

---

Prepared by: Dillon Alegre, Grant Brink & Rachel Ellison, Environmental Assessment Services, LLC

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

Report No.: 2023 Willamette RST Bi-Weekly Report 08/01-08/15 by EAS

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

---

## Project Schedule

**Table 1. Project Schedule.**

| Site                   | Task                                 | Start      | End        | Days |
|------------------------|--------------------------------------|------------|------------|------|
| Big Cliff Dam RST      | Operation                            | 12/01/2021 | 02/15/2022 | 656  |
| Big Cliff Dam RST      | Operation                            | 03/15/2022 | 10/15/2022 |      |
| Big Cliff Dam RST      | Operation                            | 10/15/2022 | 12/15/2022 |      |
| Big Cliff Dam RST      | Operation                            | 12/15/2022 | 3/15/2023  |      |
| Big Cliff Dam RST      | Operation                            | 3/16/2023  | 10/15/2023 |      |
| Big Cliff Dam Tailrace | Trap Efficiency Release (1,000 Fish) | 12/22/2021 | 12/22/2021 | 1    |
| Big Cliff Dam Tailrace | Temporary Trap Removal and Install   | 05/06/2022 | 05/13/2022 | 8    |
| Big Cliff Dam Tailrace | Trap Efficiency Release (1,000 Fish) | 05/25/2022 | 05/25/2022 | 1    |
| Big Cliff Dam Tailrace | Trap Efficiency Release (1,000 Fish) | 08/09/2022 | 08/09/2022 | 1    |
| Big Cliff Dam Tailrace | Trap Efficiency Release (1,000 Fish) | 09/30/2022 | 09/30/2022 | 1    |
| Big Cliff Dam Tailrace | Trap Efficiency Release (500 Fish)   | 10/13/2022 | 10/13/2022 | 1    |
| Big Cliff Dam Tailrace | Trap Efficiency Release (535 Fish)   | 10/24/2022 | 10/24/2022 | 1    |
| Big Cliff Dam Tailrace | Trap Efficiency Release (549 Fish)   | 11/02/2022 | 11/02/2022 | 1    |
| Big Cliff Dam Tailrace | Trap Efficiency Release (510 Fish)   | 11/16/2022 | 11/16/2022 | 1    |
| Big Cliff Dam Tailrace | Trap Efficiency Release (502 Fish)   | 12/14/2022 | 12/14/2022 | 1    |
| Big Cliff Dam Tailrace | Trap Efficiency Release (1,010 Fish) | 12/19/2022 | 12/19/2022 | 1    |
| Big Cliff Dam Tailrace | Trap Efficiency Release (1,014 Fish) | 12/21/2022 | 12/21/2022 | 1    |
| Big Cliff Dam Tailrace | Trap Efficiency Release (704 Fish)   | 12/27/2022 | 12/27/2022 | 1    |
| Big Cliff Dam Tailrace | Trap Efficiency Release (452 Fish)   | 12/29/2022 | 12/29/2022 | 1    |
| Big Cliff Dam Tailrace | Trap Efficiency Release (500 Fish)   | 01/25/2023 | 01/25/2023 | 1    |
| Big Cliff Dam Tailrace | Trap Efficiency Release (500 Fish)   | 02/17/2023 | 02/17/2023 | 1    |
| Big Cliff Dam Tailrace | Trap Efficiency Release (2,968 Fish) | 03/07/2023 | 03/07/2023 | 1    |

|  |  |            |            |     |
|--|--|------------|------------|-----|
| Big Cliff Dam Tailrace                                   | Trap Efficiency Release<br>(541 Fish)        | 03/10/2023 | 03/10/2023 | 1   |
| Big Cliff Dam Tailrace                                   | Trap Efficiency Release<br>(498 Fish)        | 04/28/2023 | 04/28/2023 | 1   |
| Big Cliff Dam Tailrace                                   | Trap Efficiency Release<br>(500 Fish)        | 05/23/2023 | 05/23/2023 | 1   |
| Big Cliff Dam Tailrace                                   | Trap Efficiency Release<br>(500 Fish)        | 6/21/2023  | 6/21/2023  | 1   |
| Big Cliff Dam Tailrace                                   | Trap Efficiency Release<br>(500 Fish)        | 7/5/2023   | 7/5/2023   | 1   |
| Big Cliff Dam Tailrace                                   | Trap Efficiency Release<br>(474 Fish)        | 8/3/2023   | 8/3/2023   | 1   |
| Green Peter Tailrace- Middle<br>Santiam River RST        | Trap Install                                 | 03/02/2022 | 03/02/2022 | 1   |
| Green Peter Tailrace- Middle<br>Santiam River RST        | Operation                                    | 03/03/2022 | 05/07/2022 | 66  |
| Green Peter Tailrace- Middle<br>Santiam River RST        | Operation                                    | 03/14/2023 | 11/30/2023 | 261 |
| Green Peter Tailrace- Middle<br>Santiam River RST        | Trap Efficiency Release<br>(643 Fish)        | 03/29/2022 | 03/29/2022 | 1   |
| Green Peter Tailrace- Middle<br>Santiam River RST        | Trap Efficiency Release<br>(521 Fish)        | 04/30/2022 | 04/30/2022 | 1   |
| Green Peter Tailrace- Middle<br>Santiam River RST        | Temporary Trap<br>Removal                    | 05/12/2022 | 05/12/2022 | 1   |
| Green Peter Tailrace- Middle<br>Santiam River RST        | Trap Install                                 | 03/14/2023 | 03/14/2023 | 1   |
| Green Peter Tailrace- Middle<br>Santiam River RST        | Anchor Install                               | 3/23/2023  | 3/31/2023  | 8   |
| Green Peter Tailrace- Middle<br>Santiam River RST        | Trap Efficiency Release<br>(999 Live Fish)   | 5/11/2023  | 5/11/2023  | 1   |
| Green Peter Tailrace- Middle<br>Santiam River RST        | Trap Efficiency Release<br>(1,001 Dead Fish) | 5/11/2023  | 5/11/2023  | 1   |
| Green Peter Tailrace- Middle<br>Santiam River RST        | Trap Efficiency Release<br>(1,000 Live Fish) | 5/25/2023  | 5/25/2023  | 1   |
| Green Peter Tailrace- Middle<br>Santiam River RST        | Trap Efficiency Release<br>(1000 Dead Fish)  | 6/30/2023  | 6/30/2023  | 1   |
| Green Peter Tailrace- Middle<br>Santiam River RST        | Trap Efficiency Release<br>(1000 Live Fish)  | 6/30/2023  | 6/30/2023  | 1   |
| Green Peter Tailrace- Middle<br>Santiam River RST        | Trap Efficiency Release<br>(1009 Live Fish)  | 7/27/2023  | 7/27/2023  | 1   |
| Green Peter Tailrace- Middle<br>Santiam River RST        | Trap Efficiency Release<br>(1,008 Live Fish) | 8/16/2023  | 8/16/2023  | 1   |
| Foster Dam Head of Reservoir-<br>South Santiam River RST | Trap Install                                 | 03/16/2022 | 03/16/2022 | 1   |
| Foster Dam Head of Reservoir-<br>South Santiam River RST | Operation                                    | 03/16/2022 | 06/30/2022 | 107 |
| Foster Dam Head of Reservoir-<br>South Santiam River RST | Trap Removal                                 | 07/01/2022 | 07/01/2022 | 1   |
| Foster Dam Head of Reservoir-<br>South Santiam River RST | Trap Install                                 | 09/02/2022 | 09/02/2022 | 1   |
| Foster Dam Head of Reservoir-<br>South Santiam River RST | Operation                                    | 09/02/2022 | 11/30/2022 | 90  |
| Foster Dam Head of Reservoir-<br>South Santiam River RST | Trap Removal                                 | 12/01/2022 | 12/01/2022 | 1   |
| Foster Dam Head of Reservoir-<br>South Santiam River RST | Trap Install                                 | 01/30/2023 | 01/30/2023 | 1   |
| Foster Dam Head of Reservoir-<br>South Santiam River RST | Operation                                    | 02/01/2023 | 11/30/2023 | 302 |
| Foster Dam Head of Reservoir-<br>South Santiam River RST | Trapping Efficiency<br>Release               | 09/29/2022 | 09/29/2022 | 1   |

|  |   |            |            |     |
|--|---|------------|------------|-----|
|  | (1,000 fish)  |            |            |     |
| Foster Dam Head of Reservoir-South Santiam River RST | Trapping Efficiency Release (840 fish)              | 10/25/2022 | 10/25/2022 | 1   |
| Foster Dam Head of Reservoir-South Santiam River RST | Trapping Efficiency Release (1,006 fish)            | 11/01/2022 | 11/01/2022 | 1   |
| Foster Dam Head of Reservoir-South Santiam River RST | Trapping Efficiency Release (1,007 fish)            | 11/09/2022 | 11/09/2022 | 1   |
| Foster Dam Head of Reservoir-South Santiam River RST | Trapping Efficiency Release (1,009 fish)            | 11/15/2022 | 11/15/2022 | 1   |
| Foster Dam Head of Reservoir-South Santiam River RST | Trapping Efficiency Release (933 fish)              | 11/22/2022 | 11/22/2022 | 1   |
| Foster Dam Head of Reservoir-South Santiam River RST | Trap Removal  | 12/06/2022 | 12/06/2022 | 1   |
| Foster Dam Head of Reservoir-South Santiam River RST | Trap Install  | 1/31/2023  | 1/31/2023  | 1   |
| Foster Dam Head of Reservoir-South Santiam River RST | Trapping Efficiency Release (1005 fish)             | 02/27/2023 | 02/27/2023 | 1   |
| Foster Dam Head of Reservoir-South Santiam River RST | Trapping Efficiency Release (995 fish)              | 03/09/2023 | 03/09/2023 | 1   |
| Foster Dam Head of Reservoir-South Santiam River RST | Trapping Efficiency Release (1,025 fish)            | 03/15/2023 | 03/15/2023 | 1   |
| Foster Dam Head of Reservoir-South Santiam River RST | Trapping Efficiency Release (985 fish)              | 05/11/2023 | 05/11/2023 | 1   |
| Foster Dam Head of Reservoir-South Santiam River RST | Trapping Efficiency Release (1003 fish)             | 6/2/2023   | 6/2/2023   | 1   |
| Foster Dam Head of Reservoir-South Santiam River RST | Trapping Efficiency Release (1000 fish)             | 6/29/2023  | 6/29/2023  | 1   |
| Foster Dam Head of Reservoir-South Santiam River RST | Trapping Efficiency Release (989 fish)              | 7/27/2023  | 7/27/2023  | 1   |
| Cougar Dam RST                                       | Operation   | 11/30/2021 | 11/30/2022 | 730 |
| Cougar Dam RST                                       | Operation   | 11/30/2022 | 11/30/2023 |     |
| Cougar Dam   | Trap Efficiency Release (1,200 Fish, 600 per route) | 01/19/2022 | 01/19/2022 | 1   |
| Cougar Dam   | Trap Efficiency Release (735 Fish, ~365 per route)  | 04/20/2022 | 04/20/2022 | 1   |
| Cougar Dam   | Trap Efficiency Release (993 Fish, RO route)        | 05/15/2022 | 05/15/2022 | 1   |
| Cougar Dam   | Trap Efficiency Release (500 Fish, PH route)        | 07/19/2022 | 07/19/2022 | 1   |
| Cougar Dam   | Trap Efficiency Release (501 Fish, PH route)        | 08/11/2022 | 08/11/2022 | 1   |
| Cougar Dam   | Trap Efficiency Release (442 Fish, RO route)        | 10/14/2022 | 10/14/2022 | 1   |
| Cougar Dam   | Trap Efficiency Release (504 Fish, RO route)        | 11/22/2022 | 11/22/2022 | 1   |
| Cougar Dam   | Trap Efficiency Release                             | 12/13/2022 | 12/13/2022 | 1   |

|                              |  |            |            |     |
|------------------------------|--|------------|------------|-----|
|                              | (506 Fish, RO route)                           |            |            |     |
| 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                   | Trap Efficiency Release (500 Fish, RO route)   | 01/30/2023 | 01/30/2023 | 1   |
| Cougar Dam                   | Trap Efficiency Release (511 Fish, RO route)   | 3/23/2023  | 3/23/2023  | 1   |
| Cougar Dam                   | Trap Efficiency Release (500 Fish, PH route)   | 3/23/2023  | 3/23/2023  | 1   |
| Cougar Dam                   | Trap Efficiency Release (491 Fish, RO route)   | 3/30/2023  | 3/30/2023  | 1   |
| Cougar Dam                   | Trap Efficiency Release (497 Fish, PH route)   | 3/30/2023  | 3/30/2023  | 1   |
| Cougar Dam                   | Trap Efficiency Release (500 Fish, RO route)   | 4/18/2023  | 4/18/2023  | 1   |
| Cougar Dam                   | Trap Efficiency Release (197 Fish, PH route)   | 4/18/2023  | 4/18/2023  | 1   |
| Cougar Dam                   | Trap Efficiency Release (499 Fish, RO route)   | 05/10/2023 | 05/10/2023 | 1   |
| Cougar Dam                   | Trap Efficiency Release (499 Fish, PH route)   | 05/10/2023 | 05/10/2023 | 1   |
| Cougar Dam                   | Trap Efficiency Release (507 Fish, PH route)   | 6/6/2023   | 6/6/2023   | 1   |
| Cougar Dam                   | Temporary RO removal                           | 6/8/2023   | 6/8/2023   | 1   |
| Cougar Dam                   | Trap Efficiency Release (510 Fish, PH route)   | 7/26/2023  | 7/26/2023  | 1   |
| Cougar Dam Head of Reservoir | Highline and Trap Install                      | 03/07/2022 | 03/07/2022 | 1   |
| Cougar Dam Head of Reservoir | Operation                                      | 03/08/2022 | 06/30/2022 | 115 |
| Cougar Dam Head of Reservoir | Trap Efficiency Release (806 Fish)             | 03/18/2022 | 03/18/2022 | 1   |
| Cougar Dam Head of Reservoir | Trap Efficiency Release (500 Fish)             | 05/19/2022 | 05/19/2022 | 1   |
| Cougar Dam Head of Reservoir | Trap Efficiency Release (515 Fish)             | 06/23/2022 | 06/23/2022 | 1   |
| Cougar Dam Head of Reservoir | Trap Removal                                   | 07/01/2022 | 07/01/2022 | 1   |
| Cougar Dam Head of Reservoir | Highline Install                               | 09/14/2022 | 09/14/2022 | 1   |
| Cougar Dam Head of Reservoir | Trap Install                                   | 09/16/2022 | 09/16/2022 | 1   |
| Cougar Dam Head of Reservoir | Operation                                      | 09/16/2022 | 11/30/2022 | 76  |
| Cougar Dam Head of Reservoir | Trap Efficiency Release (551 Fish)             | 09/22/2022 | 09/22/2022 | 1   |
| Cougar Dam Head of Reservoir | Trap Efficiency Release (608 Fish)             | 10/5/2022  | 10/5/2022  | 1   |
| Cougar Dam Head of Reservoir | Trap Efficiency Release (721 Fish)             | 11/10/2022 | 11/10/2022 | 1   |
| Cougar Dam Head of Reservoir | Trap Efficiency Release (719 Fish)             | 11/16/2022 | 11/16/2022 | 1   |
| Cougar Dam Head of Reservoir | Trap Efficiency Release (752 Fish)             | 11/23/2022 | 11/23/2022 | 1   |
| Cougar Dam Head of Reservoir | Trap Efficiency Release (620 Fish)             | 11/29/2022 | 11/29/2022 | 1   |
| Cougar Dam Head of Reservoir | Trap Removal                                   | 11/30/2022 | 11/30/2022 | 1   |
| Cougar Dam Head of Reservoir | Trap Install                                   | 1/31/2023  | 1/31/2023  | 1   |

|                              |                                      |            |            |     |
|------------------------------|--------------------------------------|------------|------------|-----|
| Cougar Dam Head of Reservoir | Trap Efficiency Release (506 Fish)   | 4/14/2023  | 4/14/2023  | 1   |
| Cougar Dam Head of Reservoir | Trap Efficiency Release (508 Fish)   | 05/10/2023 | 05/10/2023 | 1   |
| Cougar Dam Head of Reservoir | Trap Efficiency Release (597 Fish)   | 05/16/2023 | 05/16/2023 | 1   |
| Cougar Dam Head of Reservoir | Trap Efficiency Release (510 Fish)   | 6/8/2023   | 6/8/2023   | 1   |
| Cougar Dam Head of Reservoir | Trap Efficiency Release (758 Fish)   | 7/27/2023  | 7/27/2023  | 1   |
| Dexter Dam Tailrace RST      | Highline Install                     | 03/02/2022 | 03/02/2022 | 1   |
| Dexter Dam Tailrace RST      | Trap Install                         | 03/03/2022 | 03/03/2022 | 1   |
| Dexter Dam Tailrace RST      | Operation                            | 03/07/2022 | 12/16/2022 | 649 |
| Dexter Dam Tailrace RST      | Operation                            | 12/16/2022 | 12/16/2023 |     |
| Dexter Dam Tailrace RST      | Trap Efficiency Release (988 Fish)   | 03/23/2022 | 03/23/2022 | 1   |
| Dexter Dam Tailrace RST      | Trap Efficiency Release (1000 Fish)  | 05/04/2022 | 05/04/2022 | 1   |
| Dexter Dam Tailrace RST      | Trap Efficiency Release (1019 Fish)  | 05/24/2022 | 05/24/2022 | 1   |
| Dexter Dam Tailrace RST      | Trap Efficiency Release (981 Fish)   | 07/21/2022 | 07/21/2022 | 1   |
| Dexter Dam Tailrace RST      | Trap Efficiency Release (1007 Fish)  | 10/26/2022 | 10/26/2022 | 1   |
| Dexter Dam Tailrace RST      | Trap Efficiency Release (775 Fish)   | 11/01/2022 | 11/01/2022 | 1   |
| Dexter Dam Tailrace RST      | Trap Efficiency Release (991 Fish)   | 11/17/2022 | 11/17/2022 | 1   |
| Dexter Dam Tailrace RST      | Trap Efficiency Release (1,010 Fish) | 12/06/2022 | 12/06/2022 | 1   |
| Dexter Dam Tailrace RST      | Trap Efficiency Release (1,025 Fish) | 12/15/2022 | 12/15/2022 | 1   |
| Dexter Dam Tailrace RST      | Trap Efficiency Release (1,200 Fish) | 3/16/2023  | 3/16/2023  | 1   |
| Dexter Dam Tailrace RST      | Trap Efficiency Release (1,199 Fish) | 3/29/2023  | 3/29/2023  | 1   |
| Dexter Dam Tailrace RST      | Trap Efficiency Release (4,006 Fish) | 5/25/2023  | 5/25/2023  | 1   |
| Dexter Dam Tailrace RST      | Trap Efficiency Release (4,010 Fish) | 6/7/2023   | 6/7/2023   | 1   |
| Dexter Dam Tailrace RST      | Trap Efficiency Release (4028 Fish)  | 6/21/2023  | 6/21/2023  | 1   |
| Dexter Dam Tailrace RST      | Trap Efficiency Release (4000 Fish)  | 7/6/2023   | 7/6/2023   | 1   |
| Dexter Dam Tailrace RST      | Trap Efficiency Release (1,505 Fish) | 8/2/2023   | 8/2/2023   | 1   |
| Lookout Dam Tailrace RSTs    | Operation                            | 03/15/2022 | 07/31/2022 | 503 |
| Lookout Dam Tailrace RSTs    | Operation                            | 08/01/2022 | 10/17/2022 |     |
| Lookout Dam Tailrace RSTs    | Operation                            | 10/17/2022 | 7/31/2023  |     |
| Lookout Dam Powerhouse       | Trap Efficiency Release (998 Fish)   | 4/13/2022  | 4/13/2022  | 1   |
| Lookout Dam Powerhouse       | Trap Efficiency Release (3,999 Fish) | 5/23/2023  | 5/23/2023  | 1   |
| Lookout Dam Powerhouse       | Trap Efficiency Release (4,011 Fish) | 6/1/2023   | 6/1/2023   | 1   |
| Lookout Dam Powerhouse       | Trap Efficiency Release (4,010 Fish) | 6/14/2023  | 6/14/2023  | 1   |
| Lookout Dam Powerhouse       | Trap Efficiency Release              | 6/28/2023  | 6/28/2023  | 1   |

|                                     |                                      |            |            |     |
|-------------------------------------|--------------------------------------|------------|------------|-----|
|                                     | (4,010 Fish)                         |            |            |     |
| Lookout Dam Powerhouse              | Trap Efficiency Release (4,012 Fish) | 7/18/2023  | 7/18/2023  | 1   |
| Lookout Point Head of Reservoir RST | Trap Install                         | 03/06/2022 | 03/06/2022 | 1   |
| Lookout Point Head of Reservoir RST | Operation                            | 03/07/2022 | 12/16/2022 | 651 |
| Lookout Point Head of Reservoir RST | Operation                            | 12/16/2022 | 12/16/2023 |     |
| Lookout Point Head of Reservoir RST | Trap Efficiency Release (993 fish)   | 04/05/2022 | 04/05/2022 | 1   |
| Lookout Point Head of Reservoir RST | Trap Efficiency Release (989 fish)   | 04/14/2022 | 04/14/2022 | 1   |
| Lookout Point Head of Reservoir RST | Trap Efficiency Release (1007 fish)  | 05/18/2022 | 05/18/2022 | 1   |
| Lookout Point Head of Reservoir RST | Trap Efficiency Release (1005 fish)  | 07/20/2022 | 07/20/2022 | 1   |
| Lookout Point Head of Reservoir RST | Trap Efficiency Release (506 fish)   | 10/27/2022 | 10/27/2022 | 1   |
| Lookout Point Head of Reservoir RST | Trap Efficiency Release (510 fish)   | 11/17/2022 | 11/17/2022 | 1   |
| Lookout Point Head of Reservoir RST | Trap Efficiency Release (510 fish)   | 12/12/2022 | 12/12/2022 | 1   |
| Lookout Point Head of Reservoir RST | Trap Efficiency Release (516 fish)   | 01/13/2023 | 01/13/2023 | 1   |
| Lookout Point Head of Reservoir RST | Trap Efficiency Release (760 fish)   | 6/2/2023   | 6/2/2023   | 1   |
| Lookout Point Head of Reservoir RST | Trap Efficiency Release (765 fish)   | 6/15/2023  | 6/15/2023  | 1   |
| Lookout Point Head of Reservoir RST | Trap Efficiency Release (769 fish)   | 6/29/2023  | 6/29/2023  | 1   |
| Lookout Point Head of Reservoir RST | Trap Efficiency Release (765 fish)   | 7/19/2023  | 7/19/2023  | 1   |
| Fall Creek Dam Tailrace RST         | Operation                            | 03/15/2022 | 07/15/2022 | 123 |
| Fall Creek Dam Tailrace RST         | Operation                            | 10/15/2023 | 03/15/2023 | 275 |
| Fall Creek Dam Tailrace RST         | Operation                            | 03/15/2023 | 07/15/2023 |     |
| Fall Creek Dam Tailrace RST         | Trap Efficiency Release (518 fish)   | 06/08/2022 | 06/08/2022 | 1   |
| Fall Creek Dam Tailrace RST         | Trap Efficiency Release (513 fish)   | 06/30/2022 | 06/30/2022 | 1   |
| Fall Creek Dam Tailrace RST         | Trap Efficiency Release (500 fish)   | 07/13/2022 | 07/13/2022 | 1   |
| Fall Creek Dam Tailrace RST         | Deployment                           | 10/15/2022 | 10/15/2022 | 1   |
| Fall Creek Dam Tailrace RST         | Trap Efficiency Release (1,000 fish) | 05/11/2023 | 05/11/2023 | 1   |
| Fall Creek Dam Tailrace RST         | Trap Efficiency Release (992 fish)   | 6/28/2023  | 6/28/2023  | 1   |
| Fall Creek Dam Tailrace RST         | Trap Efficiency Release (1006 fish)  | 7/11/2023  | 7/11/2023  | 1   |
| Fall Creek Head of Reservoir RST    | Trap and Highline Install            | 01/11/2022 | 01/11/2022 | 1   |
| Fall Creek Head of Reservoir RST    | Operation                            | 01/02/2022 | 05/31/2022 | 150 |
| Fall Creek Head of Reservoir RST    | Removal                              | 06/02/2022 | 06/02/2022 | 1   |
| Fall Creek Head of Reservoir RST    | Highline Install                     | 1/17/2023  | 1/17/2023  | 1   |
| Fall Creek Head of Reservoir RST    | Trap Install                         | 1/18/2023  | 1/18/2023  | 1   |
| Fall Creek Head of Reservoir RST    | Operation                            | 1/18/2023  | 05/30/2023 | 132 |
| Fall Creek Head of Reservoir RST    | Trap Efficiency Release (756 fish)   | 05/05/2023 | 05/05/2023 | 1   |

|                                  |   |            |            |     |
|----------------------------------|---|------------|------------|-----|
| Fall Creek Head of Reservoir RST | Trap Efficiency Release (750 fish)                  | 05/10/2023 | 05/10/2023 | 1   |
| Fall Creek Head of Reservoir RST | Trap Efficiency Release (511 fish)                  | 05/18/2023 | 05/18/2023 | 1   |
| Fall Creek Head of Reservoir RST | Trap Efficiency Release (760 fish)                  | 05/24/2023 | 05/24/2023 | 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   |
| Hills Creek Dam                  | Trap Efficiency Release (482 fish, RO Route)        | 02/25/2023 | 02/25/2023 | 1   |
| Hills Creek Dam                  | Trap Efficiency Release (528 fish, PWR Route)       | 02/25/2023 | 02/25/2023 | 1   |
| Hills Creek Dam                  | Trap Efficiency Release (506 fish, PWR Route)       | 4/26/2023  | 4/26/2023  | 1   |
| Hills Creek Dam                  | Trap Efficiency Release (505 fish, PWR Route)       | 5/17/2023  | 5/17/2023  | 1   |
| Hills Creek Dam                  | Trap Efficiency Release (508 fish, PWR Route)       | 6/3/2023   | 6/3/2023   | 1   |
| Hills Creek Dam                  | Trap Efficiency Release (760 fish, RO Route)        | 6/13/2023  | 6/13/2023  | 1   |
| Hills Creek Dam                  | Trap Efficiency Release (507 fish, PWR Route)       | 6/27/2023  | 6/27/2023  | 1   |
| Hills Creek Dam                  | Removal   | 6/30/2023  | 6/30/2023  | 1   |

**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                   | 8/1/2023                       | 8/15/2023                    | 15                       | 536                |
| Green Peter Dam                 | 3/14/2023                   | 8/1/2023                       | 8/15/2023                    | 15                       | 144                |
| Foster Dam Head of Reservoir    | 2/1/2023                    | 8/1/2023                       | 8/15/2023                    | 9                        | 185                |
| Cougar Dam PH                   | 12/1/2021                   | 8/1/2023                       | 8/15/2023                    | 13                       | 510                |
| Cougar Dam RO                   | 12/1/2021                   | 8/1/2023                       | 8/15/2023                    | 0                        | 458                |
| Cougar Dam Head of Reservoir    | 2/1/2023                    | 8/1/2023                       | 8/15/2023                    | 13                       | 170                |
| Fall Creek Dam Tailrace         | 3/15/2022                   | 8/1/2023                       | 8/15/2023                    | 0                        | 326                |
| Fall Creek Head of Reservoir    | 1/18/2023                   | 8/1/2023                       | 8/15/2023                    | 0                        | 125                |
| Dexter Dam Tailrace             | 3/7/2022                    | 8/1/2023                       | 8/15/2023                    | 14                       | 513                |
| Lookout Dam Tailrace            | 3/15/2022                   | 8/1/2023                       | 8/15/2023                    | 0                        | 469                |
| Lookout Point Head of Reservoir | 3/10/2022                   | 8/1/2023                       | 8/15/2023                    | 14                       | 536                |
| Hills Creek Dam                 | 9/16/2022                   | 8/1/2023                       | 8/15/2023                    | 0                        | 144                |

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

| Site                            | Species | Catch (Reporting Period) | Recapture (Reporting Period) | Total Catch |
|---------------------------------|---------|--------------------------|------------------------------|-------------|
| Big Cliff Dam                   | CHS     | 21                       | 42                           | 420         |
| Big Cliff Dam                   | STW     | 4                        | 0                            | 237         |
| Green Peter Tailrace            | CHS     | 0                        | 0                            | 100         |
| Green Peter Tailrace            | STW     | 0                        | 0                            | 11          |
| Foster Dam Head of Reservoir    | CHS     | 0                        | 0                            | 576         |
| Foster Dam Head of Reservoir    | STW     | 0                        | 0                            | 79          |
| Cougar Dam                      | CHS     | 20                       | 0                            | 928         |
| Cougar Dam Head of Reservoir    | CHS     | 225                      | 0                            | 5480        |
| Fall Creek Dam Tailrace         | CHS     | 0                        | 0                            | 61          |
| Fall Creek Head of Reservoir    | CHS     | 0                        | 0                            | 148         |
| Dexter Dam Tailrace             | CHS     | 0                        | 3                            | 20          |
| Lookout Dam Tailrace            | CHS     | 0                        | 0                            | 49          |
| Lookout Point Head of Reservoir | CHS     | 0                        | 0                            | 130         |
| Hills Creek Dam                 | CHS     | 0                        | 0                            | 364         |

## Summary of Rotary Screw Trap Data

Rotary screw traps (RSTs) have been operated at eleven locations in the southern Willamette River watershed. For this reporting period, traps were operated at the following eight locations: Big Cliff Dam, Green Peter Dam Tailrace, Foster Dam Head of Reservoir- South Santiam River, Cougar Dam, Cougar Dam Head of Reservoir, Dexter Dam Tailrace, Lookout Dam Tailrace, and Lookout Point Head of Reservoir. The trap at the Fall Creek Head of Reservoir site was removed at the end of monitoring period on May 31<sup>st</sup>. The traps at Hills Creek Dam were raised into the non-sampling position on June 30<sup>th</sup> at the end of the monitoring period. The trap at Fall Creek Dam was raised to the non-sampling position on July 15<sup>th</sup> at the end of the monitoring period.

Sampling at Lookout Dam Tailrace concluded on July 31, 2023 and is now being conducted under a separate contract. Lookout Dam Tailrace sampling will be reported in the Willamette Valley Downstream Fish Passage report under contract W9127N19D0009 from August 1<sup>st</sup>, 2023 on. Sampling duration and total catch for the RST contract are summarized in tables 1-3 above.

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 February 16<sup>th</sup>, 2022 to March 14<sup>th</sup>, 2022. Sampling resumed on March 15<sup>th</sup>, 2022 in accordance with Task 2.2.

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

Sampling start dates are included in Table 2, and season total collection numbers are displayed in Table 3. The locations of the RST's are depicted in Figures 1 through 11.



Imagery Source: 2021, ESRI.



**FIGURE 1**  
Big Cliff Dam

● RST Locations

500 Feet





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

● RST Locations

500 Feet





Imagery Source: 2021, ESRI.



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

● RST Locations

———— 500 Feet



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



**FIGURE 4**  
Cougar Dam

● RST Locations

500 Feet





Imagery Source: 2020, NAIP.



**FIGURE 5**  
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 6**  
Fall Creek Dam Tailrace

● RST Locations

500 Feet





**FIGURE 7**  
Fall Creek Head of Reservoir

● RST Locations

500 Feet





Imagery Source: 2021, ESRI.



**FIGURE 8**  
Dexter Dam Tailrace

● RST Locations

500 Feet



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



Imagery Source: 2021, ESRI.



