

Smelt Monitoring Team
Tuesday, March 17, 2020
11:00 AM – 12:00 PM

Action Item (on going): Please review and offer suggestions for what you would like to be presented on the SacPas page.

http://www.cbr.washington.edu/sacramento/data/delta_smelt.html

1. Introductions

2. Relevant Actions and Triggers:

Currently under the Turbidity Bridge Avoidance measure which can be found on page 2 of the OMR guidance document and it states: “Reclamation and DWR shall manage to a more positive OMR than -5,000 cfs based on the following conditions: After the Integrated Early Winter Pulse Protection (above) or February 1 (whichever comes first) and until a ripe or spent female is detected or April 1 (whichever is first), Reclamation and DWR propose to manage exports in order to maintain daily average turbidity in Old River at Bacon Island (OBI) at a level of less than 12 NTU. The purpose of this action is to minimize the risk to adult Delta smelt in the Old and Middle River Corridor, where they are subject to higher entrainment risks.”

3. Operations

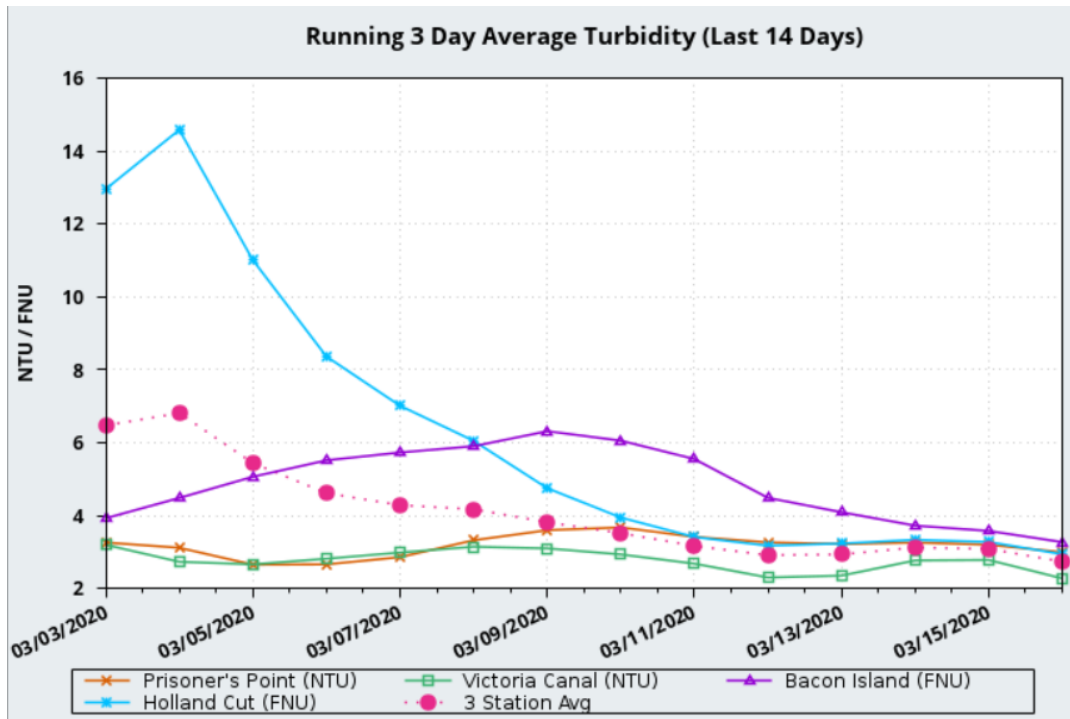
Tributary/Division	Proposed Operational (Ranges)
Clear Creek	Whiskeytown Release: 275 cfs
Sacramento R	Shasta Storage: 3.53 MAF Shasta Release: 4,500 cfs, a decrease in releases to 4,000 cfs is possible
Feather	Oroville Storage: 2.26 MAF Oroville Release to Feather: 1,750 cfs
American R	Folsom Storage: .43 MAF Nimbus Release to American: 1,500 cfs, a decrease to 1,000 cfs is possible
Stanislaus R	New Melones Storage: 1.88 MAF Goodwin Release to Stanislaus: 200

