

**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**

Spring levee inspections are complete. Reports from these inspections are available at <http://cdec.water.ca.gov/fsir.html>. The Flood Project Inspection Section is back to full staff and continues to inspect CVFPB Encroachment Permits and has started summer Channel and Structure inspections. Inspection staff is participating in an inventory and categorization of encroachments along Maintenance Area 9 in coordination with other portions of DWR and the CVFPB. Coordination regarding inspections, permits, and other topics with LMAs, CVFPB staff, and USACE staff continues.

### **LEVEE INSTRUMENTATION PILOT STUDY**

As part of this pilot study, an instrumentation network of piezometers and data logger system was installed to provide direct, real-time measurement of levee through-seepage and under-seepage conditions during medium and high-water events. Data download from the piezometers began after the completion of installation in October, 2011. Of the 36 saturated piezometers, three appear to be providing values outside the expected range. Seepage models were constructed to represent subsurface conditions based on geotechnical borings. Piezometric data recorded from the site was used to calibrate the seepage models. Flood Project Integrity Section A is currently reviewing the draft project report which will be finalized by June 30, 2012.

## **DWR UTILITY CROSSING INVENTORY PROGRAM (UCIP)**

Utility Crossing Inventory Program continued to make progress by expanding the UCIP database with additional desk studies. Program has completed desk studies documenting location of utility crossings for about 320 miles of the Project Levees. Field verification was also completed for MA 13 (Sutter Maintenance Yard, Cherokee Canal) and ST 07 (Sacramento Maintenance Yard, Putah Creek). The UCIP team is working with CDEC and the Local Maintaining Agency Assessment Section to enhance its web-based reporting tool to allow LMAs to view the utility crossing inventory information (UCIPs desk study and field survey) online. Additionally, this tool will allow the LMAs to record utility crossing status updates including any actions the LMA has taken to address issues related to the utility crossings.

## **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 May 31, statewide hydrologic conditions were as follows: precipitation, 75 percent of average to date; runoff, 65 percent of average to date; snow water equivalent, 3 percent of average for the date (1 percent of the April 1 average); and reservoir storage, 105 percent of average for the date. Sacramento River Region unimpaired runoff observed through May 31, 2012 was about 10.1 million acre-feet (MAF), which is about 64 percent of average. For comparison, on May 31, 2011, the observed Sacramento River Region unimpaired runoff through that date was about 19.7 MAF, or about 126 percent of average.

Precipitation in May was generally below average across California and temperatures above average. On May 31, the Northern Sierra 8-Station Precipitation Index Water Year total was 40.2 inches, which is about 84 percent of the seasonal average to date and 80 percent of an average water year (50.0 inches). During May, the total precipitation for the 8-Stations was 0.5 inches, which is about 24 percent of the monthly average. Last year on May 31, the seasonal total for the 8-Stations was 68.9 inches, or about 145 percent of average for the date.

On May 31, the San Joaquin 5-Station Precipitation Index Water Year total was 24.2 inches, which is about 62 percent of the seasonal average to date and 59 percent of an average water year (40.8 inches). During May, the total precipitation for the 5-Stations was 0.2 inches, which is about 11 percent of the monthly average. Last year

on May 31, the seasonal total for the 5-Stations to date was 61.3 inches, or about 158 percent of average for the date.

Selected Cities Precipitation Accumulation as of 05/31/2012 (National Weather Service Water Year: July through June)					
City	Jul 1 to Date 2011 – 2012 (in inches)	% Avg.	Jul 1 to Date 2010 – 2011 (in inches)	% Avg.	% Avg. "Water Year Jul 1 to Jun 30 2011- 2012
Eureka	38.81	98	43.84	111	96
Redding	22.80	67	34.45	102	66
Sacramento	12.18	67	22.48	123	66
San Francisco	15.60	66	26.88	114	66
Fresno	8.15	72	15.60	138	71
Bakersfield	4.93	77	10.25	160	76
Los Angeles	7.61	60	17.83	140	59
San Diego	8.03	78	12.59	123	78

Key Reservoir Storage (1,000 AF) as of 05/31/2012								
Reservoir	River	Storage	Avg. Storage	% Average	Capacity	% Capacity	Flood Control Encroachment	Total Space Available
Trinity Lake	Trinity	2,324	2,154	108	2,448	95	---	124
Shasta Lake	Sacramento	4,299	3,960	109	4,552	94	-253	253
Lake Oroville	Feather	3,500	3,043	115	3,538	99	-38	38
New Bullards Bar Res	Yuba	946	832	114	966	98	-20	20
Folsom Lake	American	926	835	111	977	95	-51	51
New Melones Res	Stanislaus	1,838	1,500	123	2,420	76	-582	582
Don Pedro Res	Tuolumne	1,672	1,531	109	2,030	82	-330	358
Lake McClure	Merced	778	714	109	1,025	76	-190	247
Millerton Lake	San Joaquin	433	407	106	520	83	-87	87
Pine Flat Res	Kings	815	723	113	1,000	82	-185	185
Isabella	Kern	215	294	73	568	38	-146	353
San Luis Res	(Offstream)	1,307	1,670	78	2,039	64	---	732

The latest National Weather Service Climate Prediction Center (CPC) long-range, 1-month precipitation outlook for June 2012, issued May 31, 2012, suggests above average precipitation for the extreme northern portion of California. The outlook suggests no tendency for above or below average rainfall for the remainder of the State.

### HYDRO-CLIMATE ANALYSES

Work continues on the University of California Task Orders for studies supporting climate change hydrology effort. Quarterly meetings with the principal investigators have been held or identified and progress reports obtained. Projects are on track and meeting expectations to date. Drafts of two-page summaries of projects and products have been developed and are being reviewed. Attempts are being made to extend the duration of the studies to enable use of 5<sup>th</sup> set of climate model runs which have more appropriate data for flood analyses. These new data sets are just now being made available.

