Agenda Item 5

REPORT OF ACTIVITIES OF THE DEPARTMENT OF WATER RESOURCES

By

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*Presented before the Central Valley Flood Protection Board on December 2, 2011

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

Fall Levee Inspections continue to progress. Inspectors continue to look at issues made by the USACE and include them in DWR reports as appropriate. This process has slowed inspections some, but is still anticipated to be completed in a reasonable amount of time. Inspectors continue to inspect construction activities related to Central Valley Flood Protection Board Encroachment Permits and other authorized activities. Enhancements to inspection policies and procedures continue to be pursued through FAXC Team efforts, including developing a second, alternative inspection program for LMAs that are not going to participate in the USACE's PL 84-99 program and creating a website with various documents and agreements regarding Project facilities LMAs maintain.

FLOOD PROJECT INTEGRITY/VULNERABILITY ASSESSMENT ACTIVITIES

The Flood System Analysis Section continues to develop a systematic levee vulnerability assessment tool that will utilize levee-related data being collected by DWR to annually assess relative vulnerability of the project levees within the Central Valley flood-control system. This assessment will integrate information related to system performance, engineering evaluations, and operation and maintenance practices. This tool will support the objectives of FA-1 by informing emergency response and resource planning decisions and will be used for the State-Federal flood control system with the flexibility to expand valley and state wide.

Using best available information developed by the Flood Operations Branch, Flood Project Integrity and Inspection Branch, Flood System Sustainability Branch, and Regional Project Assessment Branch; vulnerable sites with previous distress issues have been identified and shared during 2011 Pre-Season Flood Meetings, Program

Manager Meetings, and with the Interagency Collaborative Group. These levee distress sites include erosion, seepage/ sand boil, and slope instability issues.

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 November 1, statewide hydrologic conditions were as follows: precipitation, 135 percent of average to date; runoff, 130 percent of average to date; and reservoir storage, 130 percent of average for the date. Sacramento River Region unimpaired runoff observed through October 31, 2011 was about 0.5 million acre-feet (MAF), which is about 106 percent of average. For comparison, on October 31, 2010, the observed Sacramento River Region unimpaired runoff through that date was about 0.6 MAF, or about 124 percent of average.

On November 1, the Northern Sierra 8-Station Precipitation Index Water Year total was 3.8 inches, which is about 119 percent of the seasonal average to date and 8 percent of an average water year (50.0 inches). During October, the total precipitation for the 8-Stations was 3.8 inches, which is about 127 percent of the monthly average. Last year on November 1, the seasonal total for the 8-Stations was 7.5 inches, or about 250 percent of average for the date.

On November 1, the San Joaquin 5-Station Precipitation Index Water Year total was 2.3 inches, which is about 105 percent of the seasonal average to date and 6 percent of an average water year (40.8 inches). During October, the total precipitation for the 5-Stations was 2.3 inches, or about 115 percent of the monthly average. Last year on November 1, the seasonal total for the 5-Stations to date was 7.4 inches, or about 336 percent of average for the date.

Selected Cities Precipitation Accumulation as of 11/01/2011 (National Weather Service Water Year: July through June)					
City	Jul 1 to Date 2011 - 2011 (in inches)	% Avg	Jul 1 to Date 2010 - 2010 (in inches)	% Avg	% Avg "Water Year" Jul 1 to Jun 30 2011- 2012
Eureka	4.79	144	5.84	176	12
Redding	3.33	111	5.13	170	10
Sacramento	1.34	104	1.44	112	7
San Francisco	1.49	107	1.87	135	6
Fresno	0.90	110	0.44	54	8
Bakersfield	0.55	131	0.59	140	9
Los Angeles	0.64	75	1.56	184	5
San Diego	0.59	77	2.23	290	6

Key Reservoir Storage (1,000 AF) as of 11/01/2011								
Reservoir	River	Storage	Avg Storage	% Average	Capacity	% Capacity	Flood Control Encroachment	Total Space Available
Trinity Lake	Trinity	2,065	1,614	128	2,448	84	---	383
Shasta Lake	Sacramento	3,227	2,755	117	4,552	71	-665	1,325
Lake Oroville	Feather	2,896	2,164	134	3,538	82	-267	642
New Bullards Bar Res	Yuba	688	533	129	966	71	-108	278
Folsom Lake	American	577	496	116	977	59	-147	400
New Melones Res	Stanislaus	1,944	1,302	149	2,420	80	-26	476
Don Pedro Res	Tuolumne	1,582	1,297	122	2,030	78	-108	448
Lake McClure	Merced	687	451	152	1,025	67	13	338
Millerton Lake	San Joaquin	280	189	148	520	54	-115	240
Pine Flat Res	Kings	556	350	159	1,000	56	-275	444
Isabella	Kern	168	159	106	568	30	-2	400
San Luis Res	(Offstream)	1,721	1,105	156	2,039	84	---	318

The latest National Weather Service Climate Prediction Center (CPC) long-range, 1-month precipitation outlook for November 2011, issued October 31, 2011, suggests above average rainfall for Northern California. The outlook suggests no tendency for above or below average rainfall for the central and southern parts of the State.

