Agenda Item 5

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.

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 project levees within the Central Valley flood-control system. This assessment tool will integrate information related to system performance, engineering evaluations, and operation and maintenance practices. Engineering staff have researched and identified potential data sources. This tool will support the objectives of Functional Area 1 by informing emergency response and resource planning decision makers. The tool will initially be used for the State-federal flood control system with the flexibility to expand to the entire Central Valley and State wide.

INSPECTIONS

Spring levee inspections have been completed and Levee Mile Reports will be sent out to the LMAs shortly. Preparations for summer Channel and Structure inspections have begun and should be able to be completed on time. Inspectors are also dealing with more encroachment permits as construction season starts and continue to conduct a variety of investigations and coordination with a variety of entities for access to the levees. Inspectors also recently participated in Golden Guardian preparations and activities. Enhancements to inspections continue to be made under FAXCT 5 efforts and collaborated with a number of organizations.

Local Agency Program

Staff is updating and developing the agenda and outreach materials for Local Maintaining Agency Workshops to be held July 21.

High Water Staking
During a high water data collection effort May 3 - 11, Flood Project Integrity and Inspection Branch staff placed high water and surface water stakes at locations on San Joaquin River from River Mile 57.3 to 222.4 and the extents of Mariposa Bypass, Eastside Bypass, and Chowchilla Bypass. These stakes were surveyed by Division of Engineering, Geodetic Branch, Field Surveys on May 9-12 and 23-26.

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. Electrical sub-contractor has been identified and is currently being added to the contract. An instrumentation plan is being prepared and will be finalized by mid-July.

DWR Utility Crossing Inventory Program (UCIP) - Recent activities include participating in roundtable meetings held by USACE in an effort to establish utility related oversight inspection criteria. Desk Study and Field Survey of the utility crossings in RD17 has been completed and the UCIP team is in process of coordinating with the LMA regarding initial reporting and assessment of the crossings. USACE and the UCIP team are engaged in weekly work sessions to address record keeping and utility location issues. The UCIP is still undergoing changes to integrate with FloodSAFE and other non federal programs. Key areas remain data management, data exchange protocols, and overall coordination for essential record keeping procedures.

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.

As of June 1, 2011, statewide hydrologic conditions were as follows: precipitation, 135 percent of average to date; runoff, 130 percent of average to date; snow water equivalent, 310 percent of average for the date (100 percent of the April 1 average); and reservoir storage, 110 percent of average for the date. Sacramento River Region unimpaired runoff observed through May 31, 2011 was about 19.7 million acre-feet (MAF), which is about 124 percent of average. For comparison, on May 31, 2010, the observed Sacramento River Region unimpaired runoff through that date was about 12.4 MAF, or about 78 percent of average.

May was unusually cool and wet. On June 1, the Northern Sierra 8-Station Precipitation Index Water Year total was 69.0 inches, which is about 145 percent of the seasonal average to date and 138 percent of an average water year (50.0 inches). During May, the total precipitation for the 8-Stations was 4.6 inches, which is about 219 percent of the monthly average. Last year on June 1, the seasonal total for the 8-Stations was 52.7 inches, or about 111 percent of average for the date.

On June 1, the San Joaquin 5-Station Precipitation Index Water Year total was 61.3 inches, which is about 158 percent of the seasonal average to date and 150 percent of an average water year (40.8 inches). During May, the total precipitation for the 5-Stations was 3.6 inches, or about 200 percent of the monthly average. Last year on June 1, the seasonal total for the 5-Stations to date was 44.5 inches, or about 114 percent of average for the date.

Selected Cities Precipitation Accumulation as of 05/31/2011 (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	43.81	117	42.20	113	115
Redding	34.31	105	30.25	92	102
Sacramento	22.48	127	20.74	117	125
San Francisco	21.49	107	21.39	107	107
Fresno	15.60	142	12.36	112	139
Bakersfield	10.25	161	7.10	111	158
Los Angeles	17.83	136	12.43	95	136
San Diego	12.59	118	10.53	99	117

Key Reservoir Storage (1,000 AF) as of 05/31/2011								
Reservoir	River	Storage	Avg Storage	% Average	Capacity	% Capacity	Flood Control Encroachment	Total Space Available
Trinity Lake	Trinity	2,272	2,154	105	2,448	93	---	176
Shasta Lake	Sacramento	4,487	3,960	113	4,552	99	-65	65
Lake Oroville	Feather	3,400	3,043	112	3,538	96	-138	138
New Bullards Bar Res	Yuba	914	832	110	966	95	-52	52
Folsom Lake	American	880	835	105	977	90	-97	97
New Melones Res	Stanislaus	2,092	1,500	139	2,420	86	-328	328
Don Pedro Res	Tuolumne	1,722	1,531	112	2,030	85	-21	308
Lake McClure	Merced	750	714	105	1,025	73	34	275
Millerton Lake	San Joaquin	277	407	68	520	53	199	243
Pine Flat Res	Kings	706	723	98	1,000	71	79	294
Isabella	Kern	332	294	113	568	59	-29	236
San Luis Res	(Offstream)	1,831	1,670	110	2,039	90	---	208

The latest National Weather Service Climate Prediction Center (CPC) long-range, 1-month precipitation outlook for June 2011, issued May 31, 2011, suggests above average rainfall for the Northern and Central California. No tendency for above or below average rainfall is suggested for Southern California.