The State Climatologist participated in the American Society of Civil Engineers Water Congress. The meeting discussed climate change and hydrologic issues such as flood frequency analysis and flood and drought modeling. At the Hydroclimate Committee meeting, the State Climatologist, who serves as Secretary

of the Committee, asked for volunteer participation in the review of the framework for incorporating climate change into the 200-year level of protection for urban areas project. The committee agreed to participate.

The Central Valley Climate Variability and Sensitivity Study, which is the pilot phase of incorporating climate change into the Central Valley Hydrology Study, continues to move forward. Work on the Feather River model has gone well while calibration issues continue for the Merced River model. Work load issues at the Corps of Engineers are being discussed with the State Climatologist as they impact this study. Discussions have also started on the level of effort and funds needed to translate the pilot study to all Central Valley Hydrology Study analysis points.

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

The partners for the Extreme Precipitation Network (DWR, Scripps, and the National Oceanographic and Atmospheric Administration's Earth Systems Research Laboratory) continued discussion on the next agreement needed to manage the operations and maintenance of the network after installation. Efforts continue to coordinate moving the extreme precipitation network GPS-Met, snow level radar, and soil moisture data into CDEC from NOAA's Earth Systems Research Laboratory. The snow level radar data is now flowing to the California Nevada River Forecast Center. Soil moisture data is next.

### **HYDROLOGIC DATA MANAGEMENT**

The Feather PRMS model routing and parameters have been updated and improved. Forecasting is now fairly consistent with the results of the Bulletin 120. Future model improvements are being considered to take the Feather model into the most recent version of PRMS.

Progress remains good on the development of the Yuba and Merced models – both models have been wired up and are awaiting final calibration. To do so, all flow and climate records are being updated through the end of WY 2011.

Improvements to the Snow Surveys section of FERIS are going great. End users will have many tools accessible to them to plot and evaluate data, gain historical and statistical perspective, and produce maps and graphics suitable for reports or presentations. The basic interface will provide quick snapshots of the most current snow pack status on both an individual sensor/course level as well as an entire watershed level.

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

#### **Snow Surveys and Snow Course Maintenance**

Despite a late season snow storm in the Northern Sierra, as of June 7, 2012, the snow pack in the Sierra Nevada has all but melted out for the season. Peak snow melt runoff occurred in mid to late April for most Sierra Nevada watersheds.

Summer maintenance is already well under way (compared to a mid-July start last year). Staff is already engaged in maintenance, installations, and system upgrades in the Southern Sierra Nevada basins.

### **HYDROLOGIC DATA MANAGEMENT**

The Snow Surveys section continues to collect, review, Quality Control, and enter Full Natural Flow (FNF), precipitation, snow, and reservoir storage data for thousands of locations statewide on a daily basis. With this data staff continues to issue daily, monthly, and seasonal water condition reports on CDEC. The extreme dry conditions have brought a lot of media attention and a lot of questions from cooperating agencies. To that end, Snow Surveys participated in a Department sponsored Water Conditions Webinar in May addressing the dry hydrologic conditions and providing a forecast of expected climate conditions. During the month Snow Surveys staff alone responded to over one dozen media requests. Other calls were handled by other Hydrology Branch staff.

### **BULLETIN 120 AND WATER SUPPLY INDEX FORECASTS**

The projected median April-July runoff in the major Sierra river basins ranges from 42 percent on the Kern River to 89 percent for the Total Inflow to Shasta Lake for the May 29, 2012 Bulletin 120 update.

The final WSI forecast (from May 1) of the year can be summarized as follows:

#### **Sacramento River Unimpaired Runoff Water Year Forecast**

(11.8 MAF, 50% exceedance, 65% of normal)

#### **Sacramento Valley Index (SVI)**

(6.9, 50% exceedance, Below Normal)

#### **San Joaquin Valley Index (SJI)**

(2.2, 75% exceedance, Dry)

May unimpaired flows range between 47 (Kern River) and 75 (Inflow to Lake Shasta) percent of average. The Yuba River and rivers to the north are flowing at rates between 70 and 75 percent of normal. The rivers south of the Yuba are flowing at rates between 47 and 65 percent of normal for May.

The next forecast will be the Bulletin 120 Update for conditions on June 5, 2012. It will be available on June 7, 2012. This will be the last forecast of the Water Year.

### **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 SYSTEM ANALYSIS SECTION (FSAS)**

The Flood System Analysis Section continues to develop a systematic levee assessment tool that will utilize levee-related data being collected by DWR to assess relative vulnerability of the project levees within the Central Valley Flood-Control System and establish a consolidated reference to detailed information describing the vulnerability. Current efforts are focused on qualifying data sources for inclusion in the assessment and researching background information to identify all potential data and sources of information and performing a sample analysis. A pilot analysis is being conducted to inform future database querying process and automation.

## **EMERGENCY RESPONSE SUPPORT**

*This element includes various efforts that will further the Department's 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 respond to flood events in the Delta.*

The Regional Flood Preparedness Section (RFPS) continues to work with our contractors on the Delta Flood Emergency Preparedness, Response, and Recovery Program. The program will improve DWR's capabilities to prepare, respond, and recover from levee failure and flooding in the Delta. A Draft Project Facility Feasibility Study Report will be available in July 2012 and will present alternatives for further development of flood emergency response facilities in the Delta. DOE real estate and DGS are currently appraising 5 delta properties for 3 potential acquisitions. The Delta Flood Emergency Preparedness, Response, and Recovery Plan will detail roles and responsibilities within the Department and develop preparedness activities, response actions, and potential recovery strategies. A review Draft of this plan will be available in September 2012. As part of external agency coordination, the Flood Operations Branch currently has facilitated meetings with DWR's key emergency response partners in the Delta region to discuss these elements and other planning efforts. Additionally, modeling tools to forecast water quality impacts resulting from levee failure and subsequent repair and recovery strategies are being refined.

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

Work is underway on development of flood-flow frequency analysis, regulated flow time series, unregulated-to-regulated flow transforms and stage-to-flow transforms and rainfall-runoff modeling of ungaged streams.

Internal coordination with USACE and DWR Central Valley Floodplain Evaluation and Delineation program continues.

