

SMELT WORKING GROUP
Monday, December 31, 2012

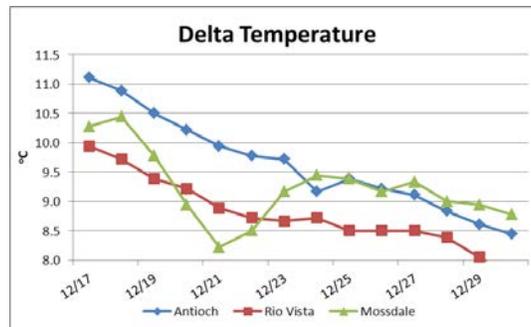
Meeting Summary:

The Working Group recommended that OMR flow for the start of Action 2 should be set at a 14-day average flow of no more negative than -2,000 cfs with a corresponding 5-day average flow of no more negative than -2,500 cfs. Should the Projects experience no salvage for four consecutive days or no salvage for five out of seven days, the Working Group will meet again to discuss the potential to set OMR flow at -3,500 cfs. Implementation of Action 2 will begin January 2, 2013, which follows immediately upon the end of Action 1. The Working Group will continue to monitor salvage, turbidity, and other conditions, and will reconvene Monday, January 7.

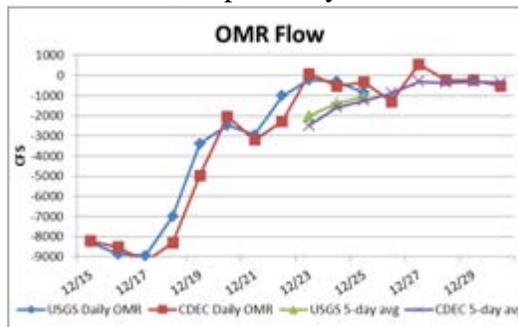
Reported Data:

1) Current environmental data:

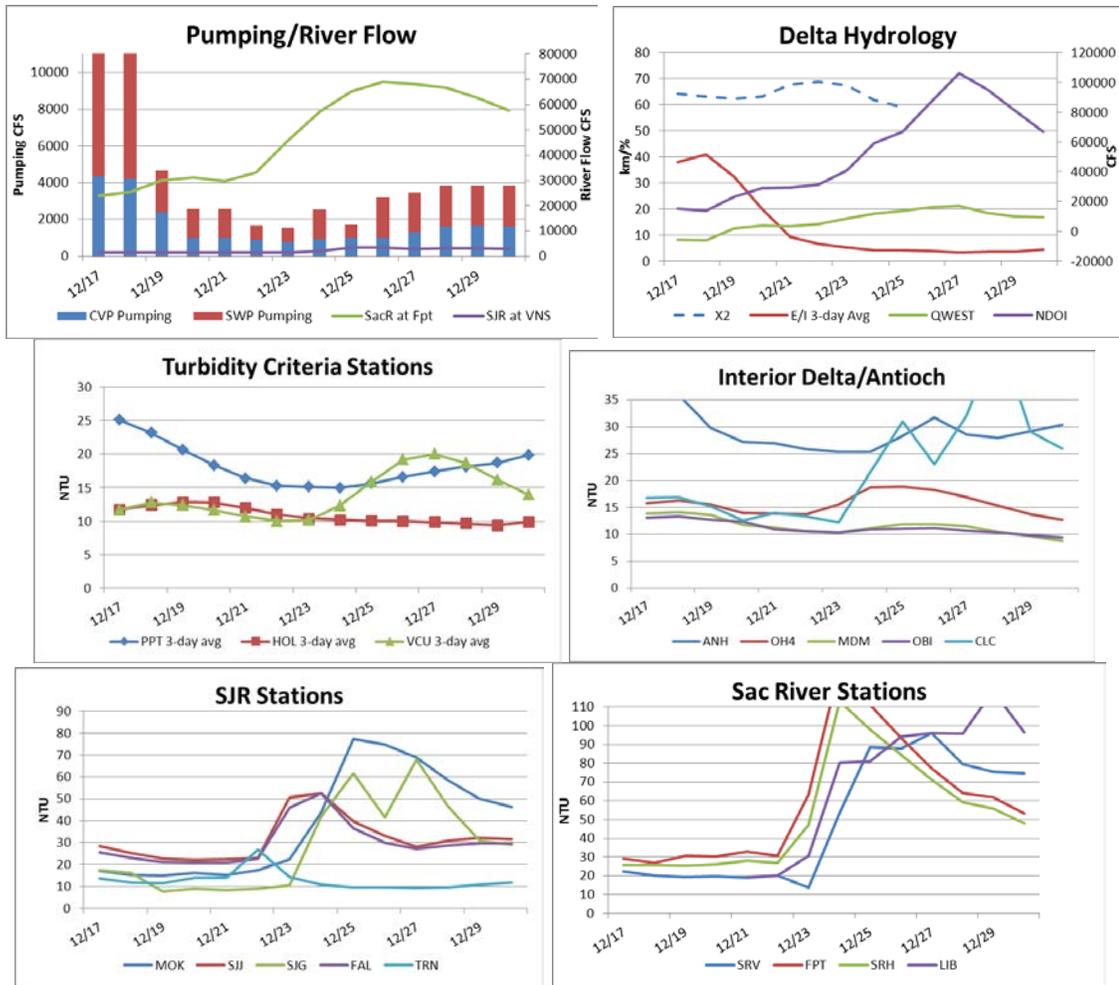
- **Water temperatures** are as follows:



- **OMR:** USGS tidally-averaged daily OMR flow and 5-day average OMR flow has been unavailable since December 26. CDEC daily OMR flow and 5-day average OMR flow as of December 30 is -520 cfs and -349 cfs, respectively.



