

special call

Delta Operations for Salmonids and Sturgeon (DOSS) Group

02/18/10 Tues conf. call 9:00 am

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 to 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/actions.htm>

Attendees: Mike Ford, Carol Stroble, Sheila Greene & Andy Chu (DWR), Rodger Guinee (FWS), Barbara Byrne, & Bruce Oppenheim (NMFS), Thuy Washburn and John Hannon (USBR)

Agenda: review DFG data and spring-run loss not available on Tuesday

Fish Monitoring:

FWS data (for 2/7 – 2/13 from last week, Sunday through Saturday):

Mossdale Trawl: 1 fall-run Chinook

Sacramento Trawl: 43 fall-run Chinook, 2 spring-run Chinook, 1 winter-run Chinook, 3 non-clipped steelhead, and 9 clipped hatchery steelhead

Chippis Island Trawl: 4 winter-run Chinook, 1 tagged Chinook, 18 clipped hatchery steelhead, 3 splitail, 107 longfin smelt, and 6 delta smelt

Beach Seines, 380 fall-run Chinook, 6 spring-run Chinook, 1 tagged Chinook, 1 clipped hatchery steelhead, and 2 splitail

CVP and SWP Fish Salvage Facilities (2/8 to 2/15, plus 2/16 & 2/17): Up to Monday, winter-run Chinook non-clipped loss was 49 (CVP) + 34 (SWP) = 83 total last week (2/8 – 2/15). SWP salvaged winter-run on the 8th and 13th, CVP peak of salvage was on the 11th

2/16-2/17: This week, 2 winter-run Chinook at the CVP, and 2 at the SWP for a total loss of 25 over last two days

Summary of loss density (fish/TAF) from 2/8 – 2/16 for older juveniles (*i.e.*, winter-run, spring-run, and late-fall Chinook). Except for a high of 2.1 fish/TAF on 2/8, loss densities have been below 2.0 this last week (see table below). Expect to see more winter-run Chinook over next few weeks based on historical salvage trends. Last year, most came through in first week of March.

| Date | Older Juvenile Loss Density |
|-----------|-----------------------------|
| 2/8/2010 | 2.17 |
| 2/9/2010 | 0.73 |
| 2/10/2010 | 0.18 |
| 2/11/2010 | 1.07 |
| 2/12/2010 | 0.78 |
| 2/13/2010 | 0.75 |

| | |
|-------------------|------|
| 2/14/2010 | 0.13 |
| 2/15/2010 | 0.49 |
| 2/16/2010 | 1.44 |
| | |
| DWR-DES 2/18/2010 | |
| Preliminary data | |

Water Operations & Delta Conditions:

| | | |
|-----------------------|---|-------------------|
| Clifton Court Inflow | = | 3,000 cfs |
| Jones Pumping Plant | = | 4,200 cfs |
| Total Delta Inflow | ~ | 27,342 cfs |
| Sacramento River | = | 23,853 cfs |
| San Joaquin River | = | 2,447 cfs |
| Delta Conditions | = | Excess Condition. |
| Delta x-channel Gates | = | Closed |
| Outflow Index | ~ | 19,200 cfs |
| % Inflow Diverted | = | 22.7% (3-day avg) |
| X2 Position | = | 62.8 km |

Old River & Middle River (OMR) Flows (as of 2/18/2010), based on USGS stations 11312676 & 11313405 via CDEC. Also available at: http://www.usbr.gov/mp/cvo/data/OMR_feb_2010.pdf

| | | |
|------------------------|---|-----------|
| 14-Day Running Average | = | -4493 cfs |
| 5-Day Running Average | = | -3838 cfs |

OMR Daily: -3,737 cfs, 5-day running average -3,548 cfs
 Since 2/11, OMR daily average have been -4500 cfs, down to -4000 cfs on 2/13, down to -3300 cfs on 2/14, then about -3500 cfs on 2/15, and yesterday -3700 cfs. Exports have remained the same during this period.

CVP: Added a unit up to 4,200 cfs
 SWP pumping 2,500 cfs today, will go up to 3,000 cfs tomorrow. Increasing 500 cfs because OMR criteria of - 5,000 cfs starts tomorrow.

DOSS Discussion of controlling factors: Exports at 7,200 cfs combined through the weekend. Delta inflows are decreasing. OMR flow is running less than - 5,000 cfs. Rain predicted for this weekend.

STEELHEAD: Increase in non-clipped (wild) steelhead salvage at both facilities. CVP = 236 non-clipped caught last week, 53 week before, 16 week before that. SWP = 89 non-clipped caught last week, 44 week before. Steelhead salvage more than tripled over last week. Currently, into the middle of the steelhead salvage season, but have not yet hit loss density triggers in NMFS opinion.

GREEN STURGEON: tagged fish have left the upper Sacramento River. Expect adult spawners will be migrating upstream in late Feb/March.