Delta	Freeport: 9,000 to 14,000 cfs Vernalis: 1,200 to 2,400 cfs Delta Outflow index: 7,000-18,000 cfs (due to rain) Exports JPP: 1,800-3,600 cfs CC: 500-2,500 cfs Expected OMR Index Values: -2,500 to -4,500 cfs Maximum Allowable OMR: -5,000 cfs X2 position: 74 to >81 km QWEST: -1,000 cfs to +6,000 cfs DCC: Closed
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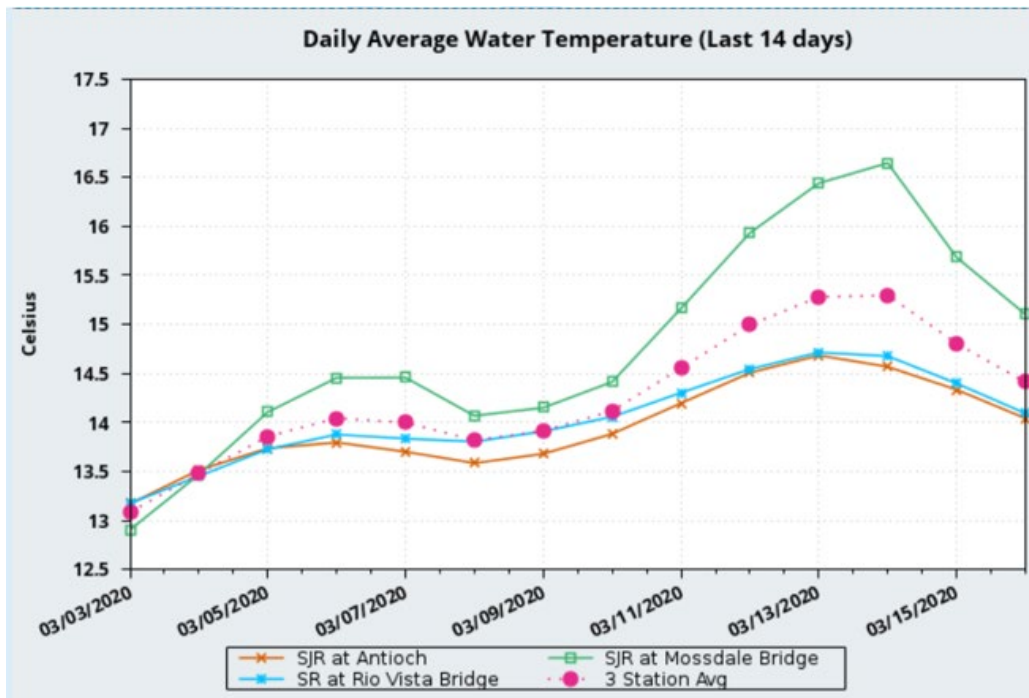
The group discussed expected OMR range of -2500 to -4500 as the expected outcome of the week. The group thinks it depends on how the San Joaquin drops and if the Sacramento does not, or if both drop in tandem, that OMR will stay about where it is now. However, if the San Joaquin drops but other inflow does not, then OMR could drift more negative. There seems to be multiple possible scenarios in OMR flows this week.

Review of Environmental Conditions:

Turbidity:

