South Delta Fish Facility Forum
Request for Input on Action Recommendations
October 2003

The SDFF Forum has met six times since January 2003 to understand various South Delta fish facility related issues. During that time, the Forum has heard technical presentations discussing our state of knowledge related to the SWP/CVP fish facilities and South Delta issues and uncertainties. Discussions to date have included: fish salvage facility operations; fish salvage trends; facility operational challenges and problems; past studies on predation and transportation; on-going research at the fish facilities (CVPIA and otherwise); new technology development; proposed facility modifications; proposed Tracy Fish Testing Facility; the CHTR studies; new facility implementation concepts (short circuit, no salvage, SD barrier operations, etc.); South Delta hydrodynamics; and recommendations for new studies. A summary of all meeting presentations and meeting minutes can be found on the California Bay-Delta website:

http://calwater.ca.gov/Programs/Conveyance/SDFF/SouthDeltaFishFacilitesForum.shtml

The Forum chairs are requesting input from you, your agency, and/or your stakeholder group on an appropriate course of action to follow based on the information presented to date. Specifically, we are asking for technical comments on how to proceed from here relative to South Delta fish facility development given various uncertainties and funding limitations. Your constructive input on what sequence of actions should be followed or supported will be valuable in shaping decisions. These comments will assist the Forum in understanding where to go from here and how far we are from consensus on any direction.

Please comment on the plans, scenarios, projects, and/or alternatives listed below, including the process and rationale by which they should be recommended for implementation or not. Please do not feel limited to these questions or possible actions in your comments – they are intended to spur discussion only.

Although it would be helpful to receive written comments on next step recommendations, you can also bring your thoughts and ideas to the SDFF Forum meeting on November 3rd for discussion there. Written comments can be sent to Ron Ott via e-mail: ronott@calwater.ca.gov. Comments will be discussed at the November 3rd SDFF Forum meeting in the context of making recommendations on our next steps:

Develop and test new fish screen and fish collection technologies in a demonstration facility – Tracy Fish Test Facility (TFTF) or Tracy Demonstration Fish Facility (TDFF)

Scenario:

Developing a 500 cfs fish screen test facility was specifically mentioned in the ROD's Biological Opinion as a prerequisite to moving forward on the 8500 South Delta Improvements Program. Information from this facility would be used to finalize designs

and determine benefits of a new state of the art fish screen facility that was part of the 10,300 cfs SDIP. However, with the uncertainty of moving to a 10,300 SDIP, some have questioned whether new facilities are necessary. If no new South Delta fish facilities are being planned in the future, it raises the question whether we should invest in a significant new fish screen demonstration facility as was planned for the Tracy Fish Test Facility. To address the fiscal concerns, the USBR responded internally by looking at a smaller fish screen test facility with application for improving existing facilities or for new facility designs whether they be in the South Delta or other areas in the Delta. The proposals for the once planned Tracy Fish Test Facility (TFTF) and the Tracy Demonstration Fish Facility differ by facility size, function, arrangement, testing, and cost. Both facilities are being designed to test a full system design in the Delta environment rather than conducting independent component testing. These facilities would test the potential impacts and cost implications of a full size facility. State funding of over $20 million has already been transferred to the USBR in anticipation of a TFTF. Information could be available by 2006 if implemented.

Questions:
If the 10,300 SDIP is delayed indefinitely, should the planning for new fish facilities be delayed indefinitely as well?

Are the existing fish facilities adequate for continued operations given the scenario of the currently envisioned 8500 SDIP?

Is there value in demonstrating new fish screen and collecting techniques before implementation?

Is there a suggested process that can be used to determine the appropriate level of funding to go into this?

Is a timeline of say three years to develop and demonstrate new facilities to determine costs and benefits adequate?

Will agency representatives approve future facilities that do not meet existing criteria with testing elsewhere or none at all in the Delta?

Should SWP/CVP operations be mitigated by non-fish facility means in the future?

Recommendation/action implications:
No action will likely delay further work on this since the USBR can not fund this work significantly without State support. The Forum should recommend a funding level that is both appropriate and achievable if this program should continue.

