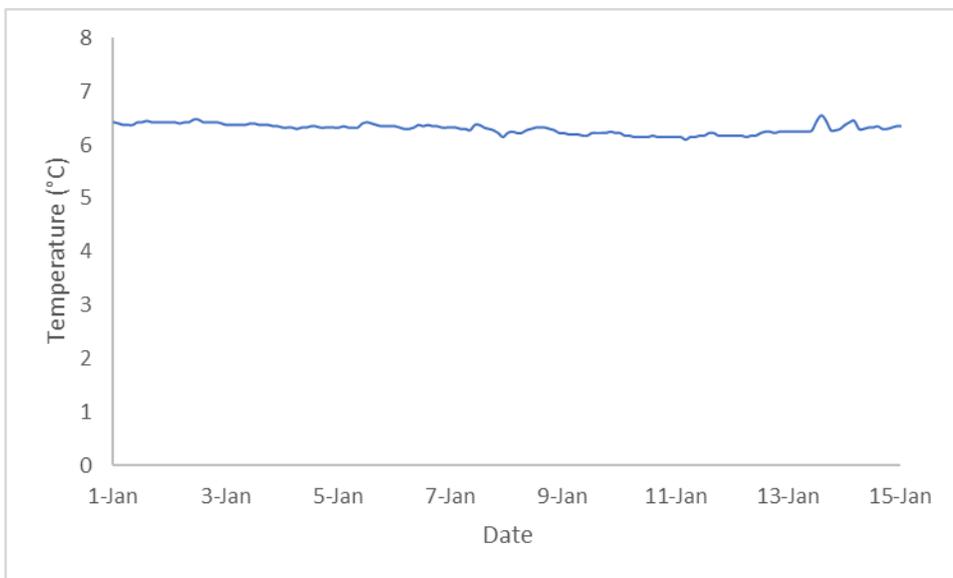
| Description    | Chinook |       |       |
|----------------|---------|-------|-------|
|                | PH 1    | PH 2  | Spill |
| Catch          | 6       | 2     | 2     |
| Effort (hrs)   | 360.2   | 360.3 | 360.3 |
| CPUE (fish/hr) | 0.017   | 0.006 | 0.006 |



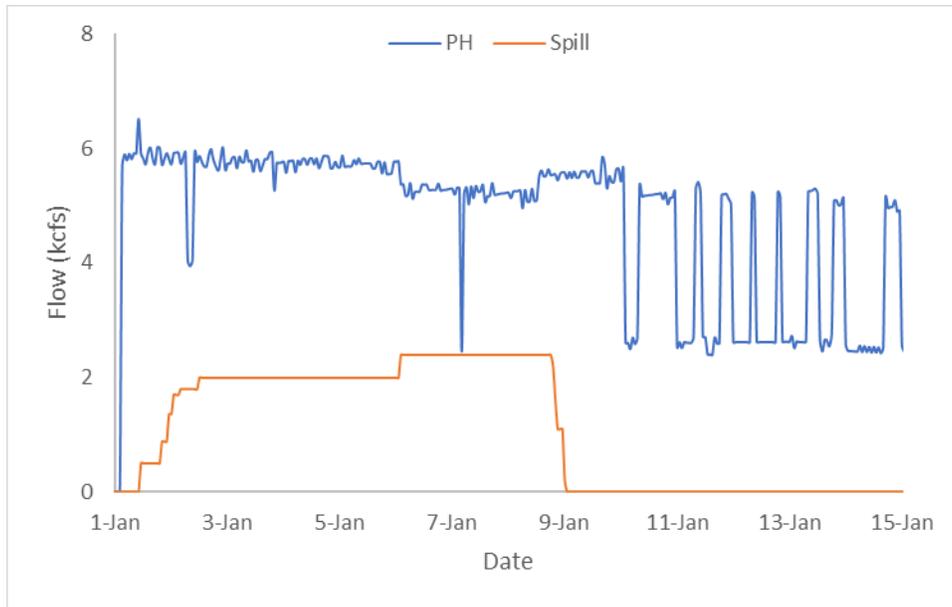
**Figure 36. Gauge Height (feet); below Lookout Dam**



**Figure 37. Temperature at RST (Lookout Dam PWR)**



**Figure 38. Temperature at RST (Lookout Dam Spill)**

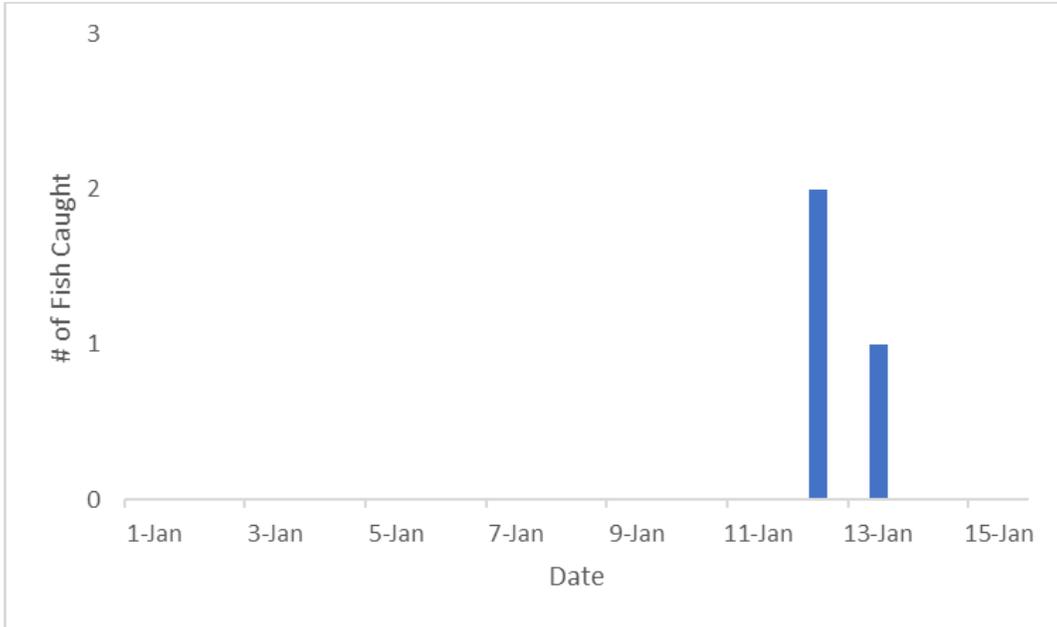


**Figure 39. Hourly Flows PWR vs. Spill (Lookout Dam Tailrace)**

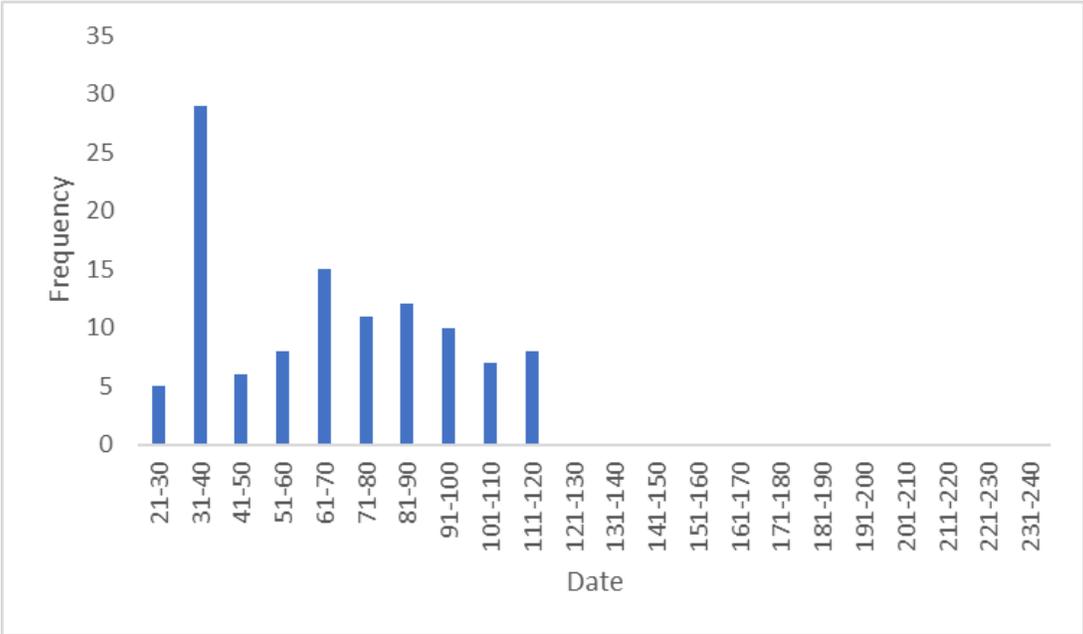
## Middle Fork Willamette – Lookout Point Head of Reservoir

### Target Species

The reporting period began January 1st and ended on January 15th. 3 Chinook salmon were captured during the 15-day sampling period (Figure 40). The 5 ft RST was raised on 12/26/2022 due to high flow and high debris in the trap. The trap was lowered to a sampling position on 1/6/2023. The trap was operated 60.0% of the reporting period. Table 23 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 41 shows length frequency data to-date.



**Figure 40. Chinook Captured Per Day 01/01/2023 to 01/15/2023 (Lookout Point Head of Reservoir)**



**Figure 41. Length Frequency of Juvenile Chinook Sampled Season To-Date (Lookout Point Head of Reservoir)**

**Table 23. Descriptive Statistics of Target Species Captured at Lookout Point Head of Reservoir, Season To-Date and for the Reporting Period**

| To-Date                         |       |         |            |           |              |     |       |             |      |      |
|---------------------------------|-------|---------|------------|-----------|--------------|-----|-------|-------------|------|------|
| Site                            | Route | Species | Life stage | Collected | Length (mm)* |     |       | Weight (g)* |      |      |
|                                 |       |         |            |           | Min          | Max | Mean  | Min         | Max  | Mean |
| Lookout Point Head of Reservoir | 5 ft  | CHS     | Smolt      | 7         | 97           | 118 | 109.2 | 10.2        | 18.2 | 15.2 |
|                                 |       | CHS     | Parr       | 63        | 59           | 119 | 81.6  | 1.0         | 19.8 | 6.4  |
|                                 |       | CHS     | Fry        | 42        | 28           | 69  | 37.1  | N/A         | N/A  | N/A  |
| January 1-15, 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      | 1         | 113          | 113 | 113.0 | 14.5        | 14.5 | 14.5 |
|                                 |       | CHS     | Parr       | 1         | 99           | 99  | 99.0  | 11.1        | 11.1 | 11.1 |
|                                 |       | CHS     | Fry        | 1         | 34           | 34  | 34.0  | 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 513 juvenile hatchery Chinook (sub-yearlings) were bismarck brown dyed and adipose clipped and released on 01/13/2023 above the Lookout Point Head of Reservoir trap. Fish were released in small groups to evaluate the traps' efficiency capturing fish migrating downstream. 10 fish were recaptured in the 5-ft RST for an efficiency of 1.9%.

| Lookout Point Head of Reservoir | Release # | Recapture # | Capture Efficiency |
|---------------------------------|-----------|-------------|--------------------|
| 01/13/2022                      | 513       | 10          | 1.9%<br>(10/513)   |

### Injuries and Copepod Infection

There were 3 Chinook captured during this reporting period. 2 had partial descaling <20% (66.7%) and 1 had body injuries (33.3%). There were 0 mortalities (0.0%). Injury data for the reporting period is shown in table 24. To date data can be found in Appendix A.

**Table 24. 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 | 3               | 2           | 0           | 1                    | 0                   | 0                   | 0                   | 0           |

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

### Collected DNA and Scale Samples

Scales and DNA were collected from 2 Chinook captured for the reporting period. The other targets were below the sampling threshold.

### PIT Tags

2 Spring Chinook were 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 reporting period to distinctly mark groups of fish by capture date. Since then, 5 Chinook have been VIE marked to the left of the dorsal fin with fluorescent elastomer. No fish with VIE marks have been detected at downstream RST sites to date.

One fish was VIE marked below the sampling threshold (35-64mm) to train new crew members in preparation for increases in fry capture at Head of Reservoir sites.

| <b>Date Tagged</b>  | <b>VIE Color</b> | <b># Tagged</b> | <b># Recaptured to Date</b> |
|---------------------|------------------|-----------------|-----------------------------|
| 6/25/2022-7/15/2022 | Yellow           | 3               | 0                           |
| 7/16/2022-7/31/2022 | Red              | 1               | 0                           |
| 1/1/2023-1/15/2023  | Blue             | 1               | 0                           |

### Non-Target Species

4 non-target species were captured during the reporting period; the data is summarized below in Table 35.

**Table 35. Summary of Non-target Species (Lookout Point Head of Reservoir).**

| <b>Species</b>             | <b>5ft Capture</b> | <b>5ft Mortality</b> | <b>Season Total</b> | <b>Season Total Mortality</b> |
|----------------------------|--------------------|----------------------|---------------------|-------------------------------|
| Bass Unknown               | 0                  | 0                    | 0                   | 0                             |
| Bluegill                   | 0                  | 0                    | 0                   | 0                             |
| Chinook (clipped)          | 0                  | 0                    | 0                   | 0                             |
| Crappie                    | 2                  | 2                    | 2                   | 2                             |
| Cutthroat Trout            | 0                  | 0                    | 0                   | 0                             |
| Dace                       | 1                  | 0                    | 1                   | 0                             |
| Lamprey                    | 0                  | 0                    | 0                   | 0                             |
| Largescale Sucker          | 0                  | 0                    | 0                   | 0                             |
| Mountain Whitefish         | 0                  | 0                    | 0                   | 0                             |
| Northern Pikeminnow        | 0                  | 0                    | 0                   | 0                             |
| <i>O. mykiss</i>           | 1                  | 0                    | 1                   | 0                             |
| <i>O. mykiss</i> (clipped) | 0                  | 0                    | 0                   | 0                             |
| Peamouth                   | 0                  | 0                    | 0                   | 0                             |
| Pumpkinseed                | 0                  | 0                    | 0                   | 0                             |
| Red-Sided Shiner           | 0                  | 0                    | 0                   | 0                             |
| Sculpin                    | 0                  | 0                    | 0                   | 0                             |
| Spotted Bass               | 0                  | 0                    | 0                   | 0                             |
| Smallmouth Bass            | 0                  | 0                    | 0                   | 0                             |
| Unknown                    | 0                  | 0                    | 0                   | 0                             |
| <b>Totals</b>              | <b>4</b>           | <b>2</b>             | <b>4</b>            | <b>2</b>                      |

### **Stream Statistics**

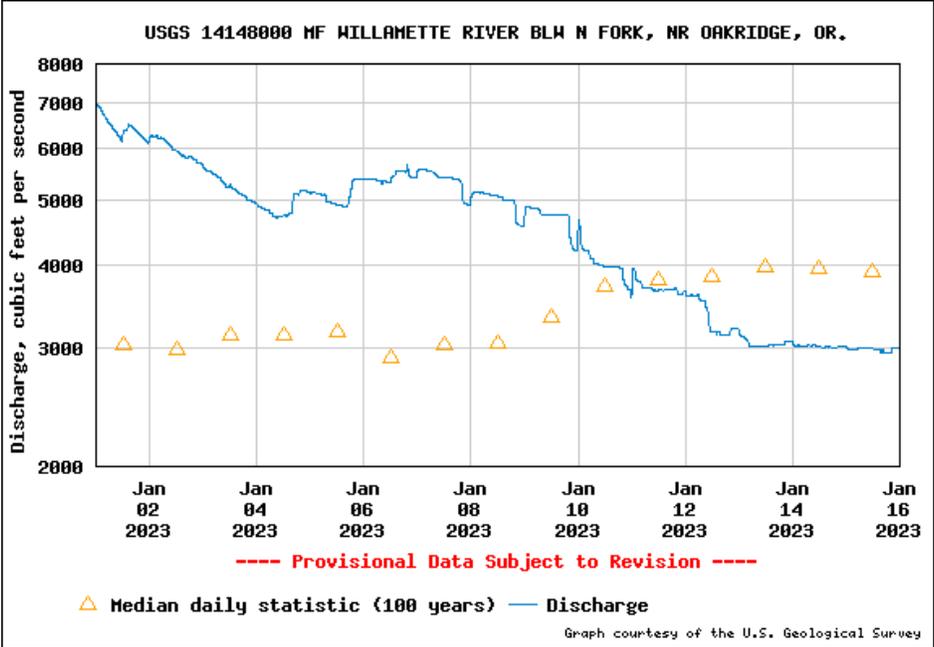
Basic stream statistics for the Lookout Point Head of Reservoir RST site were calculated from data downloaded from the U.S. Geological Survey stream gauge number 14148000. During the reporting period, daily maximum values for instantaneous discharge ranged from 3,020.0 cfs to 7,010.0 cfs (mean: 4,140.6 cfs). Figure 42 shows instantaneous discharge.