**FIGURE 9**  
Lookout Dam Tailrace

● RST Locations

500 Feet



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



**FIGURE 10**  
Lookout Point Head of Reservoir

● RST Locations

500 Feet



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



**FIGURE 11**  
Hills Creek Dam

● RST Locations

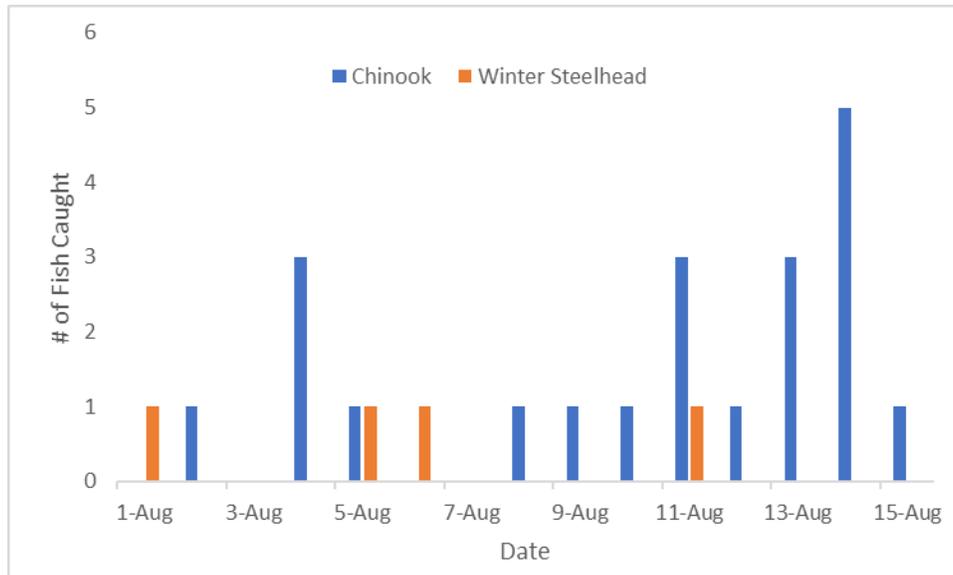
500 Feet



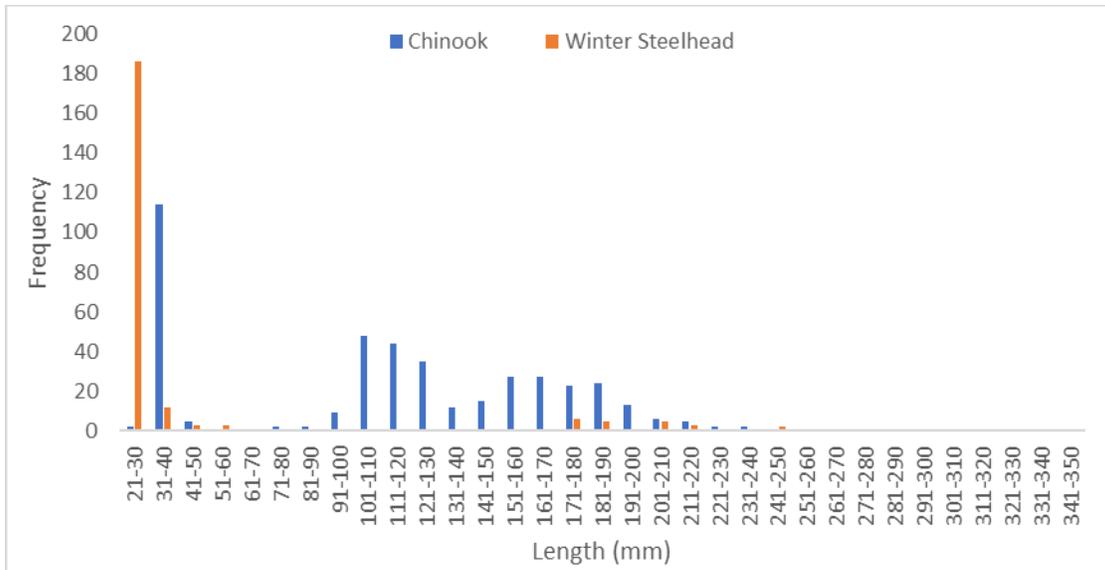
## North Santiam – Big Cliff Dam

### Target Species

This reporting period began on August 1<sup>st</sup> and ended on August 15<sup>th</sup>. There were a total of 21 Chinook Salmon (CHS) and 4 Winter Steelhead (STW) captured during the 15-day sampling period (Figure 12). Sampling duration was 100% for the RST. Table 4 provides life stage, length, and weight data for all Chinook Salmon and Winter Steelhead that have been caught at the Big Cliff Dam site to-date and for the reporting period. Figure 13 shows length frequency data to-date.



**Figure 12. Chinook and Winter Steelhead Captured per day 08/01/2023 to 08/15/2023 (Big Cliff).**



*\*Figure does not include fish without heads*

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

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

| To-Date (Since Jan. 1, 2023) |       |         |            |           |              |     |       |             |       |      |
|------------------------------|-------|---------|------------|-----------|--------------|-----|-------|-------------|-------|------|
| Site                         | Route | Species | Life stage | Collected | Length (mm)* |     |       | Weight (g)* |       |      |
|                              |       |         |            |           | Min          | Max | Mean  | Min         | Max   | Mean |
| Big Cliff                    | PWR   | CHS     | Fry        | 120       | 29           | 47  | 36.2  | N/A         | N/A   | N/A  |
|                              |       | CHS     | Parr       | 13        | 49           | 112 | 92.5  | 1.1         | 15.8  | 9.4  |
|                              |       | CHS     | Smolt      | 287       | 85           | 340 | 147.4 | 7.4         | 328.5 | 40.3 |
|                              |       | STW     | Fry        | 201       | 24           | 56  | 28.6  | N/A         | N/A   | N/A  |
|                              |       | STW     | Parr       | 5         | 47           | 119 | 70.0  | 1.3         | 49.5  | 14.7 |
|                              |       | STW     | Smolt      | 31        | 155          | 335 | 212.8 | 21.5        | 254.4 | 94.0 |

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

| August 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      | 21        | 104          | 235 | 135.9 | 11.2        | 120.9 | 31.7 |
|                   |       | STW     | Fry        | 4         | 25           | 42  | 34.0  | N/A         | N/A   | N/A  |
|                   |       | STW     | Parr       | 0         | N/A          | N/A | N/A   | N/A         | N/A   | N/A  |
|                   |       | STW     | Smolt      | 0         | N/A          | N/A | N/A   | N/A         | N/A   | N/A  |

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

### Trapping Efficiency

A total of 474 bismarck brown dyed and adipose clipped juvenile hatchery chinook were released on 8/3/2023 below Big Cliff Dam. 42 fish were recaptured in the 8 ft trap for a trapping efficiency of 8.9%.

| Big Cliff Dam | Release # | Recapture # | Capture Efficiency |
|---------------|-----------|-------------|--------------------|
| 8ft Trap      | 474       | 42          | 8.9% (42/474)      |

### 24-Hour Post Collection Holding Trial

20 Spring Chinook and 4 Winter Steelhead were captured during the current reporting period and held for 24 hours. 3 Chinook (15.0%) and 0 Winter Steelhead (0.0%) died in holding.

### Injuries and Copepod Infection

Partial descaling <20% was observed in 14 of the 21 Chinook captured (66.7%), 4 displayed descaling >20% (19.0%), 12 displayed body injury (57.1%), 1 had eye injury (4.8%), 17 had copepods present in the branchial cavity (81.0%) and 15 had copepods on fins (71.4%). 0 Chinook displayed gas bubble disease (0.0%). There was 1 mortality (4.8%).

Partial descaling <20% was observed on 0 of the 4 Winter Steelhead captured (0.0%) and 0 displayed descaling >20% (0.0%), 1 displayed body injury (25.0%), 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          | 21               | 14          | 4           | 12                   | 1                   | 17                  | 15                  | 1           |
|               | Winter Steelhead | 4                | 0           | 0           | 1                    | 0                   | 0                   | 0                   | 0           |

### Collected DNA and Scale Samples

DNA were collected from 21 Spring Chinook and 0 Winter Steelhead for the reporting period. Scales were collected from 21 Spring Chinook and 0 Winter Steelhead. The other targets captured did not meet length criteria for DNA sampling or were too descaled/damaged to collect samples.

### PIT Tags

0 Spring Chinook and 0 Winter Steelhead were PIT tagged during this reporting period. 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

10 non-targets were captured during this sampling period. A summary of non-target species catch and mortality numbers for 2023 are listed in Table 6.

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

| Species                    | PWR Capture | PWR Mortality | Season Total | Season Total Mortality |
|----------------------------|-------------|---------------|--------------|------------------------|
| Bluegill                   | 0           | 0             | 24           | 3                      |
| Brown Bullhead             | 1           | 0             | 5            | 1                      |
| Dace                       | 0           | 0             | 1            | 0                      |
| Chinook (Adult)            | 0           | 0             | 2            | 0                      |
| Chinook (clipped)          | 5           | 0             | 5            | 0                      |
| Cutthroat Trout            | 0           | 0             | 0            | 0                      |
| Kokanee                    | 2           | 0             | 158          | 18                     |
| Kokanee (clipped)          | 0           | 0             | 11           | 3                      |
| <i>O. mykiss</i> (clipped) | 0           | 0             | 6            | 2                      |
| Pumpkinseed                | 1           | 0             | 50           | 6                      |
| Unknown                    | 0           | 0             | 1            | 1                      |
| Mountain Whitefish         | 1           | 0             | 5            | 0                      |
| Sculpin                    | 0           | 0             | 0            | 0                      |
| <b>Totals</b>              | <b>10</b>   | <b>0</b>      | <b>268</b>   | <b>34</b>              |

## Stream Statistics

Basic stream statistics at the Big Cliff Dam site were calculated from data downloaded from U.S. Geological Survey stream gauge numbers 14181410 and 14181500. Gauge height (feet) is the only metric provided at gauge 14181410. Total dissolved gas (TDG) saturation data was received from gauge 14181500, 1 rkm downstream of the trap. During the reporting period, daily maximum values for instantaneous gauge height ranged from 1,109.0 to 1,109.3 feet (mean: 1,109.0 feet) during the reporting period. Figure 14 shows instantaneous gauge height.

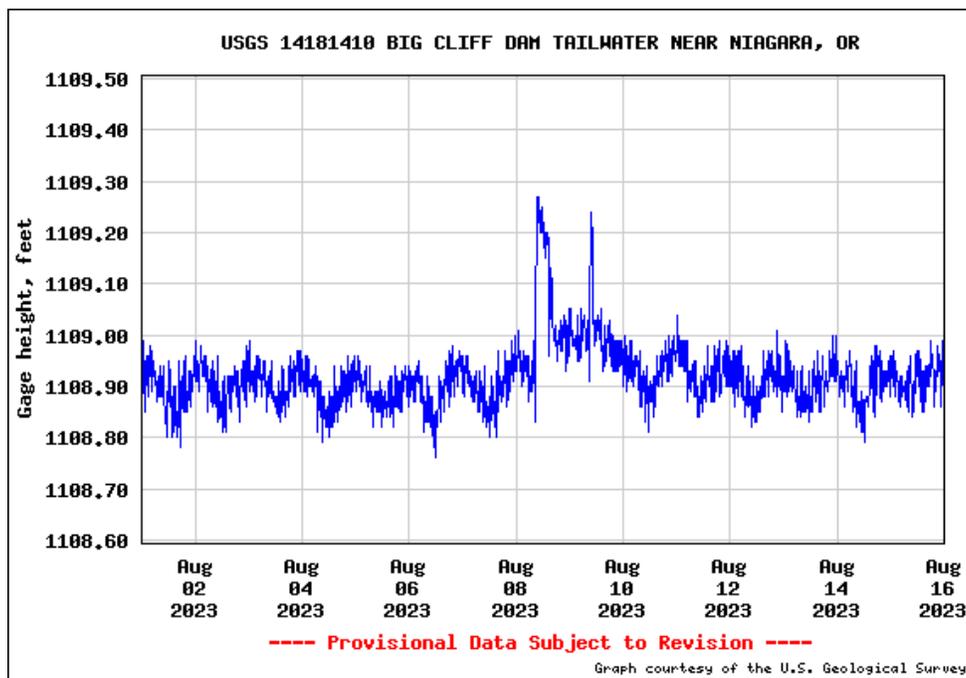
Total dissolved gas saturation ranged from 100 to 120% during the reporting period (mean: 103.3%). Figure 15 shows total dissolved gas saturation.

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

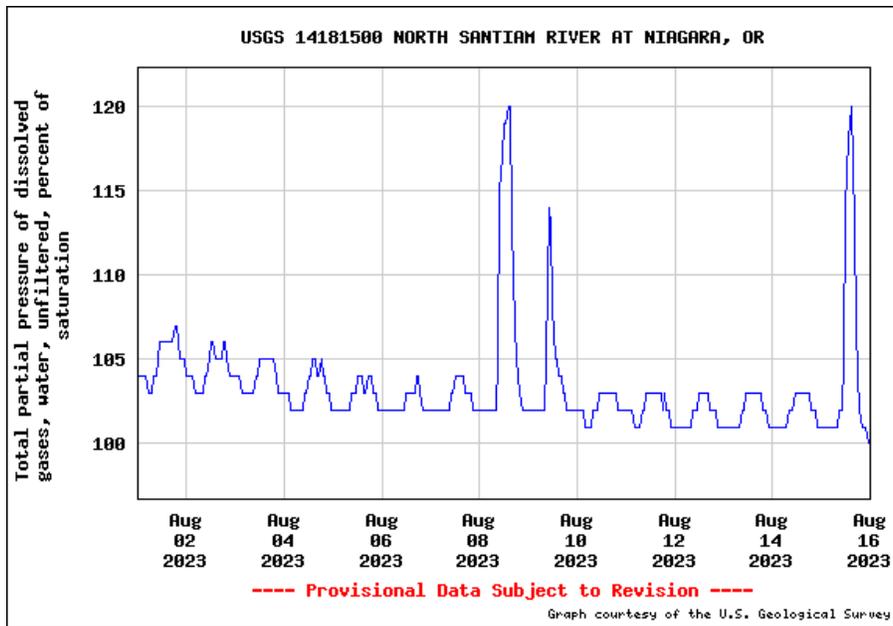
Flows through the Powerhouse and Spill during the reporting period averaged 1,078.7 and 34.5 cubic feet per second (cfs), respectively (Figure 17). Catch per unit of effort (CPUE) data are summarized in Table 7, Detroit and Big Cliff forebay elevations and TDG at Niagara are shown in appendix B. Discharge and capture data for the duration of monitoring efforts at this location are provided in Appendix B.

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

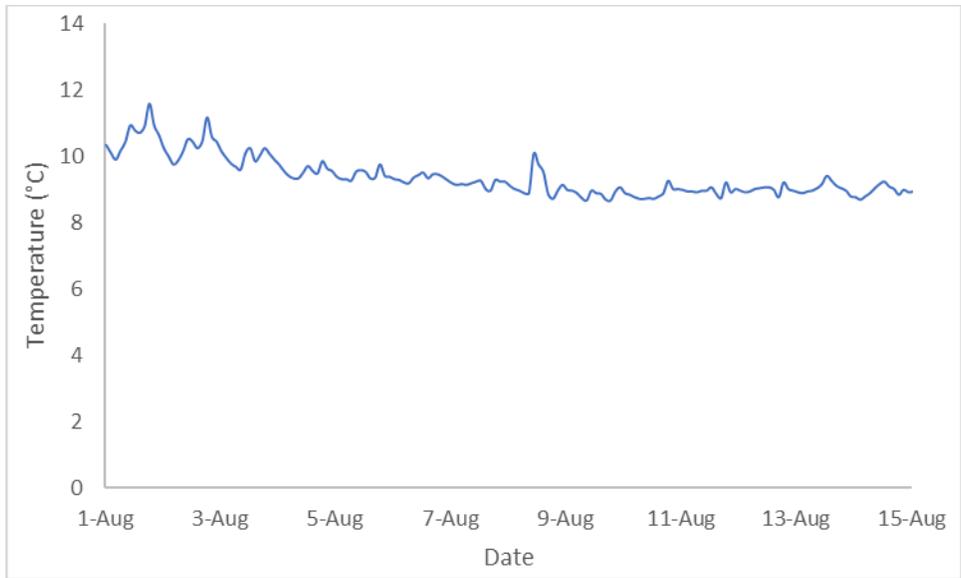
| Description    | Chinook | Winter Steelhead |
|----------------|---------|------------------|
| Catch          | 21      | 4                |
| Effort (hrs)   | 337.3   | 337.3            |
| CPUE (fish/hr) | 0.062   | 0.012            |



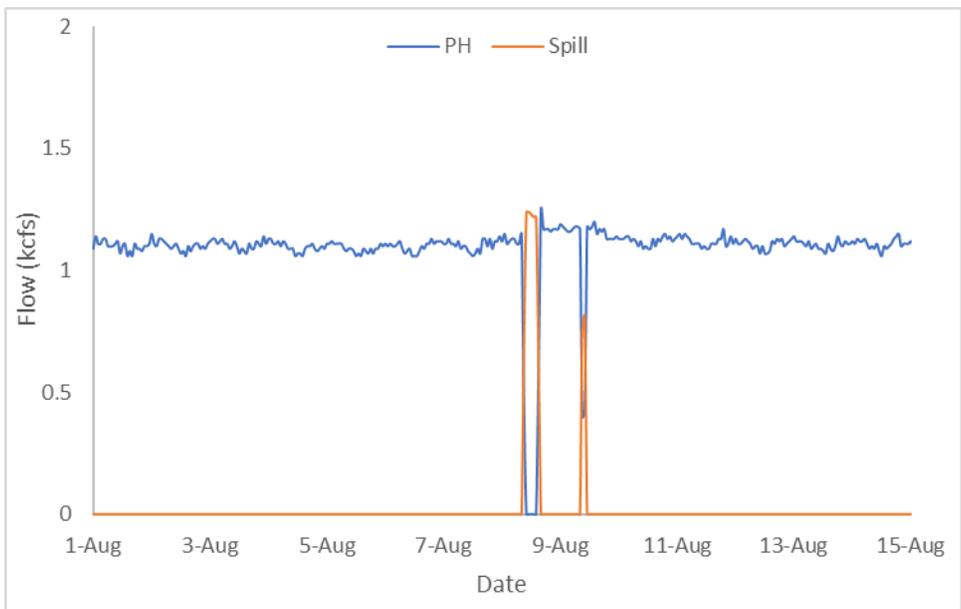
**Figure 14. Gauge height (ft); below Big Cliff Dam.**



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



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

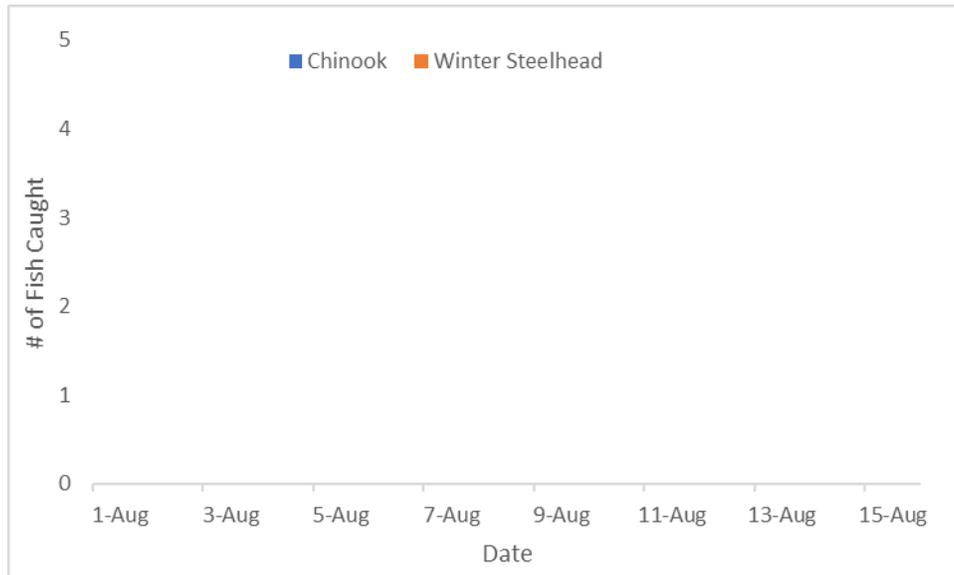


**Figure 17. Hourly Flows PWR vs. Spill (Big Cliff Dam).**

## Middle Fork Santiam– Green Peter Tailrace

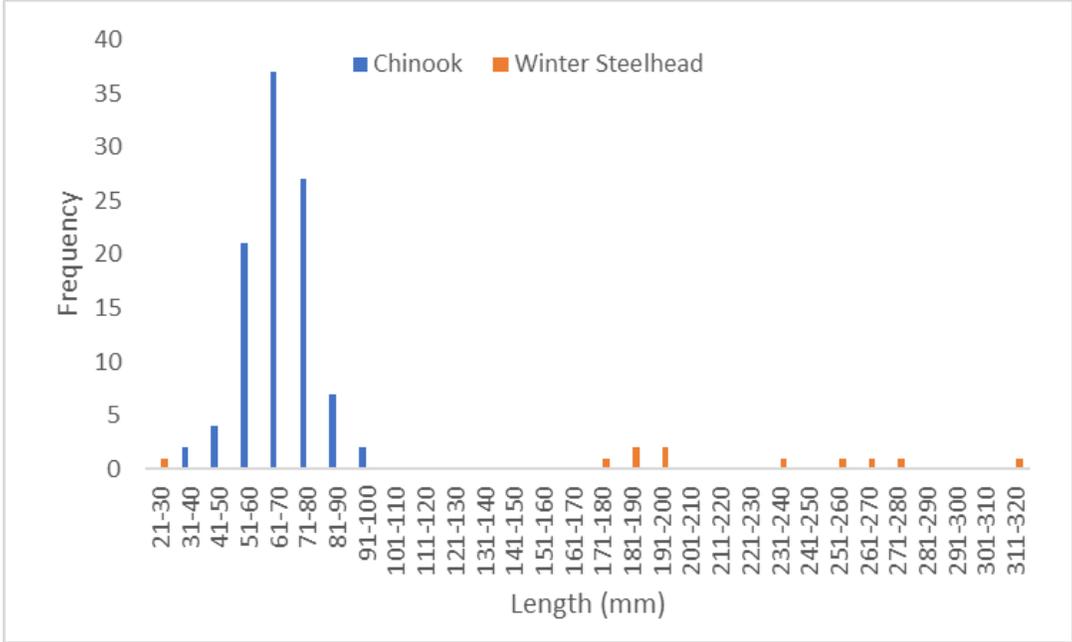
### Target Species

This reporting period began on August 1<sup>st</sup> and ended on August 15<sup>th</sup>. 0 Chinook Salmon (CHS) and 0 Winter Steelhead (STW) were captured during the 15-day sampling period. Sampling duration was 100% for the RST. Table 8 provides life stage, length, and weight data for all target species that have been caught at the Green Peter Dam site to-date and for the reporting period. Figure 18 shows the daily capture numbers for Chinook and Winter Steelhead and Figure 19 shows length frequency data to date.



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

**Figure 18. Chinook and Winter Steelhead Captured Per Day 08/01/2023 to 08/15/2023 (Green Peter Tailrace- Middle Santiam).**



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

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

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

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

| August 1-15, 2023        |       |         |            |           |              |     |      |             |     |      |
|--------------------------|-------|---------|------------|-----------|--------------|-----|------|-------------|-----|------|
| Site                     | Route | Species | Life stage | Collected | Length (mm)* |     |      | Weight (g)* |     |      |
|                          |       |         |            |           | Min          | Max | Mean | Min         | Max | Mean |
| Green Peter Dam Tailrace | Spill | CHS     | Fry        | 0         | N/A          | N/A | N/A  | N/A         | N/A | N/A  |
|                          |       | CHS     | Parr       | 0         | N/A          | N/A | N/A  | N/A         | N/A | N/A  |
|                          |       | CHS     | Smolt      | 0         | N/A          | N/A | N/A  | N/A         | N/A | N/A  |
|                          |       | STW     | Fry        | 0         | N/A          | N/A | N/A  | N/A         | N/A | N/A  |
|                          |       | STW     | Parr       | 0         | N/A          | N/A | N/A  | N/A         | N/A | N/A  |
|                          |       | STW     | Smolt      | 0         | N/A          | N/A | N/A  | N/A         | N/A | N/A  |

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

### Trapping Efficiency

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

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

### 24-Hour Post Collection Holding Trial

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

## Injuries and Copepod Infection

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

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

A summary of injuries observed on Chinook Salmon and Winter Steelhead during the reporting period is provided in Table 9, and target species injuries for the duration of the season are provided in Appendix A.

**Table 9. Number of Descaled, Bodily/Eye Injured, Copepod Infected and Dead Chinook Salmon and Winter Steelhead for Sampling Period (Green Peter Tailrace- Middle Santiam River).**

| Site                 | Species | # Collected | # DSC* <20% | # DSC* >20% | # with Body Injuries | # with Eye Injuries | # with COP* In B.C. | # with COP* on Fins | Mortalities |
|----------------------|---------|-------------|-------------|-------------|----------------------|---------------------|---------------------|---------------------|-------------|
| Green Peter Tailrace | CHS     | 0           | 0           | 0           | 0                    | 0                   | 0                   | 0                   | 0           |
|                      | STW     | 0           | 0           | 0           | 0                    | 0                   | 0                   | 0                   | 0           |

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

## Collected DNA and Scale Samples

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

## PIT Tags

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

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

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

| Species                    | Capture  | Mortality | Season Total Capture | Season Total Mortality |
|----------------------------|----------|-----------|----------------------|------------------------|
| Bluegill                   | 0        | 0         | 121                  | 66                     |
| Crappie                    | 0        | 0         | 28                   | 17                     |
| Cutthroat Trout            | 0        | 0         | 1                    | 0                      |
| Kokanee                    | 1        | 0         | 2517                 | 1398                   |
| Kokanee (clipped)          | 0        | 0         | 10                   | 2                      |
| Largemouth Bass            | 0        | 0         | 1                    | 0                      |
| <i>O. mykiss</i> (clipped) | 0        | 0         | 26                   | 6                      |
| Smallmouth Bass            | 0        | 0         | 5                    | 3                      |
| Dace                       | 0        | 0         | 1                    | 1                      |
| Sculpin                    | 0        | 0         | 2                    | 1                      |
| Unknown                    | 0        | 0         | 1                    | 1                      |
| <b>Totals</b>              | <b>1</b> | <b>0</b>  | <b>2713</b>          | <b>1495</b>            |

### Stream Statistics

Basic stream statistics at the Green Peter Dam Tailrace- Middle Santiam site were calculated from data downloaded from the U.S. Geological Survey stream gage number 14186110 and 14186200. Gage height (feet) is the only metric provided at gage 14186110. Total dissolved gas saturation data was received from gage number 14186200, 50 meters upstream of the trap. During the reporting period, daily maximum values for instantaneous gage height ranged from 698.6 feet to 702.2 feet (mean: 699.8 feet). Figure 20 shows instantaneous gage height.

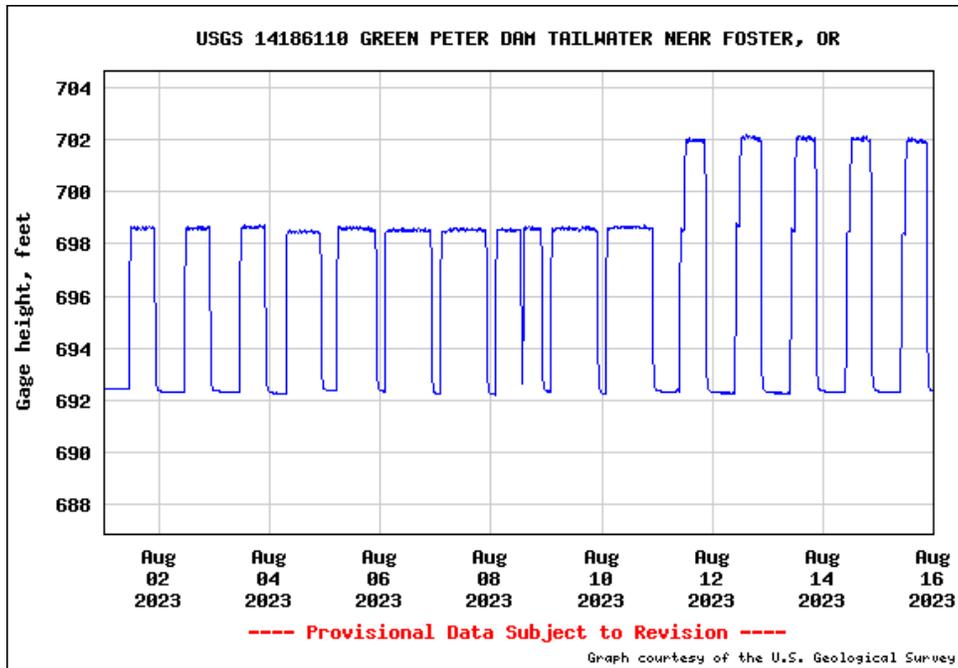
Total dissolved gas saturation ranged from 102 to 110% (mean: 103.1%) during the reporting period. Figure 21 shows the total dissolved gas saturation.

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

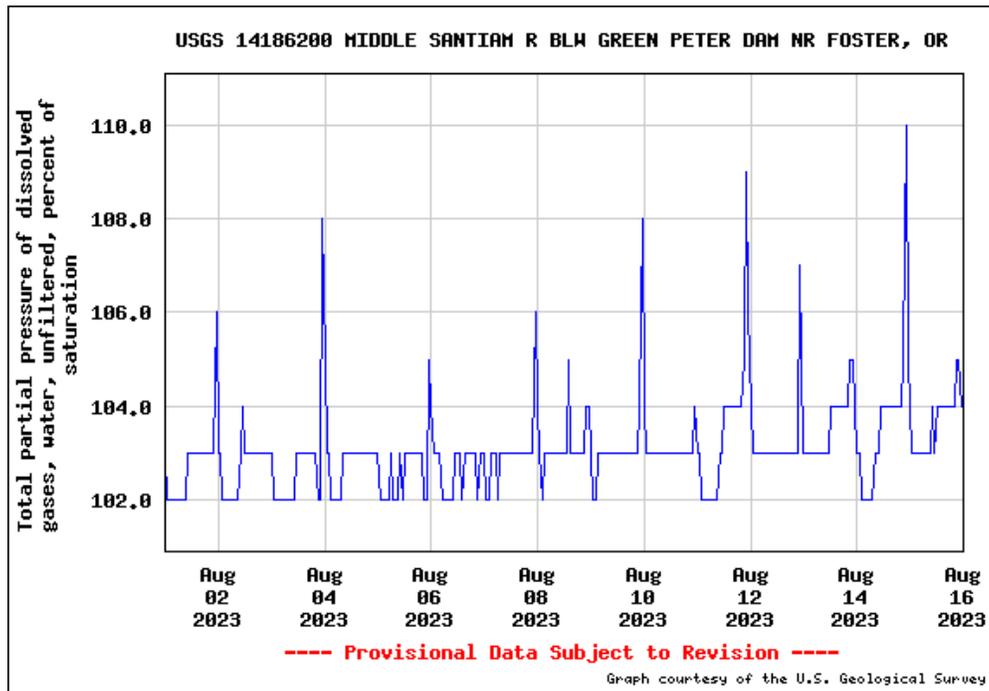
Flows through the Powerhouse and Spillway during the reporting period averaged 1,450.4 and 19.6 cubic feet per second (cfs) respectively (Figure 23). Catch per unit of effort (CPUE) data are summarized in Table 11. Discharge and capture data for the duration of monitoring efforts at this location are provided in Appendix B.