HYDRO-CLIMATE ANALYSES

Work continues on University of California Task Orders for studies supporting climate change hydrology effort. Work on the Atmospheric Rivers climatology coordinated with the climate change component of the Central Valley Flood Protection Plan to provide some initial information on future projections of flood producing storms for California. A face-to-face meeting was held between the program manager and the principal investigator for the watershed controls modeling study. This meeting arose out of convenience as both parties were participating in the American Society of Civil Engineers Environmental Water Resources Institute's First Symposium on Climate Change. Progress is being made on the storm analyses and detailed atmospheric model data generation as well as the watershed models for the assessment. Further discussions will look to detail some project products that be used for informing flood risk. Snow Covered Area reports are again being provided by the University of California Merced. Reports are posted on the State Climatologist web site. Reports are produced once a month for the February through May time period. Due to the extreme snow pack of 2011 a request for a June report has been made. Work continues on a new program plan for the next five years. Coordination efforts on that plan are being made with the Climate Change Program Manager and Federal Partner Liaison in the Executive Branch of the Department.

REAL-TIME DATA COLLECTION NETWORK

The epic snowpack of 2011 continues to hinder the next round of soil moisture sensor installation and communications hook-ups for last year's installations. Work is expected to resume by the third week in June or early July. Coordination with Scripps and the National Oceanographic and Atmospheric Administration's Earth Systems Research Laboratory continues for the deployment of the 21st Century Observing System for extreme precipitation.

SYSTEM RE-OPERATION

The DWR feasibility study for system re-operation is being conducted from the Statewide Integrated Water Management Division with participation from the Division of Flood Management (DFM). The Consultant is currently revising the initial deliverable from the first task order. Delivery was expected by May 15, but has been delayed. Efforts have been made to coordinate the work conducted for the Central Valley Flood Protection Plan with the System Re-Operation Study. Two meetings have been held and coordination points have been identified. Primary coordination will work through the DFM member of the System Re-Operation team.

HYDROLOGIC DATA MANAGEMENT

The Snow Surveys section continues to collect, review, perform quality control, and enter Full Natural Flow (FNF), precipitation, snow, and reservoir storage data for thousands of locations statewide on a daily basis. With this data staff continues to issue daily, monthly, and seasonal water condition reports on CDEC. During the month, Snow Surveys staff alone responded to over two dozen media requests and conducted several on camera interviews as well as one live radio interview. Snow Surveys staff also responded to over twenty historic data requests from a variety of sources (media, consultants, water managers, etc.). Concerns ranged from flooding and the timing of the snow melt, to questions about climate change and La Nina patterns. A few more questions came in regarding outdoor vacation planning – these requests are not abnormal.

BULLETIN 120 AND WATER SUPPLY INDEX FORECASTS

May 31, 2011 Bulletin 120 Forecast

The projected median April-July runoff now ranges from 143 percent (Shasta Lake, Total Inflow and the Sacramento River above Bend Bridge) to 191 percent (Kern River). All forecasts rose or remained the same compared to last week's forecast. Statewide, the forecast increased about three percent. From a regional perspective, the largest gains were in the northern Sierra where the Sacramento River above Bend Bridge, Feather River, and Yuba River forecasts rose 4, 5, and 4 percent, respectively.

Precipitation

During May, the Northern Sierra 8-Station Index rose 4.6 inches which is almost 220 percent of average. The seasonal total through May is 69.0 inches, which is 145 percent of average-to-date and 138 percent of an average water year.

During May, the San Joaquin 5-Station Index rose 3.6 inches which is 200 percent of average. The seasonal total is 61.3 inches, which is nearly 160 percent of average-to-date and 150 percent of an average water year.

The topic of variability, which was mentioned in an earlier report, is still a characteristic of Water Year 2011. For both indexes, April was well below average and May was at least 200 percent of average.

Snowpack

According to snow sensor data for the morning of May 31, statewide snowpack is 28 inches (99 percent of the April 1 average and 309 percent of average-to-date). During May, the statewide percent of normal increased from 190 to 309 percent. The increase indicates that the reduction in the snowpack during May was slower than normal. Regionally, the Northern Sierra, Central Sierra, and Southern Sierra snowpack are 107, 105, and 71 percent of their respective regional April 1 average.

Future Updates
The next Bulletin 120 Forecast update will be produced for conditions on June 7, and will be available by Thursday, June 9. Bulletin 120 updates are currently expected to continue into July to assist with the extraordinary runoff projections and reservoir operations.

This WSI has not changed since May 1. The forecast can be summarized as follows:

Sacramento River Unimpaired Runoff Water Year Forecast (SRR)
23.9 MAF, 50 percent exceedance, 128% of normal)
Sacramento Valley Index (SVI)
10.0, 50 percent exceedance, Wet
San Joaquin Valley Index (SJI)
5.1, 75 percent exceedance, Wet

The SRR increased slightly to 23.9 from 23.8 MAF in April, however, the SVI and SJI of 10 and 5.1, respectively, remained the same as the April 1 WSI.

