

Agenda of Oct 16, 2008

**TO: Sacramento Area Flood Control Agency
Board of Directors**

**FROM: Stein M. Buer, Executive Director
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**SUBJECT: INFORMATION – NATOMAS LEVEE IMPROVEMENT PROGRAM
UPDATE**

SUMMARY

This is an information item supplementing staff reports presented to your Board in May, July and August 2008. As outlined in those reports, a series of project design, permitting, cost and financing issues have required adjustments to the phased implementation of the Natomas Levee Improvement Program (NLIP).

In the past two months we have made progress towards awarding major construction contracts in 2009. Most notably, the U. S. Fish and Wildlife Service has completed its review of the NLIP and provided the U. S. Army Corps of Engineers (Corps) with a Biological Opinion (BO) identifying the measures that must be included in the program to protect federally endangered species and their habitats in the Natomas Basin. Because these measures are generally included in current design of the NLIP, the BO concludes that the program can be implemented consistent with the requirements of the Federal Endangered Species Act without substantial modifications. Notwithstanding this progress, we have experienced some small slips in the project design, environmental review and permitting schedule, but these have not affected the major milestones for the program, which are defined as follows:

- Completion of 50 percent of the levee improvements by November 2010, with FEMA adequate progress remapping in mid 2011.
- Completion of the 100-year levee improvements by November 2011, with FEMA 100-year remapping in mid 2012.
- Completion of the 200-year levee improvements by November 2012, with certification that the program meets the State's 200-year flood protection requirements by mid 2013.

On August 22, 2008 the California Department of Water Resources (DWR) released the *"Proposed Interim Levee Design Criteria for Urban and Urbanizing Area State-*

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federal Project Levees." These criteria are in response to Senate Bill 5's (Machado) (SB 5) requirements for DWR to define 200-year protection. The proposed criteria are more conservative than SAFCA's current design and, if finalized as proposed, will have the potential to increase program costs. Staff is in the process of drafting comments on the criteria that we think will meet DWR's engineering objectives while minimizing the potential for increasing the cost for implementation of the NLIP.

At the Federal level, in order to expedite implementation of the NLIP, SAFCA is suggesting that Corps Headquarters consider structuring the Section 408 review process so that by the end of this year a policy framework is created for all of the anticipated phases of project construction that allows each phase to be independently reviewed by the Sacramento District Engineer for consistency with this framework.

BACKGROUND AND DISCUSSION

Section 408 Process

The NLIP is a complex program with coordination required between multiple agencies, property owners and team members. The day to day coordination results in new information and or obstacles that require slight redirection or focus of resources. This has resulted in tasks being added to the schedule as well as slight delays in schedule. The primary changes in schedule are as follows:

- The Phase 2 construction contracts for the Sacramento River East Levee and Natomas Cross Canal will be awarded in March 2009 instead of February 2009. Since the flood season does not end until April 15th, this is not anticipated to impact the completion-of-construction for the program.
- The Phase 3 environmental review process is approximately one month behind schedule due to changes in the baseline conditions and project descriptions affecting the Phase 2 and Phase 3 Projects. This has the potential for delaying the anticipated June 2009 award date for the Phase 3 construction contract along the Sacramento River East Levee. This delay could be avoided if the Section 408 review process is structured so as to allow the Sacramento District Engineer to independently review and approve each phase of construction as discussed below.

To speed implementation of the NLIP, SAFCA is requesting Corps Headquarters to structure the Section 408 review process so as to create a policy framework for the overall program that allows the Sacramento District Engineer to independently review and approve each succeeding phase of project construction. This approach is feasible because the Phase 2 Environmental Impact Statement (EIS) that is being forwarded to Corps Headquarters at the end of this month provides a comprehensive evaluation of the entire NLIP as well as an analysis of the project specific impacts of the Phase 2 Project. This comprehensive evaluation contains the information that is needed to address the major policy issues that form the basis

for Section 408 review of all phases of the NLIP. Corps Headquarters will thus be in a position not only to clear the way for the requested Phase 2 action, but to establish the policies that will govern the Corps' review of the remainder of the program.

The Sacramento District Engineer should then be able to independently review and approve each succeeding phase of construction based on the established policy framework. This would streamline the permit process, speed implementation of non-Federal efforts to reduce the risk of flooding in the Natomas Basin, and reduce project escalation costs in a manner that reflects the Corps' national levee responsibilities and oversight.

The NLIP schedule will continue to be updated and ongoing reports will be provided to your Board on a regular basis as the program moves forward.

200-Year Levee Design Criteria

Levee design criteria continue to evolve with each flood event. Changes after the 1997 flood led to the focus on underseepage as a significant risk to the levee system. The 2005 levee failures from Hurricane Katrina have focused discussion on failures in the engineering and construction processes as well as the consequences of catastrophic levee failure.

The State Legislature was mindful of these considerations when it passed a series of flood management bills in the 2007 session. The centerpiece of the legislative effort was SB 5, which established a long-term framework for regional strategic planning, for fostering wise floodplain management, for appropriately guiding floodplain development, and for defining levee standards for rural and urban areas. One of the key provisions of SB 5 is to encourage urban communities to provide at least 200-year protection from flooding.

DWR is tasked with defining this 200-year protection. On August 22, 2008 DWR released the "*Proposed Interim Levee Design Criteria for Urban and Urbanizing Area State-federal Project Levees.*" These criteria were developed based on discussion with the Corps and are based, at least in part, on the direction the Corps may take with levee design criteria that are under development. One of the objectives of the criteria is to design levees so that they will not fail from geotechnical deficiencies. This results in the likely modes of levee failure being reduced to one: Overtopping.

However, these more stringent design criteria come with a significant cost, because they would require larger levee cross sections, milder back slopes, wider seepage berms, more closely spaced relief wells, or other engineering measures to provide more levee stability and seepage relief. Therefore, SAFCA staff is engaged in technical discussions with experts within Corps, DWR, other local agencies and expert consultants to develop a reasonable balance between cost and risk in the final design criteria. The outcome will have a direct effect on the design and cost of NLIP, as well as subsequent levee improvement projects in our region.

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To address the potential for levee design criteria to change and increase NLIP costs, staff is in the process of developing comments on DWR "*Proposed Interim Levee Design Criteria for Urban and Urbanizing Area State-federal Project Levees.*" We will recommend modest modifications to DWR's proposed criteria to meet its intended objectives without significantly increasing the costs of the NLIP.

RECOMMENDATION

Staff recommends your Board receive and file this report.

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