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.

INSPECTIONS

Spring levee inspections continue to be conducted as time allows. Inspectors have also been busy assisting a variety of agencies and local governments in conducting investigations, providing technical assistance, and in conducting several flood fight efforts. The two new engineer/inspectors are on-board and are coming quickly up-to-speed; they have started conducting levee inspections also. Due to training new staff and high water activities inspections are not as far along as hoped, but will still be completed. Inspectors continue to conduct inspections for encroachment permits and other authorized construction on the levees, and are coordinating with the CVFPB and USACE with their requests as time allows.

FLOOD PROJECT INTEGRITY/VULNERABILITY ASSESSMENT ACTIVITIES

Levee Instrumentation Pilot Study

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

DWR Utility Crossing Inventory Program (UCIP)

Recent activities in this reporting period include participating in roundtable meetings held by the United States Corps of Engineers (USACE) in an effort to establish utility related oversight inspection criteria. USACE and the UCIP team are engaged in weekly work sessions to address record keeping and utility location issues. The UCIP is still undergoing development 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.

Local Agency Program
CDs and copies of executive summaries of the Local Maintaining Agency Annual Report 2010 were delivered to the Board on March 25, 2011.

High Water Staking
During a high water event on March 25th, Flood Project Integrity and Inspection Branch staff staked both banks of Sacramento River from River Mile (RM) 96.66 to 118.93. The objective of this Pilot study was to follow the recently created High Water Staking documents and test the guidelines and procedures in them. Those documents include:

- High Water Event Data Collection Manual.
- High Water Staking Field Book
- High Water Event Data Acquisition Program Definition Report

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 April 1, 2011, statewide hydrologic conditions were as follows: precipitation, 140 percent of average to date; runoff, 120 percent of average to date; snow water equivalent, 170 percent of the April 1 average (the normal date of maximum accumulation); and reservoir storage, 110 percent of average for the date. Sacramento River Region unimpaired runoff observed through March 31, 2011 was about 12.6 million acre-feet (MAF), which is about 112 percent of average. For comparison, on March 31, 2010, the observed Sacramento River Region unimpaired runoff through that date was about 7.5 MAF, or about 66 percent of average.

March was an extremely wet and cool month, up and down the State. On April 1, the Northern Sierra 8-Station Precipitation Index Water Year total was 61.0 inches, which is about 146 percent of the seasonal average to date and 122 percent of an average water year (50.0 inches). During March, the total precipitation for the 8-Stations was 18.5 inches, which is about 268 percent of the monthly average and the third wettest March in 90 years of record. Last year on April 1, the seasonal total for the 8-Stations was 40.7 inches, or about 98 percent of average for the date.

On April 1, the San Joaquin 5-Station Precipitation Index Water Year total was 56.0 inches, which is about 167 percent of the seasonal average to date and 137 percent of an average water year (40.8 inches). During March, the total precipitation for the 5-Stations was 14.1 inches, or about 231 percent of the monthly average and the sixth wettest March in 107 years of record. Last year on April 1, the seasonal total for the 5-Stations to date was 34.3 inches, or about 102 percent of average for the date.

Selected Cities Precipitation Accumulation as of 02/28/2011 (National Weather Service Water Year: July through June)					
City	Jul 1 to Date 2010 - 2011 (in inches)	% Avg	Jul 1 to Date 2009 - 2010 (in inches)	% Avg	% Avg "Water Year" Jul 1 to Jun 30 2010 - 2011
Eureka	38.34	116	30.93	94	101
Redding	**30.26**	**105**	**24.52**	**85**	**90**
Sacramento	21.40	132	17.34	107	119
San Francisco	20.69	112	17.95	97	103
Fresno	14.94	152	9.96	101	133
Bakersfield	9.81	173	5.69	100	151
Los Angeles	17.30	142	11.10	91	132
San Diego	11.97	123	8.74	90	111

