Delta Smelt Working Group Meeting Minutes

November 17, 2005

Participating: Gonzalo Castillo (USFWS), Mike Chotkowski (USBR), Bruce Herbold (USEPA), Mike Dege (CDFG), Kevin Fleming (CDFG), Peter Johnsen (USFWS), Ryan Mayfield (CDFG), Matt Nobriga (CDWR), Ryan Olah (USFWS), Ted Sommer (CDWR), Jim White (CDFG) and Victoria Poage (USFWS, convener)

For Discussion:
1. Would the DSWG wait for a salvage "event" or would we use other criteria to recommend a winter action?
2. Would the DSWG recommend a reduction of the export-to-inflow ratio to 20%?
3. Would the DSWG recommend changes to the usual spring installation of south Delta barriers?

Recommendation for WOMT:
No specific recommendations at this time, however, the DSWG is gathering information needed to formulate a recommendation for a winter action. The intent will be to concentrate on pre-spawning adult distribution rather than on entrainment. The DSWG requires some initial feedback from WOMT with regard to southern Delta barrier installation in the spring.

Minutes:
Four members of the DSWG are also members of the POD Management Team. The POD Management Team has repeatedly stated that the POD is not making management recommendations. However, the DSWG may make management recommendations based on preliminary POD results or any other data which appear accurate and relevant. The POD Management Team proposed to continue to make whatever information they develop available to the DSWG, with the clear understanding that such information is not to be interpreted as policy recommendations.

Due to the very low apparent abundance of delta smelt, it is the first priority of the DSWG to minimize entrainment of pre-spawning adults. Analyses completed for the OCAP Biological Assessment indicated that by the time a salvage event becomes apparent, it would likely already be too late to provide significant protection. Thus, the DSWG will not wait for a salvage event, but will use other criteria to recommend a winter action (or actions) to protect pre-spawning adults.

The analysis of particle tracking modeling suggested that in recent years changes in winter pumping, described in terms of the export-to-inflow (E/I) ratio, may have resulted in a change in particle fate, with virtually all particles near the south Delta export facilities being entrained. The percent of particles entrained is reduced at E/I less than approximately 20%. FWS management asked the DSWG whether it would be appropriate to implement a reduction in E/I to 20% as a protective measure, to minimize entrainment of delta smelt in this very low abundance year. The DSWG noted that such a

measure would have to be considered a management action rather than an experiment; monitoring could not be implemented to adequately determine the effect of the action. Some members also noted that the ~20% E/I threshold is a hydrodynamic effect with an uncertain consequence for migrating adult delta smelt. The uncertainty stems from lack of knowledge about how migrating adult delta smelt behave as they encounter the confluence and their subsequent rates of movement into the Sacramento and San Joaquin sides of the Delta. Distribution of spawning adult delta smelt affects the distribution and, ultimately, the entrainment risk of larvae and juveniles. Implementing a 20% E/I could minimize adult delta smelt entrainment, but would not assure that adults do not move into the south Delta to spawn, and thus may not prevent young-of-the-year entrainment later in the spring. The DSWG did not achieve a consensus opinion, but the majority was unable to recommend a reduction in E/I to 20%, based on:

- 20% is the upper threshold; a lower E/I would be needed to minimize the hydrodynamic change in the south and central Delta,
- not enough environmental water is available to sustain the action,
- the consequence of the action in terms of adult distribution in unknown, and
- hydrodynamic conditions within the Delta at any particular E/I ratio may differ depending on the relative inflow contributions from Sacramento, eastern Delta and San Joaquin river sources. Conversely, similar hydrodynamic conditions might be achieved in regions of the Delta at different E/I values, depending on the mix of inflow sources.

The DSWG did, however, believe that a winter action is a prudent precautionary measure in this year of high concern. The intent of a winter action would be to minimize the impact of exports on central and southern Delta hydrodynamics and, in turn, the movement of adult delta smelt into those parts of the Delta. The challenge is to determine when an action is most likely to be effective. The strategy being considered is to act before adult delta smelt appear in the SWP/CVP salvage samples. To better inform a recommendation, Mike Chotkowski will examine historical data to try to predict the winter salvage peak. An aggressive action could result in using most or all available environmental water in winter to try to promote an adult distribution that minimizes the subsequent entrainment of larvae and juveniles in the spring. The acknowledged risk is that if an early action does not affect the adult smelt distribution favorably, there may be little or no ability to reduce entrainment of larvae or juveniles later.

Any potential application of b(2) water to help delta smelt, if appropriate, would require the USFWS to develop an implementation strategy in cooperation with CDFG and NMFS. The b(2) IT is the venue for this interaction. Bruce Herbold and Jim White will talk to the b(2)IT about using b(2) assets to simultaneously benefit salmonids and delta smelt and provide feedback to the DSWG. The final decision on use of b(2) water rests with the USFWS.

It is not clear that existing particle tracking modeling capability can assist with decision-making at this time.

The DSWG discussed but did not formulate a recommendation with regard to the installation of the spring Head of Old River Barrier (HORB). It was variously agued that (1) the spring HORB can deliver significant flows to Old River with its culverts open while still providing protection to emigrating SJR fall-run, and (2) if the spring HORB was not to be installed, then installation of the agricultural barriers should be delayed until after June. Implications of not installing the spring HORB need to be considered in order to evaluate alternative scenarios. If it is not possible to implement the VAMP, water project operations would default to the standards specified in D-1641. Without the VAMP in place, the D-1641 flow and export levels may be difficult to achieve, and if a winter action is implemented that uses all available environmental water, there will be none to use to support an export reduction beyond the 31 days of 1:1 required by D-1641. The DSWG requires some initial feedback from the WOMT, as well as some PTM runs on the various barrier configurations, before making any recommendations with respect to barrier installation.

Action Items:

1. Mike Chotkowski will take a look at the historical data and attempt to predict a winter salvage peak.
2. Bruce Herbold and Jim White will bring up the use of b(2) water for delta smelt with the b(2) IT and provide feedback to the DSWG.

Next Meeting: Conference call Tuesday, November 22 at 9:00 am.

Submitted,
VLP