Draft Minutes

Delta Cross Channel Through Delta Facility (DCCTDF) Project Team

January 13, 2004, 1:00-4:30 PM
CBDA Delta Room

Attendees

Dan Fua, Don Kurosaka, Maureen McGee, Roger Churchwell .....DWR
Pat Brandes .....USFWS
Bruce Herbold.....EPA
Pat Coulston.....DFG
Rick Sitts.....MWDSC
Joe Miyamoto.....EBMUD
Dan Odenweller .....NOAA Fisheries
Samantha Salvia (via Phone) .....CCWD
Ron Ott, Darryl Hayes .....CBDA

Agenda:

1. Status Reports: Yolo Drain Board Weir; UCD Sturgeon Study; SDW Ship Channel Study; Georgiana Slough Pilot Studies; Fall Adult Salmon Tracking; Franks Tract; and TDF Feasibility Study
2. Review of Original DCCTDF Questions and Status – Ron Ott/All
3. Funding and Priorities – Ron Ott
4. Next Meeting

1. Status Report on North Delta DCCTDF related studies

Roger Churchwell handed out a status report of recent activities of fish passage related efforts. The following additional updates were discussed at the meeting:

Yolo Toe Drain:

- The Yolo Bypass toe drain board weir was installed in November.
- The monitoring equipment was installed and some fish movements were being observed in December.
- The recently modified Lisbon Weir just downstream seems to be preventing many fish from migrating upstream. Permits are being sought to physically move tagged sturgeon over that barrier.
- Recent high flows have caused some operational issues and forced DWR to move all the monitoring equipment to higher ground and to suspend the study until flows recede.
- A cost that was not included in the original estimate was the eventual removal cost of the barrier.
- A three year study plan was originally planned. Based on the first year's initial effort, a more detailed study will lay out changes and plans for the next couple of years.

UCD Sturgeon Study:

- A report on the first year of study is under internal DWR review.
- Year 2 plans are also being evaluated.

- Sturgeon collections will begin on March??

Sacramento Deep Water Ship Channel Fish Passage:
- Many fish have been successfully passing through the locks, including several likely winter run salmon. No fish have been "stacking" up at gates waiting as in past.
- Due to some operational concerns, only one gate is being operated.
- Hydroacoustic data is being evaluated.
- A data web site has been set up. Contact Maureen McGee for more information on gaining access to the data available to date (May and June data);
- Study extended to 2004;

Georgiana Slough Pilot Status:
- No report – Studies were conducted as planned as far as the group knew

Fall Adult Salmon Tracking Status:
- No report - Fish were still being tracked as far as the group knew

Franks Tract Status:
- Dan F. reported that they are still struggling with contracting issues to initiate studies.

TDF Feasibility Study Status – Darryl Hayes
- Darryl H. said that a new alignment is being proposed for study to bring water further down the South Fork of the Mokulomne. While the TDF must evaluate a screened 4000 cfs facility, other options will be evaluated that meet the needs of the workteam and work in combination with proposed North Delta Floodway Improvements and Frank's modifications down the road.

2. Review of Original DCCTDF Questions and Status – Ron Ott/All

Ron Ott led a discussion on where the work team and various individuals were on the 22 questions. The original "Question matrix" and accompanying guidance document explained the rationale and original responsible party to address the questions. The team focused on what we have learned to date and whether or not the questions are still appropriate or relevant. Several operational or facility changes were also discussed that could change the teams' opinions.