Stream temperatures were recorded every two hours using a temperature probe at the Lookout Point Head of Reservoir RST site during this reporting period. The probe operated normally during this period. (Figure 43).

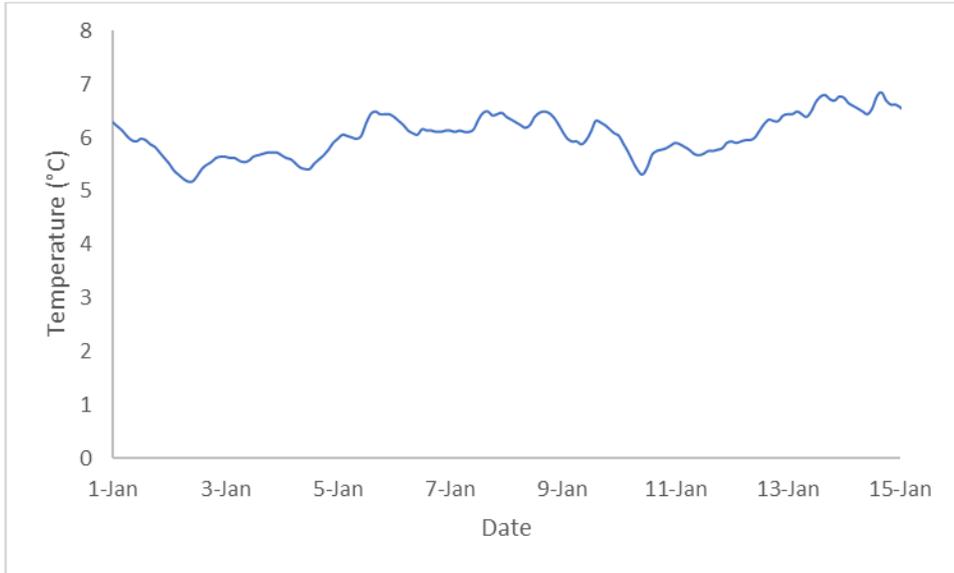
Flows into Lookout Point Reservoir averaged 4,607.6 cfs (Figure 44). Catch per unit of effort (CPUE) data are summarized in Table 26. Discharge and capture data for the duration of monitoring efforts at this location are provided in Appendix B.

**Table 26. Summary of Chinook CPUE at Lookout Point Head of Reservoir.**

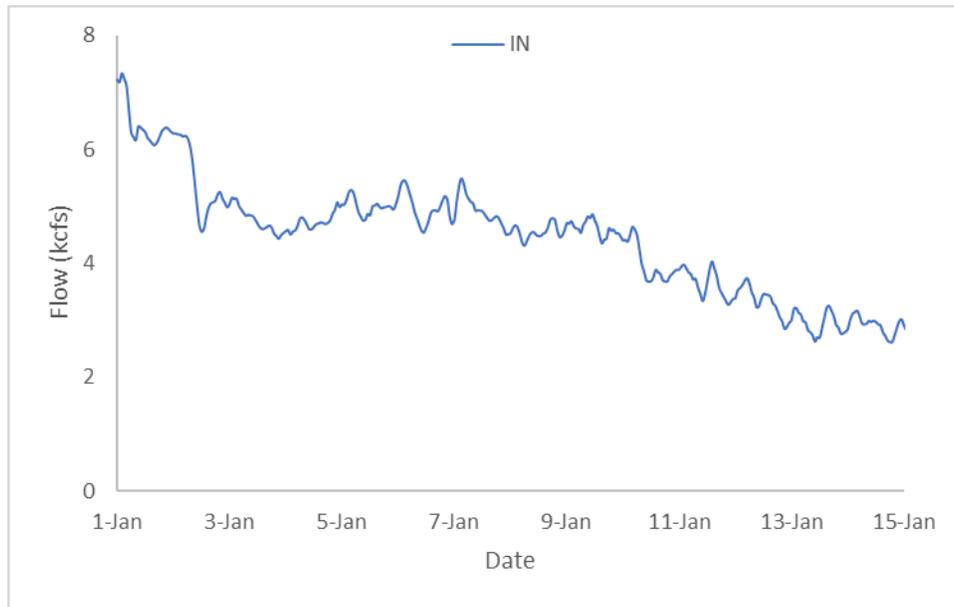
|                    | Chinook     |
|--------------------|-------------|
| <b>Description</b> | <b>5 ft</b> |
| Catch              | 3           |
| Effort (hrs)       | 218.4       |
| CPUE (fish/hr)     | 0.014       |



**Figure 42. Discharge (cfs); above Lookout Point Reservoir, Below Oakridge, OR**



**Figure 43. Temperature at RST (Lookout Point Head of Reservoir)**

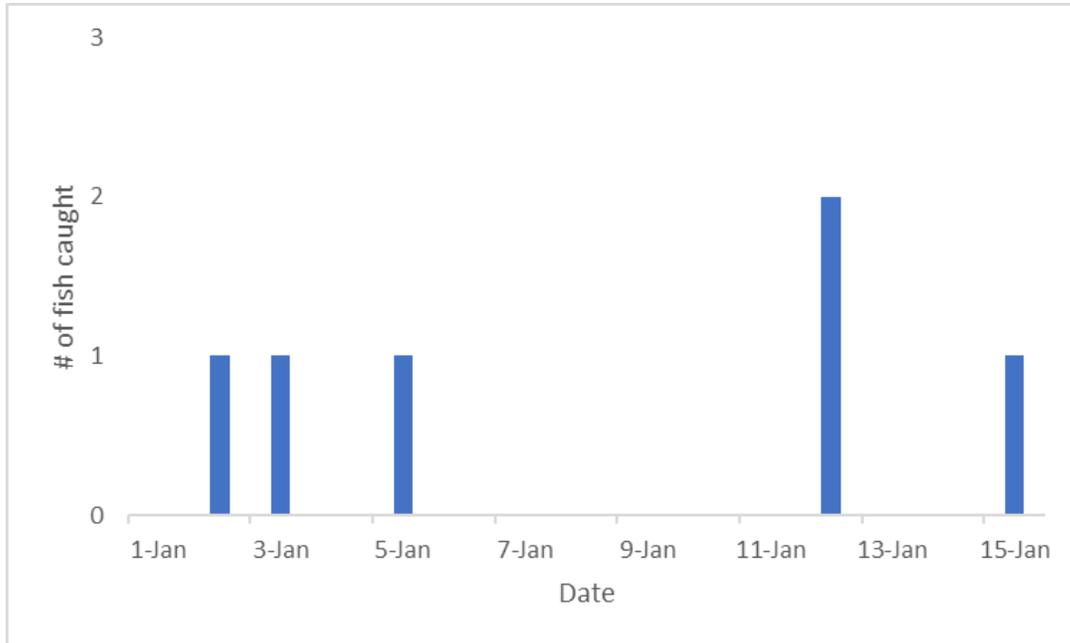


**Figure 44. Hourly Flows (Lookout Point Head of Reservoir site)**

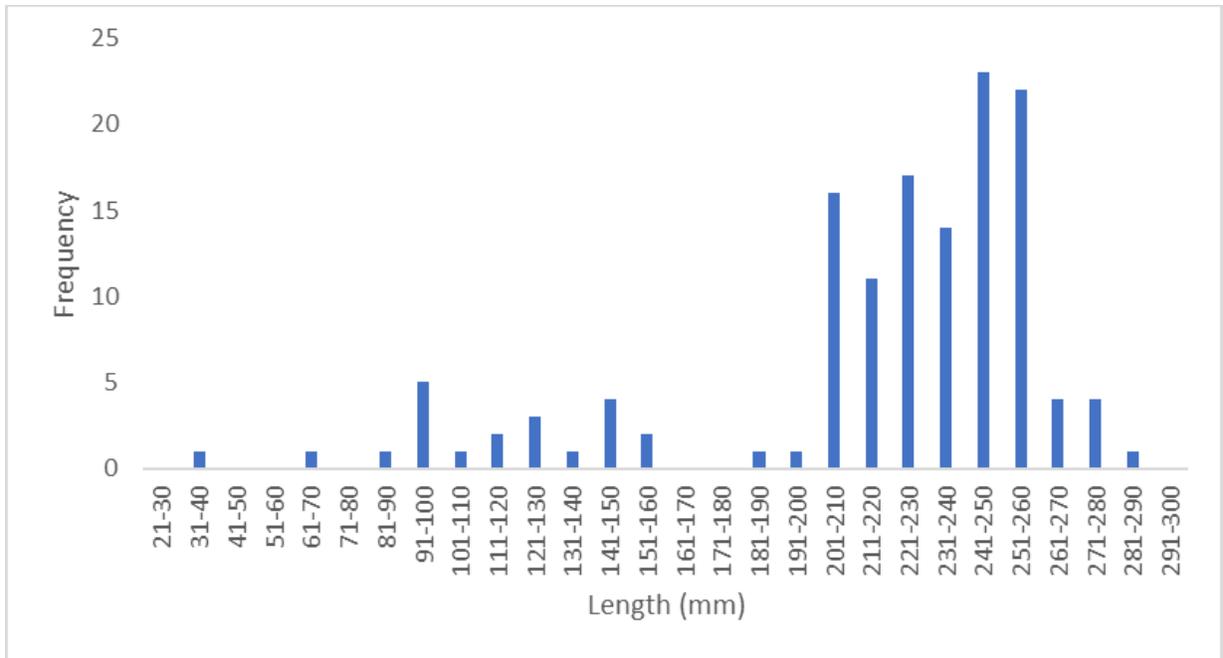
## Middle Fork Willamette – Hills Creek Dam

### Target Species

This reporting period began on January 1st and ended on January 15th. There were 6 Chinook salmon (CHS) captured during the 15-day sampling period (Figure 45). Sampling durations were 100% for both the RO RST and Powerhouse RST. Table 27 provides life stage, length, and weight data for all Chinook salmon that have been caught at the Hills Creek Dam site to-date and Figure 54 shows length frequency data to-date.



**Figure 45. Chinook Captured Per Day 01/01/2023 to 01/15/2023 (Hills Creek Dam)**



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

**Figure 46. Length Frequency of Juvenile Chinook Sampled Season To-Date (Hills Creek Dam)**

### 24-Hour Post Collection Holding Trial

4 Chinook captured in the RSTs were held during this reporting period. 2 fish were held from the PWR RST and 2 fish were held from the RO RST. 1 hold fish died from the PWR RST (50.0%). 0 of the fish from RO RST died during holding (0.0%).

### Trapping Efficiency

2 trapping efficiency trials have been conducted at Hills Creek Dam during this reporting period. The first being on 12/07/2022 and the second being on 12/13/2022.

During the first Trapping Efficiency trial, a total of 514 juvenile Chinook (parr) were dyed, clipped and released on 12/07/2022 below Hills Creek PWR to evaluate the efficiency of the screw traps. A total of 29 fish were recaptured in the 8 ft PWR trap. A total of 3 chinook released in the PWR route were captured in the 5ft RO trap. Trapping efficiency was 5.6% for the PWR RST and 0.6% for the RO RST.

| Hills Creek Dam (12/07/2022) | Release #  | Recapture # | Capture Efficiency |
|------------------------------|------------|-------------|--------------------|
| PWR Route                    | 514        | 29          | 5.6% (29/514)      |
| RO Trap                      | 514 in PWR | 3           | 0.6% (3/514)       |

\*Live fish captured at the PWR trap are released just downstream of the PWR trap, upstream of the RO trap and therefore retained in the capture efficiency estimates for the RO Trap if they arrive in the lower trap.

\*Any dead fish captured at the PWR trap are excluded from the RO trap capture efficiency estimate as they are not alive at time of re-release.

During the second Trapping Efficiency trial, a total of 516 juvenile Chinook (parr) were dyed, clipped and released on 12/13/2022 below the Hills Creek RO to evaluate the efficiency of the screw trap. A total of 1 fish was recaptured in the 5 ft RO trap. The efficiency of the RO trap was 0.2%.

| Hills Creek Dam (12/13/2022) | Release # | Recapture # | Capture Efficiency |
|------------------------------|-----------|-------------|--------------------|
| RO Route                     | 516       | 1           | 0.2% (1/516)       |

\*Live fish captured at the PWR trap are released just downstream of the PWR trap, upstream of the RO trap and therefore retained in the capture efficiency estimates for the RO Trap if they arrive in the lower trap.

\*Any dead fish captured at the PWR trap are excluded from the RO trap capture efficiency estimate as they are not alive at time of re-release.

**Table 27. Descriptive Statistics of Target Species Captured at Hills Creek Dam Season To-Date and for the Reporting Period**

| To-Date     |       |         |            |           |              |       |       |             |       |       |
|-------------|-------|---------|------------|-----------|--------------|-------|-------|-------------|-------|-------|
| Site        | Route | Species | Life stage | Collected | Length (mm)* |       |       | Weight (g)* |       |       |
|             |       |         |            |           | Min          | Max   | Mean  | Min         | Max   | Mean  |
| Hills Creek | RO    | CHS     | Parr       | 6         | 90.0         | 141.0 | 110.7 | 7.4         | 23.4  | 13.3  |
|             |       | CHS     | Smolt      | 81        | 137.0        | 275.0 | 232.9 | 27.4        | 196.3 | 143.9 |
| Hills Creek | PWR   | CHS     | Fry        | 1         | 35           | 35    | N/A   | N/A         | N/A   | N/A   |
|             |       | CHS     | Parr       | 7         | 69.0         | 127.0 | 98.1  | 3.7         | 24.5  | 11.2  |
|             |       | CHS     | Smolt      | 51        | 128.0        | 285.0 | 227.2 | 26.2        | 245.5 | 138.2 |

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

| January 1-15, 2023 |       |         |            |           |              |     |       |             |       |       |
|--------------------|-------|---------|------------|-----------|--------------|-----|-------|-------------|-------|-------|
| Site               | Route | Species | Life stage | Collected | Length (mm)* |     |       | Weight (g)* |       |       |
|                    |       |         |            |           | Min          | Max | Mean  | Min         | Max   | Mean  |
| Hills Creek        | RO    | CHS     | Parr       | 0         | N/A          | N/A | N/A   | N/A         | N/A   | N/A   |
|                    |       | CHS     | Smolt      | 3         | 234          | 273 | 259.7 | 147.3       | 196.3 | 175.8 |
| Hills Creek        | PWR   | CHS     | Fry        | 1         | 35           | 35  | 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      | 2         | 285          | 285 | 285.0 | 218.5       | 218.5 | 218.5 |

## Injuries and Copepod Infection

There were 3 Chinook captured in the RO RST. Partial descaling <20% was observed on 1 of 3 Chinook collected at the RO RST (33.3%), and descaling >20% was observed on 2 of the Chinook collected (66.7%). 2 displayed body injuries (66.7%) and 0 had eye injuries (0.0%). 3 of the RO RST Chinook had copepods present in the branchial cavity (100.0%) and 1 had copepods present on fins (33.3%). There was 1 mortality (33.3%). 0 of the fish captured in the Spill RST displayed Gas Bubble Disease (0.0%).

There were 3 Chinook captured in the Powerhouse channel RST. Partial descaling <20% was observed on 0 of the 3 Chinook collected at the PWR RSTs (0.0%). Descaling >20% was observed on 2 of the Chinook collected (66.7%). 3 PWR RST fish had bodily injury (100.0%) and 0 had eye injuries (0.0%). 2 of the fish had copepods present in the branchial cavity (66.7%) and 2 had copepods present on fins (66.7%). 0 fish displayed Gas Bubble Disease (0.0%). There was 1 chinook mortality collected in the PH RST (33.3%).