HYDRO-CLIMATE ANALYSES

Work continues on the University of California Task Orders for studies supporting climate change hydrology effort. The UC Merced team received a large grant from the National Science Foundation to expand upon the monitoring augmentation funded by DWR. HAFOO Hydrology Branch personnel met with Sacramento Municipal Utility District personnel and UC Merced researchers to discuss execution of the project to best serve interests in the American River watershed.

The Central Valley Flood Protection Plan (CVFPP) Climate Change Technical Work Group has completed the draft of the technical appendix for the Central Valley Flood Protection Plan. The draft is currently under administrative review. The approach developed for the CVFPP was presented at a UC Davis Civil and Environmental Department Seminar Series. The seminar was well received with over 30 minutes of discussion following the presentation.

Efforts continue to coordinate the hydraulics and hydrology efforts of the Department with the United States Army Corps of Engineers (USACE). USACE reviews of

interim products and processes have completed or are near completion. Other model development and data analysis continues as well. Initial product delivery is expected by the end of November. Bi-weekly coordination meetings are held to ensure that progress continues. USACE also provides monthly progress reports. A meeting between DWR, USACE and Hydrologic Engineering Center personnel regarding the Agency Technical Review of the Central Valley Hydrology Study projects is being scheduled for November. Agency Technical Review is a requirement for USACE studies.

The second set of Bulletin 195 files for the Oracle database was delivered from the consultant to the Department. These files will have the annual extremes data and the information to develop the depth-duration frequency tables and curves. Work continues on the development of a desktop analysis tool to generate new curves and tables when new data is appended to the database. Further meetings have been held with the regional office staff and climate change program staff to develop the appropriate data collection and processing protocols for extremes data. Efforts to coordinate with the Western Region Climate Center (WRCC) continue via email discussions. Further discussion will be held as a part of a resources coordinating committee with the Western US State Climatologists meeting being held from November 2nd to 4th.

REAL-TIME DATA COLLECTION NETWORK

Coordination between NOAA, DWR and Scripps continues as the 21st Century Extreme Precipitation Monitoring project moves forward. DWR staff met with Scripps staff to discuss progress and coordinate installations. Progress is being made on the data transfer protocol to take the observed data products from NOAA's Earth Systems Research Lab (ESRL) and distribute them to the National Weather Service and the Department of Water Resources' California Data Exchange Center. ESRL can now distribute data from its lab to NWS field offices via MADIS (Meteorological Assimilation Data Ingest System). DWR will work with the California Nevada River Forecast Center to coordinate moving data from MADIS to the California Data Exchange Center. Full implementation of the data transfer plan should be executed by the end of the year. Soil moisture sensor installation has begun as have site visits for the snow level radar installations. Scripps and DWR met via teleconference and developed an installation plan for this year's installations. Data logging and communications work with Scripps Institute of Oceanography has achieved products for testing phase. Testing has begun and will continue. The next quarterly meeting between the parties has been set for December.

SYSTEM RE-OPERATION

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

held in October to review the strategies put forth by NHI for consideration in the feasibility studies.

RESERVOIR OPERATIONS & RIVER FORECASTING

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

RESERVOIR COORDINATED OPERATIONS

During the month of October LOM infrastructure development continued with further development of the model check-in process including model information" check-in web pages, dataset Information" and data upload web pages. The development team made progress on the content administration web pages for maintaining lookup lists and the library setup. The development for the functionality to review and manage contents in LOM is initiated. Simultaneously model checkout workflow has also been implemented in the LOM electronic infrastructure. The documentation of the database, web navigation, and design components has been done as the development progresses. The finalization of the LOM pilot project reports and Technical Memorandums is on schedule.

FLOOD OPERATIONS EMERGENCY RESPONSE

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

FLOOD OPERATIONS, TRAINING AND EXERCISES

The Division of Flood Management conducted its fall 2011 flood emergency training program with a field exercise on November 17 with ICT3. Over 30 people from the Flood Operations Center Emergency Response Team participated in the one-day event. The exercise was a low-stress flood simulation that provided the team an opportunity to apply Standardized Emergency Management System (SEMS) section and duty position skills to a realistic Sacramento Valley flood scenario. The exercise was held at a remote location in West Sacramento to allow participants to set up an incident command post, utilize the Emergency Command Communications Trailers (ECCT), and focus on SEMS section roles and communications both within and between the sections. Staff from the Flood Operations Branch planned and

designed the exercise. Controllers and evaluators were utilized from two additional ICTs to assist team members with their Duty Position-specific roles during the exercise. Emphasis was placed on completion of ICS forms for detailed documentation, providing an ease of transfer of information to the FOC for dissimulation to other agencies, and practice drills for communications utilizing three types of communications, satellite, cell phone, and DWR radio frequencies in the event cell phone use is not available. Participant evaluations will be collected to identify constructive suggestions to improve future exercises, to further develop the training program, and to address current emergency preparedness planning logistical needs.

The Flood Operations Center (FOC) has been involved in multiple activities during the months of October and November. The FOC has been regularly participating in Emergency Action Plan Meetings with PG&E, El Dorado Irrigation District, and South Feather Water & Power Agency to review the protocols and communication structure for dam related incidents. These meetings consisted of the annual face-to-face meeting, table-top exercise, or functional exercise. These requirements are set by the Federal Energy Regulatory Commission for dams that generate power.