Improve Existing Fish Facilities
Scenario:

This alternative essentially goes about doing things the way we have always done them. Facility improvements will be made based on using the general infrastructure as a base facility (i.e. louvers with some efficiency loss). Improvements would be implemented as part of the CVPIA implementation actions, as a requirement of a Biological Opinion, or when more reliable operations are necessary. Considering the aging condition of existing facilities and additional debris loads at the facilities, some improvements will have to be made regardless of fisheries requirements. Funding would continue through CVPIA as it has to date, or through SWP/CVP operations and maintenance budgets as available. The CHTR work would be funded separately from this.

Questions:
Should improvements be made in the context of eventual replacement with State-of-the-Art screen facilities, as an O&M measure, until impacts are better understood, or what?

What is the incentive to improve facilities beyond operations and maintenance reasons?

Are fish entrainment losses at the existing facilities acceptable now or in the future?

Recommendation/action implications:
Facility changes would be initiated and implemented outside of the CBDA process so no action or recommendation is needed. Future facility changes as a result of the CHTR work would be subject to review at a later date.

Collection, Handling, Transportation, and Release (CHTR) Studies
Scenario:
Since delta smelt survival in the CHTR process is considered poor, this process is being investigated for potential improvements and to understand the mechanisms that control their survival in this process. If their survival can not be reasonably improved, future facilities will not focus efforts on their requirements (i.e. "salmon criteria" facilities might be acceptable alternatives). Improvements could potentially be implemented at new or existing SWP/CVP fish facilities. The Department of Fish and Game has been given program responsibility for this with direction by the IEP and CBDA Science. The USBR and DWR are working on new facility designs as part of this effort. Funding has been appropriated through the CBDA's Conveyance program and CVPIA for this effort. Data could be available by 2006 on this.

Questions:
Should we continue to support this effort?

If delta smelt survival can be improved in the CHTR process, how would this change your opinion on fish facility implementation?

Recommendation/action implications:

A recommendation has already been made and the work funded for the next couple of years. Program direction and implementation of facilities will be based in part on the future facility direction in the South Delta.

Clifton Court Forebay "Short Circuit" Alternative

Scenario:

This is an alternative to the "modular" fish facility implementation approach outlined in the ROD. This alternative is based on reconnecting the Skinner FF to West Canal/Old River via a new intake channel parallel to Italian Slough. A low Head Pumping Plant (LHPP) would take flow into CCF behind the existing Skinner FF, making it an "afterbay." Banks PP would pump from this pool. The existing louver facility would be used initially for collecting fish. The Skinner FF would operate in a more tidal environment due to the loss of forebay much like the Tracy Fish Facility. The Skinner FF could be modified in later phases with new facilities. The premise of this alternative is that it will significantly reduce CCF predation and fish survival benefits could be realized sooner. Cost of the "short circuit" canal and LHPP was estimated by DWR at $200 million.

Questions:

What are your opinions on the premise that predation would be reduced in the channel from what it is today?

What is the process by which you think this alternative needs to be evaluated?

What information is needed to help determine if this is feasible?

Are there any operational concerns of this alternative?

Do these actions foreclose other scenarios or alternative in the future or would they provide additional flexibility?

Recommendation/action implications:

Unless a recommendation to continue this analysis is made, this alternative will not be investigated further by the CBDA. Funding for the analysis is also needed.

Alternative Fish Facilities and/or Barrier Operations

Scenario:

These alternatives were brought forward separately by Alex Hildebrand and John Winther. Alex's barrier reoperation concept could recirculate flows in the South Delta through barrier operations and/or fish friendly pumping at the barriers. This concept could improve the dead end situation at the SWP/CVP pumps. Both this and Mr. Winther's concept would replace the existing fish salvage systems with fish exclusion screens only. Since both of these concepts would use exclusion screens, fish would not be transported out of the area. DFG coordinated a cursory evaluation of Mr. Hildebrand's concept – more details are provided on the web site.

