

Agenda of December 10, 2009

**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**

OVERVIEW:

This update includes a status of the construction, design, permitting and right of way activities for the Natomas Levee Improvement Program.

RECOMMENDATION:

Staff recommends that the Board receive and file this report.

MEASURES/EVALUATION:

This is an ongoing item. Success will be measured by implementation of the program on schedule and within budget.

FISCAL IMPACT:

This information item does not have a fiscal impact.

DISCUSSION

The entire Natomas Levee Improvement Program (NLIP) is currently divided into four major phases, as shown in the attached Figure 1, "Construction Phasing Map".

Phase 1 of the program has been completed by SAFCA.

Phase 2 is under construction by Teichert Construction and Independent Construction and will be completed by the end of the 2010 construction season.

SAFCA expects to award the construction contract for Phase 3A (relocations for reaches 6B through 9B) on December 10, 2009. Meanwhile SAFCA staff and consultants are working closely with the U.S. Army Corps of Engineers (Corps) to complete the NEPA process, obtain permits, and finalize designs for levee

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construction for Phases 3B and 4A. SAFCA anticipates that the Phase 3B levee construction contract will be awarded in March 2010, while the Phase 4A levee construction contract will be awarded in late summer 2010¹. Assuming State funding continues to be available as projected and project costs do not escalate significantly over the next two years, SAFCA expects to complete construction of these levee improvements, which cumulatively include all of the Natomas Cross Canal and Sacramento River, reaches 1 through 15, by the end of the 2011 construction season. Based on current Federal criteria, this would likely lead to a re-mapping of the flood risk for the Natomas Basin from an AE (high risk) to an A99 (substantial progress towards 100-year protection) by June 2012.

The U.S. Army Corps of Engineers (Corps) is taking the lead on completion of Phase 4b environmental documentation in coordination with preparation of the Natomas Levees Post-Authorization Change Report (PACR), due to be completed in 2010. The Corps has engaged SAFCA's team of planning, geotechnical engineering, and design consultants to effect a smooth transition of the program from a SAFCA lead to the traditional approach with the Corps and the State of California (State) in the lead. If Congress authorizes federal participation in the program in 2010, the Corps will construct levee improvements along the southern and eastern portions of the Natomas basin (Phases 3C and 4B), leading to achievement of both 100-year and 200-year levels of flood protection over time. It is possible that the 100-year features could be completed as soon as 2014 and the 200-year features the following year. However, it is too early to set firm dates for the completion of the Corps' work at this time.

The following is a summary of the status of key elements of the program.

Organization

The nomenclature used for the planning and construction phases of NLIP differ. For clarification, Figure 1, Construction Phasing Map serves as a visual cross reference for how levee reaches are grouped into planning phases and construction phases.

Status of Construction Efforts

¹ This represents a change from previous progress reports. In response to SAFCA Board direction to minimize real estate take for levee construction, to coordinate more closely with property owners regarding design of project features, to provide additional time to complete real-estate acquisition through negotiation wherever possible, and to provide the Board of Senior Consultants additional time to review levee design documents, staff has determined that the program schedule should be modified to delay award of Phase 4A by approximately four months. As a result, the majority of Phase 4A construction will occur in 2011, which will impact attainment of A99 as noted.

Natomas Cross Canal South Levee (NCCSL) Phase 2/Sacramento River East Levee (SREL) Phase 1 (Reach 1) - Contract 3980

Teichert Construction has substantially completed the work on the NCCSL portion of this project (Figure 2). Weather permitting, minor work, including touch-up of the patrol road and hydroseeding will be performed during the week of December 7, 2009, following the completion of earth hauling through the project to the Sacramento River east levee.

The Sacramento River East Levee - 1A (SREL-1A) portion of this contract is anticipated to shut down for the flood season by December 15, 2009. The portion of the embankment that is required for raising this reach of levee is currently being stockpiled. Construction of the levee raising and Garden Highway reconstruction in this reach will be completed in 2010.