Runoff
Regional Sierra flows for May in the Sacramento, San Joaquin and Tulare Lake regions were 140, 124 and a 137 percent of average, respectively. Flows for individual rivers in these regions ranged between 114 and 183 percent of average.

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.

In addition to routine river forecasting, River Forecasting Section participated in the Golden Guardian 2011 exercise. Staff developed hydrology and forecast simulations for the exercise, provided training on use of the website designed for the exercise, impersonated various concerned parties placing telephone calls to the flood operations center to prompt action and prepared daily updates of hydrology conditions and forecast summaries.

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.

The Flood System Analysis Section continues to support of the State-Federal FOC response to flood related incidents and continues to refine Levee Emergency Actions Plans for specific sites of elevated concern. The purposes of the action plans are to assemble situational assessment information; critical contacts; and design, permitting and contract procedure information to expedite contracts should they become a part of an emergency response.

FLOOD OPERATIONS, TRAINING, AND EXERCISES

The Flood Operations Center (FOC) has been involved in multiple activities over the past month. The FOC recently participated in the Golden Guardian 2011 Exercise and is actively collecting and processing feedback from key participants. This feedback is being used as a catalyst to make strategic and focused changes to improve the collection and flow of information during emergency operations. During the exercise, FOC Staff were assigned to the Planning & Intelligence Section within the SEMS structure and held positions such as the Planning & Intelligence Section Deputy Chief, Incident Reports Unit, Situational Status Unit, and Liaison Officer. The FOC has also been developing a standardized engineer's levee assessment tool that helps collect the information required to categorize a levee threat and qualify an imminent failure emergency response.

In addition, the FOC has been involved with Snowmelt Briefings and weekly San Joaquin and Tulare Lake Basin Reservoir Release status calls.

FOC Information System (FOCIS) is a web-enabled database application used to collect and update contact information for the Directory of Flood Officials. It is also used to collect and record emergency operations information and helps develop action plans, situation status reports, section status reports, incident reports, and event reports. A Field Operations tab, used by Incident Command Teams to relay critical field information, was added and successfully tested during the Golden Guardian Exercise. Another new feature within FOCIS is the addition of Reference & Maps tabs that contain information that is helpful to Flood Information Specialists during FOC activations.

OUTREACH

Public comments were compiled during the month of May on both the Sample Flood Safety Plan and the Flood Emergency Response Grant. The Sample Flood Safety Plan will be finalized and the generic template posted to the FloodSAFE website in June. The template will enable local agencies to customize the safety plan for their local needs while ensuring the required elements are satisfied. Public comments on the Flood Emergency Response Grant will be compiled during June.

The FOC is updating the State's flood system maps and are in the final quality control comments phase for a new hard copy map that show the central valley flood control system including rivers, levees, bypasses, reservoirs, river miles, forecast points, county lines, key cities, and major roadways. The updated maps will be assembled into a map book of standard maps that can be used by all emergency response staff including FOC staff and Incident Command Team members.

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:

- Internal review of the Reservoir/Hydrologic (HEC-ResSim) models is complete and independent technical review is underway.
- Estimation of local flows and local flow analysis is complete.
- Ungaged watershed delineation process is complete and rainfall-runoff model development is underway.
- Reservoir inflow hydrograph daily-to-hourly estimation and smoothing, and record augmentation is nearly complete.
- Regulated channel routing model development is completed and unregulated channel routing model development is nearly complete.
- Internal coordination with USACE and hydraulic and hydrologic workgroups is continuing.

DWR'S PARTICIPATION IN GOLDEN GUARDIAN 2011

The Golden Guardian 2011 Full Scale Exercise will be based on a major California flood. This theme will involve the Inland Region, with participation from Operational Areas, the Inland Region Emergency Operations Center, State of California Agencies, the State Operations Center, federal agencies, non-governmental organizations, and private sector partners. This theme will allow all to prepare for, respond to, and recover from this common theme during the exercise.

The River Forecasting Section actively participated in the Golden Guardian 2011 exercise. Staff developed hydrology and forecast simulations for the exercise, provided training on use of website designed for the exercise, impersonated various concerned parties placing telephone calls to the flood operations center to prompt action and prepared daily updates of hydrology conditions and forecast summaries.

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.
- Grading toe roads at Cache Creek and Willow Slough.
- Fallen tree and debris removal is being conducted in MA-13, MA-05, MA-01, MA-03, and East Levee Sacramento River.
- CCC crews are clearing and chipping brush in MA-07 and MA-05.
- Vegetation control spraying is underway, including fire guarding in all areas.
- Minor earthwork is underway to re-establish the channel geometry for the Sycamore Creek Sediment Removal Project in advance of upcoming channel restoration work.
- As of last week, the following tasks for Sycamore Creek Habitat Restoration Project have been completed in preparation for the start of construction:
  - Contract plans and specs have been revised.
  - Contractor has identified the source for irrigation water, Cal Water's service, and a Meter has been installed.
  - Sutter Maintenance Yard has re-established 90% of the depressional areas to be planted.
  - Contractor may begin work as early as 6/13 if suitable weather conditions permit.