In early October, the FOC participated in the Forecasted-Coordinated Operations (F-CO) Exercise 2011. The purpose of this exercise was to allow the reservoir operators to simulate operations during a high water event. For this exercise, the FOC was activated to monitor simulated high water, coordinate flood fight efforts, address public concerns, request a deviation in outflow to accommodate a simulated levee distress, and monitor the results from the F-CO processes. The FOC also tested a newly upgraded Communications Log (Comm Log) within the Flood Operations Center Information System (FOCIS) that allows Emergency Responders in the Flood Operation Center to directly enter geo-referenced flood operation information. This geo-referenced Comm Log information is the first step in being able to provide flood operations status within a Common Operation Picture. The upgraded Comm Log can be accessed by all SEMS Sections including the GIS Unit. Staff is continuing to work with the Decision Support Section to enhance the Comm Log within FOCIS in order to improve communication within the FOC. With this enhanced Comm Log, information flow between the various SEMS Sections will be fine-tuned to improve efficiency.

The FOC coordinated and held its last Pre-Season Flood Coordination Meeting in Eureka in early November. The meeting covered an overview of current and future weather and water conditions, DWR flood preparedness and emergency response activities, flood fighting methods, and other related topics.

This past summer, the FOC began its annual update cycle for the Directory of Flood Officials (DOFO). The 2012 DOFO has been officially published is currently being disseminated to emergency responders as needed. The FOC asks that all prior versions of the DOFO be shredded to protect the confidential nature of the information contained in the Directory.

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

Now that the 2011-2012 flood season has arrived, the FOC is maintaining its situational awareness and is monitoring the flood control system as needed. River forecast recordings are now being recorded on weekends and holidays to disseminate information to the public.

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

FLOOD EMERGENCY RESPONSE PROJECTS – DELTA COMMUNICATIONS EQUIPMENT GUIDELINES

- The final document has been released with an application period of November 9, 2011 through January 16, 2012.
- A new webpage is available with comprehensive information about the grant program. The webpage includes the background information as well as a link to the final guidelines for the Delta grant.

  http://www.water.ca.gov/floodmgmt/hafoo/fob/floodER/

- The goal of this grant program is to improve the effectiveness of, and reduce the time required for, emergency response by local agencies; specifically to improve emergency communication within the Delta. The total amount of funding available for this grant is $5 million with no local match required.
- The FOC continues to work on finalizing the grant guidelines for the Statewide Flood Emergency Response Projects grant, which is expected to become available this winter.

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:

- Sacramento HEC-ResSim model review is complete. Final comments being submitted as part of independent technical review of the San Joaquin HEC-ResSim models.
- HEC added improvements into new HEC-ResSim model as a result of this review.
- Augmentation of gage data and local flow records is complete. District Quality Control on data augmentation and smoothing algorithms is complete. Agency Technical Review is underway.
- Rainfall-runoff model analysis plans are complete and model development is underway. Calibration of models is underway.
- Temporal distribution analysis methodology for ungaged watersheds is complete.
- Continuing internal coordination with USACE and hydraulic and hydrologic workgroups.
- Configuration of HEC-RAS routing models using the preliminary augmented data set is underway.
- Ford Consulting (subcontractor) provided demonstration of Information Processing and Synthesis Tool (IPAST) basic functionality.
- Further data quality checks on boundary flow set to be used in simulations are being made.

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.

- Shrieners – mowing (60 acres) is 100% complete.
- Freemont Weir – mowing (50 acres) is 65% complete.
- Furlon – mowing (25 acres) is 100% complete.
- Natomas Cross Canal – spot spraying (8 acres) is 100% complete.
- Sutter Bypass – mowing at Highway 20 is 100% complete.
- Tisdale Bypass – debris removal from the Reclamation Road Bridge is complete.
- Butte Creek – mowing is 100% complete.
- Cherokee Canal – vegetation control with CDF crews is 100% complete.
- Little Chico Diversion Channel – vegetation control with hand crews is 100% complete.
- Colusa Bypass – vegetation control and mowing is 100% complete.
- Environmental restoration contract work continues for the Sycamore Creek Habitat Restoration Project. The construction phase of the Sycamore Creek Habitat Restoration Contract (#C51420) has been completed and the project was officially accepted from the Contractor on November 3rd, marking the beginning of the three year monitoring phase necessary for plant establishment. DFM will continue to organize the required monthly site visits with the associated reporting and make any required adjustments.

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.

- Pipe inspection in Cache Creek (20 miles) and Putah Creek (14 miles) is complete.
- Grading crown roadway (6 miles) and toe road (13 miles) in Putah Creek is complete.
- Other ongoing activities in Sutter yard include installing sheetrock (90%) and placement of parking area concrete (75%).

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.

- Rodent Program (poison, trapping, grouting) for Sutter Bypass, Wadsworth Canal, and MA3 is 80% complete.
- Pipe repair performed at Pennington Road in MA16.
- Dragging of levee slopes completed along Putah Creek, Yolo Bypass Unit 4, Cache Creek, MA1, MA12, and MA13.
- Mowing in MA 17 is complete.
- USACE Periodic Inspection identified deficiencies within Sutter area with unacceptable ratings have been corrected and documented.