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

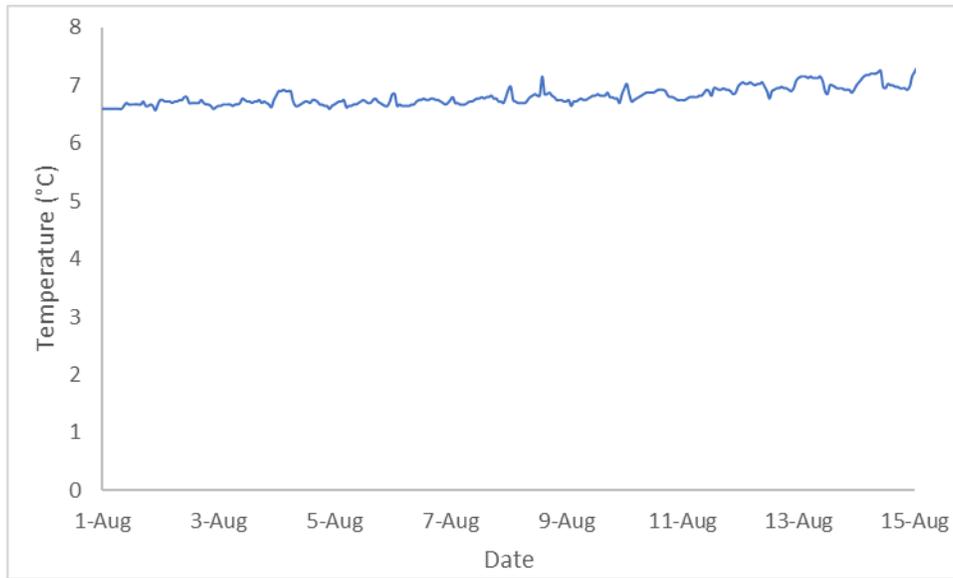
| Description    | Chinook | Winter Steelhead |
|----------------|---------|------------------|
| Catch          | 0       | 0                |
| Effort (hrs)   | 358.8   | 358.8            |
| CPUE (fish/hr) | 0       | 0                |



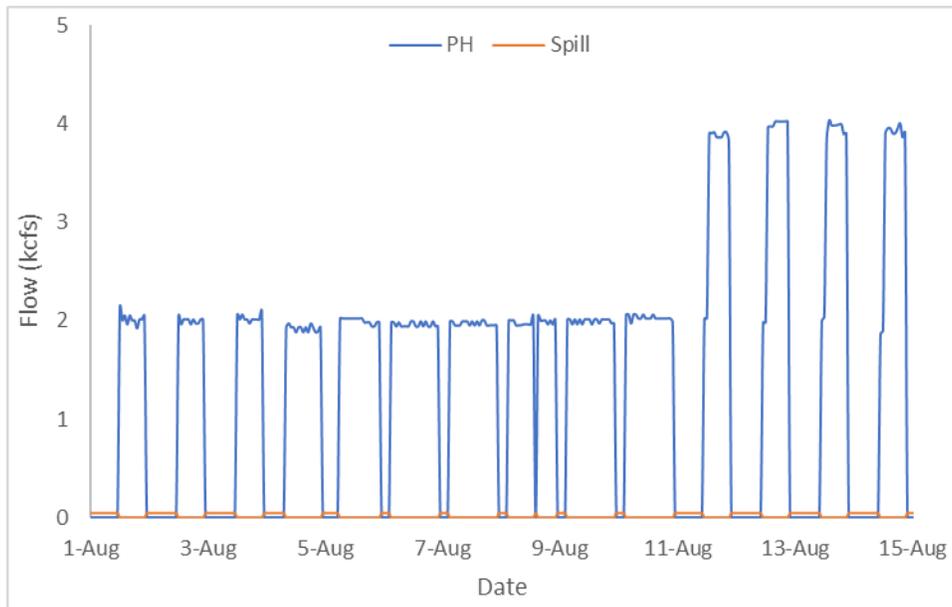
**Figure 20. Gage Height (feet); below Green Peter Dam.**



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



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

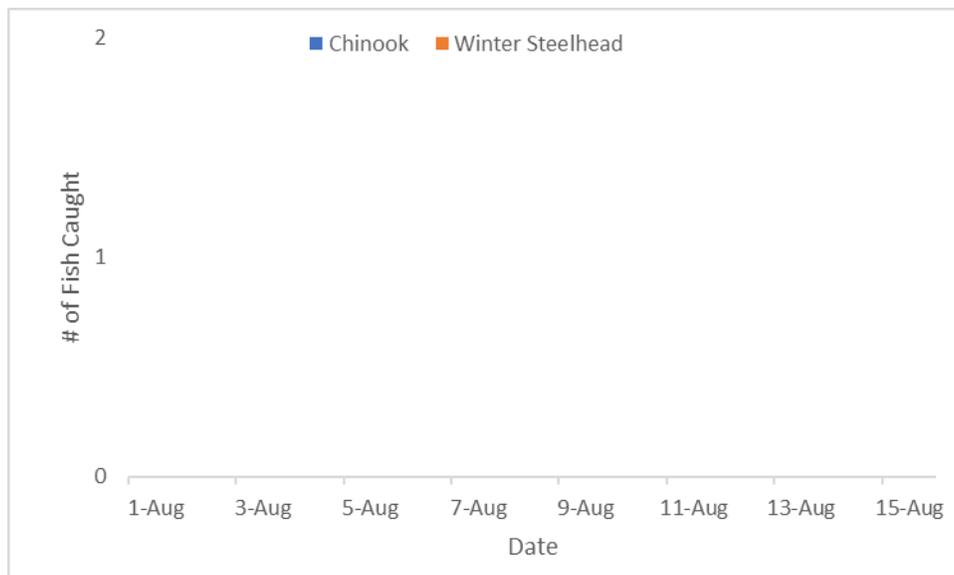


**Figure 23. Hourly Flows PWR vs. Spill (Green Peter Dam).**

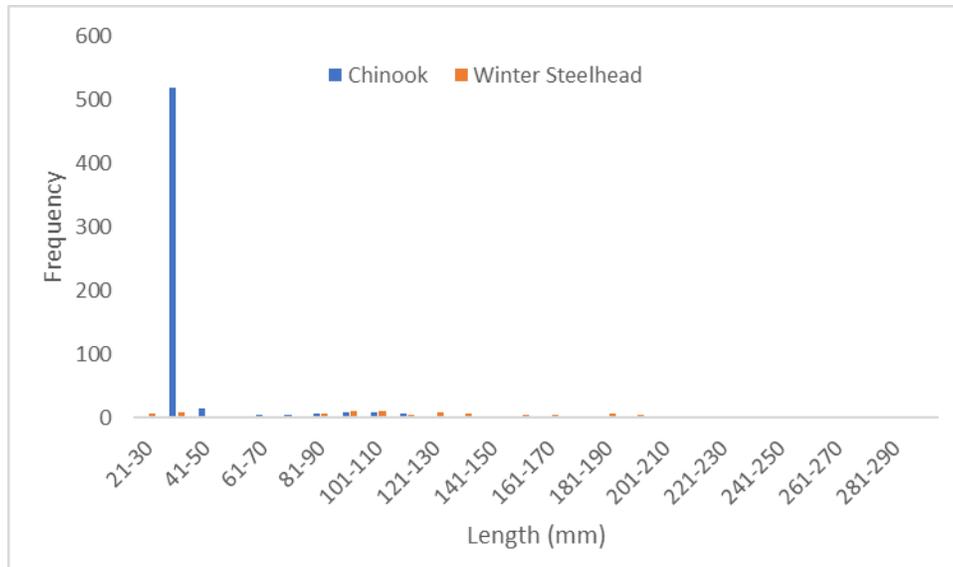
## South Fork Santiam– Foster Dam Head of Reservoir

### Target Species

This reporting period began on August 1<sup>st</sup> and ended on August 15<sup>th</sup>. There were 0 Chinook salmon (CHS) and 0 Winter Steelhead (STW) captured during the 15-day sampling period. The 5 foot trap was raised to a non-sampling position on August 10<sup>th</sup> due to temperature thresholds. Highway 20 at Cascadia has also been issued a Level 2 evacuation due to the Wiley Creek Fire. The trap did not sample for the remainder of the reporting period. Sampling duration was 60.0% for the RST. Table 12 provides life stage, length, and weight data for all Chinook Salmon and Winter Steelhead that have been caught at the Foster Dam Head of Reservoir- South Santiam site to-date and for the reporting period. Figure 24 shows the daily capture numbers for Chinook and Winter Steelhead and Figure 25 shows length frequency data to-date for both species.



**Figure 24. Chinook and Winter Steelhead Captured Per Day 08/01/2023 to 08/15/2023 (Foster Dam Head of Reservoir- South Santiam).**



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

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

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

| August 1-15, 2023            |      |         |            |           |              |     |      |             |     |      |
|------------------------------|------|---------|------------|-----------|--------------|-----|------|-------------|-----|------|
| Site                         | Trap | Species | Life stage | Collected | Length (mm)* |     |      | Weight (g)* |     |      |
|                              |      |         |            |           | Min          | Max | Mean | Min         | Max | Mean |
| Foster Dam Head of Reservoir | 5 ft | CHS     | Fry        | 0         | N/A          | N/A | N/A  | N/A         | N/A | N/A  |
|                              |      | CHS     | Parr       | 0         | N/A          | N/A | N/A  | N/A         | N/A | N/A  |
|                              |      | CHS     | Smolt      | 0         | N/A          | N/A | N/A  | N/A         | N/A | N/A  |
|                              |      | STW     | Fry        | 0         | N/A          | N/A | N/A  | N/A         | N/A | N/A  |
|                              |      | STW     | Parr       | 0         | N/A          | N/A | N/A  | N/A         | N/A | N/A  |
|                              |      | STW     | Smolt      | 0         | N/A          | N/A | N/A  | N/A         | N/A | N/A  |

## Trapping Efficiency

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

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

## Run of River Trapping Efficiency

Run of river fish captured in the RST have been caudal clipped and released upstream to perform run of river trapping efficiency trials. Only fish large enough to be safely caudal clipped have been used for run of river efficiency trials. This year, 27 Spring Chinook and 9 Winter Steelhead have been caudal clipped and released upstream for the purpose of conducting run of river trapping efficiency trials. Release numbers and recaptures for this reporting period are summarized below.

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

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

## Injuries and Copepod Infection

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

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

A summary of injuries observed during the reporting period are provided in table 13, and for the duration of the season are provided in Appendix A.

**Table 13. Number of Descaled, Bodily/Eye Injured, Copepod Infected and Dead Chinook Salmon and Winter Steelhead for Sampling Period (Foster Dam Head of Reservoir- South Santiam).**

| Site                         | Species          | # Fish Collected | # DSC* <20% | # DSC* >20% | # with Body Injuries | # with Eye Injuries | # with COP* In B.C. | # with COP* on Fins | Mortalities |
|------------------------------|------------------|------------------|-------------|-------------|----------------------|---------------------|---------------------|---------------------|-------------|
| Foster Dam Head of Reservoir | Chinook          | 0                | 0           | 0           | 0                    | 0                   | 0                   | 0                   | 0           |
|                              | Winter Steelhead | 0                | 0           | 0           | 0                    | 0                   | 0                   | 0                   | 0           |

## Collected DNA and Scale Samples

DNA was collected from 0 Spring Chinook and 0 Winter Steelhead. Scales were collected from 0 Spring Chinook and 0 Winter Steelhead. The other targets captured did not meet length criteria for DNA sampling or were too descaled/damaged to collect samples.

## PIT Tags

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

## Non-Target Species

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

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

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

## Stream Statistics

Basic stream statistics at the Foster Dam Head of Reservoir- South Santiam site were calculated from data downloaded from the U.S. Geological Survey stream gauge number 14185000. Discharge (cfs) and Gauge height (feet) are available at this gauge. During the reporting period, daily maximum values for instantaneous discharge ranged from 36.6 cfs to 45.7 cfs (mean: 41.1 cfs). Figure 26 shows instantaneous discharge.

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

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

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

| Description    | Chinook | Winter Steelhead |
|----------------|---------|------------------|
| Catch          | 0       | 0                |
| Effort (hrs)   | 239.6   | 239.6            |
| CPUE (fish/hr) | 0       | 0                |

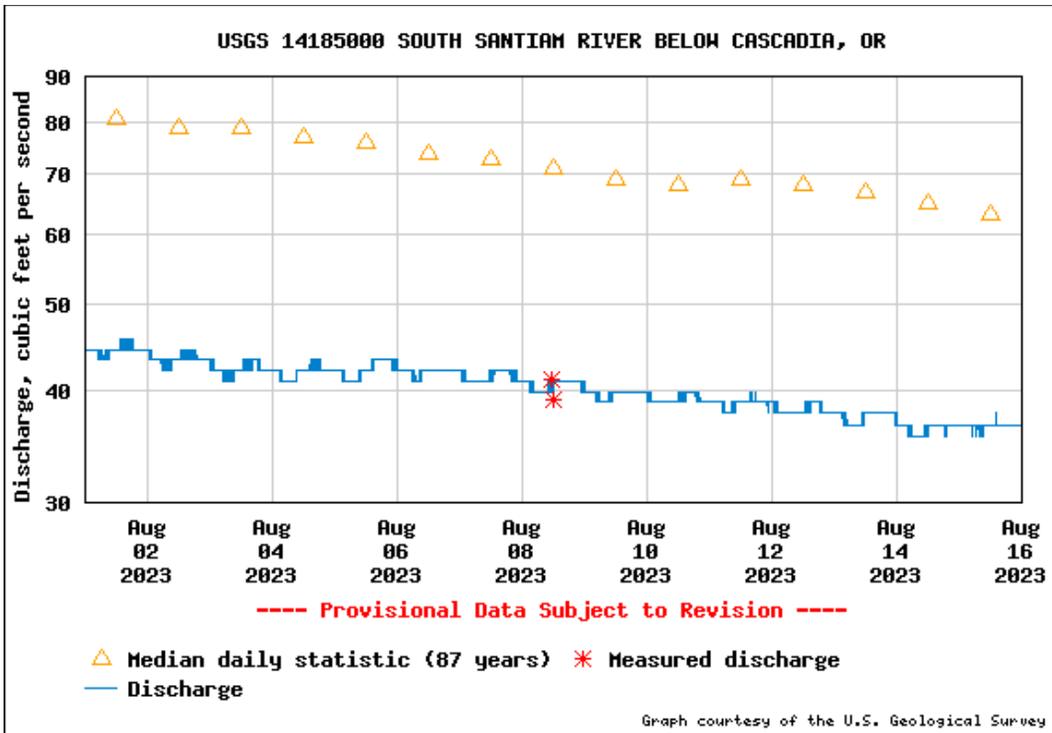


Figure 26. Discharge (cfs); Foster Dam Head of Reservoir – S. Santiam).

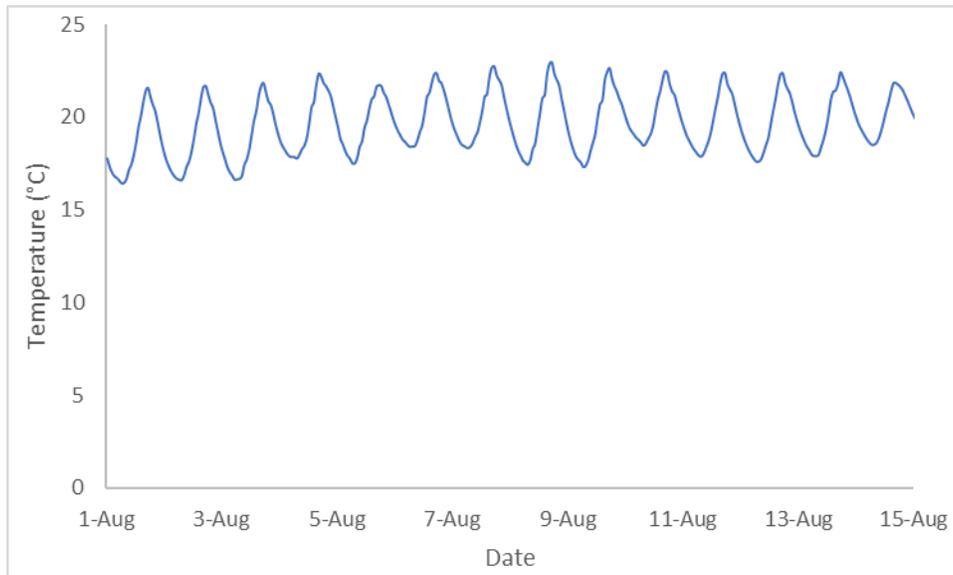
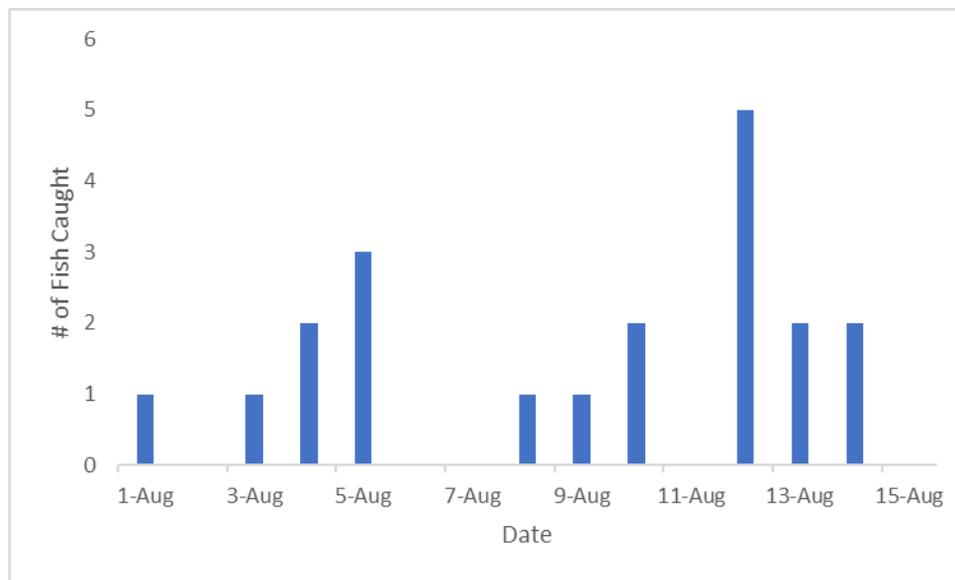


Figure 27. Temperature at RST (Foster Dam Head of Reservoir – S. Santiam).

## South Fork McKenzie – Cougar Dam

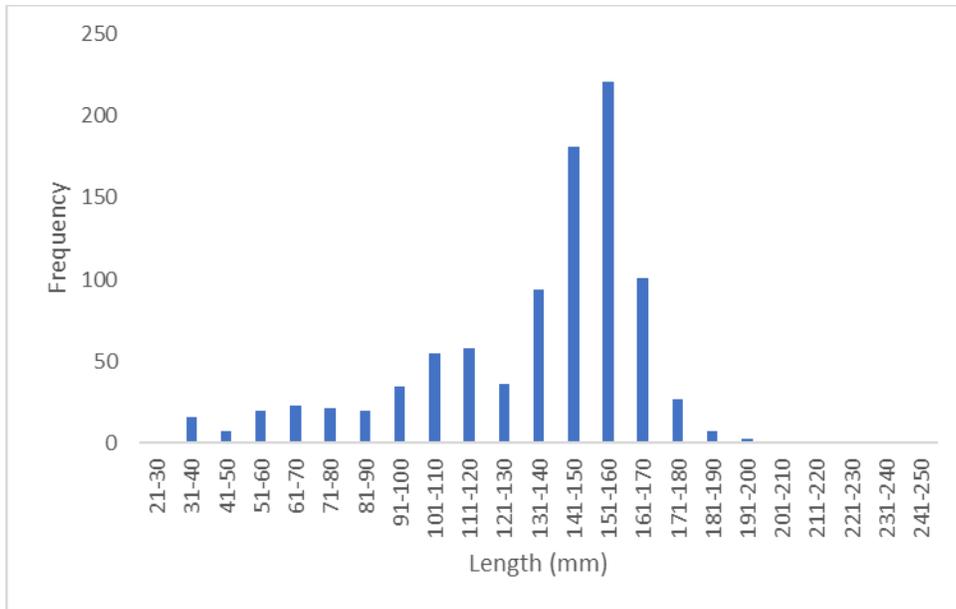
### Target Species

This reporting period began on August 1<sup>st</sup> and ended on August 15<sup>th</sup>. There were a total of 20 Chinook Salmon (CHS) captured during the 15-day sampling period. The Cougar Dam RO trap was removed on June 8<sup>th</sup> to allow for resurfacing of the regulating outlet. The powerhouse traps were raised to a non-sampling position on August 14<sup>th</sup> due to the Lookout Fire and Level 3 evacuations at the intersection of highway 126 and NF-19. A Level 1 evacuation has been ordered for Cougar Dam. The air quality index has also exceeded our safety thresholds. We are monitoring this fire daily for the safety of our crew. Sampling duration was 0% for the RO RST and 86.7% for the Powerhouse RSTs. Table 16 provides life stage, length, and weight data for all Chinook salmon that have been caught at the Cougar Dam site to-date and for the reporting period. Figure 28 shows the daily capture numbers for chinook and Figure 29 shows length frequency data to-date.



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

**Figure 28. Chinook Captured Per Day 08/01/2023 to 08/15/2023 (Cougar Dam).**



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

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

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

| To-Date (Since Jan. 1, 2023) |       |         |            |           |              |     |       |             |      |      |
|------------------------------|-------|---------|------------|-----------|--------------|-----|-------|-------------|------|------|
| Site                         | Route | Species | Life stage | Collected | Length (mm)* |     |       | Weight (g)* |      |      |
|                              |       |         |            |           | Min          | Max | Mean  | Min         | Max  | Mean |
| Cougar Dam                   | RO    | CHS     | Fry        | 18        | 33           | 52  | 38.1  | N/A         | N/A  | N/A  |
|                              |       | CHS     | Parr       | 53        | 62           | 135 | 103.0 | 3.0         | 29.2 | 12.9 |
|                              |       | CHS     | Smolt      | 720       | 90           | 195 | 147.2 | 8.1         | 72.1 | 35.2 |
| Cougar Dam                   | PWR   | CHS     | Fry        | 7         | 33           | 55  | 43.7  | N/A         | N/A  | N/A  |
|                              |       | CHS     | Parr       | 81        | 50           | 103 | 72.9  | 1.1         | 15.0 | 5.1  |
|                              |       | CHS     | Smolt      | 49        | 65           | 196 | 121.1 | 3.4         | 80.0 | 23.7 |

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

| August 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       | 0         | N/A          | N/A | N/A  | N/A         | N/A  | N/A  |
|                   |       | CHS     | Smolt      | 0         | N/A          | N/A | N/A  | N/A         | N/A  | N/A  |
| Cougar Dam        | PWR   | CHS     | Fry        | 0         | N/A          | N/A | N/A  | N/A         | N/A  | N/A  |
|                   |       | CHS     | Parr       | 9         | 61           | 80  | 68.9 | 2.2         | 5.8  | 4.0  |
|                   |       | CHS     | Smolt      | 11        | 65           | 111 | 90.4 | 3.4         | 16.8 | 9.1  |

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

### Trapping Efficiency

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

| Cougar Dam | Release # | Recapture # | Capture Efficiency |
|------------|-----------|-------------|--------------------|
| PWR Route  | 510       | 61          | 12.0%<br>(61/510)  |

### Run of River Trapping Efficiency

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

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

## 24-Hour Post Collection Holding Trial

A total of 16 Chinook captured in the RSTs, 16 fish from the PWR RST and 0 from the RO RST, were held for ~24 hours in holding tanks and then evaluated for survival rates. In total, 0 of the 16 fish (0.0%) held during this period died during holding. 0 of the 16 PWR RST captured fish (0.0%) died during holding and 0 of the 0 RO RST captured fish (0.0%) died during holding.

1 target fish was not held on August 14<sup>th</sup> as the powerhouse traps were raised due to safety concerns regarding the Lookout Fire.

## Injuries and Copepod Infection

Partial descaling <20% was observed on 15 of the 20 Chinook collected at the PWR RST (75.0%). Descaling >20% was observed on 0 of the Chinook (0.0%). There were 11 fish with bodily injuries (55.0%) and 0 had eye injuries (0.0%). 2 fish had copepods present in the branchial cavity (10.0%) and 7 had copepods present on fins (35.0%). 0 fish displayed Gas Bubble Disease (0.0%). There were 2 chinook mortalities collected in the PWR RST (10.0%).

Partial descaling <20% was observed on 0 of the 0 Chinook collected at the RO RST (0.0%). Descaling >20% was observed on 0 of the Chinook (0.0%). There were 0 fish with bodily injuries (0.0%) and 0 had eye injuries (0.0%). 0 fish had copepods present in the branchial cavity (0.0%) and 0 had copepods present on fins (0.0%). 0 fish displayed Gas Bubble Disease (0.0%). There were 0 chinook mortalities collected in the RO RST (0.0%).

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

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

| Site       | Route | # CHS Collected | # DSC* <20% | # DSC* >20% | # with Body Injuries | # with Eye Injuries | # with COP* In B.C. | # with COP* on Fins | Mortalities |
|------------|-------|-----------------|-------------|-------------|----------------------|---------------------|---------------------|---------------------|-------------|
| Cougar Dam | RO    | 0               | 0           | 0           | 0                    | 0                   | 0                   | 0                   | 0           |
| Cougar Dam | PWR   | 20              | 15          | 0           | 11                   | 0                   | 2                   | 7                   | 2           |

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

## Collected DNA and Scale Samples

DNA were collected from 18 Spring Chinook for the reporting period. Scales were collected from 18 Spring Chinook. The other targets captured did not meet length criteria for DNA sampling or were too damaged to remove scales.

## PIT Tags

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

## VIE Marking

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

## Non-Target Species

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

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

| Species             | RO Capture | RO Mortality | PWR Capture | PWR Mortality | Season Total Capture | Season Total Mortality |
|---------------------|------------|--------------|-------------|---------------|----------------------|------------------------|
| Brook Lamprey       | 0          | 0            | 1           | 0             | 1                    | 0                      |
| Bull Trout          | 0          | 0            | 0           | 0             | 2                    | 0                      |
| Chinook (clipped)   | 0          | 0            | 2           | 1             | 36                   | 3                      |
| Chinook (Adult)     | 0          | 0            | 0           | 0             | 0                    | 0                      |
| Cutthroat Trout     | 0          | 0            | 1           | 0             | 17                   | 0                      |
| Dace                | 0          | 0            | 111         | 1             | 1459                 | 2                      |
| Largescale Sucker   | 0          | 0            | 0           | 0             | 6                    | 0                      |
| Mountain Whitefish  | 0          | 0            | 3           | 0             | 17                   | 2                      |
| Northern Pikeminnow | 0          | 0            | 0           | 0             | 0                    | 0                      |
| <i>O. mykiss</i>    | 0          | 0            | 6           | 0             | 99                   | 0                      |
| Pacific Lamprey     | 0          | 0            | 0           | 0             | 1                    | 0                      |
| Sculpin             | 0          | 0            | 12          | 0             | 200                  | 4                      |
| Spotted Bass        | 0          | 0            | 7           | 0             | 25                   | 0                      |
| Unknown Bass        | 0          | 0            | 0           | 0             | 3                    | 0                      |
| <b>Totals</b>       | <b>0</b>   | <b>0</b>     | <b>143</b>  | <b>2</b>      | <b>1866</b>          | <b>11</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 1,250.6 to 1,252.7 feet (mean: 1,252.5 feet). Figure 30 shows instantaneous gauge height.

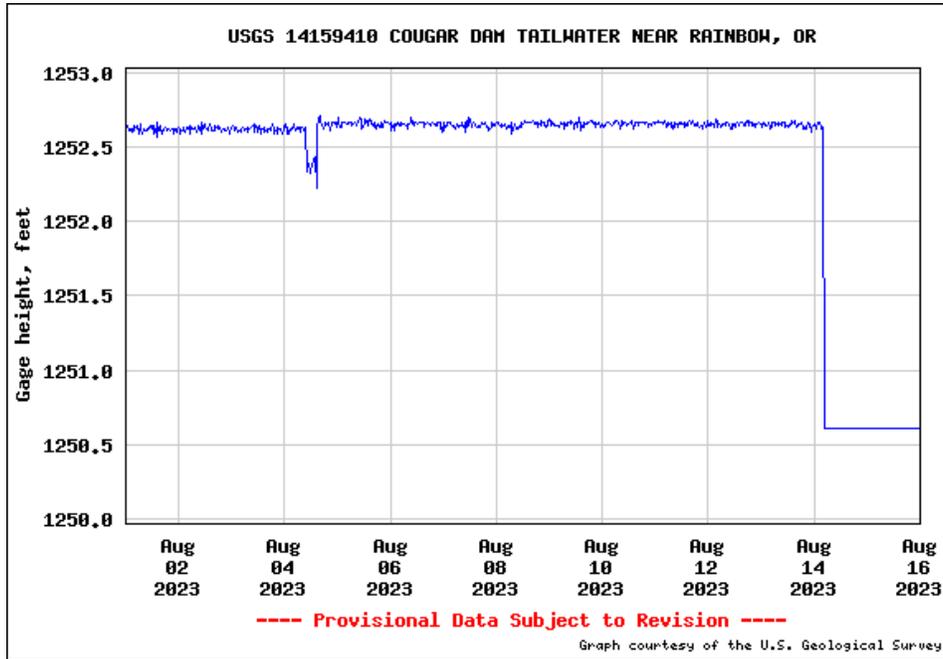
Total dissolved gas saturation ranged from 100 to 105% (mean: 102.3%). Figure 31 shows total dissolved gas saturation.

Stream temperatures were obtained from USGS data (gage # 14159500) for the PWR and RO trap sites and recorded using a HOBO temperature logger every 2 hours for the length of the reporting period for the PWR RST (Figure 32 and Figure 33 respectively). The temperature probe for the PWR RST was not downloaded due to environmental hazards in the area.

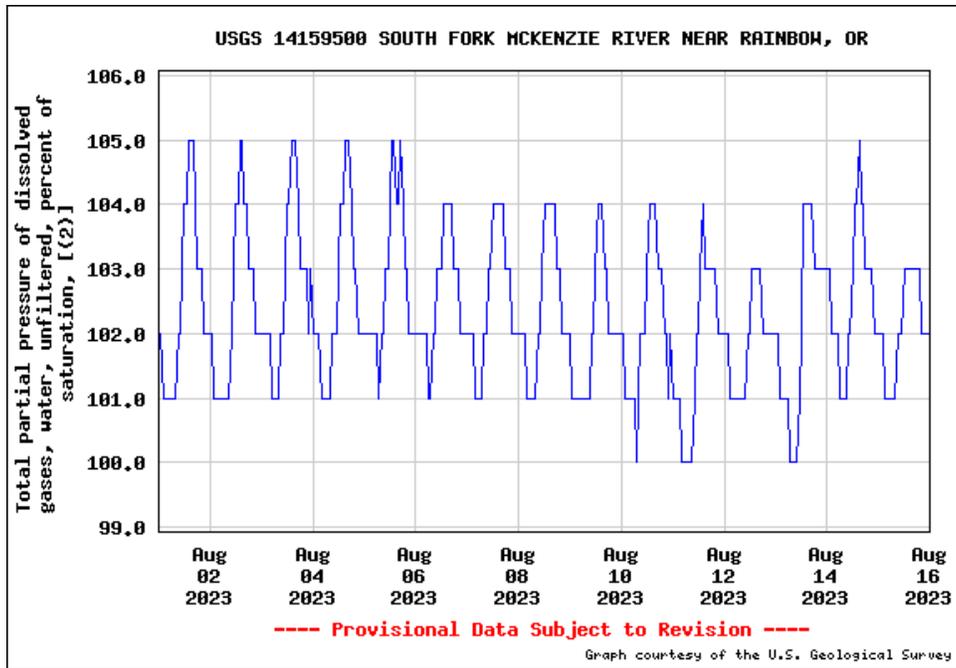
Flows through the Powerhouse and RO during the reporting period averaged 365.8 and 0 cubic feet per second (cfs) respectively (Figure 34). Catch per unit of effort (CPUE) data are summarized in Table 19. Discharge and capture data for the duration of monitoring efforts at this location are provided in Appendix B.

