

South Delta Fish Facilities Forum

DRAFT Meeting Summary and Recommendations

November 3, 2003, 1:00 – 4:30

California Bay-Delta Authority

Stanford Room (1st Floor)

Sacramento, California 95814

Attendees (Sign-ins)

Diana Jacobs	DFG (Forum Co-Chair)
Kirk Rodgers	USBR (Forum Co-Chair)
Tim Quinn.....	MWDSC (Forum Co-Chair)
John Beuttler.....	CSPA
Ron Ott, Darryl Hayes, Jana Machula, Heidi Rooks	CBDA
John Winther	Delta Wetlands
Perry Herrgesell, Bob Fujimura, Pat Coulston	DFG
Kathy Kelly, Roger Churchwell, Don Kurosaka.....	DWR
Bruce Herbold	EPA
Dave Nesmith.....	EWC (Envir. Water Caucus)
Doug Lovell	FFF (Federation of Fly Fishers)
Rick Sitts, Randall Newdeck	MWDSC
Mike Acietuno, Dan Odenweller, Bruce Oppenheim.....	NOAA Fisheries
B.J. Miller	SLDMWA
Laura King Moon, Jim Buell	SWC
Joe Cech, B.A. Younis, M.L. Kavvas	UC Davis
Bill Luce, Ron Silva, Mike Chotkowski	USBR
Jon Burau.....	USGS
Dave Harlow, Leigh Bartoo, Bill O’Leary.....	USFWS

Agenda

- 1) Introductions All
- 2) Agenda Review All
- 3) Opening Remarks Diana Jacobs,
Tim Quinn,
Kirk Rodgers
- 4) Recommendations on proposals:
 - South Delta Hydrodynamics/Fisheries Investigations
 - Collection, Handling, Transportation, and Release (CHTR)
 - South Delta Fish Facility Improvements
 - Clifton Court Forebay – Diversion Facility Location Options
 - Alternative Fish Facility Concepts using Combinations of Non-Salvage Screens and Flow Recirculation
 - Fish Facility Technology Development - Tracy Fish Test Facility
- 5) Next meeting

Note: Handouts, presentation materials, and written comments from participants related to this and previous meetings are located on the CBDA website under the Conveyance Program:

<http://calwater.ca.gov/Programs/Conveyance/SDFF/SouthDeltaFishFacilitiesForum.shtml>

Agenda Review

No Changes

Opening Remarks

Kirk Rodgers

Kirk appreciated the numerous presentations and efforts in pulling together the material for the SDFF to review. He reminded the group that the USBR has an obligation through CVPIA to improve the Tracy Fish Facility. Joining together with the California Bay-Delta Authority (CBDA) to cooperate on the Tracy Fish Test Facility (TFTF) made a lot of sense in the beginning. However, due to funding issues and decision delays, moving ahead on the larger TFTF has not been an option. The USBR will continue to develop new technologies and will continue to maintain their system in order to provide fish protection until a decision on new facilities is made and construction occurs.

Tim Quinn

The Forum has been valuable to understand and candidly question the path of new fish facility development at the SWP and CVP facilities that we were headed on. Spending over \$1 billion for new fish facilities as proposed, given the uncertainty of assurances, is reason to question the direction and to explore alternatives that are cost effective. There is a lot of raw data that needs to be developed and/or reviewed first. The time may not be ripe to move forward on spending large sums of money on fish facility development.

Diana Jacobs

The Forum was set up to report back to Patrick Wright, CBDA Director, and the Agency Coordination Team (ACT). Recommendations will be acted upon by those groups. This meeting is not intended to be a “be all” meeting – recommendations will be revisited on an on-going basis. There is still time to submit any written comments on what has been or not been presented relative to the Forum’s issues. Diana felt that the key question that the Forum is still trying to grasp is “How much do we invest in this tool versus other tools?”

Dale Flowers

Dale explained the process and meeting guidelines. The intent of this meeting is not to go into a lot of detail on each proposal, but to understand the general description and bring forth issues about each proposal that should be weighed by the chairs in making a recommendation. The goal is a recommendation on how to proceed on the agenda topics.

The following notes are organized by topic and recommendation. The discussion items capture some of the thoughts relative to each topic or recommendation that came up during the meeting. Descriptions on each topic were presented on PowerPoint slides, as well as in pre-meeting materials sent to the SDF Forum participants (also on-line). Comments by individuals or agencies on SDF Forum recommendations and these subject areas are included on the SDF Forum website under the November 3, 2003 meeting date area as referenced above. Additional comments received will be posted on the website as well.