Injuries are displayed in Table 28. To date injury data can be found in Appendix A.

**Table 28. Number of Descaled, Bodily/Eye Injured, Copepod Infected and Dead Chinook Salmon for Sampling Period. (Hills Creek Dam)**

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

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

## Collected DNA and Scale Samples

For the reporting period, scales and DNA were collected from 5 Spring Chinook. The other targets captured did not meet length criteria for DNA sampling or did not have a body.

## 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 Spring Chinook have been VIE marked at this site to date. The first 60 target fish per week are prioritized for the 24-Hour Post Collection Holding Study. These fish are not marked to not bias the results of the holding study. More information regarding VIE marked fish can be found in Appendix D.

## Non-Target Species

A total of 201 non-target fish were captured at Hills Creek during the reporting period; the data is summarized below in Table 29.

**Table 29. Summary of Non-target Species (Hills Creek Dam).**

| Species           | RO Capture | RO Mortality | PWR Capture | PWR Mortality | Season Total | Season Total Mortality |
|-------------------|------------|--------------|-------------|---------------|--------------|------------------------|
| Bass Unknown      | 1          | 1            | 3           | 2             | 4            | 0                      |
| Bluegill          | 15         | 11           | 26          | 19            | 41           | 30                     |
| Brook Lamprey     | 0          | 0            | 0           | 0             | 0            | 0                      |
| Brown Bullhead    | 1          | 0            | 1           | 0             | 2            | 0                      |
| Crappie           | 26         | 21           | 47          | 41            | 73           | 62                     |
| Dace              | 0          | 0            | 0           | 0             | 0            | 0                      |
| Redside Shiner    | 0          | 0            | 0           | 0             | 0            | 0                      |
| Sculpin           | 0          | 0            | 0           | 0             | 0            | 0                      |
| Largemouth Bass   | 2          | 1            | 1           | 1             | 3            | 2                      |
| Spotted Bass      | 21         | 10           | 30          | 24            | 51           | 34                     |
| Smallmouth Bass   | 0          | 0            | 1           | 1             | 1            | 1                      |
| Largescale Sucker | 1          | 0            | 4           | 1             | 5            | 1                      |
| <i>O. mykiss</i>  | 8          | 8            | 13          | 2             | 21           | 10                     |
| Unknown           | 0          | 0            | 0           | 0             | 0            | 0                      |
| <b>Totals</b>     | <b>75</b>  | <b>52</b>    | <b>126</b>  | <b>91</b>     | <b>201</b>   | <b>140</b>             |

## Stream Statistics

Basic stream statistics at the Hills Creek site were calculated from data downloaded from the U.S. Geological Survey stream gauge numbers 14145110 and 14145500. Gauge height (feet) is the only metric provided at this gauge. Total dissolved gas saturation data was received from gauge 14145500, 1.4 rkms downstream of the trap. During the reporting period, daily maximum values for instantaneous gauge height ranged from 1,226.1 feet to 1,227.8 feet (mean: 1,227.1 feet). Figure 47 shows instantaneous gauge height.

Total dissolved gas saturation ranged from 97 to 116% (mean: 102.8%) during the reporting period. Figure 48 shows total dissolved gas saturation.

Stream temperatures were recorded every 2 hours for both the RO RST and the PWR RST (Figures 49 and 50). The probes operated normally throughout the reporting period.

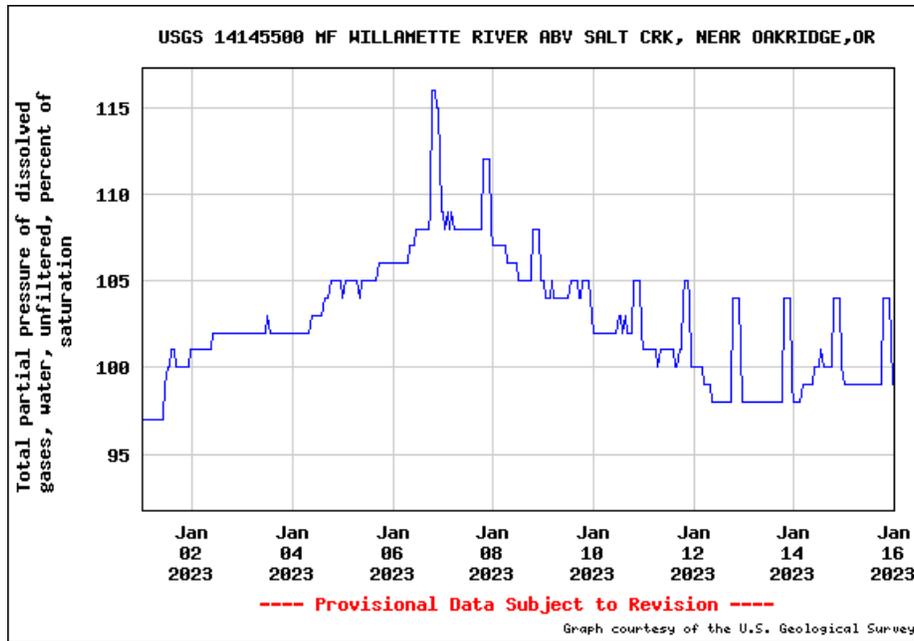
Flows through the PWR and RO during the reporting period averaged 1,149.7 and 1,247.2 cfs respectively (Figure 51). Catch per unit of effort (CPUE) data are summarized in Table 30. Discharge and capture data for the duration of monitoring efforts at this location are provided in Appendix B.

**Table 30. Summary of Chinook CPUE, Hills Creek Dam.**

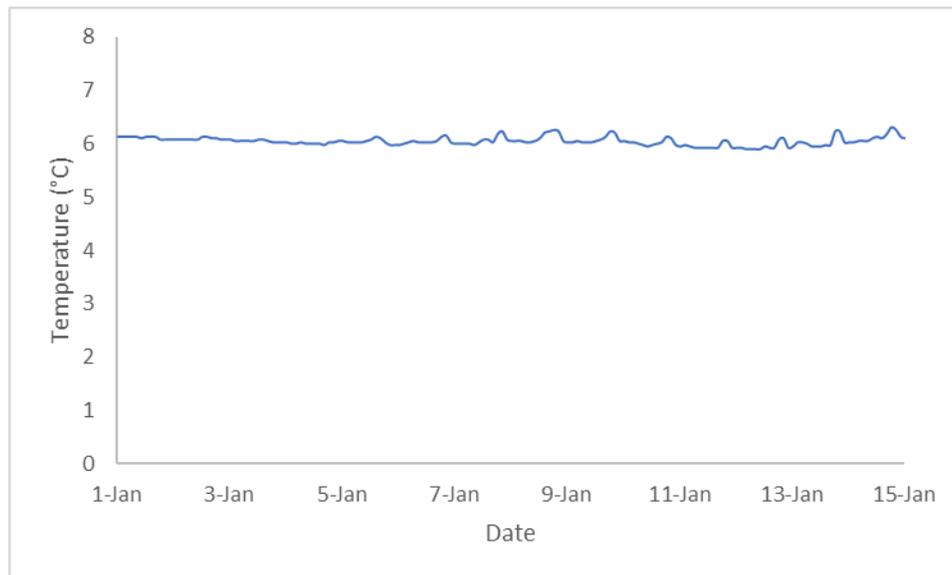
| Description    | Chinook  |           |
|----------------|----------|-----------|
|                | RO (5ft) | PWR (8ft) |
| Catch          | 3        | 3         |
| Effort (hrs)   | 364.5    | 364.5     |
| CPUE (fish/hr) | 0.008    | 0.008     |



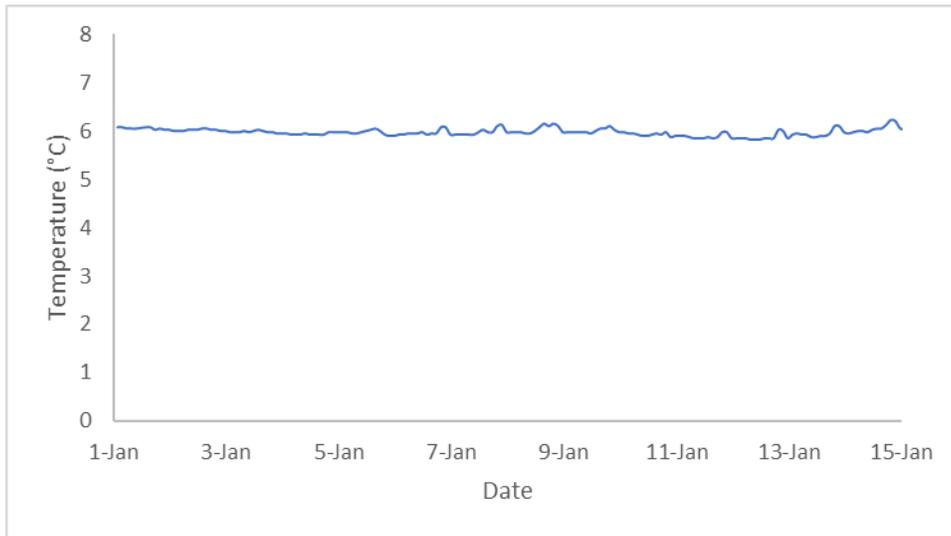
**Figure 47. Gauge Height (feet); below Hills Creek Dam PWR - Middle Fork Willamette River**



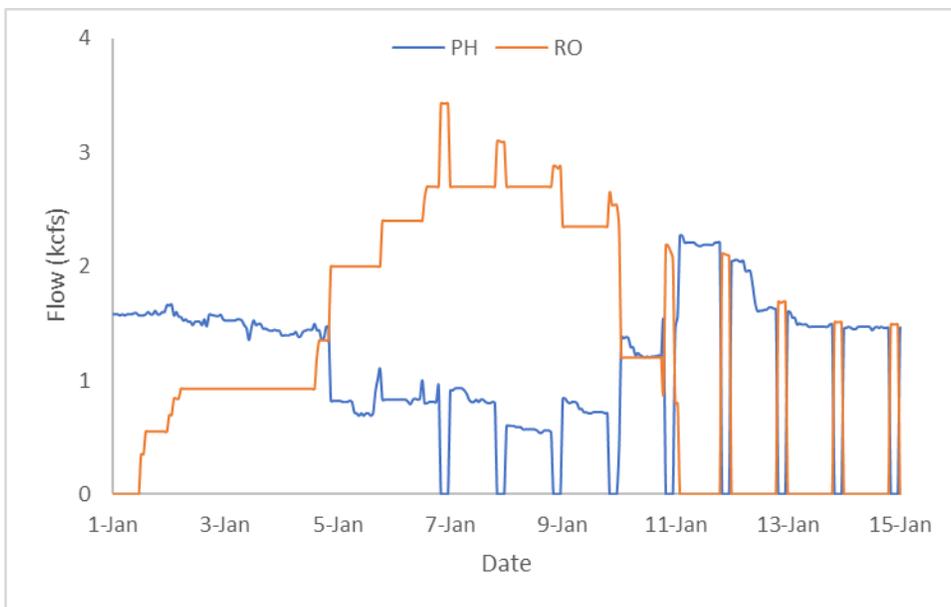
**Figure 48. Total Dissolved Gas Saturation (%); below Hills Creek Dam – Middle Fork Willamette River**



**Figure 49. Temperature at RO RST (Hills Creek Dam)**



**Figure 50. Temperature at Powerhouse RST (Hills Creek Dam)**



**Figure 51. Hourly Flows PWR vs. RO (Hills Creek Dam)**

### Issues Encountered

Fall Creek Dam Tailrace experienced an influx of detritus and sediment from the reservoir on 12/01/2022. Sediment deposits in sampling channel are too high to allow the cone of the trap to drop into the sampling position. The Fall Creek Dam Tailrace trap began sampling again on 1/10/2023. A major rain event caused high flow and high debris at the Lookout Point Head of Reservoir site. It was raised on 12/26/2022 due to high water and logs in the trap. The Lookout Point Head of Reservoir trap began sampling again on 1/6/2023, A major rain event caused high flow and high releases out of Big Cliff Dam this reporting

period. The trap was raised to a non-sampling position on 12/31/2022 when flows exceeded 5,000 cfs. The trap was removed from the river via crane support on 1/5/2023.

### **Upcoming USACE Support Services**

USACE Crane Support will be needed to install traps at Green Peter Dam in January 2023.