Pat C. presented a tentative prioritization of DCCTDF Fish Questions (see handout).
- ***Priority 1:*** Project effect in question has clear conceptual connection to critical factors for key species, and the analytical tools and data are readily available to examine impacts (#5, 8, 13, 15)
- ***Priority 2:*** Project effect in question has clear conceptual connection to factors critical to key species, but either the analytical tools or data required to evaluate are presently unavailable. New field studies or modeling development may be required (#9,11,12)
- ***Priority 3:*** Project effect in question does not have clear conceptual connection to factors critical to key species (#5 SB, 10, 14, 15)

- ***Important Un-posed questions*** – How will DCCTDF related changes in exports, in combo with potential changes in fish distribution, affect direct fish losses of key species at export facilities – Priority 1 issue
    - Franks Tract and South Delta integration

The following points were made, grouped under the question that issues came up…:

Question 1 - Would opening the DCC gates at certain tidal stages reduce the diversion of salmon into the Central Delta sufficiently to meet fishery objectives? (Responsible – Bruce Herbold and DCCTDF PWT)

- Yes, Daytime on flood tide seems to entrain the least number of salmon into the Central Delta – Did I hear this right???;
- No evaluation of just how effective this might be for water quality however;
- Gates will need to be redesigned for this type of tidal operation;

Question 2 - Would opening the DCC gates at certain tidal stages protect water quality in the central and south Delta sufficiently to meet water quality objectives? (Responsible – Bruce Herbold and DCCTDF PWT)

- See #1;
- Water quality objectives are unclear, but modeling assumes that constant TDF pumping at 4000 cfs is needed to improve water quality significantly – this is more than gates can deliver (much less if operated tidally);

Question 3 - Would opening the DCC gates only at certain times related to day or night reduce the diversion of salmon into the Central Delta sufficiently to meet fishery objectives? (Responsible – Bruce Herbold and DCCTDF PWT)

- See #1;
- Need to look at fish model to determine if this is sufficient;

Question 4 - Would the selective closure of the DCC gates interfere with the upstream migration of fish, and how does that compare with effects of current operations? (Responsible – Bruce Herbold and DCCTDF PWT)

- Unlikely to be an issue for adult fish. Studies show they turn quickly if closed and find other ways;
- Probably even a smaller issue if gates are opened periodically;
- We lack a good understanding of how much water quality can be improved;
- DCC Gates need to be redesigned for this operation;
- This section needs to be written up since there is a lot of misinterpretation of the Fall studies and their application to a May time period. There are many pieces of this work completed, but it is not pulled together. Dan F. said that these reports are also needed for contracting purposes and requirements. Reports must be completed prior to next phase work;
- Data from next Fall will be important;

- We need more cooperation on gate operations in Fall. Operators are concerned with water costs to meet water quality objectives, but we can work on an operations plan to see if possible anyway;

Action Item:
Bruce Herbold will prepare a summary report on adult salmon Fall migration studies by the March meeting. These reports are required before contracting can begin on next phase Fall work.

Question 5 - Would reducing flow in the Sacramento River below the DCC by up to 4,000 cfs during the time when the DCC is now closed by regulatory restrictions reduce the survival of juvenile salmon or striped bass eggs and larvae? (Responsible – Pat Coulston)

- Flow splits and changes at Sutter, Steamboat, and Georgiana Sloughs must also be evaluated. The proposed study plan next fall will look at these changes and potential impacts.
- Striped bass is probably not a priority species;
- DCC or TDF Operations around pulses, like done on PC planning, could address issue;
- There is some information on resuspension rates that could have application on Striped bass due to reduced flows;
- Questions #5 and #8 are less of an issue if operations work around critical fish periods;
- New operations may beg a different question;
- Timing changes may also mean that a TDF or DCC would not have to be screened; Flexibility of DCC and TDF operation may compromised if too many fish restrictions put on it;
- We seem to know more about fish than we do about water quality impacts – more modeling needed on options;

Action Item:
New questions are needed on flow splits and flow changes to give guidance and to frame issues related to DCC and TDF operations. A small group will be assigned to this…see action item at end of questions.

Question 6 - Under what conditions would a TDF improve WQ in the delta? At what seasons and under what flow regimes would a TDF provide measurable benefits? Under the historic pattern of 73 years of hydrology, how often would a TDF prove useful and how long would its period of effectiveness usually be? (Responsible – Bruce Herbold, Ralph Finch, Dave Briggs)

- In general, most benefits will be achieved in July, August, and September (and part of October). Other low flow periods will also benefit from TDF operations;
- 98% (?) of salmon pass through area in months other than July – Sept. so not a big deal on those operations;

Question 7 - What water quality improvement would be achieved in the central and south Delta with the TDF and what water quality changes would result in the Sacramento River? (Responsible – Bruce Herbold, Ralph Finch, Dave Briggs)

- Timing is same as in #6. More modeling is needed to determine changes.