Spring-run Surrogates: Expanded loss reached 864 for the 1/14 release group, or 0.5 percent. Using projected tags based on the proportion loss to date, the spring run surrogate loss from the 1/14 release exceeded the loss trigger this week. Projecting the loss is the only way to estimate actual loss rates in real time because there are a large number of unread tags from the fish facilities.

Coleman Hatchery Late-Fall and Winter-run Loss at the Delta Fish Facilities, 2009/2010, BASED ON DWR EDITS TO FWS CWT DATA (revised 2/17/2010)

| Release Date | CWT race | Release Site | Loss | Release Number | % Loss | First Concern Level | Second Concern Level | Date of First Loss | Date of Last Loss |
|--------------|----------|-----------------|---------|----------------|--------|---------------------|----------------------|--------------------|-------------------|
| 12/16/2009 | LF | Battle Cr | 1056.78 | 904699 | 0.117 | n/a | n/a | 12/26/2009 | 2/11/2010 |
| 12/28/2009 | LF | Battle Cr | 56.73 | 75676 | 0.075 | 0.5% | 1.0% | 1/22/2010 | 2/2/2010 |
| 1/14/2010 | LF | Battle Cr | 864.45 | 174386 | 0.496 | 0.5% | 1.0% | 1/24/2010 | 2/11/2010 |
| 2/10/2010 | W | Redding | 0.00 | 198582 | 0.000 | 0.5% | 1.0% | * | * |
| | | Lost tag | 0.00 | | | | | | |
| | | Non-read | 258.40 | | | | | | |
| | | since 2/16/2010 | 0.00 | | | | | | |

For Chinook lost 10/1/2009 through 2/16/2010

SWP Tags read 10/1/2009 through 2/11/2010

CVP Tags read 10/1/2009 through 2/11/2010

| DWR ESTIMATE OF NON-CONFIRMED TAGGED LOSS AND NEW TOTAL THRU 2/16/2010 | | | | | | |
|--|------------------|-------------------------------|--------------------|-----------|----------|-------|
| Release Date | Confirm Tag Loss | Proportion Confirmed Tag Loss | Proportion NON | | Released | %Loss |
| | | | Confirmed Tag Loss | New Total | | |
| 12/16/2009 | 1056.78 | 0.53 | 0.00 | 1056.78 | 904699 | 0.12 |
| 12/28/2009 | 56.73 | 0.03 | 0.00 | 56.73 | 75676 | 0.07 |
| 1/14/2010 | 864.45 | 0.44 | 0.00 | 864.45 | 174386 | 0.50 |

LF = Late-fall Chinook, W = winter-run

Expanded loss of non-read tags is 258 based on 39 tags remaining. Therefore, it is probable that the percent loss of spring-run surrogates will be higher than 0.5 percent after these tags are read. While DOSS may have recommended an action based on the 0.5 percent spring-run surrogate tag loss on 2/12, the five day action would have begun on 2/13 and ended 2/18 today.

For fish data at other monitoring sites see:

<http://www.water.ca.gov/swp/operationscontrol/calFed/calFedMonitoring.cfm>

DOSS advice for NMFS and WOMET (2/18).

The DOSS reviewed the salvage data from last week and up to through Wednesday (2/17) and concluded:

- 1) salvage of non-clipped winter-run is declining from the previous week's counts.
- 2) confirmed loss of tagged hatchery spring-run surrogates (CNFH late fall run) is 0.496 % of the total number released on (1/14/10), and (based on projections from still-unread tags) is expected to exceed 0.5% of the total number released. This information was first received 2/12/10.
- 3) tagged hatchery spring-run surrogates were observed leaving the Delta based on Chippis Island monitoring data.
- 4) daily loss densities for older juvenile Chinook salmon are very low, ≤ 2.2 fish per thousand acre feet (TAF) during the last week. Trigger levels are 8 fish per TAF for first stage level of

concern, 12 fish per TAF for the second level of concern.

5) non-clipped steelhead salvage has tripled from the week of 1/31/10 (total of 85) to the week of 2/7/10 (total of 305). The current week (4 days 2/14 through 2/17) has a grand total of 87 unclipped steelhead salvaged at both facilities. It appears that the pulse has diminished, therefore no action is recommended at this time for steelhead.

6) adult green sturgeon will be moving into San Francisco Bay from the Pacific Ocean and staging to make their spawning migration upriver into the Sacramento River. Sufficient flows from the Sacramento River into the lower estuary are necessary to provide attraction cues for this upstream migration.

Based on the fish monitoring data above, DOSS concluded that the criteria in the NMFS BO for spring-run Chinook had been reached last Friday (2/12). Actual daily OMR flow this last week ranged from -4,500 to -3,300 cfs. DOSS concluded that, at this time, even if the TRO is not extended, targeting -3500 OMR is not necessary, since the peak of tag loss has passed. DOSS advises that operating to an OMR flow of no more negative than -5000 cfs would be protective of salmon, steelhead, and green sturgeon.

Next Mtg: Tuesday 2/23 at 9:00 am