Agenda Item 6

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: Project levees inspections for Spring 2011 have started and it is anticipated that all districts will be inspected this season. Preliminary reports from the individual inspections will be made available to interested parties within a few weeks of the completion of each inspection. Inspectors also continue to coordinate with the FOC, CVFPB, and local districts to conduct investigations and monitor several locations of ongoing interest including several erosion sites on the San Joaquin River system.

Local Agency Program: The Local Agency Annual Report 2010 draft report was delivered to the Board for their review on December 30, 2010.

Flood Project Integrity/Vulnerability Assessment Activities:

Levee Instrumentation Pilot Study - The project is in Phase II (installation) status with a valid CVFPB encroachment permit. Construction is scheduled for summer 2011. It may be possible to have viable data during 2012-2013 flood season to capture levee response during high water events. Contract extension through June 30, 2012 is required to fulfill this task.

DWR Utility Crossing Inventory Program - The DWR Utility Crossing Inventory Program (UCIP) has progressed to the reporting phase of first major area after pilot study. The program is still undergoing development changes to integrate with FloodSAFE and other non federal programs. Key areas are data management and data exchange protocols. The "Best Available Information" ideology and how to push data in a timely fashion with quality assurance has been identified as an important thread to the overall fabric of FloodSAFE. One key road block has been

the historic and current lack of classification and or typing of utilities and the overall record keeping by stakeholders.

Library of Models: The Library of Models (LOM) Pilot Study will be designed to host various types of hydrologic and hydraulic flood models. A draft document for the LOM model management system design specifications has been prepared and is currently being reviewed for finalization. Development of the "model check in guideline" document is based on the recommendations from five scoping workshops held over the past six months. Development of a model acceptance criteria and approval procedure document is also in progress, along with the pilot library model preparation and packaging procedures. These documents and packaged pilot models will be used to test the LOM infrastructure and its operation in the upcoming months.

DWR presented the LOM design, operation, and application concepts at the 2011 California Water and Environmental Modeling Forum (CWEMF) annual meeting in Pacific Grove, California. Positive feedback was received from the CWEMF attendees that include the broader California water modeling and scientific community

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 March 1, 2011, statewide hydrologic conditions were as follows: precipitation, 125 percent of average to date; runoff, 100 percent of average to date; snow water equivalent, 125 percent of average for the date (110 percent of the April 1 average); and reservoir storage, 110 percent of average for the date. Sacramento River Region unimpaired runoff observed through February 28, 2011 was about 7.7 million acre-feet (MAF), which is about 92 percent of average. For comparison, on February 28, 2010, the observed Sacramento River Region unimpaired runoff through that date was about 5.6 MAF, or about 67 percent of average.

The first half of February was very dry and warm. In contrast, the second half of the month was very wet and cold. On March 1, the Northern Sierra 8-Station Precipitation Index Water Year total was 42.3 inches, which is about 121 percent of the seasonal average to date and 85 percent of an average water year (50.0 inches). During February, the total precipitation for the 8-Stations was 8.3 inches, which is

about 104 percent of the monthly average. Last year on February 28, the seasonal total for the 8-Stations was 34.3 inches, or about 99 percent of average for the date.

On March 1, the San Joaquin 5-Station Precipitation Index Water Year total was 41.9 inches, which is about 152 percent of the seasonal average to date and 103 percent of an average water year (40.8 inches). During February, the total precipitation for the 5-Stations was 6.9 inches, or about 100 percent of the monthly average. Last year on February 28, the seasonal total for the 5-Stations to date was 29.4 inches, or about 107 percent of average for the date.

Selected Cities Precipitation Accumulation as of 02/28/2011 (National Weather Service Water Year: July through June)					
City	Jul 1 to Date 2010 - 2011 (in inches)	% Avg	Jul 1 to Date 2009 - 2010 (in inches)	% Avg	% Avg "Water Year" Jul 1 to Jun 30 2010 - 2011
Eureka	26.42	97	24.87	92	69
Redding	21.87	93	22.64	97	65
Sacramento	14.45	109	14.36	108	81
San Francisco	14.99	100	15.17	101	75
Fresno	11.48	152	9.00	119	102
Bakersfield	8.14	193	5.44	129	125
Los Angeles	13.26	137	10.89	112	101
San Diego	10.51	142	7.99	108	98

Key Reservoir Storage (1,000 AF) as of 02/28/2011								
Reservoir	River	Storage	Avg Storage	% Average	Capacity	% Capacity	Flood Control Encroachment	Total Space Available
Trinity Lake	Trinity	1,891	1,851	102	2,448	77	---	557
Shasta Lake	Sacramento	3,784	3,370	112	4,552	83	-294	768
Lake Oroville	Feather	2,684	2,523	106	3,538	76	-282	854
New Bullards Bar Res	Yuba	690	622	111	966	71	-106	276
Folsom Lake	American	613	554	111	977	63	-6	364
New Melones Res	Stanislaus	1,694	1,440	118	2,420	70	-276	726
Don Pedro Res	Tuolumne	1,639	1,435	114	2,030	81	-51	391
Lake McClure	Merced	705	536	132	1,025	69	30	320
Millerton Lake	San Joaquin	407	345	118	520	78	-4	113
Pine Flat Res	Kings	687	533	129	1,000	69	60	313
Isabella	Kern	203	180	113	568	36	-42	365
San Luis Res	(Offstream)	2,006	1,759	114	2,039	98	---	33

