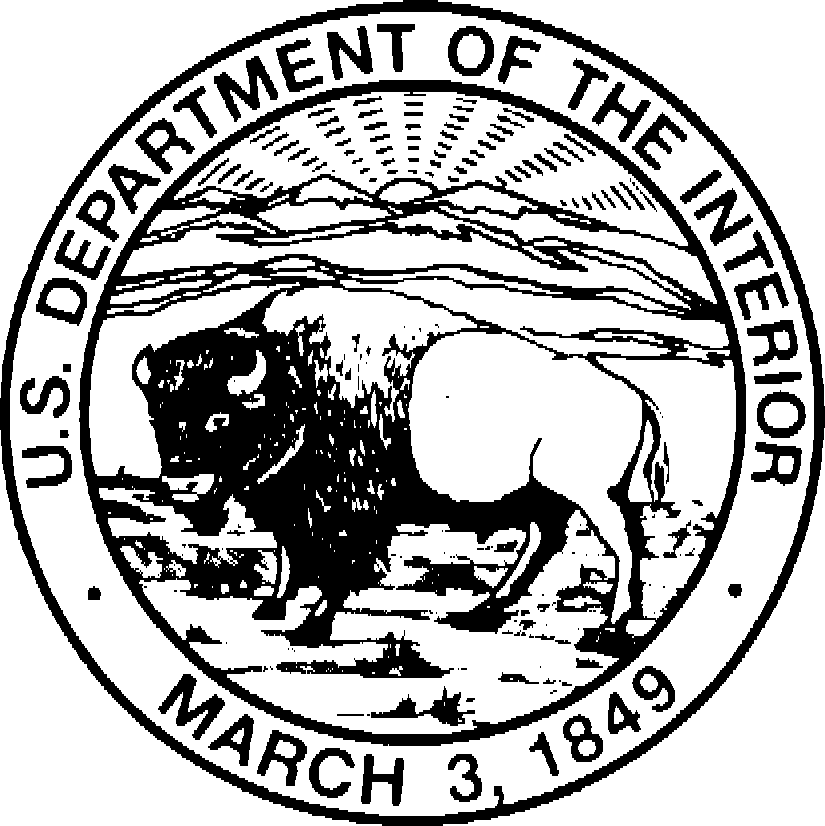
**United States Department of the Interior**

FISH AND WILDLIFE SERVICE

Red Bluff Fish & Wildlife Service

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May 2, 2022

To: Interested Parties

From: Mike Schraml, Fish Biologist, Red Bluff Fish and Wildlife Office Subject: Biweekly report (March 26, 2022 – April 8, 2022, weeks 13 and 14)

Please find attached preliminary daily estimates of passage, 90% confidence intervals, standard error, and fork length ranges of unmarked juvenile salmonids sampled at the upper rotary screw trap on Battle Creek (river mile 6.2) Shasta and Tehama Counties CA, for the period March 26, 2022 through April 8, 2022. Race designation was assigned using length-at-date criteria.

**NOTE: Bi-weekly reports produced after July 1, 2021 will be revised at a later date due to ongoing trap efficiency model analyses. These data are preliminary. Data was interpolated for times the trap was not fishing. An indication of interpolation can be when days have passage date but no fork length data. The method of interpolation is to average the catch of the number of days of the trap outage, before and after the trap outage.**

Please note that data contained in these reports is subject to revision as this data is preliminary and undergoing QA/QC procedures.

If you have any questions, please feel free to contact me at 530. 605.6322 (telework cell, or mike\_schraml@fws.gov).

Table 1. Preliminary estimates of daily passage by brood-year (BY) and run for unmarked juvenile Chinook salmon and Rainbow Trout/steelhead trout (RBT) captured by rotary screw trap at the upper Battle Creek rotary screw trap site (RM 6.2), Shasta and Tehama Counties, CA, from March 26 through April 8, 2022 (weeks 13–14). Results include estimated daily passage, peak creek discharge volume, turbidity, and mean daily water temperature (at the Igo gauging station).

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Date | Discharge volume (cfs) | Water Temperature (C) | Water Turbidity (NTU) | BY21 Winter | BY22 Winter | BY21 Spring | BY21 Late-fall | BY22 Late-fall | BY21 RBT | BY22 RBT |
| 03/26/2022 | 364 | 13.7 | 2.21 | 0 | 0 | 0 | 0 | 0 | 0 | 590 |
| 03/27/2022 | 364 | 13.3 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03/28/2022 | 385 | 12.9 | 2.33 | 0 | 0 | 0 | 0 | 0 | 0 | 425 |
| 03/29/2022 | 356 | 12.9 | 2.41 | 0 | 0 | 71 | 0 | 0 | 0 | 142 |
| 03/30/2022 | 364 | 13.3 | 3.45 | 0 | 0 | 47 | 0 | 0 | 0 | 118 |
| 03/31/2022 | 348 | 12.9 | 2.40 | 0 | 0 | 0 | 0 | 0 | 0 | 118 |
| 04/01/2022 | 340 | 12.8 | 2.52 | 0 | 0 | 24 | 0 | 0 | 0 | 0 |
| 04/02/2022 | 333 | 13.4 | 1.73 | 0 | 0 | 0 | 0 | 0 | 0 | 47 |
| 04/03/2022 | 329 | 12.4 | 2.62 | 0 | 0 | 0 | 0 | 0 | 0 | 24 |
| 04/04/2022 | 340 | 12.4 | 2.07 | 0 | 0 | 0 | 0 | 0 | 0 | 47 |
| 04/05/2022 | 314 | 12.5 | 3.31 | 0 | 0 | 24 | 0 | 0 | 0 | 71 |
| 04/06/2022 | 385 | 12.7 | 3.12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04/07/2022 | 306 | 14.2 | 2.25 | 0 | 0 | 0 | 0 | 0 | 0 | 71 |
| 04/08/2022 | 321 | 15.1 | 1.26 | 0 | 0 | 0 | 0 | 0 | 0 | 118 |

