



Sacramento  
Area Flood  
Control  
Agency

**December 18, 2007**

**TO: INTERESTED PARTIES**

**FROM: Stein Buer, Executive Director** *SMB*  
**Sacramento Area Flood Control Agency**  
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**SUBJECT: NATOMAS LEVEE IMPROVEMENT PROGRAM UPDATE**

**INTRODUCTION**

As part of SAFCA's continuing effort to keep landowners informed and up to date about the Natomas Levee Improvement Program (NLIP), SAFCA will be sending periodic reports to property owners. The reports will reflect developments that have occurred and preview future issues and important benchmarks on project planning and timeline, impact and mitigation analyses, permits and approvals, design and construction, and community outreach as the project progresses. This newsletter focuses on the following items:

- On November 29, 2007, the SAFCA Board of Directors certified the second environmental impact report on the NLIP and approved the construction project that will be initiated in the summer of 2008. This newsletter provides a summary of staff's presentation to the Board in support of the Board's decision to certify the EIS and approve construction of program elements scheduled for the 2008 construction season.
- The California Reclamation Board will consider the same 2008 construction projects at its December 21, 2007 meeting and January 18, 2008 meeting.
- The U.S. Army Corps of Engineers (USACE) will initiate a federal environmental review process in January 2008 to support two major actions that it must take in connection with the 2008 Construction Projects – acceptance of the alterations to the federal levee system that would result from these projects and permission to fill wetlands protected under the Federal Clean Water Act. A notice from USACE

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was mailed to property owners on December 14, 2007 identifying the initiation of the environmental review process with a Scoping Meeting (on January 9 at 4:00 PM, Sierra Health Center, 1321 Garden Highway) and inviting interested parties to participate.

### **NOVEMBER 29, 2007 BOARD MEETING**

On November 29, 2007, the SAFCA Board met to discuss the NLIP. Based on the presentations made by SAFCA's consultant team and on the information contained in the final environmental impact report (FEIR) for the NLIP (posted at [www.safca.org](http://www.safca.org)), the Board approved the construction projects proposed to begin in 2008 along with the mitigation measures and the mitigation monitoring and reporting program associated with these projects. Prior to taking these actions, the Board heard testimony from several individuals and organizations. This testimony and the presentations by SAFCA's consultant team generally focused on the following issues:

#### **1. Project Phasing**

The Natomas Levee Improvement Program will be implemented in three phases, with project construction commencing in 2008 and ending 2010 with the possibility extending into 2011 should any delays in planning, permitting, or construction occur.

The initial phase of construction will focus on levee improvements principally in the lightly populated area of Sutter County along the entire length of the Natomas Cross Canal (NCC) and the upper 4 miles of the Sacramento River east levee extending northward from the area of the Prichard Lake pumping station. This phase will also include construction of 2 miles of new irrigation and drainage canals extending from the Prichard Lake pumping station to the Elkhorn Reservoir just north of the Teal Bend Golf Club.

Phase 2 will begin in 2009 and will focus on improvements to the Sacramento River east levee in the 2-mile reach between the Prichard Lake pumping station and the Elkhorn Reservoir and the 4-mile reach between Elkhorn Boulevard and Powerline Road, where noirrigation canal relocation is required. This phase will also involve construction of 2 miles of new irrigation canal extending from the Elkhorn Reservoir just north of the Teal Bend Golf Club to just south of Elkhorn Boulevard; approximately 4 miles of new irrigation canal extending from just south of Powerline Road to just north of the Interstate 80 over-crossing; and approximately 2.5 miles of new drainage canal between the Elkhorn Reservoir and Interstate 5.

Phase 3 will begin in 2010 and will focus on improvements to the Sacramento River east levee in the 2-mile reach between the Elkhorn Reservoir and Elkhorn Boulevard, and the 4.5-mile reach between Powerline Road and just south of the Interstate 80 over-crossing. This phase will also include

improvements to the PGCC west levee from the NCC south levee to Sankey Road.

Detailed design of the Phase 2 and Phase 3 improvements will be completed in the late spring of 2008 and environmental review of these improvements will occur during the summer of 2008, with construction planned for 2009-2010.

