Eileen Sobeck  
Executive Director  
State Water Resources Control Board  
1001 I Street  
Sacramento, California 95814  

Exceedance of the Habitat Protection Outflow (X2) Objective  

Dear Ms. Sobeck:  

The State Water Resources Control Board's Water Rights Decision 1641 (D-1641) Habitat Protection Outflow (X2) objective mandates the Department of Water Resources and U.S. Bureau of Reclamation (collectively called the Projects) to maintain either the maximum daily average or the 14-day running average of the 2.64 mmhos/cm isohaline at or west of Chipps Island. Alternatively, the objective can also be met with an equivalent 3-day running average of the Net Delta Outflow Index (NDOI) greater than or equal to 11,400 cfs. Based on the January Eight River Index, the Projects were required to maintain this standard for the entire month of February (28 days). This letter serves as our formal notification that the Projects were one day short of meeting the required number of days in February identified in the X2 objective.  

On Monday, February 12, 2018, the maximum daily average and 14-day running average salinity at Chipps Island were 2.69 mmhos/cm and 3.80 mmhos/cm respectively, putting the 2.64 mmhos/cm isohaline upstream of Chipps Island. The 3-day running average NDOI that day was 10,462 cfs, therefore, the X2 objective was not met. The Projects attribute this shortfall to an acute reduction in accretions north of the Delta, resulting in an unforeseen 1,000 cfs drop in Sacramento River flows into the Delta.  

The following table shows the maximum daily and 14-day running average salinity at Chipps Island and the 3-day average NDOI, as well as the combined exports on the days leading up to and after February 12.
Subject: Report of Exceedance of the Habitat Protection Outflow (X2) Objective

<table>
<thead>
<tr>
<th>Date</th>
<th>X2 @ Chipps Island</th>
<th>Freeport Flow (cfs)</th>
<th>Vernalis Flow (cfs)</th>
<th>Combined Exports (cfs)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Max Daily Avg. (mmhos/cm)</td>
<td>Max 14-day Avg. (mmhos/cm)</td>
<td>3-day Avg. NDOI (cfs)</td>
<td></td>
</tr>
<tr>
<td>2/10/2018</td>
<td>3.48</td>
<td>2.52</td>
<td>10,328</td>
<td>14,593</td>
</tr>
<tr>
<td>2/11/2018</td>
<td>3.82</td>
<td>2.62</td>
<td>10,010</td>
<td>14,422</td>
</tr>
<tr>
<td>2/12/2018</td>
<td>3.80</td>
<td>2.69</td>
<td>10,025</td>
<td>13,487</td>
</tr>
<tr>
<td>2/13/2018</td>
<td>2.93</td>
<td>2.69</td>
<td>11,595</td>
<td>13,495</td>
</tr>
<tr>
<td>2/14/2018</td>
<td>3.35</td>
<td>2.70</td>
<td>12,274</td>
<td>13,270</td>
</tr>
<tr>
<td>2/15/2018</td>
<td>2.78</td>
<td>2.68</td>
<td>12,656</td>
<td>12,861</td>
</tr>
</tbody>
</table>

As shown in the table above, the Projects immediately reduced Delta exports to get back into compliance on February 13. Thus, the Projects were only one (1) day short of the required 28 days in February.

If you have any questions or would like more information regarding this notification, please contact Ms. Molly White of DWR at (916) 574-2722 or Ms. Liz Kiteck of Reclamation at (916) 979-2684.

Sincerely,

Tio Zasso, Acting Chief
SWP Operations Control Office
Department of Water Resources

Jeffrey Ricker, Operations Manager
Central Valley Operations Office
Bureau of Reclamation

cc: Michael George, Delta Watermaster
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