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.

- As of November 15, 2011, DWR has received all environmental permits for the Knights Landing Outfall Gates Rehabilitation Project. DOE approval of the final package is expected this week, with advertising occurring by the week of November 21, 2011. The notice to begin work is anticipated by February 1, 2012. The first phase of work is manufacturing the outfall gates, and will need to be completed in time for construction to begin June 1, 2012. A cofferdam will be configured such that at least half (5) of the gates will remain in operation during construction.

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).

- **Sacramento River, RM 77.2L – Sacramento Bank Protection Program**
  All the agreements and permits are in place. The repair construction work is in progress and is scheduled for completion prior to November 30.

- **Lower American River, RM 10L &10.6L – Sacramento Bank Protection Program**
  All the agreements and permits except planting rights are in place. The repair construction work is in progress and is scheduled for completion prior to November 30.

- **Feather River, RM 7.0L – Sacramento Bank Protection Program**
  All the agreements and permits except planting rights are in place. The repair construction work is in progress and is scheduled for completion prior to November 30.

- **Sacramento River RM 57.2R setback levee project - Sacramento Bank Protection Program** – Project construction will be on hold due to flood season after November 15. Construction of the setback levee with the slurry cutoff wall is scheduled to complete in 2012.

FUNCTIONAL AREA 3 FLOODPLAIN RISK MANAGEMENT

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

FLOODPLAIN MANAGEMENT TECHNICAL SUPPORT

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

Staff will hold and proctor a Certified Floodplain Manager (CFM(exam in the West Sacramento City Hall on November 18th and is working with the City of Sacramento to increase their Community Rating System (CRS) points related to the Building Code (BC) element. Staff also worked with Southern California Regional Floodplain Management Specialists and Riverside County Flood Control and Water Conservation Agency to organize a 4-day E278 CRS training course—which normally takes place in Maryland—in Riverside next year. DWR staff will teach part of the training course and holding it in CA will reduce costs for participants from California. The Floodplain Management branch Chief was asked by FEMA to serve on the Federal Interagency Floodplain Task Force that will work to update the 1193 document "A Unified national Program on Floodplain Management."

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.

"Alluvial Fan Floodplain Evaluation and Delineation (South) - Phase 1" will cover alluvial fan mapping in Riverside and San Diego counties. Afterwards, the results of the pilot project will be assessed for potential implementation in the remaining eight southern California counties.

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.

For CVFED data sharing effort, staff had a total of 6 new data requests and processed and delivered 4 requests. This equates to transferring a total of 12,888 LiDAR tiles and 46,755 tiles of Aerial Imagery, about 6,400 Gigabytes covering a land area of about 12,650 square miles.

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.

Approximately, 272,260 Flood Risk Notices were mailed to property owners during October and November 2011. Approximately 2,500 or 1% of recipients received surveys. Staff prepared an FRN Outreach Plan for FEMA's $200,000 grant and is working on related contract development. FRN program staff continues to respond to email and phone inquiries from property owners who have recently received the 2011 FRN notice, and have started to prepare 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 creating planning approaches and data sets that help agencies, communities, and individuals make better informed decisions.

- On November 10th, the Floodplain Management Branch submitted two Hazard Mitigation Grant Program (HMGP) Notice of Interest forms to CalEMA for two elevation projects previously submitted under the FEMA/CalEMA's Pre-Disaster Mitigation (PDM) grant program in October. If the elevation projects are not awarded through the nationally competitive PDM program, the grants may be funded by HMGP grant program, which is only open to California.
- Staff is working with CSUSB to develop a web-based Portal to support the use of the Integrated Approach planning program developed by the Alluvial Fan Task Force (AFTF). Development of the Portal was one of the recommendations of the AFTF to assist local communities plan and evaluate future land use plans.

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 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.

- The Project Development Team responded to minor comments made by USACE district and division to the draft document for the Feasibility Scoping Meeting (USACE Milestone F3 Conference). This document establishes the without project conditions, screens preliminary alternatives, and addresses potential changes to the Project Management Plan (PMP). The Draft Document was sent back for Division review on November 1, 2011. The scoping meeting will be scheduled once the draft documents have gone through Division and Headquarters review. USACE anticipates scheduling the scoping meeting sometime in January 2012.

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.

- The study received a USACE policy waiver to approve additional spending and is moving forward with the completion of the Reconnaissance Report and PMP, development and execution of the Feasibility Cost Share Agreement (FCSA). This effort will be resumed by USACE during the first quarter and should be completed by the second quarter in March 2012.

Lower San Joaquin River Feasibility Study
This study is a coordinated effort by the State, USACE and San Joaquin Area Flood Control Agency (SJAFCA) to investigate feasible 200-year level flood protection alternatives and opportunities for floodplain restoration and recovery, recreational enhancements, and ecosystem restoration for the city of Stockton and surrounding areas. The cost estimate for the study is $10.6 million with a projected 2016 completion date.