Attached please find the map indicating the location of these project components.

## **2. Hydraulic Impacts**

The Natomas Basin is part of the Sacramento River Flood Control Project or "SRFCP," an integrated system of levee-protected basins. The design of the SRFCP anticipates that these basins will make their levees as strong as possible to guard against failure due to high river flows. Hence, within the design parameters of the SRFCP, the protection of one basin is not dependent on the failure of levees in another basin.

The design of the SRFCP anticipates that agricultural or rural area basins will be protected by levees that are at least high enough to contain flood waters comparable to those produced by the floods of 1907 and 1909. The flood water elevations designated for each basin in the system were specified in a design memorandum issued by USACE in 1957. This design calls for the height of agricultural levees to be set at the designated water surface elevation ("1957 profile") plus three feet along the Sacramento River to address hydrologic and engineering uncertainty and contain wind-driven waves. This additional height is known as freeboard.

Current federal standards for 100-year levee certification require levees high enough to contain the computed water surface elevation produced by a 100-year flood plus three feet of freeboard. The FEMA 100-year water surface elevation is to be computed based on the assumption that there are no levee failures upstream of the affected urban basin. Current state law establishes a 200-year level of flood protection as the minimum acceptable level for all urban basins in the SRFCP system.

The levees around the Natomas Basin are already high enough to contain this 200-year design flood; however, they are vulnerable to failure due to underseepage. SAFCA is proposing to strengthen the Natomas levees so that they can pass the 200-year design flood with a high degree of reliability. SAFCA is also proposing to meet existing federal and anticipated state requirements by adding three feet of freeboard above this design flood elevation. This will reduce the risk of levee failure due to wind-driven waves and provide a degree of protection against extreme floods beyond the design of the SRFCP.

In fact, SAFCA believes that it is highly unlikely that river flows will ever invade this freeboard. The State's new laws on development in levee-protected floodplains make it highly unlikely that agricultural basins will be able to raise their levees above the freeboard required for the 1957 profile. In the case of extreme floods exceeding the magnitude of the 200-year design flood, it is likely that the agricultural levees upstream and immediately across from the Natomas Basin will fail, thus lowering water surface elevations around Natomas by comparison to the 200-year design elevation. The results of the modeling runs supporting this analysis are posted at SAFCA's website.

For these reasons, SAFCA has concluded that because the improvements undertaken by the 2008 Construction Projects do not involve in-channel work, the addition of freeboard to the Sacramento River east levee would not alter the SRFCP's design water surface elevations and the Project would not result in any adverse hydraulic impacts on other basins or properties with structures on the water side of the Natomas Basin levee. Furthermore, by raising and considerably widening the levee, the Project would increase the level of safety for existing structures along the Garden Highway by preventing a levee failure that would directly damage the structures located at the point of the failure and that would also make the remainder of these structures uninhabitable due to the detrimental effects of the resulting inundation of the Natomas Basin.

Comments provided to SAFCA during the November 29, 2007 Board meeting suggested that some residents along the Garden Highway perceive the top of the existing levee as a relief structure which would overtop in the event system changes and extreme flows combined to force the river elevation beyond the levels projected by SAFCA. As I noted in my comments to the Board, this perception is not realistic. In the extremely unlikely event that overtopping and flow over the levee into the Natomas Basin were threatened, the levee would be quickly raised as an emergency flood fight measure. While a variety of flood fight techniques could be applied, it is certain that such an emergency structure would be placed near the waterside shoulder of the levee to allow continued emergency operations on the levee crown, thus cutting off access to any adjacent properties for the duration of the emergency. For example, a row of aggregate, covered with plastic, could be placed overnight along the shoulder of the Garden Highway to provide three feet of additional freeboard for the duration of the flood season.

