

**REPORT OF ACTIVITIES  
OF THE  
DEPARTMENT OF WATER RESOURCES**

**By**

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## **FUNCTIONAL AREA 1 FLOOD EMERGENCY RESPONSE**

*This functional area includes work to better prepare for, respond to, and recover from flood emergencies. A program for flood emergency response is a necessary part of flood management because California will always face flood emergencies, even when system improvements reduce the frequency of flooding. Program activities include inspection and assessment of flood projects' integrity; reservoir operations and river forecasting; flood data collection, management, and dissemination; precipitation and runoff forecasting; Delta flood preparedness, response, and recovery; and statewide flood emergency response functions.*

### **REAL-TIME FLOOD CONDITIONS, STATUS, & WARNING**

*The purpose of the Real Time Flood Conditions, Status, and Warning element is to provide information needed to manage floods as they are occurring. This element supports flood operations by 1) inspecting, documenting, and assessing the integrity of the Sacramento and San Joaquin Flood Control Project levees, 2) storing and managing information so that it is accessible to flood managers and the general public, 3) providing emergency flood information and warnings based upon existing and forecasted conditions and field reports, and 4) developing information management tools to support emergency operations.*

### **INSPECTIONS**

Summer Channel and Structure Inspections are complete and reports will be sent out to the LMAs soon. Results from inspections of all structures and channels will be available later this year. Fall Levee Inspections have begun and are expected to be completed on time with all project levees inspected. This season the inspectors have access to issues that the USACE made during their Periodic and Continuing Eligibility Inspections and will note appropriate deficiencies in our reports.

Inspectors continue to inspect construction activities related to Central Valley Flood Protection Board Encroachment Permits and other authorized activities. Inspectors are participating with the USACE in completing erosion surveys on the Sacramento River. Enhancements to inspection policies and procedures continue to be pursued through FAXCT efforts, including developing a second, alternative inspection program for LMAs that are not going to participate in the USACE's PL 84-99 program.

### **FLOOD PROJECT INTEGRITY/VULNERABILITY ASSESSMENT ACTIVITIES**

The Flood System Analysis Section continues to develop a systematic levee vulnerability assessment tool that will utilize levee-related data being collected by DWR to annually assess relative vulnerability of the project levees within the Central Valley flood-control system. This assessment will integrate information related to system performance, engineering evaluations, and operation and maintenance practices. This tool will support the objectives of FA01 by informing emergency response and resource planning decisions. The tool will be used for the State-federal flood control system with the flexibility to expand valley and state wide.

Using best available information developed by Flood Operations Branch (FOB), Flood Project Integrity and Inspection Branch (FPIIB), Flood System Sustainability Branch, and Regional Project Assessment Branch, vulnerable sites with previous distress issues have been identified and shared during 2011 Pre Season Flood Meetings. These levee distress sites include erosion, seepage/ sand boil, and slope instability issues.

Statewide Flood Management Planning program information gathering activities have allowed the FOB to meet face to face with flood management agencies outside of the SPF and understand the exposure to flooding from the local perspective. This information will prove valuable to further inform ER decisions at the State level.

FPIIB completed annual supplemental erosion survey for San Joaquin River Flood Control (SJRFC) system. The surveys documented 66 erosion sites (53 existing and 13 newly discovered sites) where the integrity of the levee is at risk of an erosion failure during high water and/or normal flow conditions. These sites were evaluated and ranked according to their severity based upon the findings from the field investigation.

#### **LOCAL MAINTAINING AGENCY ANNUAL REPORTING PROGRAM (CWC 9140-9141)**

September 30, the official deadline for Local Maintaining Agencies (LMAs) to submit information on their levee maintenance, has been passed. Going into fourth year, we received approximately 85% response from LMAs, which is so far the highest in record. This month staff outreached to Reclamation Districts and met few of them in their local office to train them on hands-on demonstration of our electronic web application for report submission. Staff is currently busy summarizing the reports for the Board.

#### **CLIMATE DATA COLLECTION & PRECIPITATION/RUNOFF FORECASTING**

*This Element supports Flood Emergency Response by providing information on current and forecasted water conditions, and by providing meteorological and climate information. Additionally, this Element includes evaluating and improving the data collection and exchange network and forecasting models, providing water supply and watershed runoff information and forecasting, and the development of a new generation of forecasting and data collection tools to improve the quality, timeliness, and length of watershed and river forecasts. Real-time data, its timely availability, and quantities and quality are all critical to improving forecasting quality and timeliness.*

#### **WATER CONDITIONS**

As of September 30, 2011, end of Water Year 2011, statewide hydrologic conditions were as follows: precipitation, 135 percent of average to date; runoff, 145 percent of average to date; and reservoir storage, 130 percent of average for the date. Sacramento River Region unimpaired runoff observed through September 30, 2011 was about 25.1 million acre-feet (MAF), which is about 138 percent of average. For

comparison, on September 30, 2010, the observed Sacramento River Region unimpaired runoff through that date was about 16.0 MAF, or about 88 percent of average.

At the end of a very wet Water Year 2011, the water supply outlook is exceptionally good. Annual average net water demand for urban and agriculture purposes (not including environmental requirements) is about 35 million acre-feet (MAF). Current Statewide reservoir storage of 130 percent of average translates into approximately 7 million acre-feet MAF above average (about an additional 20 percent of a year's supply).

On September 30, the Northern Sierra 8-Station Precipitation Index Water Year total was 72.7 inches, which is about 145 percent of an average water year (50.0 inches). During September, the total precipitation for the 8-Stations was 0.5 inches, which is about 56 percent of the monthly average. Last year on September 30, the water year total for the 8-Stations was 53.6 inches, or about 107 percent of average.

On September 30, the San Joaquin 5-Station Precipitation Index Water Year total was 65.0 inches, which is about 159 percent of an average water year (40.8 inches). During September, the total precipitation for the 5-Stations was 0.9 inches, which is about 113 percent of the monthly average. Last year on September 30, the water year total for the 5-Stations to was 44.7 inches, or about 110 percent of average.

Selected Cities Precipitation Accumulation as of 09/30/2011 (National Weather Service Water Year: July through June)					
City	Jul 1 to Date 2011 - 2011 (in inches)	% Avg	Jul 1 to Date 2010 - 2010 (in inches)	% Avg	% Avg "Water Year" Jul 1 to Jun 30 2011- 2012
Eureka	0.57	53	1.58	146	1
Redding	0.28	31	0.47	52	1
Sacramento	0.01	3	0.01	3	0
San Francisco	0.11	41	0.06	22	0
Fresno	0.00	0	0.00	0	0
Bakersfield	0.00	0	0.00	0	0
Los Angeles	0.01	3	0.00	0	0
San Diego	0.13	65	0.05	25	1

Key Reservoir Storage (1,000 AF) as of 09/30/2011								
Reservoir	River	Storage	Avg Storage	% Average	Capacity	% Capacity	Flood Control Encroachment	Total Space Available
Trinity Lake	Trinity	2,167	1,700	127	2,448	89	---	281
Shasta Lake	Sacramento	3,341	2,810	119	4,552	73	-1,211	1,211
Lake Oroville	Feather	3,045	2,252	135	3,538	86	-306	493
New Bullards Bar Res	Yuba	701	590	119	966	73	-209	265
Folsom Lake	American	740	558	133	977	76	-237	237
New Melones Res	Stanislaus	2,052	1,331	154	2,420	85	-221	368
Don Pedro Res	Tuolumne	1,632	1,363	120	2,030	80	-140	398
Lake McClure	Merced	767	509	151	1,025	75	-86	258
Millerton Lake	San Joaquin	356	203	176	520	68	-164	164
Pine Flat Res	Kings	614	348	177	1,000	61	-386	386
Isabella	Kern	223	184	121	568	39	-81	345
San Luis Res	(Offstream)	1,516	993	153	2,039	74	---	523

The latest National Weather Service Climate Prediction Center (CPC) long-range, 1-month precipitation outlook for October 2011, issued September 30, 2011, suggests above average rainfall for Northern California and below average rainfall for Southern California. The outlook suggests no tendency for above or below average rainfall for the central part of the State.

### **HYDRO-CLIMATE ANALYSES**

Work continues on the University of California Task Orders for studies supporting climate change hydrology effort. Hourly historical precipitation data was provided to the UC Davis team to facilitate validation of model results. While success has been achieved in coordinating the needed parties to conduct the US Forest Service mandated archeological study in the American River watershed, access issues with the local forester became an issue. It is believed that those issues have been resolved. It is hoped that equipment installation can still be accomplished this year.

The Central Valley Flood Protection Plan (CVFPP) Climate Change Technical Work Group is completing the draft of the technical appendix for the Central Valley Flood Protection Plan. The Work Group committee involved with the development of the method is currently reviewing the document that will accompany the CVFPP. A presentation on the method was made at the 2011 SAME water conference. Another presentation of the material is scheduled as part of the UC Davis Civil and Environmental Department Seminar Series in October.

