

## **SACRAMENTO FLOODSAFE WORKSHOP SUMMARY**

### **JUNE 9, 2008**

#### **OVERVIEW**

The Department of Water Resources (DWR) FloodSAFE California Program sponsored a series of workshops to present information on the FloodSAFE Strategic Plan and related projects and regulations. Eight meetings were held throughout the State: four within the Central Valley and four outside the Central Valley. The Sacramento workshop was held on June 9, 2008. The workshop agenda included:

- FloodSAFE Program Update
- Federal Flood Control Subventions Program Regulations Update
- Central Valley Flood Protection
- Local Levee Maintaining Agency Reporting Requirements
- Discussion

#### **FloodSAFE PROGRAM UPDATE**

Ken Kirby, Executive Advisor to DWR, presented highlights of the FloodSAFE Program and public review draft Strategic Plan. Key elements of the Strategic Plan include: a vision statement, goals, foundational and near-term objectives, guiding principles, implementing partners and stakeholders, and an implementation framework. These key elements support the four action areas for the FloodSAFE program:

- improve emergency response
- inform and assist the public
- improve flood management systems
- improve operation and maintenance

In seeking to provide the multiple benefits outlined in the FloodSAFE vision, policy decision-makers and flood management professionals must consider and balance the outcomes identified in the FloodSAFE program goals:

- reduce the chance of flooding
- reduce the consequences of flooding
- sustain economic growth
- protect and enhance ecosystems
- promote sustainability

Twelve foundational, longer-term objectives and ten near-term objectives create an action plan for achieving those goals. To maximize the effectiveness of flood management decisions and investments, proposals must be considered in the context of the guiding principles, which promote: system-wide approaches, multiple benefits, integration with land-use and regional planning, natural processes and functions, equitable access to decision-making, informed understanding of flood risks, and adaptation to climate change.

The FloodSAFE program overview included a discussion of flood risk, defined by both the likelihood (probability) of flooding and the consequences of flooding. Through FloodSAFE program components and local actions, flood risk can be significantly reduced; however, some residual risk will always exist (no matter how small it may be). Residual risk represents the possibility of flood events that exceed the capacity of flood management systems.

The presentation also included bond funding allocations. Much of the bond funding is dedicated to the Central Valley due to legislative emphasis on the State-federal flood control system in the Central Valley and the Delta. In addition to geographic boundaries, FloodSAFE priorities are also tied to land use categories, such as urban and urbanizing areas, non-urban areas, and broad, system-wide areas that include complex land-use and/or environmental considerations. The FloodSAFE team is continuing to develop additional guidelines on investment strategies and cost-sharing approaches.

Also discussed were recent accomplishments in the FloodSAFE program including improvements in DWR's emergency response capabilities, early implementation projects, and other programs to evaluate and improve flood management systems, channel maintenance, and workshops and public outreach

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materials. Lastly, near-term future activities were discussed, including completion of the Strategic Plan. Workshop participants were invited to submit comments on the Strategic Plan through July 25, 2008.

**SUBVENTIONS**

Terri Wegener, Statewide Grants Branch Chief, recapped the Federal Flood Control Subventions Program. This program reimburses local agencies for a portion of the non-federal costs associated with federally authorized flood control projects, including watershed protection flood prevention projects administered by the Natural Resource Conservation Service. Traditionally, the program has reimbursed for a base 50% of the non-federal costs. As a result of Assembly Bill (AB) 1147, an additional 20% (for a total of 70% of non-federal costs) can be granted for projects that increase or enhance the level of protection for:

- habitat
- open space
- recreation
- impoverished areas
- state transportation and water supply facilities

Implementing regulations for AB 1147 are currently being developed, and workshop participants were invited to submit comments on the proposed regulations by July 28, 2008.

**CENTRAL VALLEY FLOOD PROTECTION**

During the Central Valley Flood Protection session of the workshop, the following projects and programs were discussed:

- Central Valley Flood Protection Plan
- Central Valley Floodplain Evaluation and Delineation Project
- Geotechnical Levee Evaluations Program

Steve Bradley, Chief Engineer and Project Manager for the Central Valley Flood Protection Plan, outlined the key elements of Senate Bill (SB) 5 and the Central Valley Flood Protection Act of 2008, which set requirements for developing the Central Valley Flood Protection Plan (CVFPP). The resulting code provides definitions for the areas comprising the Sacramento-San Joaquin Valley and the Sacramento-San Joaquin River Flood Management System facilities, including the State Plan of Flood Control (SPFC) and other facilities as determined by the Central Valley Flood Protection Board (CVFPB).

