

Delta Operations for Salmonids and Sturgeon (DOSS) Group
Conference call: 11/23/10, 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: Angela Llaban, Cynthia LeDoux-Bloom, Mike Ford
FWS: Nick Hindman, Kevin Niemela (Coleman Hatchery)
NMFS: Barb Byrne, Barbara Rocco, Bruce Oppenheim, Jeff Stuart
DFG: Joe Johnson, Dan Kratville
Reclamation: Thuy Washburn
EPA: Bruce Herbold

Agenda

- 1) Fish monitoring
- 2) Operations
- 3) Feedback from annual review
- 4) Spring-run surrogate releases

Fish Monitoring

Knights Landing (KL): 11/8/10 to 11/22/10. Flows 5,260 cfs today and dropping, there was one winter-run caught; 84 mm. CPUE = 0.12. Water temperatures dropped significantly (to 53°F). The second alert in the NMFS BiOp is water temperature < 56.3 F at KL. It met the 56°F threshold on Monday (11/22/10); however, the flow trigger for the tributaries has not been met (*i.e.*, tributary flow increase of > 50%). Flows are actually dropping (currently at 5,205 cfs) even though Verona flows upstream are increasing. There is not much debris and muddy water coming down.

Tisdale: Not much reported for general Chinook movement

Moulton: Two winter-run Chinook salmon came in yesterday

Mill & Deer Creeks: No reports for this week; should be out later this morning. Last report from 11/10/10 showed one spring-run Chinook yearling. Flows are increasing so the numbers might increase this week.

Sacramento Trawl, Chipps Island, and Mossdale: Catch is pretty low right now. No species of concern caught in the trawls; however, three winter-run salmon were caught in beach seines.

Salvage Data:

11/15/10 –11/21/10. No listed species in the salvage facilities; did not receive the usual data sheets for these reports. Today's data: No species of concern were caught.

Operations

Central Valley Project

Verona: Flows will peak out tomorrow at 14,700 cfs; will go up a little but not that large of a pulse is expected

Sacramento River: Keswick is releasing 6,000 cfs; Wilkins Slough is at 5,260 cfs and dropping. Freeport is 14,560 cfs today.

American River: Flows went from 2,000 to 3,800 cfs today; this Sunday, Reclamation will go up to 7,000 cfs to get a 2-day pulse on the American River and to evacuate the water for flood control. The Nimbus fish weir will be cleaned of salmon carcasses so that flows don't destroy them. The weir can get loaded down and damaged; it makes it unsafe to work out there.

Goodwin: 200 cfs

San Luis storage: CVP share is 571 taf; starting to fill.

State Water Project

1,750 cfs at Oroville; 5,000 cfs at Banks Pumping Plant;

E/I ratio: 57.2%; still in balanced conditions. State share of San Luis Reservoir is 479 TAF.

DCC Gates: Reclamation will schedule for closure on December 1, 2010 (pursuant to the NMFS BiOp). Water quality tracking over Thanksgiving and weekend should not be an issue. DOSS normally gets daily KL fish counts, usually after 10:00 a.m. NMFS will call Thuy or the controller's office regarding the DCC closure if necessary; however, DOSS doesn't anticipate many fish being out there and doubt that there will be a lot of people boating this weekend; some could be fishing. If the criteria for closing the DCC (*i.e.*, KL or Sacramento Catch Index > 3 fish) is met on Thursday (Thanksgiving) and the report is early enough on Friday, the gates can; however, DOSS must get something early Friday to close gates over the weekend. Otherwise, we wouldn't be able to close until Monday.

Annual review

Feedback from the Independent Review Panel: The panel wanted the technical teams to do more biological analysis in their reports; they used the Clear Creek report as a good model. They have 30 days to come out with report; probably in December.

Spring-run surrogate release

(Kevin Niemela (FWS) on phone from Coleman National Fish Hatchery): DOSS needs to think about these releases and what it wants to do for this year. There are approximately 70k fish in each of three release groups—two releases last year on 12/28 and 1/14. The fish are uniquely marked (100% clipped & tagged); they are released in the upper Sacramento River and should come out at same time and at the same size as wild fish. FWS times the releases to what DOSS thinks is going on with spring-run yearlings in the tributaries; releases are associated with storm events but DOSS has not seen an increase in numbers at Knights Landing, Deer and Mills Creeks, or Moulton yet. The Coleman hatchery surrogates are used to "count" as surrogate

spring-run take at the export facilities. DOSS assumes that if we see tagged fish, it indicates that other “wild” fish are there as well. There is no spring-run Chinook wild-fish take limit because genetic real-time monitoring is the only way to identify them. This is a topic for discussion once Sheila Greene, DWR, finishes writing up the last 5 years of results from the genetics project. DOSS considered developing a study plan to evaluate the efficiency of real-time monitoring of spring run in 2012 and 2013. Alternatively, DOSS could compare the actual data (older juveniles) to actual surrogate loss to see how they match up and will have the 2010 and 2011 data to evaluate for the 2011 annual review. The problem is reading the tags; we are always about a week or two behind what is actually occurring as a loss at the pumps. DOSS discussed several solutions such as reading the tags at the fish facilities instead of Stockton tag lab, daily pick-up of tags, and sending the tags by overnight delivery, however, nothing was adopted. The problem was deferred to later time to be discussed at a meeting on real-time data reporting.