Efforts continue to coordinate the hydraulics and hydrology efforts of the Department with the United States Army Corps of Engineers (USACE). USACE reviews of interim products and processes have completed or are near completion. Other model development and data analysis continues as well. Initial product delivery is expected by the end of November. Bi-weekly coordination meetings are held to ensure that progress continues. USACE also provides monthly progress reports.

The second set of Bulletin 195 files for the Oracle database was delivered from the consultant to the Department. These files will have the annual extremes data and the information to develop the depth-duration frequency tables and curves. Work continues on the development of a desktop analysis tool to generate new curves and tables when new data is appended to the database. Further meetings have been held with the regional office staff and climate change program staff to develop the appropriate data collection and processing protocols for extremes data. Efforts to coordinate with the Western Region Climate Center (WRCC) continue via email discussions.

### **REAL-TIME DATA COLLECTION NETWORK**

Coordination between NOAA, DWR and Scripps continues as the 21<sup>st</sup> Century Extreme Precipitation Monitoring project moves forward. Progress is being made on the data transfer protocol to take the observed data products from NOAA's Earth Systems Research Lab (ESRL) and distribute them to the National Weather Service and the Department of Water Resources' California Data Exchange Center. ESRL can now distribute data from its lab to NWS field offices via MADIS (Meteorological

Assimilation Data Ingest System). DWR will work with the California Nevada River Forecast Center to coordinate moving data from MADIS to the California Data Exchange Center. Full implementation of the data transfer plan should be executed by the end of the year. Soil moisture sensor installation has begun as have site visits for the snow level radar installations. Scripps and DWR met via teleconference and developed an installation plan for this year's installations. Data logging and communications work with Scripps Institute of Oceanography has achieved products for testing phase. Testing has begun and will continue. The next quarterly meeting between the parties has been set for December.

In September, several gauges were maintained and some needed follow up maintenance work. Staff replaced and rewired snow depth sensors, installed solar panels, and resided gage housing structures at sites located in the Trinity, Sacramento, Yuba, American, Stanislaus and San Joaquin basins. Further work needed to be rescheduled for the Kaiser Pass and Volcanic Knob depth sensors.

### **SYSTEM RE-OPERATION**

The consultant hired to assist in the System Re-Operation study produced a draft study plan in April. The product was reviewed and found to be deficient. The revised plan was delivered at the end of June. The revised study plan was accepted and the next phase of the project has begun. A meeting to discuss timelines and budget for the remaining project was held as well. NHI presented a video of their ideas for reservoir re-operation and system re-operation ideas. Coordination continues via email discussions.

### **RESERVOIR OPERATIONS & RIVER FORECASTING**

*This element supports Flood Emergency Response through a coordinated effort with various agencies' operating reservoirs in the system to enhance reservoir operations. The goal of coordinated operation of the reservoirs will be to reduce peak flood flows downstream of the reservoirs. Additionally, this Element supports Flood Emergency Response through river forecasting activities conducted in coordination with the National Weather Service River Forecast Center located at the Joint Operations Center in Sacramento. By conducting real-time and long-range hydrologic and watershed analyses, this Element provides accurate and timely runoff and river peak flow forecasts.*

### **RESERVOIR COORDINATED OPERATIONS**

On October 6th, the Yuba Feather F-CO program successfully conducted its fourth annual Functional Exercise. This exercise tested the coordination and communications between participants from the Flood Operations Center, State Water Project, Yuba County Water Agency, and U.S. Army Corps of Engineers. The Exercise Planning/Design Team is currently collecting the evaluations from all the participants. Once all the evaluations have been collect, the team will create an After Action Report based on this year's exercise.

The DWR contractor still needs to do some work near the Vernalis erosion site. Stages on the San Joaquin River near Vernalis in September were running higher than what the contractors consider ideal condition. The final work may need to be delayed until reservoir operators significantly reduce their release in late October or early November.

### **LIBRARY OF MODELS (LOM)**

LOM development efforts focused on building functionality for detailed model check-in processes in the web application implementing interactive web based electronic forms to allow users to browse and furnish information regarding, project site, general model set up, modeling project, model data set and software information and finally the model data sets. The content administration web pages for maintaining lookup list and the library setup development are underway. Updating database structure to support the web development is also continued. The database update, web navigation and design components were documented as development progresses.

### **FLOOD OPERATIONS EMERGENCY RESPONSE**

*This element includes all preparation and planning to execute flood fights, deploy teams, provide training, and coordinate local response needs and federal assistance in the event of a flood. This includes maintaining the readiness of the Flood Operations Center and all the staff that may have to staff it in the event of an emergency and assuring local response efforts can be integrated into the State response system.*

### **FLOOD OPERATIONS, TRAINING AND EXERCISES**

The Flood Operations Center (FOC) has been involved in multiple activities in the month of September. The FOC has been regularly participating in multiple Emergency Action Plan Meetings with PG&E. These consisted of the annual face-to-face meeting, table-top exercise, or functional exercise. These requirements are set by the Federal Energy Regulatory Commission for dams that generate power.

Prior to the start of each flood season, the FOC coordinates and holds Pre-Season Flood Coordination Meetings. As of today, the FOC has held six of these meetings in different locations throughout the state. They were held in Hayward, Ventura, Fontana, Stockton, Sacramento, and Yuba City. The Pre-Season Flood Coordination Meetings provide an overview of current and future weather and water conditions, DWR flood preparedness and emergency response activities, flood fighting methods, and other related topics. The last Pre-Season Flood Coordination Meeting is scheduled for November 2 in Eureka.

Each year during the summer, the FOC begins its annual update cycle for the Directory of Flood Officials (DOFO). Letters were sent to Reclamation Districts, Levee Districts, Local Agencies, County Agencies, State Agencies, Federal Agencies, and Tribal Agencies to update any contact information in order to publish the 2011 DOFO. The 2011 DOFO will be published in early Fall 2011.

The FOC is currently in the process of developing standardized county maps outlining the major flood control features, county seats, and other pertinent information. These maps will be used by FOC Management during emergencies when the FOC has been activated.

The FOC is collaborating with Federal, State, and Local partners to develop the Levee Threat Mitigation Process. The purpose of the Levee Threat Mitigation process is to clarify the roles and responsibilities of the FOC and provide a guide to local maintaining agencies, County Offices of Emergency Services, and other DWR Divisions for addressing flood threats as quickly as possible. Contained within the Levee Threat Mitigation Process are the Levee Threat Assessment and Levee Threat Monitoring Guidelines.

In order to improve communication inside of the FOC, staff is presently working with the Decision Support Section to enhance the Communications Log within FOCIS. With this enhanced Communication Log, information flow between the various SEMS Sections will be fine-tuned to improve its efficiency.

With the upcoming flood season looming in the near future, the FOC is preparing by updating the emergency contact cards, Directory of Flood Officials, High Water Notification Call lists, and various other response tools.

Since August, five Flood Operations Branch (FOB) staff members have been participating in the Statewide Flood Management Program (SFMP), to bring additional resources to the DWR SFMP team and to assist with the ambitious timeline. With the SFMP main deliverable, the "Flood Future Report," due in January 2012, FOB staff are augmenting original staff in the program components: Communication & Engagement, Relative Risk, Information Gathering, Financing & Recommendations as well as Project Management. FOB Staff have participated in face to face meetings with Plumas, Riverside, Los Angeles, and Yolo Counties as of early October. Ongoing meetings with our partner in this effort, the US Army Corps of Engineers, continue as the pace increases to bring this comprehensive evaluation of statewide flood risk report in on time. The Flood Future Report will inform state and federal decision makers on the policies and financial investments related to integrated flood management in this state.

## **OUTREACH**

The FOC continues working on the grant guidelines for the Local Flood Emergency Response Projects grant, primarily considering public comments on the draft guidelines. The goal of this grant program is to improve the effectiveness of, and reduce the time required for, emergency response by local agencies. The total amount of funding available in this round is \$10 million, of which \$5 million is specifically to improve emergency communication in the Delta. There is no local match required. We anticipate the guidelines for the grant to be finalized this fall.



## **EMERGENCY RESPONSE SUPPORT**

*This element includes various efforts that will further the Departments understanding of the flood system interactions with water supply systems and conjunctive use programs. It also includes the update of the Central Valley hydrology for use in risk assessment and project development. Another component includes developing a comprehensive plan to response to flood events in the Delta.*

## **CENTRAL VALLEY HYDROLOGY STUDY (CVHS)**

Significant accomplishments over last month include:

- Final comments being submitted as part of independent technical review of the Reservoir/Hydrologic (HEC-ResSim) models.
- HEC built in improvements to HEC-ResSim, as a result of this review.
- Augmentation of gage data and local flow records is underway. District Quality Control on data augmentation and smoothing algorithms is complete.
- Rainfall-runoff model analysis plans are complete and model development is underway.
- Temporal distribution analysis methodology for ungaged watersheds is complete.
- Continuing internal coordination with USACE and hydraulic and hydrologic workgroups.
- Development of design storm methodology for ungaged watersheds is nearly complete.

