Meeting Notes
NORTH DELTA IMPROVEMENTS GROUP MEETING
Wednesday, August 23, 2006
9:30 to 11:00 a.m. at Jones & Stokes (2600 V Street)

ATTENDANCE LIST:

Crouch, Craig	Sacramento County Water Agency
Elliott, Chris	Jones & Stokes
Eusuff, Zaffar	California Department of Water Resources (DWR) North Delta
Fleenor, Bill	UC Davis
Fiack, Linda *(by phone)*	Delta Protection Commission (DPC)
Fritz, John	Sacramento-Yolo Mosquito and Vector Control District
Hadl, Stefan	KCRA TV
Hoppe, Walt	Area resident
Kirkham, Bill	Area resident
Knittweis, Gwen	DWR North Delta
Kwan, Jonathan	CA Department of Health Services
Marshall, Dick	North Delta Water Agency
Martin, Sara	Jones & Stokes
Mraz, David	DWR
Orcutt, Bob	CA Department of Fish and Game
Simons, Rachel	East Bay Municipal Utility District (EBMUD)
Stroh, John	San Joaquin County Mosquito and Vector Control District
Van Loben Sels, Topper	North Delta Water Agency and Delta Protection Commission (DPC)
Whitener, Keith	The Nature Conservancy

HANDOUTS

- Meeting Agenda
- Meeting Notes from the May 17, 2006 North Delta Improvements Group (NDIG) meeting
- Illustrating the Surge Effect in North Delta Planning

1. INTRODUCTIONS – Gwen Knittweis, DWR

Gwen Knittweis called the meeting to order and facilitated a round of introductions. Ms. Knittweis then asked meeting attendees if they had any comments, changes to, or additions to the notes from the previous NDIG meeting (May 17, 2006). No comments were made. Corrections or comments to the May NDIG notes will be accepted via e-mail until August 25 (gwenk@water.ca.gov).

Ms. Knittweis announced that the agenda would be adjusted slightly to switch items 2 and 3 to accommodate Linda Fiack (DPC), who was attending via conference call.

2. UPDATE AND DISCUSSION ON ADDRESSING PROJECT FLOOD SURGE ISSUES – Gwen Knittweis, DWR/Bill Fleenor, UC Davis

Ms. Knittweis explained that DWR has recently been working with Bill Fleenor at UC Davis to illustrate the flood surge effect in the North Delta area. This illustration along with the anecdotal information would be helpful explaining the surge to others unfamiliar with the area. As a concurrent effort, DWR has been working with DPC to raise awareness about the surge effect and how it can break boats loose from marinas and cause debris pile-ups against downstream bridges, impeding flow and raising upstream stage. Ensuring that local marinas are following all safety codes is outside of DWR's purview, but DPC has been talking with the State Lands Commission (SLC) in

an effort to address the issue through amendments to marina lease agreements.

Linda Fiack (DPC) described the status of her efforts to explore ways to tighten enforcement of regulations applied to marinas in order to prevent break-aways during flood events. Through her discussions with the leasing division at SLC, she believes SLC would support including a condition to increase marina safety compliance in new marina leases and marina leases that come up for renewal. This new condition may require the marina operator to post a bond to pay for damages or emergency action in case they fail to comply with safety regulations. She has not tied her discussions with SLC to the North Delta project, but rather has approached it as a Delta-wide issue. In fact, DPC runs a Delta-wide abandoned vessel group, and at the next meeting, the agenda will include a discussion of flood control and bridge restrictions in emergency situations. SLC will be invited to participate.

Ms. Knittweis thanked Ms. Fiack for her broad thinking on such sensitive issues. Topper van Loben Sels agreed that stricter enforcement of marina safety regulations is a good idea, but expressed his concern that the regulations are themselves not rigorous enough. He pointed to the 1997 flood event, during which a failure on the west levee of Dead Horse Island sucked boats and docks from the Walnut Grove Marina into the island with more force than any engineer would have expected when designing or inspecting marina pilings.

Ms. Knittweis agreed that just looking at piling strength is not enough—that the safety regulations need to take into account intensity of flood events and hydrology. She felt this was a good transition into a discussion of technically illustrating the surge effect. Ms. Knittweis directed meeting attendees' attention to the handout entitled Illustrating the Surge Effect in North Delta Planning see attached file 'SurgeEffectIllustration8-23-06.doc." Ms. Knittweis hoped that thegraphs presented in the handout would be helpful in describing the surge effect to interested parties who may be unfamiliar with the local hydrology of the North Delta area.