The February 28, 2011, National Weather Service Climate Prediction Center (CPC) long-range, 1-month precipitation outlook for March 2011 suggests above average rainfall for Northern California. No tendency for above or below average rainfall is suggested Central California. Below average rainfall is indicated for the southern portion of the State. Information on current conditions can be accessed through the California Data Exchange Center (CDEC) at the following locations:

Reservoirs
http://cdec.water.ca.gov/reservoir.html
Current Conditions for Major Reservoirs
http://cdec.water.ca.gov/reservoir_map.html

Precipitation
http://cdec.water.ca.gov/snow_rain.html
Snow
http://cdec.water.ca.gov/snow/current/snow/

Snowmelt & Seasonal Volume Runoff Forecasting
The Feather Precipitation and Runoff Modeling System (PRMS) model upgrade continues on a good track to completion. The Lake Davis module is complete and forecasts are being compared to traditional methods. The results of this comparison will be used this summer to fine tune the model calibration further. The Lake Davis sub-watershed augmentation will be used to upgrade the rest of the Feather model with Frenchman Lake sub-watershed the next to integrate the lessons learned from the Lake Davis work. This work will also be the feature project of a PRMS short course that will be taught as part of the Western Snow Conference. The audience is expected to include hydrographers, forecasters, and snow experts from across the Western United States.

USGS development of the Yuba River model is very promising. The Yuba model has an expected completion date of June 1. This puts the model development just a few months behind the original expected completion date but for good reason. The delay is due to a new version of the PRMS model being released and supported by the USGS. Thus, our USGS modeling contact has taken the prudent step to slightly delay completion to provide the most up-to-date and sophisticated version of the model available.

The Merced River PRMS model, in contrast, should be delivered slightly ahead of schedule. The model is in early stages of compilation, but the knowledge gained from the upgrade of the Yuba to the latest PRMS version will be applied to the calibration efforts for the Merced. Early testing and calibration of the Merced should occur as early as this fall. Climate studies for both the Yuba and Merced will follow in 2012.

There has not been much progress on the Scott River forecasting equation although the first equation put together last month has shown some promise. The most noteworthy progress is on the Gage Augmentation Recommendations Report. Consultant support is being used to assist in evaluating existing data and conducting analyses to provide recommendations on potential gage augmentation within the watershed. The desire is to add hydrologic data streams that would not only benefit the water supply forecasts, but provide opportunities for improving short-term flood related forecasting.

Water Supply Modeling Forum: We are still aiming for a summer Water Supply Modeling Forum with the cooperators of the Snow Surveys program as our target audience. The purpose would be to identify improvements to the Snow Surveys and ultimately the FERIS websites, using this focus group to suggest an online suite of data analysis tools to improve forecasting and reservoir operations overall. A rough

plan has been made to work towards this summer event and goals have been roughly outlined.

Snow Surveys and Snow Course Maintenance: As of March 7, 2011, the regional snow pack conditions as reported by the remote snow sensors are as follows:

Northern Sierra
32" of SWC for 112% of April 1 Avg. and 119% to date
Central Sierra
37" of SWC for 118% of April 1 Avg. and 128% to date
Southern Sierra
33" of SWC for 125% of April 1 Avg. and 138% to date
Statewide
34" of SWC for 118% of April 1 Avg. and 128% to date

Compared to the February 7 report, the Northern and Central Sierra regions both gained 13 inches of SWC, while the Southern Sierra gained 8 inches. Statewide, 11 inches of SWC was added to the snowpack during February. Precipitation statewide was near average for the month and the mountain snowpack registered about a 25 percent gain for the month, which was about the normal increment for February, yielding a pack which is still well above average for this time of the year.

The third round of snow surveys for this season was conducted on or around March 1, 2011. For the stations along Highway 50 near Echo Summit the manual readings were as follows:

Location	Elevation	Snow Depth	Water Content	% of Average
Alpha	7600'	91.7"	36.8"	131
Phillips Station	6800'	89.0"	31.7"	128
Lyons Creek	6700'	101.1"	39"	153
Tamarack Flat	6500'	103.4"	36.6"	156

The results of the March snow surveys shows similar results to those recorded in the remote snow sensors. In most cases, courses showed similar gains to those recorded to the snow sensors and regional snow conditions based on surveys reflect those from the sensors. Overall, the snowpack remains above average in nearly all major watersheds although a true assessment of both the Trinity and Scott River watersheds is not available since the US Forest Service continues to ban the flights necessary to survey the snow courses in those watersheds.

Measurements from the snow courses this month proved to be somewhat tricky as the more recent snow that accumulated during the last two weeks of February is now sitting atop a thick base layer of snow and ice that accumulated during the first

three months of Water Year 2011. It appears that the early season snowpack in most cases remained largely intact despite the abnormally warm, dry January and February. However ablation did occur in some locations while a consolidation of the snow pack was evident at most locations during the prolonged dry stretch.

The next snow course measurements will occur during a 10-day window surrounding April 1, 2011.

Bulletin 120 and Water Supply Index Forecasts: From the March 1, 2011 Bulletin 120, the projected median April-July runoff in the major Sierra river basins ranges from 83 percent on the Pit River to 141 percent on the Kern River.