## **FUNCTIONAL AREA 2 OPERATIONS AND MAINTENANCE**

*Operations and Maintenance is a functional area under FloodSAFE established to ensure project facilities are operated and maintained in good working condition to function as designed. Although Operation and Maintenance has been a long-standing base program within DWR, FloodSAFE has expanded the program and provided additional funding. Historically, Operation and Maintenance projects were undertaken based on a backlog of deferred maintenance. Now, in addition to continuing to work on deferred maintenance, new projects are identified through a number of inspection programs. Operation and maintenance must continue indefinitely into the future, even after the FloodSAFE functional objectives have been achieved although the needs are expected to change over time as system upgrades and modifications are implemented.*

### **CHANNEL MAINTENANCE**

*DWR is responsible for maintaining channel flow capacity for Sacramento River Flood Control Project channels and for performing channel-specific maintenance activities identified in the USACE Operations and Maintenance Manuals, including channel clearance if required to maintain design flow capacity. Channel Maintenance consists of inspection and evaluation, routine operations and maintenance, and implementation of corridor management projects.*

- Mowing at Shrieners (10 acres) is 15% complete, at the Sacramento Bypass (5 acres) is 75 % complete; and at the Natomas Cross Canal (8 acres) is complete.
- Mowing at Tisdale Bypass (400 acres) and Butte Creek (460 acres) is complete.
- Disking at Tisdale Bypass (50 acres) is complete.
- Debris removal (50 miles) is ongoing in the seepage ditches.
- The environmental restoration contract work continues for the Sycamore Creek Habitat Restoration Project

### **FLOOD FACILITIES OPERATION AND MAINTENANCE**

*DWR operates, maintains, and repairs or replaces flood control structures located throughout the Sacramento River Flood Protection Project to ensure readiness in the event of emergencies and that facilities function as designed. Actions include inspection and evaluation, routine operation and maintenance, and non-routine maintenance. Facilities include pumping plants that transfer runoff and excess water from the land-side of levees in the flood system to flood channels; bridges providing access over and to flood facilities; flow gages; and water control structures such as weirs.*

- Completed activities include rip-rap work in Cache Creek, debris removal at Pumping Plant 2 and toe road grading in Putah Creek (13 miles) and MA05 (40 miles).
- Oil change has been done for Pumping Plants 1, 2, 3 and MA17 Pumping Plant.
- Other ongoing activities include grading crown roadway (9 miles, 50%) at Putah Creek and concrete repair at Sutter Yard facility (50%).

## **LEEVE MAINTENANCE**

*This element maintains levees and roads under DWR jurisdiction (State-maintained Maintenance Areas and bypasses) in accordance with USACE Operations and Maintenance Manuals. Annually, after high water recedes, levees are evaluated and repairs are made as necessary. Routine and extraordinary maintenance are also performed as necessary to meet maintenance assurances provided to the federal government.*

- Levee slopes mowed along Tisdale Bypass, and MA07 (18 miles total)
- Weed control by spraying levee slope on Cache Creek and MA03 (25 miles); and spot spraying East levee Sacramento River, MA07, and MA01 (49 miles).
- Vegetation hand cleared along 8 miles of Sutter Bypass and 0.5 miles along West Interceptor Canal.
- Rodent control program work (grouting rodent holes) along Wadsworth Canal (8 miles).
- Rodent control program work (baiting) is ongoing in all areas.
- Levee slopes burned along Tisdale Bypass (6 miles).
- Levee slopes dragged along Cache Creek (5 miles), Unit 4 (6 miles), Putah Creek (15 miles), East Levee Sacramento River (20.4 miles), MA01 (16.3 miles), and Sutter Bypass (26 miles).
- Levee crown roadways graded along Colusa Weir (4 miles) and East Levee Sacramento River (20.4 miles).
- Erosion repairs at MA01 (16 miles), Wadsworth Canal (150 feet), and MA12 (100 feet).

## **ENVIRONMENTAL INITIATIVES**

*DWR is responsible for planning projects in a way that avoids or minimizes environmental impacts, and for obtaining state and federal environmental permits and clearances for projects within the Operations and Maintenance Functional Area. Environmental Initiatives touches all aspects of this functional area and therefore is considered a close partner to the other maintenance elements and their activities. As such, it should be considered a part of each of the other major elements rather than a stand-alone element. Also, with DWR's established open collaborative process, various local, state, and federal agencies examine issues and develop integrated solutions to the complex environmental compliance requirements and resource opportunities as flood control maintenance activities are undertaken. Components include developing and managing environmental programs, and managing mitigation requirements for lands and habitats developed or acquired by the Department to mitigate for flood management maintenance and improvement projects.*

- Repair of the Wadsworth Canal erosion site in Sutter County was started on September 12, 2011. Part of the effort was to remove a sediment shoal along the right bank. When excavating the shoal, about 80 feet of the slope started sloughing into the canal. DWR had to shore up the sloughing with about 30 yards of revetment on the slope. For this project change, amendments to

permits were required. Resource agency staff worked with DWR to provide a quick turn on these amendments and the work was able to continue to completion by September 29, 2011. DWR is following up with additional mitigation for loss of giant garter snake habitat along the 80 foot section.

### **LEVEE REPAIRS**

*The Levee Repairs Program repairs critically damaged levees and proactively repairs other damaged levees that cannot wait for system improvement projects and require rapid repair before the next flood season. Levee repair projects are implemented through collaboration with federal and state resource agencies, USACE, and local agencies. Levee repairs are done under three federal authorized programs; Sacramento River Bank Protection Project (SRBPP), Levee Stability Program (LSP), and PL84-99 Rehabilitation Assistance Program (PL84-99). In addition, the State repairs flood project levees under the Sacramento-San Joaquin Erosion Repairs Project (SSJERP).*

- **Reclamation District 1001, LM 1.5R – Slope Stability**  
Construction work is complete; final walk through occurred on 3 Oct. 2011. Encroachment permit application has been submitted and is in process.
- **Reclamation District 404 – Slurry Wall**  
Slurry wall construction for Reclamation District 404, scheduled for this year construction, is delayed to 2012. The delay is due to a design change requested by the Corps during their encroachment permit review.
- **Reclamation District 2064. RM 71.5 – Rock Slope Protection**  
Rock slope protection construction scheduled to complete this year will extend into next construction season due to high water level in the San Joaquin River. High stage is caused by the required water release into the system to bring the reservoir stage down to create capacity for this storm season. The rock placement will occur this year; placement of in-stream woody material and other planting will delay to 2012.

### **FUNCTIONAL AREA 3 FLOODPLAIN RISK MANAGEMENT**

*The primary purpose of Floodplain Risk Management is to reduce loss of life and property caused by floods and to restore the natural resources and beneficial functions of floodplains by providing comprehensive guidance and technical support and assessing the floodplain management needs and issues of California communities in order to promote a comprehensive and system-wide flood management strategy.*

#### **FLOODPLAIN MANAGEMENT TECHNICAL SUPPORT**

*Floodplain Management Technical Support provides statewide technical support to federal, state and local agencies, and the public for flood hazard maps, levee data and National Flood Insurance Program (NFIP) activities, including the Community Rating System (CRS).*

DWR NFIP Technical Support staff members conducted six Community Assistance Visits with the Cities of Marina, Sand City, Lathrop, Los Angeles, and Richmond, and the County of Plumas. Staff also conducted a “Floodplain Management & Duties of the Local Administrator” workshop in the City of Santa Ana, a “Flood Insurance Training for Agents/Lenders” workshop in the City of Red Bluff, and a “Flood Insurance Training for Community Officials” in the City of San Rafael. Finally, staff members provided 55 hours of technical assistance to community officials, engineers and surveyors, and homeowners. California Levee Database (CLD) staff continues to coordinate the development of the CLD with the United States Army Corps of Engineers (the Corps) National Levee Database and FEMA’s midterm levee inventory. The Corps acknowledged that the CLD is the leading state levee database in the United States. DWR and the Corps continue to grow their databases and exchange datasets and data collection protocols.

#### **FLOODPLAIN EVALUATION AND DELINEATION**

*Floodplain Evaluation and Delineation works to estimate the frequency, depth, and limits of potential flooding throughout the state providing building blocks in terms of floodplain assessments, standards, methodologies, tools, and analyses supporting multiple applications including FloodSAFE programs and projects and FEMA’s National Flood Insurance Program.*

The Central Valley Floodplain Evaluation and Delineation Program has processed and delivered 6 data requests, which have a total 1,900 GB covering a land area of about 3,600 square miles. Staff also completed a draft Mapping Mast Plan at the end of September.

#### **FLOOD RISK NOTIFICATION**

*The Flood Risk Notification Element focuses on communicating flood risk to the public, and local, state and federal agencies to increase flood hazard awareness for areas protected by the State Plan of Flood Control.*

There is nothing new to report.