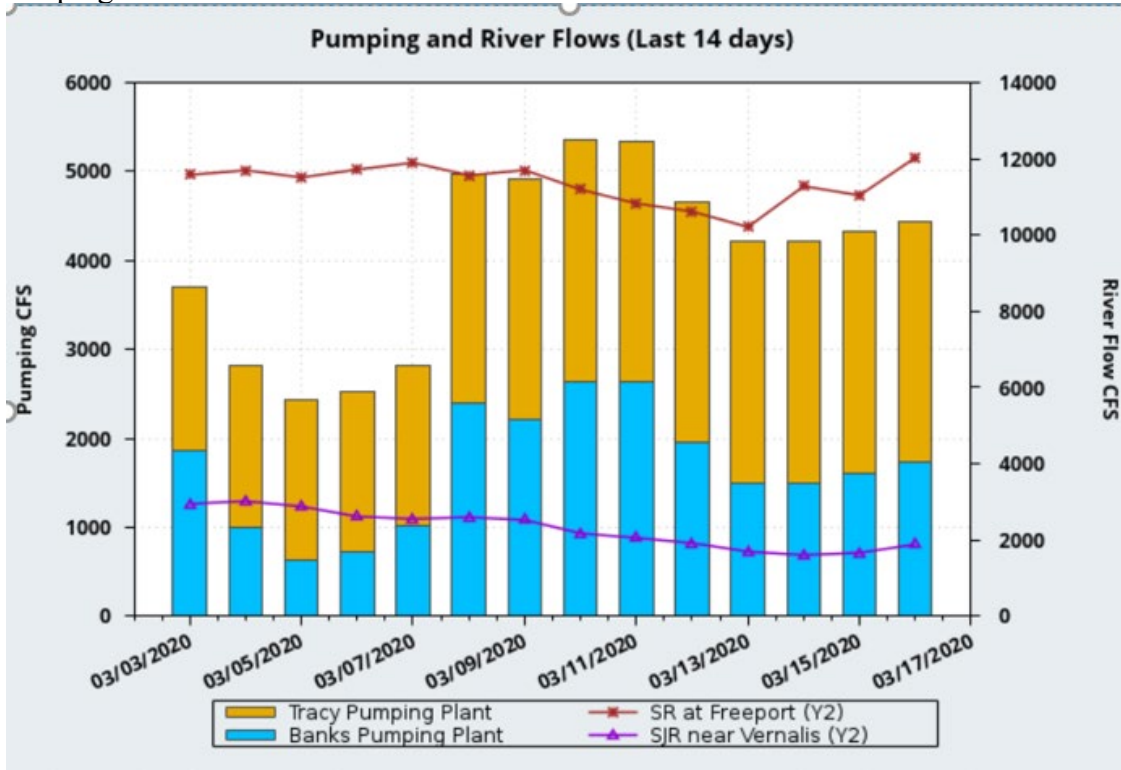


Temperature:

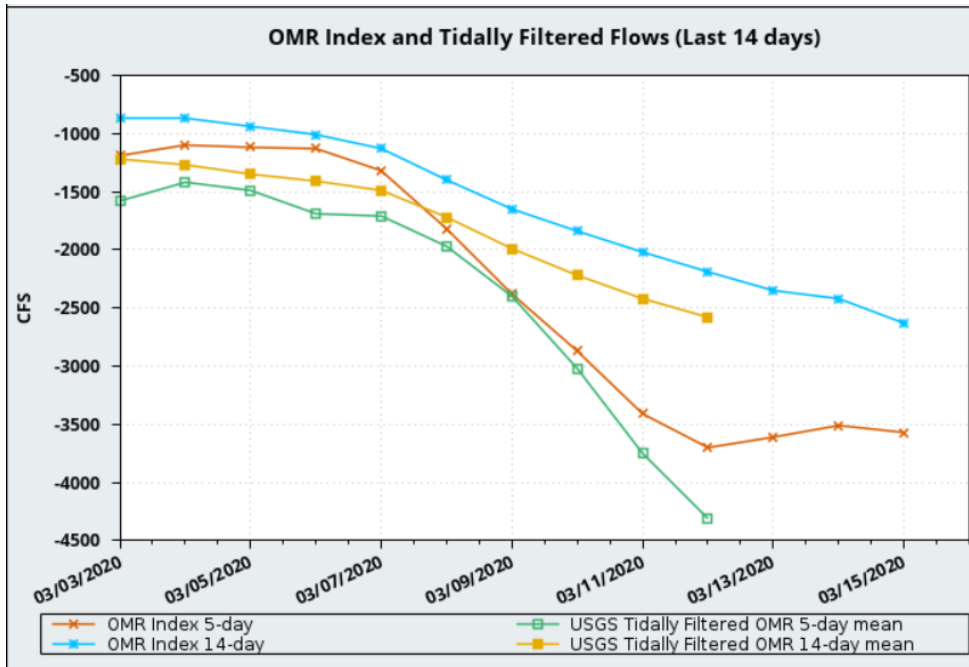


Data sources from CDEC

Pumping and Flows:



OMR Flows:



On March 15th: the three station (SJR @ Antioch and Mossdal; and SacR @ Rio Vista Bridge) average temperature was 14.78 C. X2 position was 83km. Daily turbidity (3/16) at OBI was 354NTU. Weather forecast for the week is mostly clear with increasing temperatures. A rain event is probable over the weekend.

Currently, turbidity in the Delta is low and environmental conditions are not expected to change turbidity levels. However, the group will continue to monitor the incoming storm.

The data presented for conditions was accessed via SacPAS:

http://www.cbr.washington.edu/sacramento/data/delta_smelt.html

4. Fish Abundance, distribution, and lifestage:

A. Survey Updates:

-SKT #2 is complete and sampled from February 10th-14th. They caught one female Delta Smelt (65 mm, Stage 4-ripe) on the Lower Sacramento River. Two Longfin Smelt (75, 77 mm) were caught at Stations 501 and 606, downstream of the confluence. SKT #3 concluded and caught zero delta smelt. Three Longfin Smelt were caught in SKT #3, 2 at station 602 and 1 at station 704 (ripe, stage 4).

-SLS #5 sampled March 2-4 and is 100% processed. No Delta Smelt were caught. 537 Longfin Smelt were caught. 96% of larval LFS catch occurred downstream of the confluence of the Sacramento and San Joaquin Rivers, 3% occurred in the Lower San Joaquin River, and less than 1% occurred in the Lower Sacramento River and North Delta. SLS #6 is in the field this week, and completes on March 18th.