Key Reservoir Storage (1,000 AF) as of 02/28/2011								
Reservoir	River	Storage	Avg Storage	% Average	Capacity	% Capacity	Flood Control Encroachment	Total Space Available
Trinity Lake	Trinity	2,108	1,960	108	2,448	86	---	340
Shasta Lake	Sacramento	4,032	3,736	108	4,552	89	394	520
Lake Oroville	Feather	2,840	2,754	103	3,538	80	52	698
New Bullards Bar	Yuba	786	695	113	966	81	-10	180
Folsom Lake	American	635	626	101	977	65	1	342
New Melones	Stanislaus	1,941	1,486	131	2,420	80	-98	479
Don Pedro	Tuolumne	1,727	1,474	117	2,030	85	37	303
Lake McClure	Merced	763	578	132	1,025	74	124	262
Millerton Lake	San Joaquin	431	360	120	520	83	93	89
Pine Flat	Kings	779	560	139	1,000	78	94	221
Isabella	Kern	245	195	126	568	43	-88	323
San Luis	(Offstream)	2,035	1,874	109	2,039	100	---	4

The latest National Weather Service Climate Prediction Center (CPC) long-range, 1-month precipitation outlook for April 2011, issued March 31, 2011, suggests above average rainfall for far Northern California. No tendency for above or below average rainfall is suggested for most of the northern Sierra. Below average rainfall is approximately indicated south of a line from Lake Tahoe to San Francisco.

HYDRO-CLIMATE ANALYSES

Work continues on the University of California Task Orders for studies supporting climate change hydrology effort. Quarterly meetings with the principal investigators have been held or identified and progress reports obtained. Projects are on track and meeting expectations to date.

The Central Valley Flood Protection Plan (CVFPP) Climate Change Technical Work Group is moving forward with a technical example to demonstrate the methodology developed in earlier meetings. The contractor has developed a draft workplan that has been reviewed by the State Climatologist. The plan will be reviewed and discussed with the technical work group as well. Due to timing differences in schedules, results of the Central Valley Hydrology Study (CVHS) climate variability and change phase will feed into the 2017 CVFPP. A description of the point of engagement of the material will be made in the 2012 plan. The CVHS climate variability and change phase and the CVFPP climate change methodology will be consistent in approach by examining thresholds of response in the flood management system and the thresholds in hydrology that force those response elements.

A program management plan and a work plan for the climate variability and change phase of CVHS have been drafted and are now available on the CVHS project website. The management team has held meetings to make some initial decisions for the pilot project including watershed choices and historical baseline storm choices. The level of effort for the pilot study will take approximately one year with demonstration products produced for at least two watersheds within the Sacramento/San Joaquin Basin. Translation of the study to the full CVHS area will be completed after the pilot study and is initially estimated to take 12 to 15 months.

Efforts continue to coordinate efforts between the Central Valley Hydrology Study Phase I and the Central Valley Floodplain Evaluation and Delineation (CVFED) Program through a cross coordination team to manage the Division's hydrology and hydraulics development and implementation. Recent monthly meetings have been used to discuss strategies for engaging the different project teams that have a tie to hydrology and hydraulics data and models and the steps needed to develop any project specific tools or data sets. The United States Army Corps of Engineers (USACE) have presented material to the CVHS and CVFED teams demonstrating their methods for utilizing CVHS products. The USACE has also instituted a new level of review required for all projects. The CVHS team is determining what products will need to undergo the additional review and how that will impact the project time schedule.

REAL-TIME DATA COLLECTION NETWORK

Coordination between NOAA, DWR and Scripps continues as the 21st Century Extreme Precipitation Monitoring project moves forward. The next quarterly progress meeting will be held in April. At a recent Western States Water Council meeting on extreme events and climate change, the project was highlighted and praised as a positive step in new monitoring technologies.

SNOWMELT & SEASONAL VOLUME RUNOFF FORECASTING

Precipitation Runoff Modeling System (PRMS) development

A lot of effort has been put forth this month is making more adjustments and fine tuning the Lake Davis sub basin PRMS model. This work effort will be the main focus of a short course at the Western Snow Conference to be held April 18 in S. Lake Tahoe. Dave Rizzardo, Snow Surveys Chief, will be one of the instructors of this short course. The work will also be highlighted in a poster during the length of the conference.