## **FLOOD RISK PLANNING**

*Flood Risk Planning is focused on incorporating flood risk management into statewide and local land use decision making to identify potential flood hazards and mitigation strategies to reduce flood risks through creating planning approaches and data sets that help agencies, communities, and individuals make better informed decisions.*

Staff is continuing work to submit Hazard Mitigation Grant applications for elevation projects to CalEMA by the October 17, 2011 deadline. Site visits and meetings with individual homeowners were conducted.

## **FUNCTIONAL AREA 4 FLOOD PROJECTS & GRANTS**

*Flood Protection Projects and Grants are responsible for the State's input to project selection and funding. The program is responsible for the majority of physical improvements to the flood management system and provides grant money in the Delta and Statewide. Flood Protection Projects and Projects Grants has been a long-standing DWR base program and is expected to continue indefinitely into the future due to the ongoing need for system improvements and the long-lead time to implement federal flood control projects. The work is based on the acknowledgement that the State will continue to be a significant partner in viable flood management projects in the Central Valley, Delta, and Statewide.*

### **CENTRAL VALLEY FLOOD PROJECTS**

*This element is responsible for the review of flood projects and cost-sharing on federal feasibility studies. It contains three components: Feasibility Studies, Early Implementation Program (EIP) Projects, and Flood Control Projects.*

### **USACE/CVFPB STUDIES**

The State participates and provides cost-share for feasibility studies with USACE and local partners. Several studies are underway and new ones are expected in the near future.

### **American River Common Features GRR**

This study will provide flood improvements for lower American River downstream of the Folsom Dam, Sacramento River downstream of Natomas Cross Canal, and the Natomas Cross Canal to a 200-year level of flood protection. The Post Authorization Change Report (PACR) evaluates alternative plans for the levee system around the Natomas Basin and acts as an interim general reevaluation study to the GRR.

- USACE is responding to minor comments submitted mostly by the USACE district review.
- USACE anticipates having the feasibility scoping meeting (F3) in December 2011. The meeting is not scheduled but USACE anticipates a confirmation from District on a date by the end of October 2011.
- USACE is requesting more time to complete a more realistic schedule for the GRR. No anticipated date of completion has been given at this point.

### **Frazier Creek Feasibility Study**

This study will generate an EIS/EIR and feasibility study to evaluate federal, State, and local interests in planning, designing, mitigating, and improving existing levee system of Frazier Creek/Strathmore Creek in Tulare County.

- Tulare County is working with DWR's Local Levees Assistance Program and is planning on submitting an application prior to the December 8, 2011 deadline.

### **Lower San Joaquin River Feasibility Study**

This study is a coordinated effort by the State, USACE and San Joaquin Area Flood Control Agency (SJAFCA) to investigate feasible 200-year level flood protection alternatives and opportunities for floodplain restoration and recovery, recreational

enhancements, and ecosystem restoration for the city of Stockton and surrounding areas. The cost estimate for the study is \$10.6 million with a projected 2016 completion date.

- The non-federal sponsors are working with USACE to amend the Feasibility Cost Share Agreement (FCSA) to allow In Kind Contributions (IKC) and cash payments to be accelerated to USACE.
- The Local Sponsors have developed a white paper describing a proposed preliminary screening process. This preliminary screening would be used to focus the study efforts and resources toward areas that are more likely to receive federal consideration.
- The current schedule places the Chiefs Report completion date in 2017. The State and local sponsors are pushing for the Chiefs Report to be completed in 2013, in order to use State Bond money for the construction project that will be a result of the feasibility study.

### **Merced County Streams Project-Bear Creek GRR**

This project's purpose is to evaluate options to increase the level of flood protection from a 50-year event to 200-year event for the Merced Urban Area.

- USACE is continuing efforts to secure federal funding by completing a statement of work and seeking to reprogram funds due to the lack of federal funding in the President's budget this fiscal year.

### **Rock Creek/Keefer Slough Feasibility Study**

This study will generate an EIS/EIR and feasibility study to evaluate federal, State, and local interests in planning, designing, mitigating, and improving existing levee systems of White River and Deer Creek in Butte County.

- No change since last month.

### **Sacramento River Flood Control System Evaluation**

The Sacramento River Flood Control System Evaluation (SRFCSE) will concentrate on deficiencies in non-urban levees that may be a threat to small/rural communities due to levee instability as well as identify and prioritize sites that will be presented in a final report. There will be no formulation of projects to correct deficiencies during this study.

- A meeting was held on September 21, 2011 between DWR and the USACE project management team to discuss the appropriate direction for the project scope to take.
- USACE has a limited budget and are working with DWR to consider the best way forward. USACE and DWR are weighing the pros and cons of either a Feasibility Cost Sharing Agreement (FCSA) or Design Agreement (DA). The FCSA would allow a 50/50 cost-share and the use of In-Kind-Contributions (IKC) as non-federal cost-share, but would take an inordinate amount of time. The DA would not allow IKCs, and the State would make cash contributions and would be able to repair projects in a timely manner.



### **Sutter Basin Feasibility Study**

This multipurpose study aims to address levee improvement measures for existing levee systems as well as environmental restoration and recreation opportunities.

- As part of the National Pilot Program, USACE held the Decision Point No. 1 (DP#1) meeting on August 23, 2011 and determined that there is federal interest in the study.
- USACE will hold a Critical Thinking Charette #2 in October 2011 and November 2011 which will last for five full days. The goal of Charette #2 is to complete the final array of alternatives. A Charette is a collaborative session in which a group drafts a solution to a problem, often dividing into sub-groups. Each sub-group then presents its work to the full group. This serves as a way of quickly generating a solution.

### **West Sacramento GRR**

The General Reevaluation Report (GRR) is being conducted to study future work necessary to provide a minimum of 200-year level of protection for the City of West Sacramento.

- The draft FCSA Amendment No. 2 language discussing accelerating funds and In-Kind-Contributions (IKC) to USACE is still being reviewed by DWR. Once the language is agreed upon by DWR, West Sacramento and USACE, Amendment No. 2 will be presented to the Board. This amendment will allow the non-federal sponsor to accelerate funds and IKCs in advance of USACE and increase the study cost to \$10M.
- A Project Feasibility Scoping Meeting (F3) has been tentatively scheduled for late October 2011. A draft EIS/EIR is tentatively scheduled to be ready for review in April 2012 and approved in December 2012.

### **West Stanislaus County - Orestimba Creek Feasibility Study**

This study will evaluate feasible flood protection alternatives for the City of Newman and the surrounding agricultural areas to achieve a 200-year level of flood protection.

- Details of the progress on the National Economic Development (NED) optimization plan will be discussed at the next PDT meeting scheduled for October 13, 2011.

### **White River/Deer Creek Feasibility Study**

This study will generate an EIS/EIR and feasibility study to evaluate federal, State, and local interests in planning, designing, mitigating, and improving existing levee system of White River and Deer Creek in Tulare County.

- Tulare County is working with DWR's Local Levees Assistance Program and is planning to submit an application prior to the December 8, 2011 deadline.

### **Woodland/Lower Cache Creek Feasibility Study**

USACE will develop alternatives for a new feasibility study to determine if there is a National Economic Development (NED) plan that is federally justified. The study will continue efforts suspended in 2004 after local resistance to USACE-selected Flood

Barrier Option alternative. USACE estimates that the new feasibility study will be complete in 2017 with design of a selected alternative to commence in 2017.

- On September 20, 2011, the City of Woodland submitted a revised scope, schedule, and budget plan that identified a study which includes the Cache Creek settling basin. The submittal is currently being reviewed by the USACE/CVFPB Studies Section.

### **Yuba River Basin Project GRR**

The Yuba River Basin Project consists of increasing the level of flood protection in the Yuba River Basin communities of Marysville, Linda, Olivehurst, and Arboga.

- On September 19, 2011, the State was notified that the Assistant Secretary of the Army (ASA) will not be approving early advancement of credit towards the Marysville Ring Levee (MRL). Without being able to use early credit for MRL, the non-federal sponsors will modify the alternative plans in the Yuba River Basin Alternative Formulation Briefing (AFB) Report to:
  - National Economic Development (NED)-This alternative plan consists of the project as authorized by the Water Resources Development Act (WRDA) of 1999 which features along the Yuba River, Feather River, and Jack Slough (Upper Yuba).
  - Locally Preferred Plan (LPP) at NED Cost Share-This alternative plan consists of the Upper Yuba and includes features along the lower Feather River, Bear River, and Western Pacific Interceptor (Lower Yuba). However, this alternative plan would result in the loss of approximately \$80M of credit for non-federal sponsors.
  - LPP at Full Cost Share-This alternative plan consists of the Upper Yuba and Lower Yuba River features and would result in approximately \$80M of credit towards MRL.
  - The non-federal Sponsors will make a decision on which alternative plan to select as the Tentatively Selected Plan and advance the study forward.