SREL Phase 1B (Reaches 2-4B), Elkhorn Irrigation Canal Phase 1 and GGS/Drainage Canal Phase 1 - Contract 4032

Independent Construction is currently excavating the sedimentation basin and GGS canal, east of the Garden Highway, between Riego and Elkhorn Roads. Work on the Elkhorn Canal is also currently under construction (Figure 3). Minimal traffic control has been required to support Independent's work. Work on the basin and canals are anticipated to continue, weather permitting, through December. Commencement of the levee construction for this phase of work will occur in the spring of 2010.

SREL Reaches 1-4A Private Irrigation Facility Relocation Project - Contract 4007

This construction contract was awarded in December 2008. The contract includes construction of a replacement canal and water wells in the Phase 2 adjacent levee and canal footprint. The contract is nearly complete, awaiting the contractor's procurement of pumps for the new irrigation wells.

SREL Phase 2 Structure Demolition and Tree Removal Project - Contract 4020

This construction contract was awarded in December 2008 to GW Demolition (Figure 4). The contract includes the demolition of structures in the Phase 2 adjacent levee and canal footprint. A small amount of additional tree relocation is the only remaining work under this contract.

SREL Phase 2A (Reaches 5A-9B) Structure Demolition and Tree Removal, Elkhorn Irrigation Canal Phase 2A and GGS/Drainage Canal Phase 2A – Contract 4047 (formerly 4037)

This contract includes the Elkhorn Irrigation Canal Phase 2A relocation (south of Elkhorn Reservoir) and the Giant Garter Snake/Drainage Canal Phase 2A

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construction (Figure 5). This contract will also include demolition of structures in the adjacent levee and canal footprint and the removal of trees in the canal footprint. The goal of this construction contract is to relocate the canals and demolish the structures in advance of the levee construction to prepare the footprint for 2010 construction of the adjacent levee for the Sacramento River East Levee in Reaches 5A-9B. Bids for this contract were rejected at the October Board meeting. The contract was re-bid as Contract number 4047 and bids were opened on December 1, 2009. These bids are currently being evaluated and the project is targeted for award on December 10th.

NLIP – Phase 2 Woodland Corridor Project - Contract 4043

This contract involves planting trees and creating associated habitat along a corridor that parallels the landside of Reaches 1 and 2 of the Sacramento River East Levee in accordance with the approved NLIP habitat conservation and mitigation plan (Figure 6). Bids were received on November 24, 2009 and are currently under review. Award of the contract will be considered by the Board of Directors on December 10th.

SREL-2B (Sac River Reaches 5A-9B) and SREL-3 (Sac River Reaches 10-15) - Contract 4044

The SREL-2B (Reach 5A through 9B) and SREL-3 (Reaches 10 through 15) Tree Removal Project, Sacramento County, California, Contract 4044, will include the removal of trees in the adjacent levee and canal footprint in SREL Reaches 5A through 9b to prepare for levee construction in 2010 (Figure 7). Tree Removal in reaches 10-15 will be scheduled to precede, as close in time as feasible, construction of levee improvements for this reach, most likely in the late summer of 2010. Bids were opened on December 1, 2009 and are currently being evaluated. The contract will be considered by the Board of Directors on December 10th.

Work in Progress/Public Updates

SAFCA currently posts weekly construction updates on its website at www.safca.org/programs.natomas.html to inform the public of current and pending impacts to the community including working hours and impacts on traffic. In addition, SAFCA's Ombudsperson, Jay Davis of Gualco Consulting, responds to a steady stream of inquiries from interested members of the public related to program planning, permitting, field studies, traffic, and construction activities (Attachment 1) and distributes notices of significant developments in the program to affected and interested parties (Attachment 2).