The Federal Government's shutdown threat/reality during April significantly impacted the PRMS modeling effort. The USGS, who is building these models for DWR was forced to shut down and stop work on the models. Likewise, the USGS, which was a partner in the short course, was not allowed to attend nor provide support for the class. This put extra work on Snow Surveys staff during an otherwise busy time, but the team pulled through.

Water Supply Modeling Forum: We've begun narrowing down some dates and considering locations for this summer's modeling forum. Our theme for this year's forum will focus on building "on the fly" statistical tools that will enable our seasonal volume runoff forecasting staff to better analyze the data used for the forecasts. The purpose of the forum would be to identify improvements to the Snow Surveys and ultimately the FERIS websites, using this focus group to suggest an online suite of data analysis tools to improve forecasting and reservoir operations overall.

SNOW SURVEYS AND SNOW COURSE MAINTENANCE

As of April 7, 2011, the regional snow pack conditions as reported by the remote snow sensors are as follows:

Northern Sierra - 48" of SWC for 167% of April 1 Avg. and 172% to date
Central Sierra - 47" of SWC for 157% of April 1 Avg. and 158% to date
Southern Sierra - 39" of SWC for 147% of April 1 Avg. and 149% to date
Statewide - 45" of SWC for 157% of April 1 Avg. and 160% to date

Compared to the March 7 report, the Northern Sierra region gained 16 inches of SWC, the Central Sierra gained 10 inches of SWC, and the Southern Sierra gained 6 inches. Statewide, 11 inches of SWC was added to the snowpack during March. Precipitation statewide was well above average, especially in the Northern Sierra and the statewide snowpack gained 39 percent during the month which is above average. The heavy snow pack will cause high water concerns especially in the San Joaquin Valley.

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

Location	Elevation	Snow Depth	Water Content	% Average
Alpha	7600’	151.4”	57.9”	173
Phillips Station	6800’	124.2”	43.5”	154
Lyons Creek	6700’	153.6”	56.1”	180
Tamarack Flat	6500’	121.0”	45.0”	166

The results of the April snow surveys show impressive gains throughout the Sierra Nevada. For the stations listed above, Alpha gained nearly 60 inches of depth and 21 inches of water content during March. This represents a 42 percent gain in water content during March. Several locations across the State reported record or near record gains in snow accumulation during March. In a few locations (Donner Summit included) over 20 feet of snow sits on the ground. Records kept at the Central Sierra Snow lab in Soda Springs, CA show total accumulation of over 730 inches (over 61 feet) of snow this winter. That would rank this season’s accumulation in the top 5 all time for records dating back to 1878.

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

HYDROLOGIC DATA MANAGEMENT

The Snow Surveys section continues to collect, review, Quality Control, and enter Full Natural Flow (FNF), precipitation, snow, and reservoir storage data for thousands of locations statewide on a daily basis. With this data staff continues to issue daily, monthly, and seasonal water condition reports on CDEC. The epic rain and snow gains during the month of March really sparked interest from the media and the public. 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 thirty historic data requests from a variety of sources (media, consultants, water managers, etc.). In particular interest shifted from drought questions to flooding and reservoir operations questions. We also received many public inquiries about assisting them plan their kayaking and mountaineering vacations for this summer. These requests are typical this time of the year.

BULLETIN 120 AND WATER SUPPLY INDEX FORECASTS

April 1, 2011 Bulletin 120 Forecast

The projected median April-July runoff in the major Sierra river basins ranges from 113 percent on the Pit River to 184 percent on the Kern River. The April-July runoff for the Sacramento River (Bend through American), San Joaquin River (Stanislaus through San Joaquin), and Tulare Lakes (Kings through Kern) regions are 157 percent, 167 percent, and 172 percent of average respectively.

Forecasted median Water Year runoff ranges from 108 percent for the Inflow into Shasta Reservoir to 186 percent for the Cosumnes River. The Water Year runoff for the Sacramento River (Bend through American), San Joaquin River (Stanislaus through San Joaquin), and Tulare Lake (Kings through Kern) regions are 128 percent, 173 percent, and 174 percent of average respectively.

In summary, March was very wet!