South Delta Hydrodynamics and Fisheries Investigations

Recommendation:

Develop a scientific proposal on South Delta Hydrodynamics and Fish moments for initial implementation this spring. Consider possible opportunities to add additional water quality constituents and study components that may affect fish survival and movements.

Discussion items:

- This proposal needs better definition of scope and management purpose since there are many issues that are unclear if they will be incorporated;
- The proposal will be developed for CBDA science review (peer review required);
- Input on proposal will go to Jon Burau and Mike Chotkowski for now;
- Water quality parameters other than just salinity and temperature should be included in the study;
- Study should focus on fish from both Sacramento and San Joaquin Rivers;
- Any water quality parameters that affect fish should be included;
- The USGS said that they could include hydraulic data to synthesize with water quality data that others could collect;
- Suggest that tagging green sturgeon near CCF may be valuable since there can be a population there;
- These studies should be integrated into the Frank's Track investigations;
- There are several new flow stations that will be installed. These are needed to calibrate the model and to better define what is going on around the area;
- If water quality parameters (more than salt and temp.) are not part of a pilot effort, it should be part of the Phase 2 or second year of study;
- This Forum does not deal with water quality issues specifically, so input from others are needed during the proposal review;
- Fisheries studies should include periods during VAMP and Pre-VAMP periods. Fish from San Joaquin and Sacramento Rivers should be included in the study, not just delta smelt;
- There was some concern that this study could get overloaded with too many items. The focus should be defined based on available resources as well as need;
- There was concern that stakeholders will not have sufficient chance to review proposal and what shape it will ultimately be in. Although IEP will be focus for flushing the proposal, a process for input from stakeholders is needed;
- The study will help develop tools for future water quality or other Delta parameter investigations;
- The effort will help us understand the interaction in the area better;

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- The study will add to our understanding of young delta smelt and salmon;
 - Information on Delta barrier operations will be valuable for SDIP;

Collection, Handling, Transportation, and Release (CHTR)

Recommendation:

Continue with CHTR survival studies incorporating comments from CBDA Science and IEP review.

- ***Develop scientific proposals on release site investigations, expanding scope to include impacts on all fish species (i.e. not just delta smelt).***
- ***Develop performance measures for CHTR that will guide future stage developments.***
- ***Develop stepwise proposal for implementing new technologies at facilities for all species, considering the most cost effective actions first.***

Recommendations Comments:

- Study phasing will require future planned tests to be adaptively managed. Oversight on the ongoing results is necessary;
- This study may be as much a CBDA management challenge as it is a technical challenge;
- A release site study is needed and should be a first priority;
- The IEP review is necessary throughout the process. All new proposals should continue to go through peer review, then to Science reviewers, then back to IEP. The SDF Forum should review the studies often;

Discussion items:

- Need to look at population effects on delta smelt salvage – if salvage changes, does it make this study more or less relevant?;
- May learn about delta smelt with these studies, including gaining knowledge on if there are more cost effective ways to protect the fish;
- Why limited to just delta smelt? May be good to expand information on other species as well since they are part of the same salvage process;
- Need to take a stepwise approach before we commit up to \$10 million on CHTR;
- Need performance measures to evaluate the study results and direct how we will move to subsequent phases;
- CHTR is only part of the issue on fish survival. Actions taken in the CHTR process are not exclusive or independent;
- It is unclear why CHTR is being revisited in this group -- CALFED Management Group already said "Go." Response was that the SDF Forum has heard a number of topics over the past year and this is one of them. If there is new or changed information, a new plan should be revisited (or not);
- We should look for "low hanging fruit" to implement cost effective and incremental solutions;
- During the current 3-year study we continue to have predation going on in CCF – this may be the bigger issue;
- Should we do all the CHTR studies at once to save time?;

