

Delta Operations for Salmonids and Sturgeon (DOSS) Group
Conference call: 5/3/11 at 9:00 a.m.

Objective: Provide advice to the Water Operations Management Team (WOMT) and National Marine Fisheries Service (NMFS) on measures to reduce adverse effects from Delta operations of the Central Valley Project and the State Water Project on salmonids and green sturgeon. DOSS will coordinate the work of other technical teams. DOSS notes and advice can be found at: <http://swr.nmfs.noaa.gov/ocap/htm>

DWR: Andy Chu, Mike Ford, Angela Llaban, Cynthia LeDoux-Bloom

FWS: Pat Brandes

NMFS: Barbara Rocco, Bruce Oppenheim, Jeff Stuart, Garwin Yip

DFG: Dan Kratville, Robert Vincik

Reclamation: Thuy Washburn, Josh Israel

SWRCB, EPA: not present

Action Items

- 1) **NMFS (Oppenheim)** will draft data needs and submit it to DOSS group for review.
- 2) **Amendment to BiOp:** Discussion of NMFS BiOp amendments. Carry to May 17 call

Agenda

- 1) Fish monitoring data
- 2) Current operations
- 3) Documentation for DOSS monitoring needs
- 4) DOSS subgroup report on inflow to export ratio
- 5) Discussion of recent NMFS BiOp amendment

Fish Monitoring: The following table presents the fish monitoring data from 4/25 to 4/29/11. Ad-clipped fish are not included in the total catch for RST data.

| Location | Chippis Is. Midwater Trawl | Sacramento Kodiak Trawl | Mossdale Kodiak Trawl | Beach Seines | Knights Landing RST | Tisdale Weir RST | Moulton Weir RST | Deer/Mill Creeks RST |
|--------------------|----------------------------|-------------------------|-----------------------|-------------------|---------------------|------------------|------------------|----------------------|
| Sample Date | 4/25, 4/26, 4/29 | 4/25, 4/27, 4/29 | 4/25-4/30 | 4/25, 4/6, 4/27 | 4/27-5/2 | N/A | N/A | N/A |
| Total Catch | 690 | 586 | 8 | 171 | 416 | 869 | | |
| FR | 410 | 414 | | 145 | 312 | 853 | | |
| LFR | | | | | 1 | 0 | | |
| WR | | | 1 | | | 0 | | |
| SR | 161 | 43 | 5 | 1 | 5 | 16 | | |
| (Ad-clips) | 119 | 128 | 2 | 20 + 2 spray dyed | 98 | 200 | | |
| DS | | | | 2 | | | | |
| LFS | | | | 1 | | | | |

| | | | | | | | | |
|------------------------------|------|------|------|------|--------|--------|--|--|
| SPTL | | | | | | | | |
| SH (ad-clip) | | 1 | | | | | | |
| SH (natural) | | | 1 | | | | | |
| Water Temp. (avg. °F) | 59.7 | 55.9 | 59.6 | 58.3 | 60.2 | 57.2 | | |
| Flows (avg. cfs) | | | | | 12,210 | 12,700 | | |
| Turbidity (avg. NTU) | | | | | 20.6 | 18.9 | | |
| FR/SR Avg. CPUE | | | | | 28.4 | 87.47 | | |
| WR/LFR Avg. CPUE | | | | | 0.099 | 0.0 | | |

Key: FR = Fall run; LFR = Late-fall run; SR = Spring run; WR = Winter run; SH = Steelhead; DS = Delta smelt; LFS = Longfin smelt; SPTL = Splittail.

In the screw traps, we are finding a lot of fall-run Chinook; but there are no winter run and no steelhead.

Mossdale Trawl: 1 steelhead (231 mm) on 4/26/11. Total this year is 2 since 4/4/11. The peak for steelhead is May, so we expect to see more coming out this year.

Chippis Island: The data are showing that most winter run Chinook have left the Delta by now; highest peak of the year was in April (see DWR graph).

Beach Seines: 2 delta smelt observed were 76 and 26 mm from Garcia Bend and Liberty Island.

DFG (Vincik): The American River hatchery (Nimbus) will release 3 million juvenile fall-run Chinook on 5/5 and 5/6 at Jiboom St (Sacramento R) with 25% marked; 270,000 will be released in-river at the Sunrise site the first week of June; they are 100% marked. Reclamation (Israel): Does anyone coordinate marking fish for efficiency studies? There are several colors used; fish facilities are normally notified in advance of the markings (possible IEP discussion).