At time this report was submitted, the Water Supply Index (WSI) forecast was not ready for publication. As such, the following numbers reflect the March 1st WSI forecast:

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

All three forecasts are expected to increase. A preliminary estimate for the forecasts are a median SRR forecast of 23.8 MAF or 128 percent of average, a SVI of 10.0 (Wet), and an SJI of 5.2 (Wet). These estimates are unofficial and are NOT to be used in any capacity.

The May 1, 2011 Bulletin 120 forecast will be available on May 9, 2011.

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

Beginning in March, the Reservoir Coordinated Operations Section began organizing coordination calls between the U.S. Army Corps of Engineers, the NWS River Forecast Center, Flood Operations Branch, Reservoir Operators, and Local Levee Maintaining Agencies throughout the Central Valley. Given existing snow pack and water supply/runoff forecast conditions in the Southern Sierra, along with the encroached condition of most reservoirs in the San Joaquin River Basin, the threat of snowmelt driven flooding will continue in this region for weeks to come. These coordination calls will continue as reservoir releases are evaluated and levee

and channel conditions are monitored downstream. Flows throughout the San Joaquin system are expected to remain above or near monitor stage for weeks to come.

RIVER FORECASTING

The storms in March produced runoffs that exceeded monitor and flood stages at several forecast locations statewide. In collaboration with the National Weather Service California Nevada River Forecasting Center, the River Forecasting section staff actively responded to the high water conditions and provided extended staffing coverage including weekends, more frequent forecasts, and regular updates to management and stakeholders. On several days, staff provided 24 hour shift coverage and issued forecasts every six hours due to rapidly changing conditions.

FLOOD OPERATIONS EMERGENCY RESPONSE

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

FLOOD OPERATIONS, TRAINING, AND EXERCISES

The Flood Operations Center (FOC) is currently on duty monitor status and is monitoring isolated incidents statewide. The FOC is currently monitoring the erosion site located on the right bank at RM 103.4 in RD 2063 and has mission tasked other DWR Staff outside of DFM to perform various assignments. The FOC is also currently monitoring an additional 100-ft crack located on the right bank of the Natomas Cross Canal located in RD 1001. Additionally, the FOC coordinated in the emergency repair efforts in Lake County at MA-17. The FOC monitored the Tsunami Warnings along the west coast of California caused by the M8.9 earthquake in Japan.

In addition, the FOC has been involved with several reservoir operations calls and advance planning meetings with County OES offices. Due to the high flows throughout the San Joaquin River system, the FOC is monitoring all river stages and reservoir releases.

Over the past month, the FOC has been involved in Flood Information Specialist (FIS) training for staff designated to assist in the FOC during exercises and activations. Currently, five training classes have been completed totaling with approximately 60 attendees trained on the duties and responsibilities of the FIS position.

On March 23, 2011 the FOC declared a Flood Alert due to the March 2011 storms. Weather briefings were held daily and river forecasts were issued four times a day. The Flood Alert was rescinded on March 28, 2011.

FLOOD SYSTEM ANALYSIS SECTION (FSAS)

Significant activities of the FSAS include the development of a Levee Emergency Action Plan (LEAP) template to support the State-Federal FOC response to flood incidents. The purpose of the action plans are to assemble situational assessment information, critical contacts and design, permitting and contract information to expedite repairs should they become a part of the emergency response. Response to recent incidents throughout the Central Valley and North Coast have led to further refinement of the action plans to improve interagency and intra-agency coordination, particularly environmental agencies. The initial template and live sample of the LEAP has been prepared for a seepage site on the San Joaquin River. LEAP's are now being prepared for an erosion site reported by a concerned RD and two additional seepage sites identified by the Urban Levee Evaluations Branch.

Additionally, FSAS is recommitted to the development of a pre-season flood system vulnerability assessment tool. This tool is made in support of the Flood Operations Center activities and will integrate information related to engineering evaluations, system performance and operation and maintenance practices. This tool will also utilized all data being collected by DWR and use a majority of that data to assess and rate the system to identify weak, deficient or vulnerable reaches of the flood control system. Additionally, this tool will support the objectives of FA01 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.