## 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            |            | 1254 | 784  | 9    | 88  | 5   | 1   | 974 | 289  | 4   | 668 | 5    | 12 | 5  | 41  | 8   | 83  | 43  | 158 | 80  | 83  | 15  | 49  |     |
| 8 ft                     |            | 1254 | 784  | 9    | 88  | 5   | 1   | 974 | 289  | 4   | 668 | 5    | 12 | 5  | 41  | 8   | 83  | 43  | 158 | 80  | 83  | 15  | 49  |     |
| Adult                    | 1          |      | 1    |      |     |     |     |     |      |     | 1   |      |    |    |     |     | 1   | 1   | 1   |     | 1   |     |     |     |
| Parr                     | 27         |      | 6    |      | 1   | 1   |     | 15  | 3    |     | 6   |      |    |    |     | 2   |     |     | 1   |     |     |     |     |     |
| Smolt                    | 1215       |      | 777  | 9    | 86  | 4   |     | 959 | 285  | 4   | 660 | 5    | 12 | 3  | 41  | 6   | 81  | 42  | 155 | 79  | 82  | 14  | 49  |     |
| Unknown                  | 2          |      |      |      |     |     |     |     |      |     |     |      |    | 2  |     |     |     |     |     |     |     | 1   |     |     |
| Fry                      | 9          |      |      |      | 1   |     | 1   |     | 1    |     | 1   |      |    |    |     |     | 1   |     | 1   | 1   |     |     |     |     |
| Foster Dam HOR           |            | 128  | 53   |      | 1   |     |     | 2   |      |     | 28  |      |    |    |     |     |     |     |     |     |     |     |     |     |
| 5 ft                     |            | 128  | 53   |      | 1   |     |     | 2   |      |     | 28  |      |    |    |     |     |     |     |     |     |     |     |     |     |
| Parr                     | 44         |      | 31   |      |     |     |     | 2   |      |     | 12  |      |    |    |     |     |     |     |     |     |     |     |     |     |
| Smolt                    | 29         |      | 21   |      |     |     |     |     |      |     | 16  |      |    |    |     |     |     |     |     |     |     |     |     |     |
| Fry                      | 55         |      | 1    |      | 1   |     |     |     |      |     |     |      |    |    |     |     |     |     |     |     |     |     |     |     |
| Cougar Dam               |            | 3034 | 10   | 1625 | 36  | 277 | 16  | 3   | 2229 | 693 | 3   | 1526 | 3  | 7  | 2   | 90  | 33  | 154 | 70  | 303 | 104 | 221 | 18  | 455 |
| RO                       |            | 1823 |      | 1091 | 30  | 244 | 12  | 3   | 1641 | 572 | 3   | 1204 | 3  | 2  |     | 56  | 31  | 126 | 38  | 249 | 83  | 157 | 14  | 450 |
| Parr                     | 204        |      | 108  | 5    | 33  | 3   |     |     | 131  | 50  | 102 |      |    |    | 4   | 1   | 8   | 2   | 14  | 12  | 4   | 2   | 21  |     |
| Smolt                    | 1598       |      | 983  | 25   | 208 | 9   | 3   |     | 1510 | 521 | 3   | 1101 | 3  | 2  |     | 52  | 30  | 117 | 36  | 234 | 69  | 153 | 12  | 429 |
| Fry                      | 21         |      |      |      | 3   |     |     |     |      | 1   | 1   |      |    |    |     |     | 1   |     | 1   | 2   |     |     |     |     |
| PH                       |            | 1211 | 10   | 534  | 6   | 33  | 4   |     | 588  | 121 | 322 |      | 5  | 2  | 34  | 2   | 28  | 32  | 54  | 21  | 64  | 4   | 5   |     |
| Parr                     | 271        |      | 151  |      | 11  | 1   |     |     | 107  | 25  | 71  |      | 1  |    | 5   |     | 3   | 6   | 11  | 6   | 5   |     |     |     |
| Smolt                    | 556        |      | 381  | 6    | 18  | 3   |     |     | 481  | 90  | 246 |      | 4  |    | 28  | 2   | 23  | 19  | 40  | 12  | 59  | 1   | 5   |     |
| Unknown                  | 2          |      |      |      |     |     |     |     |      |     |     |      |    | 2  |     |     |     |     |     |     |     |     |     |     |
| Fry                      | 382        | 10   | 2    |      | 4   |     |     |     | 6    |     | 5   |      |    |    | 1   |     | 2   | 7   | 3   | 3   |     | 3   |     |     |
| Cougar Dam HOR           |            | 710  | 3    | 93   |     |     | 1   |     | 10   | 4   | 3   | 56   |    |    |     |     |     | 1   | 6   | 8   | 7   | 1   | 1   |     |
| 5 ft                     |            | 710  | 3    | 93   |     |     | 1   |     | 10   | 4   | 3   | 56   |    |    |     |     |     | 1   | 6   | 8   | 7   | 1   | 1   |     |
| Parr                     | 178        |      | 90   |      |     | 1   |     |     | 10   | 4   | 2   | 48   |    |    |     |     |     | 1   | 6   | 1   | 1   | 1   |     |     |
| Smolt                    | 4          |      | 1    |      |     |     |     |     |      |     |     |      |    |    |     |     |     |     |     |     |     |     |     |     |
| Fry                      | 528        | 3    | 2    |      |     |     |     |     |      |     | 1   | 8    |    |    |     |     |     |     | 7   | 6   |     | 1   |     |     |
| Fall Creek Dam Tail.     |            | 1    |      |      |     |     |     |     |      | 1   | 1   |      |    |    |     |     |     | 1   |     |     |     |     |     |     |
| 8 ft                     |            | 1    |      |      |     |     |     |     |      | 1   | 1   |      |    |    |     |     |     | 1   |     |     |     |     |     |     |
| Smolt                    | 1          |      |      |      |     |     |     |     |      | 1   | 1   |      |    |    |     |     |     | 1   |     |     |     |     |     |     |
| Fall Creek HOR           |            | 7    |      | 3    |     |     |     |     | 2    |     | 1   |      |    |    |     |     |     |     |     |     |     |     |     |     |
| 8 ft                     |            | 7    |      | 3    |     |     |     |     | 2    |     | 1   |      |    |    |     |     |     |     |     |     |     |     |     |     |
| Parr                     | 2          |      | 2    |      |     |     |     |     | 1    |     | 1   |      |    |    |     |     |     |     |     |     |     |     |     |     |
| Smolt                    | 5          |      | 1    |      |     |     |     |     | 1    |     |     |      |    |    |     |     |     |     |     |     |     |     |     |     |
| Dexter Dam Tail.         |            | 101  |      | 62   |     | 6   |     |     | 12   | 23  |     | 48   |    |    |     | 1   |     | 3   | 4   | 6   | 6   | 5   | 21  |     |
| 5 ft                     |            | 101  |      | 62   |     | 6   |     |     | 12   | 23  |     | 48   |    |    |     | 1   |     | 3   | 4   | 6   | 6   | 5   | 21  |     |
| Parr                     | 19         |      | 7    |      | 3   |     |     |     | 2    | 6   |     | 9    |    |    |     |     |     | 2   | 3   | 2   |     |     | 6   |     |
| Smolt                    | 79         |      | 55   |      | 3   |     |     |     | 10   | 17  |     | 38   |    |    | 1   |     | 3   | 2   | 3   | 4   | 5   |     | 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.                | 90         |      | 49   | 1   | 17  | 1   |     | 18  | 29   |     | 54  |     |    |    | 3   | 2   | 10  | 2   | 15  | 10  | 8   |     | 9   |
| PH 1                             | 34         |      | 15   | 1   | 8   |     |     | 9   | 14   |     | 23  |     |    |    | 3   | 2   | 6   | 1   | 8   | 3   | 2   |     | 3   |
| Parr                             | 4          |      | 1    |     | 1   |     |     |     | 2    |     | 2   |     |    |    |     | 1   | 1   |     | 1   |     |     |     |     |
| Smolt                            | 30         |      | 14   | 1   | 7   |     |     | 9   | 12   |     | 21  |     |    |    | 3   | 1   | 5   | 1   | 7   | 3   | 2   |     | 3   |
| PH 2                             | 15         |      | 12   |     | 4   |     |     | 3   | 3    |     | 12  |     |    |    |     |     | 2   | 1   | 2   | 4   | 1   |     |     |
| Parr                             | 4          |      | 4    |     | 3   |     |     |     | 1    |     | 4   |     |    |    |     |     | 1   | 1   | 1   | 3   |     |     |     |
| Smolt                            | 11         |      | 8    |     | 1   |     |     | 3   | 2    |     | 8   |     |    |    |     |     | 1   |     | 1   | 1   | 1   |     |     |
| Spill                            | 41         |      | 22   |     | 5   | 1   |     | 6   | 12   |     | 19  |     |    |    |     |     | 2   |     | 5   | 3   | 5   |     | 6   |
| Parr                             | 7          |      | 2    |     |     |     |     |     | 3    |     | 2   |     |    |    |     |     |     |     |     |     |     |     |     |
| Smolt                            | 34         |      | 20   |     | 5   | 1   |     | 6   | 9    |     | 17  |     |    |    |     |     | 2   |     | 5   | 3   | 5   |     | 6   |
| Lookout Point HOR                | 112        |      | 37   |     |     |     |     | 2   |      |     | 16  |     |    |    |     |     | 1   |     | 1   |     |     |     |     |
| 5 ft                             | 112        |      | 37   |     |     |     |     | 2   |      |     | 16  |     |    |    |     |     | 1   |     | 1   |     |     |     |     |
| Parr                             | 63         |      | 31   |     |     |     |     | 1   |      |     | 10  |     |    |    |     |     | 1   |     | 1   |     |     |     |     |
| Smolt                            | 7          |      | 5    |     |     |     |     | 1   |      |     | 4   |     |    |    |     |     |     |     |     |     |     |     |     |
| Fry                              | 42         |      | 1    |     |     |     |     |     |      |     | 2   |     |    |    |     |     |     |     |     |     |     |     |     |
| Hills Creek Dam                  | 146        | 1    | 71   | 1   | 19  |     |     | 119 | 62   |     | 65  | 1   | 11 | 2  | 44  | 8   | 15  | 6   | 22  | 9   | 12  | 2   | 16  |
| RO                               | 87         | 1    | 44   |     | 8   |     |     | 72  | 35   |     | 36  |     | 6  |    | 27  | 6   | 8   | 2   | 15  | 6   | 4   | 2   | 5   |
| Parr                             | 6          |      | 1    |     |     |     |     | 1   |      |     |     |     |    |    |     |     | 1   |     |     |     |     |     |     |
| Smolt                            | 81         | 1    | 43   |     | 8   |     |     | 71  | 35   |     | 36  |     | 6  |    | 27  | 6   | 7   | 2   | 15  | 6   | 4   | 2   | 5   |
| PH                               | 59         |      | 27   | 1   | 11  |     |     | 47  | 27   |     | 29  | 1   | 5  | 2  | 17  | 2   | 7   | 4   | 7   | 3   | 8   |     | 11  |
| Parr                             | 7          |      | 4    |     |     |     |     | 1   | 1    |     |     |     |    |    | 1   |     |     |     |     | 1   |     |     |     |
| Smolt                            | 51         |      | 23   | 1   | 11  |     |     | 46  | 26   |     | 29  | 1   | 5  | 2  | 17  | 1   | 6   | 4   | 7   | 2   | 8   |     | 11  |
| Fry                              | 1          |      |      |     |     |     |     |     |      |     |     |     |    |    |     |     | 1   |     |     |     |     |     |     |

### Chinook (CHS) During Reporting Period

| Chinook Injuries During Reporting Period (01-01-2023 to 01-15-2023) |            |      |      |     |     |     |     |     |      |     |     |     |    |    |     |     |     |     |     |     |     |     |     |
|---|------------|------|------|-----|-----|-----|-----|-----|------|-----|-----|-----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 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 |
| Cougar Dam  | 39         |      | 34   | 1   | 2   | 2   |     | 29  | 4    |     | 30  |     |    |    |     |     | 1   | 2   | 8   | 1   | 4   | 1   | 12  |
| PH  | 18         |      | 17   | 1   |     | 1   |     | 15  |      |     | 11  |     |    |    |     |     | 1   | 2   | 1   |     | 1   |     | 1   |
| Parr  | 5          |      | 5    |     |     |     |     | 3   |      |     | 4   |     |    |    |     |     |     | 1   |     |     |     |     |     |
| Smolt   | 13         |      | 12   | 1   |     | 1   |     | 12  |      |     | 7   |     |    |    |     |     | 1   | 1   | 1   |     | 1   |     | 1   |
| RO  | 21         |      | 17   |     | 2   | 1   |     | 14  | 4    |     | 19  |     |    |    |     |     |     |     | 7   | 1   | 3   | 1   | 11  |
| Parr  | 6          |      | 6    |     | 1   |     |     | 1   |      |     | 6   |     |    |    |     |     |     |     | 1   |     |     | 1   | 2   |
| Smolt   | 15         |      | 11   |     | 1   | 1   |     | 13  | 4    |     | 13  |     |    |    |     |     |     |     | 6   | 1   | 3   |     | 9   |
| Dexter Dam Tail.  | 2          |      | 2    |     |     |     |     |     |      |     | 2   |     |    |    |     |     |     |     |     |     |     |     |     |
| 5 ft  | 2          |      | 2    |     |     |     |     |     |      |     | 2   |     |    |    |     |     |     |     |     |     |     |     |     |
| Parr  | 1          |      | 1    |     |     |     |     |     |      |     | 1   |     |    |    |     |     |     |     |     |     |     |     |     |
| Smolt   | 1          |      | 1    |     |     |     |     |     |      |     | 1   |     |    |    |     |     |     |     |     |     |     |     |     |
| Lookout Dam Tailrace  | 11         |      | 7    |     | 2   |     |     | 4   | 1    |     | 9   |     |    |    | 1   |     | 1   | 1   |     | 1   | 2   |     | 1   |
| PH 1  | 6          |      | 4    |     | 1   |     |     | 2   |      |     | 4   |     |    |    | 1   |     |     | 1   |     | 1   | 1   |     | 1   |
| Parr  | 1          |      | 1    |     |     |     |     |     |      |     |     |     |    |    |     |     |     |     |     |     |     |     |     |
| Smolt   | 5          |      | 3    |     | 1   |     |     | 2   |      |     | 4   |     |    |    | 1   |     |     | 1   |     | 1   | 1   |     | 1   |
| PH 2  | 2          |      | 1    |     | 1   |     |     | 1   | 1    |     | 2   |     |    |    |     |     |     | 1   |     |     |     |     |     |
| Smolt   | 2          |      | 1    |     | 1   |     |     | 1   | 1    |     | 2   |     |    |    |     |     |     | 1   |     |     |     |     |     |
| Spill   | 3          |      | 2    |     |     |     |     | 1   |      |     | 3   |     |    |    |     |     |     |     |     |     |     | 1   |     |
| Parr  | 1          |      | 1    |     |     |     |     |     |      |     | 1   |     |    |    |     |     |     |     |     |     |     |     |     |
| Smolt   | 2          |      | 1    |     |     |     |     | 1   |      |     | 2   |     |    |    |     |     |     |     |     |     |     | 1   |     |
| Lookout Point Head of   | 3          |      | 2    |     |     |     |     |     |      |     | 1   |     |    |    |     |     |     |     |     |     |     |     |     |
| 5 ft  | 3          |      | 2    |     |     |     |     |     |      |     | 1   |     |    |    |     |     |     |     |     |     |     |     |     |
| Fry   | 1          |      |      |     |     |     |     |     |      |     |     |     |    |    |     |     |     |     |     |     |     |     |     |
| Parr  | 1          |      | 1    |     |     |     |     |     |      |     |     |     |    |    |     |     |     |     |     |     |     |     |     |
| Smolt   | 1          |      | 1    |     |     |     |     |     |      |     | 1   |     |    |    |     |     |     |     |     |     |     |     |     |
| Hills Creek Dam   | 6          |      | 1    |     |     |     |     | 4   | 4    |     | 5   | 1   |    | 1  |     |     | 3   |     | 1   |     |     | 1   |     |
| PH  | 3          |      |      |     |     |     |     | 2   | 2    |     | 2   | 1   |    |    |     |     | 1   |     |     |     |     | 1   |     |
| Fry   | 1          |      |      |     |     |     |     |     |      |     |     |     |    |    |     |     | 1   |     |     |     |     |     |     |
| Smolt   | 2          |      |      |     |     |     |     | 2   | 2    |     | 2   | 1   |    |    |     |     |     |     |     |     |     | 1   |     |
| RO  | 3          |      | 1    |     |     |     |     | 2   | 2    |     | 3   |     |    | 1  |     |     | 2   |     | 1   |     |     |     |     |
| Smolt   | 3          |      | 1    |     |     |     |     | 2   | 2    |     | 3   |     |    | 1  |     |     | 2   |     | 1   |     |     |     |     |