Salvage data (4/25–5/1/11): See:

<http://www.water.ca.gov/swp/operationscontrol/calfed/calfedmonitoring.cfm>

Chinook (non-clipped):

| Loss | CVP | SWP |
|---------------|-----|--------|
| Winter-run | 0 | 0 |
| Spring-run | 272 | 11,286 |
| Fall-run | 12 | 111 |
| Late fall-run | 0 | 0 |

Observed a significant increase in spring-run loss at the SWP since last week (4/18-4/25 was 3,342). Most Chinook salvaged are being identified as spring-run by length-at-size category, but some may be fall run from the San Joaquin River. Fall run from the San Joaquin River are

probably growing faster than the fall-run from the Sacramento due to warmer temperatures and higher flows this year. Coleman NFH released the majority of its fall-run production a few weeks ago. However, very few (only 1 or 2) ad-clipped fish are being seen at the facilities. Concern is that the hatchery fish are not surviving through the fish facilities (possibly due to high predation in Clifton Court Forebay). The cumulative combined YTD loss for non-clipped winter-run since 10/1/10 is the same as last week (4,360).

Steelhead weekly salvage: CVP 0, SWP 46 (non-clipped), cumulative YTD totals; 450 natural (non-clipped), and 655 hatchery fish.

SWP & CVP OLDER JUVENILE* CHINOOK LOSS & LOSS DENSITY
04/25/2011 through 05/01/2011

| Date | OLDER JUVENILE LOSS** | | | Combined Older Juvenile Loss Density (fish/TAF) |
|-----------|-----------------------|------|----------|---|
| | (# fish) | | | |
| | SWP | CVP | Combined | |
| 4/25/2011 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4/26/2011 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4/27/2011 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4/28/2011 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4/29/2011 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4/30/2011 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5/1/2011 | 0.00 | 0.00 | 0.00 | 0.00 |

5/2/11 loss also 0
DWR-DES 5/1/2011

Preliminary, subject to revision

*Older juveniles defined as all Chinook > min. winter run length (Delta Model)

**Loss data obtained from DFG, Stockton

Steelhead Loss Density (fish/TAF) 4/25–5/2/11: We are still below the density trigger in NMFS BiOp (Action IV.2.3). 4/25 = 0, 4/26 = 1.78, 4/27 = 3.21, 4/28 = 1.50, 4/29 = 5.22, 4/30 = 1.43, 5/1 = 1.60, and 5/2 = 0.87.

Coded wire tags (CWTs): No update since last week on the 15 missing tags. The recent salvage was only 1 new ad-clipped fish since March 15. DWR (Llaban) keeps checking; no one knows where the missing tags are, but they never made it to the Stockton tag lab.

Smelt working group (SWG) update: The Smelt Working Group notes are posted on the FWS website at: <http://www.fws.gov/sfbaydelta/ocap/> No recommendations from the SWG; some concern that the delta smelt population is lower than in past years.

Operations (May 3, 2011)

| SWP | | CVP | |
|-----------------------|--------|---------------------|-------------------------|
| Flows/Exports (cfs) | | | |
| Clifton Court Forebay | 1,500 | Jones Pumping Plant | 3,500 for next 3 days |
| Outflow | | American- Nimbus | 8,000 |
| Total Delta Inflow | 60,268 | Sacramento-Keswick | 7,500 for flood control |

| | | | |
|--------------------------------|---------|----------------------|-------------------|
| | | Stanislaus - Goodwin | 2,000 |
| Feather - Oroville | 12,000 | | |
| Sacramento River at Freeport | 36,954 | | |
| San Joaquin at Vernalis | 18,338 | | |
| OMR (daily) | +4,382 | | |
| OMR 5 day | +4,449 | | |
| OMR 14 day | +5,737 | | |
| Reservoir Storage (TAF) | | | |
| San Luis (SWP) | 1,053 | San Luis (CVP) | 965 |
| Oroville | 3,307 | Shasta | 4,298 |
| | | Folsom | 755 |
| | | New Melones | 1,987 |
| Delta Operations | | | |
| DCC | closed | X2 (km) | <56 |
| Outflow Index (cfs) | ~53,200 | E/I | 6.7% (14-day ave) |
| Water Temperature (°F) | 59–60.6 | | |

SWP/CVP: Combined exports: 5,000 cfs targeted on Sat 4/30/11 to meet 4:1 ratio of San Joaquin River flow at Vernalis to exports (action 4.2.1 in the NMFS BiOp), will target 4,500 cfs over next few days. Vernalis dropped below the flow trigger of 21,750 cfs on Thursday 4/28/11.

