

Delta Smelt Working Group Meeting Notes

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For Discussion:

1. Revisit the preliminary recommendation for a winter action from the October 10 meeting
2. Future recommendations for spring South Delta barrier installation
3. Resources' POD Action Matrix and supporting documentation

Recommendation for WOMT: The Working Group had two recommendations for WOMT. These recommendations reflect conditions which the Working Group believes are likely to minimize salvage of pre-spawning adult delta smelt in winter and larval delta smelt in spring, but if high salvage occurs, then other actions may be warranted.

First, the Working Group finalized the preliminary recommendation from October 10 as follows:

- Implement a proactive winter action to address concerns about wintertime entrainment of adults during "first flush" conditions. It is unlikely that any action will be needed until after December 25th. Delta water temperatures have already dropped below 13^o C (compiled from data from Mossdale, Antioch and Rio Vista). Once the time of year and water temperature cues are appropriate for smelt migration to spawning areas, the Working Group may recommend the following: no more than seven days after Sacramento River flow at Freeport rises above 25,000 cfs for at least three days, increase flows in lower Old and Middle Rivers to at least -3500 cfs until February 15th.
- If no Sacramento River pulse above 25,000 cfs occurs by January 15th then Old and Middle River flows should be moderated to a range of -5000 cfs to -3500 cfs until February 15th.
- If flows on the Sacramento River are above 25,000 cfs prior to Dec 25th, and remain above 25,000 cfs through Feb 15th, the Working Group does not anticipate requesting operational changes. However, actions may be considered if Freeport flows increase but are not sustained above 25,000 cfs or if high salvage events occur.

The Working Group will consider and/or generate additional analyses of existing data and continue to monitor conditions in the Delta and survey sampling results to determine whether further refinements to the recommendation are needed.

The second recommendation is to forego installation of the spring Head-of-Old River Barrier and to postpone installation and operation of the agricultural barriers until June 1.

Meeting Notes:

1. The Delta Smelt Working Group revisited the preliminary recommendation for a winter action made at its October 10 meeting. The Working Group retained its original “first flush” conceptual model, which assumes, based on an examination of salvage data and numerous environmental variables, that adult delta smelt movement up the estuary (which increases vulnerability to entrainment) follows decreases in Delta water temperature and increases in Sacramento River flow. The Working Group retained the temperature criterion of less than 13⁰C at Mossdale, Antioch and Rio Vista and Sacramento River flow criterion of exceeding 25,000 cfs for at least three days as triggers for a winter action. It was noted that the EWA Technical Panel and others have asked the Working Group why, if we accepted analyses presented by Pete Smith, we did not recommend setting net flows in Old and Middle Rivers to zero (cfs) to better protect pre-spawning adults. The Working Group believes that while eliminating net upstream OR/MR flow likely would be better for delta smelt, operating to this target would be prohibitively expensive, and that significant protection could be achieved with flows of -3500 cfs. DWR staff have derived estimates of the water costs of the potential actions in the Resources Agency POD Action Matrix and found that the proposed winter action could consume all available environmental water, leaving no assets for spring actions for larvae or juveniles. The Working Group discussed assessing the expected benefit of alternative OR/MR flows for adult delta smelt, given that there are two key issues: (1) the rate of the flow reduction and (2) the duration of the flow reduction. In relative terms, contingency tables of flow versus duration could look something like this:

		Adults				Juveniles	
		1 week	4 weeks			1 week	4 weeks
0 cfs		Better	Best	0 cfs		Not So Bad	Best
-3500 cfs		Worse	Not So Bad	-3500 cfs		Worse	Better

The Working Group discussed restructuring the recommendation so as to gain some of the expected benefit of zero cfs, if only for a short period of time, by prescribing zero cfs for two weeks, followed by -2000 cfs for 1 or two weeks, followed by -3500 cfs for one or two weeks, using the same criteria of temperature and flow to trigger an action. However, this flow regime would not alleviate the potential shortfall in available environmental water assets, so it was not added to the recommendation.

The Working Group decided to adopt its preliminary recommendation of October 10 as a formal recommendation for a winter action. It was noted that “first flush” conditions should not take anyone by surprise; Delta water temperatures will likely drop gradually, and significant increases in Sacramento River flows would likely become apparent three to five days before Freeport flows trigger an action. However, the Working Group believed that additional analyses of the relationship of salvage to OR/MR flows and of days post-flush to first salvage would be informative. Two families of recommendations, one for adults and one for juveniles, could conceivably be generated via additional analyses of salvage in relation to OR/MR flow. Some of this work may already have

been undertaken by others; the status of this work should be clarified and remaining analyses undertaken as appropriate.

2. Recent PTM modeling (see October 30 meeting notes) indicated that the South Delta barriers increase particle entrainment risk from the central Delta. The Working Group recommends against the installation of the spring Head-of-Old River barrier and postponement of the installation and operation of the agricultural barriers until June 1.

Discussion of the first two agenda items did not leave sufficient time for discussion of the supporting documentation for Resources' POD Action Matrix.

Submitted,
VLP