- The Lower San Joaquin River Feasibility Study is not in the President's Budget for fiscal year 2012 and existing federal funds will be exhausted by the second quarter of fiscal year 2012. Without non-federal funding, the study could be placed on hold until funding is made available.
- The non-federal sponsors are working with USACE to amend the FCSA to allow In Kind Contributions (IKC) and cash payments to be accelerated to USACE up to the non-federal cost share per the FCSA. Once the amendment language is agreed upon by all sponsors, the amendment will be presented to the Board.

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.

- No change since last 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 White River and Deer Creek in Butte County.

- No change since last month.

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

- DWR has provided the Non-Urban Levee Evaluation (NULE) Cost-Benefit screening tool to USACE to determine if it can be used for their current effort. This would allow the current study to concentrate on only the areas that are most likely to receive federal funding.

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

- As part of the National Pilot Program, USACE held the Risk analysis Workshop meeting on October 24 and 25, 2011. The purpose of the Risk Analysis Workshop was to rank the eight preliminary alternatives based on risk. USACE held the second critical thinking Charette, called the Value Engineering and Planning Charette, on October 31, 2011 through November 4, 2011. This

process screened the eight preliminary alternatives and produced the final array of alternatives for the feasibility study.

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.

- FCSA Amendment No. 2 for this project is being processed. This amendment will allow the non-federal sponsor's IKCs and cash payments to be accelerated to USACE up to the non-federal cost share per the FCSA and increase the study costs from $5.7 million to $10 million.
- The Feasibility Scoping Meeting (USACE Milestone F3 conference) for this project has been scheduled by USACE for November 17, 2011. The purpose of this conference is establishment of the without project conditions, screening of preliminary alternatives, and addressing potential changes to the PMP.

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 is continuing to investigate whether a Habitat Evaluation Procedure (HEP) analysis for environmental mitigation will be needed for the National Economic Development Plan.

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.

- The study received a USACE policy waiver to approve additional spending and is moving forward with the completion of the Reconnaissance Report and PMP, development and execution of the FCSA. This effort will be resumed by USACE during the first quarter and should be completed by the second quarter in March 2012.

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.

- The federal and non-federal sponsors met on November 8, 2011 to discuss strategies to obtain additional federal appropriations funding and accelerate payments to USACE, other topics included the State's review of the City of Woodland's scope, schedule, and budget revisions.

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

- On October 26, 2011, the non-federal sponsors met with USACE Division staff to discuss strategies for completing the GRR and obtaining credit for work performed under DWR's Early Implementation Program (EIP). USACE staff will continue preparing the Draft GRR which is expected to include elements of EIP projects that will be eligible for receiving credits that can be credited towards the Marysville Ring Levee 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.

- No change since last month.

Reclamation District 17 - 100-Year Seepage Area Project (RD-17)
The RD-17 levees have unacceptably low factors of safety for under- and through-seepage. These issues are being addressed by constructing seepage berms, slurry walls, and setback levees.

- RD-17 is moving forward with the 60 percent design plans and will be presenting the information to DWR within the next 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.

- Construction of the Vegetated Wave Buffer, Segment 2, is now complete and a post construction job-walk will be scheduled for November 2011.
- The Board has required TRLIA to remove all existing asbestos concrete piping left in the floodway within the setback area and all PVC irrigation lines within 100 feet from the water side toe of the setback levee as well as removing visible PVC risers. This work is now 100 percent complete.
- 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) is scheduled to be heard at the December Board meeting.

Three Rivers Levee Improvement Authority - Upper Yuba River (TRLIA-YR)
The **Upper Yuba River Levee Improvement Project** will complete a levee system designed to provide 200-year level of protection for 40,000 residents in South Yuba County.

- During the week of June 20, 2011, the grading contractor discovered buried debris on the landside of the levee at the eastern-most limits of Segment 4 that appears to be old farm trash. HDR and Kleinfelder have had environmental and archeological staff onsite to assess the debris and obtain material samples for environmental testing TRLIA is in the process of disposing off the designate contaminated soil.
- Construction work is about 80 percent complete. TRLIA requested an extension from the Board to work beyond October 31, 2011 which was granted.

Sacramento Area Flood Control Agency - Natomas Cross Canal (SAFCA-NCC)
This project, part of the Natomas Levee Improvement Program, would improve the level of flood control protection to the Natomas Basin by providing at least 200-year level of flood protection. This is accomplished by installing cutoff walls to prevent seepage, underseepage, and raise the levee.

- SAFCA has submitted the NCC Project Completion Report, dated May 9, 2011, which was received on June 24, 2011. Comments from reviewers were received in June with the exception of those from the Board. The Board has issued seven comments which have been forwarded to SAFCA to review with their contractors. The closing delays are causing SAFCA concerns due to DWR's unwillingness to release the 10 percent withholding until the Board comments have been addressed.

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

- Construction is currently underway on Elements 10 to 12A (I5 to Powerline Rd). Sukut Construction has completed cutoff wall construction and is currently working on embankment construction (total contract amount - $19.2 million). Construction is approximately 45 percent completed. A time extension has been submitted to the Board for work to continue through November 15, 2011.
- Construction is continuing by Nordic Construction on Elements 6B to 9A (Teal Bend to I5) and is approximately 90 percent complete. Nordic has recently been issued two Notice of Violations (NOVs) by the Board for unacceptable work. 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 to the satisfaction of the Board. A time extension has been submitted to the Board for work to continue through November 15, 2011.