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.

- Maintenance and debris removal activities are continuing at the Knights Landing Outfall Gates, Butte Slough Outfall Gates, Willow Slough Weir, Weir 2, and Weir 4.
- Minor repairs on the Sacramento Weir's wooden stop logs are planned for this summer.

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.

- Levee slope erosion repaired north of Gridley-Colusa Hwy in MA13.
- Levee slope mowing is underway for Willow Slough, MA9, Sacramento Bypass, Cache Creek, MA12, Sutter Bypass, and Tisdale Bypass.
- Rodent control program (grouting of rodent holes) in MA16 and other areas.
- Minor grading of MA17 slopes.
- Minor access gate repairs were made in various areas.
- Ongoing activities include debris removal and vegetation management.

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.

- A Small Erosion Repair Program (SERP) subcommittee was formed at the direction of the Interagency Flood Management Collaborative Group (IFMCG) on January 17, 2007, with the intention of improving integrated flood management. The SERP is a system wide conceptual approach for maintenance of the flood control system, whereby a streamlined permitting and clearance process is

developed for the repair of a specified range of small erosion sites. In its initial phase, SERP will enable the Sacramento and Sutter Maintenance Yards to repair a greater number of small erosion sites each season before they become larger sites. SERP offers both immediate and long-term benefits as follows:

- Multi-agency commitment toward integrated, more sustainable flood management systems.
- Reduction in the public's exposure to risks from flooding through greater numbers of repairs each season.
- Reduced impacts to the environment by preventing small erosion sites from becoming larger sites.
- Improved flood protection while incorporating environmental resource protections.
- Greater cost effectiveness by reducing delays from individual project permitting.
- Development of a systematic approach that builds a long-term, consistent response to maintenance repairs with similar impacts.

Later expansion to other local maintaining agencies is anticipated based on the success of this initial 5 year (Phase I) effort. The FMO is anticipating preparing an informational briefing about SERP for the Central Valley Flood Protection Board in July or August.

- Environmental staff are continuing to conduct bird surveys in certain State-maintained areas and coordinating with the Department of Fish and Game (DFG) to support the Sacramento and Sutter Maintenance Yards in starting routine maintenance earlier in the season per the January 2011 programmatic Streambed Alteration Agreement for routine maintenance.

LEVEE REPAIRS

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

- **Reclamation District 404, SJRM 42.3R, Slurry Wall** - The Work Agreement was executed on June 2, 2011 and the Project is on schedule for 2011 construction pending completion of a DWR contract with RD404.
- **Sacramento River RM 57.2 setback levee project** – Project construction continues to be on hold due to high river/ground water levels. Construction of the setback levee with the slurry cutoff wall will resume once the river/ground water levels subside. This is not expected to impact the construction completion date of fall 2011.

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).

Floodplain Management Technical Support Staff:

- Conducted a Community Assistance Visit with the City of Sutter Creek.
- Conducted a "Floodplain Management & Duties of the Local Administrator Workshop" in the City of Lakeport.
- Conducted two FEMA Elevation Certificate workshops in the Cities of Lakeport and Orange.
- Provided 52 hours of technical assistance to community officials, engineers and surveyors, and homeowners.
- Finishing review of the updated and expanded DWR CRS website for the Community Rating System Program.
- Continues to work with community representatives interested in starting regional CRS users-groups.

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 the month of May, staff:

- Received three new data requests from public agencies regarding LiDAR data release.
- Processed and delivered four existing requests, two of which were requests from within DWR and two from other public agencies.
- Is finalizing a web viewer for the Best Available Maps program.

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.

USACE is finalizing an information video for the Flood Risk Notification Program.

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.

- The first Urban Level of Flood Protection Criteria (ULOP) work group meeting was held on May 3 and included representatives from cities and counties, professional planning associations, Central Valley Flood Protection Board, and State and federal agencies.
- The DWR design team is currently updating the draft Urban Level of Flood Protection Criteria document and responding to comments submitted by the work group.
- The second ULOP work group meeting is scheduled for June 21.
- Floodplain Management Branch staff is working with FEMA-Region IX to notify communities of and implement the new California Building Codes for flood elevation in 100-year floodplains. These statewide codes became effective January 2010 and require structures to be elevated to the one foot above the Base Flood Elevation (BFE) for most categories. (See California Building Code, Section 1612 Flood Loads, and Appendix G for more information. This activity is separate from the Building Standards Code Update Project where DWR is developing draft building codes for areas protected by the CVFPP and flood depths exceed 3 feet for the 200-year flood event.)
- Staff is working with CalEMA to convene a Hazard Mitigation workshop. The Workshop will offer assistance to local governmental agencies interested in developing a Local Hazard Mitigation Plan (LHMP) and demonstrate common goals between the LHMP and other planning initiatives such as General Plans, new water legislation, National Flood Insurance Program Community Rating System, and California Wildfire Protection Program. The workshop will include presentations from DWR, CalEMA, Office of Planning and Research, Housing and Community Development, FEMA-Insurance Services Office/CRS Specialist, and CalFIRE. The session will also include grant program information and an opportunity to present questions to Agency representatives from CalEMA, DWR, HCD, OPR, FEMA-ISO, USACE and CalFIRE. For more information, please visit the following website:

  http://hazardmitigation.calema.ca.gov/workshops.

