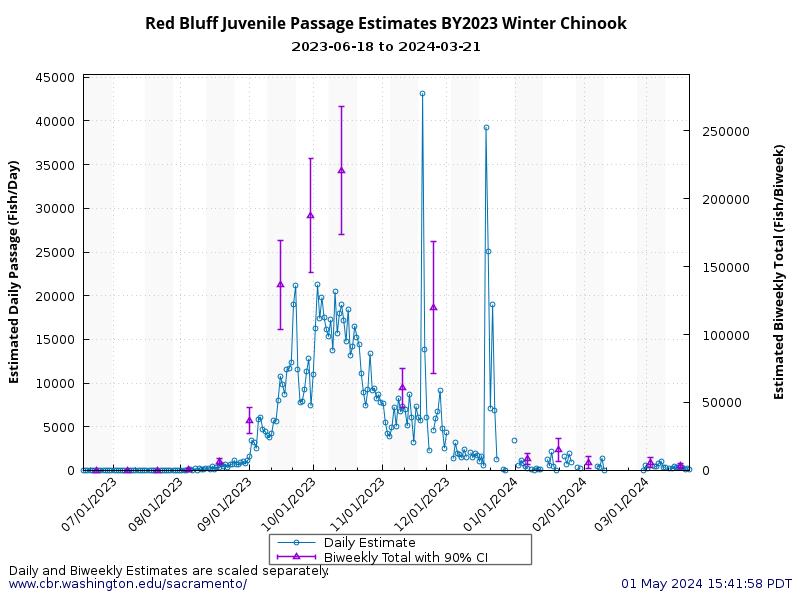
abundance (RBDD production plot)



[Red Bluff Juvenile Passage Estimates Graph: SacPAS Central Valley Prediction & Assessment of Salmon (washington.edu)](https://www.cbr.washington.edu/sacramento/tmp/redbluffdaily_1714603318_94.html)

survival (STARS plots) (this is a surrogate for steelhead)

* Same as the plots for winter run (Figure 2)

Diagram

Description automatically generated

minimization ((1) bar plots of totals (wild and hatchery), (2) annual cumulative loss by period and water year type)

(1)

Chart

Description automatically generated

Chart, bar chart, histogram

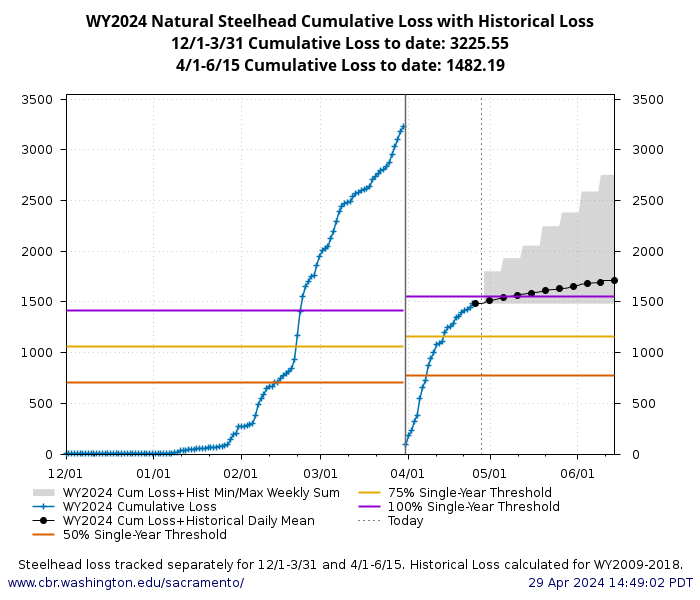
Description automatically generated

(2)