Question 8 - Would reducing flow in the Sacramento River between the intake of the TDF and the DCC by up to 4,000 cfs affect the survival of downstream migrant salmon? If both the DCC and TDF divert water simultaneously, would flow reductions below the DCC affect survival incrementally? (Responsible – Pat Coulston)

- Similar issues as #5;
- The timing of the TDF diversion drives this question's significance;
- If we have redefined the operation of the TDF to non-critical migration periods (July-Sept.), then fish screens may not be necessary (if say fish friendly pumps into TDF or it is tidal);
- Water quality modeling is needed to determine the potential link between Franks Tract and TDF operation;
- There was concern that we are NOT using similar metrics when evaluating water quality changes or impacts between the various Delta project modeling runs. For instance, TDF looked at using total salt load change, while Franks Tract study looked at changes in salinity concentration for various periods. MWD and CCWD would rather see results in concentration;

Action Item:

NOTE: This is actually an action item from the Delta Integration effort coordinated by Rick Sitts

By March 2004 meeting, Samantha and Lynda (CCWD and MWD) will recommend establishing common metrics for the DCCTDF and Franks Tract evaluations so various actions can be compared in modeling. Recommendations on baseline studies/assumptions for other water quality related modeling in the Delta will also be outlined for others to use to look at overall water quality changes for comparison in the Delta.

CCWD and MWD will also re-evaluate the existing TDF modeling to look at these revised units.

Question 9 - Would reducing flow in the Sacramento River between the intake of the TDF and the DCC by up to 4,000 cfs affect the survival of striped bass eggs? If both the DCC and TDF were used, would the additional reduction of up to 4,000 cfs below the DCC have an incremental effect on survival on eggs and larvae? (Responsible – Pat Coulston)

- An operations summary is needed to look at this. A revised operation will drive whether this is an issue or not;
- There is very little information on Striped bass egg survival to work with to address this;
- Flow split changes at Sutter/Steamboat and Georgiana Slough also must be evaluated.

Question 10 - How would injection of flows up to 4,000 cfs into the Mokelumne River system upstream of the DCC affect the ecology? (Responsible – Pat Coulston)

- Certain Sloughs could be significantly changed from backwater to flowing ecology;
- This will be better defined by the TDF study and the project description;
- Not a good conceptual model on this - the bigger issue might be to determine where the water goes;
- Joe M. and Pat C. have some information on Snodgrass ecology and communities;
- Predator fish could be displaced with more consistent flows;

Question 11 - How many individual fish of each species would attempt to migrate upstream through the TDF? (Responsible – Pat Coulston)

- Same issues as #5 and #8 – depends on timing;
- How many may not be a good question, except for salmon;
- There are fish passage options that are not dependant on run size (locks);
- We should focus flow timing more than this question;
- American shad adult migration could be an issue in June;

Question 12 - Would the TDF increase straying of salmon? If so, what management measures would be appropriate? (Responsible – Pat Coulston)

- There will be impacts, but we will never know how much or the significance of straying – this may not be a doable question to answer;
- This questions is less of concern of the timing of DCC/TDF is late summer primarily;
- There may be some delay if a steady flow of TDF water is supplied, much like there is for a fish trying to find a ladder at a river powerplant;
- Salmon straying is fairly common;

Question 13 - How many individual fish of each species would be susceptible to diversion into the TDF, and would their cross-sectional distribution in the river affect fish screening decisions? (Responsible – Pat Coulston)

- There is some good information on salmon distribution from DCC studies, that could be applicable to TDF intake;
- Some information from Ray Shafter, DFG reports available from PC sampling in the area;
- Depends on timing how significant this issue is;