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

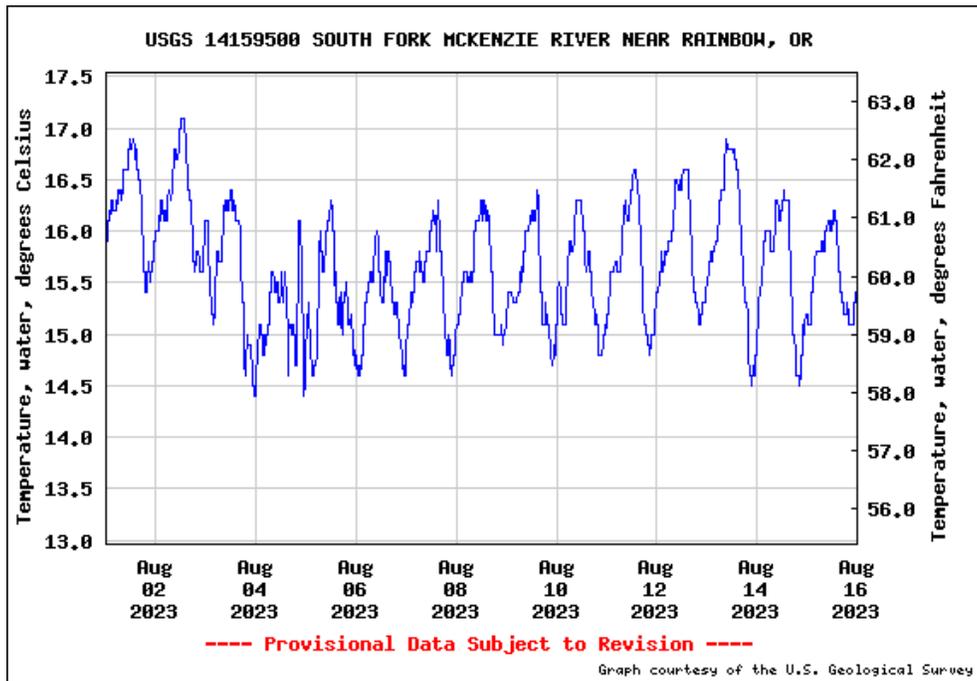
| Description    | RO (5ft) | PWR (8ft) |
|----------------|----------|-----------|
| Catch          | 0        | 20        |
| Effort (hrs)   | 0        | 673.1     |
| CPUE (fish/hr) | 0        | 0.030     |



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

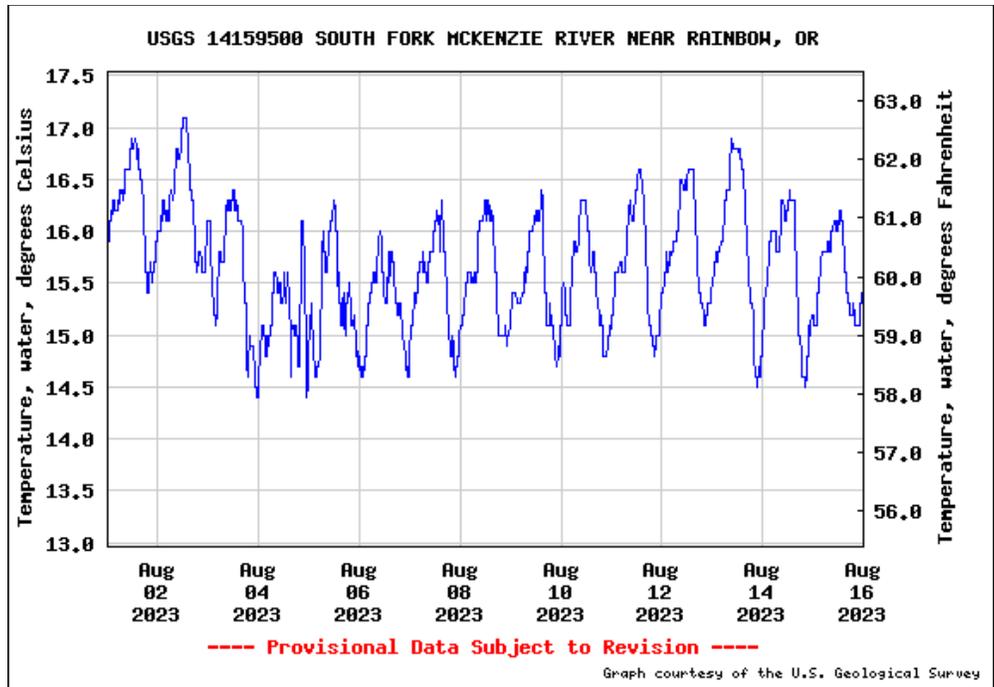


**Figure 31. Total Dissolved Gas Saturation (%); below Cougar Dam, South Fork McKenzie River.**



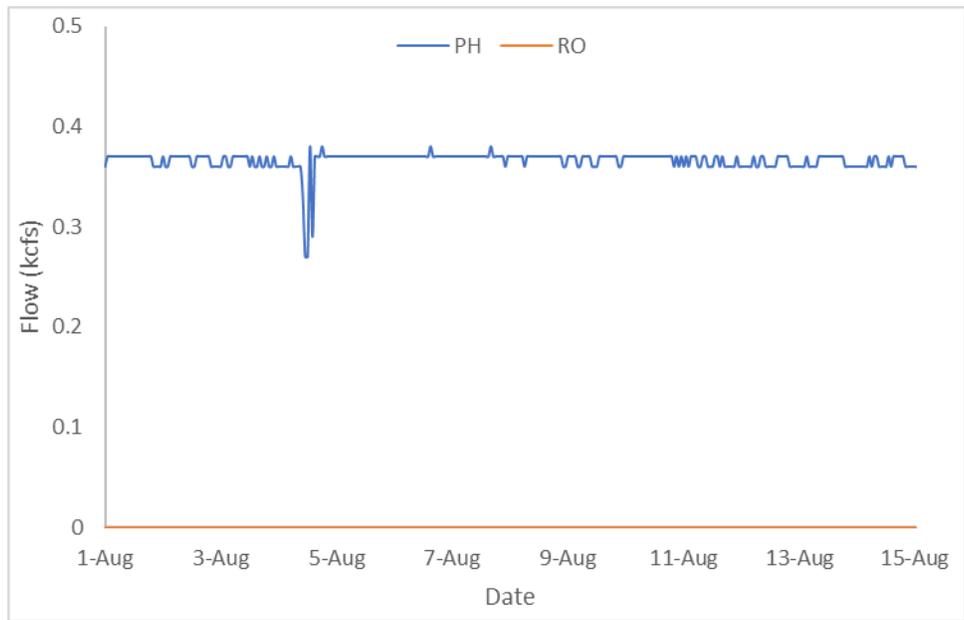
**Figure 32. Temperature at RO RST (Cougar Dam).**

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



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

*Note: Temperatures were obtained from USGS gage # 14159500 to supplement the temperature data for the PWR RST due to environmental hazards in the area.*

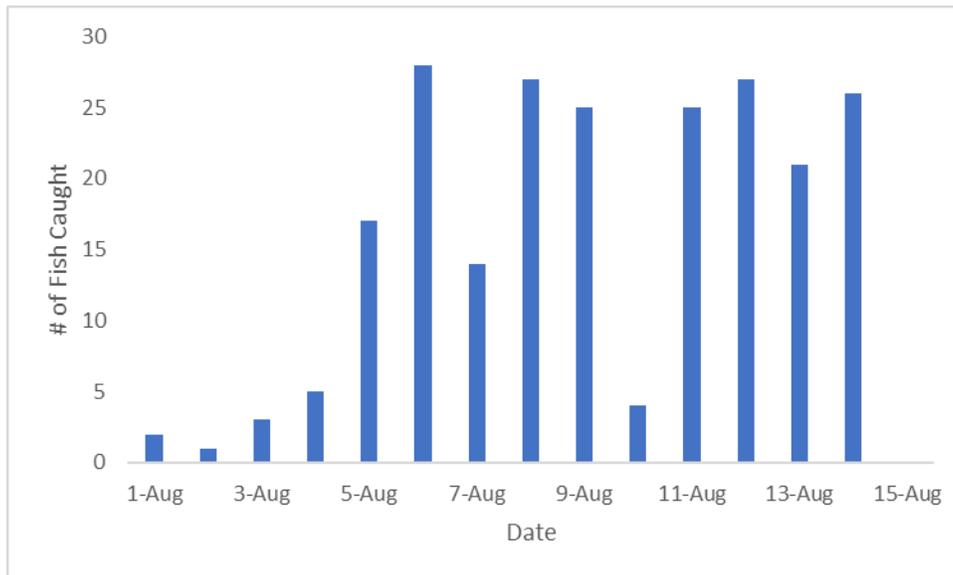


**Figure 34. Hourly Flows PWR vs. RO (Cougar Dam).**

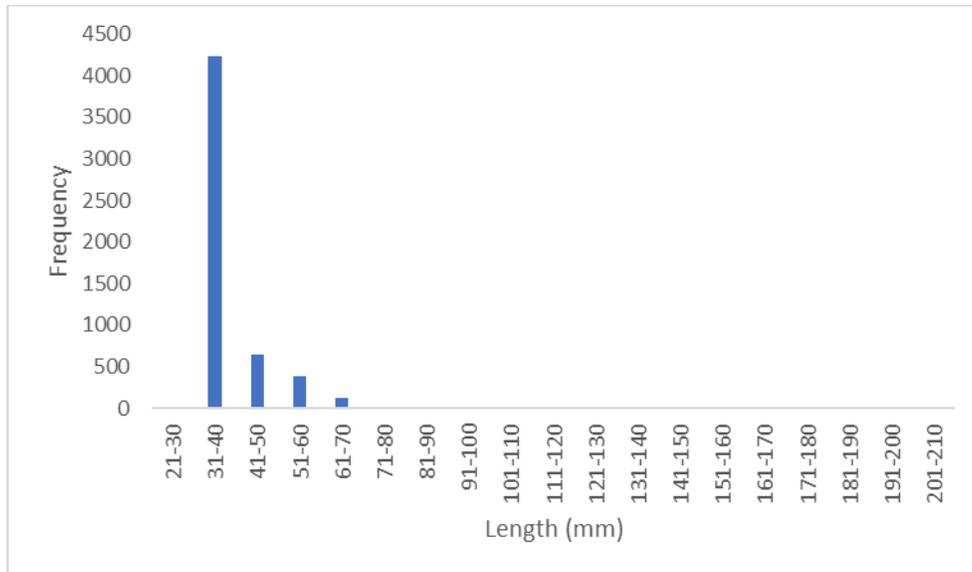
## South Fork of the McKenzie–Cougar Dam Head of Reservoir

### Target Species

The reporting period began August 1<sup>st</sup> and ended on August 15<sup>th</sup>. There were 225 Chinook salmon captured during the 15-day sampling period (Figure 35). The 5 foot trap was raised to a non-sampling position on August 14<sup>th</sup> due to safety concerns from the Lookout Fire and Level 3 evacuations at the intersection of highway 126 and NF-19. A Level 1 evacuation has been ordered for Cougar Dam. The air quality index has also exceeded our safety protocols. We are monitoring this fire daily for the safety of our crew. The trap was operated 86.7% of the reporting period. Table 20 provides life stage, length, and weight data for all Chinook salmon that have been caught at the site to-date and Figure 36 shows length frequency data to-date.



**Figure 35. Chinook Captured Per Day 08/01/2023 to 08/15/2023 (Cougar Dam Head of Reservoir).**



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

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

| To-Date (Since Jan. 1, 2023) |       |         |            |           |              |     |      |             |      |      |
|------------------------------|-------|---------|------------|-----------|--------------|-----|------|-------------|------|------|
| Site                         | Route | Species | Life stage | Collected | Length (mm)* |     |      | Weight (g)* |      |      |
|                              |       |         |            |           | Min          | Max | Mean | Min         | Max  | Mean |
| Cougar Dam Head of Reservoir | 5 ft  | CHS     | Smolt      | 14        | 51           | 100 | 81.0 | 1.7         | 10.4 | 6.2  |
|                              |       | CHS     | Parr       | 703       | 40           | 106 | 55.3 | 1.0         | 13.7 | 2.3  |
|                              |       | CHS     | Fry        | 4763      | 25           | 64  | 36.5 | N/A         | N/A  | N/A  |

| August 1-15, 2023            |       |         |            |           |              |     |      |             |     |      |
|------------------------------|-------|---------|------------|-----------|--------------|-----|------|-------------|-----|------|
| Site                         | Route | Species | Life stage | Collected | Length (mm)* |     |      | Weight (g)* |     |      |
|                              |       |         |            |           | Min          | Max | Mean | Min         | Max | Mean |
| Cougar Dam Head of Reservoir | 5 ft  | CHS     | Smolt      | 7         | 60           | 73  | 67.0 | 2.8         | 5.1 | 3.9  |
|                              |       | CHS     | Parr       | 200       | 42           | 78  | 58.2 | 1.0         | 6.2 | 2.5  |
|                              |       | CHS     | Fry        | 18        | 43           | 50  | 46.6 | <1          | 1.7 | 1.4  |

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

### Trapping Efficiency

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

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

## Injuries and Copepod Infection

225 Chinook were captured for the reporting period. Of the fish captured, partial descaling <20% was observed on 49 fish (21.8%) and descaling >20% was observed on 0 fish (0.0%). 36 fish had bodily injury (16.0%). 0 fish displayed eye injuries (0.0%). 0 fish had copepods in the branchial cavity (0.0%), 3 had copepods on fins (1.3%). There were 2 mortalities for this reporting period (0.9%). Injury data for the reporting period is summarized in Table 21. To date injury data can be found in Appendix A.

**Table 21. Number of Descaled, Bodily/Eye Injured, Copepod Infected and Dead Chinook Salmon for Sampling Period. (Cougar Dam Head of Reservoir).**

| Site                         | # CHS Collected | # DSC* <20% | # DSC* >20% | # with Body Injuries | # with Eye Injuries | # with COP* In B.C. | # with COP* on Fins | Mortalities |
|------------------------------|-----------------|-------------|-------------|----------------------|---------------------|---------------------|---------------------|-------------|
| Cougar Dam Head of Reservoir | 225             | 49          | 0           | 36                   | 0                   | 0                   | 3                   | 2           |

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

## Collected DNA and Scale Samples

DNA was collected from 195 of the Chinook captured. Scales were collected from 170 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

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

## VIE Marking

Visual Implant Elastomer (VIE) trials commenced at the Cougar Dam Head of Reservoir site on 6/25/2022. VIE tag color and locations are changed every month to distinctly mark groups of fish by capture date. Since then, 3,764 Chinook have been VIE marked with fluorescent elastomer. No fish with VIE marks have been detected at downstream RST sites to date. Fish still showing an egg sac are not VIE marked.

| Date Tagged          | Tag Location | VIE Color   | # Tagged | # Recaptured to Date |
|----------------------|--------------|-------------|----------|----------------------|
| 6/25/2022-7/15/2022  | Left Dorsal  | Yellow      | 30       | 0                    |
| 9/15/2022-9/30/2022  | Left Dorsal  | Orange      | 1        | 0                    |
| 10/1/2022-10/15/2022 | Left Dorsal  | Pink        | 1        | 0                    |
| 11/1/2022-11/15/2022 | Left Dorsal  | Green       | 1        | 0                    |
| 2/16/2023-2/28/2023  | Right Dorsal | Yellow      | 1        | 0                    |
| 3/1/2023-3/15/2023   | Right Dorsal | Red         | 1        | 0                    |
| 3/16/2023-3/31/2023  | Right Dorsal | Red         | 9        | 0                    |
| 4/1/2023-4/15/2023   | Right Dorsal | Blue        | 85       | 0                    |
| 4/16/2023-4/30/2023  | Right Dorsal | Blue        | 288      | 0                    |
| 5/1/2023-5/15/2023   | Right Dorsal | Orange      | 496      | 0                    |
| 5/16/2023-5/31/2023  | Right Dorsal | Orange      | 1397     | 0                    |
| 6/1/2023-6/15/2023   | Right Dorsal | Pink        | 487      | 0                    |
| 6/16/2023-6/30/2023  | Right Dorsal | Pink        | 234      | 0                    |
| 7/1/2023-7/15/2023   | Right Dorsal | Green       | 207      | 0                    |
| 7/16/2023-7/31/2023  | Right Dorsal | Green       | 356      | 0                    |
| 8/1/2023-8/15/2023   | Right Dorsal | Yellow (2x) | 170      | 0                    |

## Non-Target Species

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

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

| Species             | Capture   | Mortality | Season Total | Season Total Mortality |
|---------------------|-----------|-----------|--------------|------------------------|
| Bull Trout          | 1         | 0         | 6            | 0                      |
| Cutthroat Trout     | 0         | 0         | 5            | 0                      |
| Chinook (clipped)   | 1         | 0         | 7            | 0                      |
| Dace                | 0         | 0         | 4            | 0                      |
| Mountain Whitefish  | 0         | 0         | 2            | 1                      |
| Northern Pikeminnow | 0         | 0         | 0            | 0                      |
| <i>O. mykiss</i>    | 11        | 0         | 502          | 0                      |
| Sculpin             | 0         | 0         | 14           | 1                      |
| Unknown             | 0         | 0         | 1            | 1                      |
| <b>Totals</b>       | <b>13</b> | <b>0</b>  | <b>542</b>   | <b>3</b>               |

## Stream Statistics

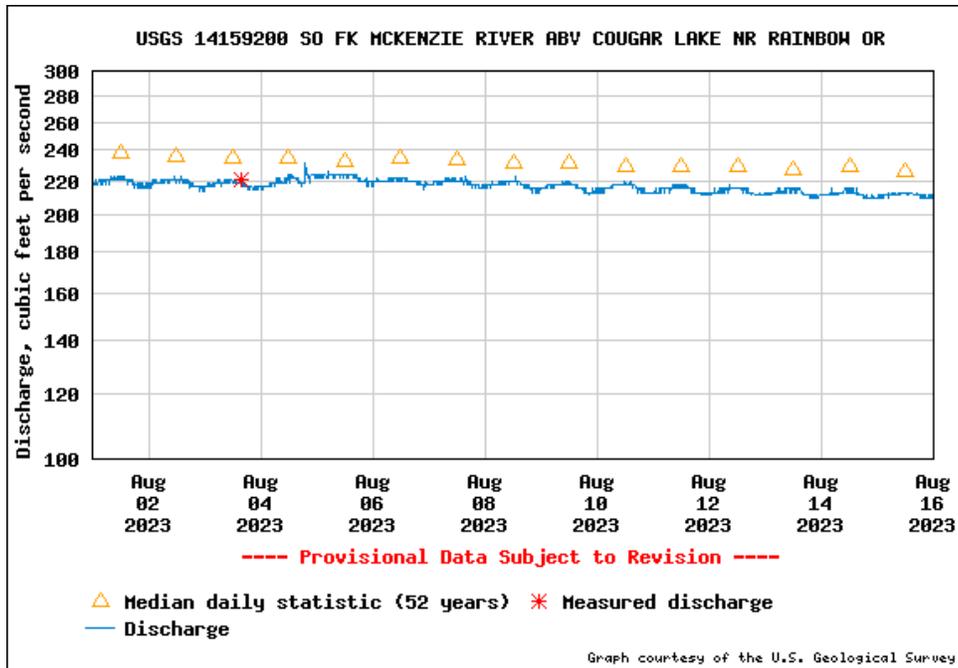
Basic stream statistics at the site were calculated from data downloaded from the U.S. Geological Survey stream gauge number 14159200. During the reporting period, daily maximum values for instantaneous discharge ranged from 213.0 cfs to 231.0 cfs (mean: 220.9 cfs). Figure 37 shows instantaneous discharge.

Due to environmental hazards in the area, the Cougar Dam HOR temperature probe was not downloaded and rather stream temps were obtained from USGS gage # 1415920 for the reporting period, and the data is shown below in Figure 38.

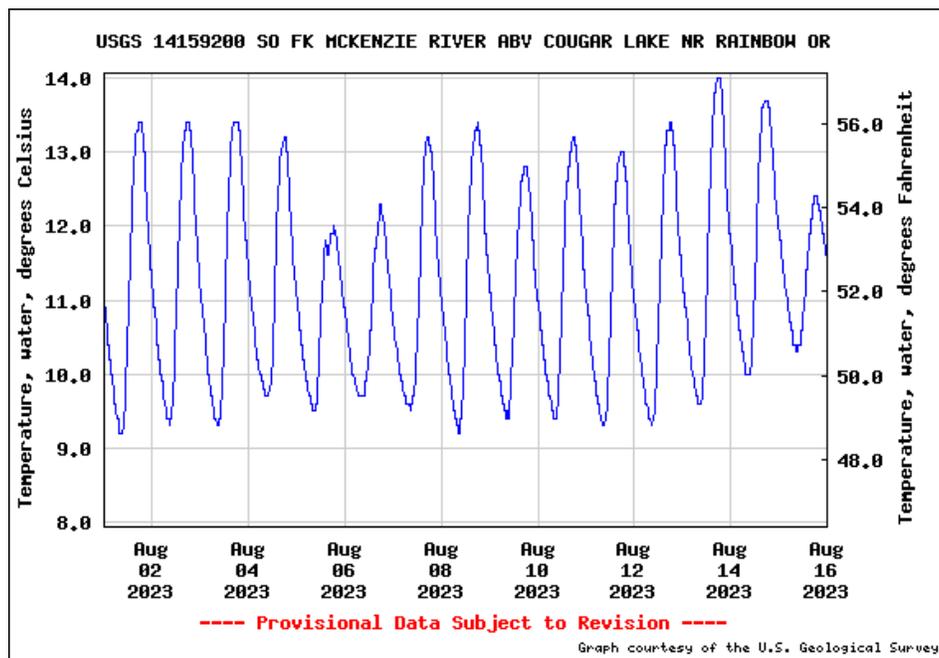
Catch per unit of effort (CPUE) data are summarized in Table 23. Discharge and capture data for the duration of monitoring efforts at this location are provided in Appendix B.

**Table 23. Summary of Chinook CPUE, Cougar Dam Head of Reservoir.**

| Description    | Chinook |
|----------------|---------|
| Catch          | 225     |
| Effort (hrs)   | 334.3   |
| CPUE (fish/hr) | 0.673   |



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

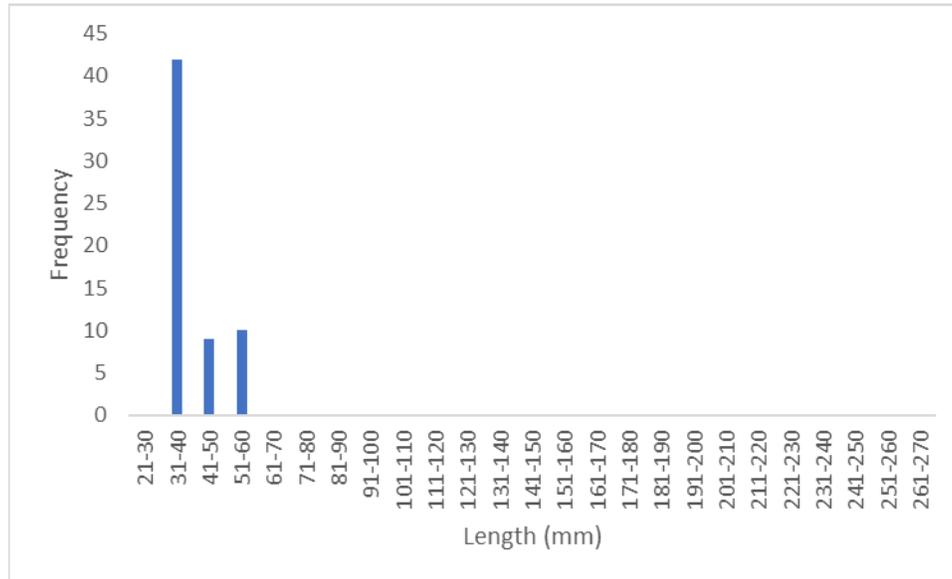


**Figure 38. Temperature at RST (Cougar Dam Head of Reservoir).**

*Note: Due to environmental hazards in the area, the Cougar Dam HOR temperature probe was not downloaded and rather stream temps were obtained from USGS gage # 1415920 for the reporting period.*

## Fall Creek Dam Tailrace

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



**Figure 39. Length Frequency of Juvenile Chinook Sampled in 2023 (Fall Creek Dam Tailrace).**

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

| To-Date (Since Jan. 1, 2023) |       |         |            |           |              |     |      |             |     |      |
|------------------------------|-------|---------|------------|-----------|--------------|-----|------|-------------|-----|------|
| Site                         | Route | Species | Life stage | Collected | Length (mm)* |     |      | Weight (g)* |     |      |
|                              |       |         |            |           | Min          | Max | Mean | Min         | Max | Mean |
| Fall Creek Dam               | RO    | CHS     | Smolt      | 0         | 0            | 0   | 0    | 0           | 0   | 0    |
|                              |       | CHS     | Parr       | 7         | 40           | 60  | 53.9 | 2.1         | 4.5 | 3.3  |
|                              |       | CHS     | Fry        | 54        | 33           | 55  | 39.2 | 1.3         | 3.2 | 1.9  |

## Trapping Efficiency

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

## 24-Hour Post Collection Holding Trial

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

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

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

### Injuries and Copepod Infection

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

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

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

### Collected DNA and Scale Samples

No Chinook were captured during this reporting period.

### PIT Tags

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

### VIE Marking

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

## Non-Target Species

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

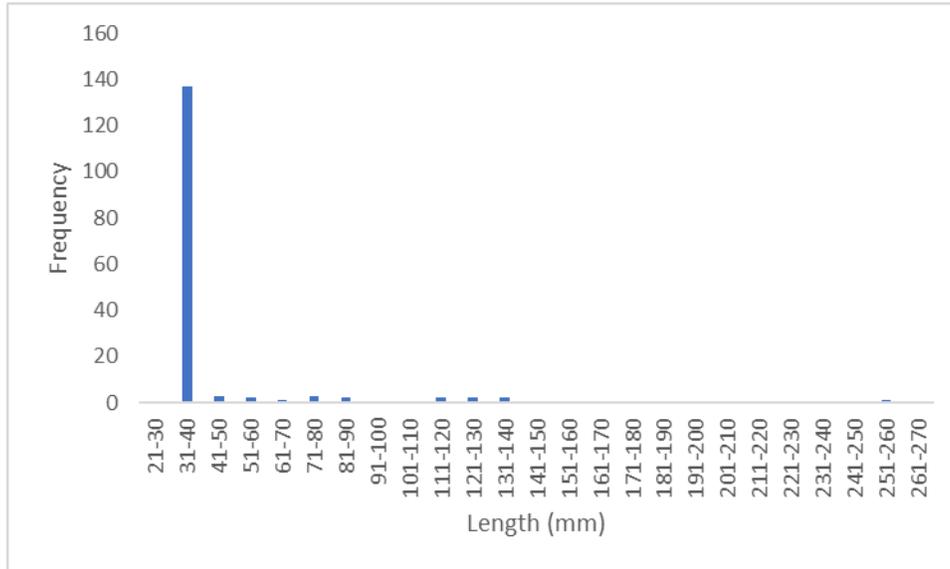
**Table 27. Summary of Non-target Species (Fall Creek Dam Tailrace).**

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

## Middle Fork Willamette – Fall Creek Head of Reservoir

### Target Species

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



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

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

| To-Date                      |       |         |            |           |              |     |       |             |       |       |
|------------------------------|-------|---------|------------|-----------|--------------|-----|-------|-------------|-------|-------|
| Site                         | Route | Species | Life stage | Collected | Length (mm)* |     |       | Weight (g)* |       |       |
|                              |       |         |            |           | Min          | Max | Mean  | Min         | Max   | Mean  |
| Fall Creek Head of Reservoir | 8 ft  | CHS     | Smolt      | 5         | 127          | 255 | 157.2 | 21.5        | 108.5 | 214.3 |
|                              |       | CHS     | Parr       | 10        | 54           | 120 | 81.4  | 1.3         | 19.8  | 7.6   |
|                              |       | CHS     | Fry        | 140       | 31           | 42  | 34.7  | N/A         | N/A   | N/A   |

### Trapping Efficiency

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

### Collected DNA and Scale Samples

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

## PIT Tags

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

## VIE Marking

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

Fish still showing an egg sac are not VIE marked.

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

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

## Non-Target Species

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

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

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

## Middle Fork Willamette– Dexter Dam

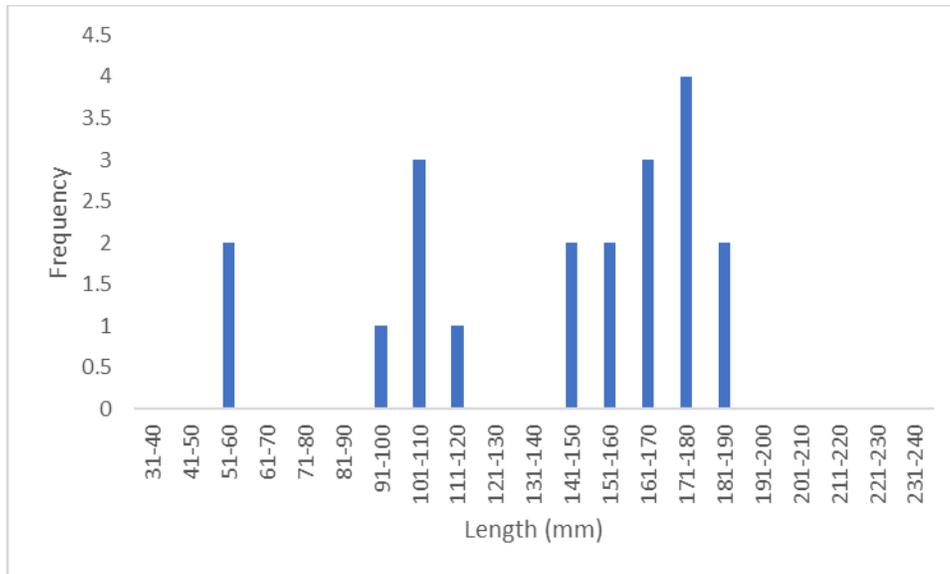
### Target Species

This reporting period began on August 1<sup>st</sup> and ended on August 15<sup>th</sup>. There was 0 Chinook salmon (CHS) captured during the 15-day sampling period. The 5 foot trap was raised to the non-sampling position due to air quality above our safety thresholds. The Lowell to Oakridge corridor is currently reading over 400 on the AQI scale. Sampling duration was 93.3% for the 5 ft RST. Table 31 provides life stage, length, and weight data for all Chinook salmon that have been caught at the Dexter Dam site to-date and for the reporting period. Figure 45 shows the daily capture numbers for Chinook and Figure 46 shows length frequency data to-date.



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

**Figure 45. Chinook Captured Per Day 08/01/2023 to 08/15/2023 (Dexter Dam)**



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

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

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

| To-Date (Since Jan. 1, 2023) |      |         |            |           |              |     |       |             |      |      |
|------------------------------|------|---------|------------|-----------|--------------|-----|-------|-------------|------|------|
| Site                         | Trap | Species | Life stage | Collected | Length (mm)* |     |       | Weight (g)* |      |      |
|                              |      |         |            |           | Min          | Max | Mean  | Min         | Max  | Mean |
| Dexter Dam                   | 5 ft | CHS     | Fry        | 0         | N/A          | N/A | N/A   | N/A         | N/A  | N/A  |
|                              |      | CHS     | Parr       | 3         | 54           | 103 | 72.3  | 1.5         | 12.9 | 5.8  |
|                              |      | CHS     | Smolt      | 17        | 100          | 190 | 151.9 | 11.0        | 65.5 | 42.2 |

| August 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       | 0         | N/A          | N/A | N/A  | N/A         | N/A | N/A  |
|                   |      | CHS     | Smolt      | 0         | N/A          | N/A | N/A  | N/A         | N/A | N/A  |

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

### Trapping Efficiency

A total of 1,505 juvenile hatchery Chinook (sub-yearlings) adipose clipped, lower caudal clipped, and released on 8/2/2023 below Dexter Dam. Fish were released in small groups into the spillway flow to evaluate the traps efficiency capturing fish passing through the powerhouse. 3 fish were recaptured in the 5-foot RST for an efficiency of 0.2%.

| Dexter Dam | Release # | Recapture # | Capture Efficiency |
|------------|-----------|-------------|--------------------|
| Spillway   | 1505      | 3           | 0.2% (3/1505)      |

## 24-Hour Post Collection Holding Trial

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

## Injuries and Copepod Infection

0 Chinook was captured during this reporting period. Partial descaling <20% was observed in 0 of the 0 Chinook captured (0.0%) and 0 displayed descaling >20% (0.0%). 0 displayed body injury (0.0%) and 0 Chinook had eye injury (0.0%). 0 Chinook had copepods present in the branchial cavity (0.0%) and 0 had copepods on fins (0.0%). 0 displayed gas bubble disease (0.0%). There were 0 mortalities this reporting period (0.0%). Injuries are displayed in Table 32. To date injury data can be found in Appendix A.

**Table 32. Number of Descaled, Bodily/Eye Injured, Copepod Infected and dead Chinook Salmon for Sampling Period (Dexter Dam).**

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

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

## Collected DNA and Scale Samples

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

## PIT Tags

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

## VIE Marking

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

## Non-Target Species

708 non-target fish were captured during the reporting period; the data is summarized below in Table 33. Dexter Fish Facility releases adipose clipped Chinook near our trapping site. Adipose clipped Chinook caught in our trap are being counted as non-target fish to provide better clarity on data concerning run of river Chinook.