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.

- Last month Board staff provided preliminary levee sections to rehabilitate levees in the Pocket Area for USACE review. This month, USACE will continue to move forward with Board staff measures presented by staff on May 6, 2011. USACE is now developing alternative plans based on array of measures developed.

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.

- Project Management Plan (PMP) is at 40 percent completion; a scope of work is being developed within the PMP. Further development of PMP is dependent upon ongoing USACE internal budget approval to expend additional reconnaissance level funding.

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 draft Feasibility Cost Sharing Agreement (FCSA) Amendment No. 2 is being approved by USACE Division and then the final will be presented to the Board for approval. Amendment No.2 will provide language to allow the State to accelerate funds in advance of USACE up to the Non-Federal Sponsor's cost share.
- USACE has completed a conceptual review of the proposed Smith Canal Closure Structure and although they have many concerns and suggestions regarding the final design, their review does not preclude the feasibility of SJAFCA's use of an Obermeyer Gate as a closure structure.

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.

- Board staff is concerned that USACE will not be able to secure funds for FY11-12. Insufficient funding for the Merced study is anticipated to cause more schedule delays and cost increases. Staff is pursuing other means of USACE funding such as reprogramming, in order to fund the development of the PMP and cost-share agreement.

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 continuing efforts to close out the Continuing Authorities Program (CAP) project and secure funding for the development of the Project Management Plan (PMP).
- Efforts to determine carry-over funds available for FY11-12 continue.

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.

- In February 2011, this study was transferred from the ULE/NULE program to the USACE/CVFPB Studies Section.

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.

- The Sutter Basin Feasibility Study is one of two studies selected nationwide for a new trial program to accelerate USACE's current feasibility study process. The trial program is referred to as the Pilot Study Program.
- USACE held a meeting on Friday May 27, 2011 to discuss the Re-Scoping Plan based on the accelerated 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.

- This study is progressing toward the existing conditions (F3) milestone; Agency Technical Review (ATR) has been completed for several disciplines.
- Inventory of all encroachment permits is being gathered, and GIS mapping of trees, structures, and encroachments will begin in about two weeks through ground survey field work.

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 analyses on a revised levee alignment.

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.

- A Project Management Plan (PMP) is at 40 percent completion; a scope of work has been developed. Further development of the PMP is dependent upon ongoing USACE internal budget approval to expend additional reconnaissance-level funding.

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 FCSA and LFCSA are now fully executed.
- There were no funds allocated under the federal FY 2012 Civil Works Budget for this study. The study has been put on hold indefinitely until additional federal funding is available.

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 is scheduling a Teleconference to discuss the draft Policy and Guidance Memorandum (PGM).
- The Non-Federal Sponsors submitted documentation for payment delays under WRDA 1986 Section 103(l) Section 104 was also submitted to USACE in November 2010 and both received a denial from USACE. This has resulted in USACE requiring a payment of approximately $5 million from the Non-Federal Sponsors.

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.

- 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)

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

- DWR and CVFPB continue to work with RD-17 to ensure compliance with all EIP and Board permit conditions.
- RD-17 is preparing to install piezometers required by DWR and CVFPB. There will be a three week bid review period, followed by piezometer installation.
- RD-17 is requesting that the payment freeze be lifted. RD-17 will receive payments when all of DWR's outstanding requests for additional information are satisfied.

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 Vegetated Wave Buffer, Segment 2, is underway.
- CVFPB has required TRLIA to remove all existing asbestos concrete piping left in the floodway within the setback area and all PVC irrigation lines within 100 feet from the water side toe of the setback levee as well as removing visible PVC risers. TRLIA has provided a work plan and is planning to proceed with the removal in the third week of June 2011.

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

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

- On May 5, 2011, DWR received a copy of a letter from the Department of the Army (DOA) through USACE denying the Three Rivers Levee Improvement Authority's (TRLIA) Section 104 credit eligibility request for the Upper Yuba River project. According to the letter, the DOA will no longer consider applications for

Section 104 credit eligibility and that Section 221 of the Flood Control Act of 1970, as amended by Section 2003 of WRDA 2007, provides a more contemporary and comprehensive general authority for affording credit for non-federal in kind contributions that covers all the water resources development projects. TRLIA, through the Yuba County Water Agency, has a signed Memorandum of Understanding (MOU) with USACE under Section 221(a) of the Flood Control Act of 1970, as amended by Section 2003 of the WRDA of 2007. TRLIA therefore will be pursuing credit for in-kind contributions under Section 221 (a).

- TRLIA awarded the construction contract to the lowest bidder Magnus Pacific, Notice to proceed was granted, construction is to begin in the second week of June 2011.

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

- SAFCA is compiling the necessary information to begin project close out.

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 USACE Phase 4A along the Sacramento River in 2011 and have USACE complete the remainder. This is estimated to occur in 2014.

- Construction is currently underway on USACE Phase 4A. Sukut Construction has started clearing and grubbing in anticipation cutoff wall construction (total contract amount - $19.2 million).