## **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.*

- Debris removal is on-going in seepage ditches in Sutter area – (50 miles).
- Beaver dam removal is on-going in seepage ditches in Sutter area – (50 miles).
- Gravel screening is ongoing at the Feather River Channel Pit. (60 Tons)
- Debris removal and spraying at Little Chico Diversion Weir is 100% complete (10 acres).

### **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.*

- Repair of gates and barricades is 15% complete in the Sacramento area (10 miles).
- Supply building remodel at the Sacramento Maintenance Yard is 97% complete.
- Concrete repairs at the Sutter Yard are 60% complete.
- Debris Removal is on-going at all pumping plants in Sutter Bypass.
- Boom repair is on-going at 20R054.
- Catwalk repair is on-going at the Little Chico Diversion Weir.



## **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.*

- Mowing Levee Slopes is 50% complete at Tisdale (4.5 miles), 60% complete at the East Levee of the Sacramento River (14 miles), 50% complete at MA1 (9 miles), 70% complete at MA9 (30 miles), 25% complete at Cache Creek (7 miles), and 75% complete at Willow Slough (7 miles).
- Vegetation Control with CDF crews is on-going at the north levee of Colusa Weir (15 Acres).
- Spraying levee slopes are 25% complete on Willow Slough (4 miles). Spraying is ongoing at MA1, MA12, MA5, MA13, MA16, MA7, and East Levee of the Sacramento River.
- Rodent Program (poison, trapping, grouting) for all areas in Sacramento and Sutter are ongoing.
- Grading crown roadways is 20% complete on Putah Creek (6 Miles) and 20% complete on Cache Creek (12 Miles).
- Levee gate repairs are ongoing at MA1.
- Mowing Levee Slopes is 100% complete at MA3 (5.19 miles), Tisdale Spoil Pile (50 acres), and Sacramento Bypass (6 miles).
- Spraying levee slopes are 100% complete on Sacramento Bypass (6 miles).
- Levee stump grinding is 100% complete on MA7 (15 Stumps) and MA 16 (15 Stumps).

## **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.*

### **Sycamore Creek Restoration Project**

DWR conducted its on-site monthly inspection on May 21, 2012. At the same time, DWR met with the U.S. Army Corps of Engineers and the Regional Water Quality Control Board in the field to evaluate mitigation requirements as they relate to the actual area of impact. The group discussed refining the maps to better describe the area of impact and will be considering a modification to the current permit to reflect a more accurate assessment of the area of impact and the mitigation requirements.

### **National Oceanic and Atmospheric Administration's National Marine Fisheries Service Agreement**

The Flood Maintenance Office (FMO) Maintenance Environmental Support Branch is working with the National Oceanic and Atmospheric Administration's (NOAA) National Marine Fisheries Service (NMFS) to obtain a 2-year agreement for expedited NMFS technical support and consultation on permitting of flood control project operations and maintenance activities, and participation in FMO Environmental Initiatives (e.g., the Interagency Flood Management Collaborative Program, Corridor Management Strategy (CMS), and the Small Erosion Repair Program (SERP)). The agreement is currently being prepared for NOAA's Acting Assistant Administrator for Fisheries' signature and the agreement should be finalized by in June.

### **U.S. Army Corps of Engineers Agreement**

The FMO Maintenance Environmental Support Branch is working with the U.S. Army Corps of Engineers (USACE) to obtain a 3-year memorandum of agreement for expedited USACE permit processing, and participation in FMO Environmental Initiatives. The agreement is undergoing review for signatures and is expected to be finalized in June.

### **LEVEE REPAIRS**

*The Levee Repairs Program consists of projects for repair, rehabilitation, reconstruction, or replacement of levees, weirs, bypasses, channels, and other facilities of the SPFC. Types of repairs are critical (has likelihood of failure during next high water event), serious (can withstand one high water event; likelihood of failure on subsequent high water events), and proactive (small deficiencies that are worsening rapidly and that can be designed and constructed by the Local Maintaining Agency (LMA)). Levee repair projects are implemented through collaboration with federal and State resource agencies, USACE, and LMAs. Levee repairs are done under three federal authorized programs; Sacramento River Bank Protection Project (SRBPP), Levee Stability Project (LSP), and PL84-99 Rehabilitation Assistance Project (PL84-99). In addition, the State is developing guidelines for a new project, Flood System Repair Project (FSRP), to address deficiencies in the entire State Plan of Flood Control Facilities in the Central Valley Watershed; FSRP replaces the San Joaquin River Bank Protection Project.*

- No new information this month

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

*The primary purpose of Floodplain Risk Management is to empower local communities through floodplain management program support and technical assistance to make wise land use decisions in flood prone areas that result in reduced flood risk and preservation of the beneficial uses of floodplains. FPM projects and programs work towards development of a statewide integrated approach for flood risk reduction and long term floodplain sustainability that reduces loss of life and property damage and minimizes the economic impacts associated with flooding.*

#### **FLOODPLAIN MANAGEMENT ASSISTANCE**

*Floodplain Management assistance provides statewide technical support to federal, state and local agencies, and the public for flood hazard maps, levee data, and the National Flood Insurance Program activities including the Community Rating System (CRS). As part of the NFIP Community Assistance Program (CAP) grant-partnership with the Federal Emergency Management Agency (FEMA), DWR conducts audits with communities participating in the NFIP, provides technical assistance to the public, and trains community officials.*

In May 2012, the Floodplain Risk Management (FPM) Branch and Regional Office staff conducted three FEMA Workshops: an Elevation Certificate and an Approximate Zone A Workshop in Amador County, and an Approximate Zone A Workshop in the City of Redding. California NFIP Coordination staff: (1) conducted a Certified Floodplain Manager (CFM) refresher course and proctored a CFM Exam in the City of West Sacramento, (2) identified Participating NFIP Communities in the State Plan of Flood Control by region and collected insurance and Community Rating System (CRS) statistics, (3) initiated work on two projects which have been awarded FEMA Hazard Mitigation Grants and (4) are compiling the NFIP levee certification and accreditation criteria as the follow up to the ULOP Public Comment process. FPM staff provided approximately 20 hours of technical assistance to local communities regarding the NFIP, Certified Floodplain Manager Exam, and federal Hazard Mitigation grants.

