



# United States Department of the Interior



## FISH AND WILDLIFE SERVICE

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

NOV 09 2017



Ms. Felicia Marcus, Chair  
State Water Resources Control Board  
1001 I Street  
Sacramento, California 95814

Subject: Response to State Water Resource's Control Board's October 4, 2017  
Opportunity to Provide Input to Inform the Development of the Program of  
Implementation For the Phase II Update to the Bay- Delta Plan

Dear Chair Marcus,

The U.S. Fish and Wildlife Service (Service) appreciates the opportunity to provide input on the development of the Program of Implementation for the Phase II update to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary Bay-Delta (Bay-Delta Plan). We are encouraged to see the State Water Resources Control Board (State Board) moving forward with updating the Bay-Delta Plan to address the ecological health of the Bay-Delta as part of the beneficial uses considered in the update.

It is our understanding that interests on several of the tributaries have been in discussions regarding the development of voluntary plans that could assist the State Board in meeting objectives. The Service is very supportive of the voluntary plan model and recognizes that each of these areas has tributary or region specific issues that are likely to drive both the development and implementation schedules. At the same time, revisiting the objectives is an important undertaking and we encourage the State Board to set a timeline for completing the voluntary plan development that will allow the State Board to continue its progress on the Bay-Delta Plan update.

In regard to your questions on Delta outflow, we encourage the State Board to consider objectives that recognize the ecological importance of the size and location of the Low Salinity Zone (LSZ) year-round. Recently developed science, as synthesized in the 2015 MAST technical report entitled "An Updated Conceptual Model of Delta Smelt Biology: Our Evolving Understanding of an Estuarine Fish" reinforces previous work that demonstrated the LSZ provides important habitat for numerous organisms, including Delta Smelt (IEP MAST 2015, p.39).

Although some Delta Smelt have been found to remain in freshwater year-round, data indicate that Delta Smelt are most commonly found in the LSZ of the Delta (IEP MAST 2015). Specifically, most juveniles move to the LSZ in the spring and summer, where they will stay and rear throughout the summer and fall (IEP MAST 2015). When outflow moves the LSZ downstream into the Suisun bay and marsh area, Delta Smelt are able to access more (increased area) and better (increased quality) habitat. This has long been hypothesized for Delta Smelt (Moyle et al. 1992), but new research is strongly reinforcing the older studies by increasing the number of metrics that improve when the LSZ overlies the Suisun Bay and marsh (e.g., Bever et al. 2016; Hammock et al. 2015; 2017). Since the early 2000s, there is a positive association between spring Delta outflow and the production of young Delta Smelt (IEP MAST 2015). Given this positive effect, the State Board should give consideration to how to maintain a beneficial size and location of the LSZ across multiple life stages and year types.

Adaptive Management applies to situations in which decisions are linked through time, i.e., in which a decision will be made repeatedly over some period of time and better information to support the decision is useful at each interval. Therefore, in regard to question 7 on Adaptive Management, the State Board should consider developing an adaptive management strategy that provides the Board with better information each time it needs to revisit its WQCP for the Bay-Delta, and ensure through the Program of Implementation that there are sufficient resources to implement that strategy. We have seen adaptive management actions fail to be implemented because of a lack of resources. Clearly identifying the time interval between this revision of the WQCP and the next one, stating clearly what information the Board would like to have the next time it updates the WQCP that it does not have and securing sufficient resources to implement adaptive management are key steps to for structuring adaptive management for the Program of Implementation.

On your questions related to drought, we believe that several of the processes developed during the most recent severe drought, while created in a somewhat ad hoc manner, proved to be effective in coordinating the agencies' efforts to develop and implement a Drought Operations Plan. The Real-Time Drought Operations Management Team (RTDOMT) was a useful forum for convening the agencies to coordinate around proposed temporary changes to D-1641 to address drought conditions and the needs of multiple fish species. Specification of processes to facilitate response to drought in the Bay-Delta Plan could help the agencies move in a more expedited manner when the next drought occurs.

While we have no specific responses to other questions in your notice we would like to offer our technical assistance to the State Board and staff as you work to further consider objectives and develop the Program of Implementation for the Bay-Delta Plan. The Service has had extensive experience developing and implementing Biological Opinions and other actions that have required monitoring and accounting to determine compliance. Through these efforts we have gained insight that the State Board may find useful in developing and implementing the Bay-Delta Plan.

We look forward to working with you in the future as this effort continues. We hope we can work with you to help improve the health of fish and wildlife habitat in the Bay-Delta and balance the needs of people and nature.



Sincerely,



Kaylee Allen, Field Supervisor  
San Francisco Bay-Delta Fish and Wildlife Office  
U.S. Fish and Wildlife Service

#### Literature Cited

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- IEP MAST (Interagency Ecological Program Management, Analysis, and Synthesis Team). 2015. An updated conceptual model of delta smelt biology: our evolving understanding of an estuarine fish. Technical Report 90, January 2015. [http://www.water.ca.gov/iep/docs/Delta\\_Smelt\\_MAST\\_Synthesis\\_Report\\_January%202015.pdf](http://www.water.ca.gov/iep/docs/Delta_Smelt_MAST_Synthesis_Report_January%202015.pdf)
- Moyle, P.B., B. Herbold, D.E. Stevens and L.W. 1992. Life history and status of delta smelt in the Sacramento-San Joaquin Estuary, California. *Transactions of the American Fisheries Society* 121(1):67-77. doi: [http://dx.doi.org/10.1577/1548-8659\(1992\)121<0067:LHASOD>2.3.CO;2](http://dx.doi.org/10.1577/1548-8659(1992)121<0067:LHASOD>2.3.CO;2)