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:

- USGS/Cornell/Corps have completed regional duration skew study. Report should be available soon.
- Reservoir/hydrologic (HEC-ResSim) models are completed, and ready for Agency
- Technical Review (ATR). Draft review plan for ATR was completed.
- Local flow analysis is nearly complete.
- Ungaged watershed delineation process is complete. Rainfall-runoff model development is currently underway.
- Reservoir inflow hydrograph daily-to-hourly estimation and smoothing, and record augmentation is nearly complete.
- Unregulated channel routing model development is nearly complete.

- Continuing internal coordination with Corps and hydraulic and hydrologic workgroups.

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 Hydrology & Flood Operations Office is the lead office for DWR's participation in Golden Guardian 2011, sponsored by CalEMA during the week of May 16, 2011. HAFOO has been involved in numerous coordination meetings with CalEMA, state and federal agencies, operational areas, and local maintaining agencies. HAFOO is also coordinating and supporting planning groups from regional offices in Red Bluff and Fresno and other DWR Divisions. This will be the first major flood exercise for DWR since 2001. The initial DWR Master Sequence of Events List has been submitted to CalEMA. The MSEL will be finalized in the next several weeks. In preparation for the exercise HAFOO staff have conducted a variety of training sessions (FIS, SEMS/ICS) for new FOC staff and have scheduled additional briefings and training for the two new incident command teams. The three existing teams are also engaged in preparatory activities for GG11. The principal exercise activities will include activation of the FOC and field deployment of ICTs in three locations. The two new ICTs will shadow and be mentored by one of the existing ICTs.

FLOODSAFE FOCUS NEWSLETTER

The public comment period is now open for the draft Flood Emergency Response Projects Grant Guidelines. Flood Emergency Response Projects grants, funded from propositions 84 and 1E, are awarded to local public agencies for projects to improve their flood preparedness and response capabilities. Through 2015, up to $10 million will be available, including $5million specifically reserved for improving Delta communication tools and processes. Typical projects include purchasing and installing equipment for improved communication and multi-agency coordination; developing maps, information systems, facilities or staging areas; and enhancing planning, preparedness and response training and programs. Six public workshops to review the draft grant guidelines are scheduled for April and May, 2011. Written comments are due by June 4, 2011, to William Croyle, 3310 El Camino Avenue, Suite 200, Sacramento, CA 95821. The draft grant guidelines are available as a PDF for electronic download at:

http://www.water.ca.gov/floodsafe/docs/Flood_Emergency_Response_Grant_Guideline_022811.pdf

FLOOD EMERGENCY RESPONSE GRANT GUIDELINE WORKSHOPS

Six workshops to solicit public comments on the draft guidelines will be held at the follow dates, times, and locations:

Merced – Monday, April 4, 2011
Merced Civic Center
678 18th Street, Merced CA 95340

Yuba City – Friday, April 8, 2011
Whiteaker Hall
44 Second Street, Yuba City CA 95991

Isleton – Thursday, April 14, 2011
Isleton Community Center
208 Jackson Boulevard, Isleton CA 95641

Stockton – Wednesday, April 13, 2011
San Joaquin County Robert J. Cabral Agricultural Center
Assembly Room 1
2101 East Earhart Ave, Stockton CA 95205

Woodland – Wednesday, April 20, 2011
Herbert Bauer M.D. Health and Alcohol, Drug and Mental Health Building
Thomason/Walker Rooms
137 North Cottonwood Street, Woodland CA 95695

Sacramento – Wednesday, May 4, 2011
DWR, Flood Operations Center, Conference Room LL-20
3310 El Camino Avenue (El Camino and Watt Ave)

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.

- Clean-up of debris, rodent damage repair, and downed vegetation removal is on-going system wide. Debris removal was focused at the State maintained pumping plant intakes in Sutter and Lake Counties.
- A majority of the month's levee maintenance activities included high water patrolling on a 24 hour basis for all DWR maintained levees and channels

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.