#### **STATEWIDE 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.*

Staff is meeting with Riverside County officials to share preliminary results of DWR's alluvial fan mapping program. Riverside County is a pilot study area for the AFED program.

## **CENTRAL VALLEY FLOODPLAIN EVALUATION AND DELINEATION**

*Floodplain Evaluation and Delineation works to estimate the frequency, depth, and limits of potential flooding in the Central Valley by 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 (CVFED) completed the last phase of its Central Valley Topography Acquisition Project. The LiDAR data derived Digital Elevation Model (DEM) data has been finalized for the Sacramento River Basin and the Lower San Joaquin River Basin. The DEM data for the Upper San Joaquin River Basin is expected to be finalized in August 2012. Staff continues to share CVFED LiDAR and Aerial Imagery data. In the last month, staff processed and delivered four data requests to public agencies. The total amount of data transferred in May adds up to about 260 GB covering a land area of about 550 square miles. In addition, staff has responded to seven requests for CVFED bathymetric data.

## **FLOOD RISK NOTIFICATION**

*Flood Risk Notification focuses on communicating flood risk and risk mitigation strategies to the public and to local, state and federal agencies for areas protected by the facilities of the State Plan of Flood Control.*

The final draft of the 2012 Flood Risk Notice has been forwarded for the Director's approval. The FRN team continues to analyze and adjust parcel data related to the Central Valley distribution of the 2012 Flood Risk Notice.

## **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 creation of integrated planning approaches and datasets that help agencies, communities, and individuals make well informed decisions.*

Staff is preparing documentation to submit to the California Building Standards Commission that intends to clean-up Building Code language associated with DWR.

## **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 SECTION**

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

- USACE is moving forward to the Alternative Review meeting milestone which will determine the Tentatively Selected Plan (TSP). USACE anticipates having a TSP by August 2012. The schedule for the Alternative Review meeting has not been determined, but is anticipated to be scheduled after the TSP has been selected.
- USACE is working on re-scoping the study to fit the new USACE "3x3x3" guidelines for studies. This is an aggressive schedule to complete the study in 3 years, cost no more that 3 million dollars, and fit in a 3-inch binder. USACE anticipates reducing the detail in the alternatives analysis process and developing a more robust analysis of the TSP in order to meet the new 3x3x3 guidance.

### **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 and Strathmore Creek in Tulare County.

- Nothing new to report this month.

### **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.

- USACE is currently revising the Project Management Plan for this Study to take into account the new 3x3x3 guidance.

### **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.

- Nothing new to report this month.

### **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 Rock Creek and Keefer Slough in Butte County.

- Nothing new to report this 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.

- Nothing new to report this month.

### **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.

- USACE is currently revising the Project Management Plan for this Study to take into account the new 3x3x3 guidance.

### **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.

- USACE is currently revising the Project Management Plan for this Study to take into account the new 3x3x3 guidance.

### **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.

- USACE has determined that the local sponsor of the Project Participation Agreement (PPA), for design and construction, will need to be identified prior to moving forward with the Alternative Formulation Briefing (AFB). Discussions with Stanislaus County are anticipated to continue at the next Project Delivery Team (PDT) meeting to be held June 14, 2012.

#### **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.

- Nothing new to report this month.

#### **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 the USACE-selected Flood Barrier Option alternative.

- USACE is currently revising the Project Management Plan for this Study to take into account the new 3x3x3 guidance.

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

The Yuba River Basin Project General Evaluation Report (GRR) consists of increasing the level of flood protection in the Yuba River Basin communities of Marysville, Linda, Olivehurst, and Arboga.

- The Yuba River Post Authorization Documentation Report (PADR) of the General Reevaluation Report (GRR) was reviewed by non-federal sponsors and sent to USACE Division on June 8, 2012. Discussions on how credit will be awarded continued and it was determined that the Integral Determination Report (IDR) is critical. The strategy includes submitting to the ASA the PADR and IDR that could be separated and approved by ASA. The PADR would describe how the constructed improvements match the 1999 authorized project. The IDR would then provide details showing that work completed on the Yuba River and upper Feather River is both economically justified and integral to the 1999 authorized project. The IDR and PADR will ultimately determine the work for which USACE will approve credit to the non-federal sponsors, which is approximately \$23.4 million that can be used toward the non-federal costs of the Marysville Ring Levee Improvement Project.

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

EIP includes projects that are ready to proceed in advance of the 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 to provide increased flood protection for Yuba City.

- DWR staff received the construction closeout documents on May 1, 2012, and is coordinating with LD1 to receive a complete package before starting the DWR review.

### **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 a setback levee to increase the level of flood protection for South Stockton, Lathrop, and Manteca communities.

- DWR is working with RD-17 to establish the direction of the Phase III Design.
- DWR is currently awaiting further results from the piezometers installed in June 2011 to verify proper construction.

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

This project will offer 200-year flood event protection for both Highways 65 and 70; benefiting the areas 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 1600 acres for site mitigation, agricultural use, and habitat.

- Central Valley Flood Protection Board Permit No. 18690 to install chain link fencing, K-rails, and a maintenance road within the Sacramento San Joaquin Drainage District Right-of-Way, parallel to and on the landside of the Feather River east (left) bank levee and Yuba South Levee (Yuba County) was heard at the January Board meeting. Due to late notification of one of the lot owners, and the drainage issue, the CVFPB rescheduled the hearing to a special Board meeting that took place in Marysville on March 2, 2012. The Board heard the individual lot owners' arguments but decided to postpone their decision until August 2012 Board meeting.

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

This project will offer 200-year flood event protection for both Highways 65 and 70; benefiting the areas of Olivehurst, Linda, Plumas Lake, Marysville, and Yuba City. This project includes a portion of the South levee on the Yuba River.

