



REPORT TO COUNCIL

City of Sacramento

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Staff Report
May 25, 2010

**Honorable Mayor and
Members of the City Council**

**Title: FloodSafe and the Central Valley Flood Protection Plan – Presentation by
the State Department of Water Resources**

Location/Council District: Citywide

Recommendation: Receive and file.

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Presenters: Ken Kirby (DWR), Gary Bardini (DWR), Stein Buer (SAFCA), Bill Busath
(Department of Utilities)

Department: Utilities

Division: Engineering Services

Organization No: 14001331

Description/Analysis

Issue: Legislation passed in 2007 requires the California Department of Water Resource (DWR) to develop the California Central Valley Flood Protection Plan (CVFPP) and have it adopted by July 2012. DWR is also encouraged to update local legislative bodies on the potential impacts of the legislation and plan on local governments.

Policy Considerations: The CVFPP is a comprehensive, integrated, system-wide flood protection plan. The CVFPP could have significant impacts on development in the City including the requirement to have a plan for 200 year protection in place by 2015 as a condition of development, as well as requirements to modify the City's General Plan and Zoning Ordinance. The flood risk reduction realized by compliance with the plan is in keeping with the City's goals of enhancing public safety and livability.

Environmental Considerations:

California Environmental Quality Act (CEQA): This item is for information only, and does not recommend approval of a project for which CEQA review is required.

Sustainability Considerations: The overall objective of the 2007 legislation and the CVFPP is to reduce flood risk in the Central Valley including the Sacramento area. This is in keeping with the City's sustainability goals.

Commission/Committee Action: Not applicable.

Rationale for Recommendation: The workshop is for information only, and it is recommended that Council receive and file this report.

Financial Considerations: The financial impacts of implementing 2007 flood legislation and the CVFPP to the City's rate payers are unknown at this time. This workshop is for information only and does not financially obligate the City.

Emerging Small Business Development (ESBD): Not applicable.

Respectfully Submitted by:



David L. Brent
Engineering Manager

Approved by:



Marty Hanneman
Director of Utilities

Recommendation Approved:



Gus Vina
Interim City Manager

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Attachment 1

Background

The Department of Water Resources (DWR) is meeting with local jurisdictions within the Sacramento – San Joaquin Valley to brief staff and elected officials about the development of the recently required Central Valley Flood Protection Plan (CVFPP). To help provide context for the CVFPP, we are also providing a quick introduction to the FloodSAFE California Initiative and highlighting some recent changes in California law related to land use planning and flood protection.

FloodSAFE California

FloodSAFE is an initiative to improve public safety and flood management in California through a system-wide integrated approach that will help reduce flood risk at regional and local levels. Flood management improvements will be achieved through a three-pronged approach:

1. Improve core flood management functions including Flood Emergency Response and Operation and Maintenance of flood protection facilities, comprehensively address levee erosion sites, improve management of floodplains through land use policies, and enhance riparian habitat and floodplain connectivity with structural and nonstructural approaches to improve public safety.
2. Implement regional projects to reduce flood risks including “Early Implementation Program,” United States Corps of Engineers projects, flood control subventions projects, and Delta levees projects. Coordinate and support implementation of regionally integrated local projects.
3. Initiate a system-wide integrated flood management approach to evaluate flood management and public safety needs, identify flood system deficiencies, and define and evaluate feasible projects/programs to fix system deficiencies.

The draft FloodSAFE Strategic Plan (DWR, 2008) provides strategic guidance for implementation of the FloodSAFE initiative (www.water.ca.gov/floodsafe/plan/). As part of FloodSAFE, DWR will work with partners to meet the following goals:

- **Reduce the Chance of Flooding** – Manage flood events to reduce the damage to California communities, homes and property, and critical public infrastructure.
- **Reduce the Consequences of Flooding** – Take actions that will reduce the adverse consequences of floods when they do occur and allow for quicker recovery after flooding.
- **Sustain Economic Growth** – Design the sustainable flood management system to facilitate continuing opportunities for prudent economic development that supports robust regional and statewide economies without creating additional flood risk.