- SAFCA is in discussions with EIP staff and management for an increase in the Funding Agreement amount of $193,270,000 by an additional amount not to exceed 10 percent. This increase is due to increased project costs.

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

- Embankment construction continued at CHP Academy and The Rivers Projects. The reinforced concrete slope protection at the CHP Academy is underway. The Board has approved a time extension request, for work during the flood season, to November 15, 2011. Construction is about 80 percent complete.

Sutter Butte Flood Control Agency, Feather River West Levee Project (SBFCA)
The Feather River West Levee Project will repair approximately 44 miles of levee along the west banks of the Feather River from the Thermalito Afterbay to near Star Bend.

- The Design Funding Agreement was executed by all parties on October 25, 2011.
- Design is currently at the 60 percent design level.

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 of Site R5 is complete with final inspection on November 1, 2011.
- Negotiations to obtain temporary easements for construction at Howe Ave are currently underway with Sacramento County.
- Remedial Monitoring Reports (RMR) for the remaining Phase 2 and Phase 3 sites have been released and are undergoing stakeholder review.
- DWR Real Estate is currently negotiating with Sacramento County and Sacramento City for a programmatic approach to permanent and temporary easements for future Phase 2 and Phase 3 projects including Sites L5A, L9A, R9, R10 and NEMDC.
- Construction for remaining Phase 2 and Phase 3 sites is scheduled for FY13 and FY14 with FY12 and FY13 awards.

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

- The Folsom Dam Raise Project Development Team (PDT) is currently developing an optimal construction plan to make the best use of the projected Congressional authorization and funding.
- A Project Partnership Agreement (PPA) is scheduled for discussion and execution in 2012 for the dam raise portion of the project. Replacement of the emergency gates is a possible addition to the dam raise.

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

- The estimated completion for the JFP is October 2017.
- Production blasting, excavation, and rock anchor installations in the Control Structure area continue and double shifts for the excavation construction continue.
- Joint Agency Schedule Implementation Team (SIT) continues to seek out opportunities to optimize the construction schedule.
- Folsom Prison land lease is being processed with DGS, DWR and DCR. The lease signing is scheduled for March 2012.
- Project Development Team (PDT) meetings are held monthly for the Flood Management Operations Study.
- Engineering designs for the chute, stilling basin and approach channel are on schedule and are about 65 percent complete.
- Federal Air Quality Standards - The updated calculations of projected air emissions were completed on September 30, 2011 and calculations for the Transload Facility will be completed by October 31, 2011. Indications are positive that emissions exceedence can be adequately mitigated without delaying the project.
- FY12 Funding—Federal capability predictions for FY12 are $28 million and the President's Budget is $21 million. A PCA Amendment is being finalized which is proposing to allow the Non-Federal Partner to accelerate funding to alleviate the shortfall.
- A Notice of Preparation of the Draft Supplemental EIS/EIR for the auxiliary spillway approach channel for the JFP went out on October 3, 2011.
- A public scoping meeting for the Folsom Dam JFP approach channel was held on October 20, 2011 at the Folsom Community Center.

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.

- Phase 1 levee reconstruction scheduled for completion on November 15, 2011.

- USACE Levee Safety finalizing testing procedure to evaluate installed soil cement bentonite wall (SCB) for continuity, verticality and homogeneity. The wall evaluation is scheduled for December 2011 with the final wall evaluation results to be released in January 2012.
- The MRL PDT is currently negotiating with Union Pacific Railroad (UPRR) for right of way access on Phase 2.
- Phase 4 design is nearing 90 percent completion with a possible force gas main line relocation necessary.
- Phase 2B geotechnical investigation is underway by Fugro and HDR.
- Local Partners and Board staff are currently in negotiation with USACE to resolve the denial of Section 103 Deferral extension and Section 104 credit denial.

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 USACE consultant continues to work on the 30 percent plans and specifications for Sites 9, 10, and 11 (Yolo County).

South Sacramento Streams Project

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

- The State recently acquired real estate from UPRR and USACE subsequently awarded a contract to construct 2,850 feet of floodwall along Morrison Creek and UPRR tracks. Construction is scheduled to begin in May 2012.
- Complications with right of way limitations on the Unionhouse Creek design along 4,500 feet of the creek have led the local sponsor to investigate alternatives for flood control along Unionhouse Creek. Therefore, SAFCA may pursue flood control improvements apart from USACE and request that this portion of the project be removed from the USACE scope of authorization. Details on SAFCA's plan will be released later.
- USACE, the State, and SAFCA have begun the initial investigation and design into flood control improvements along approximately two miles of Florin Creek as the next step in this project.

West Sacramento Area Project, Slip Repair

- Construction is complete and USACE is conducting final inspections.
- An additional slip south of the existing repair was identified in March 2011. USACE determined that it needs to be stabilized prior to the upcoming flood season. They plan to modify the existing contract to include the additional work, which should be completed during November 2011.