**Table 33. Summary of Non-target Species (Dexter Dam).**

| <b>Species</b>             | <b>Capture</b> | <b>Mortality</b> | <b>Season Total</b> | <b>Season Total Mortality</b> |
|----------------------------|----------------|------------------|---------------------|-------------------------------|
| Bass Unknown               | 27             | 1                | 61                  | 2                             |
| Bluegill                   | 1              | 0                | 3                   | 0                             |
| Chinook (adult)            | 0              | 0                | 1                   | 0                             |
| Chinook (clipped)          | 2              | 0                | 441                 | 0                             |
| Crappie                    | 133            | 0                | 608                 | 23                            |
| Cutthroat Throat           | 0              | 0                | 1                   | 0                             |
| Dace                       | 7              | 0                | 18                  | 2                             |
| Largescale Sucker          | 0              | 0                | 3                   | 1                             |
| Largemouth Bass            | 0              | 0                | 2                   | 0                             |
| Mountain Whitefish         | 1              | 0                | 2                   | 0                             |
| <i>O. mykiss</i>           | 0              | 0                | 3                   | 0                             |
| <i>O. mykiss</i> (clipped) | 0              | 0                | 1                   | 0                             |
| Pikeminnow                 | 0              | 0                | 0                   | 0                             |
| Redside Shiner             | 0              | 0                | 1                   | 0                             |
| Sculpin                    | 530            | 7                | 997                 | 18                            |
| Smallmouth Bass            | 5              | 0                | 6                   | 1                             |
| Walleye                    | 2              | 0                | 10                  | 0                             |
| <b>Totals</b>              | <b>708</b>     | <b>8</b>         | <b>2158</b>         | <b>47</b>                     |

### **Stream Statistics**

Basic stream statistics at the Dexter Dam site were calculated from data downloaded from the U.S. Geological Survey stream gauge numbers 14149510 and 14150000. Gauge height (feet) is the only metric provided at gauge 14149510. Total dissolved gas saturation data was received from gauge 14150000, 4.75 rkms downstream of the trap. During the reporting period, daily maximum values for instantaneous gauge height ranged from 637.9 feet to 638.2 feet (mean: 637.9 feet). Figure 47 shows instantaneous gauge height.

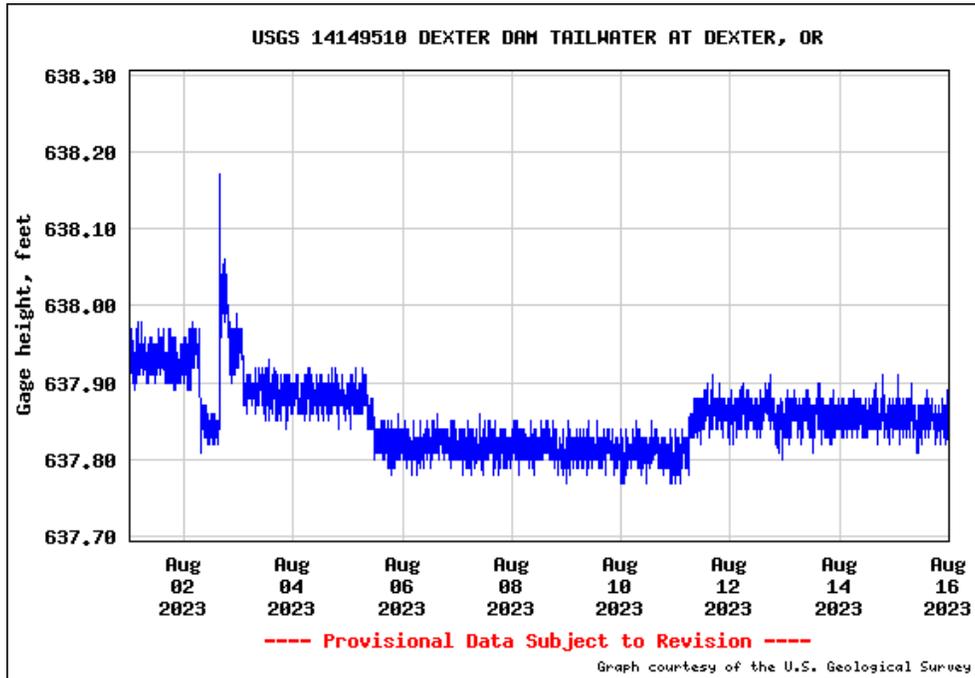
Total dissolved gas saturation ranged from 103 to 111% (mean: 105.6%) during the reporting period. Figure 48 shows total dissolved gas saturation.

Stream temperatures were recorded every 2 hours using a temperature probe at the Dexter Dam RST site during this reporting period. The temperature probe operated normally throughout the reporting period and can be seen in Figure 49.

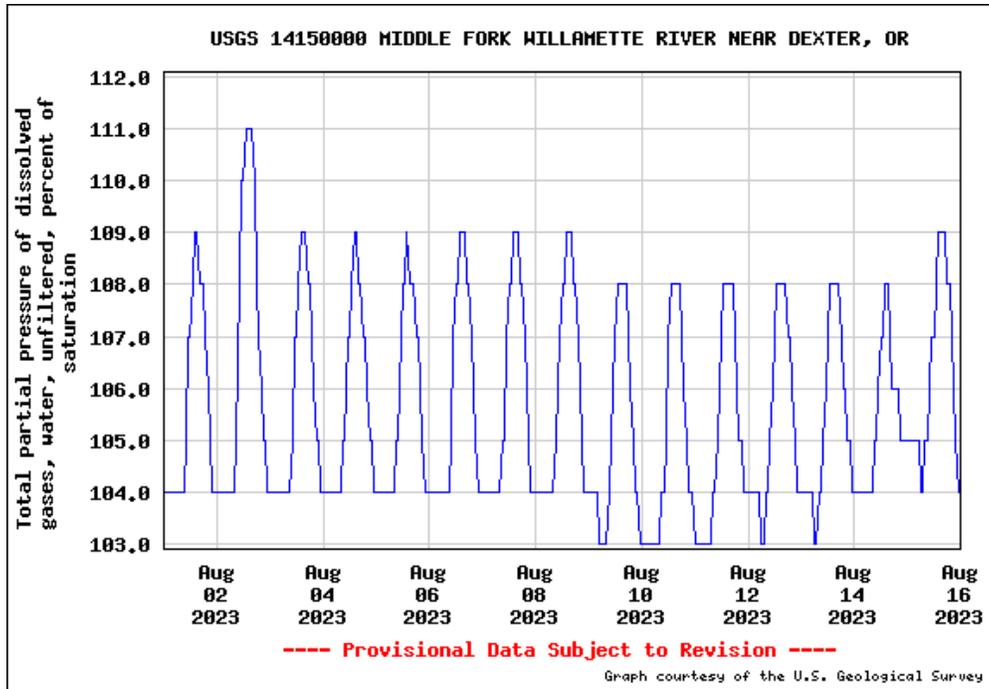
Flows through the Powerhouse and Spill during the reporting period averaged 1,980.8 and 48.8 cubic feet per second (cfs) respectively (Figure 50). Catch per unit of effort (CPUE) data are summarized in Table 34. Discharge and capture data for the duration of monitoring efforts at this location are provided in Appendix B.

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

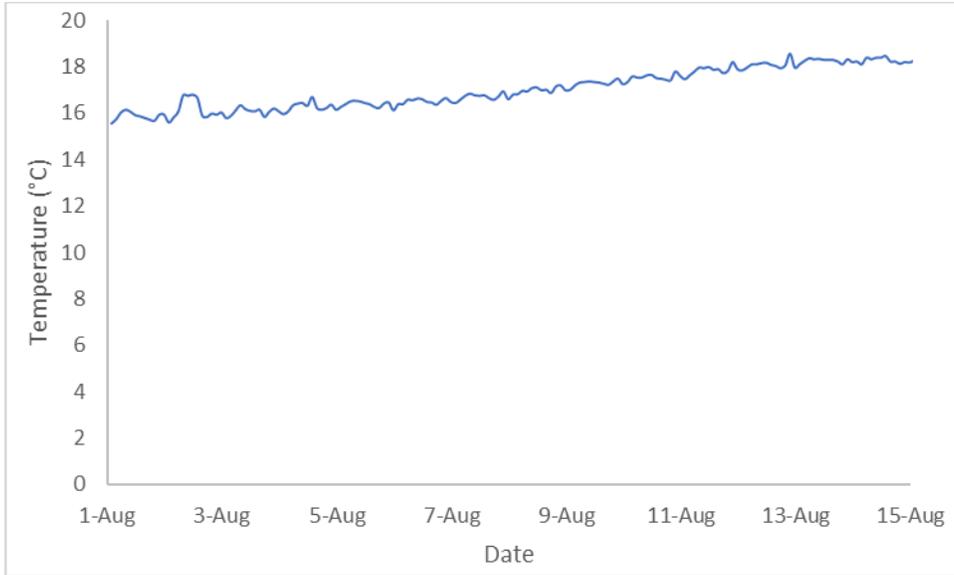
| Description    | Chinook |
|----------------|---------|
| Catch          | 0       |
| Effort (hrs)   | 358.2   |
| CPUE (fish/hr) | 0       |



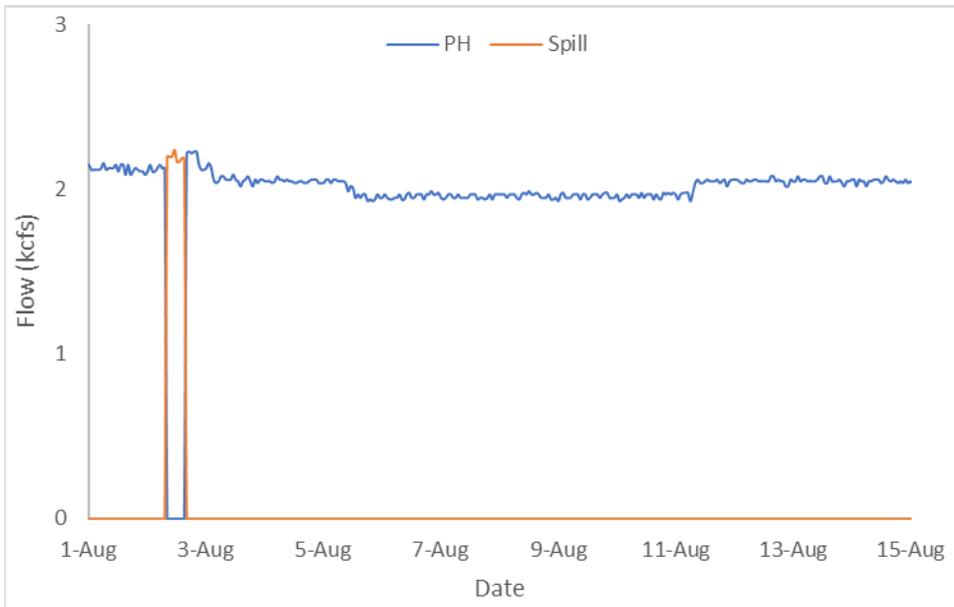
**Figure 47. Gauge Height (feet); below Dexter Dam, Middle Fork Willamette.**



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



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



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

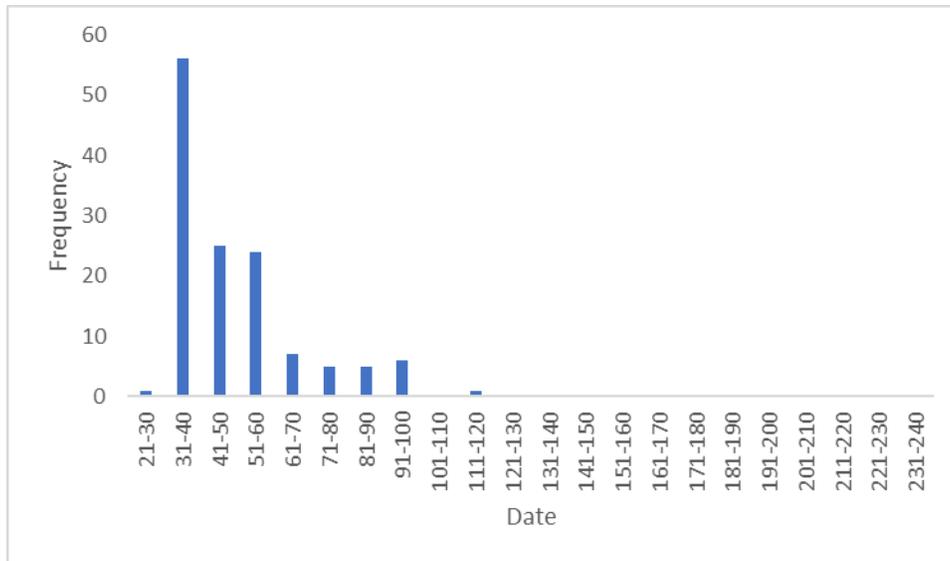
## Middle Fork Willamette – Lookout Point Head of Reservoir

### Target Species

The reporting period began August 1<sup>st</sup> and ended on August 15<sup>th</sup>. 0 Chinook salmon were captured during the 15-day sampling period (Figure 57). The 5 foot trap was raised to the non-sampling position due to air quality above our safety thresholds. The Lowell to Oakridge corridor is currently reading over 400 on the AQI scale. Sampling duration was 93.3% for the 5 ft RST. Table 35 provides life stage, length, and weight data for all Chinook salmon that have been caught at the Middle Fork Willamette – Lookout Point Head of Reservoir site to-date and Figure 58 shows length frequency data to-date.



**Figure 57. Chinook Captured Per Day 08/01/2023 to 08/15/2023 (Lookout Point Head of Reservoir).**



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

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

| To-Date (Since Jan. 1, 2023)    |       |         |            |           |              |     |      |             |      |      |
|---------------------------------|-------|---------|------------|-----------|--------------|-----|------|-------------|------|------|
| Site                            | Route | Species | Life stage | Collected | Length (mm)* |     |      | Weight (g)* |      |      |
|                                 |       |         |            |           | Min          | Max | Mean | Min         | Max  | Mean |
| Lookout Point Head of Reservoir | 5 ft  | CHS     | Smolt      | 5         | 69           | 113 | 93.2 | 4.1         | 14.5 | 10.3 |
|                                 |       | CHS     | Parr       | 38        | 41           | 99  | 64.8 | 1.0         | 11.1 | 3.6  |
|                                 |       | CHS     | Fry        | 87        | 30           | 57  | 39.6 | 1.0         | 4.0  | 2.0  |
| August 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      | 0         | N/A          | N/A | N/A  | N/A         | N/A  | N/A  |
|                                 |       | CHS     | Parr       | 0         | N/A          | N/A | N/A  | N/A         | N/A  | N/A  |
|                                 |       | CHS     | Fry        | 0         | N/A          | N/A | N/A  | N/A         | N/A  | N/A  |

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

### Trapping Efficiency

A total of 765 juvenile hatchery Chinook (sub-yearlings) were adipose and upper caudal clipped and released on 7/19/2023 above the Lookout Point Head of Reservoir trap. Fish were released in small groups to evaluate the traps' efficiency capturing fish migrating downstream. 1 fish were recaptured in the 5-ft RST for an efficiency of 0.1%.

| Lookout Point Head of Reservoir | Release # | Recapture # | Capture Efficiency |
|---------------------------------|-----------|-------------|--------------------|
| 5 ft                            | 765       | 1           | 0.1%<br>(1/765)    |

## Injuries and Copepod Infection

There was 0 Chinook captured during this reporting period. 0 had partial descaling <20% (0.0%) and 0 had descaling >20% (0.0%). 0 had body injuries (0.0%) and 0 fish displayed eye injuries (0.0%). 0 fish had copepods in the branchial cavity (0.0%). There were 0 mortalities (0.0%). Injury data for the reporting period is shown in Table 36. To date data can be found in Appendix A.

**Table 36. Number of Descaled, Bodily/Eye Injured, Copepod Infected and Dead Chinook Salmon for Sampling Period (Lookout Point 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 | 0               | 0           | 0           | 0                    | 0                   | 0                   | 0                   | 0           |

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

## Collected DNA and Scale Samples

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

## PIT Tags

0 Spring Chinook was PIT tagged during this reporting period. Refer to Appendix D for further information regarding PIT tags during this reporting period.

## VIE Marking

Visual Implant Elastomer (VIE) trials commenced at the Lookout Point Head of Reservoir site on 6/25/2022. VIE tag color and locations are changed every month to distinctly mark groups of fish by capture date. Since then, 68 Chinook have been VIE marked with fluorescent elastomer. No fish with VIE marks have been detected at downstream RST sites to date. Fish still showing an egg sac are not VIE marked. A summary of VIE marked fish at the Lookout Point Head of Reservoir site is available in table 37.

**Table 37. Summary of VIE Marked Chinook at the Lookout Point Head of Reservoir site.**

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

## Non-Target Species

153 non-target species were captured during the reporting period; the data is summarized below in Table 38.

**Table 38. Summary of Non-target Species (Lookout Point Head of Reservoir).**

| Species                    | 5ft Capture | 5ft Mortality | Season Total | Season Total Mortality |
|----------------------------|-------------|---------------|--------------|------------------------|
| Chinook (clipped)          | 1           | 0             | 10           | 0                      |
| Crappie                    | 0           | 0             | 2            | 2                      |
| Cutthroat Trout            | 4           | 0             | 18           | 0                      |
| Dace                       | 127         | 2             | 524          | 6                      |
| Lamprey                    | 0           | 0             | 0            | 0                      |
| Largescale Sucker          | 10          | 0             | 79           | 0                      |
| Mountain Whitefish         | 1           | 0             | 4            | 0                      |
| Northern Pikeminnow        | 1           | 0             | 31           | 0                      |
| <i>O. mykiss</i>           | 5           | 0             | 208          | 2                      |
| <i>O. mykiss</i> (clipped) | 0           | 0             | 0            | 0                      |
| Redside Shiner             | 0           | 0             | 5            | 0                      |
| Sculpin                    | 4           | 0             | 23           | 0                      |
| Unknown                    | 0           | 0             | 0            | 0                      |
| <b>Totals</b>              | <b>153</b>  | <b>2</b>      | <b>904</b>   | <b>10</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 986.0 cfs to 1,480.0 cfs (mean: 1,098.8 cfs). Figure 59 shows instantaneous discharge.

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

Flows into Lookout Point Reservoir averaged 1,125.3 cfs (Figure 61). Catch per unit of effort (CPUE) data are summarized in Table 39. Discharge and capture data for the duration of monitoring efforts at this location are provided in Appendix B.

**Table 39. Summary of Chinook CPUE at Lookout Point Head of Reservoir.**

| Description    | Chinook |
|----------------|---------|
| Catch          | 0       |
| Effort (hrs)   | 356.8   |
| CPUE (fish/hr) | 0       |

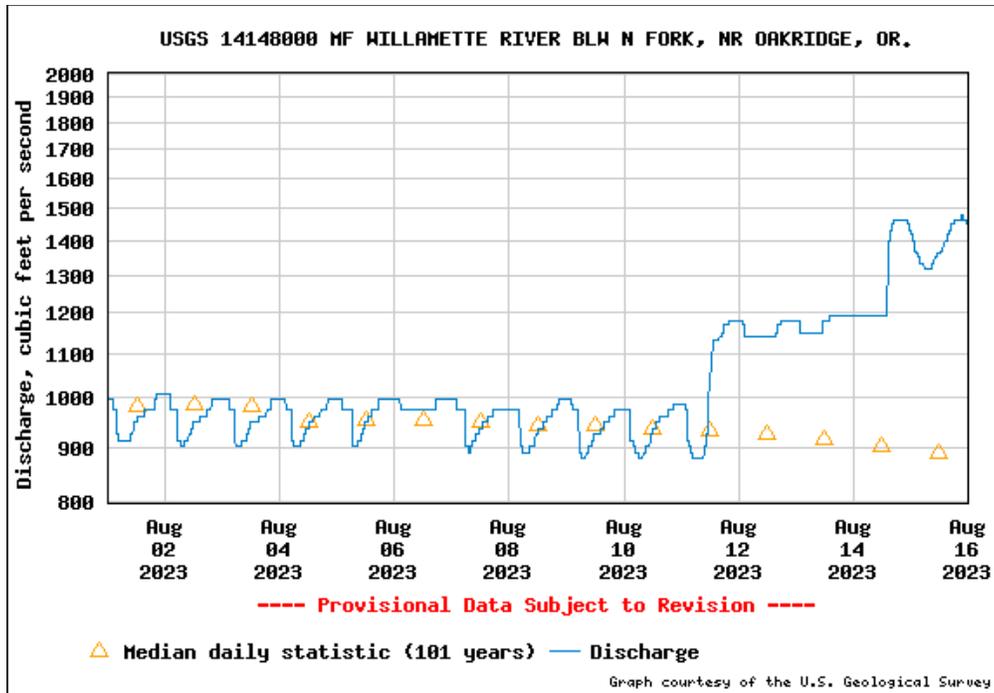


Figure 59. Discharge (cfs); above Lookout Point Reservoir, Below Oakridge, OR.

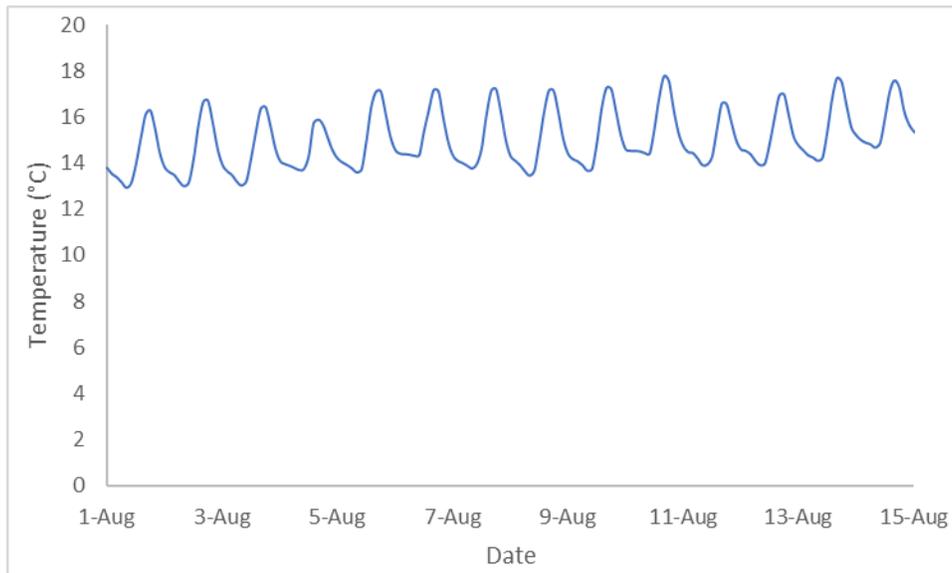
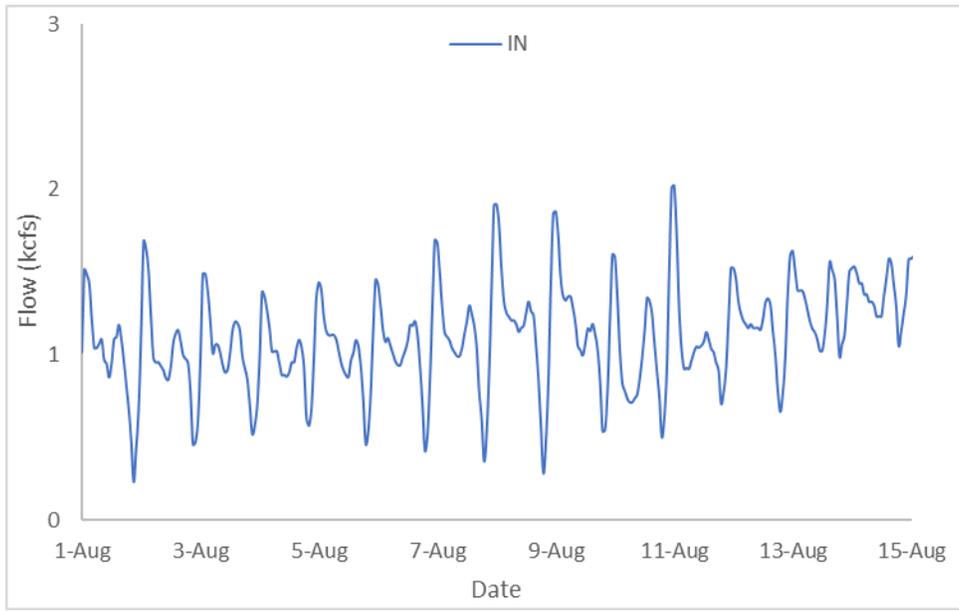


Figure 60. Temperature at RST (Lookout Point Head of Reservoir).

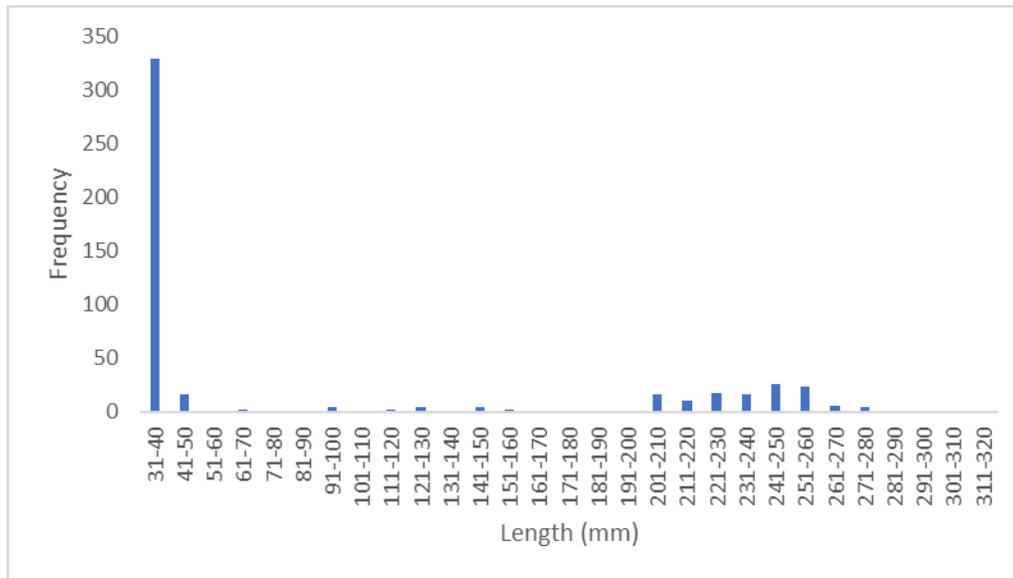


**Figure 61. Hourly Flows (Lookout Point Head of Reservoir site).**

## Middle Fork Willamette – Hills Creek Dam

### Target Species

Spring sampling at Hills Creek Dam concluded on June 30, 2023. Sampling will resume at this site in September. Table 40 provides life stage, length, and weight data for all Chinook salmon that have been caught at the Hills Creek Dam site to-date and Figure 62 shows length frequency data to-date.



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

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

### Trapping Efficiency

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

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

**Table 40. Descriptive Statistics of Target Species Captured at Hills Creek Dam Season To-Date and for the Reporting Period.**

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

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

### 24-Hour Post Collection Holding Trial

24-hour hold trials were performed at the Hills Creek Dam site to assess delayed mortality resulting from dam passage. The first fish entered hold trials at Hills Creek Dam in January 2023. A total of 260 fish, 93 from the RO and 167 from the Powerhouse traps, were held (Table 41). A total of 2 fish died during hold (0.8%), 1 of the RO Chinook (1.1%) and 1 of the Powerhouse Chinook (0.6%). Mortality rates across the two-week periods in which fish were held ranged from 0 to 25.0%.

**Table 41. Summary of 24-hour hold trials for fish captured in the RSTs at the Hills Creek Dam site.**

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

### Non-Target Species

A total of 1,257 non-target fish were captured at Hills Creek in 2023; the data is summarized below in Table 42.

**Table 42. Summary of Non-target Species (Hills Creek Dam).**

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

## Issues Encountered

The Foster Head of Reservoir- South Santiam site has reached temperature thresholds above 21 °C and was raised on August 10<sup>th</sup>. Increased activity from the Wiley Creek Fire resulted in a Level 2 evacuation along Highway 20 in Cascadia. The Foster Head of Reservoir site was included in a Level 1 evacuation. This fire has since been controlled and evacuations have lifted. We anticipate being able to safely resume sampling once stream temperatures decrease.

The Bedrock Fire is nearing the Fall Creek Head of Reservoir site. A Level 3 evacuation has been issued for the area surrounding our site. A Level 2 evacuation has been issued for Fall Creek Dam. The Head of Reservoir trap is no longer located here as it will not sample again until January. All highlines and loop lines were removed at the time of the trap removal. We have no updates on the current sampling site or the efficacy of the anchor trees at this time. The Fall Creek Dam Tailrace trap is no longer sampling but is still anchored mid-stream until the October sampling start date. We will continue to monitor this trap as the fire approaches the Fall Creek area. We will be monitoring air quality along the entire Middle Fork Willamette. We anticipate the need to halt sampling if winds come from the east and create unsafe air quality at sampling sites.

The Lookout Fire has increased in size towards the southern boundary. A Level 3 evacuation has been ordered on Highway 126 from Blue River to McKenzie Bridge. This includes our entry point to the NF-19 road into Cougar Dam. A Level 1 evacuation has been issued for the area south of Highway 126 to Cougar Dam. The Cougar Dam and Cougar Dam Head of Reservoir traps were raised on August 14<sup>th</sup> due to safety concerns from the Lookout Fire during a Red Flag warning. The air quality in this area has also

reached our safety thresholds for sampling. We will continue to monitor this fire and determine the continued risk in accessing our sites.