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- If conditions on delta smelt change (i.e. delisted, population changes dramatically up, etc.) should these studies continue?;
 - CHTR is based on the idea that we need to minimize direct take. The bigger population and performance measure issues need to be addressed in context;
 - Facilities can only be shut down so many times, so if period before or after VAMP is critical, some facilities may be needed;
 - If CHTR is good for delta smelt, is it considered good enough for other fish?;
 - Despite information on population effects, it is good to collect information on CHTR;
 - We should keep revisiting this CHTR study and watching progress.
 - Science has gotten some reviews back. The acute tests appear feasible, but the other tests may take longer than 3 years to get answers (chronic stress and predation proposals). CBDA is preparing a summary of findings for recommendation to IEP;
 - Should be looking at a cost effective way to minimize exposure of a large portion of delta smelt;
 - Survival studies being planned by DFG need only focus on delta smelt;
 - Release site studies should be looking at ALL fish species, not just delta smelt;
 - New technologies should be investigated for ALL species as well;
 - A phased study approach is needed
 - Good to get information on effect of present and future facilities;
 - May not be larval or juvenile fish focused enough to be of value;
 - Uncertain if tests will be able to predict Delta smelt survival accurately given tests on larger fish;
 - May need to look at delta smelt behavior more;
 - Decisions on South Delta improvements are being made without this data – Is it too late to be doing studies for “decisions”;
 - Need appropriate scientific review and input for all aspects of studies on delta smelt including water quality, fisheries, etc.;
 - Concern over who will coordinate to see that these studies are carried forward or implemented;
 - We can not afford to have tests with failed results since a lot depends on them;
 - Clarity needed on performance measures (what is the survival we are trying achieve?);
 - The cost effectiveness of the “study” verses the “Fix” is unclear (will study cost more than potential solution?)
 - Concern over the slipping of the schedule – we are one year in and nothing seems to have started;
 - How do the results fit with the decisions that need to be made?;

South Delta Fish Facility Improvements

Recommendation:

Fix and maintain facilities to bring fish salvage to original function. Implement cost effective facility improvements when possible (such as an automatic trash rack cleaner, lift bucket improvements, etc.)

Discussion items:

- This item is presented to affirm ongoing efforts – especially since the USBR is under obligation to do this through CVPIA;
- There were some differences on the interpretation of what “level of improvement” really means – “Fix and maintain” or “improve function using new facility components?” How much is really necessary and at what cost should we focus efforts? If new technologies are implemented, fish agencies would have to be on board with improvements;
- The Tracy Fish Facility is over 40 years old and there will be a significant cost to keep it functioning as it is today;
- We should fix the problems that develop at the existing facilities and bring them up to the standards that they were designed for (at a minimum);
- We should focus on making the facility operate better;
- If the existing facilities only entrain say 2% of the salmon population, and predation losses take more of that, is any facility improvement significant?;
- There was agreement that the CVP and SWP should look for the “low hanging fruit” improvements and implement them;
- Components should only be replaced that are compatible with the entire facility function;
- Even if we do move forward on new facilities, it will be a long time before new facilities are in place, so improvements are needed at existing facilities for some time;
- The SDF Forum would like to hear about more “low hanging fruit” projects and just how much they will cost;

Clifton Court Forebay – Diversion Facility Location Options

Recommendation:

Conduct pre-feasibility analysis on proposed “module” and “short circuit” options that have the potential to reduce predation in CCF. Develop performance measures on predation and salvage efficiency to guide efforts.

Discussion items:

- The proposed hydrodynamics work will be valuable to this effort. This should proceed first;
- Hydrodynamics work could give more information on barrier operations with these scenarios;
- Performance measures are needed. What are we really trying to achieve and how does predation really need to be curtailed in this area?;
- There is little or no data on delta smelt predation in CCF. Can we infer that predation on delta smelt is similar with any certainty? Are there “gut content” studies that could shed some light on this? How are we ever going to measure effect that these concepts will improve this?;
- CCF could be a rearing area for trapped delta smelt. After VAMP, the SWP exports many delta smelt for period despite their densities elsewhere. The CVP salvage does not see many delta smelt following VAMP;

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- Concern over how many resources are available to conduct a prefeasibility study. Can bond money be made available for this from South Delta facilities? How will this be resolved and who will take the lead?
 - Feasibility on several options will give value in determining options;
 - Studying these options with hydrodynamics model will show flexibility of diversion operations (tidal or not) and barrier operations;
 - Performance measures are needed on project staging of these options
 - A plan of action on how this study will proceed should come back to the SDFP Forum for input. There are many details to work out on how this study will be carried out and who will be advocate.

Alternative Fish Facility Concepts using Combinations of Non-Salvage Screens and Flow Recirculation

Recommendation:

Complete South Delta hydrodynamic and fish movement investigations before investigating these concepts further.