### **EARLY IMPLEMENTATION PROGRAM (EIP) PROJECTS**

EIP includes projects that are ready to proceed in advance of CVFPP. An element of approval for these projects ensures that they do not eliminate opportunities or prejudice the flood risk reduction alternatives that would provide regional or system wide benefits.

#### **Levee District 1 - Setback Levee at Starbend Feather River (LD-1)**

Levee District 1 constructed a 3,400 foot long setback levee at Star Bend near RM 18.0 on the right bank of the Feather River.

- The LD-1 project construction is now complete and ready to move into the “project closeout” process.

#### **Reclamation District 17 - 100-Year Seepage Area Project (RD-17)**

The RD-17 levees have unacceptably low factors of safety for under- and through-seepage. These issues are being addressed by constructing seepage berms, slurry walls, and setback levees.

- DWR is currently working with RD-17 to process a payment and move forward into 60 percent design for Phase III.

### **Three Rivers Levee Improvement Authority – Feather River (TRLIA-FR)**

The Feather River Levee Improvement Project (FRLIP) will offer 200-year flood event protection for both Highways 65 and 70. FRLIP will lower water surface elevations by 1.5 feet along the Feather River and the lower Yuba River benefiting the communities of Olivehurst, Linda, Plumas Lake, Marysville, and Yuba City. This project includes one of the largest setback levees west of the Mississippi River and creates 1,600 acres for site mitigation, agricultural use, and habitat.

- Construction of the Vegetated Wave Buffer, Segment 2, is now complete and a post construction job-walk will be scheduled for October 2011.
- CVFPB has required TRLIA to remove all existing asbestos concrete piping left in the floodway within the setback area and all PVC irrigation lines within 100 feet from the water side toe of the setback levee as well as removing visible PVC risers. As of October 7, 2011, TRLIA has removed over 8,000 linear feet of asbestos and PVC pipes and is expected to complete this work by the end of October 2011.

### **Three Rivers Levee Improvement Authority - Upper Yuba River (TRLIA-YR)**

The Upper Yuba River Levee Improvement Project will complete a levee system designed to provide 200-year level of protection for 40,000 residents in South Yuba County.

- TRLIA awarded the construction contract to the lowest bidder Magnus Pacific, notice to proceed was granted, construction began in June 2011.
- Cutoff Walls have been completed and embankment work is underway and scheduled to be completed by the end of October 2011.

### **Sacramento Area Flood Control Agency - Natomas Cross Canal (SAFCA-NCC)**

This project, part of the Natomas Levee Improvement Program, would improve the level of flood control protection to the Natomas Basin by providing at least 200-year level of flood protection. This is accomplished by installing cutoff walls to prevent seepage, underseepage, and raise the levee.

- SAFCA submitted the NCC Project Completion Report in June 2011. Comments from reviewers have been received with the exception of those from the Board.

### **Sacramento Area Flood Control Agency - Capital Outlay (SAFCA-CO)**

This project, a part of the Natomas Levee Improvement Program, would improve the level of flood control protection to the Natomas Basin by providing at least 200-year level of flood protection. This is accomplished by installing cutoff walls to prevent through seepage, underseepage, and raise the levee. SAFCA plans to complete components to Element 12A (approximately RM 67) along the Sacramento River in 2011 and have USACE complete the remainder. This is estimated to occur in 2014.

- Construction is currently underway on Elements 10 to 12A (I5 to Powerline Rd). Sukut Construction has begun cutoff wall construction (total contract amount - \$19.2M). Construction is approximately 12 percent completed.
- Construction is continuing by Nordic Construction on Elements 6B to 9A (Teal Bend to I5) and is approximately 75 percent complete.

### **West Sacramento Area Flood Control Agency, Capital Outlay (WSAFCA-CO)**

The CHP Academy, the Rivers and the I-Street Bridge projects are part of the North Area Plan and were selected to be completed under EIP. All three projects are designed to provide 200-year level of protection for about 47,000 residents. The I-Street Bridge project was completed in November 2008. Plans and specifications are currently nearing completion for the CHP Academy and The Rivers projects. The two projects are scheduled for construction in June 2011 and are expected to be completed in December 2011.

- Cut off wall operations are complete at The Rivers and CHP Academy Projects and levee embankment construction is scheduled to be complete in early November 2011.

### **USACE/CVFPB PROJECTS**

The Board continues to participate with USACE on non-federal cost-share funding for projects to upgrade the State-federal flood management system in the Central Valley.

#### **American River Common Features Project**

The American River Common Features Project is improving the levee system along the American and Sacramento Rivers in Sacramento.

- Construction at Site R5 is nearing completion and to be completed by November 2011.
- Negotiations to obtain temporary easements for construction at Howe Ave and Site R6 are currently underway with Sacramento County.
- Construction contracts for sites R6 and Howe Ave have been awarded. Construction is scheduled for summer 2012.
- Remedial monitoring reports (RMR) for remaining Phase 2 and Phase 3 sites have been released and are undergoing stakeholder review.
- Construction for remaining Phase 2 and Phase 3 sites is scheduled for FY13 and FY14. Negotiations to obtain easements and right of ways for Phase 2 and Phase 3 sites with USACE real estate support are underway.

#### **Folsom Dam Raise and Bridge Element**

The Folsom Dam Raise and Bridge Element Project provide Flood Damage Reduction and Dam Safety benefits to Sacramento.

- A Project Partnership Agreement (PPA) is scheduled for discussion and execution in 2012 for the dam raise portion of the project.
- Design of temperature control shutters are scheduled for completion in 2013. The State has expressed no interest in participating as a sponsor for the environmental mitigation and temperature control shutter portion of the Folsom Dam Raise project.

#### **Folsom Dam Modifications (Joint Federal Project)**

The Folsom Dam Modifications Project (Folsom Dam Joint Federal Project) provides Flood Damage Reduction and Dam Safety benefits to Sacramento.

- The estimated completion for the JFP is October 2017.

- Production blasting, excavation, and rock anchor installations in the Control Structure area continue.
  - Due to a Folsom City ordinance against traffic impacts during the holidays, production blasting during the month of December may be impacted.
  - Poor results of a cement mix design at TSC (Denver) might push the return of the final mix design for the Control Structure by at least 30 days.
  - Recovery/acceleration options were received from the Contractor.
  - Negotiations of bulkhead gate design revisions and accelerations continue. Award has been delayed from September 30, 2011 to October 11, 2011, due to additional engineering issues.
  - Conduit installations started at the Generator building and the concrete batch plant is being mobilized.
  - Extended shifts for the excavation construction started on August 15, 2011. Double shifts started on September 12, 2011.
- Joint Agency Schedule Implementation Team continues to seek out opportunities to optimize the construction schedule.
  - Folsom Prison land lease is being processed with DGS, DWR and DCR. Lease signing is scheduled for March 2012.
  - Completed 10 percent design for secondary access via Folsom Lake Crossing.
- Project Development Team (PDT) meetings are held monthly for the Flood Management Operations Study. An additional management group will be formed to address issues that the PDT cannot.
- Engineering designs for the chute, stilling basin and approach channel are on schedule and are about 65 percent complete.
  - 65 percent design review for Chute and Stilling Basin is scheduled for October 31, 2011 (one month ahead of schedule).
  - The design of the transload facility for the cofferdam contract is in progress. Options for the transload facility will be completed by October 14, 2011.
- Federal Air Quality Standards—the updated calculations of projected air emissions were completed on September 30, 2011 and calculations for the transload facility will be completed by October 31, 2011. Indications are positive that emissions exceedance can be adequately mitigated without delaying the project.
- FY12 Funding—Federal capability predictions for FY12 are \$28M and the President’s Budget is \$21M. A PCA Amendment, which is proposed to allow the Non-federal Partner to accelerate funding to alleviate the shortfall, is being finalized.

**Marysville Ring Levee Improvement Project**

The Marysville Ring Levee Project provides 200-year or greater flood protection to the City of Marysville by constructing cut-off walls and levee strengthening and reshaping features to the existing levee system surrounding the Marysville urban area.

- Construction for Phase 1 is currently ongoing with complete Phase 1 completion scheduled for fall 2012.

- The USACE Levee Safety Department is currently drafting procedures and policy to test approximately 2000 LF of SCB wall installed by Raito Inc. for verticality and continuity. Local and State Partners are currently in negotiation with USACE and ASA to resolve the denial of Section 103 Deferral extension and Section 104 credit denial. The State and Locals have been instructed to apply for Section 221 credit following the denial of Section 3041 credit by the ASA (CW).

### **Mid-Valley Area Levee Reconstruction Project**

The Mid-Valley Reconstruction Project extends from the Tisdale Bypass to the Sacramento Bypass and includes levees on Sacramento River, Feather River, Yolo and Sutter Bypasses, and Knights Landing Ridge Cut.