### Steelhead (O. mykiss) To Date

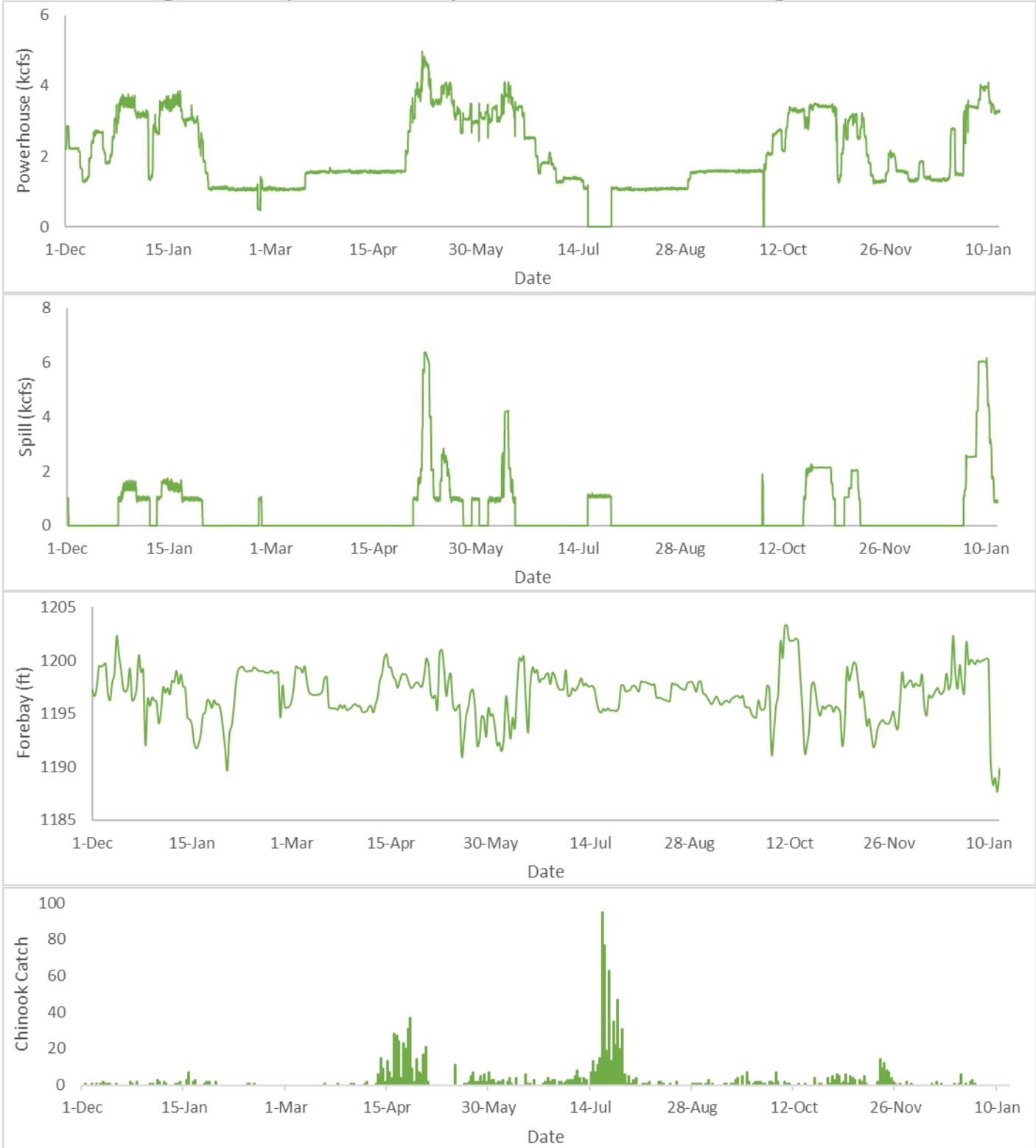
| O. mykiss Injuries To Date |            |      |      |     |     |     |     |     |      |     |     |     |    |    |     |     |     |     |     |     |     |     |     |
|----------------------------|------------|------|------|-----|-----|-----|-----|-----|------|-----|-----|-----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Site/Trap/Life Stage       | Total Fish | MUNK | DS<2 | BLO | EYB | FUN | BKD | COP | DS>2 | PRD | FID | HBO | BO | HO | BVT | HBP | BRU | TEA | OPD | HIN | FVB | POP | GBD |
| Big Cliff Dam              | 107        | 1    | 36   | 4   | 2   | 3   |     | 27  | 10   |     | 39  |     | 1  |    | 2   |     | 8   | 3   | 9   | 9   | 3   |     | 7   |
| 8 ft                       | 107        | 1    | 36   | 4   | 2   | 3   |     | 27  | 10   |     | 39  |     | 1  |    | 2   |     | 8   | 3   | 9   | 9   | 3   |     | 7   |
| Adult                      | 1          |      |      |     |     |     |     |     | 1    |     | 1   |     | 1  |    |     |     |     |     |     |     |     |     |     |
| Parr                       | 45         | 1    | 11   | 4   | 1   | 1   |     |     |      |     | 14  |     |    |    |     |     | 2   |     | 1   | 1   | 1   |     | 1   |
| Smolt                      | 33         |      | 22   |     | 1   | 2   |     | 27  | 9    |     | 23  |     |    |    | 2   |     | 5   | 3   | 8   | 8   | 2   |     | 6   |
| Fry                        | 28         |      | 3    |     |     |     |     |     |      |     | 1   |     |    |    |     |     | 1   |     |     |     |     |     |     |
| Green Peter Tail.          | 6          |      | 3    |     | 1   |     |     | 1   | 2    |     | 4   |     |    |    |     |     | 4   |     | 1   | 1   |     |     | 5   |
| 8 ft                       | 6          |      | 3    |     | 1   |     |     | 1   | 2    |     | 4   |     |    |    |     |     | 4   |     | 1   | 1   |     |     | 5   |
| Smolt                      | 6          |      | 3    |     | 1   |     |     | 1   | 2    |     | 4   |     |    |    |     |     | 4   |     | 1   | 1   |     |     | 5   |
| Foster Dam HOR             | 224        |      | 69   |     | 1   | 2   |     | 2   |      | 2   | 64  |     |    |    |     |     | 3   | 1   | 2   | 1   | 1   | 1   |     |
| 5 ft                       | 224        |      | 69   |     | 1   | 2   |     | 2   |      | 2   | 64  |     |    |    |     |     | 3   | 1   | 2   | 1   | 1   | 1   |     |
| Adult                      | 7          |      | 1    |     |     |     |     |     |      |     | 2   |     |    |    |     |     |     |     |     |     |     |     |     |
| Parr                       | 110        |      | 32   |     | 1   | 2   |     | 1   |      |     | 36  |     |    |    |     |     | 3   |     | 2   |     | 1   | 1   |     |
| Smolt                      | 76         |      | 36   |     |     |     |     | 1   |      | 2   | 26  |     |    |    |     |     |     | 1   |     | 1   |     |     |     |
| Fry                        | 31         |      |      |     |     |     |     |     |      |     |     |     |    |    |     |     |     |     |     |     |     |     |     |

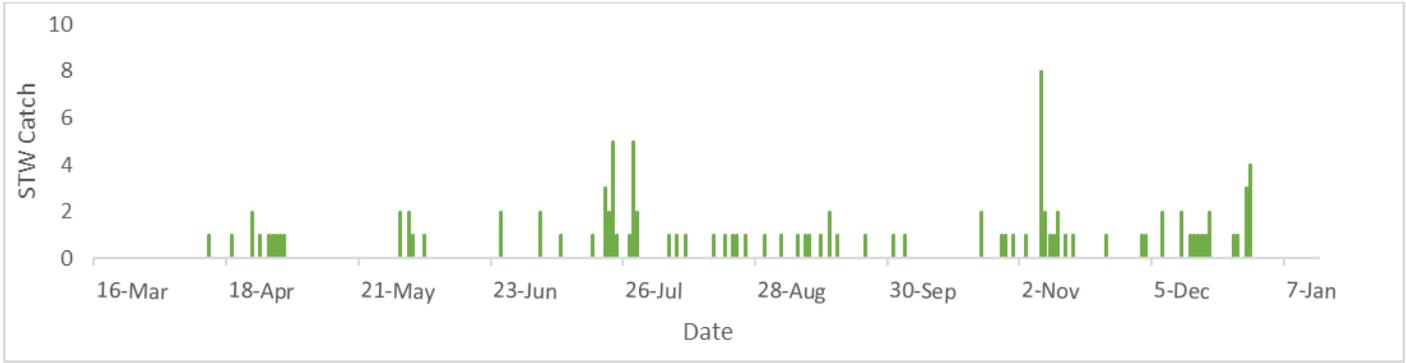
**Steelhead (O. mykiss) During Reporting Period**

No Steelhead were captured during the reporting period.

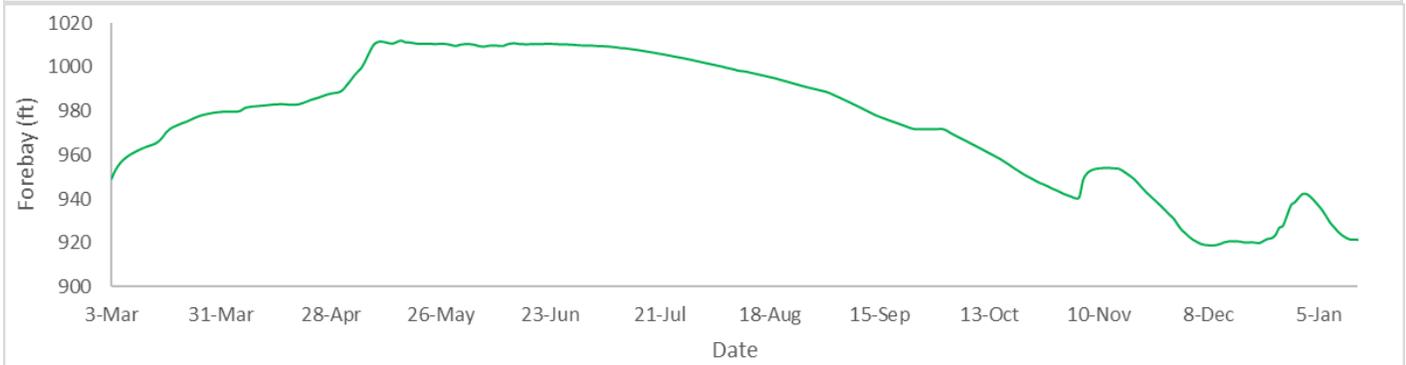
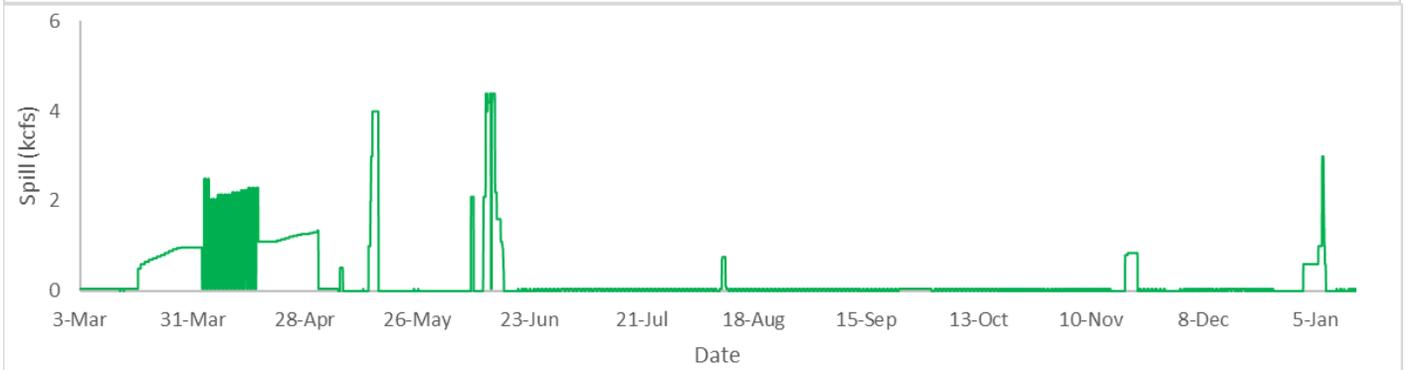
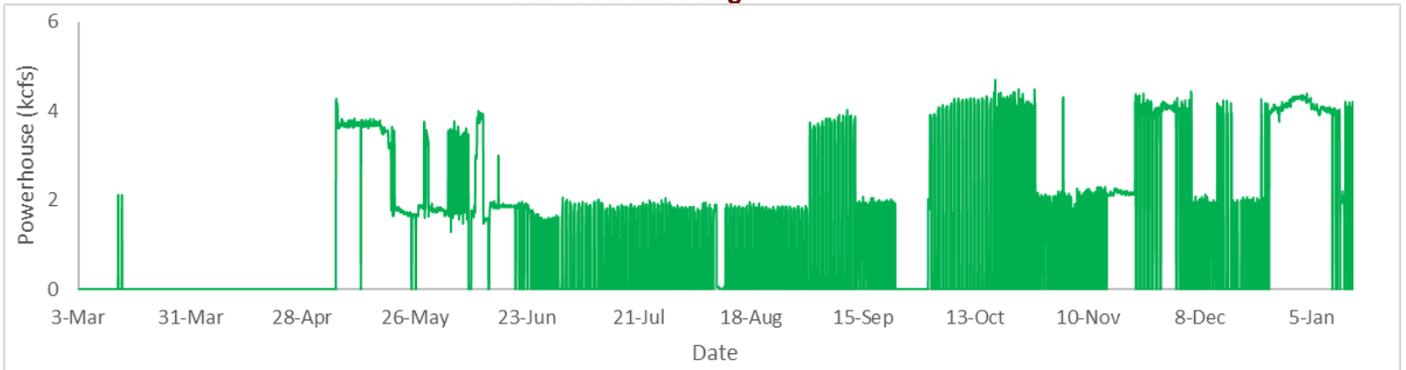
## Appendix B

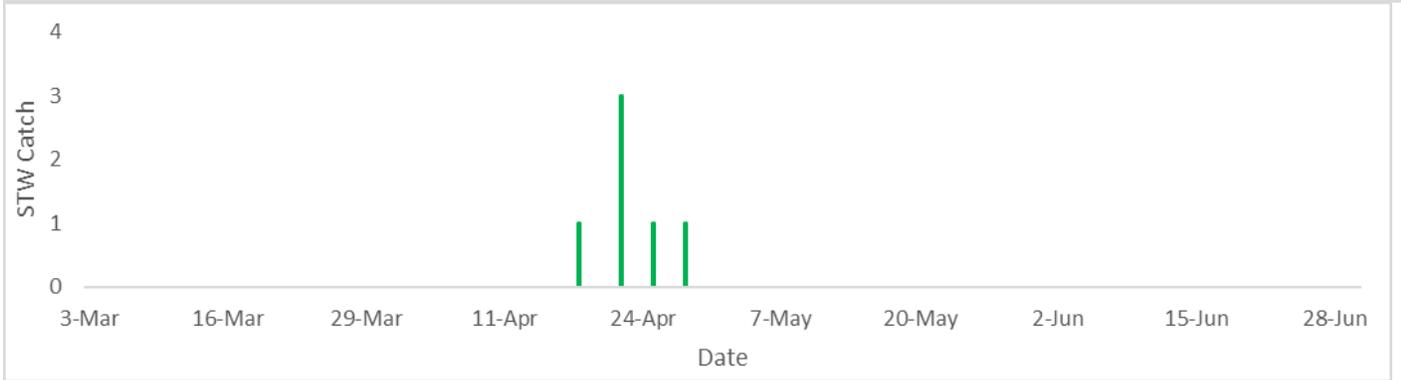
### Big Cliff Dam Operational and Capture Data Since Start of Monitoring



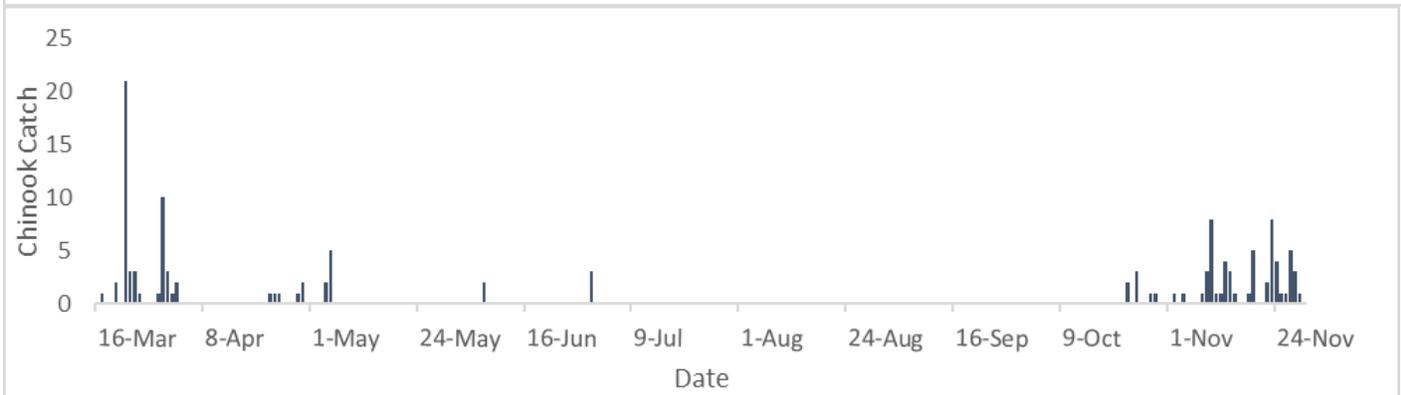
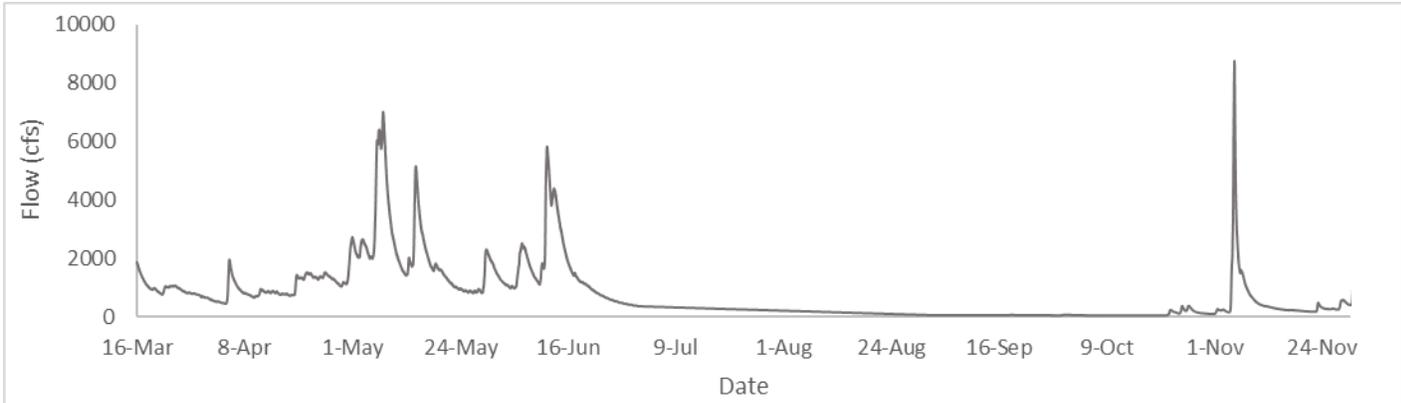