- **Protect and Enhance Ecosystems** – Improve flood management systems in ways that include habitat functions as a facility design parameter. Incorporate, protect, restore, and enhance ecosystems and integrate flood management with other public trust resources needs.
- **Promote Sustainability** – Take actions that improve compatibility of the flood management system with the natural environment and reduce the expected costs to improve, operate, and maintain the flood management systems into the future, including ecosystem function and future flood management system expandability in the design.

The California legislature passed a series of laws in 2007 related to flood management including the Central Valley Flood Protection Act (see Water Code § 9600). The act sets the required content and provides guidance for preparation of the Central Valley Flood Protection Plan (CVFPP).

The Legislative Digest of 2007 described the CVFPP as a “strategic flood protection plan for the Sacramento-San Joaquin Valley”. The Central Valley Flood Protection Act requires DWR to develop a draft CVFPP by January 1, 2012 and the Central Valley Flood Protection Board to adopt a CVFPP by July 1, 2012. The CVFPP is to be updated every 5 years thereafter.

“The Central Valley Flood Protection Plan reflects a system wide approach to protecting the lands currently protected from flooding by existing facilities of the State Plan of Flood Control.” Water Code § 9603(b)

In addition to developing the Central Valley Flood Protection Plan, DWR must also develop two other related documents.

- The State Plan of Flood Control Descriptive Document that identifies and describes the State-federal flood protection facilities in the Sacramento-San Joaquin Valley. This includes approximately 1,600 miles of federal levees and associated facilities, lands, and modes of operation for which the State has given assurances to operate and maintain. A review draft of the State Plan of Flood Control Descriptive Document is currently available.
- The Flood Control System Status Report that assesses the current level of performance of the State Plan of Flood Control facilities according to their authorized purpose. This report is being developed and a review draft will be available in the second quarter of 2010.

The CVFPP will build from the State Plan of Flood Control Descriptive Document and the assessment of the current facilities in the Flood Control System Status Report and evaluate how to provide appropriate integrated flood management through 2050 for the lands that currently receive protection from the State Plan of Flood Control facilities. The CVFPP will also provide criteria related to meeting the urban standard of flood protection described below.

Land Use Planning and Flood Protection

The laws enacted in 2007 added several requirements related to land use planning and flood protection. As part of this briefing, DWR is highlighting two of the prominent new requirements for communities in the Sacramento-San Joaquin Valley that relate to the Central Valley Flood Protection Plan. There are additional requirements in the flood related laws passed in 2007 and DWR is preparing a document to describe all of the new requirements.

General Plan Safety Element

Government Code § 65302 (g) (2) requires that upon the next revision of the housing element on or after January 1, 2009, the safety element of a general plan must include information about flood hazards. In addition to identifying flood hazards, the safety element is to include a set of goals, policies and objectives related to protecting communities from an unreasonable risk of flooding.

Urban Standard of Flood Protection

A set of provisions added to the Government Code in 2007 require each city and county within the Sacramento-San Joaquin Valley to amend its:

- General plan to include information in the Central Valley Flood Protection Plan within 24 months of adoption of the CVFPP (Government Code § 65302.9)
- Zoning ordinance to be consistent with the amended general plan within 36 months of adoption of the CVFPP or within 12 months after amendment of the general plan (Government Code § 65860.1)

Once amendments to the general plan and zoning ordinance are effective, cities and counties within the Sacramento-San Joaquin Valley cannot enter into development agreements, approve discretionary or ministerial permits, or approve tentative or parcel maps for areas located within a flood hazard zone unless the city or county makes certain findings, based on significant data (Government Code § 65865.5). The required findings relate to providing at least 200 year level of flood protection ($\leq 0.5\%$ chance of flooding in any year) for urban and urbanizing areas within the Sacramento – San Joaquin Valley. The government code requires, as a condition of development, that a plan for 200 year protection be in place by 2015 and that adequate progress on plan implementation be demonstrated thereafter until 200 year protection is achieved not later than 2025. (See SAFCA'S plan for 200 year protection below).