Table 2. The estimated biweekly (March 26 through April 8, 2022; weeks 13–14) and brood year passage estimates and the lower and upper 90% confidence intervals for Chinook Salmon and Rainbow Trout/steelhead captured at the upper Battle Creek rotary screw trap site (RM 6.2), Shasta and Tehama Counties, CA.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | BY21 Winter | BY22 Winter | BY21 Spring | BY21 Late-fall | BY22 Late-fall | BY21 RBT | BY22 RBT |
| **Biweekly Total** | 0 | 0 | 166 | 0 | 0 | 0 | 1,769 |
| *Biweekly Lower 90% Confidence Interval* | 0 | 0 | 115 | 0 | 0 | 0 | 1,257 |
| *Biweekly Upper 90% Confidence Interval* | 0 | 0 | 236 | 0 | 0 | 0 | 2,475 |
| **Brood Year Total** | 0 | 0 | 53,913 | 47 | 102 | 157 | 3,027 |
| *Brood Year Lower 90% Confidence Interval* | 0 | 0 | 42,991 | 0 | 84 | 130 | 2,311 |
| *Brood Year Upper 90% Confidence Interval* | 0 | 0 | 68,906 | 0 | 122 | 195 | 4,166 |

aBrood year 2021 *O. mykiss* is from January 1, 2021 through June 30, 2022.

bBrood year 2022 *O. mykiss* is from January 1, 2022 through June 30, 2023.

cBrood year 2021 winter-run is from July 1, 2021 through June 30, 2022.

dBrood year 2022 winter-run is from July 1, 2022 through June 30, 2023.

**e**Brood year 2021 late-fall run is from April 1, 2021 through March 31, 2022

fBrood year 2022 Winter-run is from April 1, 2022 through March 30.

Table 3. Minimum (min) and maximum (max) fork lengths (FL) of Chinook Salmon by run and brood year captured at the upper Battle Creek rotary screw trap site (RM 6.2), Shasta and Tehama Counties, CA, from March 26 through April 8, 2022 (weeks 13–14). A dash indicates that the trap was not fished on that day.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Date | BY21 Winter min FL | BY21 Winter max FL | BY22 Winter min FL | BY22 Winter max FL | BY21 Spring min FL | BY21 Spring max FL | BY21 Late-Fall min FL | BY21 Late-fall max FL | BY22 Late-Fall min FL | BY22 Late-fall max FL |
| 03/26/2022 |  |  |  |  |  |  |  |  |  |  |
| 03/27/2022 | - | - | - | - | - | - | - | - | - | - |
| 03/28/2022 |  |  |  |  |  |  |  |  |  |  |
| 03/29/2022 |  |  |  |  | 80 | 83 |  |  |  |  |
| 03/30/2022 |  |  |  |  | 88 | 90 |  |  |  |  |
| 03/31/2022 |  |  |  |  |  |  |  |  |  |  |
| 04/01/2022 |  |  |  |  | 87 | 87 |  |  |  |  |
| 04/02/2022 |  |  |  |  |  |  |  |  |  |  |
| 04/03/2022 |  |  |  |  |  |  |  |  |  |  |
| 04/04/2022 |  |  |  |  |  |  |  |  |  |  |
| 04/05/2022 |  |  |  |  | 79 | 79 |  |  |  |  |
| 04/06/2022 |  |  |  |  |  |  |  |  |  |  |
| 04/07/2022 |  |  |  |  |  |  |  |  |  |  |
| 04/08/2022 |  |  |  |  |  |  |  |  |  |  |

Table 4. Minimum (min) and maximum (max) fork lengths (FL) of Rainbow Trout/steelhead by brood year captured at the upper Battle Creek rotary screw trap site (RM 6.2), Shasta and Tehama Counties, CA, from March 26 through April 8, 2022 (weeks 13–14). A dash indicates that the trap was not fished on that day.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Date | BY21 Rainbow Trout/steelhead min FL | BY21 Rainbow Trout/steelhead max FL | BY22 Rainbow Trout/steelhead min FL | BY22 Rainbow Trout/steelhead max FL |
| 03/26/2022 |  |  | 22 | 28 |
| 03/27/2022 | - | - | - | - |
| 03/28/2022 |  |  | 21 | 29 |
| 03/29/2022 |  |  | 23 | 27 |
| 03/30/2022 |  |  | 24 | 26 |
| 03/31/2022 |  |  | 23 | 25 |
| 04/01/2022 |  |  |  |  |
| 04/02/2022 |  |  | 26 | 27 |
| 04/03/2022 |  |  | 25 | 25 |
| 04/04/2022 |  |  | 25 | 26 |
| 04/05/2022 |  |  | 25 | 27 |
| 04/06/2022 |  |  |  |  |
| 04/07/2022 |  |  | 26 | 33 |
| 04/08/2022 |  |  | 25 | 40 |