Forecasted median Water Year runoff ranges from 81 percent for the Inflow into Shasta Reservoir and the Sacramento River at Bend Bridge to 153 percent on the Tule River.

February started out in much the same way that January did with unseasonably warm and dry weather. Around the middle of the month, however, these conditions drastically changed and the last two weeks of the month were characterized by a series of cold, wet storms that boosted rainfall and snowpack accumulation totals across the state. The storms were not as wide-spread as they were in December with only certain areas of the State receiving above normal precipitation. This includes the San Joaquin River Region at 102 percent of the monthly average resulting in a slight increase in the San Joaquin Valley Index (SJI) (75 percent exceedence level). Conversely, the Sacramento River Region was slightly below normal at 97 percent of the monthly average resulting in a slight drop in the Sacramento Valley Index (SVI) (50 percent exceedence level).

This Water Supply Index forecast can be summarized as follows:

Sacramento River Unimpaired Runoff Water Year Forecast
17.3 MAF, 50 percent exceedence, 93 % of normal
Sacramento Valley Index (SVI)
7.7, 50 percent exceedence, Below Normal
San Joaquin Valley Index (SJI)
3.9, 75 percent exceedence, Wet

The SVI decreased to 7.7 from 7.8 while the SJI increased to 3.9 from 3.8 from the February 1, 2011 WSI. The SJI increase to 3.9 places the index back where it was on January 1, 2011.

The April 1, 2011 Bulletin 120 forecast will be available on April 8, 2011.

Hydro-Climate Analyses: Work continues on the University of California Task Orders for studies supporting climate change hydrology effort. The Central Valley Flood Protection Plan Climate Change Technical Work Group is moving forward with coordinating next step efforts with the Central Valley Hydrology Study (CVHS)

Phase II effort. Continued collaboration will work through the State Climatologist. Initial documents for the Phase II effort are now under review by the State Climatologist. A meeting discussing hydrologic models within the USACE that include snow modeling capabilities was held on December 16. Coordination efforts between the Central Valley Hydrology Study Phase I and the Central Valley Floodplain Evaluation and Delineation (CVFED) Program have been elevated to function through a cross coordination team.

Real-Time Data Collection Network: Snow level radar installations for the Kings River and Merced River watersheds are now online. The California Nevada River Forecast Center has created a web page to display a text product of data from the four snow level radar sites. NOAA's Earth Systems Research Laboratory has begun testing data dissemination through the regional Weather Service Office. Once testing is complete and data is flowing to the local Weather Forecast Offices and River Forecast Center, the data will be incorporated into the California Data Exchange Center through existing data sharing protocols. Final payment for the four coastal wind profilers is being made to enable construction of the sensors within the next year. The coastal wind profilers will allow forecasters to visualize and track the flux of water vapor as it comes ashore to better target which watersheds may receive the extreme precipitation. Coordination between NOAA, DWR and Scripps continues as the 21st Century Extreme Precipitation Monitoring project moves forward. The next quarterly progress meeting will be held in April. Newsletter articles on the project for the California Nevada River Forecast Center and FloodSAFE were prepared and submitted.

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.

Forecast-Coordinated Operations (F-CO): The draft guidelines for the F-CO Direct Grant Program have been released for public review and comment. Details are posted at the following FloodSAFE link:

http://www.water.ca.gov/floodsafe/docs/FCO_Program_Grant_Guidelines.pdf.

The comment period is current open and will close on April 13, 2011. The Department will consider and incorporate appropriate comments received during this public comment period into a final PSP and Guideline Packet that is scheduled for

release by May 1, 2011. Public workshops were held on February 23 and March 1 in Fresno and Sacramento, respectively.

River Forecasting: The storms in February produced runoffs that exceed monitor stages of a few forecast points up and down California. Of significance, the storm in late February produced runoff in the Arroyo Pasajero basin that lead to the temporary closure of Lassen Avenue near the town of Huron.

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 Center Training and Exercises: The Flood Operations Center (FOC) is scheduling Flood Information Specialist (FIS) training for staff designated to assist in the FOC during exercises and activations. The training will provide a brief summary of FOC Operations under SEMS/ICS, river and flood control systems, CA hydrology and geography, data resources including the California Data Exchange Center (CDEC) and National Weather Service (NWS), FIS duties, and procedures for direct response to public inquiries.

In addition, a number of Department staff completed HAM radio training, have passed Element 2, Technician Class and will received their FCC HAM radio license. The Flood Operations Branch is working closely with California Emergency Management Agency, local flood response agencies and local HAM Emergency Response Volunteer Groups to address emergency radio communication needs in Eureka, Sacramento, and Southern California as needed during major flood events. Trained staff includes members of the Incident Command Teams, the Eureka Flood Center and the State-Federal Flood Operations Center.

Outreach Program: DWR will announce two opportunities for local governments and levee maintaining agencies (LMAs), in a portion of the Central Valley, to improve flood emergency preparedness and ensure continued state funding eligibility of project levee upgrades. Both programs will be presented in a one-day workshop, repeated in Yuba City, Sacramento, and Merced. The two programs are: 1) Proposition 84 Grant Guidelines for Local Flood Emergency Planning, Preparedness, and Response projects and 2) a “Sample Flood Safety Plan” template to satisfy the new criteria required for Flood Emergency Response Plans for those areas in identified Central Valley Levee Flood Protection Zones.