STATEWIDE FLOOD PROGRAMS

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

FLOOD CORRIDOR PROGRAM (FCP)

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

- The FY 10-11 Funding Cycle request for grant-funded project proposals closed in March. A total of 36 proposals were submitted. FCP staff members completed site visits and evaluations for all 36 proposals, with staff from other DWR regional offices and from CA Department of Fish and Game, Cal Emergency Management Agency, and CA Department of Conservation assisting. Four consensus meetings were held in May and June.
- Five Management Team meetings, including FloodSAFE and DFM managers, were held in June through September to discuss funding recommendations. Draft funding recommendations are expected to be announced in November 2011.
- Funding agreements were signed for the River Partner's Dos Rios project under Proposition 84 as well as the Eastside Bypass mitigation project.
- Funding agreement amendments were signed for the nearly complete Santa Maria and Bedford-Temescal projects funded under Proposition 13.

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.

- One claim for $911,313.80 was approved for payment.
- Eleven claims for $46.22 million are currently under review.
- No audit payments were processed.
- Six new claims for $2.58 million were received.
- Thirty four claims for $126.9 million are pending review.
- Work on revising Program Guidelines is in progress.

LOCAL LEVEE ASSISTANCE PROGRAM (LLAP)

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

- Contra Costa County's invoice #4 was reviewed and approved. Additional funds are in the encumbrance process and once solidified, will be paid out for this invoice.
- Humboldt County retention funding was released this month after the project was formally closed. The project manager has archived the hard copy files.

- Del Norte County invoice #4 was reviewed and approved for payment. Payment is currently being processed through the budget office.

YUBA-FEATHER FLOOD PROTECTION PROGRAM (YFFPP)

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

- Files for the Yuba County Water Agency (YCWA) Supplemental Flood Control Feasibility Study are being archived. YFFPP staff are currently determining retention amount left over from the completed project.
- YCWA submitted invoices #24 and #3 for the Forecast Coordinated Operations Design and Implementation projects. A consultant was contacted for further clarification on specific elements of invoice. The invoice has been reviewed and processed for work through June 2011.

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

Local Levee Assistance Program (LLAP) and FCSP are all in process of finalizing their program guidelines.

- The Project Solicitation Package (PSP) was released on September 7, 2011. Public workshops were held in the Sacramento, Oakland, and Long Beach Areas, and on a statewide WebEx presentation. LLAP staff continue to assist applicants through telephone, email, and in person.
- DWR Project Manager has developed the PSP interface in the Bond Management System (BMS). LLAP staff continues to develop the BMS review module, review process, and recruit reviewers. The application period closes December 8, 2011.

ENVIRONMENTAL SUPPORT

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

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

TECHNICAL ASSISTANCE

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

- The final AB 1788 regulations package has been submitted to the Office of Administrative Law. The regulatory action was published in the Regulatory Notice on October 7, 2011. Public hearings are scheduled for the Sacramento and Long Beach areas on November 30, 2011 and December 1, 2011.
- Staff has developed a white paper for the FAXCT 9 Feasibility Studies Sub-Team. The white paper is currently under review by team members and DWR staff.
- As part of the Lower Feather River Corridor Management Plan development, staff met with representatives of the regulatory agencies to discuss individual agency goals and objectives related to obtaining long-term environmental permits for routine and extraordinary maintenance work in the 20-mile Feather River corridor from the Sutter Bypass to the Highway 20 Bridge between Yuba City and Marysville.

DELTA FLOOD PROJECTS

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

DELTA LEVEES MAINTENANCE SUBVENTION PROGRAM

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

Work Agreements for FY 2009-2010

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

Work Agreements for FY 2010-2011

- DWR staff has mailed work agreements to 68 reclamation district and has received signed work agreements from 65 reclamation districts.
- To date staff has received final claims from 45 reclamation districts totaling $9.3 million and 18 districts have asked for a 30 day extension for submitting their final claim.

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.
- Staff mailed Work Agreements on October 25, 2011 to participating districts for signature.
- Work agreements will finalized once received back from the districts and 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.

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	**32**	**NEMDC East**	**42**
Marysville	**45**	Natomas	15
Sutter	35	**Bear Creek**	**27**
RD 784	**43**	**Calaveras River**	**27**
Davis	**12**	**RD 404**	**40**
Woodland	**12**	RD 17	50
American River	**41**	**Stockton Non-Project**	**34**
West Sacramento	97	**W. Sac. Non-Project**	**15**
Sacramento River	**49**	South Sac. Streams	12

Changes shown in bold.

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

NON-URBAN LEVEE EVALUATION (NULE)

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

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

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

- Overall, Non-Urban Levee Evaluations are 49% complete.
- Drilling activities occurred during this reporting period in Yolo, Colusa, Sutter, Butte, Glenn, San Joaquin, Stanislaus, Madera, and Fresno Counties and are anticipated to continue in November.
- 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.

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 SAFCA (AR Common Features), the Sutter Butte Area Flood Control Agency, and the (LSJFS) Lower San Joaquin Feasibility Study, RD 784, and RD 17.
- ULE/NULE will be providing additional CVFPP fragility curves (or supporting data) to USACE for the LSJFS.

