



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Pacific Southwest Region
2800 Cottage Way, Room W-2606
Sacramento, California 95825-1846

In reply refer to:

MEMORANDUM

To: Regional Director, Mid-Pacific Region, U.S. Bureau of Reclamation
Sacramento, California

From: Regional Director, Pacific Southwest Region, U.S. Fish and Wildlife Service
Sacramento, California *Acting*

Subject: Determination Under Component 2, Action 3 of the 2008 Coordinated Long-term Operation of the Central Valley Project and State Water Project Biological Opinion

Determination: The Service determines that temperature and biological criteria triggering Action 3 have been met and therefore Action 3, intended to protect larval and juvenile delta smelt, has been initiated. Action 3 specifies that OMR should be no more negative than -5000 cfs on a 14-day running average, with a simultaneous 5-day running average no more negative than -6250 cfs (within 25 percent).

Previous Determination: There have been no previous determinations made during Water Year 2018.

Rationale: Action 3 begins when temperatures at Antioch, Rio Vista, and Mossdale average 12°C or when spent females have been detected, indicating the start of the spawning season has commenced. Under the Biological Opinion, 12°C is called out as the temperature at which delta smelt can be reasonably assumed to have initiated spawning. The Action ends when the daily average temperature at Clifton Court Forebay reaches 25°C for three consecutive days or on June 30, whichever is earlier. Action 3 does not have any suspension criteria that can be triggered by environmental conditions such as high flows. Under Action 3, the range of OMR flow may be set between -1250 and -5000 cfs based on an assessment of conditions.

On February 4, the temperature criterion was met when unseasonably warm weather caused temperatures to rise in the Delta. This was the second earliest date that the temperature trigger has been met and was considered relatively early with respect to the historical delta smelt spawning season. The temperature subsequently dropped below 12°C on February 14 for several weeks and reached 12°C again on March 8. On March 19, the first gravid female was detected in the Enhanced Delta Smelt Monitoring survey, indicating that spawning activity has begun. Additionally, preliminary data provided on March 22 from the Smelt Larva Survey has reported detections of delta smelt larvae in the lower San Joaquin River and near Franks Tract, and

preliminary data provided on March 23 from the 20mm Survey has reported delta smelt larvae in the lower Sacramento River, the Sacramento-San Joaquin river confluence, and Carquinez Strait. Based on water temperatures in the estuary that are consistent with the historical spawning and hatching of larval delta smelt and the first detection of a gravid female and larvae, the Service determines OMR flows should be no more negative than -5000 cfs on the 14-day running average, with a simultaneous 5-day running average no more negative than -6250 cfs (within 25 percent).

Due to recent storm activity, flows on the San Joaquin River are projected to rise and to provide favorable flows and reduced risk of entrainment for larval and juvenile delta smelt hatching in the system over the next week. As of March 26, forecasts show that flows on the San Joaquin River at Vernalis are projected to peak at 8400 cfs on Wednesday, March 28. However, additional storms are not forecasted this week and elevated flows are anticipated to drop later this week. OMR flows set under Action 3 will provide protections for rearing delta smelt for the remainder of the season. With the onset of Action 3, larval fish monitoring should commence at the Skinner and Tracy fish facilities. The larval and juvenile delta smelt incidental take number for Water Year 2018 is 112, with a concern level of 75 fish, as detailed in the Biological Opinion. We will continue to monitor conditions, including weather forecasts, flow conditions, salvage, and results from fish monitoring surveys and will reevaluate this determination if necessary.