The Act requires that identified flood management actions be taken by jurisdictions in the Central Valley in order to enter into development agreements for areas located in a flood hazard zone. Jurisdictions are required to incorporate CVFPP findings into their General Plans and zoning ordinances. Additional requirements in the Act are established for:

- State flood protection planning
- building standards
- local flood protection planning
- development of the CVFPP

The Act also details specific elements regarding content and development of the CVFPP. As with the FloodSAFE Strategic Plan, specific objectives and approaches that will guide the development of the plan have been identified.

A key element in developing the CVFPP is floodplain evaluation and delineation, which is being delivered under the Central Valley Floodplain Evaluation and Delineation Project. This technical effort is underway, with data being collected using LiDAR and bathymetry. The data will be used to support mapping outcomes, as identified in SB 5. Technical community meetings will be scheduled to review and refine information on topography, stream hydraulics, geotechnical data, and floodplain mapping.

Hamid Bonakdar, Supervising Engineer for the Levee Repairs and Floodplain Management Office,

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described the levee evaluations program, which assesses the geotechnical integrity of Central Valley levees. The effort will identify geotechnical deficiencies within levee structures, as well as remedies and cost estimates associated with addressing those identified deficiencies. The Urban Levee Evaluations Program will assess both project and non-project urban levees; the Non-Urban Levee Evaluations Program will assess primarily project levees in non-urban settings. A phased work plan, including a general technical approach, has been developed for the evaluations and surveys, and is overseen by an independent consulting board.

At the time of the workshop, urban evaluations were 40% complete, and non-urban evaluations were being initiated.

**LOCAL LEVEE MAINTAINING AGENCY REPORTING REQUIREMENTS**

Jon Ericson, Senior Engineer, outlined key elements of AB 156, which requires that specific, levee-related information be submitted to DWR, including the condition and performance of project levees, a summary of maintenance activities performed during the previous year, and estimated operation and maintenance costs for the current fiscal year. Local agencies who maintain either project levees or non-project levees that provide flood protection benefits to areas within a boundary benefited by a project levee must submit the information to DWR by September 30 each year. At the time of the workshop, DWR was developing a template for data collection that included an option for electronic submissions via the California Data Exchange Center website. DWR will summarize levee information from local agencies and submit an annual report to the CVFPB by December 31 each year.

Additionally, the team is seeking input to prevent duplication of reporting efforts associated with levee mile reports and integrity inspection grants.

**DISCUSSION**

**Scope of Strategic Plan**

Q: How will DWR interact with local planning for developments currently being planned? What are the options for developments already built or in the planning process? Strengthened levees?

A: Beyond strengthening levees in place, options may include flow reductions, multi-use facilities, and bypasses. The program is working with locals to look at systems more broadly.

Q: Floods often involve larger stream flows than planning foresaw. Will the flood planning effort revisit the concept of design flood levels?

A: The topic of flood conditions will be addressed in some detail in the CVFPP. One objective is to better characterize expected flood flows in the future.

Q: Will DWR suggest a plan for accommodating those flows through the system?

A: The flood planning effort will look at addressing flood flows and anticipated consequences.

Q: What does 200-year flood protection look like in areas without levees?

A: SB5 requires a 200-year minimum level of flood protection for urban and urbanizing areas in the Central Valley by 2025. Additionally, building limitations and development restrictions will be imposed on Central Valley communities after 2015 if adequate progress is not made toward achieving 200-year flood protection. As such, the 200-year level of protection must be incorporated into flood planning and land use decisions. (Characterization of 200-year level of flood protection will be undertaken as part of the FloodSAFE effort.) Attainment of the 200-year level of flood protection may include both structural (e.g., hydraulic structure improvements, structure elevations, bypasses) and non-structural (e.g., land use decisions, flood ordinances) means.

Q: How will this planning process incorporate stakeholder comment and expertise?

A: Through meetings, work groups, email, and direct briefings. FloodSAFE will continue to host workshops, including public workshops as part of the local assistance program guidelines process. The CVFPP will

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include a process designed to ascertain and leverage the most effective way(s) to interact with the public and stakeholders. The process may include some large public meetings, some working groups, some direct contacts, and periodic regular meetings.

Q: Has any thought been given to the inclusion of educational systems as part of this program?  
Engineering and planning departments and programs, including academia and students, need to be brought along.

A: Having students and academia as partners is a concept that could be developed more.

Q: Are there any projections of what improvements may cost over the next 20 years?

A: The public review draft Strategic Plan outlines broad categories of cost.