-20-mm #1 is in the field this week (March 16 start date).

Note: Due to social distancing procedures real time data access will be limited as staff is reduced.

-EDSM Week 15: Crews sampling in the Lower Sacramento River, and Southern Delta strata. One Delta Smelt (70mm, no expression) caught (3/16) in the lower Sacramento Deep Water Ship Channel. No abundance estimate this week as no Delta Smelt were detected last week. Last week, 3 Longfin Smelt were caught on 3/11 in Suisun Bay (79-92mm, no expression).

Note: the daily and weekly EDSM reports on the USFWS Lodi website. Old file share system is being retired. Please use new links moving forward. These will be distributed to the group and are also on the Delta Juvenile Fish Monitoring Program website:

https://www.fws.gov/loDI/juvenile_fish_monitoring_program/jfmp_index.htm

B. Salvage Monitoring:

-No adult or juvenile Delta Smelt or Longfin Smelt have been observed in salvage so far this season (WY 2020).

-The Federal facilities began larval sampling on 3/16.

-There was discussion in the group if the state facilities have begun larval sampling. They have not. A request was put in with the State facilities, and they are currently changing gear with anticipation to begin larval sampling next week.

5. Evaluation:

- Between December 1 and January 31, has any first flush condition been exceeded?

-During WY2020, no first flush conditions were exceeded. The group agrees that under the 2019 parameters on Freeport turbidity and flow data no first flush conditions were seen.

- Do DSM have a high risk of migration and dispersal into areas at high risk of future entrainment? (this week compared to last)
- The group feels that it's currently the historical time when Delta Smelt begin their spawning and migration. The group expressed not seeing any turbidity move through the Delta and stated the clarity of the Delta. Despite the low turbidity, the group agrees that spawning and migration will happen soon regardless of conditions as water temperatures continue to rise. Some group members suggested spawning has likely already began. The group agrees that risk of entrainment to adult Delta Smelt is similar to that of last week, as OMR flows remain similar. But for larval smelt in the system there is a moderate risk. Due to positive QWEST flows this week, the group does not think there is high risk to larval smelt in the system but this could change towards the end of the week due to receding inflows.

- Has a spent female been collected?

-A ripe female Delta Smelt (65mm, stage 4-ripe) was sampled on the lower Sacramento River during Spring Kodiak Trawl #2. SKT#2 sampled February 10th-14th. The group feels that the ripe female was likely an early spawner. Rising temperatures and the historical spawning period approaching. We're not necessarily going to get from the survey obvious signs of spawning via a spent female because population numbers are low and field surveys are reaching detection limits. The group agrees spawning will happen soon and it is likely that larvae are hatching in the system from early spawners. Due to this, the group will begin considering larval and juvenile protections for delta smelt.

- If OMR of -2000 cfs does not reduce OBI turbidity below 12 NTU, what OMR target is deemed protective between -2000 and -5000 cfs?

-As of March 16th, turbidity at OBI is 3.7 NTU and OMR is at -4,284. Hence, OBI remains below 12 NTU and OMR flows are within the -2000 and -5000 cfs range. However, OBI turbidity needs to be observed daily as storm affected flows reach the

Delta from the San Joaquin River. If OBI turbidity surpasses 12 NTU, OMR flows will need to become more positive than -5,000 cfs to be protective.

If OBI is 12 NTU, what do other station locations show?

- As of March 16th, turbidity at OBI is 3.54 NTU. There is a storm happening which may increase turbidity. Turbidity is higher in the western Delta and Suisun Bay (showing turbidity of 46 NTU). There is higher turbidity upstream in the San Joaquin which could make its way downstream. Currently there is a spike just downstream of Ripon at 16 NTU. This turbidity is making its way down to Lathrop. The group feels this turbidity is unlikely to greatly impact turbidity levels in the lower San Joaquin River.

8. Additional Considerations

The group discussed the need for PTM runs to track larval entrainment risk of delta smelt. Reclamation has made a separate request to DWR to run PTM. There will be a follow-up email to decide on injection points for particles and for the range of flows based on possible operations. Reclamation will provide DWR with parameters for PTM run and the results will be discussed on next weeks' call to assess entrainment risk to larval delta smelt.

Advice regarding Barker Slough pumping plant operations was warranted under condition 5.3 of 2009 Incidental Take Permit for Longfin Smelt. See **Weekly Advice for the Department of Fish and Wildlife for Longfin Smelt** (17 March 2020) below for further details.

9. Next Meeting:

March 24, 2020 at 11:00am