Questions:
Do you feel that these alternatives or elements of them have merit to pursue?

Are there merits of discussing fish facilities without fish collection systems?

Do these actions foreclose other scenarios or alternative in the future or would they provide additional flexibility?

Recommendation/action implications:
Unless a recommendation to continue this analysis is made, this alternative will not be investigated further by the CBDA unless funding is made available for the analysis.

South Delta Fisheries and Hydrodynamic Studies
Scenario:
These are proposed study elements to investigate how fish move with the flow under various operational regimes and to get a better handle on the hydrodynamic processes in the South Delta. These studies would help evaluate the near and far field fisheries impacts of export and barrier operations. These studies would be linked to evaluations of Environmental Water Account, VAMP, or SDIP operations. This information would also be used to make recommendations on current and future export operations that may impact the fishery or barrier operations, including planning for new facilities. Some of this effort is funded as past of the SDIP work; however, the bulk of this work is unfunded. More information on these concept proposals is posted on the web site.

Questions:
Are these studies relevant to future decisions on South Delta facilities?

Are these studies valuable to on-going EWA, VAMP, and/or operations evaluations?

How should these studies be developed further or funded?

Recommendation/action implications:
Unless a recommendation is made to develop these studies further, the studies will be redesigned and funded using available funding from their respective programs. If funding for all these studies is recommended by the Forum, funding support would have to be available ASAP to implement studies in Spring 2004. These studies would also have to be supported by the IEP.

Background Information:

The CBDA to date has been heading down a path of fish facility development based on meeting various ROD commitments and Biological Opinion mandates. This approach included construction and testing of a Tracy Fish Test Facility and the eventual phasing in of new South Delta fish facilities over time (based on the implementation of the 8500 SDIP and 10,300 SDIP).

Activities to Date:

Tracy Fish Test Facility (TFTF – CBDA and CVPIA)

The USBR completed environmental documentation and 90 percent design documents. This facility and its study plan were overseen by an interagency team supported by the CBDA. However, federal funding has not been available for implementation as originally envisioned (Cost was over $130 million). Alternative lower cost facilities have been developed by the USBR, but direction on further development will be subject to SDFF Forum input.

Collection, Handling, Transportation, and Release (CHTR - CBDA)

The Department of Fish and Game has been given the responsibility of determining whether or not delta smelt can reasonably be expected to survive the CHTR process both now and in the future. The USBR and DWR are working on new facility designs as part of this effort. Funding has been appropriated through the CBDA's Conveyance program and CVPIA for this effort. Data may be available by 2006 on this.

Tracy Fish Facility Improvement Program (CVPIA)

The USBR has been working since the early 1990's on facility improvements. The CVPIA has appropriated approximately $2 million annually to a number of studies. This work has lead to several improvements and facility testing programs, including many CHTR related facilities. Tracy improvements are being implemented as necessary or when given opportunities.

South Delta Improvements Program Fish Facilities (SDIP)

The Department of Water Resources has looked at several fish facility options for future facilities that are tied to the 10,300 SDIP. Presently there is little effort on fish facility changes since it is unclear what modifications could be required in the future or what facilities are appropriate. Due to anticipated debris conditions worsening, an automated trashrack is planned as part of the initial SDIP implementation (8500) but little else.

Fish Facility Actions in the ROD and CVPIA:

The CALFED Bay-Delta Program's Conveyance Program identifies various projects and timelines that are part of the Stage 1 actions in the ROD. The CVPIA also identifies a

mandate to “improve the Tracy Fish Facility.” Details on these are available on the CBDA and USBR websites.

The CBDA Conveyance Program includes various fish facility projects to meet the ROD and associated Biological Opinion’s. The following actions are specifically identified:

- Construct 500 cfs Tracy Fish Test Facility (Biological Opinion) for the 8500 SDIP
- Begin Construction of the first “2500 cfs Fish Screen Module” prior to implementation of the 10,300 SDIP, complete new fish facilities after 10,300 SDIP implementation
- Investigate a Clifton Court Intertie between the CVP and SWP pumping plants in Stage 1