



# 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:  
FWS/R8/

**MAR 25 2016**

## Memorandum

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

From: Regional Director, Pacific Southwest Region  
Sacramento, California

Subject: March 24, 2016 Determination under Component 2, Action 3 of the 2008 OCAP  
Biological Opinion

Attached, please find the subject Determination. We find under Component 2, Action 3 of the Reasonable and Prudent Alternative of the opinion that the 14-day average OMR should not be more negative than -2500 cfs.

We appreciate your agreement to manage entrainment earlier this week, operating to achieve an OMR no more negative than -3500 cfs while we worked together to the review modeling results and risk to larval and juvenile Delta Smelt. We will continue to work with you to closely monitor the situation over the coming days and make adjustments if needed.

Thank you for your continued collaborative efforts to limit entrainment risk to Delta Smelt. Please call me if you have any questions or concerns at (916) 414-6469.



## 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 24, 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 Old and Middle River (OMR) flow should be no more negative than -2500 cfs on a 14-day running average, with a simultaneous 5-day running average no more negative than -3125 cfs (within 25 percent).

Previous Determination: On March 8, the Service determined that Action 3 was initiated and that OMR flow should be no more negative than -5000 cfs. On March 22, it was agreed that the Projects would target OMR flow of -3500 cfs by March 24, and that the Service would review additional information in the interim.

Rationale: Given current Delta conditions, the historical low abundance of Delta Smelt, the presence of a spent female in spring Kodiak trawl survey #3 and confirmed presence of larval Delta Smelt in the San Joaquin River at Prisoner's Point (Station 815) and at Medford Island (Station 906) in smelt larval survey (SLS) #6, the Service determines OMR flows should be no more negative than -2500 cfs on a 14-day running average, with a simultaneous 5-day running average no more negative than -3125 cfs (within 25 percent). Presence of adults in spawning condition in the early warning survey throughout the month of February and water temperatures consistent with spawning and hatching in the Delta since early February indicate potentially persistent presence of the early life-history stages of Delta Smelt in a region vulnerable to entrainment at more negative OMR flows. Early life history stages of Delta Smelt are more vulnerable to entrainment as they behave more like particles. Particle tracking modeling indicates that maintaining OMR flow of no more negative than -2500 cfs would result in entrainment of approximately 10 percent of particles from station 815 and slightly higher than 10 percent from station 906. SLS #6 confirmed the presence of larval Delta Smelt in other areas of the Delta not subject to entrainment, and for that reason the Service believes flow more positive than -2500 cfs OMR is not necessary for protection of Delta Smelt at this time. However, given the depressed abundance of Delta Smelt and the importance of the larval and juvenile life stage, we believe OMR flow more protective than -3500 cfs are warranted. Sacramento River flows at Freeport are expected to remain around 50,000 cfs on average through the end of March. Larval and juvenile Delta Smelt will be able to realize the benefits of the more favorable hydrology with the decrease in negative OMR flow.

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 20 mm Survey #2. If conditions indicate a change in risk of entrainment, we will reevaluate this determination.