Question 14 - Would operation of the TDF and DCC cause ecological changes in the lower San Joaquin River? (Responsible – Pat Coulston)

- Local changes possible, but cross delta flow changes are compensated somewhat when DCC gates are closed now;
- Must look at modeling to see flow and season changes – QWEST changes are shown in TDF modeling runs now;

- Unlikely to be significant changes;

Question 15 - Would any water quality differences cause by diverting water through the TDF as opposed to, or in addition to, the DCC affect fish abundance? (Responsible – DWR and Pat Coulston)

- This is NOT a big concern of group;
- Conceptual model hard to grasp;
- Water temperatures are primarily driven by air temperatures, so temp. changes with a TDF would likely be small;
- Salinity changes could be more significant;

Question 16 - How should the fish facility system for a TDF be constructed to facilitate the upstream passage of fish, and how successful will that approach be? (Responsible – Roger Churchwell)

- The fish lock concept looks very promising. At Sacramento Ship Lock, fish pass quickly through open gates with only a little attraction flow. Locks also pass many salmon and almost all non-salmonids on Columbia River;
- Tests on ladder concepts and attraction issues still being pursued at UC Davis, Yolo Basin, and Sacramento Deep Water Ship Locks;
- If no pumping plant or fish screen on TDF concept, this is not even an issue;
- If no screen, but fish friendly pumping plant, this is still an issue;
- Attraction through periodic DCC gate operations and flows could be used as passage as well;

Question 17 - What is the best design for a fish facility at the intake to a TDF, and how effective can we expect it to be? (Responsible – Roger Churchwell)

- See #16

Question 18 - How do the water quality effects identified in response to Questions 1-15 above compare to existing effects of DCC operations? (Responsible – DCCTDF PWT and Policy)

- Did not get to this

Question 19 - How do any effects identified in response to Questions 1-17 above compare to existing effects of DCC operations on aquatic resources? How could any identified effects be mitigated? (Responsible – DCCTDF PWT and Policy)

- Did not get to this

Question 20 - How do the effects identified in response to Questions 1-17 above compare to effects of other CALFED programs? (Responsible – DCCTDF PWT and Policy)

- Did not get to this

Question 21 - How does the design, implementation and operation of the other CALFED Programs affect the responses to Questions 1-17 above (Responsible – DWR)

- Did not get to this

Question 22 - What are the cost and Environmental Impacts of a TDF and is it technically viable? (Responsible – DWR)

- Did not get to this

Action Item:

A small group will prepare a status report on the DCC and TDF issues and questions. The group will make recommendations on a revised DCCTDF strategy and project description that can be evaluated. The strategy will address the benefits of a revised operations and facility strategy based on what we have learned to date. Suggestions on model runs and additional studies, as appropriate, will be outlined. Performance objectives and metrics will also be identified. Bruce H., Pat C., and Darryl H. will be responsible for the report. Rick S., Dan O., and Samantha S. offered to assist in the effort.

A draft status report and outline will be available in Late March 2004.

3. Funding and Priorities

Budget update – Bond funding is cut for North Delta (and other programs), but may be resurrected in May Budget Revise (as status of tax bond passage). Proposition funding is covering only salaries now.

- Don K. said that only $858K is available for all North Delta now;
- Program plans are in process. They will outline contingency plans if no significant funding is available;
- A BCP for $8.5 million was not approved, but will be resubmitted soon;
- Funding in contracts can be carried over into next year. Funding of contract this year is available but contracts are frozen;
- A federal request for funding was submitted;
- CBDA was counting on $198 million next year, but worst case is that only $30 million is available;
- The DCCTDF Team may be able to assist in reprioritizing work;

4. Next Meeting:

Next meeting is March 9, 2004. The February Meeting was cancelled due to the IEP Annual Meeting.

Location/Time: California Bay-Delta Authority

650 Capitol Mall, 5th Floor
Delta Conference Room
1:00 – 4:30 PM

Future Dates: Meetings are scheduled the second Tuesday of each month:

March 9
April
May 11
June 8
July 13
August 10
September 14
October 12
November 9
December 14