- TRLIA submitted a report to DWR and the CVFPB in May 2012 that outlined how TRLIA plans to address the crown rut issue in one segment. It also addressed the question raised by DWR and CVFPB regarding why ASTM D698 was used as the compaction test method for the TRLIA-YR and not ASTM D1557 per CVFPB permit requirement. CVFPB signed the revised plan on May 30, 2010.

### **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 will be accomplished by installing cutoff walls to prevent seepage, under-seepage, and raising the levee.



- EIP has processed a 10% retention payment for Phases 1 and 1B in the amount of \$404,991.
- SAFCA has submitted, and DWR Staff is reviewing, a SAFCA closeout request for the remainder of NCC 2, approximately \$2.23 million. DWR Staff returned the SAFCA report as incomplete and directed them to follow a format which DWR provided. EIP is requesting a two-year extension to the funding agreement to take the end date beyond June 2012. This is necessary due to the length of time ESA compliance is taking to be completed by the REB.
- CVFPB staff request sampling of the NCC cutoff wall as part of the permit and SAFCA submitted a sampling plan. GEI has sampled areas of the blended cutoff wall bentonite spoil material as requested by CFFPB staff.

### **Sacramento Area Flood Control Agency – Sacramento River East Levee (SAFCA-SREL)**

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, under-seepage, and raising the levee. SAFCA plans to complete components to Element 12A (approximately RM 67) along the Sacramento River in 2012 and have USACE complete the remainder, estimated to occur in 2014.

- Sukut claim with SAFCA has not been settled yet. Sukut continues to perform surface preparations of the levee and seepage berm for fill placement.
- The Board issued two Notice of Violations (NOVs) to Nordic for unacceptable work on Elements 6B to 9A, which are still pending resolution. SAFCA is working with Nordic, the Board, and EIP staff to resolve the NOVs quickly. EIP Program staff notified SAFCA that no payments will be made for this portion of the work until the work has been completed in compliance with the plans and specs to the satisfaction of the Board. It is reported that the CVFPB Chief Engineer is preparing a letter to notify SAFCA of approval of the work; however, EIP staff has not seen a draft of this letter as yet.
- SAFCA is in discussion with EIP for an approximate \$30 million increase in the Funding Agreement amount due to increased project costs. DWR is waiting to receive the Work Plan that documents the Project scope and costs. SAFCA expects to deliver the Work Plan near the end of June.

### **West Sacramento Area Flood Control Agency, North and Southport Improvement (WSAFCA)**

The CHP Academy, the Rivers, and the I-Street Bridge projects are part of the North Area Plan and all major construction is complete for these sites. All three projects are designed to provide 200-year level of protection for about 47,000 residents. The Southport Area, which may include a large setback levee, is currently under design.

- On April 2, 2012, DWR received the WSAFCA Southport Final Project report. This Report identifies one proposed alternative and a proposed alternate for development at the 15% design level. DWR provided a list of comments to WSAFCA design team.

- WSAFCA requested a meeting with the EIP Section to discuss the Southport project alternatives and funding. The meeting has been scheduled for June 8, 2012.

### **Sutter Butte Flood Control Agency, Feather River West Levee Design Project (SBFCA)**

The Feather River West Levee Project will be for the repair of approximately 35 miles of levee along the west bank of the Feather River from Thermalito Afterbay to the north end of Star Bend. The design will include use of slurry walls and seepage berms to protect the communities of Gridley, Biggs, Live Oak, Yuba City, and parts of Sutter and Butte counties.

- A Decision Memo proposing a construction funding agreement for \$56.78 million for critical levee improvements next to Yuba City is under management review and consideration.

### **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.

- DWR Real Estate is working towards certifying all temporary real estate rights for sites L5A, L9, L9A, R10, Jacob Lane C and NEMDC in FY12. L13 will require a FY13 award due to permanent construction rights required.
- The Howe Ave Site and R6 Site are scheduled to begin construction in the 2012 construction season. USACE has negotiated with WAPA to de-energize power lines along Site R6.
- Work on the Natomas Basin and American River Design and Construction (NBARDC) component has been postponed indefinitely until federal authorization and funding has been approved.
- Currently, State and local sponsors are working on a LERRD crediting package to submit to the USACE to prevent decreases in credit estimate.
- The USACE, State and SAFCA will be holding a public outreach meeting to mitigate for Site R6 night time construction. The State will be supplying room and board reimbursement for all affected residents near site R6 during night time construction.

#### **American River Watershed – Natomas Features Project**

The Project was fully constructed in 1998 and increased flood protection by controlling flows and reducing flood stages in four creeks. The Federal Government approved a significant portion of the project for reimbursement eligibility, and in turn the State will reimburse SAFCA for the state share of the project.

- DWR paid \$496,000 to SAFCA in May toward the outstanding State-share of the project.

- The CVFPB approved an LPCA Amendment to pay the outstanding State-share obligation of \$ 3,711,700 to SAFCA. The payment is expected to be made after final DGS contract approval, within the next two months.

### **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 2014. The Temperature Control Shutters design is 35% complete and is being shelved to focus on updating three existing emergency spillway gates.
- The State, local and federal government partners have revised the Project Management Plan and broadened the scope of the project to include emergency gate replacement and raise.

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

The purpose of the Folsom Dam Modifications Project (Joint Federal Project) is to construct an auxiliary spillway at Folsom Dam that will work in conjunction with ancillary projects to help the Sacramento region achieve a 200-year level of flood protection. The estimated completion for the JFP is October 2017.