Chart

Description automatically generated

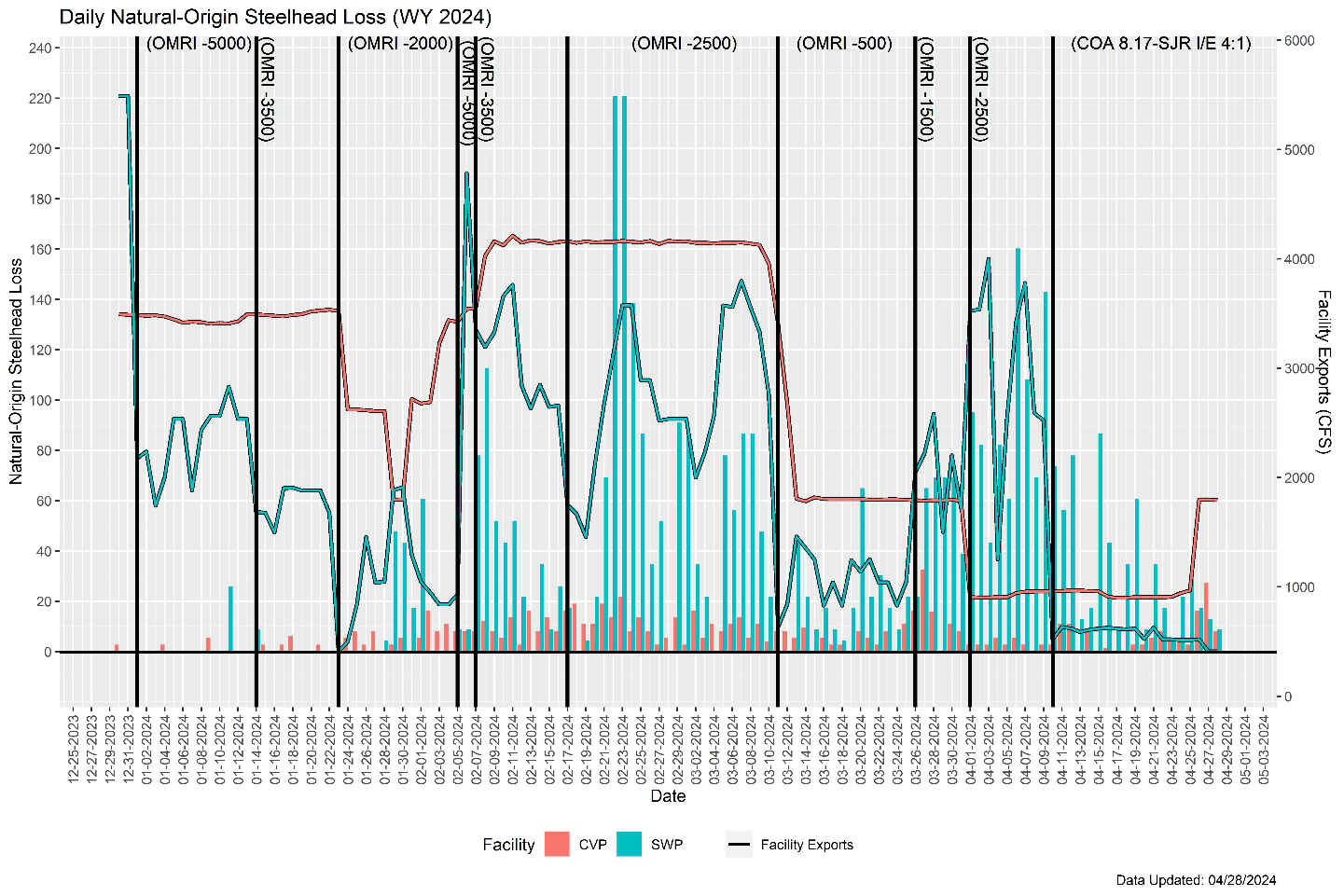
minimization (loss)



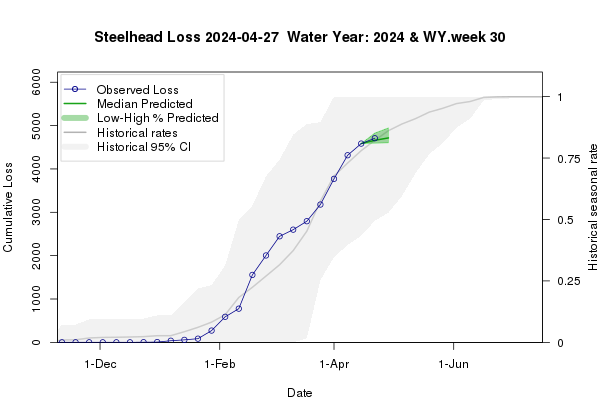
minimization (% of hatchery fish loss)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| BroodYear | Total Hatchery Steelhead Release Number (BY) | Loss of clipped steelhead at the facilities (WY) | % Total Hatchery Release Number Lost to the Facilities | WaterYear |
| 2016 | 1,019,501 | 164.29 | 0.016 | 2017 |
| 2017 | 811,379 | 2,462.90 | 0.304 | 2018 |
| 2018 | 1,264,939 | 5,777.70 | 0.457 | 2019 |
| 2019 | 1,084,899 | 659.44 | 0.061 | 2020 |
| 2020 | 1,853,751 | 341.69 | 0.018 | 2021 |
| 2021 | 1,676,701 | 639.79 | 0.038 | 2022 |
| 2022 | 1,623,483 | 3,650.30 | 0.225 | 2023 |
| 2023 | 1,592,998 | 2,576.29 | 0.162 | 2024 |

minimization (daily loss and daily pumping rates)



minimization (Tillotson output- predicted loss)- Chase



**Table comparing predicted and observed loss (hindcast)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Week** | **Average OMR** | **Average Exports** | **Average**  **San Joaquin Flow** | **Average Sacramento Flow** | **Predicted Weekly Loss Based on Columns to the left** | **Observed Loss** |
| 1/1 | 481 | 1570 | 4938 | 24037 | 116.95 | 8.20 |
| 1/8 | 0 | 2100 | 4938 | 24037 | 130.21 | 10.52 |
| 1/15 | -500 | 2650 | 4938 | 24037 | 171.27 | 16.01 |