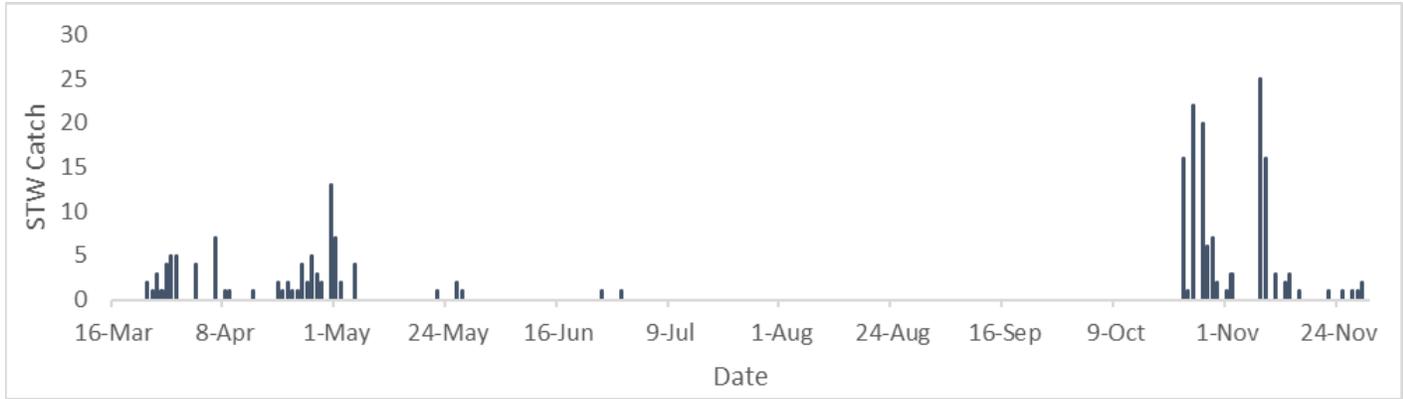
**Green Peter Dam Operational and Green Peter Tailrace- Middle Santiam River Capture Data Since Start of Monitoring**



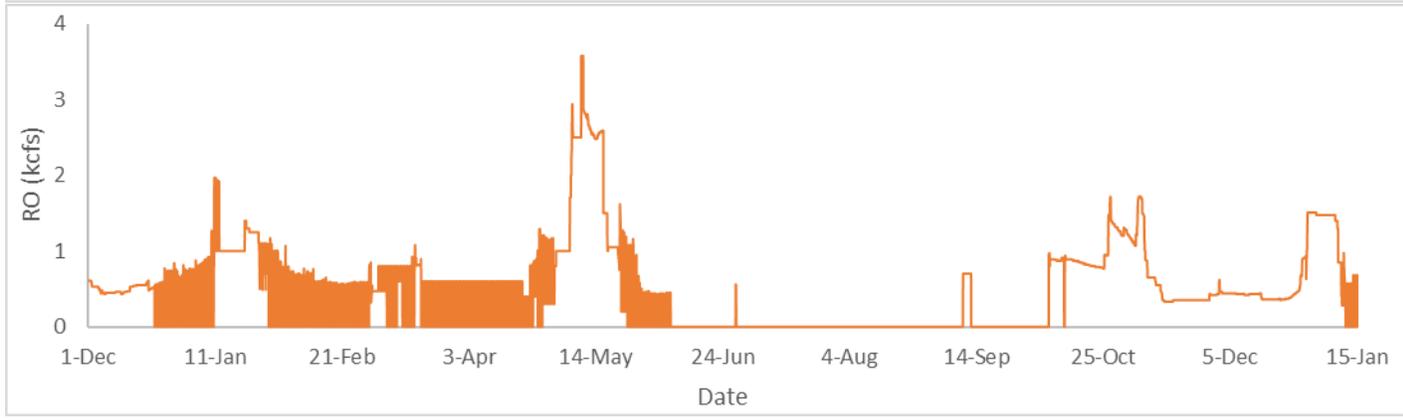
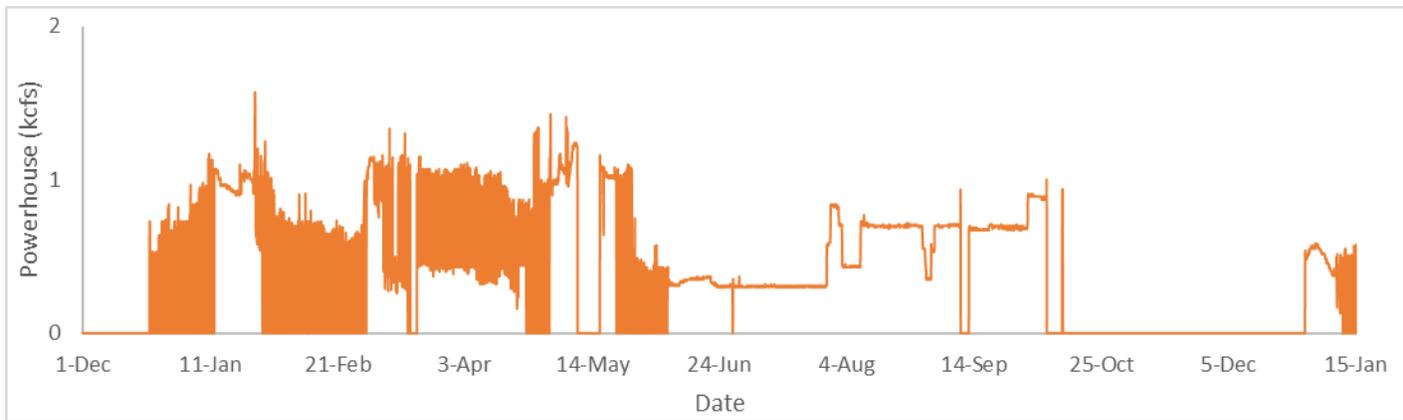


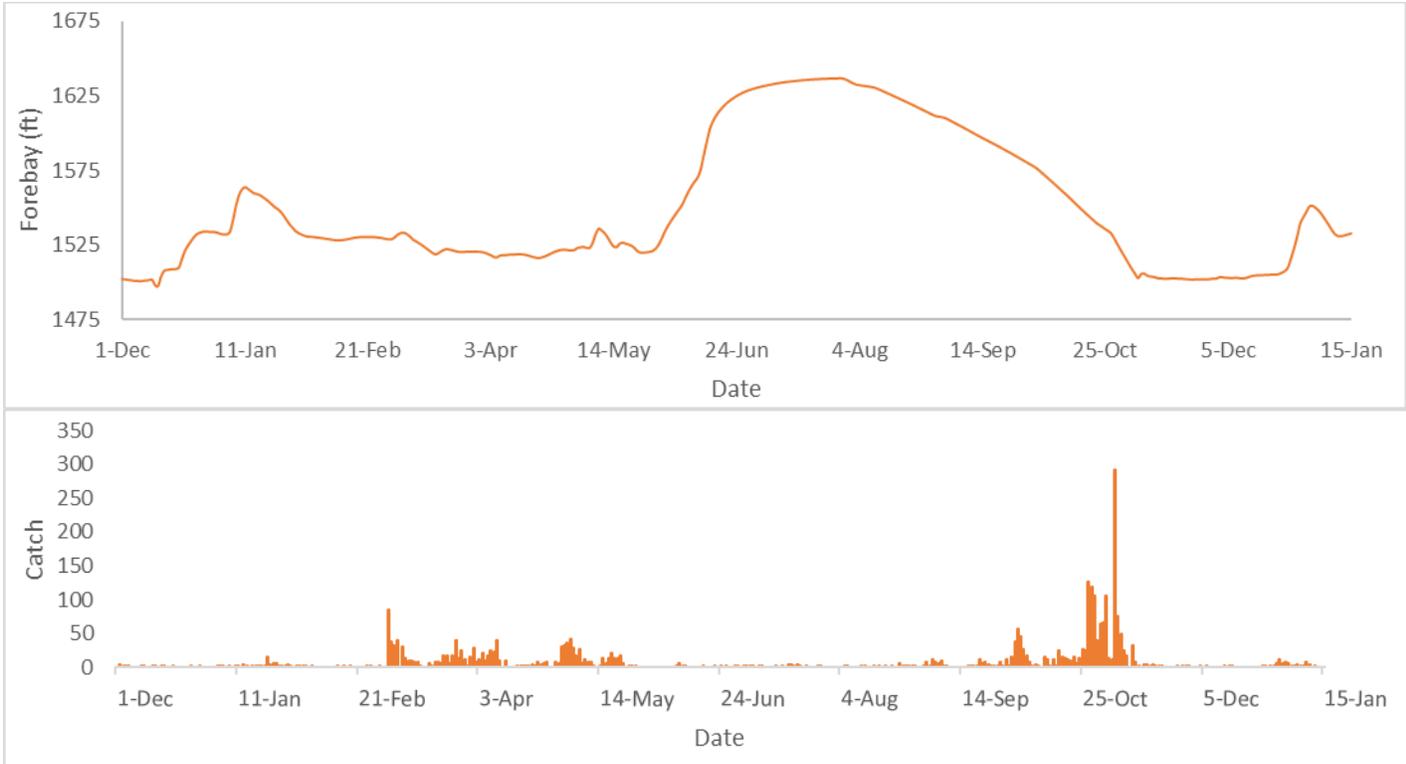
**South Santiam River Above Foster Dam Discharge and Foster Dam Head of Reservoir Capture Data**



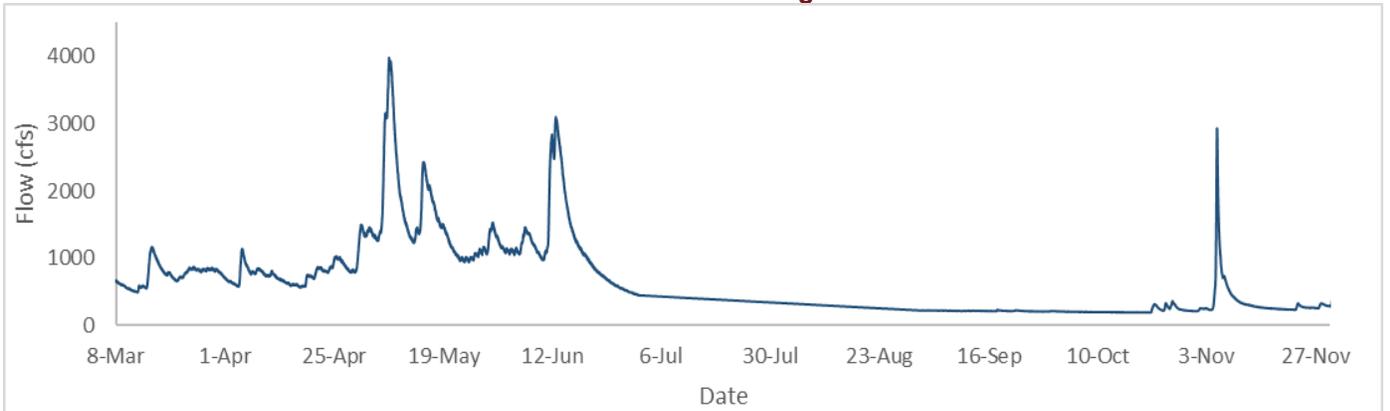


**Cougar Dam Operational and Capture Data Since Start of Monitoring**

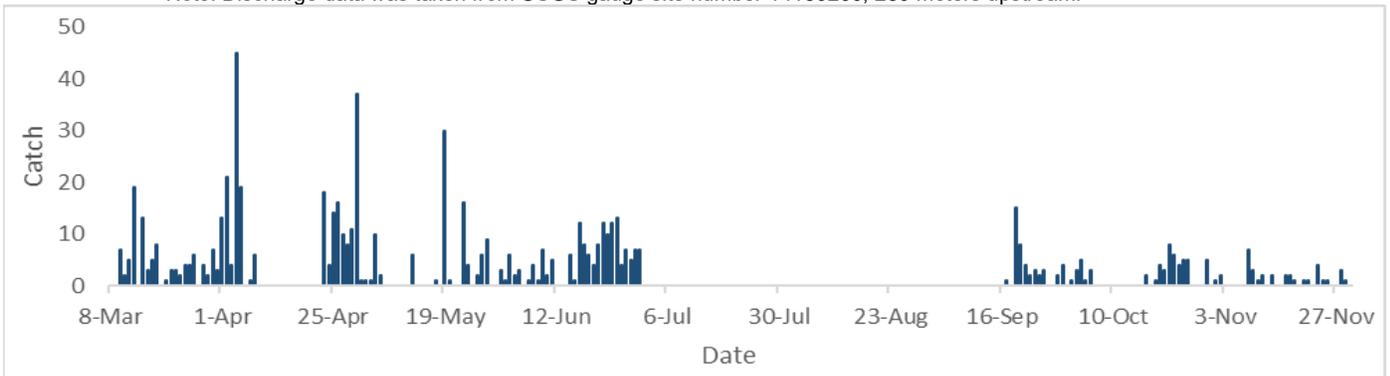




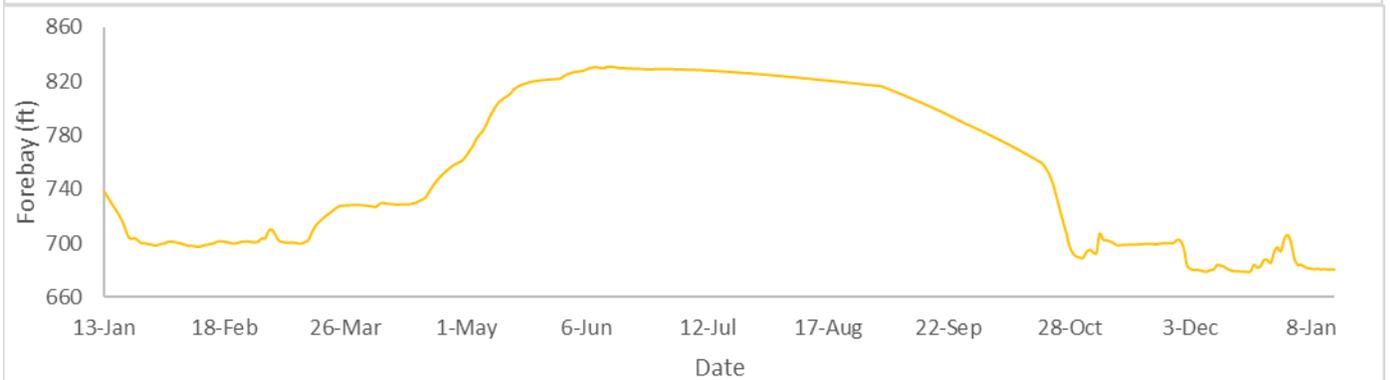
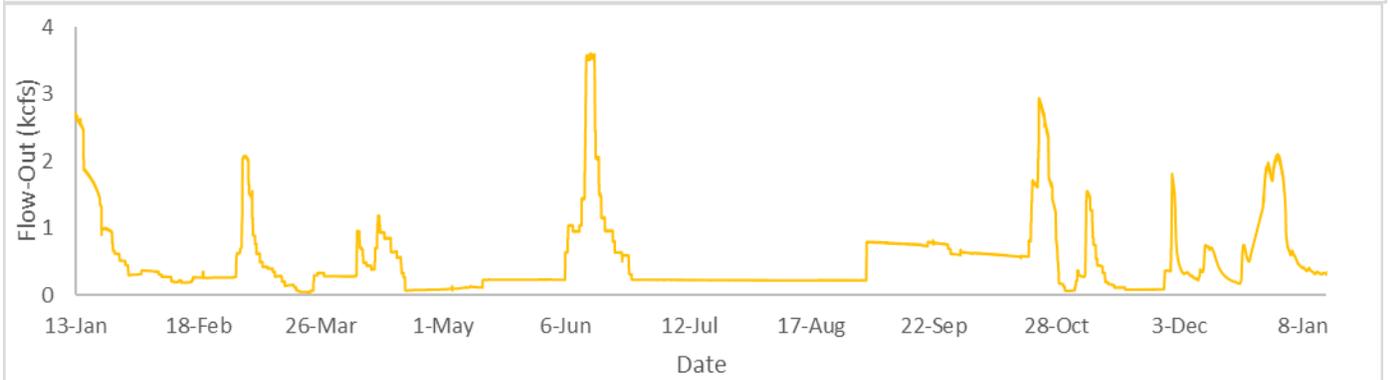
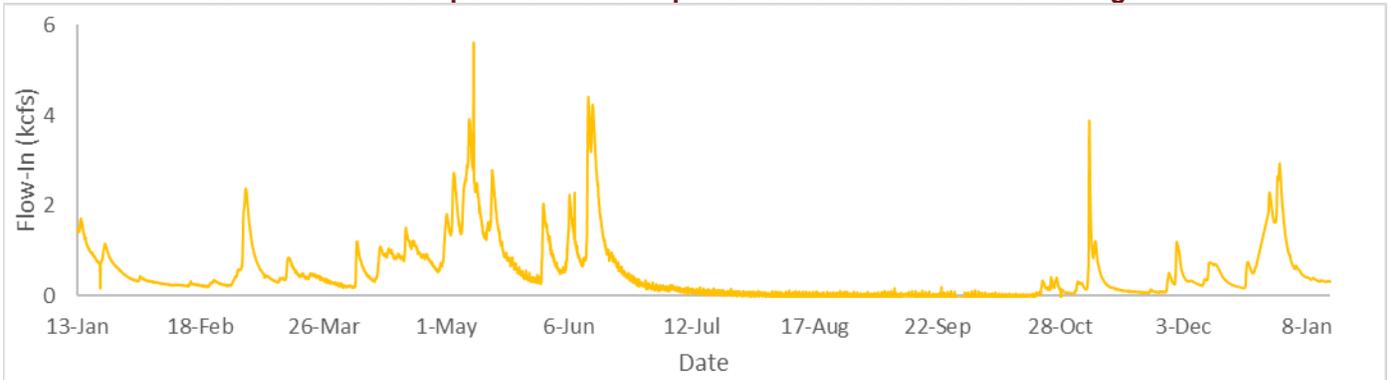
**South Fork McKenzie above Cougar Dam Discharge and Cougar Dam Head of Reservoir Capture Data Since Start of Monitoring**