While the “Sample Flood Safety Plan” workshop is rather straightforward in providing agencies with a template to modify their existing Flood ER Plan to meet the new requirements of AB 156 (Laird), the Grant Guidelines workshop has two

components: 1) accepting public comment on the grant guidelines and 2) educating agency representatives about this upcoming funding opportunity for their local flood risk reduction projects. Outreach for these items includes posting the Grant Guidelines on the DWR website, direct mail invitation to these three workshops, and future targeted outreach to Delta agencies.

Flood Emergency Response Coordination: The Division of Flood Management is working in concert with the United States Army Corps of Engineers (USACE), National Oceanic Atmospheric Association's National Marine Fisheries Service (NOAA-NMFS), U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG), and the Inter-Agency Collaboration Group to develop a communication plan that will ensure environmental resource management agencies are notified of any proposed flood fight activities.

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:

- Received comments on draft technical memos from Hydrologic Advisory Committee. Response to comments is nearly complete and will be incorporated in final document.
- USGS/Cornell/Corps have completed regional duration skew study. Report should be available in the near future.
- Reservoir/hydrologic (HEC-ResSim) models are nearly complete. A review plan is being prepared for independent technical review.
- Estimation of local flows is completed. Local flow analysis is underway.
- Ungaged watershed delineation process is nearly complete. Rainfall-runoff model development will start in the near future.
- Reservoir inflow hydrograph daily-to-hourly estimation and smoothing, and record augmentation is underway.
- Continuing internal coordination with Corps and hydraulic and hydrologic workgroups.
- Regulated channel routing model development is completed. Unregulated channel routing model development is underway.

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.

- Channel clearing, tree trimming, and vegetation control is continuing using hand crews throughout the system.
- Significant clearing efforts continue at Nelson Bend.
- Clean-up of debris, rodent damage, and downed vegetation is on-going system wide.
- Grading is underway at Tisdale weir.
- Vegetation control spraying is underway, including fire guarding, in all areas.
- The environmental restoration contractor for the Sycamore Creek Sediment Removal project is scheduled to begin work by June 2011 or earlier (depending upon high water, channel access, and permit conditions). Preparation and coordination for this work is ongoing.

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.

- Bid opening was held on February 16 for the Weir No. 2 Replacement project. The apparent low bidder was Mountain Cascade Inc., at $5,700,000. The engineer's estimate was $6,580,000. The contract is expect to be awarded in mid March. Construction is expected to commence in May 2011.

- Start of construction to modernize the Sutter Bypass Pumping Plant control system is scheduled to begin in May 2011.
- Maintenance and debris removal activities are continuing at the Knights Landing Outfall Gates, the Butte Slough Outfall Gates, and other low flow structures.
- Planned concrete repairs on the Sacramento and Tisdale weirs baffles will resume next summer. Major concrete repairs on the Sacramento weir have been completed.

LEVEE 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.

- Ongoing activities include tree maintenance (trimming in MA 5, MA 9, Putah Creek, Cache Creek, and Nelson Bend), spot spraying for weed control, replacing/repairing gates, and rodent control in all areas.
- Sacramento Maintenance Yard hauled and placed approximately 150 linear feet of A/B gravel to repair the crown road in MA 9 where tree root excavation took place for the levee vegetation research program.

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.

- The Division of Flood Management and the Flood Projects Office are developing the Lower Feather River Corridor Management Plan under the Corridor Management Strategy concept. Progress is being made on completing this project by June 30, 2012. Recently the project staff met with the State and Federal regulatory agencies responsible for maintenance permits along the project corridor to discuss the possibilities for streamlining or develop

programmatic agreements. Also, potential maintenance mitigation opportunities were discussed. Further actions will be developed through a collaborative process with the Corridor Management Plan Development Work Group.

- The Division of Flood Management has been developing a cadre of environmental scientists to be prepared for the Emergency Response needs for this year and future emergency needs. The Division is preparing for a higher level of preparedness, training, and response capability for all emergency incidents. The Division's goal is to prevent loss of life and property damage caused by floods, to facilitate recovery efforts in ways that preserve and restore the environment.

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).

- Cache Creek LM3.9 and LM4.2 construction previously scheduled for the 2011 construction season has been delayed to 2012 because of a lengthy condemnation process to acquire some of the required land and the need to relocate two PG&E power lines. Cache Creek LM2.8 and LM3.4 are at 60% design stage; construction is scheduled for 2013 or 2014, depending on right of way acquisition and expected condemnation for on most parcels.
- All permits for RD 2064 San Joaquin Critical Erosion Site (SJ RM 71.5) for 2,200 lineal feet rock repair have been obtained and the Division of Engineering is moving forward with preparation of final design, specifications, and contract documents for an anticipated 2011 repair; however, the requirement to obtain a new biological opinion due to the emergency repair may delay the proposed schedule. The length of the emergency repair recently completed was actually 650 feet, which is 100 feet longer than previously reported.
- On February 18, 2011, RD 2063 notified the Flood Operations Center and CVFPB personnel of erosion damage along the San Joaquin River (LM 3.15 – 3.35). The Levee Repairs Branch met with representatives of RD 2063 on at the erosion site and determined there were no imminent threats to the levee. Stakes were placed to monitor the erosion and the RD was given instructions on how to monitor erosion of the bank and what to report.

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).