### **Upcoming USACE Support Services**

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

# Appendix A

## Chinook (CHS) To Date

|                      |            | Chinook Injuries to-Date |      |      |     |     |     |      |      |     |      |      |    |    |     |     |     |     |     |     |     |     |     |     |
|----------------------|------------|--------------------------|------|------|-----|-----|-----|------|------|-----|------|------|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Site/Trap/Life Stage | Total Fish | MUNK                     | DS<2 | BLO  | EYB | FUN | BKD | COP  | DS>2 | PRD | FID  | HBO  | BO | HO | BVT | HBP | BRU | TEA | OPD | HIN | FVB | POP | GBD |     |
| Big Cliff Dam        |            | 1674                     | 1007 | 12   | 118 | 16  | 16  | 1216 | 361  | 6   | 893  | 6    | 13 | 5  | 49  | 9   | 118 | 59  | 202 | 100 | 103 | 25  | 76  |     |
| 8 ft                 |            | 1674                     | 1007 | 12   | 118 | 16  | 16  | 1216 | 361  | 6   | 893  | 6    | 13 | 5  | 49  | 9   | 118 | 59  | 202 | 100 | 103 | 25  | 76  |     |
| Adult                | 1          |                          | 1    |      |     |     |     |      |      |     | 1    |      |    |    |     |     | 1   | 1   | 1   |     | 1   |     |     |     |
| Parr                 | 40         |                          | 14   | 1    | 4   | 2   |     | 20   | 5    |     | 14   |      |    |    |     | 2   |     |     | 1   | 1   |     | 1   |     |     |
| Smolt                | 1502       |                          | 987  | 11   | 112 | 14  | 15  | 1196 | 355  | 6   | 875  | 6    | 13 | 3  | 48  | 7   | 114 | 55  | 199 | 96  | 102 | 21  | 74  |     |
| Unknown              | 2          |                          |      |      |     |     |     |      |      |     |      |      |    | 2  |     |     |     |     |     |     |     | 1   |     |     |
| Fry                  | 129        |                          | 5    |      | 2   |     | 1   |      | 1    |     | 3    |      |    |    | 1   |     | 3   | 3   | 1   | 3   |     | 2   | 2   |     |
| Green Peter Tail.    |            | 100                      | 3    | 49   | 1   | 14  | 2   |      | 7    | 28  |      | 66   |    |    |     | 8   | 9   | 5   | 13  | 14  | 11  | 2   | 30  |     |
| 8 ft                 |            | 100                      | 3    | 49   | 1   | 14  | 2   |      | 7    | 28  |      | 66   |    |    |     | 8   | 9   | 5   | 13  | 14  | 11  | 2   | 30  |     |
| Parr                 | 82         | 3                        | 43   |      | 9   | 2   |     | 5    | 21   |     | 53   |      |    |    | 4   |     | 6   | 3   | 11  | 10  | 11  | 2   | 25  |     |
| Smolt                | 3          |                          | 1    |      |     |     |     | 1    | 2    |     | 3    |      |    |    |     |     |     |     |     |     |     |     | 1   |     |
| Fry                  | 15         |                          | 5    | 1    | 5   |     |     | 1    | 5    |     | 10   |      |    |    | 4   |     | 3   | 2   | 2   | 4   |     |     | 4   |     |
| Foster Dam HOR       |            | 711                      |      | 82   |     | 3   |     |      | 3    | 5   |      | 64   |    | 1  | 1   | 3   |     | 5   | 12  | 4   | 15  | 1   | 6   |     |
| 5 ft                 |            | 711                      |      | 82   |     | 3   |     |      | 3    | 5   |      | 64   |    | 1  | 1   | 3   |     | 5   | 12  | 4   | 15  | 1   | 6   |     |
| Parr                 | 69         |                          | 47   |      |     |     |     | 3    |      |     | 21   |      |    |    | 1   |     |     |     | 1   |     |     |     |     |     |
| Smolt                | 45         |                          | 32   |      |     |     |     |      |      |     | 23   |      |    |    |     |     | 1   |     |     |     | 2   |     |     |     |
| Fry                  | 597        |                          | 3    |      | 3   |     |     |      | 5    |     | 20   |      |    | 1  | 1   | 2   |     | 4   | 12  | 3   | 13  | 1   | 6   |     |
| Cougar Dam           |            | 3921                     | 12   | 2191 | 43  | 370 | 45  | 12   | 2894 | 918 | 7    | 2224 | 3  | 8  | 2   | ##  | 44  | 209 | ##  | 429 | 132 | 333 | 34  | 815 |
| RO                   |            | 2592                     | 1    | 1587 | 34  | 331 | 39  | 12   | 2269 | 781 | 5    | 1849 | 3  | 3  |     | 92  | 39  | 172 | 93  | 366 | 107 | 261 | 30  | 808 |
| Parr                 | 251        |                          | 135  | 5    | 39  | 3   | 1   | 155  | 68   |     | 142  |      |    |    | 9   | 2   | 10  | 6   | 18  | 17  | 7   | 5   | 37  |     |
| Smolt                | 2302       | 1                        | 1451 | 29   | 289 | 36  | 11  | 2114 | 712  | 5   | 1705 | 3    | 3  |    | 83  | 37  | 161 | 87  | 347 | 88  | 253 | 25  | 771 |     |
| Fry                  | 39         |                          | 1    |      | 3   |     |     |      | 1    |     | 2    |      |    |    |     |     | 1   |     | 1   | 2   | 1   |     |     |     |
| PH                   |            | 1329                     | 11   | 604  | 9   | 39  | 6   |      | 625  | 137 | 2    | 375  |    | 5  | 2   | 43  | 5   | 37  | 43  | 63  | 25  | 72  | 4   | 7   |
| Parr                 | 346        | 1                        | 189  | 2    | 12  | 3   |     | 126  | 35   | 2   | 97   |      | 1  |    | 10  | 2   | 6   | 15  | 16  | 8   | 10  |     | 1   |     |
| Smolt                | 592        |                          | 411  | 7    | 21  | 3   |     | 498  | 95   |     | 272  |      | 4  |    | 32  | 3   | 28  | 21  | 43  | 14  | 62  | 1   | 6   |     |
| Unknown              | 2          |                          |      |      |     |     |     |      |      |     |      |      |    | 2  |     |     |     |     |     |     |     |     |     |     |
| Fry                  | 389        | 10                       | 4    |      | 6   |     |     | 1    | 7    |     | 6    |      |    |    | 1   |     | 3   | 7   | 4   | 3   |     | 3   |     |     |
| Cougar Dam HOR       |            | 6238                     | 9    | 240  | 7   | 12  | 6   |      | 23   | 28  | 19   | 227  | 2  | 1  |     | 6   | 37  | 47  | 58  | 47  | 14  | 27  |     |     |
| 5 ft                 |            | 6238                     | 9    | 240  | 7   | 12  | 6   |      | 23   | 28  | 19   | 227  | 2  | 1  |     | 6   | 37  | 47  | 58  | 47  | 14  | 27  |     |     |
| Parr                 | 881        |                          | 211  | 7    | 1   | 6   |     | 21   | 7    | 10  | 156  |      |    |    | 4   |     | 7   | 19  | 7   | 7   | 4   | 6   |     |     |
| Smolt                | 18         |                          | 4    |      |     |     |     |      |      |     | 3    |      |    |    |     |     |     |     |     |     |     |     |     |     |
| Fry                  | 5339       | 9                        | 25   |      | 11  |     |     | 2    | 21   | 9   | 68   | 2    | 1  |    | 2   |     | 30  | 28  | 51  | 40  | 10  | 21  |     |     |
| Fall Creek Dam Tail. |            | 62                       |      | 4    |     | 2   |     |      | 1    |     | 5    |      |    |    | 1   |     | 2   | 1   | 2   | 3   |     |     | 2   |     |
| 8 ft                 |            | 62                       |      | 4    |     | 2   |     |      | 1    |     | 5    |      |    |    | 1   |     | 2   | 1   | 2   | 3   |     |     | 2   |     |
| Parr                 | 7          |                          | 1    |      | 1   |     |     |      |      |     | 1    |      |    |    | 1   |     |     | 1   | 1   | 1   |     |     | 2   |     |
| Smolt                | 1          |                          |      |      |     |     |     |      | 1    |     | 1    |      |    |    |     |     | 1   |     |     |     |     |     |     |     |
| Fry                  | 54         |                          | 3    |      | 1   |     |     |      |      |     | 3    |      |    |    |     |     | 1   |     | 1   | 2   |     |     |     |     |
| Fall Creek HOR       |            | 155                      |      | 5    | 1   |     |     |      | 2    | 4   |      | 5    | 1  |    |     |     |     | 2   | 3   |     | 2   |     | 1   |     |
| 8 ft                 |            | 155                      |      | 5    | 1   |     |     |      | 2    | 4   |      | 5    | 1  |    |     |     |     | 2   | 3   |     | 2   |     | 1   |     |
| Parr                 | 10         |                          | 3    |      |     |     |     | 1    | 2    |     | 3    |      |    |    |     |     |     | 1   |     |     |     |     |     |     |
| Smolt                | 5          |                          | 1    |      |     |     |     | 1    |      |     |      |      |    |    |     |     |     |     |     |     |     |     |     |     |
| Fry                  | 140        |                          | 1    | 1    |     |     |     |      | 2    |     | 2    | 1    |    |    |     |     | 1   | 3   |     | 2   |     | 1   |     |     |
| Dexter Dam Tail.     |            | 119                      |      | 69   |     | 7   |     |      | 19   | 32  |      | 60   |    |    |     | 1   | 4   | 4   | 6   | 6   | 6   | 1   | 21  |     |
| 5 ft                 |            | 119                      |      | 69   |     | 7   |     |      | 19   | 32  |      | 60   |    |    |     | 1   | 4   | 4   | 6   | 6   | 6   | 1   | 21  |     |
| Parr                 | 21         |                          | 7    |      | 3   |     |     | 2    | 6    |     | 9    |      |    |    |     |     |     | 2   | 3   | 2   |     |     | 6   |     |
| Smolt                | 95         |                          | 62   |      | 4   |     |     | 17   | 26   |     | 50   |      |    |    | 1   |     | 4   | 2   | 3   | 4   | 6   | 1   | 15  |     |
| Fry                  | 3          |                          |      |      |     |     |     |      |      |     | 1    |      |    |    |     |     |     |     |     |     |     |     |     |     |

**Chinook (CHS) To Date - Continued**

| Chinook Injuries to-date (Cont.) |            |      |      |     |     |     |     |     |      |     |     |     |    |    |     |     |     |     |     |     |     |     |     |
|----------------------------------|------------|------|------|-----|-----|-----|-----|-----|------|-----|-----|-----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Site/Trap/Life Stage             | Total Fish | MUNK | DS>2 | BLO | EYB | FUN | BKD | COP | DS>2 | PRD | FID | HBO | BO | HO | BVT | HBP | BRU | TEA | OPD | HIN | FVB | POP | GBD |
| Lookout Point HOR                | 239        | 1    | 56   |     | 3   |     |     | 3   | 3    |     | 33  |     |    |    |     |     | 4   | 3   | 4   |     | 1   |     |     |
| 5 ft                             | 239        | 1    | 56   |     | 3   |     |     | 3   | 3    |     | 33  |     |    |    |     |     | 4   | 3   | 4   |     | 1   |     |     |
| Parr                             | 100        |      | 46   |     |     |     |     | 1   |      |     | 18  |     |    |    |     |     | 1   |     | 2   |     |     |     |     |
| Smolt                            | 11         |      | 8    |     |     |     |     | 1   | 1    |     | 6   |     |    |    |     |     |     |     |     |     |     |     |     |
| Fry                              | 128        | 1    | 2    |     | 3   |     |     | 1   | 2    |     | 9   |     |    |    |     |     | 3   | 3   | 2   |     | 1   |     |     |
| Hills Creek Dam                  | 504        | 2    | 81   | 1   | 26  |     |     | 130 | 70   |     | 83  | 1   | 12 | 3  | 55  | 8   | 28  | 11  | 30  | 16  | 16  | 7   | 20  |
| RO                               | 219        | 2    | 49   |     | 9   |     |     | 77  | 37   |     | 43  |     | 7  |    | 29  | 6   | 12  | 2   | 18  | 9   | 7   | 4   | 8   |
| Parr                             | 7          |      | 2    |     |     |     |     | 1   |      |     |     |     |    |    |     |     | 1   |     |     |     |     |     |     |
| Smolt                            | 86         | 1    | 45   |     | 8   |     |     | 76  | 37   |     | 41  |     | 7  |    | 29  | 6   | 8   | 2   | 16  | 6   | 6   | 2   | 8   |
| Fry                              | 126        | 1    | 2    |     | 1   |     |     |     |      |     | 2   |     |    |    |     |     | 3   |     | 2   | 3   | 1   | 2   |     |
| PH                               | 285        |      | 32   | 1   | 17  |     |     | 53  | 33   |     | 40  | 1   | 5  | 3  | 26  | 2   | 16  | 9   | 12  | 7   | 9   | 3   | 12  |
| Parr                             | 7          |      | 4    |     |     |     |     | 1   | 1    |     |     |     |    |    |     | 1   |     |     |     | 1   |     |     |     |
| Smolt                            | 58         |      | 23   | 1   | 13  |     |     | 52  | 32   |     | 35  | 1   | 5  | 3  | 21  | 1   | 10  | 4   | 8   | 4   | 9   |     | 12  |
| Fry                              | 220        |      | 5    |     | 4   |     |     |     |      |     | 5   |     |    |    | 5   |     | 6   | 5   | 4   | 2   |     | 3   |     |

**Chinook (CHS) During Reporting Period**

| Chinook Injuries During Reporting Period (8-1-2023 to 8-15-2023) |            |      |      |     |     |     |     |     |      |     |     |     |    |    |     |     |     |     |     |     |     |     |     |
|--|------------|------|------|-----|-----|-----|-----|-----|------|-----|-----|-----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| p/Life Stage   | Total Fish | MUNK | DS>2 | BLO | EYB | FUN | BKD | COP | DS>2 | PRD | FID | HBO | BO | HO | BVT | HBP | BRU | TEA | OPD | HIN | FVB | POP | GBD |
| Big Cliff Dam  | 21         |      | 14   |     | 1   | 1   |     | 19  | 4    | 1   | 11  |     |    |    |     |     | 2   | 2   |     |     |     | 1   |     |
| 8 ft   | 21         |      | 14   |     | 1   | 1   |     | 19  | 4    | 1   | 11  |     |    |    |     |     | 2   | 2   |     |     |     | 1   |     |
| Smolt  | 21         |      | 14   |     | 1   | 1   |     | 19  | 4    | 1   | 11  |     |    |    |     |     | 2   | 2   |     |     |     | 1   |     |
| Cougar Dam   | 20         | 1    | 15   |     |     |     |     | 10  | 1    | 1   | 10  |     |    |    |     |     |     |     | 1   |     |     |     |     |
| PH 1   | 18         | 1    | 13   |     |     |     |     | 9   | 1    | 1   | 8   |     |    |    |     |     |     |     | 1   |     |     |     |     |
| Parr   | 9          | 1    | 5    |     |     |     |     | 6   | 1    | 1   |     |     |    |    |     |     |     |     | 1   |     |     |     |     |
| Smolt  | 9          |      | 8    |     |     |     |     | 3   |      |     | 8   |     |    |    |     |     |     |     |     |     |     |     |     |
| PH 2   | 2          |      | 2    |     |     |     |     | 1   |      |     | 2   |     |    |    |     |     |     |     |     |     |     |     |     |
| Smolt  | 2          |      | 2    |     |     |     |     | 1   |      |     | 2   |     |    |    |     |     |     |     |     |     |     |     |     |
| Cougar Dam HOR   | 225        |      | 49   |     |     | 2   |     | 3   |      | 3   | 31  |     |    |    |     |     | 2   | 3   | 1   |     |     |     |     |
| 5 ft   | 225        |      | 49   |     |     | 2   |     | 3   |      | 3   | 31  |     |    |    |     |     | 2   | 3   | 1   |     |     |     |     |
| Fry  | 18         |      |      |     |     |     |     |     |      |     |     |     |    |    |     |     |     |     |     |     |     |     |     |
| Parr   | 200        |      | 49   |     |     | 2   |     | 3   |      | 3   | 30  |     |    |    |     |     | 2   | 3   | 1   |     |     |     |     |
| Smolt  | 7          |      |      |     |     |     |     |     |      |     | 1   |     |    |    |     |     |     |     |     |     |     |     |     |

### Steelhead (O. mykiss) To Date

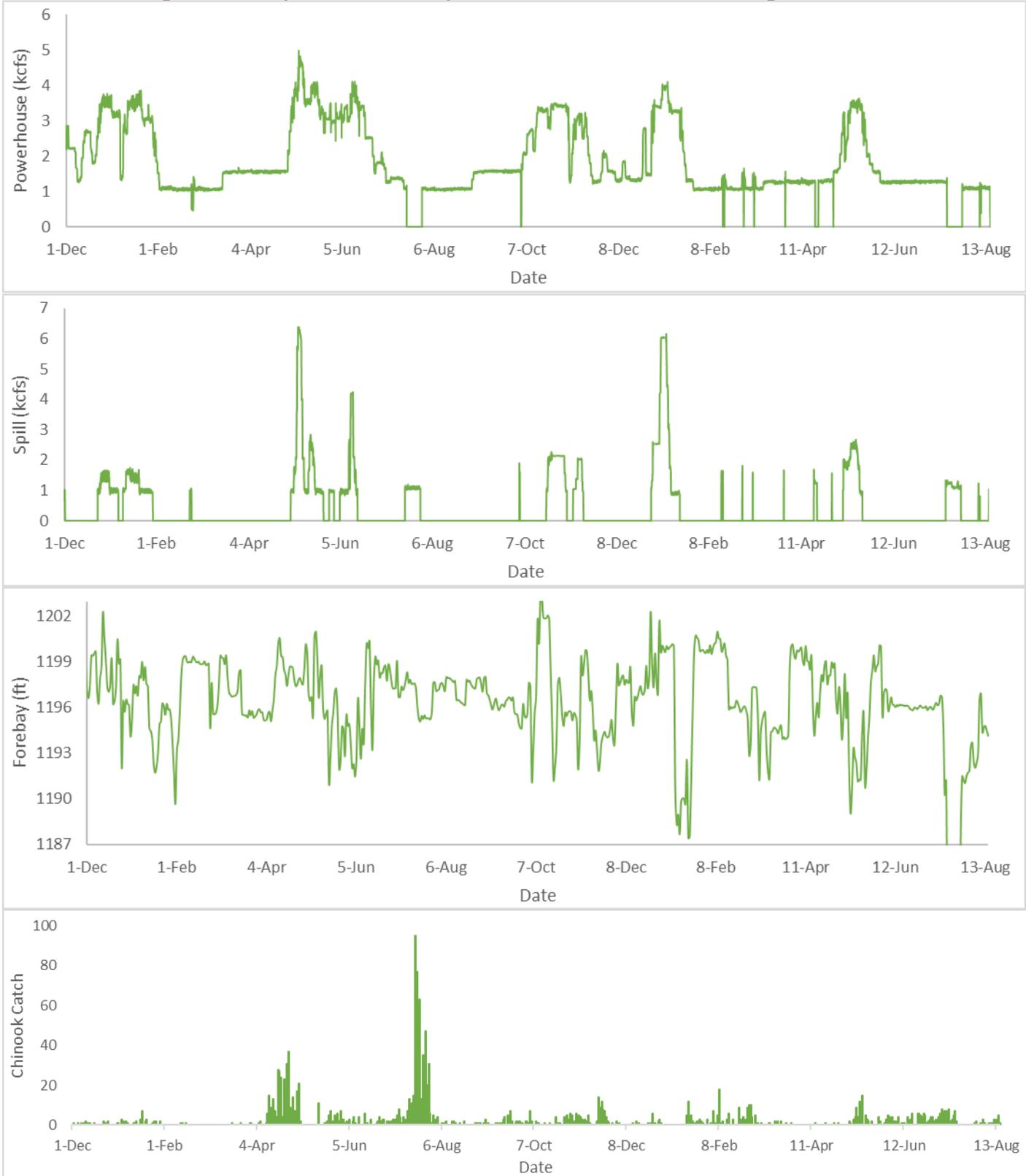
| O. mykiss Injuries to-Date |            |      |      |     |     |     |     |     |      |     |     |     |    |    |     |     |     |     |     |     |     |     |     |
|----------------------------|------------|------|------|-----|-----|-----|-----|-----|------|-----|-----|-----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 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              | 344        | 1    | 55   | 4   | 7   | 4   | 6   | 51  | 22   | 1   | 72  | 1   | 1  |    | 5   |     | 15  | 7   | 17  | 16  | 12  | 3   | 13  |
| 8 ft                       | 344        | 1    | 55   | 4   | 7   | 4   | 6   | 51  | 22   | 1   | 72  | 1   | 1  |    | 5   |     | 15  | 7   | 17  | 16  | 12  | 3   | 13  |
| Adult                      | 1          |      |      |     |     |     |     |     | 1    |     | 1   |     | 1  |    |     |     |     |     |     |     |     |     |     |
| Parr                       | 50         | 1    | 12   | 4   | 1   | 1   | 1   | 1   |      |     | 16  |     |    |    |     |     | 2   | 1   | 1   | 1   | 1   |     | 1   |
| Smolt                      | 64         |      | 38   |     | 6   | 3   | 5   | 50  | 21   |     | 50  | 1   |    |    | 5   |     | 10  | 5   | 15  | 15  | 11  | 3   | 11  |
| Fry                        | 229        |      | 5    |     |     |     |     |     |      | 1   | 5   |     |    |    |     |     | 3   | 1   | 1   |     |     |     | 1   |
| Green Peter Tail.          | 17         |      | 7    |     | 3   |     |     | 4   | 8    |     | 13  |     |    |    | 1   |     | 4   |     | 5   | 3   | 1   | 5   | 12  |
| 8 ft                       | 17         |      | 7    |     | 3   |     |     | 4   | 8    |     | 13  |     |    |    | 1   |     | 4   |     | 5   | 3   | 1   | 5   | 12  |
| Adult                      | 1          |      | 1    |     |     |     |     |     |      |     | 1   |     |    |    |     |     |     |     |     |     |     |     | 1   |
| Smolt                      | 15         |      | 6    |     | 3   |     |     | 4   | 8    |     | 12  |     |    |    | 1   |     | 4   |     | 5   | 3   | 1   | 5   | 11  |
| Fry                        | 1          |      |      |     |     |     |     |     |      |     |     |     |    |    |     |     |     |     |     |     |     |     |     |
| Foster Dam HOR             | 265        |      | 90   |     | 2   | 5   |     | 6   |      | 2   | 80  |     |    |    |     |     |     | 3   | 2   | 3   | 3   | 1   | 2   |
| 5 ft                       | 265        |      | 90   |     | 2   | 5   |     | 6   |      | 2   | 80  |     |    |    |     |     |     | 3   | 2   | 3   | 3   | 1   | 2   |
| Adult                      | 7          |      | 1    |     |     |     |     |     |      |     | 2   |     |    |    |     |     |     |     |     |     |     |     |     |
| Parr                       | 125        |      | 38   |     | 1   | 3   |     | 4   |      |     | 43  |     |    |    |     |     | 3   |     | 2   |     |     | 1   | 1   |
| Smolt                      | 93         |      | 51   |     | 1   | 2   |     | 2   |      | 2   | 34  |     |    |    |     |     |     | 1   | 1   | 2   |     | 1   |     |
| Fry                        | 40         |      |      |     |     |     |     |     |      |     | 1   |     |    |    |     |     |     | 1   |     | 1   |     |     |     |

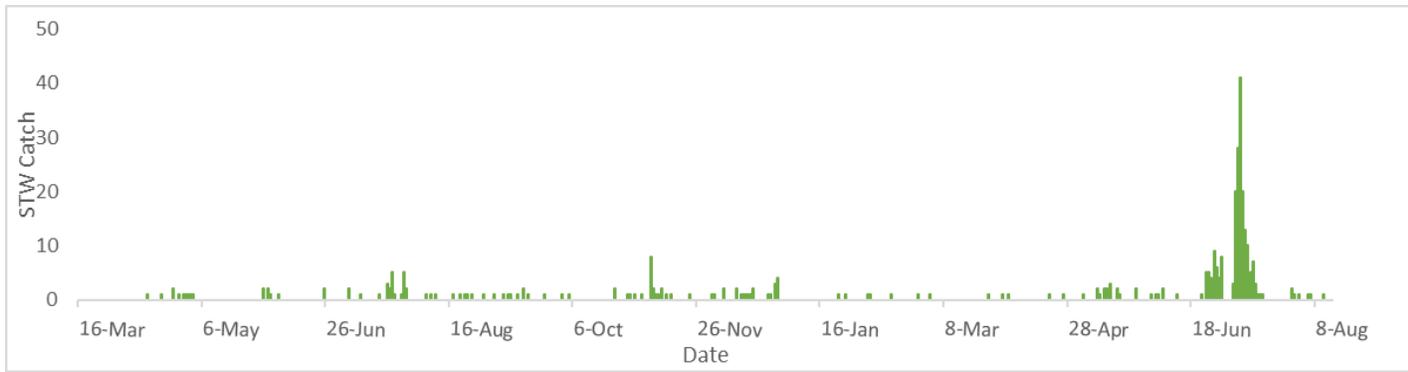
### Steelhead (O. mykiss) During Reporting Period

| O. mykiss Injuries During Reporting Period (8-1-2023 to 8-15-2023) |            |      |      |     |     |     |     |     |      |     |     |     |    |    |     |     |     |     |     |     |     |     |     |
|--|------------|------|------|-----|-----|-----|-----|-----|------|-----|-----|-----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| p/Life Stage   | Total Fish | MUNK | DS<2 | BLO | EYB | FUN | BKD | COP | DS>2 | PRD | FID | HBO | BO | HO | BVT | HBP | BRU | TEA | OPD | HIN | FVB | POP | GBD |
| Big Cliff Dam  | 4          |      |      |     |     |     |     |     |      |     | 1   |     |    |    |     |     |     |     |     |     |     |     |     |
| 8 ft   | 4          |      |      |     |     |     |     |     |      |     | 1   |     |    |    |     |     |     |     |     |     |     |     |     |
| Fry  | 4          |      |      |     |     |     |     |     |      |     | 1   |     |    |    |     |     |     |     |     |     |     |     |     |

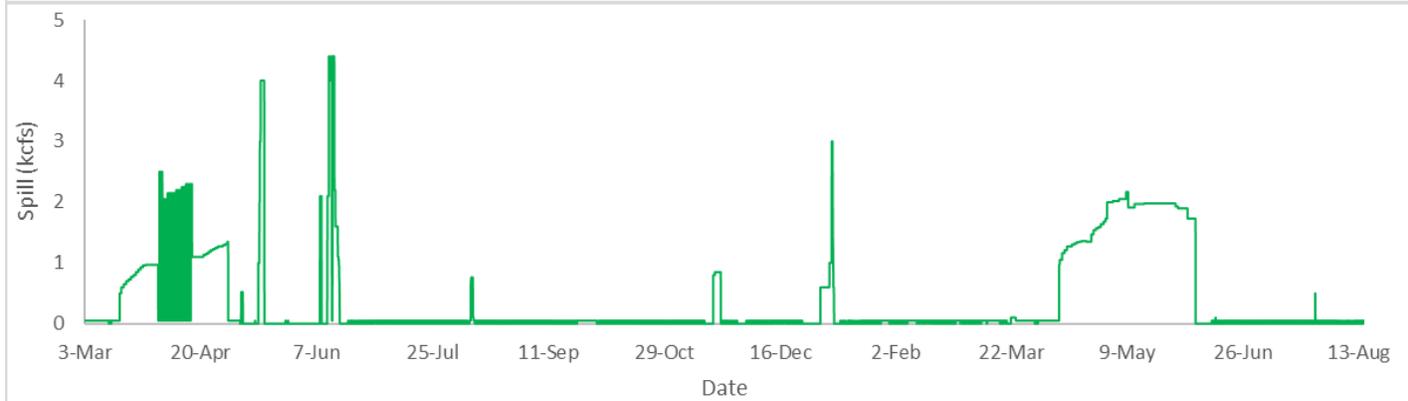
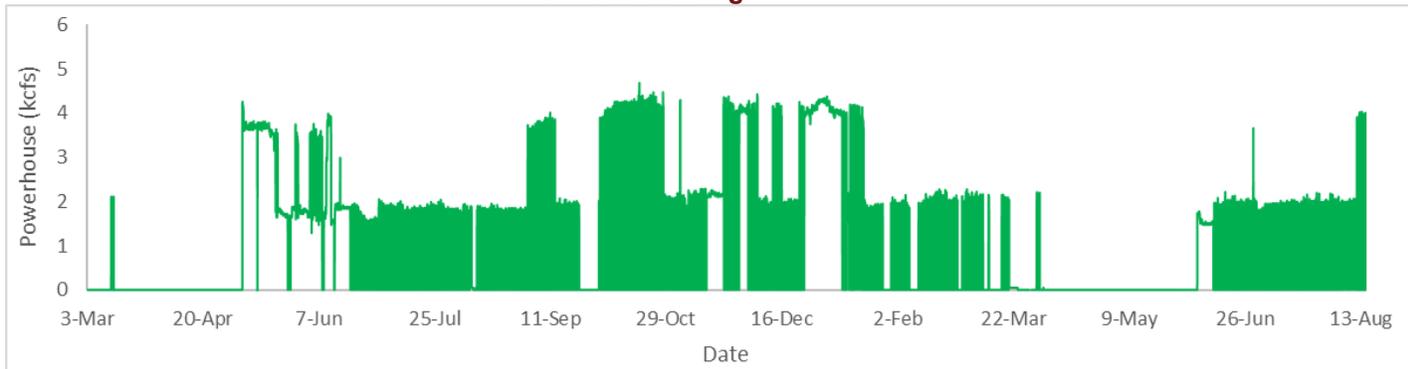
# Appendix B

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



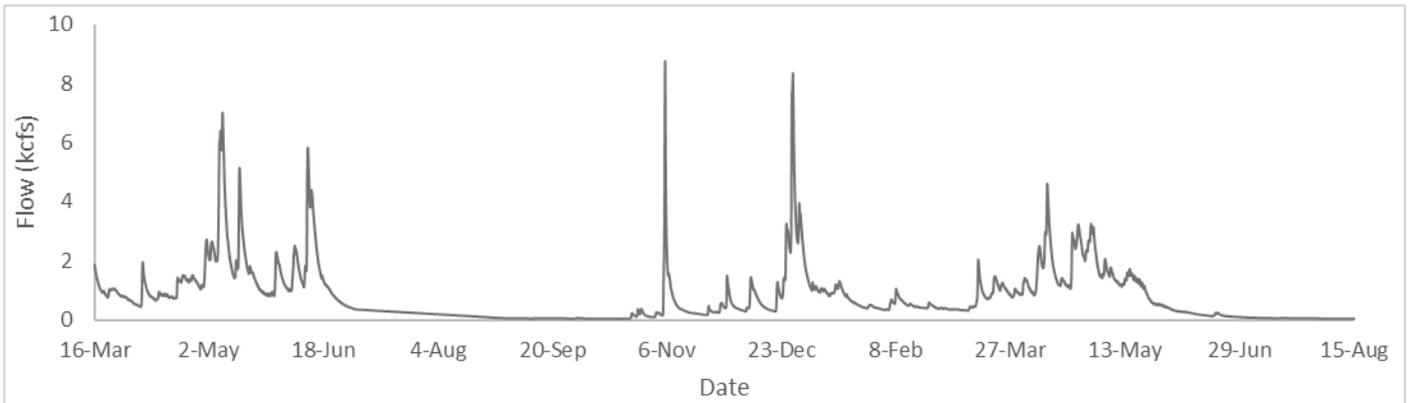


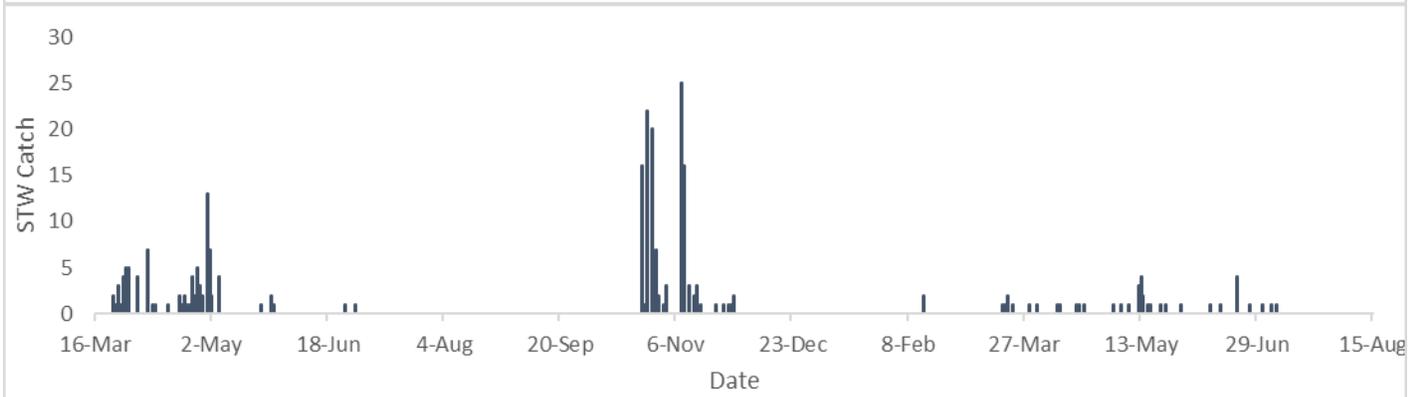
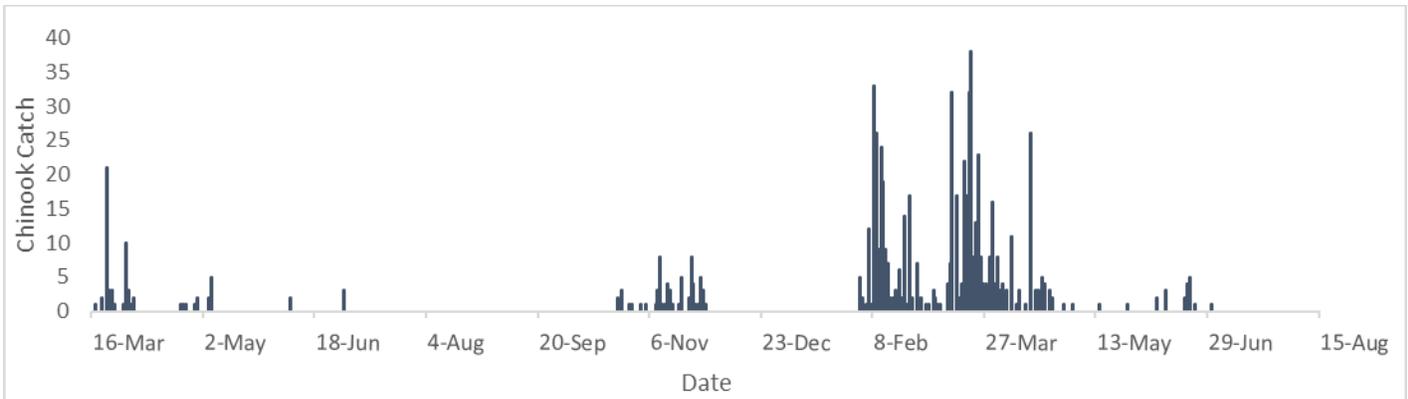
**Green Peter Dam Operational and Green Peter Tailrace- Middle Santiam River Capture Data Since Start of Monitoring**