Bill Fleenor spent some time explaining the graphs in the handout. When the southwest levee on McCormack-Williamson Tract fails, it causes an immediate stage increase of approximately 2 feet in the local area, including all the channels around Dead Horse Island. Velocity stagnation (caused when the water rushing out of McCormack-Williamson Tract hits the Dead Horse Island east levee head-on and stops) causes an additional foot of increased stage very locally, in Dead Horse Cut.

Craig Crouch asked Mr. Fleenor if he was satisfied with his velocity stagnation calculations, wondering if he thought it might be helpful to analyze wave run-up effects as well. Mr. Fleenor responded that as Dead Horse Island's east levee has a roughness factor that is converted to a vertical wall in the model. With the limitation of a one dimensional hydraulic model, wave run-up calculations would not be appropriate in this case. Ms. Knittweis added that the purpose of producing a technical illustration of the surge effect is to provide a general representation of what occurs, not to provide exact stage value.

Mr. Fleenor then fielded questions from the meeting attendees. Walt Hoppe pointed out that the plot of Series 2 data on the lower graph does not appear to represent the same amount of volume as is shown under the plot of Series 1 data. Mr. Fleenor explained that the graph shows stage, not volume. Although stage can be representative of volume, that is only true when no variables have changed in a prismatic channel. In this case, a variable has changed—because the surge effect has been eliminated in Series 2, the flow distribution between the North Fork Mokelumne River and the South Fork Mokelumne river has changed, as has the overall slope and conveyance of the system.

Mr. Hoppe then asked how eliminating the surge effect changes stage in the Lost Slough area. Mr. Fleenor responded that it should lower stage in the Lost Slough area. He expects to get much better information about how that area would be affected once the HEC-RAS corroborative hydraulic model is run. He thanked Mr. Hoppe for helping UC Davis better understand the hydrology of that area. Mr. Fleenor believes the HEC-RAS corroborative model represents that area much better than the Mike-11 model.

3. ADMINISTRATIVE DRAFT EIR REVIEW SUMMARY – Sara Martin, Jones & Stokes

Sara Martin provided an overview of comments received from the agencies that reviewed the administrative draft EIR (ADEIR). The ADEIR was released to the following agencies in mid-June:

- CA Dept. of Fish & Game
- Delta Protection Commission
- CA Dept. of Conservation
- CA Dept. of Health Services
- The Nature Conservancy
- CA Dept. of Food & Agriculture
- US Bureau of Reclamation
- Sacramento County Water Agency
- Sacramento Area Flood Control Agency
- East Bay Municipal Utility District
- US Fish & Wildlife Service
- US Army Corps of Engineers
- Natural Resources Conservation Service
- National Marine Fisheries Service
- CBDA
- Sacramento-Yolo MVCD
- San Joaquin MVCD
- KCRA-3
- Reclamation District 563
- CVRWQCB

Comments, written and verbal, were received from:

- Delta Protection Commission
- CA Department of Conservation
- CA Department of Health Services
- CA Department of Food & Agriculture
- The Nature Conservancy
- Sacramento County Water Agency
- National Marine Fisheries Service
- Sacramento-Yolo Mosquito and Vector Control District
- East Bay Municipal Utility District

In general, feedback from the agencies was positive—none of the commentors indicated that there were any fatal flaws with the document. Comments received were thoughtful and will be addressed prior to the release of the public draft EIR (DEIR). The comments generally fell within the following categories: project description, fish, public health, land use and agriculture, hydrology/water quality, and long-term management. A summary of the comments described by Ms. Martin follows.

Comment Category: Project Description

- Expand project elements to better promote compliance with marina safety regulations
- Include Cosumnes dry dam as a related action
- Describe how global warming affects target habitats
- Include bridge modification/replacement as an optional component of Alternative 2-D

Comment Category: Fish
- Design and operate pumps and gates to minimize fish stranding
- Include a mitigation measure to protect pumped fish from predation at pump outfalls
- Limit dredging to period between July 1 and August 31
- AMP – incorporate appropriate success criteria, monitoring, and adaptive management responses

Comment Category: Public Health
- Incorporate elements from UC mosquito management publications in project design
- Describe BMPs to minimize mosquito production
- Research strategies for successful long-term vector control (Bufferlands, Stone Lakes, Yolo Bypass)
- Ensure long-term funding/cost-share is available for vector control (AMP endowment may be appropriate)
- Expand AMP discussion and potential response options for vector control