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



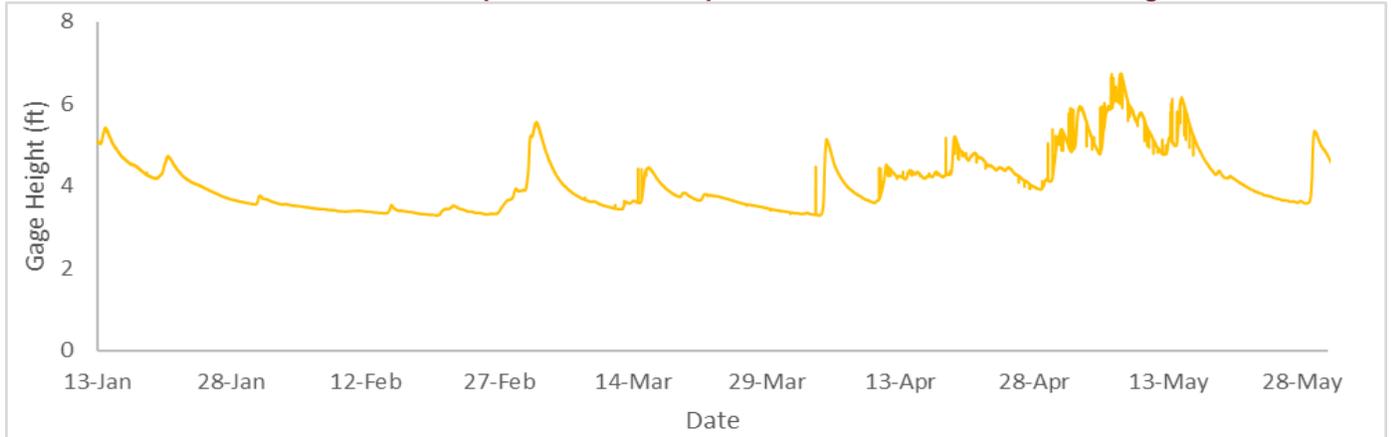
### Fall Creek Dam Tailrace Operational and Capture Data Since Start of Monitoring



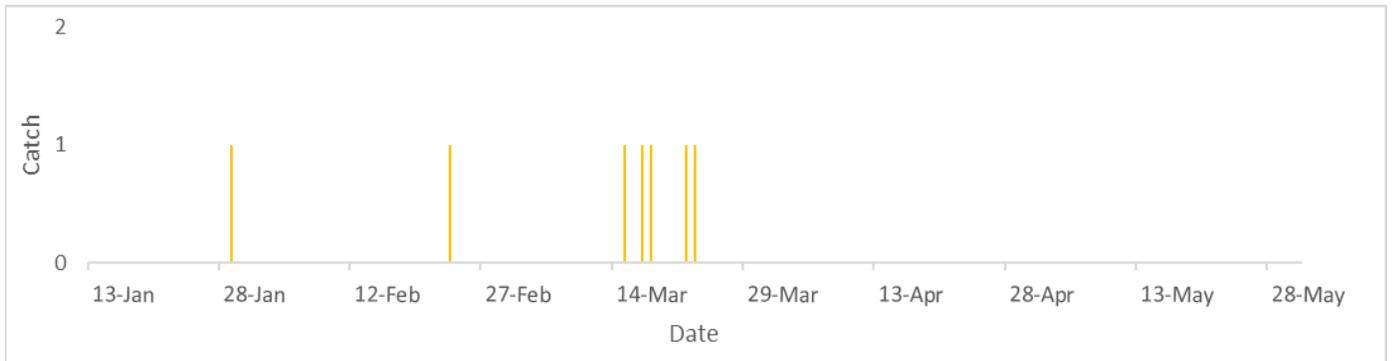
Note: Operational data was being tracked for Fall Creek Head of Reservoir site prior to initiation of Fall Creek Dam monitoring.



### 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.

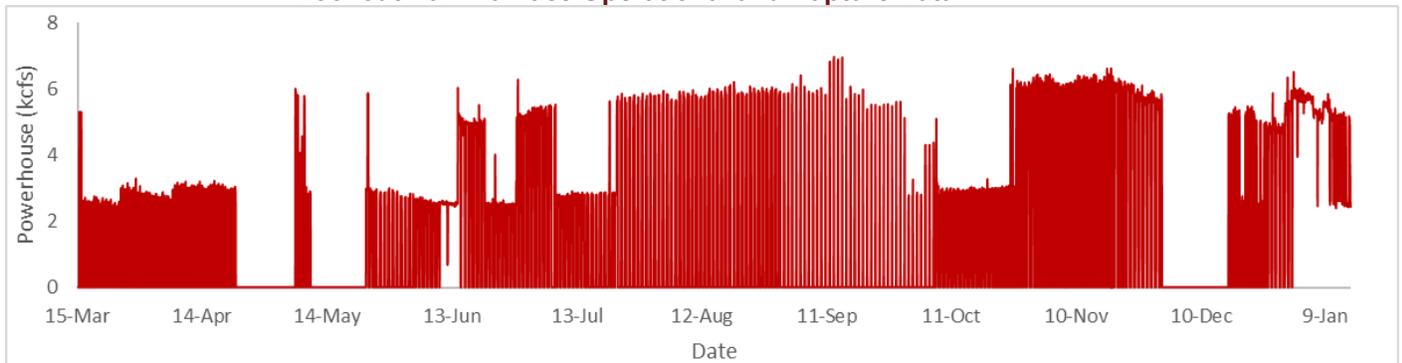


### Dexter Dam Operational and Capture Data Since Start of Monitoring



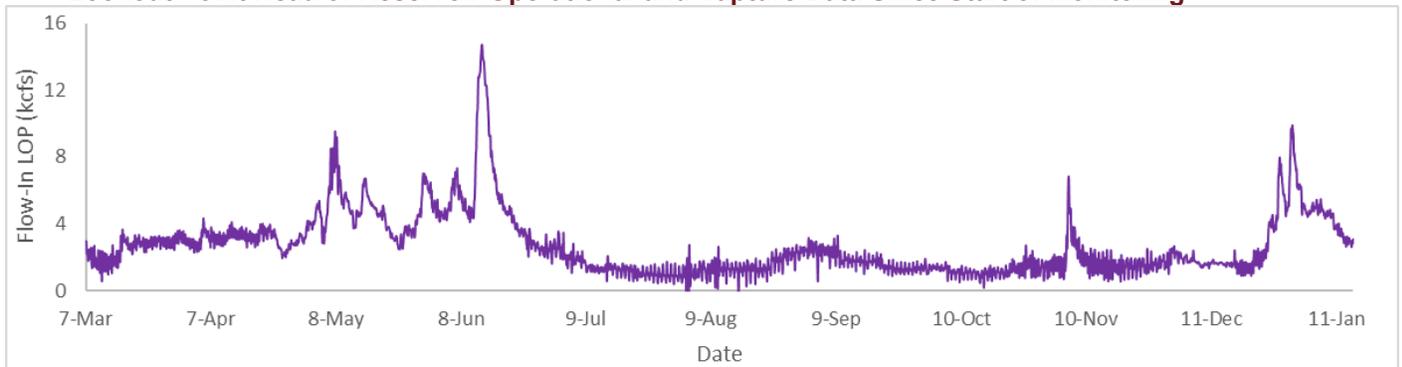


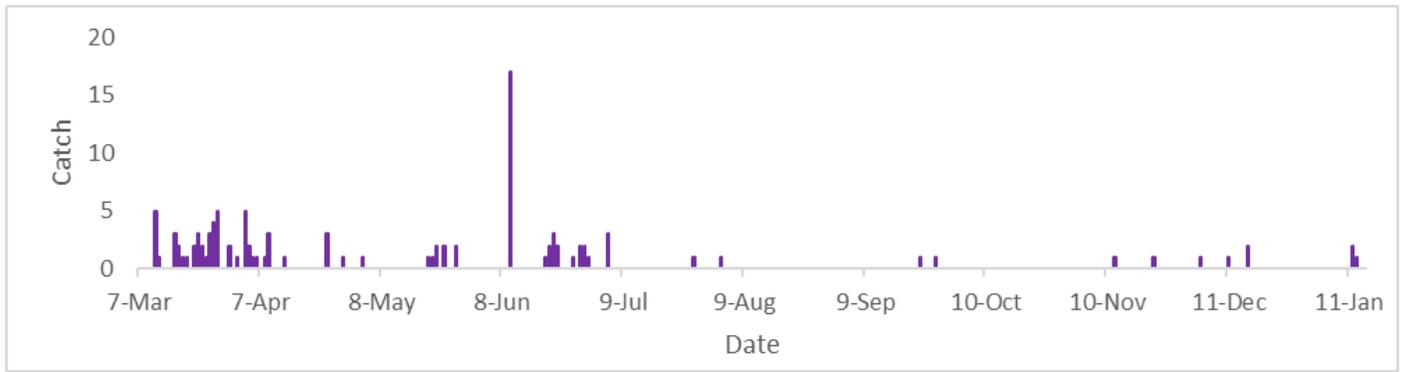
**Lookout Dam Tailrace Operational and Capture Data**



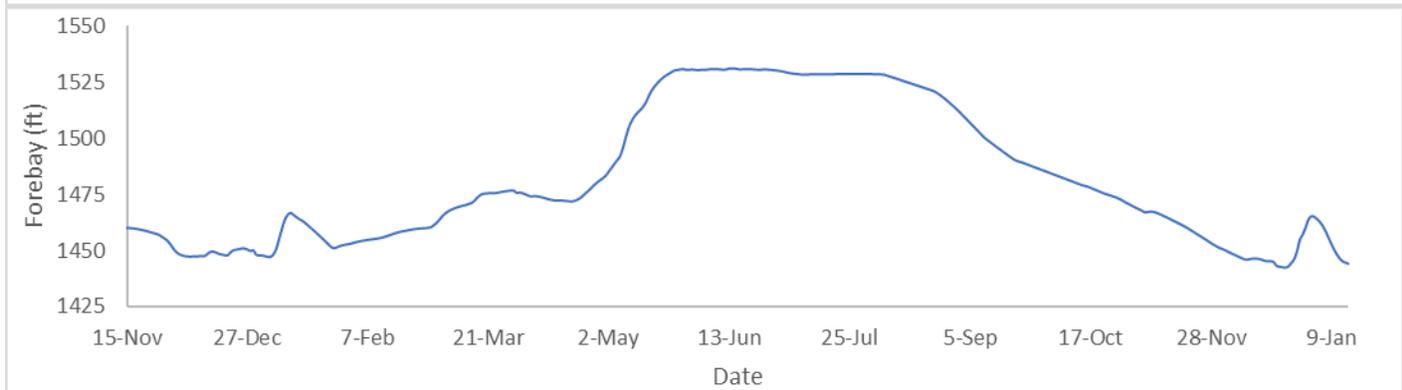
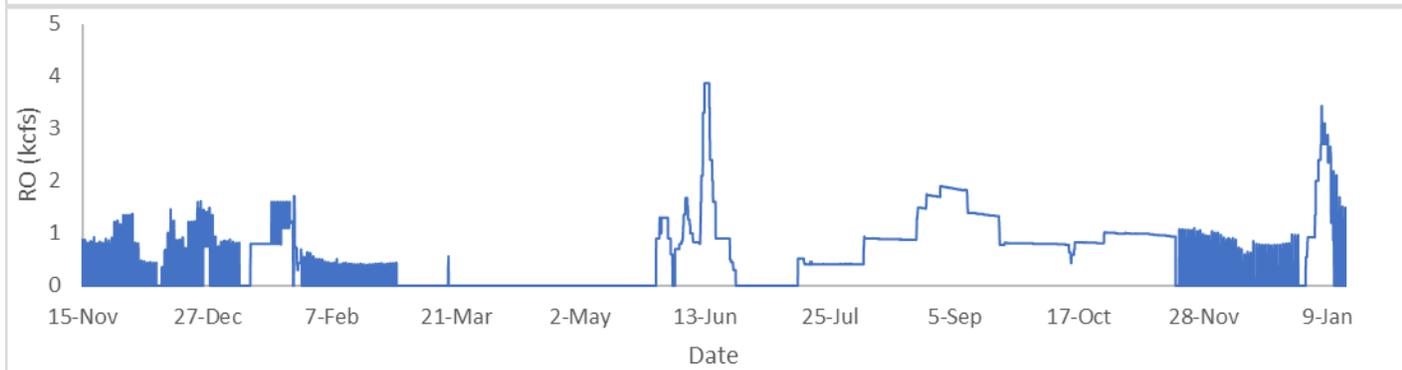
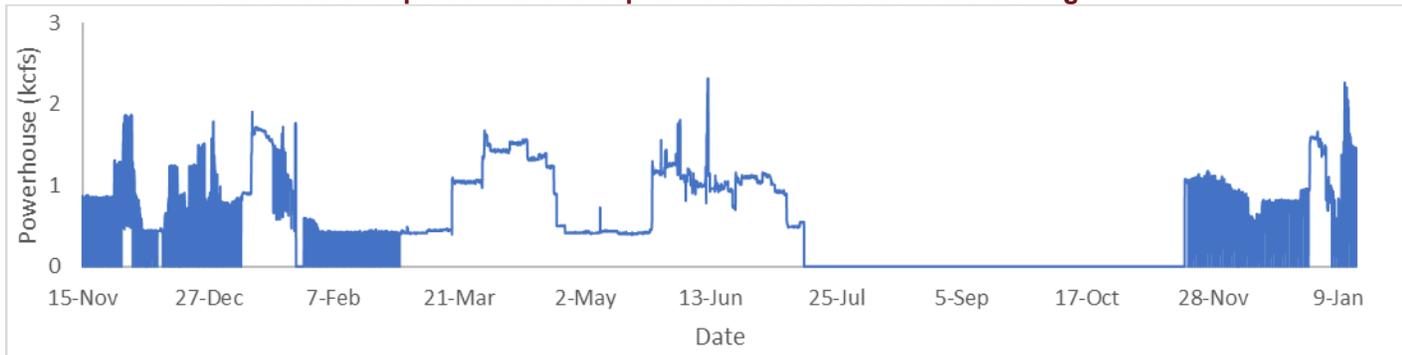