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.

- Invitation for contract bid submittal for the CHP Academy and The Rivers was closed on June 2, 2011. WSAFCA is planning to award the Construction contract in mid July 2011.

USACE/CVFPB PROJECTS

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

American River Common Features Project

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

- The Mayhew project site staging area and erosion site repair is currently in design.
- Construction at Site R5 will begin in the 2011 construction season.
- Howe Ave and Site R6 contract awarding scheduled for late 2011 with construction in 2012.
- Howe Ave and Site R6 design is currently near 90 percent submittal.

Folsom Dam Raise and Bridge Element

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

- Off-site environmental mitigation is underway.
- USACE is currently working on preliminary design and a Project Management Plan (PMP) for the project.

Folsom Dam Modifications (Joint Federal Project)

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

- Granite contracted construction work is about 7 percent complete. The Contractor continues production blasting and excavation in the Control Structure area.
- Joint Agency task force meetings for optimization of the construction schedule are ongoing.
- CVFPB and staff attended a site visit to the Folsom Dam Modification (JFP) project site on May 27.

Marysville Ring Levee Improvement Project

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

- Construction for Phase 1 is currently underway with scheduled completion in late September 2011.
- Weekly environmental bird surveys are underway to account for nesting raptors along the Phase 1 Project Footprint.
- The Phase 4 design is at 60 percent.
- Local and State Partners 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.

- USACE conducted a preliminary transfer inspection of Area 1 (RD-1500) and found several issues at the original repair sites that must be addressed before the Supplemental O&M Manual can be delivered. Details of the USACE findings will be presented at the June 9, 2011 PDT Meeting.

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 is in the process of acquiring real estate from Union Pacific Rail Road (UPRR) with the intent to allow USACE to award a contract by 30 September 2011 to construct 2,850 feet of floodwall along Morrison Creek and UPRR tracks. Construction is scheduled to begin in spring 2012.
- There are complications with right of way limitations on the Unionhouse Creek design along 4,500 feet of the creek. The local sponsor's investigations into other alternatives for flood control along an additional 6,000 feet of Unionhouse Creek have slowed progress on that creek. Within the next two months, updates are expected on the approach that will be used to implement flood control requirements for the entire 10,500 foot street of the creek.
- USACE, the State and SAFCA are intending to proceed with the design of flood control improvements along approximately two miles of Florin Creek as the next step in this project.

West Sacramento Area Project, Slip Repair

- The completed Real Estate Certification package is being routed for final DWR signatures and will be delivered to USACE by June 9.
- USACE is scheduled to open bids on June 9, with construction scheduled to start July 1.

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 2010-11 Funding Cycle request for grant-funded project proposals closed on March 3. A total of 36 proposals were submitted. FCP staff members completed site visits and evaluations for all 36 proposals, with staff from other departments

assisting. The next steps include meetings with all of the evaluators to finalize scoring and grant dollar amount recommendations, and review by DFM and FloodSAFE managers.

- Three of the four scheduled consensus meetings were held with all of the evaluators to finalize scoring and grant dollar amount recommendations, the next step will be a review by DFM and FloodSAFE managers.
- Funding agreement amendments were signed by the Director for the following projects: Middle Creek Flood Damage Reduction and Ecosystem Restoration Project, and the Hamilton City Flood Damage Reduction and Ecosystem Restoration Project.

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 Program Delivery improvement process.
- In a meeting with Fresno Metropolitan Flood Control District, it was agreed upon that FMFCD did owe the State the value of the property purchased for the Redbank Fancher Creek project and is still in position of the District that was not needed for the federal project. The District was to provide a reasonable date that can be accepted by the State as project completion date for purpose of establishing the property value. Currently, the District has an invoice of $7 million, which will be adjusted once the new appraisal is received and approved.
- Requested supporting documents for SAMO reimbursement claims were received; staff review of three reimbursement claims for total of $23.1 million is nearing completion.
- Staff evaluated 5 reimbursement claims by Santa Clara Valley Water District (SCVWD) (UGR-4, 5, 6, 7 and 8), for the total of $2,270,559.
- Staff completed five engineering reports for SCVWD claims.
- Staff began evaluation of three additional SCVWD claims (UGR-9, 10 and 11) for the total of about $770,400.
- Staff completed evaluation of two claims for Upper Guadalupe River (UGR), in excess of $630,000.
- Staff is in the process of completing evaluation of reimbursement claims from Napa County Flood Control and Water Conservation District for the total of $367,430.
- Seven claims for $3.18 million were completed.
- Five claims for $24.1 million are under review.
- No audit payments were processed.
- No claims are in process of payment.
- No new claims were received.
- 40 claims for $123.9 million are pending review.