When surrogates show up at the pumps, turbidity, temperature, tide flows, etc., are added to data to assess behavioral response in migration timing. The relationship is “total Chinook movement” and there is a relationship between turbidity, temperature, and flow. Fish agencies haven’t studied the difference between behavior of wild and tagged fish in the Central Valley because it’s hard to “tag” wild fish.

Coded wire tags: DOSS discussed a reader at each of the Fish Facilities to get data faster or could use pit tags instead. It would speed up the process. Real-time coded tag reading is certainly a possibility depending on the need for it and number of fish coming through the facility. We would have to have someone there around the clock to extract the tag and read it immediately. There are approximately 1-20 tags/day out of the 200–250k total released to be monitored. The criterion for take is 0.5% of the release group. The number of tags to be read daily does not justify hiring someone, but possible could be done when technicians/biologists have down time.

Timing: In the past, the November release was too early; many of the surrogates came down before the wild ones so it wasn’t a good indicator of what was happening. Last year, we moved the releases to December and January. The first one release will be scheduled for late December and the second for mid-January.

Other considerations: Hatchery production releases of late-fall run Chinook are made between Thanksgiving and December holidays. They are not occurring on a set date but will coincide with high flow events on the Sacramento River. The production release will be over by December holidays but we’ve tried to stagger release of tagged fish with that group. Mid-January is the latest that we can hold the second group. The production release is timed with turbidity and high flow events on the upper Sacramento River and can be done any time after Thanksgiving. Coleman late-fall production fish: 800–900k total released. The timeliness of that decision is relative to when you want fish the surrogate fish to be released.

Staggering: DOSS discussed what would be the appropriate time between Coleman production release and the first surrogate release. DOSS decided two weeks is a good “gap” between the two types of releases. The lead time depends on what the hatchery has going on at that time. If there is late-fall spawning, it may occupy staff time at the hatchery. We would need a few days of lead time to know when to release. It’s hard to schedule releases around gap times and flows.

DOSS usually works through DWR to schedule releases, so that's probably the downfall – we didn't work directly with Kevin at Coleman Hatchery. DOSS can avoid that this year by giving Kevin a head's up for surrogate releases; we will still need to look at forecasts for weather – another storm event is forecast for about 7 days out. If there is a potential storm event, DOSS could convene a call to discuss surrogate release. DOSS looks at flows and the forecast every week so we would have a conference call each week to discuss the events. It's hard to predict a storm event; sometimes it is predicted but then doesn't happen.

There is a shift in strategies that the hatchery has taken to releasing late-fall Chinook salmon; it is now releasing them during a high-flow event between Thanksgiving and December holidays, which seems to almost be a “surrogate” for what they're using the “surrogates for”. All are coded-wire tagged; every release has a different tag code. DOSS could make a release of any late fall into a surrogate; since we have tag codes for them. DOSS may not need spring surrogates because hatchery production releases are “acting” as the surrogates now; 100% are tagged. FWS wants to stagger both fish releases, but release them en masse because it results in a higher survival rate. The late-fall production fish will be released together as a group on a storm event.

DOSS considered using the late-fall production release as surrogates. For example, if the flow event triggers a release of 400k late fall, if the hatchery can specifically identify them with a tag code, we can track them at the facilities. There is no need to identify which tag codes are used because we have nine groups of 70–75k surrogates going out on that date, or nine replicates. It would be helpful to get corresponding data for wild spring run migrating out of the tributaries and the releases.

We assume that the fish take 4–7 days to show up at pumps; if we know that a smaller group of surrogates has been released, the hatchery could potentially gear up its coded-wire tag turnaround to try to increase data collection time. Setting up tag readings must relate to the number of fish expected. We could decide whether to designate the production releases as surrogates but we must decide in advance whether those tag codes will trigger any of the OMR flows. The DOSS group should identify the time when naturally produced spring run Chinook should come down from the tributaries based on the water and weather conditions. That would be a much simpler process. A surrogate release of 200k fish historically has worked as well as anything. We are wary of designating an entire production year and calling them surrogates. For production releases, we can specify that 200k are surrogates; however, this deviates from what has been done.

Maybe DOSS should treat this as an opportunity to learn and do the production release and spring surrogates as we've done in the past. We can modify the protocols next year or stay the course. There's no need to decide on a date for releases at this point. FWS will most likely release between 12/14–12/17; this would provide enough time before the holidays to collect data; otherwise, we get into the holidays and vacations and may not get the data. That could be confounded by the release of production fish, which could show up at the pumps around the holidays. DOSS will have no way to identify spring surrogates from production fish and would need to stagger their releases. We can release the surrogates after the production release; hopefully, the conditions will be prime for the release. FWS will send out a notice of production release and then release the surrogates on the first weather event after that. Generally, DOSS agreed with this schedule.

DOSS will discuss this again as we get closer to the first release time in December.

6-year (tag) study status: (Jeff Stuart)

NMFS received the initial draft and is trying to address the comments on how it will use data to address flows and survival, and behavior effect. Reclamation needs to address why to change the equipment and must prove that they will get more data from new equipment. Next year, the 6-year study will be back with the Vernalis Adaptive Management Plan (VAMP) experiment. There are a lot of barriers, such as the head of Old River that must be considered in the study design. About 1,800 hatchery steelhead will be released in March. Reclamation is trying to pool all the agency resources (*e.g.* FWS, USGS, DFG) so that they are available for the different studies. We will have a lot of data from the south Delta out to Chipps Island this year.

Advice: There was no advice to WOMT or NMFS this week.

Next Meeting

Conference call: 11/30/10 from 9:00 to 11:00 a.m.