- A media event was held in Folsom on May 24, 2012 at 10:00 a.m. for the “First Concrete Placement” for the JFP control structure. Speakers included Rep. Matsui, Rep. Lungren, BG. Wehr and Col. Leady of USACE, Bureau of Reclamation Assistant Regional Director Gore, President Edgar from CVFPB, Deputy Director Bardini from DWR, Chairman Coln of SAFCA, Mayor Howell of Folsom and Mr. Pierce of Granite Construction.
- Phase III excavation is 100% complete and construction has transitioned to concrete work. Batch Plant and Cranes 1 & 3 are operational; Crane 2 will be operational in August. Concrete pour started for Monolith No. 5 structure.
- The USACE is seeking a lease with Folsom Prison from the California Department of Corrections and Rehabilitation (CDCR) for additional staging area. DWR, DGS, CDCR and USACE are meeting to search for a lease solution.
- - The Project Management Plan for the Water Control Manual Update is being reviewed by partners/sponsors.
- Phase IV Chute & Stilling Basin and Approach Channel design have been integrated into one plan and specification set. A 95% Agency Technical Review is scheduled for late August.
- An Administrative Draft EIS/EIR was completed on March 1. The EIS/EIR is scheduled for release for public review on July 25. The final EIS/EIR is expected to complete by April 2013.
- The Federal FY2013 President’s budget included \$87 million and USACE optimal capability of \$138 million. DWR has requested the matching State share cost through a capital outlay State FY2012-13 State budget change proposal.

### **Lake Kaweah Enlargement Project (Terminus Dam, Kaweah River Project)**

The Lake Kaweah Enlargement Project was completed in 2006 and remaining work is focused on turning over the O&M to the local sponsors, finalizing all financial balancing, and completing final real estate documents.

- DWR anticipates preparing a crediting package for LERRD expenses. Initial estimates suggest upwards of \$1.5 million in creditable costs. DWR would expect to receive approximately \$1.125 million in credit or cash reimbursement from the USACE after approval of the crediting package.
- DWR will also sell its shared interest in the Davis Ranch mitigation site to the KDWCD, valued at approximately \$135,000.

### **Marysville Ring Levee Improvement Project**

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

- Phase 1 construction and wall testing is scheduled to begin in June 2012. Wall evaluation will take place concurrently with construction of the remaining Phase 1 slurry wall. Increases in wall construction costs are estimated at \$2.1 million.
- The State, USACE, and locals are currently in negotiations over future funding for design Phases 2A, 2B and 3.
- The State and local partners are currently undergoing funding negotiations with USACE to reduce cash contributions. A recent payment of \$400,000 has been submitted to the USACE to cover increase in Phase 1 construction costs efforts.

### **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.

- The 90% designs for Sites 9, 10, and 11 of Area 3 are scheduled to be delivered June 27, 2012.
- USACE is still on schedule to complete the Limited Reevaluation Report and environmental documents by the end of September 2012.

### **South Sacramento Streams Project**

The South Sacramento County Streams Project will increase the level of flood protection for the urbanized area of South Sacramento County and an area to the south and east of the City of Sacramento. Portions of the project have been completed on the four creeks, and additional improvements are forthcoming.

- Construction on a 3,000 foot floodwall along Morrison Creek began on May 1, 2012. The work is approximately 20% complete. USACE, DWR, and SAFCA have all been regularly involved in on-site activities.
- SAFCA is finishing its design efforts to construct improvements on Unionhouse Creek upstream of Franklin Boulevard. SAFCA anticipates beginning construction in September 2012, in hopes of finishing work prior to the Regional Transit Blue Line extension work along the creek next spring.

- USACE anticipates completing all necessary work on the South Sacramento Streams project with its remaining \$4 million in federal funds, with some matching nonfederal funds. This would complete the major project construction in 2013, leaving minor loose ends to tie up in the following years.
- DWR is in the process of preparing a crediting package for LERRD expenses. Initial estimates suggest upwards of \$1.5 million in LERRD creditable costs for DWR and over \$2 million for SAFCA.
- The Moulton Soil Stockpile is being moved this month after a lengthy multi-year process of negotiations and settlement with the property owner. The dirt is expected to be moved and all obligations satisfied by late summer 2012.

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

The West Sacramento Area Project raised and strengthened five miles of levees by a maximum of five feet on the east side of the Yolo Bypass and the south side of the Sacramento Bypass. Initial repairs were completed in 2001, but additional slips were identified during high water events in 2006 and March 2011.

- The O&M supplemental manual is complete and in the review process at USACE. It will be sent to the State and locals for review in June 2012.

### **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 Program has been working with the new grant recipients in order to hold public hearings in the vicinity of the new projects prior to release of over \$58 million in grants to 13 localities state-wide to reduce flood risk in their communities while protecting wildlife habitat and agriculture. The flood risk reduction projects will be funded by Propositions 84 and 1E and will benefit communities and resources from Siskiyou County in the North to San Bernardino County in the South. The Flood Corridor Program anticipates that there will be \$28.3 million in remaining funds available for future grant awards.

### **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. During the last month:

- Three claims, for total of \$19.75 million, were approved for payment.
- Five claims, for total of \$20.56 million, are currently being reviewed.

- No audit payments were processed.
- Three new claims, for total of \$4.8 million, were received.
- In total, forty six claims for \$80.3 million are pending review, excluding amount pending State Controller's Office audit release.

### **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.

- The Klamath Glen Levee Evaluation Project, a project with Del Norte County, has been completed. A project closeout letter was sent to the grantee. The appropriate amount of retention funds is currently being processed for payment. Remaining retention funds will be moved back to the LLAP general fund for other projects and the project file will be closed.
- Marin County has provided confirmation that the project will move forward and be completed in the next 6 months. Operations were previously held up as the County awaited information from USACE. An amendment to the contract is in signature process, extending the termination date an additional 18 months.
- A Controlled Correspondence letter to Senator Loni Hancock was drafted to respond to her support letter for the Port of Oakland's three LLAP applications. The letter has been sent out.

### **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.

- The TRLIA Goldfields High Ground Feasibility Study was authorized by the Director last month. A new contract number and agreement summary were developed and are being processed by the Contract Services Office. DWR, TRLIA, and CVFED have cooperated to develop an agreement work plan and contract; both documents are being finalized.

### **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 & PROGRAM SOLICITATIONS**

Local Levee Assistance Program (LLAP) finalized program guidelines and published a Program Solicitation Package in 2011.

- Draft recommendations for a list of approved projects are being processed for signature. Once approved, the list will be published online for a public comment period. The decision memo has been approved by the DFM Chief and is now in review by DWR Executive.