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 Amendment No. 1 to the Wildcat and San Pablo Creek Levee Geotechnical Evaluation Project was approved by FPO chain of command and is awaiting Director's signature for final approval. The amendment will increase agreement term, increase the overall grant amount, and update the project work plan, schedule, and budget.
- City of Oroville is currently obtaining City signatures for execution of a grant agreement for the Evaluation of the City of Oroville Levee. The Agreement is on the Agenda for the City Board's July meeting.
- San Bernardino County submitted the Project Completion Report and Geotechnical Report for the Levee Certification and Modernization Project. These documents were reviewed and rejected by the DWR Project Manager. The DWR PM has worked closely with San Bernardino County to compile the appropriate documents necessary for project closure.
- The City of Bakersfield final invoice payment and retention payment were both approved and processed. The project closeout letter was sent and received by the City. The city will allow over $200,000 in Proposition 84 funds to revert to the general funding pool due to ineligible work.

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 revised the 5-year work plan for YFFPP
- The new Project Manager for YFFPP is William Wong.
- Staff coordinated with FPMO to upload YFFPP into the Program Funding Summary Sheet.
- SC/SBFCA Feasibility Study Cost-Share Agreement invoice No. 2 was processed and paid.
- YWCA Feasibility Study extended Contract; remaining funds were released. Project close out will be underway after it is confirmed that it has been received.

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.

- Public comments on the LLAP Draft Guidelines were reviewed. A Response to Comments has been prepared. The LLAP Guidelines have been amended based on the efficacy of public comments received. The Project Solicitation

Package (PSP) has been updated to reflect the next solicitation plans and amendments to the Guidelines. These documents have been sent for Office of Chief Counsel (OCC) review and management approval.
- EIP staff and support staff are either finished or nearing completion of the review of the EIP applications submitted for review. Director's Decision Memos are being prepared and circulated through DFM management for approval.

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.
- The Eastside Bypass Mitigation Project received a report that the mitigation proposed by USFWS (fence construction in the San Joaquin River Channel) is infeasible because the resulting vegetation would cause a rise in water surface elevation that would encroach into the FEMA 3-foot required freeboard. USFWS responded with an alternative mitigation approach to enhance habitat within the San Luis Wildlife Refuge that would have no effect on floodwater conveyance or stage elevation.

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 is circulating for management approval before submittal to the Office of Administrative Law.
- Staff directed completion of Phase I of The DFM Desk Reference Manual / Intranet Website Project which includes development of subject matter components for the Budget Process, SAP Reporting, Bond Accountability and Project Management Basics. Training for 60 DFM staff was also completed.
- LLAP staff provided technical support for the review of flood risk and flood damage reduction benefits of potential projects for Flood Corridor Section.
- Staff has completed case reviews in assistance to DIRWM Proposition 1E grant application evaluation.
- Flood Corridor Programs and Environmental Support Branch staff assisted the Flood Maintenance Office to complete the Phase II Task Order for support services for preparation of the Lower Feather River Corridor Management Plan.

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 61 joint levee inspections and received DFG approval for 57 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. To date, 53 reimbursements have been paid totaling $7.8 million.

Work Agreements for FY 2010-2011

- DWR staff has mailed work agreements to 68 reclamation district and has received signed work agreements from 63 reclamation districts. An additional four work agreements have been received since the April CVFPB meeting.
- The agreements will be finalized once signed by the Board's Executive Officer.

Work Agreements for FY 2011-2012

- Staff has sent a letter to local agencies inviting them to participate in the FY11-12 Subventions Program. All local agencies are expected to submit their maintenance plan by July 1, 2011 in order to be considered in the FY11-12 funding plan. The allocated fund for FY11-12 is $12 million.

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.

- No relevant significant changes since April 2011.

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	31	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	**29**
West Sacramento	**95**	W. Sac. Non-Project	12
Sacramento River	45	South Sac. Streams	11

Changes shown in bold.

- Overall, ULE is 69% complete.
- The draft West Sacramento GER (Volumes 1 and 2), the template for all GERs was be presented for review and comment at the Independent Consulting Board meeting in May.
- No drilling activities occurred during this reporting period.
- Schedules for completion of the Geotechnical Evaluation Reports (GERs) Program are being prepared with the current delivery date of the GERs scheduled for the end of 2012.
- Most ULE efforts for the reporting period have been for planning the GERs 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: 1) the Flood Control System Status Report and 2) the Central Valley Flood Protection Plan.

- Overall, Non-Urban Levee Evaluations are 44% complete.
- At the Independent Consulting Board meeting in May, updates on the Geotechnical Assessment Report (GAR), Remedial Alternatives and Cost Estimates Report (RACER), and Geotechnical Data Report (GDR) were presented. The approach to the Geotechnical Overview Reports (GORs) was also presented for review and comment.
- No drilling activities occurred during this reporting period but field work is anticipated to resume in early June.
- Schedules for completion of the GORs are being prepared with the current delivery date of the GORs scheduled for the end of 2012.
- The GAR is final.

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 RD 17, SAFCA (AR Common Features), and Sutter Butte Area Flood Control Agency.

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.

- Urban Levee Design Criteria Version 5 meetings occurred in May with additional meetings planned for June.
- Vegetation management policies and research continues.
- With the completion of the draft West Sacramento GER, seismic studies are continuing in the study area for overall general cost estimate for seismic deficiencies and cost benefit analysis of these fixes.

Staff continues to support development of policy papers and technical data for the CVFPP and participate in various FloodSAFE FAXCTs (Functional Area Cross Coordination Teams).