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 and provides training to community officials. In February 2011, DWR staff members conducted a FEMA Elevation Certificate Workshop in the City of Cathedral City, Riverside County and conducted a FEMA Approximate Zone A Workshop in the City of Visalia, Tulare County. For the Community Rating System (CRS) program, staff completed the Statewide Quick Check (form and instructions) to help communities interested in participating in the program, a CA CRS Elected Officials brochure (only final edits and FEMA signoff remain), and the draft DWR CRS website. Staff also completed training materials and a flyer for two upcoming statewide CRS training classes—Community Rating System Basics and 2012 Community Rating System Changes—to be held in Roseville, Martinez, San Jose, and Santa Ana during the last week of April.

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.

- In February 2011, the Floodplain Evaluation Branch processed and delivered LiDAR/Digital Areal Imagery Data for six requests (including Federal, State, and local agencies and universities and research institutes). To date, the CVFED program has delivered LiDAR and Digital Aerial Imagery to over 40 local, state and federal entities, which adds up to approximately 40 Terabytes in computer storage and more than 90,000 square miles.
- As a result of the work of the CVFED program, FEMA has been funding DWR for floodplain mapping studies. In February 2011, the Floodplain Evaluation Branch issued FEMA funded task orders worth $320,000 and finalized an additional $1.46 million worth of FEMA funded mapping studies.
- The Floodplain Evaluation Branch is working with the Flood Projects Office to incorporate CVFED data to support multi-benefit projects. One example is the

potential use of CVFED modeling efforts to support hydraulic modeling efforts of the Lower Cache Creek Feasibility Study, discussion of which was initiated in February 2011.
- The Floodplain Evaluation Branch is currently investigating increasing the role of DWR to assist FEMA as a potential Mapping State.
- Continued development of CVFED Project Two – Hydraulic Modeling Development. Anticipated completion date of March 2012.

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.

- The 2011 Flood Risk Notification flyer will be ready for executive and management approval by March 18, 2011.
- The Flood Risk Notification program team is planning to develop a proposal seeking grant funding from FEMA.

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 continues to support development of policy papers and technical data for the CVFPP and participate in various FAXCT (functional area cross coordination teams).

FUNCTIONAL AREA 4 FLOOD PROJECTS & GRANTS

Flood Protection Projects and Grants is 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 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.

- On February 18, 2011, USACE completed the conversion of the hydraulic model from NAVD 29 to NAVD 88.
- USACE finalized a draft F3 document on February 20, 2011 and held a meeting to discuss the draft alternatives on March 2, 2011. Alternatives are currently out for sponsors review.

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.

- USACE approved the Reconnaissance Report on February 25, 2011.
- A management meeting between federal and non-federal sponsors is being coordinated to determine long and short term goals and potential interim solutions for the study.

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.

- Funding delays, both federal and non-federal, are impacting the project schedule. A USACE payment request of $297,000 is currently being processed by DWR.
- This study was one of the three recommended by USACE for an accelerated 18-month study program, but was not chosen.
- F3 Conference /Feasibility Scoping meeting is now scheduled for February 2014.

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 work on a draft Project Participation Agreement to include the State and local sponsors in the reevaluation of cost-share.
- USACE is continuing to determine whether the project will need to be a new start or if the reevaluation can continue as an existing investigation under design and construction appropriation.

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.

- USACE is rescheduling the February 17, 2011 meeting with local sponsors to discuss the Reconnaissance Report, funding, PMP, and FCSA to a date yet to be determined.

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.

- A payment of $52,503.50 is being processed through the Budget Office.
- The non-federal sponsor Work-In-Kind package is being completed and will be submitted to USACE when finalized.
- The Sutter Basin Feasibility Study was chosen by USACE along with one other project in the nation to be part of "The New Paradigm" program which proposes to complete the study within 18 months. A meeting at the Sacramento USACE office was held on February 28, 2011 to discuss what the new process will be. A Pilot Initiation meeting will be scheduled by USACE for early March to discuss what types of changes will happen to the study's scope, budget, and schedule.

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 has received a payment of $403,500 for the 1st and 2nd quarter FY 11 tasks for the study.
- All disciplines are completing their sections of the study in preparation for the F3 Conference currently scheduled for July 2011.

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 completed the reevaluation of the levee alignment along the CCID canal on February 10, 2011.
- A new levee alignment has been selected based on the results from the soils exploration which revealed some levee stability and seepage concerns.
- The revised schedule anticipates completion of the feasibility study by August 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.

- USACE approved the Reconnaissance Report on February 25, 2011.
- A management meeting between federal and non-federal sponsors is being coordinated to determine long and short term goals and potential interim solutions for the study.

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.

- Resolution No. 10-39 was signed on February 25, 2011 by CVFPB giving the Board President the authority to sign the FCSA and LFCSA. The FCSA and LFCSA have been signed by the City of Woodland and the CVFPB. The agreements will now be sent to the Contracts and Budget Office. Finally, USACE will sign the FCSA to execute the agreement.

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.

- USACE received the final installment on February 24, 2011 of $36,820 for a $600K invoice, dated April 2010.
- The Alternative Formulation Briefing (AFB) Conference is scheduled for March 17, 2011.

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)
The USACE approval of the OMRR&R is still pending. LD-1 is moving forward with preparing documents for project closeout and is in contact with DWR about requirements.