**Lookout Point Head of Reservoir Operational and Capture Data Since Start of Monitoring**





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





## Appendix C

| <b>Big Cliff Dam<br/>12/14/2022</b> | <b>Release #</b> | <b>Recapture #</b> | <b>Capture Efficiency</b> |
|-------------------------------------|------------------|--------------------|---------------------------|
| 8ft Trap                            | 502              | 54                 | 10.8%<br>(54/502)         |

| <b>Cougar Dam<br/>(12/13/2022)</b> | <b>Release #</b> | <b>Recapture #</b> | <b>Capture Efficiency</b> |
|------------------------------------|------------------|--------------------|---------------------------|
| RO Route                           | 506              | 42                 | 8.3%<br>(42/506)          |

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

| <b>Cougar Dam</b> | <b>Release #</b> | <b>Recapture #</b> | <b>Capture Efficiency</b> |
|-------------------|------------------|--------------------|---------------------------|
| PH Route          | 405              | 40                 | 9.88%<br>(40/405)         |
| RO Route          | 410              | 28                 | 6.83%<br>(28/410)         |

| <b>Dexter Dam</b> | <b>Release #</b> | <b>Recapture #</b> | <b>Capture Efficiency</b> |
|-------------------|------------------|--------------------|---------------------------|
| Spill             | 988              | 2                  | 0.2% (2/988)              |
| Powerhouse        | N/A              | N/A                | N/A                       |

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

| <b>Big Cliff Dam</b> | <b>Release #</b> | <b>Recapture #</b> | <b>Capture Efficiency</b> |
|----------------------|------------------|--------------------|---------------------------|
| 8ft Trap             | 996              | 40                 | 4.01%<br>(40/996)         |

| <b>Cougar Dam Head of Reservoir</b> | <b>Release #</b> | <b>Recapture #</b> | <b>Capture Efficiency</b> |
|-------------------------------------|------------------|--------------------|---------------------------|
| 5ft trap                            | 806              | 41                 | 5.1%<br>(41/806)          |

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

| <b>Cougar Dam</b> | <b>Release #</b> | <b>Recapture #</b> | <b>Capture Efficiency</b> |
|-------------------|------------------|--------------------|---------------------------|
| PH Route          | 357              | 62                 | 17.37%<br>(62/357)        |
| RO Route          | 378              | 21                 | 5.56%<br>(21/378)         |

| <b>Dexter Dam</b> | <b>Release #</b> | <b>Recapture #</b> | <b>Capture Efficiency</b> |
|-------------------|------------------|--------------------|---------------------------|
| Spill             | 1000             | 43                 | 4.3%<br>(43/1000)         |
| Powerhouse        | N/A              | N/A                | N/A                       |

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

| <b>Fall Creek Dam</b> | <b>Release #</b> | <b>Recapture #</b> | <b>Capture Efficiency</b> |
|-----------------------|------------------|--------------------|---------------------------|
| RO                    | 518              | 11                 | 2.1%<br>(11/518)          |

| <b>Fall Creek Dam</b> | <b>Release #</b> | <b>Recapture #</b> | <b>Capture Efficiency</b> |
|-----------------------|------------------|--------------------|---------------------------|
| RO                    | 513              | 0                  | 0%<br>(0/513)             |

| <b>Cougar Dam</b> | <b>Release #</b> | <b>Recapture #</b> | <b>Capture Efficiency</b> |
|-------------------|------------------|--------------------|---------------------------|
| RO Route          | 993              | 63                 | 6.34%<br>(63/993)         |

| <b>Dexter Dam</b> | <b>Release #</b> | <b>Recapture #</b> | <b>Capture Efficiency</b> |
|-------------------|------------------|--------------------|---------------------------|
| Spill             | 1019             | 67                 | 6.6%<br>(67/1,019)        |
| Powerhouse        | N/A              | N/A                | N/A                       |

| <b>Lookout Point Head of Reservoir</b> | <b>Release #</b> | <b>Recapture #</b> | <b>Capture Efficiency</b> |
|--|------------------|--------------------|---------------------------|
| 05/24/2022                             | 1007             | 125                | 12.4%<br>(125/1007)       |

| <b>Big Cliff Dam</b> | <b>Release #</b> | <b>Recapture #</b> | <b>Capture Efficiency</b> |
|----------------------|------------------|--------------------|---------------------------|
| 8ft Trap             | 1000             | 21                 | 2.1%<br>(21/1000)         |

| <b>Cougar Dam</b> | <b>Release #</b> | <b>Recapture #</b> | <b>Capture Efficiency</b> |
|-------------------|------------------|--------------------|---------------------------|
| PH Route          | 500              | 148                | 29.6%<br>(148/500)        |

| <b>Cougar Dam Head of Reservoir</b> | <b>Release #</b> | <b>Recapture #</b> | <b>Capture Efficiency</b> |
|-------------------------------------|------------------|--------------------|---------------------------|
| 5ft trap                            | 551              | 56                 | 10.2%<br>(56/551)         |

| <b>Big Cliff Dam</b> | <b>Release #</b> | <b>Recapture #</b> | <b>Capture Efficiency</b> |
|----------------------|------------------|--------------------|---------------------------|
| 8ft Trap             | 1000             | 92                 | 9.2%<br>(92/1000)         |

| <b>Cougar Dam</b> | <b>Release #</b> | <b>Recapture #</b> | <b>Capture Efficiency</b> |
|-------------------|------------------|--------------------|---------------------------|
| PH Route          | 501              | 31                 | 6.2%<br>(31/501)          |

| <b>Big Cliff Dam</b> | <b>Release #</b> | <b>Recapture #</b> | <b>Capture Efficiency</b> |
|----------------------|------------------|--------------------|---------------------------|
| 8 ft Trap            | 500              | 14                 | 2.8%<br>(14/500)          |

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

| <b>Dexter Dam</b> | <b>Release #</b> | <b>Recapture #</b> | <b>Capture Efficiency</b> |
|-------------------|------------------|--------------------|---------------------------|
| Spill             | N/A              | N/A                | N/A                       |
| Powerhouse        | 981              | 1                  | 0.1%<br>(1/981)           |

| <b>Lookout Point Head of Reservoir</b> | <b>Release #</b> | <b>Recapture #</b> | <b>Capture Efficiency</b> |
|--|------------------|--------------------|---------------------------|
| 07/20/2022                             | 1005             | 9                  | 0.9%<br>(9/1005)          |

| <b>Big Cliff Dam</b> | <b>Release #</b> | <b>Recapture #</b> | <b>Capture Efficiency</b> |
|----------------------|------------------|--------------------|---------------------------|
| 8ft Trap             | 549              | 40                 | 7.3%<br>(40/549)          |

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

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

| <b>Cougar Dam Head of Reservoir</b> | <b>Release #</b> | <b>Recapture #</b> | <b>Capture Efficiency</b> |
|-------------------------------------|------------------|--------------------|---------------------------|
| 5ft trap                            | 721              | 33                 | 4.6%<br>(33/721)          |

| <b>Dexter Dam</b> | <b>Release #</b> | <b>Recapture #</b> | <b>Capture Efficiency</b> |
|-------------------|------------------|--------------------|---------------------------|
| Spill             | N/A              | N/A                | N/A                       |
| Powerhouse        | 775              | 1                  | 0.1%<br>(1/775)           |

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

| <b>Cougar Dam (10/14/2022)</b> | <b>Release #</b> | <b>Recapture #</b> | <b>Capture Efficiency</b> |
|--------------------------------|------------------|--------------------|---------------------------|
| RO Route                       | 442              | 48                 | 10.9%<br>(48/442)         |

| <b>Big Cliff Dam (11/16/2022)</b> | <b>Release #</b> | <b>Recapture #</b> | <b>Capture Efficiency</b> |
|-----------------------------------|------------------|--------------------|---------------------------|
| 8ft Trap                          | 509              | 15                 | 2.9%<br>(15/509)          |

| <b>Foster Dam Head of Reservoir- South Santiam (11/15/2022)</b> | <b>Release #</b> | <b>Recapture #</b> | <b>Capture Efficiency</b> |
|---|------------------|--------------------|---------------------------|
| 5 ft Trap   | 1009             | 55                 | 5.5%<br>(55/1009)         |

| <b>Foster Dam Head of Reservoir- South Santiam (11/22/2022)</b> | <b>Release #</b> | <b>Recapture #</b> | <b>Capture Efficiency</b> |
|---|------------------|--------------------|---------------------------|
| 5 ft Trap   | 933              | 163                | 17.5%<br>(163/933)        |

| <b>Cougar Dam Head of Reservoir<br/>(11/16/2022)</b> | <b>Release #</b> | <b>Recapture #</b> | <b>Capture Efficiency</b> |
|--|------------------|--------------------|---------------------------|
| 5ft trap   | 719              | 29                 | 4.0%<br>(29/719)          |

| <b>Cougar Dam Head of Reservoir<br/>11/23/2022</b> | <b>Release #</b> | <b>Recapture #</b> | <b>Capture Efficiency</b> |
|--|------------------|--------------------|---------------------------|
| 5ft trap   | 752              | 51                 | 6.8%<br>(51/752)          |

| <b>Cougar Dam Head of Reservoir<br/>(11/29/2022)</b> | <b>Release #</b> | <b>Recapture #</b> | <b>Capture Efficiency</b> |
|--|------------------|--------------------|---------------------------|
| 5ft trap   | 620              | 48                 | 7.7%<br>(48/620)          |

| <b>Cougar Dam<br/>(11/22/2022)</b> | <b>Release #</b> | <b>Recapture #</b> | <b>Capture Efficiency</b> |
|------------------------------------|------------------|--------------------|---------------------------|
| RO Route                           | 504              | 24                 | 4.8%<br>(24/504)          |

| <b>Dexter Dam<br/>(11/17/2022)</b> | <b>Release #</b> | <b>Recapture #</b> | <b>Capture Efficiency</b> |
|------------------------------------|------------------|--------------------|---------------------------|
| Spill                              | N/A              | N/A                | N/A                       |
| Powerhouse                         | 991              | 4                  | 0.4%<br>(4/991)           |

| <b>Lookout Point Head of Reservoir</b> | <b>Release #</b> | <b>Recapture #</b> | <b>Capture Efficiency</b> |
|--|------------------|--------------------|---------------------------|
| 11/17/2022                             | 510              | 0                  | 0.0%<br>(0/510)           |

| <b>Hills Creek Dam<br/>(2/16/2022)</b> | <b>Release #</b> | <b>Recapture #</b> | <b>Capture Efficiency</b> |
|--|------------------|--------------------|---------------------------|
| PWR Route                              | 600              | 12                 | 2.0%<br>(12/600)          |
| RO Trap                                | 593              | 19                 | 3.2%<br>(19/593)          |

\*Live fish captured at the PWR trap are released just downstream of the PWR trap, upstream of the RO trap and therefore retained in the capture efficiency estimates for the RO Trap if they arrive in the lower trap.

\*Any dead fish captured at the PWR trap are excluded from the RO trap capture efficiency estimate as they are not alive at time of re-release.

| <b>Hills Creek Dam<br/>(2/25/2022)</b> | <b>Release #</b> | <b>Recapture #</b> | <b>Capture Efficiency</b> |
|--|------------------|--------------------|---------------------------|
| PWR Route                              | 604              | 6                  | 0.99%<br>(6/604)          |
| RO Trap                                | 625              | 7                  | 1.12%<br>(7/625)          |

\*Live fish captured at the PWR trap are released just downstream of the PWR trap, upstream of the RO trap and therefore retained in the capture efficiency estimates for the RO Trap if they arrive in the lower trap.

\*Any dead fish captured at the PWR trap are excluded from the RO trap capture efficiency estimate as they are not alive at time of re-release.

| <b>Cougar Dam<br/>(12/15/2022)</b> | <b>Release #</b> | <b>Recapture #</b> | <b>Capture Efficiency</b> |
|------------------------------------|------------------|--------------------|---------------------------|
| RO Route                           | 1015             | 56                 | 5.5%<br>(56/1015)         |

| <b>Cougar Dam<br/>(12/20/2022)</b> | <b>Release #</b> | <b>Recapture #</b> | <b>Capture Efficiency</b> |
|------------------------------------|------------------|--------------------|---------------------------|
| RO Route                           | 500              | 65                 | 13.0%<br>(65/500)         |

| <b>Cougar Dam<br/>(12/28/2022)</b> | <b>Release #</b> | <b>Recapture #</b> | <b>Capture Efficiency</b> |
|------------------------------------|------------------|--------------------|---------------------------|
| RO Route                           | 445              | 15                 | 3.4%<br>(15/445)          |

| <b>Lookout Point<br/>Head of Reservoir</b> | <b>Release #</b> | <b>Recapture #</b> | <b>Capture<br/>Efficiency</b> |
|--|------------------|--------------------|-------------------------------|
| 12/12/2022                                 | 510              | 0                  | 0.0%<br>(0/510)               |

**Run of River Trapping Efficiency**

| <b>Foster Dam Head of Reservoir-<br/>South Santiam<br/>To-Date</b> | <b>Release #</b> | <b>Recapture #</b> |
|--|------------------|--------------------|
| Chinook  | 78               | 11                 |
| Winter Steelhead   | 193              | 17                 |

| <b>Cougar Dam<br/>10/15/2022-10/31/2022</b> | <b>Release #</b> | <b>Recapture #</b> |
|---|------------------|--------------------|
| PH  | 126              | 8                  |
| RO  | 20               | 1                  |

| <b>Cougar Dam<br/>11/1/2022-11/15/2022</b> | <b>Release #</b> | <b>Recapture #</b> |
|--|------------------|--------------------|
| PH   | 0                | 0                  |
| RO   | 464              | 22                 |

| <b>Cougar Dam<br/>11/16/2022-11/30/2022</b> | <b>Release #</b> | <b>Recapture #</b> |
|---|------------------|--------------------|
| PH  | 0                | 0                  |
| RO  | 25               | 1                  |

| <b>Foster Dam Head of Reservoir-<br/>South Santiam<br/>11/16/2022 to 11/30/2022</b> | <b>Release #</b> | <b>Recapture #</b> |
|---|------------------|--------------------|
| Chinook   | 32               | 7                  |
| Winter Steelhead  | 7                | 1                  |

## Appendix D

### Summary of Project PIT Tagged Fish for Reporting Period

| Site  | Trap  | # of PIT Tagged Fish |
|---|-------|----------------------|
| Big Cliff Dam                               | 8 ft  | 0                    |
| Foster Dam Head of Reservoir- South Santiam | 5 ft  | 0                    |
| Cougar Dam                                  | PWR   | 0                    |
| Cougar Dam                                  | RO    | 0                    |
| Cougar Dam Head of Reservoir                | 5 ft  | 0                    |
| Green Peter Tailrace- Middle Santiam        | 8 ft  | 0                    |
| Dexter Dam Tailrace                         | 5 ft  | 0                    |
| Lookout Point Head of Reservoir             | 5 ft  | 2                    |
| Lookout Dam Tailrace                        | Spill | 0                    |
| Lookout Dam Tailrace                        | PWR   | 0                    |
| Hills Creek Dam Tailrace                    | PWR   | 0                    |
| Hills Creek Dam Tailrace                    | RO    | 0                    |

### Summary 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 |

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

| Site                            | Trap | PIT Tag #      | Date      | Species |
|---------------------------------|------|----------------|-----------|---------|
| Lookout Point Head of Reservoir | 5 ft | 3DD.003BD2273B | 1/13/2023 | Chinook |
| Lookout Point Head of Reservoir | 5 ft | 3DD.003BD2274A | 1/12/2023 | Chinook |