Weekly Assessment of CVP and SWP Delta Operations on ESA-listed Species

Bureau of Reclamation

November 14, 2022

## Chinook Salmon

### TABLES

#### TABLE 2. Historic migration and salvage patterns

| Species | RedBluffDiversionDam | TisdaleRst | KnightsLandingRst | SacTrawlSherwoodCatchIndex | ChippsIslandTrawlCatchIndex | Salvage |
| --- | --- | --- | --- | --- | --- | --- |
| Chinook, Winter-run, Unclipped | 82.0%(74.0%,89.9%) BY: 2012 - 2021 | 23.1%(5.7%,40.4%) BY: 2012 - 2021 | 26.1%(3.4%,48.7%) BY: 2013 - 2021 | 9.9%(-9.4%,29.1%) BY: 2012 - 2021 | 1.4%(-1.8%,4.7%) BY: 2012 - 2021 | 0.0%(0.0%,0.0%) WY: 2013 - 2022 |
| Chinook, Spring-run, Unclipped | 4.6%(-1.4%,10.6%) BY: 2012 - 2021 | 0.3%(0.1%,0.6%) BY: 2012 - 2021 | 1.8%(-1.5%,5.2%) BY: 2013 - 2021 | 0.0%(0.0%,0.0%) BY: 2012 - 2021 | 0.0%(0.0%,0.0%) BY: 2012 - 2021 | 0.0%(0.0%,0.0%) WY: 2013 - 2022 |
| Steelhead, Unclipped (January-December) |  |  |  |  |  |  |
| Steelhead, Unclipped (December-March) |  |  |  |  |  | 0.0%(0.0%,0.0%) WY: 2013 - 2022 |
| Steelhead, Unclipped (April-June) |  |  |  |  |  | 0.0%(0.0%,0.0%) WY: 2013 - 2022 |

#### TABLE 3. Knight’s Landing (KLCI) and Sacramento Seine and Trawl (SCI).

| Date | Knights Landing RST: Winter Chinook: Catch Index | Knights Landing RST: Older Chinook: Catch Index | Sacramento Trawls: Older Chinook: Catch Index | Sacramento Beach Seines: Older Chinook: Catch Index | Alert: Catch Index > 5 | Alert: Catch Index 3 < X ≤ 5 |
| --- | --- | --- | --- | --- | --- | --- |
| 2022-11-13 |  |  |  |  |  |  |
| 2022-11-12 |  |  |  |  |  |  |
| 2022-11-11 |  |  |  |  |  |  |
| 2022-11-10 |  |  |  | 0 |  |  |
| 2022-11-09 |  |  | 0 | 0 |  |  |
| 2022-11-08 |  |  | 0 |  |  |  |
| 2022-11-07 |  |  | 0 | 0 |  |  |
| 2022-11-06 |  |  |  |  |  |  |
| 2022-11-05 | 0 | 0 |  |  |  |  |

#### TABLE 4. Mean daily flow and percent change (Wilkins Slough, Deer Creek, Mill Creek; cfs from CDEC) and temperature and percent change (Knights Landing; °F from RST)

| Date | MLM flow | MLM change | MLM alert | DCV flow | DCV change | DCV alert | WLK flow | WLK change |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2022-11-07 | 137.6 | 16.6 | Yes | 116.1 | 18.7 | Yes | 3,543.9 | 2.7 |
| 2022-11-08 | 204.2 | 48.4 | Yes | 160.5 | 38.3 | Yes | 3,719.0 | 4.9 |
| 2022-11-09 | 206.6 | 1.2 | Yes | 148.9 | -7.3 | Yes | 3,924.3 | 5.5 |
| 2022-11-10 | 143.5 | -30.6 | Yes | 109.0 | -26.8 | Yes | 4,113.7 | 4.8 |
| 2022-11-11 | 121.6 | -15.2 | Yes | 94.6 | -13.3 | No | 4,065.8 | -1.2 |
| 2022-11-12 | 117.8 | -3.1 | Yes | 91.6 | -3.1 | No | 3,720.4 | -8.5 |
| 2022-11-13 | 115.0 | -2.4 | Yes | 90.1 | -1.6 | No | 3,441.3 | -7.5 |

#### TABLE 5. STARS model output

Waiting for SacPAS

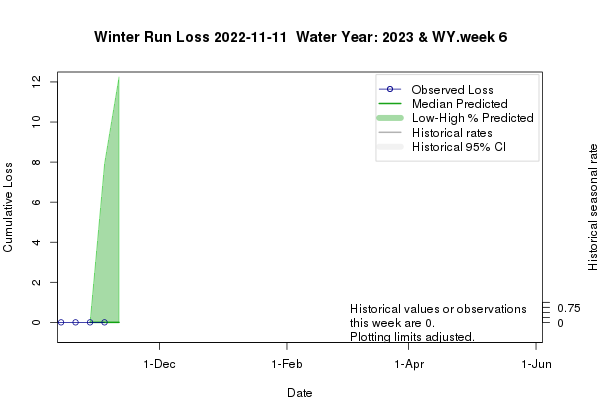
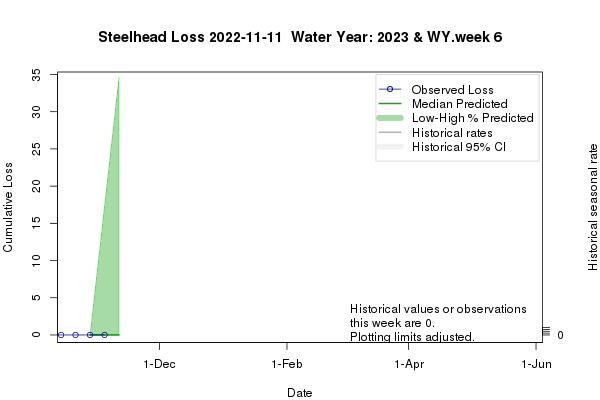
#### TABLE 6. a) WY 2022 loss and salvage predictor data: Predicted weekly loss of winter-run Chinook salmon and steelhead at CVP and SWP facilities.

| Parameter | Modeled Current Week | Modeled Next Week |
| --- | --- | --- |
| Predicted Steelhead, Median % | 0 | 0 |
| Predicted Steelhead, High % | 17 | 17 |
| Predicted Chinook Winter Run, Median % | 0 | 0 |
| Predicted Chinook Winter Run, High % | 8 | 4 |

#### TABLE 6. b) Environmental details, current and forecast.

| Parameter | Data | Forecast |
| --- | --- | --- |
| Temperature (Mallard Island, C) | 14.7 | 20 |
| Precipitation (5-d running sum, inches) | 0.54 | 0 |
| Old and Middle River Flows (cfs) | -2690 | -3039 |
| Sacramento River Flow (Freeport, cfs) | 7799 | 6993 |
| DCC Gates | closed | closed |
| San Joaquin River Flow (Vernalis, cfs) | 708 | 262 |
| Export | 2227 | 1887 |

### FIGURES

#### Figure 1. Predicted weekly loss of steelhead and winter-run Chinook salmon at the CVP and SWP facilities