

**1. Clifton Court Forebay Intake – Reoperation Study**

Primary criteria being the restriction of inflow to forebay to 15,000 cfs

*Bob Suits has provided preliminary feedback on this issue. DSM group to compose something close to the following list of questions, and forward to Bob for response and substantive support material:*

1. What is the maximum inflow (Q) into CCFB (in a period of maximum Delta export and minimum Delta outflow) that can be achieved by gravity (tidal) inflow?

Operating assumptions include:

- 1.5' head loss at new northern intake due to screens (NOTE change from 1.0' used previously)
  - NO Skinner screens
  - -3.0 elevation (in CCFB) at new intake is threshold below which cavitation would occur at Banks pumps
2. What are the subsequent effects on stages in the So. Delta channels?
  3. What is the impact on water quality?

**2. Alternative 2 Water Quality (A. Hildebrand request) *Completed: July 6***

Model runs ASSUMPTIONS with SOUTH FORK IMPROVEMENTS.

1. Maximum of 10,000 cfs hood diversion to Snodgrass Slough. (same as 2B)
2. Flooding of McCormack Williamson Tract. (same as 2B)
3. ISDP improvements (same as 2B).
4. DWRSIM 532a hydrology.
5. Levee set backs from Western New Hope Tract along South Fork of Mokelumne River, East of Bouldin Tract and Empire Tract up to SJR. The levee set backs would be to the west of the existing canals.
6. Levee set backs would be 2000 ft. (similar to alt 2D)
7. Suisun Marsh Gates operation. (same as all other alternatives).
8. South Delta Barriers and CCFB operations similar to Alt 2B.
9. DXC open from Jul-October. (minor exceptions during 1983-wet year). (Same as latest alt 2B)

**Two model runs are:**

- A. Model run with "Assumptions and So Fork Improvements" above.
- B. Model run with "Assumptions and So Fork Improvements" above, along with Georgiana Slough completely blocked at all times as well as the keeping the Delta Cross channel closed at all times.

**3. Alternative 2 Refinement – "Hydraulic Barrier" at Georgiana Slough**

Hydrology used for this alternative would be DWRSIM study 532a. The geometry and the delta facility operation for this study would be identical to the June 1, 1998 study of Alternative 2B. However, the 10,000 cfs screened Hood intake on the Sacramento River should discharge the required flow at the head of Georgiana Slough to maintain a positive flow to the Sacramento River during critical fishery periods. Any remaining screened diversion from Hood would discharge to Snodgrass Slough. The North Fork Mokelumne river system would be enlarged to accommodate the increased cross-Delta flow.

*Start Date: Mid July (Requires further development prior to modeling)*

*Comp. Date: Mid August*

**4. Alternative 3 (with a 7,500 cfs Isolated Facility)**

The study is being conducted at the request of Ag/Urban and SWRI (Dave Schuster). Hydrology used for this alternative is being provided by SWRI, which reflects a 7,500 cfs isolated facility under different Hood diversion assumptions using a CALFED 2020 hydrology and demand pattern. The geometry and the delta facility operation for this study should be identical to the June 1, 1998 study of Alternative 3X. However, no intertie would be assumed in connecting the Clifton Court Forebay to Tracy Pumping Plant.

*Start Date: Aug 1 (Hydrology to be completed by end of June – Bardini)*

*Comp. Date: Sept 1*

*Correction*

**5. System Operations Incorporation of ANN**

CALFED has been supporting the development of an artificial neural salinity flow relationship into DWRSIM. Preliminary results of a No Action operation study with the G model and ANN have been completed. A comparison of the two operation studies against the Delta water quality standards is required at Emmanon, Jersey Point, Terminous, San Andreas Landing, Prisoners Point, Brandt Bridge, Old River near Middle River, Old River at Tracy Road, Clifton Court Forebay, DMC at Tracy Pumping Plant, Collinsville, and Chipps. The analysis would be conducted for the entire 16-year hydrologic period from water year 1976-91.

*Start Date: ?*  
*Comp. Date: Mid July*

**6. Water Quality Study**

Bromide and Selenium Water Quality using Superposition Technique. To support the Water Quality Program, Delta simulations are to be conducted using a superposition approach to evaluate specific water quality constituents, such as bromides and selenium, for existing conditions, no action, Alt 1C, 2B and 3X. The salinity concentrations at various locations in the Delta would be determined by the following salinity sources: 1) Sacramento River, 2) San Joaquin River, 3) Delta agricultural and soil, and 4) sea/brackish. The analysis would be conducted for specific water years, such as 1989.

*Start Date: ?* (Hydro completed, req's Qual runs)  
*Comp. Date: Sept 1*

**7. Development of Salinity Gradients Based on Various Levee Failure Scenarios –**

To support the Levee Program, Delta simulations would be conducted for specific levee failures, such as Sherman Island, to determined the salinity impacts. The analysis would be conducted for non steady-state and steady-state conditions under different hydrologic conditions and system operations. The specific study scenarios are still being devised for the purposes of the Levee Program and the Draft EIS/EIR. Information regarding levee failure locations and break sizes are currently being prepared by CALFED staff.

*Start Date: Mid Sept*  
*Comp. Date: Mid Oct (1<sup>st</sup> run); Mid Dec (4 runs)*

**8. Mass Tracking**

CALFED alternatives 1C, 2B, and 3X along with the existing conditions and no action need mass tracking modeling. This process gives an indication of the residence time of fish eggs or larvae as affected by these alternatives. The mass would be introduced at discrete locations in the Delta to determine its fate under each different CALFED alternative. Mass would be injected at Vernalis, Terminous, Freeport, Rio Vista, San Andreas Landing, and Prisoners Point. The mass fate 30 days and 60 days after injection would be evaluated from water year 1976-91.

*Start Date: ?* (Await developed PTM module)  
*Comp. Date: ?*

**9. South Delta Flood Control *STUDY ON HOLD***

A meeting was held with Mark Cowin, Alex Hildebrand, Susan Raymos and Jim \_\_\_?\_\_\_ from the USACE Comprehensive Flood Study, George Barnes and Francis Chung of DWR, and Jerry Orlob of UCD at the request of Alex. The purpose of which was to gain support for proceeding with flood model analysis to confirm his belief that channel improvements to Paradise Cut would alleviate flooding problems in the south Delta. It is Alex's belief that these improvements would be included in any comprehensive flood solution, and would to go forward without waiting for the completion of a flood study. George suggested this shouldn't be a question of modeling - the USACE should go forward under the intention of replacing original design flow capacity. It is Francis' belief that DSM2 doesn't include adequate south Delta channel descriptions to do a credible job of modeling flood flows in Paradise Cut and thus discouraged proceeding. Orlob however, felt an order of magnitude study could be done that would provide useful information. The USACE is gathering new channel data, and will eventually include this portion of the south Delta in the hydrodynamic model of the San Joaquin system they are developing. It will be some time before this tool is ready. However, they will put out an interim report next April, and might seek approval from Congress to do immediate work such as that Alex is asking for.

Alex wants to move forward and will be sending a letter to ask for help. Upon receipt of this letter we will need to discuss how to proceed with Francis and USACE.