Right-of-Way Update

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SAFCA staff and the NLIP consultant team are moving forward with the appraisal and acquisition of the rights-of-way necessary for levee construction along Sacramento River East Levee for Reaches 5A through 15 (just upstream of Elverta Road to just downstream of San Juan Road). Staff is continuing to negotiate with property owners in areas where the Board has passed Resolutions of Necessity.

SAFCA staff has been working with owners of over 50 waterside parcels to conduct field evaluations of potential locations for waterside drainage outlets associated with levee construction. The field evaluations are nearly complete at this time.

Approximately 30 waterside drains will be required along SREL 1 through 12 to provide for drainage of the runoff from the eastern half of the Garden Highway. Because the new adjacent levee on the east side of the roadway is higher than the existing highway, the runoff can no longer run eastward off the roadway and down the back side of the levee. Instead, the runoff will be collected in a roadside swale, and conveyed via 24-inch drain pipes to the river. The drainage system is designed in accordance with best management practices to minimize discharge of sediment and pollutants to the river.

Planning, Permitting and Design Update

Phase 3 Project Update

Phase 3 includes the Sacramento River East Levee Reaches 5A-9B, the Pleasant Grove Creek Canal West Levee and the Natomas East Main Drainage Canal West Levee from Elkhorn Boulevard to Northgate Boulevard. The Phase 3 Project Environmental Impact Report (EIR) was certified by the Board on May 21, 2009. The corresponding final Environmental Impact Statement (EIS) has also been completed. The Corps is processing the Record of Decision, the Section 408 permission request, and the Section 404 permit.

Two new issues are being addressed in the Phase 3 408 request which were not part of Phase 1 and Phase 2 Section 408 permission decisions.

First, in the context of the NLIP General Re-Evaluation Report formulation process, Corps engineering staff raised concerns that portions of the topographic survey data used to build the Sacramento River System hydrologic and hydraulic model were incorrectly referenced to survey benchmarks or was outdated due to channel sedimentation or vegetative growth, thus distorting the rivers slopes and cross sections used in the model. The Corps suggested that the model performance would need to be evaluated in light of these errors, or a new model would need to be constructed based on new surveys.

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Subsequently the Corps determined that this issue would need to be resolved prior to issuance of the Section 408 permission for Phase 3 construction. Under the direction of Joe Countryman and Ric Reinhardt of MBK Engineers, the SAFCA team prepared an extensive sensitivity analysis, including new field surveys, a comprehensive review of the model input parameters, and a series of model runs in which the slope, roughness, and cross sectional areas representing the channels of the system were systematically varied. The analysis demonstrated that the potential errors in questions were not of sufficient magnitude to significantly affect either the hydraulic impact analysis nor the design calculations. The sensitivity analysis was delivered in draft form to the Corps on November 17, 2009 and is currently under review by the Corps (Attachment 3).

Second, the Corps anticipates issuing a policy guidance letter in December setting forth the requirements which must be fulfilled to obtain a variance from the Corps *Guidelines for Landscape Planting and Vegetation Management at Levees, Floodwalls, Embankment Dams, and Appurtenant Structures* (ETL 1110-2-571, Issued April 10, 2009). The Corps is seeking to integrate the Section 408 permission process with the new vegetation guidance, which will require that SAFCA obtain a variance from the Guidelines. SAFCA is working with the Corps to formulate an approach acceptable to the Corps which will not delay issuance of Section 408 permission for Phase 3.

Taking these new challenges into account, the Record of Decision, Section 408 approval and Section 404 permit are scheduled to be completed in January 2010. Table 1 summarizes the status of the various approvals needed to award the SREL-2A and SREL-2B construction contracts (Sacramento River levee work from Elverta to I-5) and the proposed work is shown in Figure 8.