Comment Category: Land Use/Ag
- Discuss potential future compatible agricultural opportunities on McCormack-Williamson Tract
- Expand discussion of Williamson Act contract cancellation on McCormack-Williamson Tract
- Include a mitigation ratio for land converted from agricultural use (suggest 1:1)
- Conduct additional research on wildlife depredation impacts
- Include final LESA score sheet as an appendix

Comment Category: Hydro/WQ
- Incorporate information from DWR's new climate change report
- Assess mercury methylation effects
- Include the Delta Mercury TMDL in the water quality analysis

Comment Category: Long-Term Management
- Address long-term dredging maintenance needs
- Develop a post-flood recovery plan for Staten Island
- Describe long-term land management practices
- Include an "undo" clause in the Adaptive Management Plan (and guarantee funding for adaptive management)

Mr. Elliott informed the group that the project team expects to release the DEIR for public review in mid-October. Rachel Simons asked if there had been any developments on the contracting front. The last update heard by the NDIG indicated that the US Bureau of Reclamation was going to terminate the contract before the release of the DEIR. Mr. Elliott responded that this is still the case, but that DWR is working on a contract vehicle to ensure the project makes it all the way through the environmental review process.

4. UPDATE ON OTHER PROJECT STUDIES – Zaffar Eusuff, DWR

Zaffar Eusuff updated the group on two additional North Delta studies that are currently underway. The first study is a preliminary construction cost estimate for all of the project alternatives. Jones & Stokes is heading up this effort and it should be complete sometime in mid-September. DWR is also undertaking a concurrent effort to quantify the flood damages in the project area with and without the project. For the economic loss analysis, DWR is using a method very similar to the Corps' cost-benefit analysis method. A GIS inventory data has been available from the Delta Risk Management

Strategy effort. This inventory will be used to estimate flood damages for different flood depths on the islands. DWR's effort is expected to be complete by the end of September. At that point, DWR will have the cost estimate data available from Jones and Stokes to perform a cost-benefit analysis that will assist in the selection of a preferred alternative.

Mr. Van Loben Sels asked how long after the release of the DEIR DWR expects to have a preferred alternative. Mr. Elliott responded that the project team is currently looking at early spring for the release of the final EIR.

Mr. Hoppe asked if there had been any developments in DWR's search for a project implementation sponsor. Ms. Knittweis said that they have been looking for potential sponsors, and that DPC has been a big help as of late with the effort. However, no commitments have been made yet.

5. NEXT MEETING

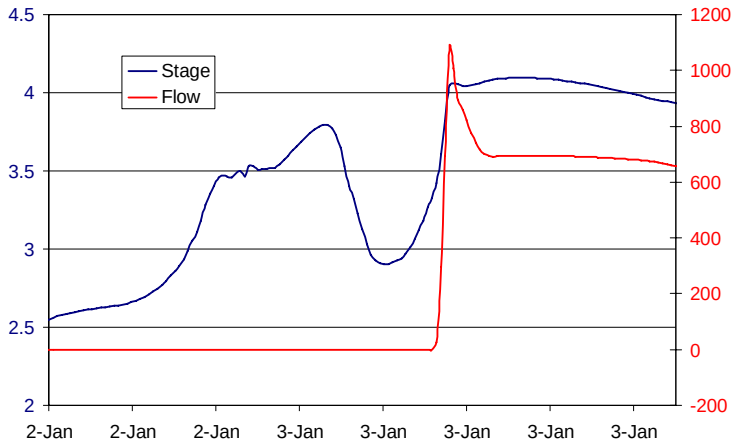
The next project milestone will be the release of the public draft EIR, which is scheduled for mid-October. The next NDIG meeting was therefore tentatively scheduled for Wednesday, October 18, 2006 from 9:30 to 11:00 a.m. at Jones & Stokes.

Attachment:

Illustrating the Surge Effect in North Delta Planning

August 23, 2006 NDIG

- Surge effect in historical events never measured, based on stakeholder accounts of flooding dynamics.
- Hard to quantify a surge effect through modeling. Cannot use a 1-D model to capture momentum effects.
- Velocity and stage in the model can be used as indicators of the surge.
- Chart below shows stage (meters) in Dead Horse Cut and flow (m^3/s) out of M-W Tract toward opposite levee for the 1997 flood event. The rapid spike in flow values would correspond with the surge. Stage jumps over 2 feet in 2 hours and would be about another foot due to stagnation velocity.



- Chart below shows time versus stage (meters) at a point just above New Hope for Series 1, the 1997 flood event conditions and Series 2, Alternative 1-B coupled with 2-A. Note the metering effects shown in Series 2.