Reclamation District 17 - 100-Year Seepage Area Project (RD-17)
DWR and CVFPB staff continue to work with RD-17 to ensure compliance with all EIP and Board permit conditions. RD-17 is preparing to install piezometers as required by DWR and CVFPB staff. DWR expects an updated Piezometer Installation Plan by the 2nd week of March. RD-17 will put the piezometer installation work out for bidding by the end of the 2nd week of March and expects to be able to move forward with the installation within the month.

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 1600 acres for site mitigation, agricultural use and habitat.

- This project received a National, ASCE Region 9 award in Sacramento for outstanding flood management project at an evening ASCE event on March 9, 2011.

Three Rivers Levee Improvement Authority - Upper Yuba River (TRLIA-YR)
The 104 credit approval is still pending from USACE. The 104 credit request must be approved prior to contract advertisement. TRLIA is concerned that if the approval is not received by April, the construction may be delayed and the levee may lose FEMA accreditation.

Sacramento Area Flood Control Agency - Natomas Cross Canal (SAFCA-NCC)
SAFCA is compiling the necessary information to begin project closeout.

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

- Construction continues on Phases 1B, 2A and 2B. SAFCA has re-bid SREL after reviewing the previous winning bids it was discovered that there were portions of the bids that came back incomplete. The new bid will be back on March 8, 2011 and the award is to be made by March 18, 2011. The Notice to Proceed is expected in April.
- FPO continues to work on review of invoices to make a reimbursement payment to SAFCA. The early estimate is an amount equal to about $25 million which should allow SAFCA to finish construction through SREL 12A, the point at which USACE is expected to pick up construction.

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

- DWR is drafting a Decision Memo recommending funding of the CHP Academy and the Rivers Projects construction costs.

- On January 7, 2011 and January 20, 2011, DWR met with WSAFCA to discuss the various setback alternatives in the Southport area. On February 1, 2011, WSAFCA met with DWR executives, Deputy Director Stein Buer, and Division Chief Gary Bardini. In this meeting, WSAFCA sought DWR's support in concurring with WSAFCA's selection of the setback-preferred alternative and requested DWR's support and collaboration in maximizing the State's cost-share. On February 7, 2011, DWR's EIP Section met with WSAFCA and discussed various cost-share options. DWR is scheduled to meet with WSAFCA on March 23, 2011 to discuss early results of preliminary alternative screening analyses and to continue discussing the means and methods for integrating different DWR and WSAFCA funding sources.

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 for R5 is scheduled to begin in June 2011.
- A detour bike path for R5 was established.

Folsom Dam Raise and Bridge Element

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

- FY 12-13 Appropriation increased to $1 million by USACE as USACE updated their projected capability for the fiscal year.

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 35 percent design review was completed and submitted for the geotechnical plans and specifications for the approach channel.
- The Bureau of Reclamation Phase II Auxiliary Spillway Excavation Project is substantially complete. The USACE contractor, Granite Construction, has begun constructing the Phase III control structure and installing the six giant Tainter floodgates. The Phase III construction will be complete in July 2014.
- The "Kick-Off" meeting for the JFP Re-Operation Study for the Folsom Dam was held March 3, 2011. Pre planning issues were discussed.

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.

- The Phase 4 design is 60 percent complete and being reviewed for comments within USACE.
- The Phase 2 schedule is being revised to begin construction in FY 2012.
- The Phase 2A design will be A&E contracted to HDR to meet FY 12-13 construction season, pending approval of the President's budget.
- Phase 1 scheduled to resume construction on May 1, 2011.
- AFB conference to be conducted on March 15, 2011.

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.

- A supplemental O&M manual for Area 1, RD-1500, is being reviewed by USACE and is scheduled to be delivered to DWR by mid-March.
- USACE is in the process of amending the PCA to separate Area 3 from Areas 2 and 4. The draft PCA is scheduled to be delivered to DWR for review by the end of March.

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.

- DWR has participated in discussions with USACE, SAFCA, and Sacramento Regional Transit (RT) regarding RT's pending application for encroachment into the project along Morrison and Unionhouse Creeks. Preliminary feedback from CVFPB is to reject it in full or recommend an alternative application for part of the work west of Franklin Blvd. The Project Development Team (PDT) has been considering how to accommodate the encroachment, but is also evaluating cost, schedule, and alternative design considerations. A presentation is planned by USACE at SAFCA's March 17 board meeting.
- DWR is reviewing updated plans for the floodwall along the landside of the Morrison Creek levee near the UPRR. The PDT is reviewing the plans in concert with SMUD to ensure the proposed design will not restrict SMUD's access for their nearby overhead electrical lines.

West Sacramento Area Project, Slip Repair

- The Geotechnical analysis for the repair of two Yolo Bypass east bank levee slips is complete. The north slip repair site design is underway at USACE and repair is currently scheduled for the 2011 construction season.
- The project is on the agenda to be presented to the CVFPB at the March 25 Board Meeting for environmental and funding issues.

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 2010-2011 Funding Cycle request for grant-funded project proposals is open and will close March 3, 2011. Based on preliminary response, between 30 and 40 proposal submittals are expected, requesting funds for non-structural flood risk reduction projects. FCP staff members are making necessary preparations to begin evaluations of the proposals as soon as the deadline has passed.

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.

