



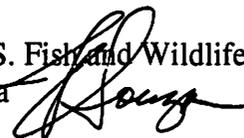
United States Department of the Interior



FISH AND WILDLIFE SERVICE
Pacific Southwest Region
2800 Cottage Way, Room W-2606
Sacramento, California 95825-1846

JAN 04 2018

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

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

Subject: Confirmation of Initial Incidental Take for Adult Delta Smelt for the 2018 Water Year

The U.S. Fish and Wildlife Service (Service) provides this memo to the Bureau of Reclamation (Reclamation) confirming the adult delta smelt incidental take for the 2018 Water year based on the 2015 amendment of the incidental take statement for the Service's 2008 Biological Opinion (2008 BiOp) for the Coordinated Long-term Operation of the Central Valley Project and State Water Project (Service File No. 81420-2008-F-1481-5).

This past water year California experienced record-levels of precipitation that created high flow conditions in the Delta during the winter and spring. The Enhanced Delta Smelt Monitoring (EDSM) effort, launched in December 2016, showed a promising increase in abundance of delta smelt through May 2017, with estimates of larval abundance hovering around 3-4 million delta smelt at that time. EDSM is designed to provide richer information about the geographic distribution of smelt, offering more detailed data for real time management than had existed previously through other surveys such as the Fall Midwater Trawl, which are more temporally limited.

After May 2017, conditions in the Delta were notably hot and dry and these conditions extended into the fall. After July, delta smelt were identified in surveys less frequently. The Fall Midwater Trawl (FMWT), for example, caught 2 delta smelt, which is the lowest in FMWT history. As defined in the Incidental Take Statement of the 2008 biological opinion (BiOp), as updated per our December 23, 2015 memo, the level of incidental take of delta smelt calculated from this FMWT number for the upcoming water year would be 16. As you know, reinitiation of consultation regarding the 2008 BiOp has already occurred and our teams are coordinating to conduct needed environmental reviews, including a new BiOp that will incorporate all of the new scientific information that has been developed since the 2008 BiOp.

It is unclear why all of the surveys have recorded such low numbers in recent months. One hypothesis suggests that the high flows from the last water year dispersed smelt significantly and resulted in lower reproduction and survival, although relatively higher larval abundance in June and July suggest otherwise. Another suggests that the extended hot and dry period in the summer and fall reduced survival. Yet another speculates that the extended sunny and clear period in November and December caused the fish to be less susceptible to capture than they would be under overcast, rainy or turbid conditions. These and other factors may also be working in combination.

We have not recorded delta smelt in the area around Old and Middle River this fall and winter, so we believe the risk of entrainment is currently very low. As storm events occur this year and turbidity increases, we expect EDSM to catch more fish and provide clearer information about the species' population size and distribution. As a result, we see this as a transition year that will incorporate EDSM into management decisions, including the incidental take calculation.

Therefore, the initial incidental take threshold for this water year will begin at 16 per the incidental take calculation method described in the 2008 BiOp and 2015 memo. However, we plan to revise the BiOp with a new approach for determining incidental take that relies upon the best available science now provided by substantially more years of California Department of Fish and Wildlife index data and EDSM. This will allow our agencies to use the strength of EDSM's information for adaptive management and develop an incidental take threshold that is more realistic based upon current conditions. Our teams have already begun discussions on this effort, and we would sincerely appreciate your continued participation. This approach may or may not be ready for use in the 2018 Water Year.

In the interim, we believe that continuing to implement the conservation provisions in the 2008 BiOp will be protective of the species. Real time water management will be informed by the accumulating EDSM presence, absence, and geographic distribution information, current and forecasted flows and turbidity. Additionally, we understand the State Water Contractors will be undertaking a new eDNA study that will help set the baseline for this new survey method. We stand ready to fully engage in our weekly (or more frequent if necessary) water management discussions and are confident this information can be used to minimize impacts to the species. This interim approach will avoid jeopardy and adverse modification of critical habitat in the coming water year until the Incidental Take Statement of the BiOp is revised to incorporate the new methodology, or sooner through a modification to the incidental take threshold if necessary for 2018. If 75 percent of this initial incidental take is reached, or 50 percent of incidental take is reached and there is a high likelihood of continued salvage, we will reassess expected take for the remainder of the pre-spawning adult protection season that could extend through approximately the end of March.

Thanks for your partnership and please don't hesitate to call me with questions.