Q: Will there be more bond measures to fund flood management?

A: The availability of state bond funds is linked to the State's economy and budget as well as program performance over the next few years. In addition to State bond funding, federal and local participation will be vital as well. The pending statewide flood management planning program is expected to include identification and cost estimation of needed investments.

Q: When do you expect to see the 200-year level of protection defined?

A: This is one of the first topics that the CVFPP process will tackle, and this will require significant public input that will roll forward into regulations.

Comment: Local agencies will need time to respond to modeling and development standards.

Response: The CVFPP must be adopted by the CVFPB by July 1, 2012. Local jurisdictions will then have two years to incorporate into their general plans information from the CVFPP. A year after general plans are updated, zoning ordinances must be modified for consistency with the revised general plan.

### **CVFPP**

Q: What are the schedule, budget, and accomplishments for the CVFPP Request for Qualifications?

A: DWR has selected a team and is in contract negotiations. The budget is \$35 million over 5 years (authorized); the objectives are to deliver the CVFPP.

Q: When will initial task orders be signed?

A: As soon as possible upon conclusion of contract negotiations.

Q: Is anyone talking about the plan for maintenance?

A: Looking at financing strategies for maintenance efforts is one of the topics that the CVFPP will address.

### **Levee Evaluations**

Q: Are additional factors of safety for hydrology being considered?

A: DWR is trying to better characterize expected flood flows in the future and is updating hydrologic information for use in the Central Valley Floodplain Evaluation and Delineation Project. This update is based on new information collected and processed through the Hydrology Branch and California Data Exchange Center and will ultimately consider uncertainties related to climate change. All appropriate factors and considerations will be addressed, as necessary. For levee systems, factor of safety is addressed through freeboard. Looking at minimum freeboard requirements will continue for some time.

Q: In developing fragility curves, how might DWR standardize engineering judgment (e.g., the level of uncertainty between experts)?

A: DWR will produce a guidance document for analysis offering a consistent approach for selecting parameters and software for analysis. The guidance will conform to U.S. Army Corps of Engineers criteria and the current state of practice. Analysis involves substantial judgment; the objective is to make this a very transparent process.

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Q: Of the geotechnical studies that have been completed for urban project levees, what are the results? How many meet criteria?

A: We do not know yet. Data collection is about 40% complete. There have been no big surprises, based on the Comp [Comprehensive] Study and earlier studies.

Q: How will the ecosystem function analyses be carried out?

A: A definitive answer is not yet available. Several groups associated with CALFED are working to identify some indicators of ecosystem health, along a number of key themes. The groups who are working on this will be invited to make presentations to the CVFPP advisory group(s). Other indicators may be developed as well.

Q: How will public participation be used in developing the appropriate level of public involvement?

A: A consultant team will help DWR develop that approach. Public meetings are very important, but as a forum to work out solutions, they can be ineffective. Small group conversations will be needed, perhaps using a working group of key stakeholders.

Comment: My sense is that there might be interest in that. Participants would need to know about time commitments and work products.

Comment: Stakeholders are not interested in being presented with a plan already developed; they want an opportunity to help develop the plan.

Q: Will there be any review of the law and how reclamation districts are formed (and allowing them to be more effective?)

A: Input will help inform how we will proceed. If review of the law and formation of reclamation districts are important components, then they are what we will tackle.

Q: What's the interaction among local, regional, and valley-wide flood planning that the legislature requires?

A: The program is looking for local planning to be consistent with more detailed Integrated Regional Water Management plans, so that planning efforts are similar. Information generated in local plans will feed into the regular update cycle of the CVFPP.

**Local Levee Maintaining Agency (LLMA) Reporting Requirements**

Q: Who is required to submit levee-related information?

A: Local agencies that maintain either project levees or non-project levees that provide flood protection benefits to areas that also receive protection from project levees.

Q: What information is required?

A: Required information includes: (1) Information known to the condition or performance of the project levee (or *jurisdictional non-project levee, as appropriate*); (2) Information identifying known conditions that might impair or compromise the level of flood protection provided; (3) A summary of maintenance performed by the LMA during the previous fiscal year; (4) A statement of work and estimated cost for O&M of the levee for the current fiscal year; and (5) Any other readily available information relevant to the condition or performance of the levee, as determined by the CVFPB or DWR. An electronic submission process for submitting the required information to DWR is currently under development.

Q: What about the rest of the state and levees outside the State-federal flood protection system?

A: AB 156 imposes reporting requirements only for project levees or levees that provide protection for the same areas.