Next Steps

- DWR will conduct a Valley wide Forum in May or June of 2010 to share the information developed during Phase 1 of the CVFPP development and invite public participation in future phases. The information in Phase 1 was developed in collaboration with federal and local flood protection providers and other interested parties.
- DWR is beginning Phase 2 of the development of the Central Valley Flood Protection Plan. This phase of planning focuses on identifying potential management actions that can be applied to address the problems and goals

identified in Phase 1. DWR continues to invite broad participation in helping develop this information.

- DWR will charter work groups for developing management actions and other specific topics starting in June 2010.
- DWR will host a number of workshops to refine information about management actions in July and August of 2010.
- DWR will continue to compile technical data, update analytical tools, and evaluate the status of the system during 2010.

Sacramento Area Flood Control Agency (SAFCA) 200-Year Flood Protection Plan

The Sacramento Area Flood Control Agency (SAFCA) was created in 1989 through a Joint Exercise of Powers Agreement by the City of Sacramento, the County of Sacramento, the County of Sutter, the American River Flood Control District (ARFCD), and Reclamation District 1000 (RD 1000) to reduce the Sacramento area's vulnerability to catastrophic flooding. In 1990, the California Legislature enacted the Sacramento Area Flood Control Agency Act giving SAFCA broad authority to finance flood control projects and directing SAFCA to carry out its flood control responsibilities in ways that provide optimum protection to the natural environment and public recreation.

SAFCA's flood risk reduction program focuses on the major floodplains in the Sacramento area along the lower American and Sacramento Rivers and their tributaries. The goals of this program are to:

- Provide at least a 100-year level of flood protection as quickly as possible.
- Work toward achieving urban-standard ("200-year") flood protection over time.
- Ensure the structural integrity of the levee system.

Over the past twenty-one years, SAFCA has pursued these goals on a step-by-step basis in coordination with the U.S. Army Corps of Engineers (USACE), the U.S. Bureau of Reclamation (Reclamation), the California Central Valley Flood Protection Board (CVFPB), and the California Department of Water Resources (DWR). This coordinated effort has produced a combination of levee improvements and modifications to the flood control operation at Folsom Dam that made it possible to achieve the 100-year flood protection objective for most of the properties in the area's major floodplains, including the Natomas Basin in 1998, the American River floodplain in 2005, and the Pocket-Meadowview area in 2007.

Based on investigations by USACE and SAFCA the Natomas Basin 100-year certification was revoked by FEMA in December 2008. In addition, a small number of parcels remain in the federally regulated 100-year floodplain along the American River upstream of the Mayhew Drain, and along Morrison Creek and its tributaries in south Sacramento. SAFCA's objective is to provide at least a 100-year level of flood protection to these areas over the next three to five years while working to provide a "200-year" level of flood protection to all of Sacramento's major floodplains within the next decade.

The centerpiece of SAFCA’s 200-year flood protection plan is improvements to Folsom Dam, including the Folsom Joint Federal Project and the Folsom Dam Raise, which will allow Folsom Dam to limit 200-year flood releases to 160,000 cubic feet per second. The Folsom Dam improvements are supplemented by major levee improvements along the American River, around Natomas, along the Sacramento River southward to Freeport, and along major tributary creeks in the north area and south area, such that the improved levees will be compliant with current 200-year design criteria as required under SB 5(Machado, 2007). The major plan elements are briefly described below:

Folsom Dam Modifications, Joint Federal Project:

This project includes construction of a new auxiliary spillway on the east abutment to Folsom Dam. This new spillway will both provide sufficient release capacity to allow Folsom Dam to control the 200-year flood, as well as to safely pass a Probable Maximum Flood without overtopping the dam in conjunction with other features associated with the Joint Federal Project. Since June of 2005 USACE, Bureau of Reclamation, the State of California, and SAFCA have rapidly advanced planning for this project, including a joint EIR/EIS, a Corps Post Authorization Change (PAC) Report by USACE, and a Reclamation Dam Safety Modifications Report. All these reports are complete and work on the project has begun through the Bureau of Reclamation’s Dam Safety program. The project will be jointly constructed by USACE and Reclamation, with the State and SAFCA serving as non-federal cost sharing partners. The FY2010 was a significant increase above past requests and consistent with the schedule of work and since USACE expects to award a major construction contract for the gated control structure in the fall of 2010.