- Staff is evaluating the current processes in an effort to improve program delivery.
- Nine claims for $7 million were completed.
- One new claim for $8.7 million was received this month.
- Seven claims for $33 million are under review.
- One audit payment for $5 million was processed.
- Two claims for $7 million are in process of payment.
- 50 claims for $140 million are pending processing.

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's request for agreement amendment was approved and the documents are currently receiving management approval. The amendment will increase the overall grant amount and update the project work plan, schedule, and budget. The agreement term is also amended.
- Marin County and Humboldt County both requested a one year extension on the contract term. Amendment documents were approved and are in final stage of execution.
- The City of Bakersfield resubmitted a final report and invoice for the Kern River Project. The City met the requested deadline of March 31, 2011 for the resubmittal.
- All LLAP project information has uploaded to the FloodSAFE Bond Accountability website.

- Alameda County submitted a final report and invoice along with all necessary documents for the Alameda Creek LOLE project and the Flood Control Zone 3A Project. The final payments are being processed through the Budget Office.
- City of Oroville requested execution of a grant agreement and submitted an updated project work plan. The agreement has been reviewed by both DWR's and the City's legal counsel. Four copies of the agreement are being sent to the City for signature.
- A concept paper was drafted to propose the addition of a new strategy for LLAP funding. This strategy will involve the award of Proposition 1E funds to O&M projects within the Sac-San Joaquin watersheds.
- Staff participated in and completed a six-day comprehensive project management workshop.

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.

- Staff prepared payment request to release $52,503.50 towards the $650,000 Sutter County local share for Sutter Basin Feasibility Study.
- Staff reviewed four invoices from YCWA for FCO - Design and Implementation Agreements. Due to inaccuracies observed in reporting of tasks, not in accordance with the corresponding contract agreements, staff requested that YCWA resubmit all four invoices following correction of amount requested for each invoice and in-line with agreed tasks.

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.

- LLAP is conducting workshops on the guidelines for the next round of proposal selections.
- A brochure advertizing the LLAP Draft Guidelines for public comment was developed and mailed to about 600 state entities. Information is now being collected on the effectiveness of the mailing and the correctness of entity contact information.
- A short article advertised the public comment period and workshops. This article is posted in the February issue of the FloodSAFE newsletter.

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

- Activities are described under the individual project headings.

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.

- A work group was formed to update the AB 1147 regulations based on changes in AB 1788 and is preparing a draft document based on the recent Cost Sharing Formulas. The regulations document is undergoing a final management review, after which the document will be packaged for submittal to OAL.
- A Project Managers Group was created to develop an office standard template for project charters, QAQC Manuals, and other project management aids. The group has worked with and provided feedback to the Project Services Office (PSO) for the production of an Enterprise Process Guide. PSO staff is updating the standard charter for FPO.
- Staff continues to provide assistance to comment and address specific engineering issues for various flood projects.
- The Flood Corridor Programs and Environmental Support Branch continued leading the effort to develop a Corridor Management Plan for the Lower Feather River. The draft environmental setting biological conditions baseline report was completed with consultant support, as was the draft report on required permits and recommended permitting strategy for DWR maintenance projects and ecosystem restoration.

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 54 joint levee inspections and received DFG approval for 50 claims. Payments will be processed by staff as DFG approves the claims.
- Staff has received 6 final claims for the maintenance work totaling $13 million. To date, we have paid 13 reimbursements totaling $2.6 million.

Work Agreements for FY 2010-2011

- DWR staff has mailed work agreements to 68 reclamation district and has received signed work agreements from 47 reclamation districts. An additional 14 work agreements since the February CVFPB meeting.
- The agreements will be finalized once signed by the Board's Executive Officer.

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.

- The Project Funding Agreements for the Aqueduct Protection Projects have been fully executed, and copies distributed to the Reclamation Districts (RD) and the Department of Fish and Game. It is anticipated that the RD's will present the Scopes of Work and CEQA documentation for these projects to the Delta Stewardship Council at their March meeting.
- DWR staff is currently updating the Bond Accountability Database (www.bondaccountability.com) to ensure that relevant projects are included.

More and 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.

Geotechnical Evaluation Reports			
Study Area	**% Complete**	**Study Area**	**% Complete**
Chico	30	NEMDC East	40
Marysville	40	Natomas	15
Sutter	35	Bear Creek	25
RD 784	40	Calaveras River	25
Davis	10	**RD 404**	**37**
Woodland	10	RD 17	50
American River	40	**Stockton Non-Project**	**26**
West Sacramento	**86**	**W. Sac. Non-Project**	**11**
Sacramento River	45	**South Sac. Streams**	**10**

Changes shown in bold.

- Overall, ULE is 67% complete.
- No drilling activities occurred during the reporting period.
- ULE is preparing Task Orders and schedules for Geotechnical Evaluation Reports to complete the program.
- ULE completed version 10 of the ULE Guidance Document.
- Most ULE efforts for the reporting period have been for planning GER's noted above and in support of the CVFPP.

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: the Flood Control System Status Report and the Central Valley Flood Protection Plan.

- Overall, Non-Urban Levee Evaluations are 39% complete.
- No drilling activities occurred during the reporting period. However, field work will likely resume in April 2011.
- The final geomorphology reports for North and South NULE were completed.
- A preliminary report on the San Joaquin River Restoration Project seepage analysis was completed.

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 in RD 17, AR Common Features, and SBFCA.

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.

