

Addendum to DSWG Notes from June 18, 2007

Task: As Delta water temperatures have risen toward the lab critical thermal maximum of 25<sup>0</sup>C, the SWP and the CVP have increased export pumping, and salvage of delta smelt has occurred. According to the decision flow chart, the Delta Smelt Working Group must meet and discuss whether or not a further recommendation is warranted. A conference call was scheduled for noon on Wednesday, June 20.

Recommendation for WOMT: The Working Group recommended that WOMT follow the decision process criteria described in the notes from the June 8 meeting and modify Project operations to achieve a net flow in Old and Middle Rivers as near to zero as possible. However, USFWS biologists believed that salvage at the CVP was likely representative of delta smelt densities in South Delta channels, and so wrote a dissenting statement (attached).

PLEASE NOTE THE FOLLOWING CORRECTION

The June 4, 2007 notes provided the following definition for the 25<sup>0</sup>C criterion (page 3, line 2): “The temperature criterion will be met when the average of three stations (Holland Tract, Prisoner’s Point and Victoria Canal) reaches 25<sup>0</sup>C during the six hours between noon and six p.m.” Victoria Canal should be replaced with Victoria Island (CDEC station VIC) in the notes. All analyses and discussion of the temperature criterion by the Working Group was done with Victoria Island (VIC) data, not Victoria Canal (VCU) data.

Since Monday (June 18) the following temperature (<sup>0</sup>C) data have been logged:

| Date      | HLL  | PPT  | VIC  | 3-Sta | ANC  | JER  |
|-----------|------|------|------|-------|------|------|
| 6/18/2007 | 25.1 | 24.0 | 25.7 | 25.0  | 22.9 | 23.3 |
| 6/19/2007 | 24.6 | 23.7 | 25.8 | 24.7  | 22.3 | 22.5 |

HLL= Holland Tract, PPT= Prisoner’s Point, VIC= Victoria Island, ANC= Antioch, JER= Jersey Point

1. The CDFG Tow-Net Survey collected a few delta smelt last week in the area of the confluence. Thus far, no delta smelt have been collected from the south Delta in survey 8 of the 20-mm Survey, which continues this week.
2. Water temperatures in the Delta continue to warm; the three-station average reached 25<sup>0</sup>C on Monday (June 18) but dipped slightly to 24.7<sup>0</sup>C yesterday (June 19). The CVP has salvaged 12 delta smelt in the last five days (expanded) since June 15, but the SWP has salvaged 375 in that time. Some of the SWP salvage (48) occurred during routine flushing of the system to remove predators. Salvage patterns have differed this year from what would be expected from historic salvage patterns in that there was no “big gulp” taken by the SWP to replenish Clifton Court Forebay following the VAMP, but instead the SWP has taken lesser quantities over longer periods of time, in an attempt to lessen the impact of resumption of pumping. Historic salvage patterns do, however, indicate that salvage is likely to be nearing its conclusion for the water year. Salvage densities have decreased at the SWP in recent days.

| Date    | Exp. SWP Salvage | Salvage Density | Exp. CVP Salvage | Salvage Density | Combined Salvage | Cumulative Salvage |
|---------|------------------|-----------------|------------------|-----------------|------------------|--------------------|
| 6/9/07  | 0                | 0               | 0                | 0               | 0                | 488                |
| 6/10/07 | 27               | 151.6854        | 0                | 0               | 27               | 515                |
| 6/11/07 | 9                | 50.27933        | 0                | 0               | 9                | 524                |
| 6/12/07 | 30               | 170.4545        | 0                | 0               | 30               | 554                |
| 6/13/07 | 9                | 50.84746        | 48               | 12.04819        | 57               | 611                |
| 6/14/07 | 9                | 50.5618         | 0                | 0               | 9                | 620                |
| 6/15/07 | 18               | 94.24084        | 0                | 0               | 18               | 638                |
| 6/16/07 | 9                | 46.875          | 0                | 0               | 9                | 647                |
| 6/17/07 | 168              | 171.2538        | 12               | 2.24341         | 180              | 827                |
| 6/18/07 | 90               | 113.4931        | 0                | 0               | 90               | 917                |
| 6/19/07 | 90               | 54.02161        | 0                | 0               | 90               | 1007               |