### **3. Encroachments**

In the aftermath of Hurricane Katrina and the flooding of New Orleans, USACE issued a Draft White Paper calling for more rigorous enforcement of federal levee operation and maintenance standards. These standards anticipate that maintaining agencies will keep the levees clear of large trees and physical structures. Although the specific implications of this USACE initiative on Sacramento's levees are not yet clear, in its current condition

the Garden Highway levee would likely be deemed to be significantly out of compliance with applicable federal standards. SAFCA's proposal to construct an adjacent levee along the landside of the Garden Highway is designed to minimize these compliance issues and the severe dislocations that might otherwise be required if the existing levee was simply strengthened and raised as necessary in its existing footprint. The trade-off is a greatly enlarged project footprint, a much more substantial earth moving effort and the complications associated with relocating existing utility poles and managing roadway drainage issues.

#### **4. Construction Management**

In order to minimize construction-related impacts to residences located near the project footprint along the Garden Highway, the project will use the following construction management measures. Construction-related traffic on the Garden Highway will be kept to a minimum. No haulage trucks will use this roadway. Rather, such trucks will be confined to temporary haul roads established within the footprint of the project along the landside of the Sacramento River east levee and the NCC south levee.

Best management practices will be employed to reduce the noise of the project in the vicinity of residences along the waterside and landside of the Garden Highway. Construction activity in these areas will be conducted between the hours of 6:00 a.m. and 8:00 p.m. Monday through Saturday unless the SAFCA Board determines that there is a compelling public health and safety need to lengthen these hours of construction. In that event, the Board will, for the period of construction, offer a temporary alternative housing option for residents adjacent to active construction areas.

Best management practices will be employed to reduce the dust and vibration generated by the project. As in prior levee improvement projects along the American River and in the Pocket area, SAFCA will work with any affected residents concerned about vibration-related damage to their homes, including conducting a pre-construction inspection of their homes for the purpose of establishing a baseline condition for measuring such damage.

No new utility poles will be added to the waterside of the Garden Highway within 100 feet of any existing residence unless the SAFCA Board determines that there is no reasonable or feasible alternative to such a location.

#### **5. Land Acquisition**

Where it is determined that privately owned land may need to be acquired to accommodate the footprint of the project, SAFCA will contact affected property owners in advance of initiating any formal land acquisition process and will work with owners to minimize the impact of the project on their land.

If private land must be acquired, SAFCA will comply with applicable state land acquisition laws and regulations and affected property owners will be compensated at fair market value as required by law. Toward this end, SAFCA will prepare an appraisal of the fair market value of the property to be acquired, provide the owners with a summary of the appraisal, and make an offer for the full amount of fair market value determined by the appraisal. The owners may also elect to obtain their own independent appraisal, for which SAFCA will reimburse the cost up to the limit allowed by law. If SAFCA and the property owner are unable to reach agreement on compensation, then SAFCA may be left with no alternative but to initiate an eminent domain action to acquire the property. Of course SAFCA will work closely with the property owner to reach mutual agreement whenever possible.

Where the property owner occupies a residence on the property to be acquired, SAFCA will allow at least twelve months, rather than the statutory allowance of three months, for the owner to relocate off the property

## **6. Habitat Impacts**

The Project includes compensation for unavoidable impacts to sensitive habitats in the Natomas Basin. This compensation consists of field/row crop and rice field preservation; creation of new woodlands, grasslands, and marshlands created as part of the design of the Project on and adjacent to levee slopes, seepage berms and maintenance areas, and in borrow areas; and construction of new irrigation and drainage canals.

With respect to mitigating losses of existing irrigation and drainage canals, rice fields and other habitats utilized by the giant garter snake, compensation will involve creating one acre of new canal habitat for every acre of canal habitat that is lost, and preserving one acre of existing rice field and/or creating 0.5 acre of new marshland habitat for every acre of rice field that is lost.

With respect to mitigating losses of existing field crops and other foraging habitats used by the Swainson's hawk, compensation will involve preserving one acre of existing field crop land and/or creating two acres of grassland habitat within the project footprint and on Airport bufferlands for every acre of field crop land that is lost.

With respect to mitigating losses of existing woodlands, compensation will consist of creating new woodlands to replace lost woodlands on a tree diameter inch-for-inch basis within corridors adjacent to levee and seepage berm improvements and on lands currently managed by the Natomas Basin Conservancy.