FUNCTIONAL AREA 6 FLOOD MANAGEMENT PLANNING AND CONSERVATION STRATEGY

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

CENTRAL VALLEY FLOOD MANAGEMENT PLANNING (CVFMP)

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

STATE PLAN OF FLOOD CONTROL (SPFC)

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

- **FCSSR** – Responses to comments on the Administrative Working Draft FCSSR were provided as a back-check to SPFC maintaining agencies and others who reviewed the document and senior level DWR review of the final draft document was performed in June 2011. A roll-out plan for the public review Draft FCSSR has been developed with the public review document first provided to the legislature and then the general public is scheduled for later this summer.
- **History Report** - An administrative draft of the history report for internal review by DWR and the Board is scheduled for this fall with a public review draft scheduled for release in early 2012.

CENTRAL VALLEY FLOOD PROTECTION PLAN (CVFPP)

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

- Work continues of formulating alternative approaches to identified resources problems and from these approaches development of the State System-wide Investment Approach which will be the basis for the recommended plan in the 2012 CVFPP.
- Work also continues on the draft Program Environmental Impact Report.
- Two workshops covering a number of technical evaluations on the CVFPP were held in West Sacramento on June 2 and Stockton on June 10. The workshops were well attended with vigorous participation by local interests. Information presented at the workshops is being posted on the CVFMP website at: http://www.water.ca.gov/cvfmp.

- Coordination continued between the CVFPP Product Delivery Team and USACE staff on the Project Management Plan (PMP) for the Central Valley Integrated Flood Management Study (CVIFMS).

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.

Conservation Framework

Staff submitted a 40% draft of the Conservation Framework. This framework provides a preview of the Central Valley Flood System Conservation Strategy (CVFSCS), which is a long-term approach for DWR to achieve the environmental goals and objectives of the CVFP Act, FloodSAFE Initiative, and CVFPP; implement DWR's environmental stewardship policy; and address public environmental expectations related to Central Valley flood management. The longer-term strategy will be developed and complement the developing 2017 CVFPP and the federal Central Valley Integrated Flood Management Study (CVIFMS). The Conservation Framework itself provides more specific environmental information, context, and guidance as part of the CVFPP, and helps CVFPP readers understand how key environmental elements have been already integrated into the CVFPP.

Conservation technical documents

Staff completed 70% drafts of the following technical reports to support the Conservation Strategy, CVFPP, and associated CEQA documentation: 1) Biological Status and Trends Report, 2) Fish Passage Barriers Assessment, 3) Habitat Conservation Objectives from Overlapping Plans, and 4) Fish Passage Barriers Assessment.

Vegetation Management - Staff is continuing to develop specific content for the conservation strategy to support vegetation management approach of the CVFPP including mitigation for life cycle management and elderberry issues.

REGIONAL CONSERVATION PLANNING

Regional Advanced Mitigation Planning (RAMP)

- The RAMP Statewide Framework was distributed to participating state and federal agencies for review. Feedback has been positive on the Statewide Framework. Comments dealt with issues such as engagement of local interests and private organizations, integration with NCCP/HCP programs, project-level implementation issues, CEQA process, and funding sources. Comments will be addressed by smaller RAMP working group and the document distributed in August 2011.
- A communication plan is under development so the upcoming outreach on the Statewide Framework and the pilot's Regional Assessments can be organized and coordinated across partner agencies. In June, staff will be meeting with representatives from Habitat Conservation Plans that overlap the pilot project.
- The new RAMP website provides a variety of communication tools for collaborating and reviewing documents.

Corridor Management Planning - Staff continues to work with DFM (Flood Corridor Projects and FMO) and the consultant (AECOM) on planning activities for the Lower Feather River CMP. The permitting subcommittee met on May 11and a work group site visit was held on May 19.

SCIENTIFIC AND PLANNING INFORMATION

- **Vegetation mapping**
  Most of the medium-scale regional mapping modules have been assessed for initial accuracy and a complete map and data set will be completed in early summer. This will be followed with technical review by external *agencies and area* experts before making the product available. Staff is working with the Riparian Habitat Joint Venture coordinator to conduct this outreach to outside agencies. Agencies and NGO's continue to express positive interest in map data. Staff is also initiating fine-scale vegetation mapping, which is more useful for project-level work. Field studies are expected to begin later this summer.

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. The Federal Advocacy Program will, in coordination with DWR Executive Office, serve as the primary State advocate for securing the necessary federal funding. Primary federal partners also include United States Corps of Engineers (USACE) and the Federal Emergency Management Agency.

- On May 5, 2011, Assistant Secretary of the Army (ASA) Darcy issued a memorandum in connection with the Yuba River Basin project indicating the ASA's office will no longer consider applications for Section 104 credit and will instead rely upon Section 2003 of the Water Resources Development Act of 2007. This decision is of great concern as Sections 104 and 2003 are separate authorities, each with its own advantages and disadvantages.
- DWR is working with the USACE District and Division offices to get a better handle on the impact of the USACE decision to discontinue Section 104 crediting and rely upon Section 2003 credit. DWR is also reaching out to other non-federal partners to determine a path forward.

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.