Folsom Dam Raise Project:

Based on current Corps design studies, a raise of up to 3.5 feet of the dikes and wing dams around Folsom Lake may be constructed under this project authority in conjunction with the Folsom Dam Modifications project. The Folsom Dam Bridge, an authorized part of this project, was opened to traffic in March 2009 and is essentially complete. Ecosystem restoration is also an authorized component of this project, focusing on improving salmon habitat in the Lower American River through improved temperature control for Folsom Dam releases. Funds will be used to advance the design of this project and to allow for coordination between this project and the Folsom Dam Modifications project.

Natomas Levee Improvements:

SAFCA has taken the lead on improvements to the Natomas Basin levee system, beginning with construction beginning in 2007 and continuing annually thereafter. With 70% funding by DWR under SB 276 (Steinberg, 2007), SAFCA anticipates that by the end of 2011 18 miles of Natomas levees in the most vulnerable portion of the 42-mile levee perimeter will be reconstructed to the 200-year level standard, at an estimated cost of \$350 million. Meanwhile, SAFCA and DWR are working with USACE to complete the federal study (a Supplemental Information Report (SIR) needed to authorize USACE to complete the 200-year levee improvements for the Natomas Basin on an expedited basis, as described below.

American River Common Features General Re-evaluation Report and Natomas Supplemental Information Report (GRR and SIR):

Under the Common Features authorization, USACE initiated a GRR in 2007 to include planning for measures needed to provide 200-year flood protection for Natomas, the Sacramento River East levee south of the American River and the Lower American River. This comprehensive GRR under the American River Common Features Authority will address all elements needed to improve the levees to provide 200-year level of protection to the area. The report is expected to be completed in the 2012 timeframe.

USACE, DWR, and SAFCA agreed to expedite the Natomas Basin portion of the analysis to expedite federal authorization for the Natomas Levee Improvement Program (NLIP), as the Natomas Basin is now rated with less than 100-year flood protection. Accordingly, USACE initiated a SIR, which is scheduled for completion late in 2010.

South Sacramento County Streams Group Project:

This project will provide improved flood protection for the Morrison Stream Group, including Morrison Creek, Florin Creek, Elder Creek, and Unionhouse Creek when completed. This project protects the existing community, as well as helps facilitate the City's economic development goals for the South Sacramento region. SAFCA, the State, and USACE are working together to expedite construction of this project. Levee improvements around the Regional Wastewater Treatment Plant were completed by SAFCA in 1996. USACE has completed approximately 7 miles of levee improvements over the last several years and now improvements on all creeks and have been completed to Franklin Blvd. In FY2010, funds will be used to improve 3300-foot a Union Pacific Railroad embankment to current levee standards which will allow several hundred properties to be removed from the 100-year floodplain.

American River Levees:

FY2010 funds will be used to further additional levee improvements to address gaps in the slurry walls along the American River levees on both sides of the river, and to provide levee height parity. This work will go a long way towards meeting the goal of safely conveying 160,000 cubic feet per second through Sacramento, required to provide a minimum of 200-year flood protection on the American River. In addition, funds will be used to complete the designs needed to construct the remaining elements of the Common Features WRDA 1996 and WRDA 1999 authorizations.

Sacramento River Bank Protection Project:

This program, executed by USACE in close collaboration with the State, has been very effective in addressing serious erosion problems in levees protecting the Sacramento area and in other parts of the central valley. The project, which has been underway since 1960, is cost shared between USACE and CVFPB, with local agencies taking responsibility for maintenance. Additional funding is needed to continue repairs of critical erosion sites and to avoid levee failures associated with an eroding levee system.