- USACE is completing the transfer inspection report for Area 1 (RD-1500). This portion of the project is scheduled to be turned over to the State by the end of 2011.

### **South Sacramento Streams Project**

The South Sacramento County Streams Project will increase the level of flood protection from 1-in-50-years to 1-in-200-years for the urbanized area of South Sacramento County and an area to the south and east of the City of Sacramento.

- The State acquired real estate from Union Pacific Rail Road (UPRR) and awarded a construction contract before the end of September 2011 to construct 2,850 feet of floodwall along Morrison Creek and UPRR tracks in 2012. Environmental documents were completed and approved by the SAFCA board and CVFPB in August 2011. The project is scheduled to begin in May 2012.
- Complications with right of way limitations on the Unionhouse Creek design along 4,500 feet of the creek have led the local sponsor to investigate alternatives for flood control along Unionhouse Creek. Therefore, SAFCA and/or the City of Sacramento may pursue flood control improvements apart from USACE, and request that this portion of the project be removed from the USACE scope of authorization. Details on the plan are still pending finalization.
- USACE, the State, and SAFCA have initiated the project team's focus to proceed with the design of flood control improvements along approximately two miles of Florin Creek as the next step in this project.

### **West Sacramento Area Project, Slip Repair**

- The contractor is currently importing fill and installing pipe at the north repair site. Final grading will start at the end of the week of October 3, 2011, which will be followed by installation of AB, site cleanup, and hydro seed. It is scheduled for completion by Friday, October 14, 2011.

## **STATEWIDE FLOOD PROGRAMS**

*The Statewide Flood Programs provide financial support to local entities for flood and ecosystem restoration related projects throughout the State. These programs include Flood Control Subventions Program, Flood Corridor Program, Local Levee Assistance Program, and Yuba-Feather Flood Protection Program.*

### **FLOOD CORRIDOR PROGRAM (FCP)**

The Flood Corridor Program provides local assistance grants to local governments, special districts, and non-profit organizations for flood risk reduction projects using non-structural methods. Each project must also include an ecosystem restoration or agricultural land conservation component.

- The FY 10-11 Funding Cycle request for grant-funded project proposals closed in March. A total of 36 proposals were submitted. FCP staff members completed site visits and evaluations for all 36 proposals, with staff from other DWR regional offices and from CA Department of Fish and Game, Cal Emergency Management Agency, and CA Department of Conservation assisting. Four consensus meetings were held in May and June.
- Five Management Team meetings, including FloodSAFE and DFM managers, were held in June 2011 through September 2011 to discuss funding recommendations. Draft funding recommendations are expected to be announced in November 2011.

### **FLOOD CONTROL SUBVENTIONS PROGRAM (FCSP)**

The Flood Control Subventions Program provides financial assistance to local agencies cooperating in the construction of federally authorized flood control projects outside of the Central Valley and the State Plan of Flood Control.

- Completed review of seven claims and approved payment in the amount of \$302,805.
- Ten claims for \$27.97M are currently under review.
- No audit payments were processed.
- Two new claims for \$3.14M were received.
- Thirty claims for \$131.43M are pending review.
- Work on revising Program Guidelines is in progress.

### **LOCAL LEVEE ASSISTANCE PROGRAM (LLAP)**

LLAP provides financial assistance to local agencies to evaluate and perform urgent repair on their flood control facilities outside of the Central Valley and the State Plan of Flood Control.

- Contra Costa County submitted invoice #4. This is the final invoice for the project. It has been reviewed and approved by the LLAP Project Manager. Contra Costa County's Amendment No. 1 requires the Project Manager to encumber additional funds into the project account. The Project Manager has worked closely with DWR staff to develop the necessary documents to encumber the funds. The documents are now being processed by the Budget Office. Once funds are encumbered, invoice #4 will be paid.
- City of Oroville grant agreement for the Evaluation of the City of Oroville Levee was received, and DWR approval signatures and have been fully executed. Work on the project has begun.
- Humboldt County submitted a Final Geotechnical Report and Project Completion Report. Payment has been made of the Final Invoice. A close out letter has been sent and a request for release of retention funds has been sent to the Budget Office.

## **YUBA-FEATHER FLOOD PROTECTION PROGRAM (YFFPP)**

YFFPP provides Proposition 13 financial assistance to local entities demonstrating non-structural flood management projects showing a potential significant reduction of peak flood flows, flood stage, flood risk (including wildlife habitat enhancement and/or agricultural land preservation) on the Yuba and Feather Rivers.

- Files for the Yuba County Water Agency (YCWA) Supplemental Flood Control Feasibility Study are being archived. Staff is currently determining retention amount left over from the completed project. Project closeout will follow.
- USACE submitted invoice #3 for the Sutter Basin Feasibility Study for first quarter tasks for FY12. The invoice has been reviewed and processed.
- YCWA submitted invoices #24 & #3 for the FCO Design and Implementation projects. A consultant was contacted for further clarification on specific elements of invoice. The invoice is currently awaiting review for further processing.
- YFFPP staff responded to public records request by supplying supporting documents for the TRLIA Phase II Implementation project.

## **PROGRAM SUPPORT**

*The program support function is designed to ensure the various programs and their projects receive sufficient technical and administrative support to be successful. These support functions are Grant Guidelines, Environmental Services, Technical Assistance, and Federal Coordination.*

## **GRANT GUIDELINES**

LLAP and FCSP are all in process of finalizing their program guidelines.

- The LLAP 2011 Project Solicitation Package (PSP) was released on September 7, 2011. DWR staff has developed the PSP interface in the Bond Management System (BMS). Public workshops have been scheduled and presentations have been developed for the workshops. Staff continues to answer questions and assist applicants as an ongoing task.

## **ENVIRONMENTAL SUPPORT**

FCP has a number of environmental resources that provide technical assistance to various FPO projects.

- Most activities are described under the individual project headings.
- USACE has increased the cost estimate for completion of the Planning, Engineering, and Design (PED) phase of the Hamilton City Flood Risk Reduction and Ecosystem Restoration Project, raising the State match request by approximately \$59,000 for this phase.

## **TECHNICAL ASSISTANCE**

LLAP has resources to provide technical assistance in flood modeling, GIS, technical consultation, design criteria development, and databases to various programs in FPO.

- The final AB 1788 regulations package has been approved by DFM chain of command and has been submitted to the Office of Administrative Law (OAL).



OAL will publish the Notice of Regulatory Action in the Notice Register on October 7, 2011.

- Staff participated in levee design criteria development meetings and introduced the; status of the Levee Design Criteria (LDC) development in Flood Project Development Branch meeting.

### **DELTA FLOOD PROJECTS**

*This is a grants program that works with more than 60 reclamation districts in the Delta and Suisun Marsh to maintain and improve the flood control system and provide protection to public and private investments in the Delta including water supply, habitat, and wildlife. The program, through its two major components; Delta Levees Maintenance Subventions Program and Delta Levees Special Flood Control Projects, works with the local agencies to maintain, plan and complete levee rehabilitation projects. One of the requirements to qualify for available funds is the project to result in no net loss of habitat in the Delta. Additional responsibilities under the Bay-Delta Levees Branch are in support of the levee system and habitat development; improve the flood fight capability of the Delta through planning, cooperative efforts, encouraging the development of emergency response plans for each Delta island, and conduct studies and contract efforts necessary for program purposes.*

### **DELTA LEVEES MAINTENANCE SUBVENTION PROGRAM**

DWR staff, on behalf of the Central Valley Flood Protection Board, initiates and manages work agreements to fund levee maintenance and rehabilitation. To date, the status of work agreements is as follows:

#### **Work Agreements for FY 2009-2010**

- DWR staff has completed 62 joint levee inspections and received DFG approval for 61 claims. Payments will be processed by staff as DFG approves the claims.
- Staff has received 62 final claims for the maintenance work totaling \$13M and, to date, 61 reimbursements have been paid totaling \$9.2M.

#### **Work Agreements for FY 2010-2011**

- DWR staff has mailed work agreements to 68 reclamation district and has received signed work agreements from 65 reclamation districts.
- To date staff has received final claims from 12 reclamation districts totaling \$1.9M. Staff will continue to audit final claims and conduct joint levee inspections.

#### **Work Agreements for FY 2011-2012**

- The FY 11-12 funding allocation plan presented to CVFPB on September 23, 2011 has been approved by the Board. The plan allocates the funding of \$12M to 66 reclamation districts.
- The Board adopted the updated Guidelines: Procedures and Criteria dated September 23, 2011. Staff has mailed copies of the adopted guidelines to participants and stakeholders of the Subventions Program.

## **DELTA LEVEES SPECIAL FLOOD CONTROL PROJECTS**

DWR initiates and manages project funding agreements in support of local agencies' levee rehabilitation, habitat, or other projects. DWR is executing agreements authorizing the work proposed under Project Solicitation Packages.