## **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.
- The Lower Feather River Corridor Management Plan preparation is continuing. The prime consultant, AECOM, has submitted chapters 1-3 in draft for review. A draft Technical Memorandum on strategies for obtaining regulatory permits for flood system maintenance and compatible habitat enhancement was submitted as part of Phase I, and an expanded and updated version of that previous report is now under review by DWR.

## **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 AB 1788 regulations package was withdrawn from the Office of Administrative Law (OAL) in order to make non-substantive text edits requested by OAL and to add a Supplemental Statement of Reasons to adequately fulfill the necessity standard for law making. The form 400 is in process for signature by the DWR Director. Once the form is signed the rulemaking file will be resubmitted for approval by OAL.

## **REGIONAL PLANNING**

Regional Flood Management Planning (RFMP) is a new initiative resulting from the drafting of the 2012 Central Valley Flood Protection Plan. LLAP is taking the lead in the data collection effort for the Regional Plans.

- The RFMP Public Draft of the PMP Decision Memo received comments and has been updated.
- Creation of the RFMP SharePoint site has been completed and the site is now available for use.
- The Consultant Services Request Form has been created and is available for use.
- Updated versions of Regional Atlases and the communication engagement plan were released and presented to a coordination committee who is currently reviewing to provide comments. Comments are due June 22, 2012.
- The RFMP Dashboards were released with instructions for use and upkeep.
- Progress has been made on the RFMP Public Website. Staff continues to coordinate on the website production.

## **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 maintenance work totaling \$13 million to date, and 61 reimbursements have been paid totaling \$9.2 million.

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

- DWR staff has mailed work agreements to 68 reclamation districts and has received signed work agreements from 65 reclamation districts.
- Final Claims have been received from 61 reclamation districts totaling \$17.9 million.
- DWR staff has completed 61 joint levee inspections and received DFG approval for 47 claims.
- Reimbursements are being processed by staff as DFG approves the claims. To date, staff has initiated reimbursements totaling \$10.1 million.

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

- The FY 2011-2012 funding allocation plan, presented to the Board on September 23, 2011, has been approved by the Board. The plan allocates the funding of \$12 million to 66 reclamation districts.
- On October 25, 2011, Staff mailed Work Agreements to participating districts for signature. To date, staff has received 66 signed agreements from the districts. The signed agreements will be routed to the Board's Executive Officer for final signature.

### **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 executes agreements authorizing the work proposed under Project Solicitation Packages (PSPs).

- DWR has committed approximately \$350 million dollars for levee work in the Delta, of which about \$135 million has been allocated to PL 84-99 projects and \$85 million to HMP projects. To date, 42 miles of levee work has been completed.



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>
<b>Chico</b>	<b>38</b>	<b>NEMDC East</b>	<b>48</b>
<b>Marysville</b>	<b>53</b>	<b>Natomas</b>	<b>20</b>
<b>Sutter</b>	<b>38</b>	<b>Bear Creek</b>	<b>33</b>
<b>RD 784</b>	<b>50</b>	<b>Calaveras River</b>	<b>33</b>
<b>Davis</b>	<b>20</b>	<b>RD 404</b>	<b>51</b>
<b>Woodland</b>	<b>21</b>	<b>RD 17</b>	<b>56</b>
<b>American River</b>	<b>50</b>	<b>Stockton Non-Project</b>	<b>40</b>
<b>West Sacramento</b>	<b>100</b>	<b>W. Sac. Non-Project</b>	<b>18</b>
<b>Sacramento River</b>	<b>57</b>	<b>South Sac. Streams</b>	<b>18</b>

Changes shown in bold.

- Overall, ULE is 74% complete.
- The West Sacramento GER (Volumes 1 and 2), the template for all GERs was finalized in May.
- Drilling occurred in RD 784 along WPIC, South Sac Streams, and RD 17. Some additional drilling will occur in Chico.
- Schedules for completion of the Geotechnical Evaluation Reports (GERs) Program are continuing to be modified and tracked with the current delivery date of the GERs scheduled for the middle of 2013.
- All GER's except Bear Creek, Calaveras River, Davis, Deep Water Ship Channel, and South Sac Streams are underway.
- Laboratory testing is continuing for some of the urban areas such as all of Stockton, Davis, and Woodland.
- Close coordination of the GER efforts and the EIP projects for RD 17 and Sutter continues.

### **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 the nine regional plans.

- Overall, Non-Urban Levee Evaluations are 58% complete.
- No drilling occurred during this reporting period.
- Laboratory testing is still occurring in several areas.
- 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.
- GOR pilot studies are ongoing in the Woodland South and Gravelly Ford study areas and nearly completed.

- GOR's were continued during May in Wheatland, Gerber, Clarksburg, Knights Landing, Sutter, and RD 2095. These GOR's will support FMO, regional plans, and SJRRP studies.
- GDR's for NULE study areas are ongoing and nearing completion.
- In support of the draft CVFPP, NULE effort is being redirected to prioritize support for the FMO critical repairs program and the FAXCT9 Regional Plans.
- Task orders to support FMO critical repairs were prepared during the reporting period.
- A Task order to support the SJRRP was prepared during the reporting period. This will involve geomorphology, data collection, drilling and lab testing, and GDR preparation for areas identified by the District.

### **TECHNICAL REVIEW**

*Geotechnical analyses are being conducting 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 the Sutter Butte Area Flood Control Agency, the (LSJFS) Lower San Joaquin Feasibility Study, and RD 17.
- ULE/NULE provided additional supporting data, including a technical memo on fragility curve development, to USACE for the LSJFS.
- ULE and USACE are in the process of providing data to SAFCA for their assessment of the AR Common Features (minus Natomas) study area.
- ULE continues to review the USACE Marysville design and construction project.

### **TECHNICAL POLICY**

*A statewide seismic policy is being developed for levee performance, emergency levee remediation, and long-term levee remediation. Urban Levee Design Criteria (ULDC) 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 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. As a part of this effort, a draft Seismic Remediation Alternative Report was prepared during this reporting period.
- Participated in various FloodSAFE FAXCTs (Functional Area Cross Coordination Teams).
- Continuing support for Version 5 of the Urban Levee Design Criteria was provided.