## **7. Public Communication and Participation**

The project planning, design and approval process will be communicated by SAFCA to all interested parties by regular and electronic mail, through the Agency's website ( [www.safca.org](http://www.safca.org) ), and through direct individual and group contact including informational workshops, with everyone who is interested in or, affected by the project. Interested property owners or parties are encouraged to contact SAFCA, its field representatives and certainly the Board of Directors with relevant questions and comments as appropriate. Regular SAFCA Board meetings are held on the third Thursday of each month and public comment is always welcome. SAFCA is also available to speak to established property owner organizations as requested.

Prior to issuing any invitations for bid on the construction work currently planned for 2008, and prior to issuing any subsequent environmental impact analyses for work currently planned for 2009 and 2010, SAFCA will hold public workshops on key topics related to the Project. These topics will include but not be limited to project phasing, hydraulic impacts, habitat mitigation and enhancement, construction management (including highway drainage and utility pole relocation), and land acquisition.

Prior to initiating project construction activities, SAFCA will notify all property owners in the construction zone and surrounding areas by regular mail and/or electronic mail. The notice will describe the anticipated construction schedule including work locations, hours of work, and duration of construction activities. SAFCA will designate an ombudsperson to receive and respond to public inquiries associated with the construction process.

### **CALIFORNIA RECLAMATION BOARD MEETINGS**

The California Reclamation Board is the state agency with jurisdiction over the Natomas levee system. This agency must approve any alterations to this system and secure acceptance of these alterations by USACE. On December 21, 2007, the Reclamation Board will consider SAFCA's request to raise and strengthen the south levee of the Natomas Cross Canal. The Reclamation Board will consider SAFCA's request to raise and strengthen the upper four miles of the Sacramento River east levee at its meeting on January 18, 2007. In both instances, the Reclamation Board will rely on the information contained in the final environmental impact report which the SAFCA Board certified on November 29, 2007, as well as any additional information received through its permit hearing and review process.

### **FEDERAL ENVIRONMENTAL REVIEW PROCESS**

The National Environmental Policy Act (NEPA) requires federal agencies to prepare environmental impact statements (EIS) to support major federal decisions that have the potential to significantly affect the environment. In this instance, the "major actions" by the USACE are decisions that: the

alterations to the federal levee system protecting the Natomas Basin which would occur in connection with the NLIP 2008 Construction Projects are acceptable to the federal government; and that the impacts to federally protected wetlands, principally the filling and relocation of agricultural irrigation ditches located along the landside toe of several segments of the levee system, are also acceptable. The levee alteration decision must be made by the Chief of Engineers for USACE in Washington based on a request from the California Reclamation Board while the wetland impact decision is made by the District Engineer for the Sacramento District of USACE. Both decisions must be supported by an environmental impact statement (EIS) that has been coordinated with all federal and state agencies affected by the proposed construction activities here in Sacramento and in Washington.

