



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Pacific Southwest Region
2800 Cottage Way, Suite W-2606
Sacramento, California 95825

IN REPLY REFER TO:
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MAR - 8 2016

Memorandum

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

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

Subject: Determination, March 8, 2016

Please find attached the subject determination regarding Bay Delta water operations and measures needed to protect delta smelt. Average water temperatures have triggered Action 3 of the 2008 biological opinion and average Old and Middle Rivers reverse flows will be constrained to -5,000 cfs or less negative until average water temperature reaches 25 C or until June 30, 2016, whichever condition occurs first.

The Service greatly appreciates the concern shown this year for imperiled species while your agency has worked to fulfill its mandate to the California public.



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:

March 8, 2016

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 temperatures triggering Action 3 have been met and therefore Action 3, intended to protect larval and juvenile Delta Smelt, has been initiated. OMR flow 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: On February 10, the Service determined OMR flow 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) under Action 2.

Rationale: Action 3 begins when temperatures at Antioch, Mossdale and Rio Vista average 12°C or when spawning has been detected. Under the Biological Opinion, 12°C is believed to initiate of spawning activity and the probable presence of larval delta smelt in the south and central Delta. 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. Under Action 3, the range of OMR flow is between -1250 cfs and -5000 cfs. Given the historically low abundance of Delta Smelt, and water temperatures in the estuary that are consistent with spawning and hatching of larval Delta Smelt, the Service determines OMR flows 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). Conditions historically associated with the peak of spawning and hatching will likely occur over the next few weeks. We believe eggs and juvenile delta smelt emulate free floating particles in the water column. Recent particle tracking model results provided to the Smelt Working Group indicate a substantial entrainment risk (50-60% entrainment) for particles released at Jersey Point when OMR flows are -5000 cfs. However, Delta outflow is estimated to be greater than was modeled this week. We believe the higher than modeled Delta outflow will reduce the risk of entrainment to larval Delta Smelt in the very near term. It is likely that the Service will be recommending more positive OMR flow in the coming weeks.

We will continue to monitor conditions, including weather forecasts, Sacramento River flow levels, other Delta inflows, salvage, and the results of the EWS and the Department of Fish and Wildlife's forthcoming March Spring Kodiak Trawl, 20 mm Survey, and Smelt Larva Survey. If conditions change indicating increasing entrainment risk we will reevaluate this determination.