



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/RS/

JAN 26 2016

Memorandum

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

From: Regional Director, Pacific Southwest Region
Sacramento, California

Subject: January 26, 2016 Determination under Component 1 of the 2008 OCAP Biological Opinion

Attached, please find the subject determination. As noted, we find under Action 2 of the Reasonable and Prudent Alternative of the opinion that the 14-day average OMR should not be more negative than the -3500 cfs.

We will work with you to closely monitor the situation over the coming days and make adjustments if needed. At the latest, conditions will be fully analyzed on Friday, January 29, 2016.

Thank you; 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:

January 26, 2016

Subject: Determination under Component 1, Action 2 of the 2008 Coordinated Long-term Operation of the Central Valley Project and State Water Project Biological Opinion

2016 History: On January 14, 2016, the Service determined that conditions warranted implementation of Action 2 of the 2008 Biological Opinion (BiOp) Reasonable and Prudent Alternative (RPA) on the Coordinated Long-term Operation of the Central Valley Project and State Water Project, and that Reclamation and Department of Water Resource's proposed operation targeting -3500 cfs Old and Middle River (OMR) flow from January 15 through January 19 was prudent. On January 20, based on an increasing level of turbidity in Old and Middle Rivers and an associated increased risk of entrainment, the Service determined that Delta Smelt remained vulnerable during their migration period and therefore set OMR flow at -2500 cfs on a 14 day running average. Following implementation of that determination turbidities have continued to fall in the Old and Middle Rivers.

Determination: Therefore, the Service determines that OMR can become more negative at -500 cfs per day, such that an OMR flow of -3000 cfs OMR could be implemented on Wednesday and -3500 cfs OMR could be implemented on Thursday. Overall, OMR flow should be no more negative than -3500 cfs on a 14-day running average, with a simultaneous 5-day running average no more negative than -3125 cfs (within 25 percent), based on this determination. Conditions will continue to be monitored daily for changes and if warranted, a new determination will be issued. A review will occur on Friday, January 29, or sooner if needed.

Explanation: The Smelt Working Group provided the following risk assessment. Regarding risk of entrainment to the facilities:

- -1250 to -2000 cfs = moderate
- -2000 to -3500 cfs = high
- -3500 to -5000 cfs = high

The Smelt Working Group indicated that the scheduled -2500 cfs OMR flow for January 25 could result in a higher risk of entrainment to fish than last week, due to the widespread turbidity and recently peaking Sacramento River flows that will pass further into the Delta over the next few days. The Working Group suspects that more fish may have been entrained than indicated by the single Delta Smelt salvaged on January 21, because entrained Delta Smelt may not have been conveyed to the facilities and/or because the apparent population abundance is low which results in lowered probability of detection in the salvage counts.

The Service believes that an OMR flow more negative than -2500 cfs can be attained without undue increased risk to Delta Smelt. Turbidity has generally declined since the last determination, especially in the Old River corridor, which reduces the risk of entrainment. Surveys at Prisoner's Point have found a continuous presence of delta smelt. . No gravid females have been captured since January 16 indicating that the peak period of spawning has not occurred. No Delta Smelt have been taken at the pumps since the one, expanded to four, was taken a week ago.

However, the Service believes an OMR flow more negative than -3500 cfs could pose unacceptable risk for several reasons. First, the continued presence of Delta Smelt at Prisoner's Point is at the periphery of the zone of entrainment when OMR flows approach -5,000 cfs and the fact that on two occasions in the past week 4 delta smelt have been captured by the sampling indicates Delta Smelt have aggregated in this area. Historical DSM-2 PTM runs indicate that the risk of entrainment of neutrally buoyant particles (from Prisoner's Point) increases rapidly as OMR flow becomes more negative. Because Delta Smelt are weak swimmers, the Service believes that an OMR flow no more negative than -3500 cfs is needed to adequately protect Delta Smelt that are in the vicinity of Prisoner's Point.

Further, although turbidities in the Old River corridor have decreased in the past few days, Freeport inflow is still high and will continue to move into the Delta and may carry turbidity. Another storm is forecast for later this week (January 29). The Service remains concerned with the fluctuating turbidity levels in the South Delta and we believe turbidity may increase if wind events accompany the forecast storm. We will have a better forecast on Friday (January 29) and we will re-evaluate the OMR of -3500 cfs.

Historical low apparent abundance of Delta Smelt likely limited the ability of the December and January Spring Kodiak Trawl (SKT) surveys to sample Delta Smelt. Catches in areas historically known to support Delta Smelt were low. Thus, the overall Delta Smelt distribution is unknown. The Service believes that the apparent low adult abundance will translate into low recruitment in 2016. This elevates the Service's concern for the adult Delta Smelt in the San Joaquin River that are currently moving in preparation for spawning.

The Smelt Working Group has repeatedly raised concerns about the ability to detect Delta Smelt killed at the pumps when Delta Smelt apparent abundance is at record low levels. The 2008 BiOp was also concerned about the difficulty of relying on salvage (p. 331) when Delta Smelt are at low levels of abundance. For this reason, the Service believes upmost care needs to be taken if salvage at the pumps is used as a factor when determining measures to protect Delta Smelt.

The Service intends to begin early warning on Wednesday, January 27, in the Old River corridor. This will be in addition to the Early Warning Surveys ongoing at Prisoner's Point. It is the Service's intention to alternate surveys between Station 902 and Prisoner's Point.

3.

The next review will be Friday, January 29. We will continue to monitor conditions, including turbidity, Sacramento River flow levels, other Delta inflows, salvage, the results of the early warning surveys, and results from the Department of Fish and Wildlife's February Spring Kodiak Trawl surveys. If turbidity in the Old and Middle River corridors increases or other conditions change indicating increasing entrainment risk, we will reevaluate this determination before Friday, January 29.