- **Flow:** Sacramento River inflow is 57,646 cfs and San Joaquin River is 2,916 cfs. X_2 calculation from CDEC has been further downstream than 56km since December 26. The graphs below show the most recent trends in Delta hydrology and water quality that were evaluated by the Working Group.



Delta Fish Monitoring:

The Final Fall Midwater Trawl Index (all four months) is 42. Smelt Larval Survey will begin sampling January 2, 2013 while the Spring Kodiak Trawl will begin sampling January 7, 2013. The total allowable take for adult delta smelt for the WY 2013 as calculated from the FMWT Index using the formula prescribed in the BO is 305.

The 2012 Delta Smelt Recovery Index (based on September and October) is 13. More information on the Recovery Index can be found on the Bay-Delta Office's web site at http://www.fws.gov/sfbaydelta/species/delta_smelt.cfm. Results from CDFG surveys are available online at: <http://www.dfg.ca.gov/delta/>.

2) Salvage:

Four delta smelt were salvaged on both December 29 and 30 at the CVP facility. No delta smelt were salvaged at the SWP during the previous week. The total combined delta smelt salvage for the season is now 82. No longfin smelt have been salvaged at either facility for the season.

Current longfin smelt and delta smelt salvage information can be downloaded from DFG's salvage FTP site at <ftp://ftp.dfg.ca.gov/salvage/Daily%20Smelt%20Summary/> or queried from DFG's salvage web page at <http://www.dfg.ca.gov/delta/apps/salvage/SalvageExportCalendar.aspx>

3) Expected Project Operations:

Combined CVP/SWP exports are approximately 3,600 cfs as of December 31 and expected to be 5,800 cfs on January 2, 2013.

4) Particle Tracking Modeling:

No PTM runs were requested for this week.

5) Turbidity Modeling:

The Working Group discussed modeling outputs from two turbidity models. The first set of outputs was created by Paul Hutton (Metropolitan WD). This model provided forecasts of turbidity change under -2,000 cfs OMR and -6,000 cfs OMR as well as actual OMR flow. These outputs indicated a general declining trend in turbidity throughout the Delta and also indicated an overall insensitivity to the examined OMR flow levels. Members could not determine what the range of error was for the model. This model was presented as being "...in its infancy..."

The second turbidity modeling outputs were presented by DWR. This model utilizes DSMII modeling results to predict turbidity movement and levels. However, this model was unable to predict the recent changes in turbidity due to the increased San Joaquin River flow. DWR indicated this is the first time they have utilized this model and that additional runs and analysis need to be made with it.

6) Assessment of Risk:

Background:

RPA Component 1, Action 2: "An action implemented using an adaptive process to tailor protection to changing environmental conditions after Action 1. As in Action 1, the intent is to protect pre-spawning adults from entrainment and, to the extent possible, from adverse hydrodynamic conditions."

"The range of net daily OMR flows will be no more negative than -1,250 to -5,000 cfs. Depending on extant conditions (and the general guidelines below) specific OMR flows within this range are recommended by the SWG from the onset of Action 2 through its termination..." (page 35).

Discussion: The Working Group reviewed and discussed all relevant data from Delta monitoring, salvage, and planned Project operations. Turbidity has continued to remain at higher, but now decreasing, levels in the central and southern Delta. After recent increases in turbidity

on the Sacramento and San Joaquin River mainstems, readings are now decreasing in both of those systems. Although salvage was low for the past two days, the Working Group remains concerned over the current turbidity levels in the southern and central Delta, especially since OMR flow has been close to positive for the previous four days.

Members pointed out the current high degree of uncertainty we have regarding distributional information for adult delta smelt and the lack of new distributional information until after the start of SKT January 7.

Members also noted that the implementation of Action 1 appears to have been successful. It was noted that in the past, with similar hydrological conditions and a more negative OMR flow, a much larger amount of salvage would have occurred than was experienced since December 19 of this year.

An analysis done by Brian Manley utilizing recent hydrology and exports, indicated an OMR flow of -5,000 cfs could have resulted in a salvage event of more than 500 fish over a two week period, which would greatly surpass the 2013 Incidental Take Limit of adult delta smelt.

While some members noted that -3,500 cfs OMR flow would likely be protective of adult delta smelt, the Working Group ultimately decided to continue with the protection provided at -2,000 cfs OMR flow for the next week.

The SWG will meet again on January 7.