## **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 primarily includes: (1) SPFC Descriptive Document and (2) Flood Control Systems Status Report (FCSSR), which were completed and provided to Central Valley Flood Protection Board (Board) in November 2010 and December 2011, respectively.

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

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

- A Public Draft of the 2012 CVFPP was provided to the Board on December 30, 2011, and released to the public for review on January 2, 2012. The public comment period for the CVFPP ended on May 4, 2012.
- DWR released the *Public Review Draft Program Environmental Impact Report (DPEIR)* for the 2012 CVFPP on March 6, 2012, for a 45-day public comment period, ending on April 20, 2012. The DPEIR was formally presented to the Board on March 23, 2012. The DPEIR will inform the public and decision makers about potential program-level environmental effects and mitigation measures that may result from implementation of the CVFPP.
- DWR and the Board held four joint public hearings to receive comments on the 2012 CVFPP and the DPEIR in early April at locations in Sacramento, Marysville, Stockton, and Woodland. DWR staff is developing responses to comments received to both the CVFPP and DPEIR in anticipation of certification of the final PEIR and adoption of the CVFPP on June 29, 2012.
- DWR has participated in a series of meetings held by the Board to deliberate the Board's *Draft Adoption Resolution 2012-25* for the 2012 CVFPP during May and continuing into June. The public was invited to comment on the resolution through June 8. A special meeting is scheduled for June 15 to consider approval to publish and post the proposed adoption package for the CVFPP two weeks in

advance of the June 29th meeting to consider final approval, as required by Water Code Section 9612.

- The CVFPP Project Development Team prepared a draft Project Management Plan for two State Basin-Wide Feasibility Studies. These feasibility studies will refine the State System-wide Investment Approach (SSIA) developed as part of the 2012 CVFPP. These studies will focus on further developing regional and system-wide SSIA project elements in both the Sacramento and San Joaquin River Basins.

### **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 recommendations to 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 program will publish a report titled "Report on Flood Future: Recommendations for Managing California's Flood Risk" (Flood Future Report). In addition, SFMP includes integration of flood-related information into the California Water Plan.*

### **FLOOD FUTURE REPORT**

- The recommendations team is working on refinement of the recommendations that will be included in the Flood Future Report.
- Several Technical Memoranda, including the *Exposure to Flood Hazards, Information Gathering, Risk Information Inventory, Finance, Integrated Flood Management, and Opportunities and Challenges* memos are being prepared for inclusion in the Flood Future Report.
- Work continues on the Administrative Draft the Flood Future Report.

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

- The California Water Plan 2013 Design and Work teams and the Flood Caucus membership are being formed.
- Work is beginning on the Integrated Flood Resource Management Strategy.
- A Flood Caucus meeting will be held in June 2012.

### **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.*

### **CONSERVATION STRATEGY**

To guide development of the Conservation Strategy, staff developed a program charter and a draft Program Management Plan. Staff has also developed several

components of the Strategy, including draft list of species for conservation focus, a conceptual approach for tracking progress for ecological indicators, and proposed implementation steps related to communications and engagement. This latter implementation section will integrate text from a developing concept paper for regional permitting. The current Strategy text builds upon input from three meetings of the interagency Conservation Strategy Team and incorporates text from the Conservation Framework, including goals and potential conservation measures and projects. Missing text gaps will be targeted for completion over the next few months.

### **Conservation Strategy Funding Guidelines**

Staff is coordinating more extensive internal DWR review of the Project Solicitation Proposal (PSP) for the Conservation Strategy Funding Guidelines. These guidelines authorize DWR to spend Proposition 1E money on projects and activities that advance the goals of the Conservation Framework and provide mitigation for improvements to State Plan of Flood Control facilities. The PSP is expected to be submitted to the Director's office for approval in June.

### **Conservation Strategy Outreach**

- Staff met with the FAXCT 1 Communication, Coordination, Outreach and Engagement (CCOE) subcommittee to provide more information about upcoming outreach to develop the Conservation Strategy and to ensure good coordination with the regional planning efforts. During May and June, this outreach targeted a variety of internal DWR programs to ensure the Strategy addresses a variety of needs and expectations.
- FES will be presenting a panel on the Conservation Strategy at the upcoming 2012 FMA Conference. Abstracts were submitted for presentations on the Conservation Strategy overview, fish passage, floodplain ecosystem modeling, and an integrated ecosystem and floodplain case study.

## **REGIONAL CONSERVATION PLANNING**

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

- Two additional USACE staff have been assigned to help with federal cost sharing and crediting for advance mitigation issues. Investigations are underway to understand a potential restriction regarding using federal dollars to purchase state-sponsored credits when private bank credits are available. This activity is discouraged by the WRDA 2007 legislation.
- The bi-monthly meeting of the RAMP Work Group was held May 17, where opportunities to work with the High-Speed Rail Authority (HSRA) on their potential mitigation needs in the San Joaquin Valley was discussed. HSRA representatives will be included in the next work group meeting.
- On June 4, the Pilot Subcommittee heard presentations from DFM and Caltrans' Planning and Environmental Stewardship Branches, covering major milestones and level of detail needed within various planning processes. The Subcommittee is determining the most appropriate infrastructure project data for use in a "demand analysis" for Regional Assessment and Action Plans.

**Regional Permitting**

A regional permitting concept paper has been drafted, to clarify goals and objectives for regional permitting under the Conservation Strategy.

**Regional Planning and Corridor Management Strategies**

Staff is regularly participating in weekly Regional Flood Management Planning meetings and has started meeting with CVFPO to coordinate with the basin-wide feasibility studies for the CVFPP.

**Targeted Conservation Planning**

Staff has developed a draft document summarizing potential impacts and conservation activities to Riparian Brush Rabbit. After further revision, staff will meet with USFWS to discuss a potential mitigation agreement between DWR and USFWS.



## **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.*

### **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.*

No new information this month