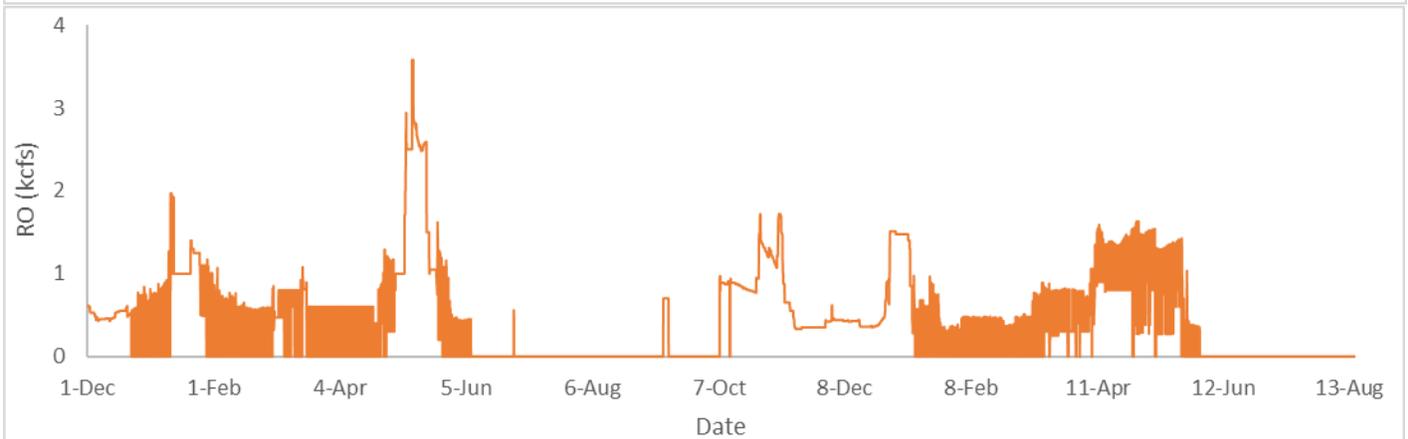
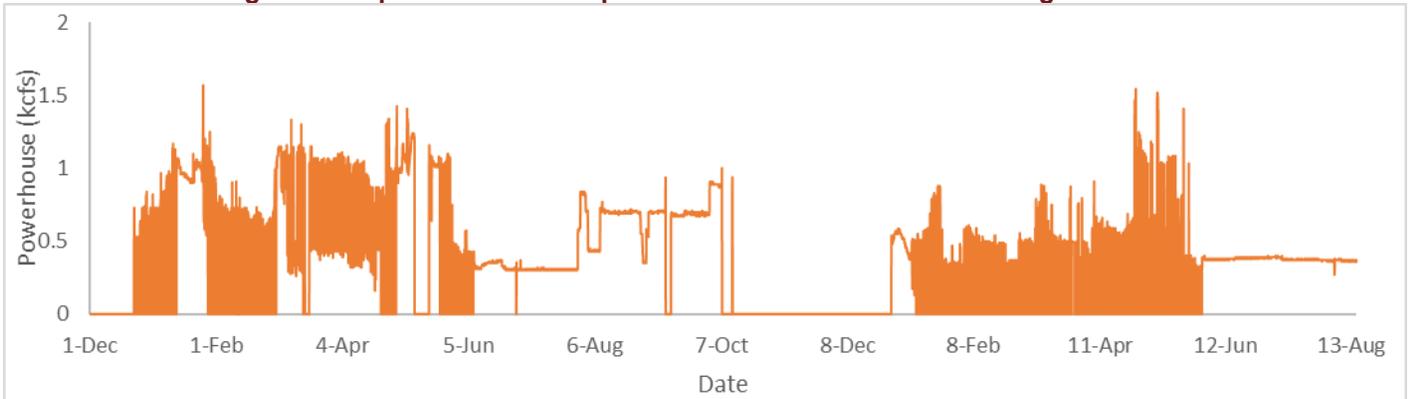


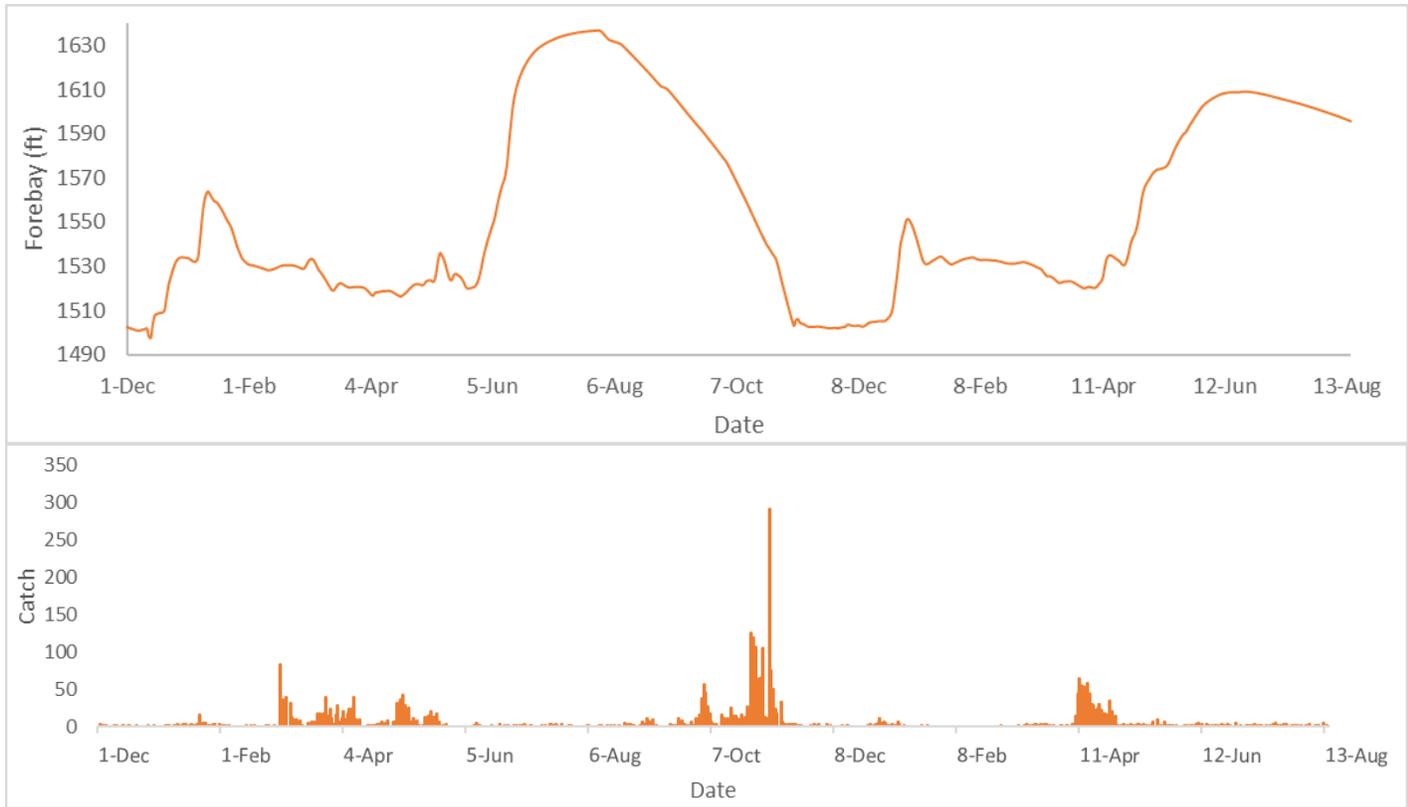
**South Santiam River Above Foster Dam Discharge and Foster Dam Head of Reservoir Capture Data**



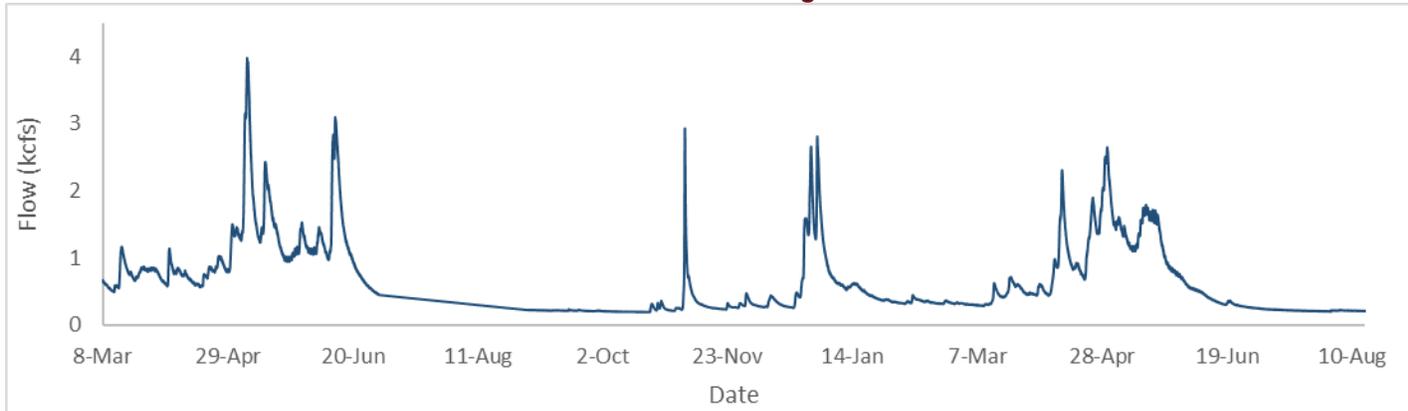


**Cougar Dam Operational and Capture Data Since Start of Monitoring**

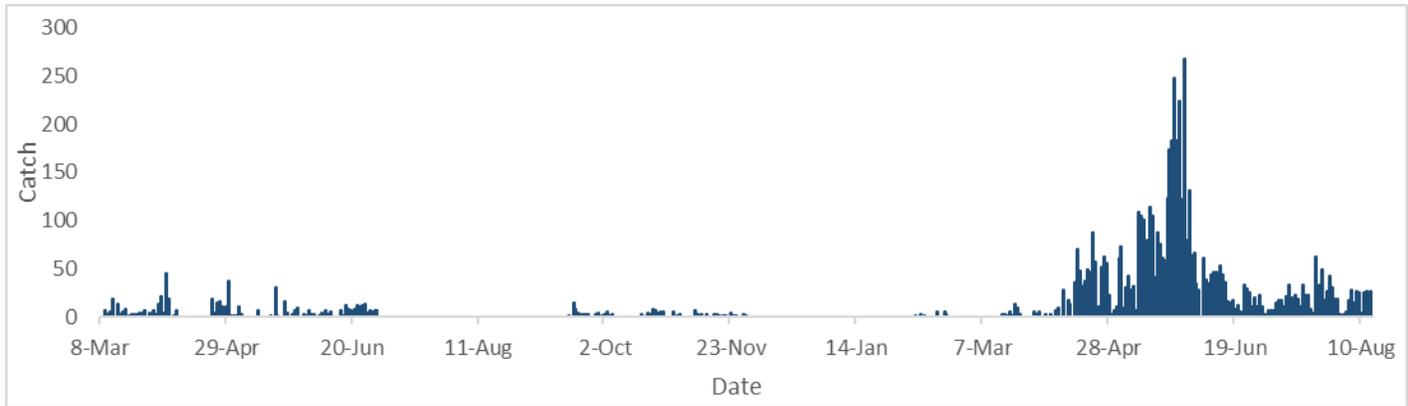




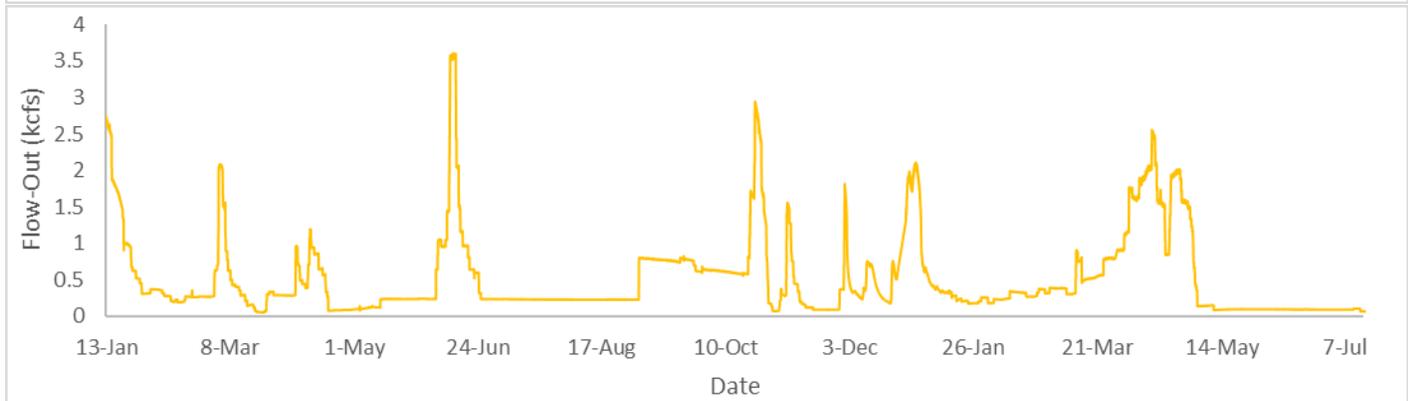
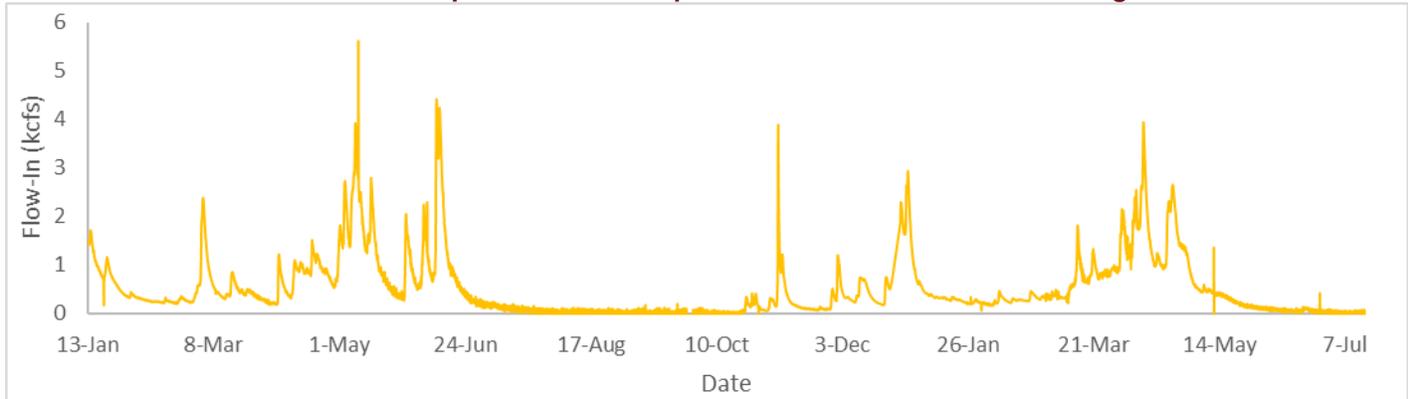
**South Fork McKenzie above Cougar Dam Discharge and Cougar Dam Head of Reservoir Capture Data Since Start of Monitoring**



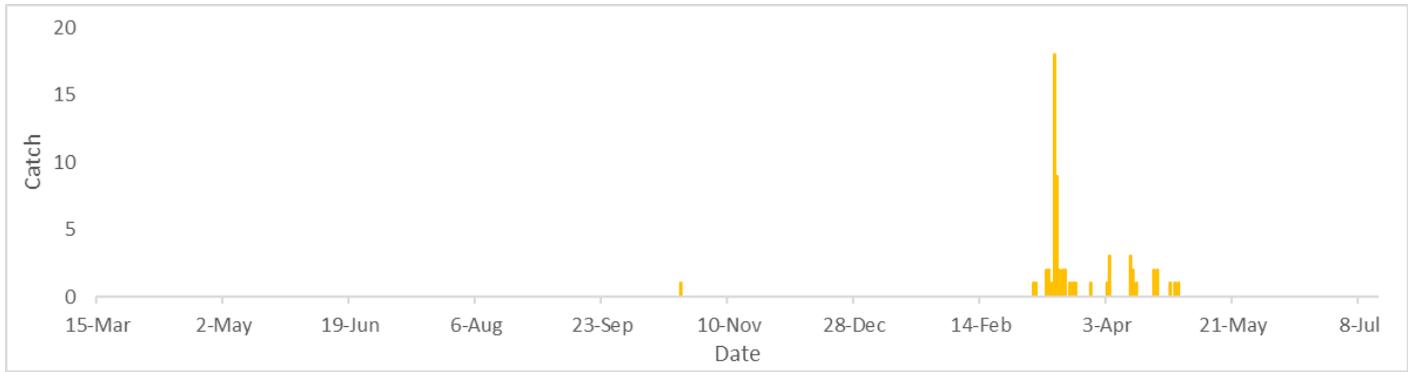
Note: Discharge data was taken from USGS gauge site number 14159200, 250 meters upstream.



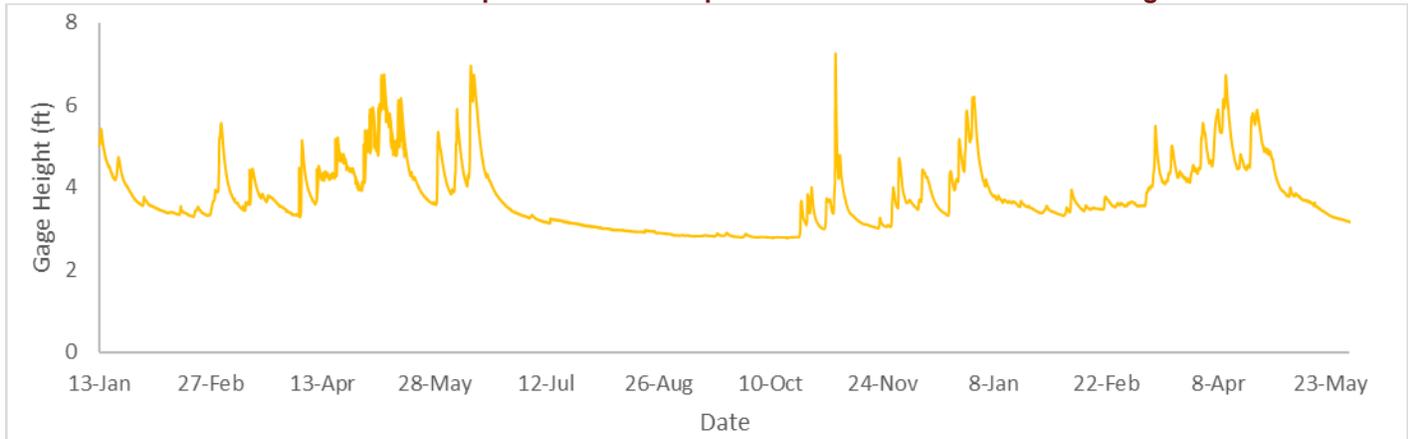
**Fall Creek Dam Tailrace Operational and Capture Data Since Start of Monitoring**



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



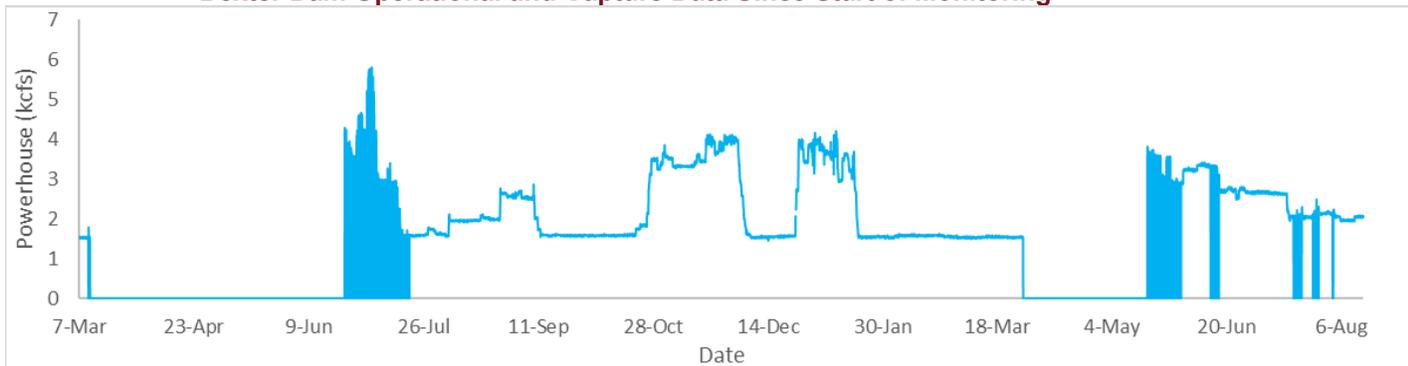
**Fall Creek Head of Reservoir Operational and Capture Data Since Start of Monitoring**



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

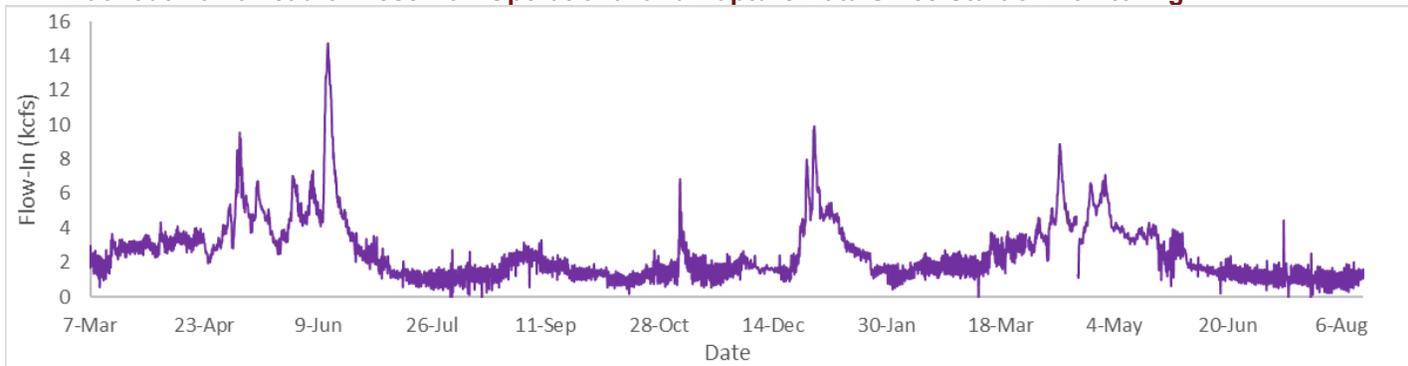


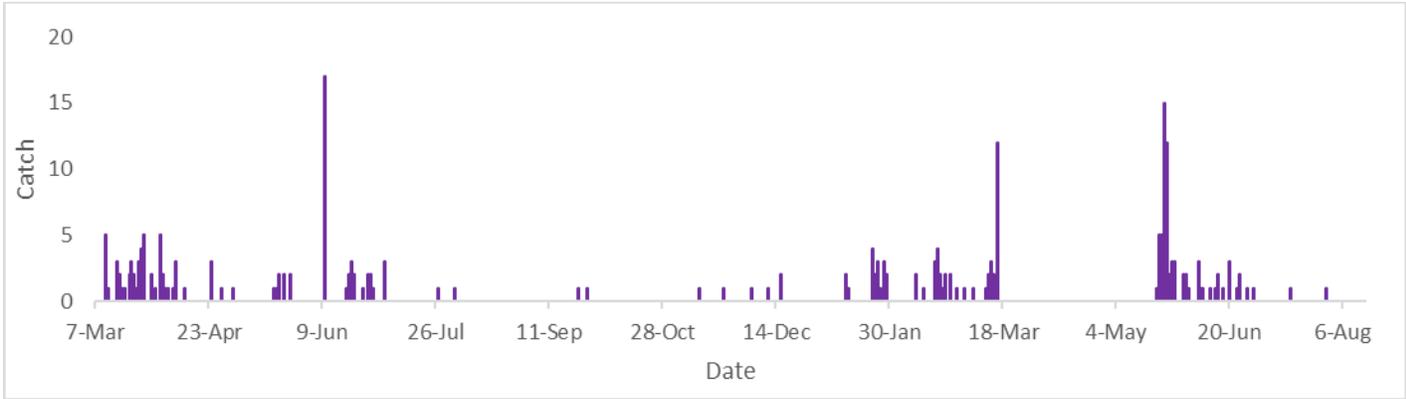
**Dexter Dam Operational and Capture Data Since Start of Monitoring**



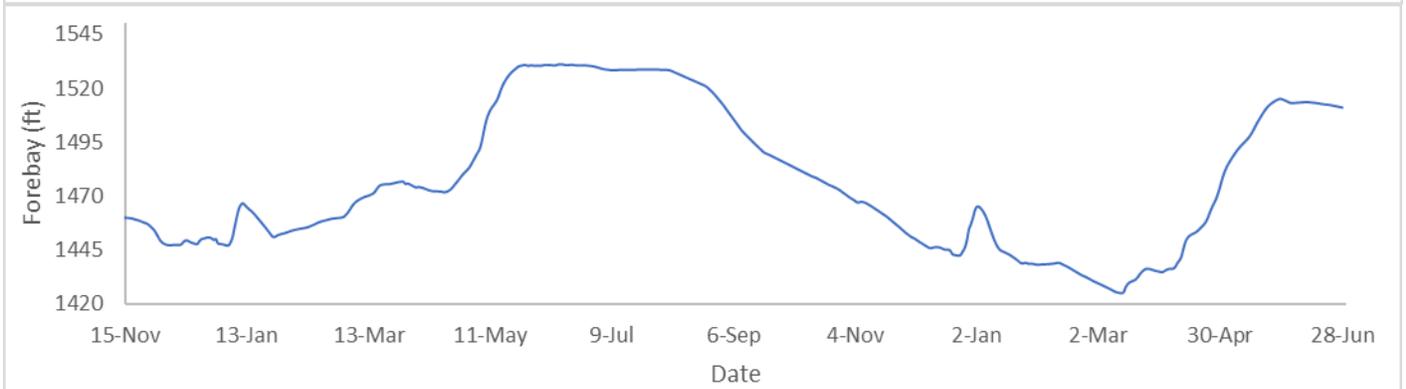
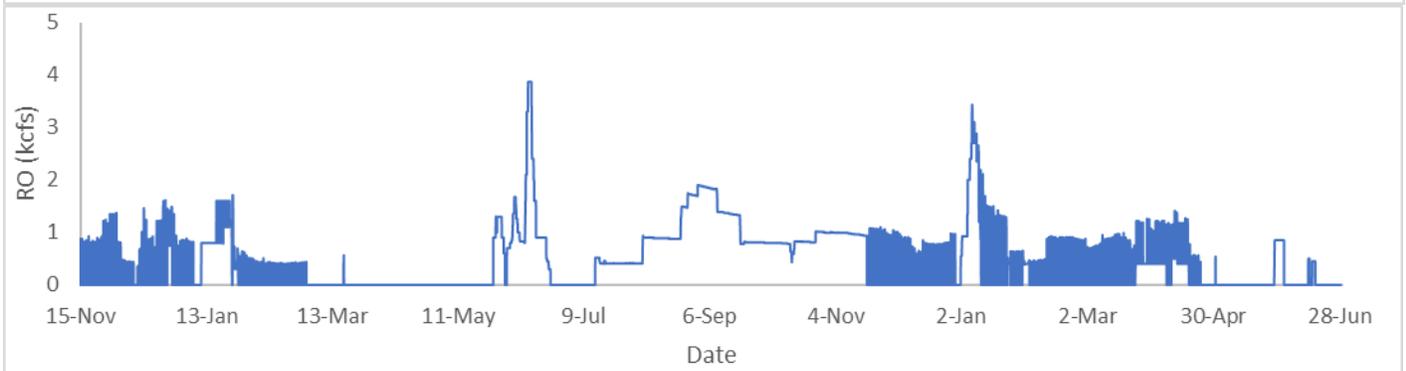
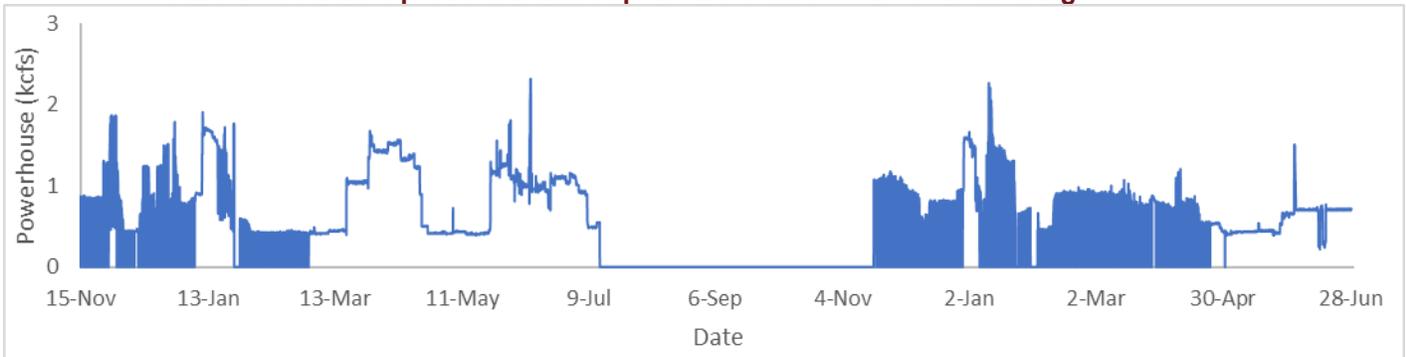


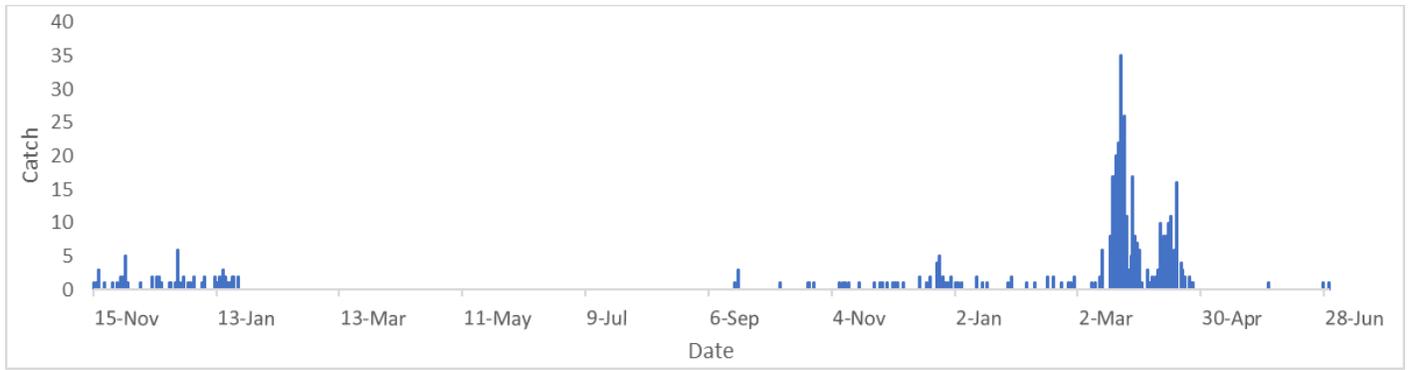
**Lookout Point Head of Reservoir Operational and Capture Data Since Start of Monitoring**



