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

Bureau of Reclamation

October 13, 2023

## Chinook Salmon

### TABLES

#### TABLE 2. Historic migration and salvage patterns.Last updated 10/13/2023

| **Species** | **RedBluffDiversionDam** | **TisdaleRst** | **KnightsLandingRst** | **SacTrawlSherwoodCatchIndex** | **ChippsIslandTrawlCatchIndex** | **Salvage** |
| --- | --- | --- | --- | --- | --- | --- |
| Chinook, Winter-run, Unclipped | 55.2%(46.5%,64.0%) BY: 2013 - 2022 | 5.9%(1.1%,10.7%) BY: 2013 - 2022 | 5.4%(1.9%,8.9%) BY: 2013 - 2022 | 0.0%(0.0%,0.0%) BY: 2013 - 2022 | 0.0%(0.0%,0.0%) BY: 2013 - 2022 | 0.0%(0.0%,0.0%) WY: 2014 - 2023 |
| Chinook, Spring-run, Unclipped |  | 0.0%(0.0%,0.0%) BY: 2013 - 2022 | 0.0%(0.0%,0.0%) BY: 2013 - 2022 | 0.0%(0.0%,0.0%) BY: 2013 - 2022 | 0.0%(0.0%,0.0%) BY: 2013 - 2022 | 0.0%(0.0%,0.0%) WY: 2014 - 2023 |
| Steelhead, Unclipped (January-December) |  |  |  |  |  |  |
| Steelhead, Unclipped (December-March) |  |  |  |  |  |  |
| Steelhead, Unclipped (April-June) |  |  |  |  |  |  |

#### 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** |
| --- | --- | --- | --- | --- | --- | --- |
| 2023-10-12 |  |  |  |  |  |  |
| 2023-10-11 |  |  |  |  |  |  |
| 2023-10-10 |  |  |  |  |  |  |
| 2023-10-09 |  |  |  |  |  |  |
| 2023-10-08 |  |  |  |  |  |  |
| 2023-10-07 |  |  |  |  |  |  |
| 2023-10-06 |  |  | 0 | 0 |  |  |
| 2023-10-05 |  |  | 0 |  |  |  |
| 2023-10-04 |  |  | 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** | **Mill Creek (MLM): mean daily flow (cfs)** | **Mill Creek (MLM): flow percent change** | **Mill Creek (MLM): Alert** | **Deer Creek (DCV): mean daily flow (cfs)** | **Deer Creek (DCV): flow percent change** | **Deer Creek (DCV): Alert** | **Wilkins Slough (WLK): mean daily flow (cfs)** | **Knights Landing RST: water temperature (f)** | **Alert Triggered** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10/12/2023 | 111.4 | -6.5% | Flow>95cfs | 108.8 | -2.5% | Flow>95cfs | 5,420.8 |  |  |
| 10/11/2023 | 119.1 | 16.2% | Flow>95cfs | 111.6 | 9.4% | Flow>95cfs | 5,476.3 |  |  |
| 10/10/2023 | 102.5 | 1.9% | Flow>95cfs | 102.0 | 2.0% | Flow>95cfs | 5,571.0 |  |  |
| 10/9/2023 | 100.6 | -0.7% | Flow>95cfs | 100.0 | -0.2% | Flow>95cfs | 5,627.5 |  |  |
| 10/8/2023 | 101.3 | -1.0% | Flow>95cfs | 100.2 | -0.4% | Flow>95cfs | 5,750.5 |  |  |
| 10/7/2023 | 102.3 | -0.2% | Flow>95cfs | 100.6 | -0.3% | Flow>95cfs | 5,888.6 |  |  |
| 10/6/2023 | 102.5 | -1.4% | Flow>95cfs | 100.9 | -1.1% | Flow>95cfs | 5,891.2 |  |  |

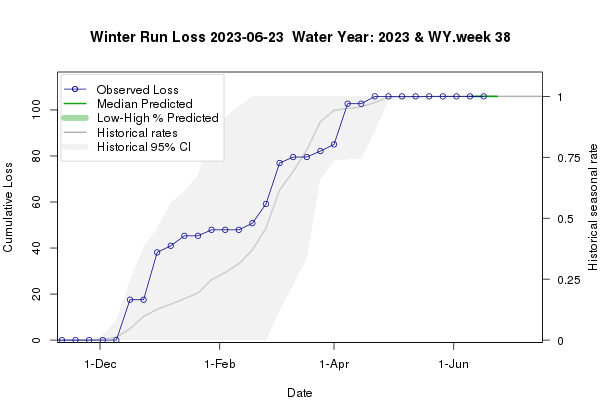
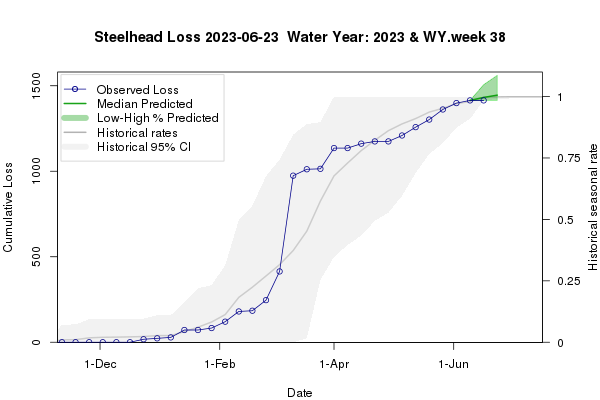
#### TABLE 5. STARS model simulations for route-specific entrainment, travel times, and survival. Travel time is calculated in days.

| **Stock** | **Date** | **Route** | **Median Travel Time** | **Survival** | **Routing Probability** |
| --- | --- | --- | --- | --- | --- |
| Winter Chinook | 2023-10-12 | Overall | 6.63 | 0.05 |  |
| Winter Chinook | 2023-10-12 | Sacramento River | 6.19 | 0.05 | 0.58 |
| Winter Chinook | 2023-10-12 | Yolo Bypass | 9.74 | 0.46 | 0.00 |
| Winter Chinook | 2023-10-12 | Sutter Slough | 6.32 | 0.08 | 0.14 |
| Winter Chinook | 2023-10-12 | Steamboat Slough | 6.02 | 0.05 | 0.14 |
| Winter Chinook | 2023-10-12 | Interior Delta | 9.55 | 0.02 | 0.13 |
| Late-fall Chinook | 2023-10-12 | Overall | 12.00 | 0.40 |  |
| Late-fall Chinook | 2023-10-12 | Delta Cross Channel | NA | NA | 0.00 |
| Late-fall Chinook | 2023-10-12 | Georgiana Slough | 16.99 | 0.19 | 0.27 |
| Late-fall Chinook | 2023-10-12 | Sacramento River | 10.16 | 0.53 | 0.46 |
| Late-fall Chinook | 2023-10-12 | Sutter and Steamboat Slough | 10.56 | 0.41 | 0.27 |

#### 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. TABLES AREN’T ON SACPAS YET SO THE CODE CHUNK IS TURNED OFF IN THE MARKDOWN CODE.

#### TABLE 6. b) Environmental details, current and forecast. TABLES AREN’T ON SACPAS YET SO THE CODE CHUNK IS TURNED OFF IN THE MARKDOWN CODE.

### FIGURES

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