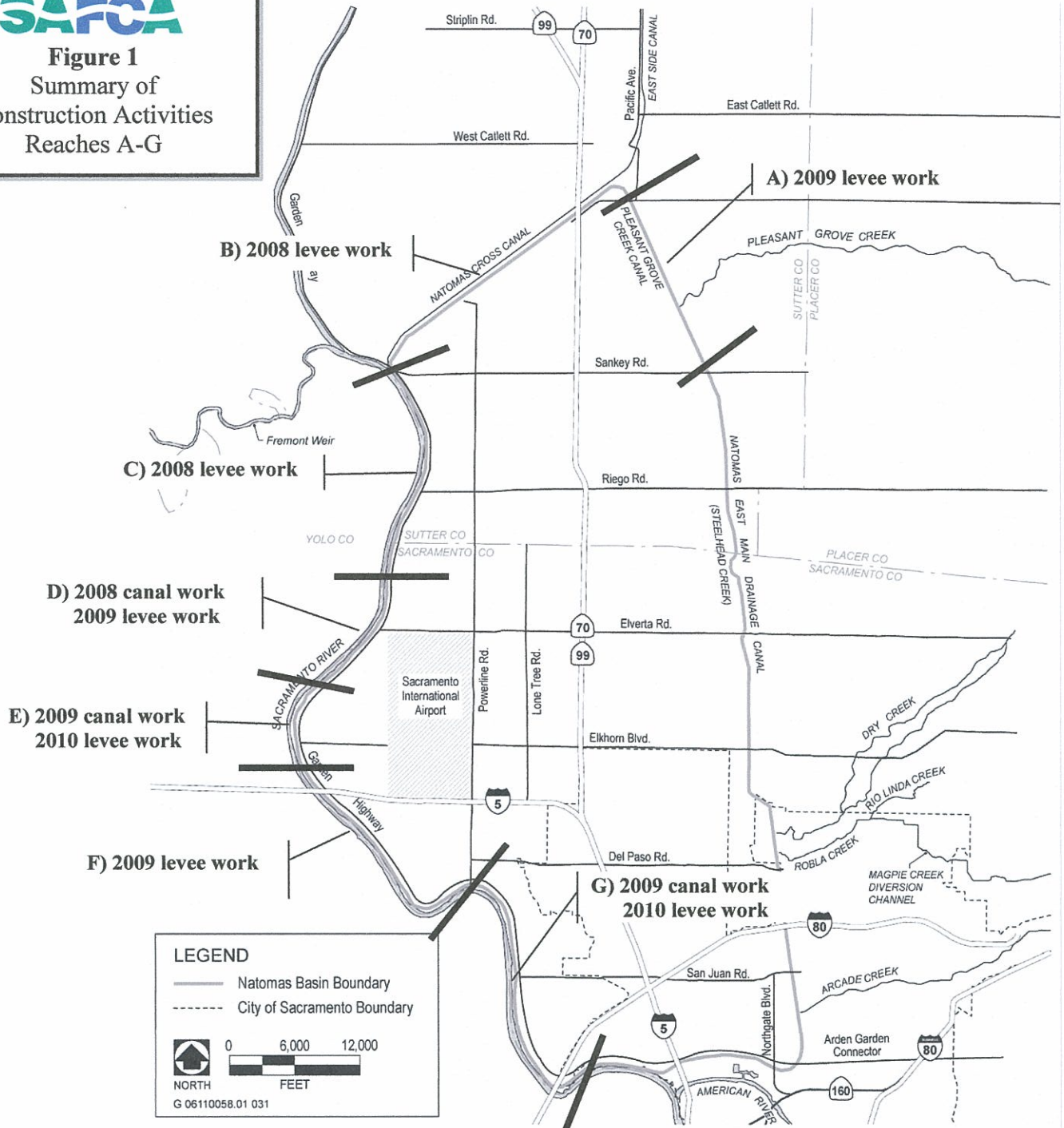
This process begins with the issuance of a Notice of Intent to issue an EIS published in the Federal Register followed shortly thereafter by a public scoping meeting to identify the issues to be addressed in the EIS. The purpose of this meeting will be for USACE to receive input from interested parties on the issues they believe should be addressed in the EIS. The federal process will constitute a fresh start for USACE on these issues.

Based on the results of the scoping meeting, USACE will prepare a Draft EIS that will be issued and circulated for 45 days for agency and public review and comment in February or March 2008. USACE will respond to the comments received and prepare a Final EIS for Washington D.C. level review. Based on this review, the Chief of Engineers will determine whether the proposed 2008 alterations to the Natomas levee system are acceptable. SAFCA anticipates this decision will be made in June or July 2008.





**Figure 1**  
Summary of  
Construction Activities  
Reaches A-G



- A) Pleasant Grove Creek Canal West Levee
- B) Natomas Cross Canal South Levee (5.3 miles from north of Sankey Rd east to PGCC)
- C) SREL\* – Natomas Cross Canal to North Drainage Canal (1.5 miles south of Riego Rd)
- D) SREL - North Drainage Canal (1.5 miles south of Riego Rd) to Teal Bend Golf Club
- E) SREL - Teal Bend Golf Club to Elkhorn Blvd
- F) SREL - Elkhorn Blvd to Powerline Road
- G) SREL - Powerline Road to south of I-80

\*SREL= Sacramento River East Levee