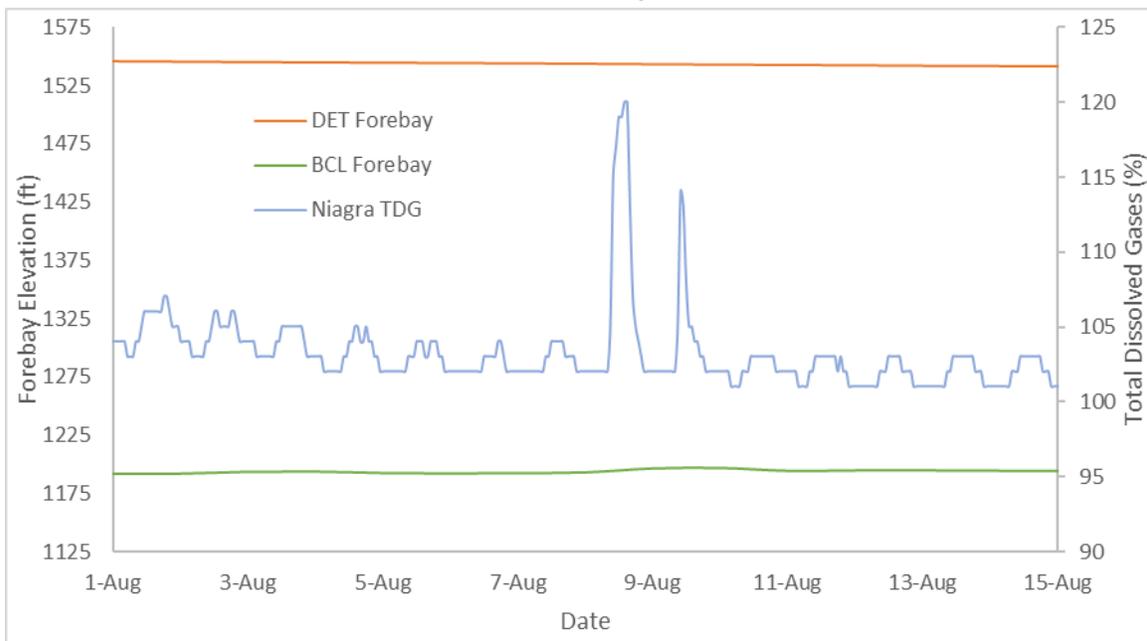


**Hills Creek Dam Operational and Capture Data Since Start of Monitoring**





### Detroit Dam Forebay Elevation



## Appendix C

| Release Location                            | Date of Release | # of Fish Released | # of Fish Recaptured | % Efficiency |
|---|-----------------|--------------------|----------------------|--------------|
| Big Cliff Dam Tailrace                      | 12/22/2021      | 997                | 39                   | 3.9%         |
| Big Cliff Dam Tailrace                      | 5/25/2022       | 995                | 21                   | 2.1%         |
| Big Cliff Dam Tailrace                      | 8/9/2022        | 1000               | 92                   | 9.2%         |
| Big Cliff Dam Tailrace                      | 9/30/2022       | 995                | 48                   | 4.8%         |
| Big Cliff Dam Tailrace                      | 10/13/2022      | 500                | 15                   | 3.0%         |
| Big Cliff Dam Tailrace                      | 10/24/2022      | 535                | 25                   | 4.7%         |
| Big Cliff Dam Tailrace                      | 11/2/2022       | 949                | 40                   | 4.2%         |
| Big Cliff Dam Tailrace                      | 11/16/2022      | 509                | 15                   | 2.9%         |
| Big Cliff Dam Tailrace                      | 12/14/2022      | 502                | 60                   | 12.0%        |
| Big Cliff Dam Tailrace                      | 12/19/2022      | 1010               | 92                   | 9.1%         |
| Big Cliff Dam Tailrace                      | 12/21/2022      | 1014               | 33                   | 3.3%         |
| Big Cliff Dam Tailrace                      | 12/27/2022      | 704                | 47                   | 6.7%         |
| Big Cliff Dam Tailrace                      | 12/29/2022      | 452                | 22                   | 4.9%         |
| Big Cliff Dam Tailrace                      | 1/25/2023       | 500                | 56                   | 11.2%        |
| Big Cliff Dam Tailrace                      | 2/17/2023       | 499                | 37                   | 7.4%         |
| Big Cliff Dam Tailrace                      | 3/7/2023        | 2,968              | 61                   | 2.1%         |
| Big Cliff Dam Tailrace                      | 3/10/2023       | 541                | 112                  | 20.7%        |
| Big Cliff Dam Tailrace                      | 4/28/2023       | 498                | 34                   | 6.8%         |
| Big Cliff Dam Tailrace                      | 5/23/2023       | 500                | 6                    | 1.2%         |
| Big Cliff Dam Tailrace                      | 6/21/2023       | 500                | 8                    | 1.6%         |
| Big Cliff Dam Tailrace                      | 7/5/2023        | 500                | 33                   | 6.6%         |
| Big Cliff Dam Tailrace                      | 8/3/2023        | 474                | 42                   | 8.9%         |
| Green Peter Dam Tailrace- Spill             | 3/29/2022       | 643                | 4                    | 0.6%         |
| Green Peter Dam Tailrace- Spill             | 4/30/2022       | 518                | 9                    | 1.7%         |
| Green Peter Dam Tailrace- Spill (Dead Fish) | 5/11/2023       | 1,001              | 0                    | 0%           |
| Green Peter Dam Tailrace- Spill             | 5/11/2023       | 999                | 9                    | 0.9%         |
| Green Peter Dam Tailrace- PWR               | 5/25/2023       | 1,000              | 10                   | 1.0%         |
| Green Peter Dam Tailrace- PWR               | 6/23/2023       | 1000               | 23                   | 2.3%         |
| Green Peter Dam Tailrace- PWR               | 7/27/2023       | 1,009              | 13                   | 1.3%         |
| Foster Dam Head of Reservoir                | 9/29/2022       | 1,063              | 0                    | 0%           |
| Foster Dam Head of Reservoir                | 10/25/2022      | 821                | 116                  | 14.1%        |
| Foster Dam Head of Reservoir                | 11/1/2022       | 1006               | 263                  | 26.1%        |
| Foster Dam Head of Reservoir                | 11/9/2022       | 1007               | 68                   | 6.8%         |
| Foster Dam Head of Reservoir                | 11/15/2022      | 1009               | 55                   | 5.5%         |
| Foster Dam Head of Reservoir                | 11/22/2022      | 933                | 163                  | 17.5%        |
| Foster Dam Head of Reservoir                | 2/27/2023       | 1,002              | 21                   | 2.1%         |
| Foster Dam Head of Reservoir                | 3/9/2023        | 995                | 62                   | 6.2%         |
| Foster Dam Head of Reservoir                | 3/15/2023       | 1,025              | 0                    | 0%           |
| Foster Dam Head of Reservoir                | 5/11/2023       | 985                | 20                   | 2.0%         |
| Foster Dam Head of Reservoir                | 6/2/2023        | 1,003              | 79 <sup>a</sup>      | 7.9%         |
| Foster Dam Head of Reservoir                | 6/29/2023       | 1,000              | 16                   | 1.6%         |
| Foster Dam Head of Reservoir                | 7/27/2023       | 989                | 0                    | 0.0%         |
| Cougar Dam Powerhouse Channel               | 1/19/2022       | 997                | 37                   | 3.7%         |
| Cougar Dam Regulating Outlet Channel        | 1/19/2022       | 995                | 26                   | 2.6%         |
| Cougar Dam Powerhouse Channel               | 4/20/2022       | 1000               | 67                   | 6.7%         |
| Cougar Dam Regulating Outlet Channel        | 4/20/2022       | 995                | 16                   | 1.6%         |
| Cougar Dam Regulating Outlet Channel        | 5/15/2022       | 500                | 64                   | 12.8%        |
| Cougar Dam Powerhouse Channel               | 7/19/2022       | 535                | 148                  | 27.7%        |
| Cougar Dam Powerhouse Channel               | 8/11/2022       | 949                | 29                   | 3.1%         |
| Cougar Dam Regulating Outlet Channel        | 10/14/2022      | 509                | 49                   | 9.6%         |
| Cougar Dam Regulating Outlet Channel        | 12/13/2022      | 502                | 42                   | 8.4%         |
| Cougar Dam Regulating Outlet Channel        | 12/15/2022      | 1010               | 56                   | 5.5%         |
| Cougar Dam Regulating Outlet Channel        | 12/20/2022      | 1014               | 61                   | 6.0%         |
| Cougar Dam Regulating Outlet Channel        | 12/28/2022      | 704                | 14                   | 2.0%         |
| Cougar Dam Powerhouse Channel               | 1/12/2023       | 843                | 159                  | 18.9%        |
| Cougar Dam Regulating Outlet Channel        | 1/30/2023       | 509                | 6                    | 1.2%         |
| Cougar Dam Powerhouse Channel               | 3/23/2023       | 500                | 49                   | 9.8%         |
| Cougar Dam Regulating Outlet Channel        | 3/23/2023       | 511                | 4                    | 0.8%         |
| Cougar Dam Powerhouse Channel               | 3/30/2023       | 497                | 12                   | 2.4%         |
| Cougar Dam Regulating Outlet Channel        | 3/30/2023       | 491                | 31                   | 6.3%         |
| Cougar Dam Powerhouse Channel               | 4/18/2023       | 297                | 14                   | 4.7%         |
| Cougar Dam Regulating Outlet Channel        | 4/18/2023       | 501                | 2                    | 0.4%         |

| Release Location                     | Date of Release | # of Fish Released | # of Fish Recaptured | % Efficiency |
|--------------------------------------|-----------------|--------------------|----------------------|--------------|
| Cougar Dam Powerhouse Channel        | 5/10/2023       | 499                | 5                    | 1.0%         |
| Cougar Dam Regulating Outlet Channel | 5/10/2023       | 499                | 0                    | 0%           |
| Cougar Dam Powerhouse Channel        | 6/6/2023        | 507                | 65                   | 12.8%        |
| Cougar Dam Powerhouse Channel        | 7/26/2023       | 510                | 61                   | 12.0%        |
| Cougar Dam Head of Reservoir         | 3/18/2022       | 806                | 40                   | 5.0%         |
| Cougar Dam Head of Reservoir         | 5/19/2022       | 498                | 23                   | 4.6%         |
| Cougar Dam Head of Reservoir         | 6/23/2022       | 486                | 7                    | 1.4%         |
| Cougar Dam Head of Reservoir         | 9/22/2022       | 551                | 56                   | 10.2%        |
| Cougar Dam Head of Reservoir         | 10/5/2022       | 608                | 47                   | 7.7%         |
| Cougar Dam Head of Reservoir         | 11/10/2022      | 704                | 33                   | 4.7%         |
| Cougar Dam Head of Reservoir         | 11/16/2022      | 719                | 28                   | 3.9%         |
| Cougar Dam Head of Reservoir         | 11/23/2022      | 752                | 48                   | 6.4%         |
| Cougar Dam Head of Reservoir         | 11/29/2022      | 620                | 48                   | 7.7%         |
| Cougar Dam Head of Reservoir         | 4/14/2023       | 506                | 10                   | 2.0%         |
| Cougar Dam Head of Reservoir         | 5/10/2023       | 508                | 7                    | 1.4%         |
| Cougar Dam Head of Reservoir         | 5/16/2023       | 497                | 23                   | 4.6%         |
| Cougar Dam Head of Reservoir         | 6/8/2023        | 510                | 23                   | 4.5%         |
| Cougar Dam Head of Reservoir         | 7/27/2023       | 758                | 27                   | 3.6%         |
| Fall Creek Dam Regulating Outlet     | 06/08/2022      | 517                | 11                   | 2.1%         |
| Fall Creek Dam Regulating Outlet     | 06/30/2022      | 513                | 0                    | 0%           |
| Fall Creek Dam Regulating Outlet     | 07/13/2022      | 498                | 0                    | 0%           |
| Fall Creek Dam Regulating Outlet     | 5/11/2023       | 998                | 0                    | 0%           |
| Fall Creek Dam Regulating Outlet     | 6/28/2023       | 992                | 0                    | 0%           |
| Fall Creek Head of Reservoir         | 5/5/2023        | 756                | 15                   | 2.0%         |
| Fall Creek Head of Reservoir         | 5/10/2023       | 750                | 23                   | 3.1%         |
| Fall Creek Head of Reservoir         | 5/18/2023       | 511                | 7                    | 1.4%         |
| Fall Creek Head of Reservoir         | 5/24/2023       | 760                | 4                    | 0.5%         |
| Dexter Dam Spillway                  | 3/23/2022       | 988                | 2                    | 0.2%         |
| Dexter Dam Spillway                  | 5/4/2022        | 995                | 43                   | 4.3%         |
| Dexter Dam Spillway                  | 5/24/2022       | 1018               | 67                   | 6.6%         |
| Dexter Dam Powerhouse                | 7/21/2022       | 976                | 2                    | 0.2%         |
| Dexter Dam Powerhouse                | 10/26/2022      | 1007               | 1                    | 0.1%         |
| Dexter Dam Powerhouse                | 11/1/2022       | 755                | 1                    | 0.1%         |
| Dexter Dam Powerhouse                | 11/17/2022      | 991                | 4                    | 0.4%         |
| Dexter Dam Powerhouse                | 12/6/2022       | 1010               | 10                   | 1.0%         |
| Dexter Dam Powerhouse                | 12/15/2022      | 1025               | 1                    | 0.1%         |
| Dexter Dam Powerhouse                | 3/16/2023       | 1,200              | 2                    | 0.2%         |
| Dexter Dam Spillway                  | 3/29/2023       | 1,199              | 5                    | 0.4%         |
| Dexter Dam Powerhouse                | 5/25/2023       | 4,003              | 14                   | 0.3%         |
| Dexter Dam Powerhouse                | 6/7/2023        | 4,010              | 4                    | 0.1%         |
| Dexter Dam Powerhouse                | 6/21/2023       | 4,028              | 15                   | 0.4%         |
| Dexter Dam Powerhouse                | 7/6/2023        | 4,000              | 5                    | 0.13%        |
| Dexter Dam Powerhouse                | 8/2/2023        | 1,505              | 3                    | 0.2%         |
| Lookout Dam Powerhouse               | 4/13/2022       | 998                | 0                    | 0%           |
| Lookout Dam Powerhouse               | 5/23/2023       | 3,999              | 32                   | 0.8%         |
| Lookout Dam Powerhouse               | 6/1/2023        | 4,011              | 6                    | 0.1%         |
| Lookout Dam Powerhouse               | 6/14/2023       | 4,010              | 4                    | 0.1%         |
| Lookout Dam Powerhouse               | 6/28/2023       | 4,010              | 3                    | 0.1%         |
| Lookout Dam Powerhouse               | 7/18/2023       | 4,012              | 1                    | 0.02%        |
| Lookout Point Head of Reservoir      | 4/5/2022        | 993                | 53                   | 5.3%         |
| Lookout Point Head of Reservoir      | 4/14/2022       | 987                | 19                   | 1.9%         |
| Lookout Point Head of Reservoir      | 5/18/2022       | 1004               | 125                  | 12.5%        |
| Lookout Point Head of Reservoir      | 7/20/2022       | 1005               | 9                    | 0.9%         |
| Lookout Point Head of Reservoir      | 10/27/2022      | 506                | 9                    | 1.8%         |
| Lookout Point Head of Reservoir      | 11/17/2022      | 510                | 0                    | 0%           |
| Lookout Point Head of Reservoir      | 12/12/2022      | 510                | 0                    | 0%           |
| Lookout Point Head of Reservoir      | 1/13/2023       | 516                | 10                   | 1.9%         |
| Lookout Point Head of Reservoir      | 6/2/2023        | 760                | 15                   | 2.0%         |
| Lookout Point Head of Reservoir      | 6/15/2023       | 765                | 6                    | 0.7%         |
| Lookout Point Head of Reservoir      | 6/29/2023       | 769                | 2                    | 0.3%         |
| Lookout Point Head of Reservoir      | 7/19/2023       | 765                | 1                    | 0.13%        |
| Hills Creek Dam Powerhouse           | 1/6/2022        | 596                | 20                   | 3.4%         |
| Hills Creek Dam Regulating Outlet    | 1/6/2022        | 605                | 13                   | 2.1%         |
| Hills Creek Dam Powerhouse           | 2/16/2022       | 600                | 12                   | 2.0%         |

| Release Location                     | Date of Release | # of Fish Released | # of Fish Recaptured | % Efficiency |
|--------------------------------------|-----------------|--------------------|----------------------|--------------|
| Hills Creek Dam Regulating Outlet    | 2/16/2022       | 593                | 19                   | 3.2%         |
| Hills Creek Dam Powerhouse           | 2/25/2022       | 604                | 6                    | 1.0%         |
| Hills Creek Dam Regulating Outlet    | 2/25/2022       | 625                | 6                    | 1.0%         |
| Hills Creek Dam Powerhouse           | 12/7/2022       | 514                | 29                   | 5.6%         |
| Hills Creek Dam Regulating Outlet    | 12/13/2022      | 516                | 1                    | 0.2%         |
| Hills Creek Dam Powerhouse- RO Trial | 1/6/2022        | 596                | 5                    | 0.8%         |
| Hills Creek Dam Powerhouse- RO Trial | 2/16/2022       | 600                | 0                    | 0%           |
| Hills Creek Dam Powerhouse- RO Trial | 2/25/2022       | 604                | 1                    | 0.2%         |
| Hills Creek Dam Powerhouse- RO Trial | 12/7/2022       | 514                | 3                    | 0.6%         |
| Hills Creek Dam Powerhouse           | 2/25/2023       | 519                | 15                   | 2.9%         |
| Hills Creek Dam Powerhouse- RO Trial | 2/25/2023       | 519                | 0                    | 0%           |
| Hills Creek Dam Regulating Outlet    | 2/25/2023       | 478                | 0                    | 0%           |
| Hills Creek Dam Powerhouse           | 4/26/2023       | 506                | 62                   | 12.3%        |
| Hills Creek Dam Powerhouse- RO Trial | 4/26/2023       | 506                | 12                   | 2.4%         |
| Hills Creek Dam Powerhouse           | 5/17/2023       | 505                | 57                   | 11.3%        |
| Hills Creek Dam Powerhouse- RO Trial | 5/17/2023       | 505                | 2                    | 0.4%         |
| Hills Creek Dam Powerhouse           | 6/3/2023        | 508                | 36                   | 7.1%         |
| Hills Creek Dam Powerhouse- RO Trial | 6/3/2023        | 508                | 2                    | 0.4%         |
| Hills Creek Dam Regulating Outlet    | 6/13/2023       | 760                | 0                    | 0%           |
| Hills Creek Dam Powerhouse           | 6/27/2023       | 507                | 22                   | 4.3%         |
| Hills Creek Dam Powerhouse- RO Trial | 6/27/2023       | 507                | 0                    | 0%           |

## Appendix D

### Summary of PIT Tagged Fish for Reporting Period

| Site  | Trap | # of PIT Tagged Fish |
|---|------|----------------------|
| Big Cliff Dam                               | 8 ft | 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 | 29                   |
| Fall Creek Head of Reservoir                | 8 ft | 0                    |
| Green Peter Tailrace- Middle Santiam        | 8 ft | 0                    |
| Dexter Dam Tailrace                         | 5 ft | 0                    |
| Lookout Point Head of Reservoir             | 5 ft | 0                    |
| Hills Creek Dam Tailrace                    | PWR  | 0                    |
| Hills Creek Dam Tailrace                    | RO   | 0                    |

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

| Site       | Trap | PIT Tag #      | Date      | Species |
|------------|------|----------------|-----------|---------|
| Cougar Dam | RO   | 3DD.003BEE14EC | 1/1/2023  | Chinook |
| Cougar Dam | RO   | 3DD.003BEE1565 | 1/2/2023  | Chinook |
| Cougar Dam | RO   | 3DD.003BEE0B3B | 1/4/2023  | Chinook |
| Cougar Dam | RO   | 3DD.003BEE0F24 | 1/5/2023  | Chinook |
| Cougar Dam | PH   | 3DD.003BEE1B78 | 1/14/2023 | Chinook |
| Cougar Dam | PH   | 3DD.003BEE19BF | 1/14/2023 | Chinook |
| Cougar Dam | PH   | 3DD.003BEE29B1 | 1/13/2023 | Chinook |
| Cougar Dam | PH   | 3DD.003BEE23CE | 1/13/2023 | Chinook |
| Cougar Dam | PH   | 3DD.003BEE23AF | 1/13/2023 | Chinook |
| Cougar Dam | PH   | 3DD.003BEE19C3 | 1/13/2023 | Chinook |
| Cougar Dam | PH   | 3DD.003BEE19A0 | 1/13/2023 | Chinook |
| Cougar Dam | PH   | 3DD.003BEE17CA | 1/13/2023 | Chinook |
| Cougar Dam | PH   | 3DD.003BEE17A5 | 1/13/2023 | Chinook |
| Cougar Dam | PH   | 3DD.003BEE1C21 | 1/13/2023 | Chinook |
| Cougar Dam | PH   | 3DD.003BEE2748 | 1/13/2023 | Chinook |
| Cougar Dam | PH   | 3DD.003BEE1C16 | 1/13/2023 | Chinook |
| Cougar Dam | PH   | 3DD.003BEE2B5C | 1/13/2023 | Chinook |
| Cougar Dam | PH   | 3DD.003BEE1BC9 | 1/13/2023 | Chinook |
| Cougar Dam | PH   | 3DD.003BEE19AE | 1/13/2023 | Chinook |
| Cougar Dam | PH   | 3DD.003BEE1BE3 | 1/13/2023 | Chinook |

|            |    |                |           |         |
|------------|----|----------------|-----------|---------|
| Cougar Dam | PH | 3DD.003BEE2BA3 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE1BF3 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE27B4 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2D74 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2DB5 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE1B8C | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2B8B | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2D68 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE1B92 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2D86 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE27A5 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2B1B | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE1C26 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE27A3 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE19B9 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE17BA | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE1B75 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2B42 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2D88 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2DAF | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE1C28 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2DAD | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2D6B | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE25BA | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2DAG | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE1C0E | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE177C | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2BAB | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE279D | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2BA4 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE23BC | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2B84 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE27BF | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE1B91 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE19C7 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2BCA | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE1BE1 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE25C1 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE272B | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2B23 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE25A7 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE25B1 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE27CD | 1/13/2023 | Chinook |

|            |    |                |           |         |
|------------|----|----------------|-----------|---------|
| Cougar Dam | PH | 3DD.003BEE29C5 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE19BD | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE19C2 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE1BA7 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE23A1 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE199A | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE17C7 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2997 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE25B3 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2991 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE17C3 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2BA6 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE27CB | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2B6C | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2755 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE1B90 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE25DC | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE1BD2 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE299F | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2BB1 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE29AA | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE27BC | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2766 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE27BD | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE1C06 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE1B8B | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE271E | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2B92 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE1C22 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE29C1 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE1B85 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2753 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE25CB | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE1794 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2D76 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2D6C | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE17AD | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE17A2 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE179E | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2BAA | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2BC0 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE1C1D | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2B24 | 1/13/2023 | Chinook |

|            |    |                |           |         |
|------------|----|----------------|-----------|---------|
| Cougar Dam | PH | 3DD.003BEE1986 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE23FA | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2B55 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE271C | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE19BD | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE275B | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE1995 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE29C1 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE17D6 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE1BC7 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE29D4 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE1C0C | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2D7C | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE277A | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2B8A | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE179A | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2BA9 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2B4C | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE277F | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE274D | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE1778 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2B51 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE23A8 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2B08 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2725 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE1B86 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2D8F | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2D8E | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2975 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2D93 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2BA5 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE23A7 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE1B82 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE1BF6 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE19BF | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE23C8 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE23E6 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2BB6 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE197B | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE2B8D | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE1B78 | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE179B | 1/13/2023 | Chinook |
| Cougar Dam | PH | 3DD.003BEE259A | 1/13/2023 | Chinook |

|                              |      |                |           |         |
|------------------------------|------|----------------|-----------|---------|
| Cougar Dam                   | PH   | 3DD.003BEE278E | 1/13/2023 | Chinook |
| Cougar Dam                   | PH   | 3DD.003BEE1BF0 | 1/13/2023 | Chinook |
| Cougar Dam                   | PH   | 3DD.003BEE2758 | 1/13/2023 | Chinook |
| Cougar Dam                   | PH   | 3DD.003BEE2B1A | 1/13/2023 | Chinook |
| Cougar Dam                   | PH   | 3DD.003BEE1972 | 1/13/2023 | Chinook |
| Cougar Dam                   | PH   | 3DD.003BEE1BE2 | 1/13/2023 | Chinook |
| Cougar Dam                   | PH   | 3DD.003BEE2590 | 1/13/2023 | Chinook |
| Cougar Dam                   | PH   | 3DD.003BEE27D9 | 1/13/2023 | Chinook |
| Cougar Dam                   | PH   | 3DD.003BEE2B59 | 1/13/2023 | Chinook |
| Cougar Dam                   | PH   | 3DD.003BEE2730 | 1/13/2023 | Chinook |
| Cougar Dam                   | PH   | 3DD.003BEE2B62 | 1/13/2023 | Chinook |
| Cougar Dam                   | PH   | 3DD.003BEE2B36 | 1/13/2023 | Chinook |
| Cougar Dam                   | PH   | 3DD.003BEE274C | 1/13/2023 | Chinook |
| Cougar Dam                   | RO   | 3DD.003BEE2C16 | 1/22/2023 | Chinook |
| Cougar Dam                   | RO   | 3DD.003BEE0966 | 1/20/2023 | Chinook |
| Cougar Dam                   | RO   | 3DD.003BEE2345 | 1/21/2023 | Chinook |
| Cougar Dam                   | PH   | 3DD.003BEE23A2 | 3/14/2023 | Chinook |
| Cougar Dam                   | RO   | 3DD.003BEE16B9 | 3/17/2023 | Chinook |
| Cougar Dam                   | RO   | 3DD.0077CF7449 | 3/20/2023 | Chinook |
| Cougar Dam Head of Reservoir | 5 ft | 3DD.003BD2275C | 3/22/2023 | Chinook |
| Cougar Dam                   | RO   | 3DD.003BEE1B2D | 4/10/2023 | Chinook |
| Cougar Dam                   | RO   | 3DD.003BD22B12 | 4/12/2023 | Chinook |
| Cougar Dam                   | RO   | 3DD.003BD22CE0 | 4/13/2023 | Chinook |
| Cougar Dam                   | RO   | 3DD.003B332C11 | 4/13/2023 | Chinook |
| Cougar Dam                   | RO   | 3DD.003BD22B0D | 4/13/2023 | Chinook |
| Cougar Dam                   | RO   | 3DD.003BD227D4 | 4/13/2023 | Chinook |
| Cougar Dam                   | RO   | 3DD.003BD22B30 | 4/14/2023 | Chinook |
| Cougar Dam                   | RO   | 3DD.003BEE2CE7 | 4/15/2023 | Chinook |
| Cougar Dam                   | RO   | 3DD.003BEE1D22 | 4/15/2023 | Chinook |
| Cougar Dam                   | RO   | 3DD.003BEE1B0A | 4/29/2023 | Chinook |
| Cougar Dam                   | RO   | 3DD.003BEE1B14 | 4/27/2023 | Chinook |
| Cougar Dam                   | RO   | 3DD.003BEE1B3A | 4/26/2023 | Chinook |
| Cougar Dam                   | RO   | 3DD.003BEE1D8D | 4/26/2023 | Chinook |
| Cougar Dam                   | RO   | 3DD.003BEE2286 | 4/25/2023 | Chinook |
| Cougar Dam                   | RO   | 3DD.003BEE2562 | 4/19/2023 | Chinook |
| Cougar Dam                   | RO   | 3DD.003BEE2581 | 4/26/2023 | Chinook |
| Cougar Dam                   | RO   | 3DD.003BEE28AC | 4/18/2023 | Chinook |
| Cougar Dam                   | RO   | 3DD.003BEE28C7 | 4/27/2023 | Chinook |
| Cougar Dam                   | RO   | 3DD.003BEE28D9 | 4/27/2023 | Chinook |
| Cougar Dam                   | RO   | 3DD.003BEE2923 | 4/18/2023 | Chinook |
| Cougar Dam                   | RO   | 3DD.003BEE2C03 | 4/23/2023 | Chinook |
| Cougar Dam                   | RO   | 3DD.003BEE2D54 | 4/23/2023 | Chinook |
| Cougar Dam                   | RO   | 3DD.003BEE24F8 | 5/9/2023  | Chinook |

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

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

| Site                         | Trap | PIT Tag        | Date      | Species |
|------------------------------|------|----------------|-----------|---------|
| Cougar Dam Head of Reservoir | 5 ft | 3DD.003BEE1039 | 8/3/2023  | Chinook |
| Cougar Dam Head of Reservoir | 5 ft | 3DD.003BEE1015 | 8/4/2023  | Chinook |
| Cougar Dam Head of Reservoir | 5 ft | 3DD.003BEE1047 | 8/4/2023  | Chinook |
| Cougar Dam Head of Reservoir | 5 ft | 3DD.003BEE101D | 8/5/2023  | Chinook |
| Cougar Dam Head of Reservoir | 5 ft | 3DD.003BEE1019 | 8/6/2023  | Chinook |
| Cougar Dam Head of Reservoir | 5 ft | 3DD.003BEE1014 | 8/6/2023  | Chinook |
| Cougar Dam Head of Reservoir | 5 ft | 3DD.003BEE1027 | 8/6/2023  | Chinook |
| Cougar Dam Head of Reservoir | 5 ft | 3DD.003BEE1038 | 8/7/2023  | Chinook |
| Cougar Dam Head of Reservoir | 5 ft | 3DD.003BEE102A | 8/7/2023  | Chinook |
| Cougar Dam Head of Reservoir | 5 ft | 3DD.003BEE1012 | 8/8/2023  | Chinook |
| Cougar Dam Head of Reservoir | 5 ft | 3DD.003BEE1035 | 8/8/2023  | Chinook |
| Cougar Dam Head of Reservoir | 5 ft | 3DD.003BEE1050 | 8/8/2023  | Chinook |
| Cougar Dam Head of Reservoir | 5 ft | 3DD.003BEE1049 | 8/8/2023  | Chinook |
| Cougar Dam Head of Reservoir | 5 ft | 3DD.003BEE0FC9 | 8/9/2023  | Chinook |
| Cougar Dam Head of Reservoir | 5 ft | 3DD.003BEE1061 | 8/10/2023 | Chinook |
| Cougar Dam Head of Reservoir | 5 ft | 3DD.003BEE1056 | 8/10/2023 | Chinook |
| Cougar Dam Head of Reservoir | 5 ft | 3DD.003BEE1048 | 8/11/2023 | Chinook |
| Cougar Dam Head of Reservoir | 5 ft | 3DD.003BEE1028 | 8/11/2023 | Chinook |
| Cougar Dam Head of Reservoir | 5 ft | 3DD.003BEE1025 | 8/11/2023 | Chinook |
| Cougar Dam Head of Reservoir | 5 ft | 3DD.003BEE106F | 8/11/2023 | Chinook |
| Cougar Dam Head of Reservoir | 5 ft | 3DD.003BEE104D | 8/11/2023 | Chinook |
| Cougar Dam Head of Reservoir | 5 ft | 3DD.003BEE102E | 8/12/2023 | Chinook |
| Cougar Dam Head of Reservoir | 5 ft | 3DD.003BEE1043 | 8/12/2023 | Chinook |
| Cougar Dam Head of Reservoir | 5 ft | 3DD.003BEE1062 | 8/12/2023 | Chinook |
| Cougar Dam Head of Reservoir | 5 ft | 3DD.003BEE1013 | 8/12/2023 | Chinook |
| Cougar Dam Head of Reservoir | 5 ft | 3DD.003BEE1059 | 8/12/2023 | Chinook |
| Cougar Dam Head of Reservoir | 5 ft | 3DD.003BEE105F | 8/12/2023 | Chinook |
| Cougar Dam Head of Reservoir | 5 ft | 3DD.003BEE1020 | 8/13/2023 | Chinook |
| Cougar Dam Head of Reservoir | 5 ft | 3DD.003BEE1040 | 8/13/2023 | Chinook |

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

| Site                            | Trap | Species | VIE Mark Code | # VIE |
|---------------------------------|------|---------|---------------|-------|
| Cougar Dam Head of Reservoir    | 5 ft | Chinook | RDYY          | 170   |
| Fall Creek Head of Reservoir    | 8 ft | Chinook | RDYY          | 0     |
| Lookout Point Head of Reservoir | 5 ft | Chinook | RDYY          | 0     |

\*RDYY denote location and color (Right Dorsal 2x Yellow marks)