Phase 4A Project Update

The Phase 4A Project includes the Sacramento River east levee reaches 10-15 and work on the Natomas Cross Canal south levee at the Bennett and Northern Main pump stations. The EIR was certified on November 12, 2009. The Record of Decision, Section 408 approval and Section 404 permit are scheduled to be completed in April 2010. Consistent with direction from the SAFCA Board, construction of this reach, originally scheduled for award in May, 2010, has been re-scheduled for August, 2010 to allow additional time to work with the property owners on the acquisition of the project footprint to minimize the real-estate take, and to allow more time for the design team to work through comments raised by the Board of Senior Consultants, DWR and the Corps. The schedule for the Phase 4A Project construction contract is being revised. However, it is anticipated that the contract will be ready for award in August 2010. Table 2 summarizes the status of the various approvals needed to award the SREL-3 Construction Contract.

Phase 4B Project Update

The Phase 4B Project includes the Sacramento River East Levee Reaches 16-20, the American River North Levee, the Natomas East Main Drainage Canal West Levee from Sankey Road to Elkhorn Boulevard, additional improvements to the Pleasant Grove Creek Canal West Levee, and other improvements needed to provide a 200-year level of flood protection to the Natomas Basin. SAFCA staff is currently working with the Corps to develop a plan for completing this work using a combination of Corps and SAFCA resources. The Corps has initiated the preparation of a Post-Authorization Change Report (PACR) to identify the Federal interest in NLIP. The PACR will be the basis for Congress to authorize federal participation in the program, including authorizing credit for the SAFCA and State expenditures for NLIP, increasing the Common Features cost ceiling (Section 902 limit) for the American River Common Features Project, and authorizing the Corps to construct the remaining elements of the program. A detailed schedule is in the process of being developed, reflecting the Corps' commitment to completing the EIS, PACR, and Record of Decision by late 2010.

DWR Funding Update

SAFCA staff has been working with DWR to confirm the funding that the State will have available for the Program in 2010. On a December 1, 2009 conference call, DWR communicated that they are working through the project allocations of funding from recent bond sales, but have identified at least \$78 million for NLIP. They are coordinating with the Department of Finance to determine if our full request of \$137.9 million will be available this year. DWR expects to provide SAFCA with a letter of funding commitment by December 10th, 2009 (Attachment 4).

FEMA A99 Update

SAFCA's previous schedule for the implementation of the NLIP anticipated that the requirements for FEMA's A99 flood insurance rate zone would be met by the end of 2010 and the remapping could occur by mid-2011. The revised schedule for Phase 4a (Sacramento River Reaches 10-15) will mean that eligibility for the A99 zone will be delayed by one year to mid 2012.

SREL Encroachment Report Update

The SAFCA team is in the process of preparing the draft report that maps and evaluates encroachments along the existing levee system to determine which encroachments may need to be modified or removed in order to achieve FEMA certification and to comply with the Corps and Central Valley Flood Protection Board standards. SAFCA and RD 1000 are in the process of coordinating with the USACE and the Central Valley Flood Protection Board (CVFPB) to seek their input

on the criteria that would be the basis for screening the existing encroachments. SAFCA and RD 1000 staff requested to meet with the Corps and CVFPB staff in October to seek their input on the draft report. The Corps requested this meeting be delayed until their guidance is issued for the variance process. The Corps is scheduled to release their guidance for the variance process this month. The Corps has stated that our criteria will need to comply with this new guidance. As a result, the release of the draft report to the public will occur once SAFCA staff has had adequate time to review the new guidance and discuss its applicability with Corps and CVFPB staffs.

In the interim, staff has made the encroachments data base available to the interested public, beginning November 18. Copies are available in DVD-ROM format upon request from the SAFCA office for \$1.00 per copy. The information is in the form of Adobe portable document format (PDF) files, which are readily readable on most personal computers.

FINANCIAL IMPLICATIONS

This report is an informational update on implementation of the NLIP. The program is currently within budget and there is no proposed action with this report.

POLICY IMPLICATIONS

This report is an informational update on implementation of the NLIP. There is no change in policy as a result of this report.

RECOMMENDATIONS

Staff recommends that the Board receive and file this report.