- Current information can be found at <http://www.water.ca.gov/floodmgmt/dsmo/bdlb/spp/>

## FUNCTIONAL AREA 5 EVALUATION & ENGINEERING

*Evaluation & Engineering is a FloodSAFE Functional Area established to address assessments of existing flood management facilities to identify deficiencies and needed improvements. This is a new Functional Area that is expected to continue after the FloodSAFE foundational objectives are met. Functional Area activities are performed in partnership with the USACE, which prior to FloodSAFE, conducted most evaluations and engineering for existing facilities. This Functional Area is based on the acknowledgement that changing conditions, new knowledge about system performance, and eventual facility deterioration will demand continued evaluation and engineering services.*

### **URBAN LEVEE EVALUATION (ULE)**

*DWR is required to evaluate the current level of performance of the State-federal flood protection system in the Central Valley. Urban levees are levees that provide protection to developed areas with a population of at least 10,000 people. The evaluation of current urban levee performance is to include an estimate of the risk of levee failure, a discussion of the inspection and reviews performed, and recommendations regarding the levees and future work activities. The geotechnical engineering being performed will help flood managers understand the overall flood risks to populated areas in the Central Valley and consider alternative changes to the flood management system to better manage the risks.*

ULE is evaluating 470 miles of urban levees for hidden defects. The 470 miles include State-Federal project levees as well as associated non-project levees that provide protection to urban areas receiving some protection from the State-Federal flood system. Urban levees are being evaluated to determine whether they meet defined geotechnical criteria and, where needed, identify remedial measures, including cost estimates, to meet the defined geotechnical criteria. The information being developed will be used in support of the Central Valley Flood Management Planning Program to inform development of two required documents: the Flood Control System Status Report and the Central Valley Flood Protection Plan.

<b>Geotechnical Evaluation Reports</b>			
<b>Study Area</b>	<b>% Complete</b>	<b>Study Area</b>	<b>% Complete</b>
Chico	31	<b>NEMDC East</b>	<b>41</b>
<b>Marysville</b>	<b>44</b>	Natomas	15
Sutter	35	<b>Bear Creek</b>	<b>26</b>
<b>RD 784</b>	<b>42</b>	<b>Calaveras River</b>	<b>26</b>
<b>Davis</b>	<b>11</b>	<b>RD 404</b>	<b>39</b>
<b>Woodland</b>	<b>11</b>	RD 17	50
American River	40	<b>Stockton Non-Project</b>	<b>33</b>
West Sacramento	97	<b>W. Sac. Non-Project</b>	<b>14</b>
<b>Sacramento River</b>	<b>48</b>	South Sac. Streams	12

Changes shown in bold.

- Overall, ULE is 68% complete.
- The West Sacramento GER (Volumes 1 and 2), the template for all GERs has received comments from USACE and is continuing to be finalized.
- Drilling occurred in Davis, Woodland, West Sacramento (non-project levees), and Stockton during this reporting period. All drilling is anticipated to be completed by the end of November.
- Schedules for completion of the Geotechnical Evaluation Reports (GERs) Program are continuing to be modified with the current delivery date of the GERs scheduled for the middle of 2013.
- Marysville, Sacramento River, RD 784, and RD 404 GERs continue to be active. The NEMDC east GER was initiated. The American River GER will be initiated during the next reporting period.

### **NON-URBAN LEVEE EVALUATION (NULE)**

*DWR is required to evaluate the current level of performance of the State-federal flood protection system in the Central Valley. Non-urban levees are levees that provide protection to agricultural areas and developed areas with a population of less than 10,000 people. The evaluation of current system performance is to include an estimate of the risk of levee failure, a discussion of the inspection and reviews performed, and recommendations regarding the levees and future work activities. The geotechnical engineering being performed will help flood managers understand the overall flood risks to populated areas in the Central Valley and consider alternative changes to the flood management system to better manage the risks.*

NULE is evaluating 1,620 miles of non-urban levees for hidden defects. The non-urban levees being evaluated include State-Federal project levees and associated non-project levees that also provide protection to non-urban areas receiving some protection from the State-Federal flood protection system. Non-urban levees are being evaluated to determine whether they meet defined geotechnical criteria and, where needed, identify remedial measures, including cost estimates, to achieve the defined geotechnical criteria.

The information being developed will be used in support of the Central Valley Flood Management Planning Program to inform development of two required documents: 1) the Flood Control System Status Report and 2) the Central Valley Flood Protection Plan.

- Overall, Non-Urban Levee Evaluations are 49% complete.
- Drilling activities occurred during this reporting period in Yolo, Colusa, Sutter, Butte, San Joaquin, and Fresno Counties and are anticipated to continue in October.
- Schedules for completion of the GORs are continuing to be prepared with the current delivery date of the GORs scheduled for the middle of 2013.

## **TECHNICAL REVIEW**

*Geotechnical analyses are being conducted on behalf of the CVFPB on an “as-needed” basis and to support proposed and ongoing capital improvement projects. Collaboration with the USACE is occurring with on-going geotechnical studies, including review of associated documents that may impact the CVFPP.*

- Technical reviews are currently being performed for SAFCA (AR Common Features), the Sutter Butte Area Flood Control Agency, and the (LSJFS) Lower San Joaquin Feasibility Study, RD 784, and RD 17.
- ULE/NULE also provided CVFPP fragility curves to USACE for the LSJFS.

## **TECHNICAL POLICY**

*A statewide seismic policy is being developed for levee performance, emergency levee remediation, and long-term levee remediation. Interim Levee Design Criteria (ILDC) are also being developed to guide local urban levee improvement projects. Research is being conducted to resolve gaps in knowledge associated with the effects that woody vegetation growing on or near levees has on levee integrity; and provide technical support for the development of vegetation management policies as part of the CVFPP.*

- Vegetation management policies and research continues.
- With the completion of the draft West Sacramento GER, seismic studies are continuing in the study area for an overall general cost estimate for seismic deficiencies and cost benefit analysis of these fixes.
- Provided support for development of policy papers and technical data for the CVFPP and participated in various FloodSAFE FAXCTs (Functional Area Cross Coordination Teams).

## **FUNCTIONAL AREA 6 FLOOD MANAGEMENT PLANNING AND CONSERVATION STRATEGY**

*The Flood Management Planning and Conservation Strategy Functional Area refer to the planning and analysis necessary to evaluate flood systems as complete systems consistent with the intent of the FloodSAFE Implementation Plan rather than a set of individual, isolated projects. This functional area consists of three elements: Central Valley Flood Management Planning (CVFMP) Program, Statewide Integrated Flood Management Planning and Conservation Strategies.*

### **CENTRAL VALLEY FLOOD MANAGEMENT PLANNING (CVFMP)**

*The CVFMP Program is one of several programs being managed within FloodSAFE California. The CVFMP Program addresses most of the flood-related planning activities that were authorized by the Legislature during the 2007/2008 session within much of the Central Valley. The CVFMP Program consists of two primary projects - State Plan of Flood Control (SPFC) and the Central Valley Flood Protection Plan (CVFPP).*

### **STATE PLAN OF FLOOD CONTROL (SPFC)**

The SPFC includes two major upcoming deliverables: 1) Flood Control Systems Status Report (FCSSR) and 2) Living with Risk: California and Flood Protection in the Central Valley, 1848-2007 Report (History Report).

- FCSSR – The release of the Public Draft of the FCSSR will coincide with the release of the Public Draft 2012 CVFPP in January 2012.
- History Report - An administrative draft of the history document for DWR and Board review was released for internal review on August 31, 2011 with a release of a public review draft scheduled for early 2012.

### **CENTRAL VALLEY FLOOD PROTECTION PLAN (CVFPP)**

The CVFPP reflects a system-wide approach to protecting lands currently protected from flooding by the SPFC. The initial plan is to be completed by January 1, 2012, and updated every five years thereafter.

- Work is on schedule for completing the Draft CVFPP to be provided to the Board and released to the public review in early January 2012. A webinar is scheduled for November 2<sup>nd</sup> with the CVFPP Regional Working Groups to describe initial findings of the plan and two workshops are planned for late November.
- Internal DWR review of the Administrative Draft Program Environmental Impact Report (PEIR) was completed in early October and comments are being incorporated. A second Administrative Draft PEIR is scheduled to be released on January 1, 2012.
- Coordination continues between the CVFPP and Corps Product Delivery Teams on the Project Management Plan (PMP) for the Central Valley Integrated Flood Management Study (CVIFMS). The Corps conveyed the draft final CVIFMS PMP to DWR in mid-August. Approval to an amendment to the existing CVIFMS Feasibility Cost Share Agreement (FCSA) will be considered by Central Valley Flood Protection Board in October or December 2011.
- A public education video produced in collaboration with DWR by the Water Education Foundation highlighting Central Valley flood management issues and

planning efforts will be aired on November 9, 11 and 13, 2011 by Sacramento Public Broadcasting Service station KVIE.