Vernalis Flows (CDEC)

| Date | Vernalis | 4:1 | Combined Exports |
|--------|----------|-------|------------------|
| 5/1/11 | 19,279 | 4,820 | 4,750 |
| 5/2/11 | 18,338 | 4,585 | 4,363 |

Mike Archer (San Joaquin River Group) projections: Vernalis average of 17,263 cfs for May, but upstream reservoirs projected to be releasing water for flood control and Vernalis may come back up. No June forecast yet. Vernalis is dropping faster than expected. San Joaquin tributary groups are going to try to stabilize Vernalis flows for the VAMP to about 17,000 cfs but we don't know whether that's daily or a monthly average: today: 17,500 cfs, by the end of May: 16,820 cfs. Exports would then be 25% of those numbers pursuant to action 4.2.1 in the NMFS BiOp.

Update from DOSS subgroup: The subgroup is still expecting some final comments on the draft document clarifying procedures for implementation of the I:E ratio component of RPA Action IV.2.1. Compliance is measured based on the 14-day running average for the I:E ratio. During early implementation, before a 14-day running average starts, the operators will report the progressive daily mean. The subgroup recognized that stable Vernalis flows and stable exports help to provide stable experimental conditions for the six-year acoustic tag study and VAMP study, but decided that these experimental considerations were beyond the scope of the subgroup's charge, which was to clarify procedures for implementing the I:E ratio.

VAMP: Objective is to keep flows and exports as stable as possible for the first two weeks so that all released fish experience the same types of conditions as they go through the system.

Did the I:E subgroup discuss going to 1,500 cfs combined exports in the second half of May for VAMP? DWR (Chu): We did not discuss this further but we may have more detail at the WOMT call this afternoon. FWS (Guinee): It's important to have high exports the first and second weeks of May and lower exports over the last 2 weeks of May. Exports should be high during the first 2 weeks in June (~11,000 cfs). We're missing important data points if we don't do the 1,500 cfs; we'll end up with two data points instead of three. We will discuss this more this afternoon.

Reclamation (Israel): It would be nice to change exports but it's not a requirement of the I/E action in the NMFS BiOp; we must look at data for this year to make decisions for future years.

FWS (Guinee): Could we figure out a way to compensate for combined reduced pumping to get to 1,500 cfs? Is there any potential for using the 500 cfs extra pumping capacity for June and July? DWR (Chu): There's not a lot of room for reoperations. We will discuss again today during the WOMT call. We need to know where to put the limited resources at this point. What is the possibility of having no restrictions in June from fisheries? From a delta smelt perspective, there is an OMR concern (new settlement). Vernalis is projected to be about 12–14,000 cfs by the end of June. NMFS' calendar-based OMR is -5000 cfs until June 15. At 15,000 cfs at Vernalis, OMR would be -2,500 cfs.

Real-time monitoring action (beginning on 10/1/11): See Action Item 1. Carry forward
NMFS BiOp Amendment: No comments yet; carry forward for 2 weeks.

DOSS advice to WOMT and NMFS:

Current Status: As of Saturday, April 30, 2011, export pumping has been targeting NMFS' action RPA 4.2.1 (San Joaquin 4:1 inflow-to-export ratio [I/E]). Combined exports were reduced to 5,000 cfs on Saturday 4/30/11 pursuant to Vernalis flows dropping below the trigger (21,750 cfs) last Thursday.

DOSS Advice: Continue to implement as a minimum the NMFS action 4.2.1 (4:1 ratio) to protect juvenile steelhead emigrating from the San Joaquin River basin. At a minimum, combined exports should be no more than 25% of Vernalis flows. In addition, where compatible, provide opportunities for experimental fish releases as part of VAMP at lower export rates.

Next Meeting: Conference call on Monday, 5/10/11, 11:00 a.m.