TECHNICAL POLICY

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

- Vegetation management policies and research continues.
- With the completion of the draft West Sacramento GER, seismic studies are continuing in the study area for an overall general cost estimate for seismic deficiencies and cost benefit analysis of these fixes.
- Provided support for development of policy papers and technical data for the CVFPP and participated in various FloodSAFE FAXCTs (Functional Area Cross Coordination Teams).
- Final recommendations for Version 5 of the Urban Levee Design Criteria were 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 next important deliverable for the SPFC consists of the Flood Control Systems Status Report (FCSSR). The FCSSR will be formally provided to the Central Valley Flood Protection Board (Board) along with the Public Draft 2012 CVFPP by January 2012.

CENTRAL VALLEY FLOOD PROTECTION PLAN (CVFPP)

The CVFPP reflects a system-wide approach to protecting lands currently protected from flooding by the SPFC.

- Work is on schedule to submit the Public Review Draft 2012 CVFPP to the Board by December 30, 2011.
- Two Webinars were held on November 2 to discuss the Working Draft 2012 CVFPP Summary and inform CVFMP Program Work Group Members about the upcoming Working Draft 2012 CVFPP and associated workshops. Over 60 people participated in the webinars.
- CVFMP Program workshops took place on November 9 and 10 in Sacramento and Stockton, respectively. A follow-up webinar workshop was held on November 15. The workshops were designed to discuss comments from CVFMP Program Work Group members on the *Working Draft CVFPP,* and its attachments; including the *Conservation Framework.* Approximately 40 Work Group members attended the Sacramento workshop and about 10 attended the Stockton event. Written comments on the Working Draft documents have been received from about 16 different partners for consideration while DWR prepares the Public Review Draft 2012 CVFPP.
- The Public *Draft PEIR* is scheduled to be released in March 2012
- Coordination between the CVFPP and Corps Product Delivery Teams continues on the federal Project Management Plan (PMP) and Feasibility Cost Sharing Agreement (FCSA) for the Central Valley Integrated Flood Management Study (CVIFMS). A request for Board approval to amend the existing CVIFMS FCSA will be made at the December 2, 2011 meeting.

- A documentary video of the history and challenges of flooding in the Central Valley, and the state's efforts to address the problem, was aired on Sacramento KVIE PBS station ViewFinder series on November 9, 11 and 13. The 27-minute segment is called *Overcoming the Deluge: California's Plan for Managing Floods.* It was produced by the Water Education Foundation with technical input and support by DWR. The video will be posted on-line following the debut at:

  www.kvie.org/viewfinder.

STATEWIDE INTEGRATED FLOOD MANAGEMENT PLANNING

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

FLOOD FUTURE REPORT

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

INTEGRATED FLOOD MANAGEMENT IN THE CALIFORNIA WATER PLAN

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

CONSERVATION STRATEGIES

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

CENTRAL VALLEY CONSERVATON PLANNING

Conservation Framework

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

Conservation Strategy Outreach

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

Interagency Advisory Committee (IAC)

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

Vegetation Management

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

REGIONAL CONSERVATION PLANNING

Regional Advanced Mitigation Planning (RAMP)

- DWR is collaborating with other agencies to develop a RAMP communication strategy. The work is being coordinated with the FloodSAFE Communications office.
- Staff is actively engaged in communicating information about RAMP to other organizations. Recent presentations were given at the USACE's Annual California Regulatory Coordination Meeting and to DWR Flood Maintenance Office staff related to ongoing flood and conservation planning in Butte, Yuba,

and Sutter counties. Staff also submitted abstracts for presentations at three upcoming professional conferences.

- The bi-monthly meeting of the RAMP Work Groups was held on September 15th. An initial impact analysis and the "greenprint" showing other conservation planning priorities is now complete for the pilot area. The pilot area subcommittee met on September 26th to review these items.

Corridor Management Strategies (in coordination with DFM)

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

SCIENTIFIC AND PLANNING INFORMATION

Medium-scale vegetation mapping

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

Fine-scale vegetation mapping

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

Vegetation analysis and conservation

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

Fish Passage

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

FUNCTIONAL AREA 7 LEGISLATION, BUDGETS, AND COMMUNICATION

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

COMMUNICATION AND BRIEFING MATERIALS

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

- No new information.

FUNDING ADVOCACY & AGENCIES' ALIGNMENT

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

The Federal Advocacy Team conducted a comprehensive training program on October 24, 2011 that included personnel from the U.S. Army Corps of Engineers and the Department of Water Resources, Division of Flood Management. The group included all the Program Managers and their supervisors from the Corps and DWR that are involved in the cost shared flood control projects in the Central Valley. This training provided an overview of the Federal Advocacy Program to the individuals that provide the detailed information on each of the flood control projects and established a procedure that promotes closer coordination between the two agencies' Program Managers. They are jointly working on the draft documents that will be present to DWR and Corps Management on January 23, 2011.

This coordinated information will be the basis for what is provided to the Office of Management and Budget, headquarters for the U.S. Army Corps of Engineers, and various Congressional offices next spring when discussing the funding needs for federal FY 2013 cost shared flood control projects.

LEGISLATION LIAISON & LEGAL

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

- No new information.

PROGRAM MANAGEMENT, BUDGET, & FISCAL SERVICES

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

- No new information.

FLOODSAFE PROGRAM ADMINISTRATION & COORDINATION SERVICES

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

- No new information.