In past years, when recommending an endpoint for spring fish actions, the Working Group has hypothesized that reaching 25<sup>0</sup>C was an indicator that any delta smelt remaining in the south Delta would not be able to move to rearing areas near the confluence and thus would not recruit to the population. It was noted, however, that since reaching the thermal maximum, Delta water temperatures have dropped below 25<sup>0</sup>C, which may allow some juveniles to persist. This year, with concern at a very high level, the Working Group believed that the delta smelt currently being salvaged could still be valuable to the population as a whole. Further, the Working Group noted that temperature was not the only criterion in the decision flow chart (see notes for June 8, 2007); juvenile delta smelt collected by the 20-mm Survey had not yet reached a mean length of 40 mm (an indicator of volitional swimming ability). Considering this, the Working Group believed that exports should be curtailed in an attempt to achieve OMR flows of zero. After discussion of trends in salvage and Delta water temperature, the consensus from the Working Group was to adhere to the decision process outlined in the June 8 notes, but instead of recommending a five-day wait with no salvage, the recommendation to modify Project operations to achieve a net flow in Old and Middle Rivers as close to zero as possible would expire if no further salvage occurred. Fish and Wildlife Service biologists, however, gave additional weight to salvage at the CVP, as more likely to be reflective of delta smelt densities in the south Delta channels, since the CVP diverts directly from those channels. Fish and Wildlife Service biologists will therefore prepare a dissenting opinion. The Working Group's recommendation will be submitted to WOMT along with all dissenting viewpoints.

Attachment (1) Dissenting opinion from USFWS biologists

Submitted,

VLP

**Dissenting Opinion from the Delta Smelt Working Group's recommendation of 6/20/07**

U.S. Fish and Wildlife Service biologists disagree with the Delta Smelt Working Group's (DSWG) recommendation from June 20, 2007. Currently, the temperatures in the South Delta are approaching the lethal limit for delta smelt, 25 degrees C, having reached that temperature on June 18, 2007, and possibly also on June 15, 2007. Because of these temperatures, the Service anticipates that any delta smelt remaining the South Delta will not be able to survive for a period sufficiently long enough to move to the vicinity of the confluence of the Sacramento and San Joaquin Rivers, where most smelt reside during the summer. Additionally, no delta smelt have been caught in the Central or South Delta in the recent IEP's sampling efforts. At the Central Valley Water Project (CVP) fish salvage facilities, delta smelt have not been caught since June 17, when an expanded 12 fish were caught. The next most recent salvage of smelt at the CVP's facility occurred on June 13, when an expanded 48 smelt were caught. No other smelt were salvaged at the CVP's facility during June, 2007. Over the past week, pumping at CVP has increased from 853 cfs on June 12 to 3,363 cfs on June 19. Since the CVP facilities do not a forebay in front of them, the salvage at the CVP is a better indicator of the current presence of delta smelt in the adjacent South Delta waterways<sup>1</sup>. Delta smelt have been salvaged at the State Water Project (SWP) facilities, but the numbers salvaged have dropped from 168 on June 17 to 90 on June 19, while pumping has increased from 495 cfs on June 17, to 840 cfs on June 19. Even should diversions be reduced or halted, current inflow from the San Joaquin River into the South Delta would not be expected to result in a sufficiently high net positive outflow towards the confluence before any delta smelt present in that area succumb to high water temperatures. Any potential upstream reservoir reoperation would take a minimum of several days to influence flows entering the South Delta. Additionally, such releases are expected to reduce water supply intended to protect listed salmonids in the San Joaquin River watershed later in the year.

Therefore, based on these conditions, the Service has determined that reductions in diversions at the SWP and CVP would not provide a benefit to those delta smelt remaining in the South Delta. It appears that few smelt remain in the South Delta and these fish are not likely to make it to the confluence area before temperatures reach 25 degrees C.

<sup>1</sup>Smelt salvaged at DWR's Skinner Fish Facility may have persisted for an indeterminate period in Clifton Court Forebay after having been entrained during diversions from the adjacent South Delta waterways