### **STATEWIDE INTEGRATED FLOOD MANAGEMENT PLANNING**

*The Statewide Integrated Flood Management Planning Program (SFMP) will assess the flood risk to life and property statewide, and develop and guide the state's flood risk management strategic policies and investment decisions. The program will inventory existing and future flood management needs in the state's regions, identify opportunities for integrated flood management, and formulate potential integrated flood management solutions. The major work product is a report titled "Recommendations for Improving and Sustaining Integrated Flood Management in California" (Recommendations Report). In addition, SFMP includes integration of flood-related information into the California Water Plan.*

### **FLOOD FUTURE REPORT**

- Work is ongoing for the interview of approximately 104 flood control agencies. The interviews are intended to gather flood management information on every county in the State. The information will help inform the Flood Future Report.
- The Recommendations Team is working on the development of the categories for recommendations that will be included in the Flood Future Report.
- Work continues on the Exposure to Flood Hazard Analysis, in which the team is documenting how many people and properties are within the 100-year and 500-year FEMA floodplains. A draft Technical Memorandum will be produced by November 1, 2011.
- Work continues on development of the storyboard for the Flood Future Report. A Public Review draft will be completed by May 15, 2012.

### **INTEGRATED FLOOD MANAGEMENT IN THE CALIFORNIA WATER PLAN**

- A meeting of the Flood Caucus will be held at the California Water Plan Plenary on October 26-27, 2011. The Design and Work teams and the Flood Caucus membership are being formed.

### **CONSERVATION STRATEGIES**

*The Conservation Strategies Element is designed to provide support and integrate environmental stewardship into the CVFMP Program. Therefore, major progress, such as the status of key documents, progress on major milestones, and upcoming events, is described under the Central Valley Flood Management Planning section above.*

### **CENTRAL VALLEY CONSERVATION PLANNING**

#### **Conservation Framework**

The Conservation Framework was released for FAXCT4 review on September 22<sup>nd</sup>. The next draft of the Conservation Framework is due to the consultant for final editing and formatting in late October. After final editing is complete, the documents will be released to the CVFPP workgroups.

## **Conservation Strategy Outreach**

- Staff has engaged the services of Kearns & West to develop a longer-term outreach approach for the Conservation Strategy. This firm has already helped support the development of the CVFPP and the Conservation Framework. This month, these consultants provided a draft schedule of potential outreach elements. This outreach effort will be developed in coordination with other CVFPP and FloodSAFE outreach efforts.
- Staff is actively sharing information about progress and ongoing activities with a variety of organizations and groups. In addition to presentations related to RAMP and the Conservation Strategy's Interagency Advisory Committee (see below), staff briefed the California Levees Roundtable about medium scale vegetation mapping efforts, quantification of shaded riverine aquatic habitat along the Sacramento River and floodplain restoration opportunity analyses.

## **Interagency Advisory Committee (IAC)**

The IAC met for the third time on September 21<sup>st</sup>. FESSRO staff updated the committee on release dates of the Administrative Working Draft of the Central Valley Flood Protection Plan (CVFPP) and the Conservation Framework; summarized recent changes to the August 5<sup>th</sup> draft Conservation Framework; and provided more information on several technical components of the Conservation Framework. These technical components concerned riparian vegetation mapping, shaded riverine aquatic habitat connectivity, and floodplain restoration opportunity analyses. IAC members also provided additional comments on the current draft of the Conservation Framework document.

## **Vegetation Management**

In collaboration with DFM, staff prepared revised vegetation management text for inclusion in the Conservation Framework. Staff continued to participate in preparation of the vegetation management white paper as part of the Levees Roundtable vegetation management subcommittee.

## **REGIONAL CONSERVATION PLANNING**

### **Regional Advanced Mitigation Planning (RAMP)**

- DWR is collaborating with other agencies to develop a RAMP communication strategy. The work is being coordinated with the FloodSAFE Communications office.
- Staff is actively engaged in communicating information about RAMP to other organizations. Recent presentations were given at the USACE's Annual California Regulatory Coordination Meeting and to DWR Flood Maintenance Office staff related to ongoing flood and conservation planning in Butte, Yuba, and Sutter counties. Staff also submitted abstracts for presentations at three upcoming professional conferences.
- The bi-monthly meeting of the RAMP Work Groups was held on September 15<sup>th</sup>. An initial impact analysis and the "greenprint" showing other conservation planning priorities is now complete for the pilot area. The pilot area subcommittee met on September 26<sup>th</sup> to review these items.



### **Corridor Management Strategies (in coordination with DFM)**

Staff participated in the Lower Feather River Corridor Management Plan (LFRCMP) Work Group monthly meeting. Both DFM and FESSRO continue to work together to manage this project. The Work Group discussed draft CMP revisions and the Feather River Maintainer's Meeting on floodway maintenance priorities, potential restoration features, and trends in the Feather River channel. In addition, the Work Group received updates on flood hydraulic modeling, hydrodynamic modeling, and bathymetry assessment; the river meander model; and Permitting Subcommittee current activities. The regulatory members of the Permitting Subcommittee will meet in October to discuss the restoration component of the CMP.

## **SCIENTIFIC AND PLANNING INFORMATION**

### **Medium-scale vegetation mapping**

FES has received the latest draft version of the medium-scale riparian vegetation map. The Riparian Habitat Joint Venture (RHJV) coordinator continues to collect agency member comments for the map before final map production. Once the map is made final, the map will be available to outside parties through DFG's online data-sharing system (BIOS). Vegetation map data was used for a RHJV presentation at the Flood Management Association Conference on riparian habitat and flood risk reduction.

### **Fine-scale vegetation mapping**

Field mapping teams continue working in both the Sacramento and San Joaquin study areas.

### **Vegetation analysis and conservation**

Staff is working on a connectivity analysis of shaded riverine habitat (SRA) to be included with the Conservation Framework attachments. Staff is also developing data and GIS layers to inform planning, conservation and potential impacts to riparian brush rabbit and riparian woodrat habitat.

### **Fish Passage**

A final edit of the Flood System Fish Passage Report is underway and will be complete by the late October deadline.

## **FUNCTIONAL AREA 7    LEGISLATION, BUDGETS, AND COMMUNICATION**

*The primary goal of the Legislation, Budget, and Communication functional area is to facilitate legislation, budget, and communication matters to aid the efficient work of all functional areas in improving flood safety. This functional area will work to secure sustainable funding to implement the FloodSAFE initiative and to secure legislative support for all other functional areas that must continue indefinitely into the future. It is also responsible for coordination and public outreach consistency.*

### **COMMUNICATION AND BRIEFING MATERIALS**

*While each functional area will conduct some of its own coordination and outreach on individual programs, the Communication element of area 7 provides assistance and support to ensure consistency. Communications and coordination take place internally, as well as externally with partner agencies on various aspects of the FloodSAFE program; including status updates, achievements and accomplishments, and upcoming milestones, with frequency ranging from weeks to years.*

- No new information.

### **FUNDING ADVOCACY & AGENCIES' ALIGNMENT**

*Effective coordination between State, federal, and local agencies will be required at all stages from project concept through completion of construction. FloodSAFE implementation will not be possible without federal funding. Proposition 1E requires that the State secure the maximum feasible amounts of federal and local matching funds. This group will, in coordination with DWR Executive Office, serve as the primary State advocate for securing the necessary federal funding. Primary federal partners also include USACE and FEMA.*

- In October, DWR staff traveled to Washington, DC to meet with the Office of Management and Budget, the Assistant Secretary of the Army, US Army Corps of Engineers (USACE) headquarters staff, and staff from various congressional offices and committees to discuss fiscal year 2013 federal funding needs for critical flood control projects/studies that are cost shared between USACE and the State of California. Also discussed were crediting policy, vegetation policy, Section 408 policy, and DWR's proposed regional crediting legislation.
- Staff also prepared the October 13, 2011 letter from John Laird, Secretary for California Natural Resources Agency, to Senator Dianne Feinstein and Senator Barbara Boxer concerning the Section 104 crediting issue.

### **LEGISLATION LIAISON & LEGAL**

*The Legislature is a key player in the implementation of the FloodSAFE initiative. Effective communication and reporting of plans and progress will aid the Legislature in funding flood management activities and with direction for future implementation. This element will also address legal issues that need to be resolved for progression of the FloodSAFE initiative.*

- No new information.

### **PROGRAM MANAGEMENT, BUDGET, & FISCAL SERVICES**

*DWR is accountable for efficient management and expenditure of State funds. Preparing bond budgets and tracking of bond expenditures is essential to document investments of taxpayer dollars. This element provides overall management support to the other functional areas, including program management activities, strategic and implementation plans, detailed budget preparation, and contracts, funds and invoice tracking.*

- No new information.

### **FLOODSAFE PROGRAM ADMINISTRATION & COORDINATION SERVICES**

*This element includes all administrative and coordination work required for FloodSAFE implementation, including human resources activities, policy document review, and FloodSAFE governance activities, including managing working groups and coordination teams within DFM and DWR.*

- No new information.