- Version 4 of the ILDC was completed. Version 5 work will commence in March 2011.
- A meeting was held with Corps District technical staff regarding the seismic approach for ULE as well as DWR developing seismic policy.
- Vegetation management policies and research continues.

Staff continues to support development of policy papers and technical data for the CVFPP and participate in various FAXCT (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 deliverables: (1) SPFC Descriptive Document and (2) Flood Control Systems Status Report (FCSSR).

No new information.

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.

Planning Activities

- Management actions developed in Phase 2 are being refined and assembled into alternative approaches for qualitative comparison and to form a basis for incorporation into the State's preferred alternative.
- Formulation and development of screening process to select management actions from alternative approaches for consideration and incorporation into the State's preferred approach continues.
- Regulatory sections of impact analysis are being prepared for the PEIR.

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.

No new information.

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.

VEGETATION

In response to the Levees Roundtable's Levees Improvement Framework, staff have been working with the DFM levee inspection group, DFG, and USFWS to assist with resolution of non-compliant levee environmental issues. A Vegetation Obligations Summary Report has been drafted and is currently under management review.

REGIONAL CONSERVATION PLANNING

- The Statewide Framework, the first major work product of Regional Advanced Mitigation Planning (RAMP), is currently undergoing edits with RAMP partner agencies. The report provides statewide context and organizational structure to the RAMP effort, and it identifies key planning components, regulatory issues, funding, and future guidance.
- A regional assessment for RAMP in the northern Sacramento pilot region is currently in preparation. Agency staff will provide briefings to each of their agency regional offices.

CORRIDOR MANAGEMENT PLANNING

- FESSRO continues to coordinate with DFM in order to promote the Corridor Management System (CMS) approach to other parts of the Central Valley flood management system.

- Staff is collaborating with DFM on development of the Lower Feather River Corridor Management Plan. Recent activities include refinement of key items including objectives, content, permitting, funding, and linkages to the CVFPP Conservation Strategy.

SCIENTIFIC AND PLANNING INFORMATION

- Staff continues to develop and refine reports to provide baseline ecological information for the Conservation Strategy, CVFPP, and CEQA document preparation. Reports in development include: Biological Status and Trends Report, Fish Passage Barriers Assessment, and Habitat Conservation Objectives from Overlapping Plans Summary.
- Work continues toward completion of a habitat map for the Central Valley. The map will provide a medium-scale, system-wide assessment of the distribution and acreage of riparian habitats within the planning area for the CVFPP. Partners are planning for upcoming agency coordination and outreach.
- FESSRO staff continues to work in coordination with partners to develop an agreement for a high-resolution, fine-scale map to provide project-level planning detail.

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.

Two documents have been published and can be found on the FloodSAFE website:

- The March 2011 issue of the FloodSAFE Focus newsletter includes a description of the new spillway construction at Folsom Dam, a request for comments on draft Local Levee Assistance Program guidelines for Proposition 84 funds, a story about the completion of the Marsh Creek fish ladder, information about the partnership between state and federal weather forecasters, and a story about critical erosion repairs to the San Juan Creek levee in Orange County.

  http://www.water.ca.gov/floodsafe/newsletters/

- A FloodSAFE brochure, *Implementing the FloodSAFE California Initiative. An Integrated, System-Wide Approach for Sustainable Flood Risk Management in California*, that describes the history of the program, its accomplishments, and how its programs have been financed from 2006 to 2010.

  http://www.water.ca.gov/floodsafe/factsheets/

A Flood Management DVD and Public TV documentary is underway. A short video (12 minutes) will be used in the Central Valley flood planning effort and a longer half hour program will be used for public television in the Central Valley.

A session on flood modeling at the annual California Water and Environmental Modeling Forum meeting (February 28-March 2) focused on progress in developing the Central Valley flood models and tools being used to support various FloodSAFE programs including the Central Valley Flood Protection Plan.

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.

The FloodSAFE Federal Advocacy Team will start a series of meetings in Washington D.C on March 28, 2011. They will meet with the Office of Management and Budget, headquarters for the U.S. Army Corps of Engineers (USACE), and various Congressional offices to discuss the potential cuts in federal FY 2011 USACE funding and funding needs for federal FY 2012 cost shared flood control projects. Other issues to be discussed include DWR proposed legislation for crediting and reimbursement as well as USACE vegetation policy.

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.

Executive Order S-02-07 requires that a public website be created to provide readily accessible information on how proceeds of State general obligation bonds and lease revenue bonds are being utilized, and it also requires that each department establish and document a three-part accountability structure for the Strategic Growth Plan bond proceeds. The California Natural Resources Agency Bond Accountability website has been restructured to represent how bond-funded projects are categorized under the current FloodSAFE program structure and the fund source for

each project. All required three-part accountability statements have been revised to reflect this restructuring, and have been submitted for Department of Finance approval and posting to the website.

http://www.bondaccountability.ca.gov/Bonds/

Consultant support to expedite the economic feasibility evaluations for Early Implementation Project submittal has been initiated.

The Division of Flood Management is currently preparing Concept Papers for Support and Local Assistance programs and Capital Outlay Budget Change Proposals for consideration in the Governor's FY 2012-13 budget.

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.

On March 4, 2011, the Department of Finance issued Budget Letter 11-04, which provides State departments with instructions on requesting exemptions to the Governor's most recent hiring freeze, Executive Order B-3-11, issued February 15, 2011.