Discussion items:

- We should look at how effective barriers are at circulating water first. Can they really be operated tidally to make much circulation to the San Joaquin River?;
- These options should be kept on the table;
- There is concern over fish stress with these options. Fish could potentially be recirculated in the South Delta. If subjected to pumping over barriers, this will only add to stress;
- The CCWD Los Vaqueros intake was praised as a good example. However, others pointed out that this is a State of the art screen with the CVP/SWP providing the bypass flows;
- This proposal inspires some new ideas such as the potential to screen increased water diversions in other locations using non-salvage screens and connecting up systems;
- There is concern with creating artificial flows. Are we creating more problems?;
- What happens to the fish that are NOT salvaged? Will they move out on their own? Concern that this strategy is not possible;
- Indirect effects are different from indirect effects today due to no salvage and recirculation;
- Concern that this alternative will just recycle fish back to the south delta;
- Hydrodynamic studies will tell us more about circulation and potential impacts of no-salvage facilities;
- Los Vaqueros Intake was mentioned as good example of exclusion screen that works well. Circulation and bypass flows are provided by SWP/CVP pumping and they salvage fish that might have been entrained at Los Vaqueros;
- We should consider alternative locations for increased SWP/CVP diversions above existing rates (i.e. construct new facilities for only new capacity outside of the South Delta, possibly at Los Vaqueros area.);
- We need to understand where the fish go before going too far with this proposal;

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- Concern over how much water and energy it will take to create artificial sweeping flows in the South Delta;'

Fish Facility Technology Development - Tracy Fish Test Facility

Recommendation:

Consider a recommendation in more detail at next SFFF meeting

Discussion items:

- Concern over what a \$20 million dollar facility will do verses the previous version of TFTF at close to \$180 M;
- The \$180 M version was to look at a full depth facility and compare full scale CHTR facilities with existing systems. The CHTR portion of the facility was to be included as part of a future facility;
- Major issue is debris loading. The smaller setup will have to simulate loadings somewhat since it is located behind the existing louvers and trashracks;
- The most important question is the population effects? Performance measures are needed to determine how much effort is justified. It will help determine level of effort that should go into the demonstration flume;
- Concern that the cumulative effect of salvage is not being evaluated. The existing facilities can take a significant number of fish;
- Should the CHTR be completed before we do a demonstration facility?
- There is a need for this facility to be fixed up for salmon. NOAA Fisheries still feels that replacing the facility with new technology facilities is a high priority;
- The test facility could be good for looking for new and critical facilities. A test facility is compatible with even a "Short Circuit" CCF implementation strategy;
- Questions about what information a potentially cheaper UC Davis flume might give us. Comparisons and objectives are uncertain since this has not been evaluated. Advantage of Tracy flume is its ability to test in source water, to include natural entrainment, proximity to debris and fish, comparisons to existing operations, and good facility for conducting and linking CHTR new technologies;
- Postponing moving forward with new facilities may give us time to determine protection levels that are needed;
- Should there be a PSP on facility research?;
- Test facility development should be tied to CHTR results. It was stated that this was intent;
- A decision to delay could postpone research and facility improvement information for a new facility. Five years from go to results likely. Delays could be more significant if momentum is lost and resources are spread to other areas;
- There was concern over why direction on facility improvements and research has turned since ROD – this was once such a high priority.
- The fisheries agencies were asked if anything had really changed that makes planning for a new facility in the future unnecessary.
 - NOAA Fisheries said that as far as they were concerned, nothing had changed – they still wanted a new screening facility tied to future operations plans, even if it was just for salmon or steelhead;
 - USFWS stated that they were very interested in CHTR results before making a recommendation;

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- It was suggested that some actions like a “short circuit” analysis could allow some facility decision to be delayed;
 - It was suggested that if anyone believes that losses in the South Delta have no significant effect on adult population levels, then fish salvage is unlikely to have an effect either. This hypothesis would mean that:
 - There is no need for hydrodynamic and fishery studies;
 - There is no need CHT&R studies;
 - There is no need for fish facility development;
 - There is no need to “short circuit” CCF; and
 - Screens might as well be taken out of the water since this could save money;
 - If any felt that losses have some effect, then we should be doing the things above.
 - A path to resolution on facilities is needed since no one felt we could abandon the facilities;
 - Proving the hypothesis that the South Delta facility direct losses do not impact the fisheries will be difficult if not impossible to conclude;
 - A study on cumulative impacts of diversion may be needed;

Next Meeting

Next meeting: December 8, 2003 1:30 – 4:30

**Location: Stanford Room (like last time)
 1st Floor
 650 Capitol Mall**

Topic will be related to Fish Facility recommendations and what to do on a research facility.