- The construction contract for the Weir No. 2 Replacement project was awarded on March 16 to Mountain Cascade Inc. Construction is expected to commence in May 2011.
- Start of construction to modernize the Sutter Bypass Pumping Plant control system is scheduled to commence in May 2011.
- Staff has been conduction roving patrols during the day light hours to monitor the Knights Landing Outfall Gates, Sacramento Weir, and Cache Creek Settling Basin Facilities.

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.

- On March 14, staff engaged in a flood fight in MA-17 in Lake County. Significant water flow was observed exiting the landside of a levee from the underside of a 30-inch pipe. DWR worked with County and CDF crews to stabilize the site and essentially cut off the flow by utilizing 8.5 cubic yards of grout pumped into the voids. Continuous monitoring is ongoing.
- A majority of the month's levee maintenance activities included high water patrolling on a 24 hour basis for all DWR maintained levees.

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.

- Erosion repairs in MA 9 are planned for the 2011 construction season. Applications for environmental permits and clearances are being prepared and will be submitted in April. A California Environmental Quality Act (CEQA) Notice of Exemption (NOE) was filed on July 30, 2010, and the State Lands Commission General Lease (PRC 8890.9) was obtained for the MA 9 Levee Erosion Repair Projects at RM 36.8 and RM 53.6. An additional site at RM 46.7 was identified in February 2011 as needing repair this season. Filing CEQA document and requesting an amendment to the existing SLC lease is targeted for mid-April.

LEVEE REPAIRS

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

- Reclamation District 1001 sent an "Assistance for Repairs of Levee Crack and Slump on the North Levee of the Natomas Cross Canal, RD 1001" letter and back up documentation requesting technical and financial assistance to repair this levee – letter was received on 4 April 2011. DWR is currently reviewing the request, but does not believe the situation requires immediate action due to the time of year and expected canal stages.
- Reclamation District 2064 – The “Assurance Agreement (LPCA) for the emergency erosion repairs (SJR RM 71.5R) was delivered by certified mail to the District on April 1, 2011. A revised Biological Assessment and new LPCA addressing the previously completed emergency repair, as well as final repairs scheduled for fall 2011, are currently undergoing final Department review.
- Reclamation District 2063, Stanislaus County and DWR continue to monitor erosion along the east bank of the San Joaquin River at River Mile 103.4. Department Staff continues to do advance planning in the event emergency response activities become necessary.

FUNCTIONAL AREA 3 FLOODPLAIN RISK MANAGEMENT

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

FLOODPLAIN MANAGEMENT TECHNICAL SUPPORT

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

As part of the NFIP Community Assistance Program (CAP) grant-partnership with the Federal Emergency Management Agency (FEMA), DWR conducts audits with communities participating in the NFIP and provides training to community officials. In March and April of 2011, DWR staff members conducted a FEMA Elevation Certificate workshop in Butte County for the California Land Surveyor's Association, and conducted a four day workshop on “Managing Floodplain Development through the National Flood Insurance Program” in Santa Clara County. For the Community Rating System (CRS) program, staff gave a presentation on DWR’s CRS program implementation strategy to the Floodplain Management Association. Also staff completed final edits of the CA CRS Elected Officials brochure and received a signoff from FEMA Region IX. In addition, the second draft of the DWR CRS website design has been completed.

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.

No new information.

FLOOD RISK NOTIFICATION

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

The 2011 Flood Risk Notification flyer has been sent out for executive and management approval. Also, the Flood Risk Notification program team has started to develop a proposal seeking grant funding from FEMA.

FLOOD RISK PLANNING

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

Staff members continue to support development of policy papers and technical data for the CVFPP and are participating in various functional areas cross coordination teams. In April, a notice will go out to all California City and County Planning agencies on the availability of DWR's " Implementing California Flood Legislation into Local Land Use Planning: A Handbook for Local Communities" document. The notice will also reference a future webinar session in the June 2011 timeframe for additional information on the Handbook. As the DFM lead to obtain competitively-awarded hazard mitigation grants, staff attended a FEMA-sponsored national Hazard Mitigation Summit in March where about 300 invited folks consisting of FEMA officials from each region; State NFIP Program Managers and State Hazard Mitigation Officers from each state; and Local government officials converged. The Summit entitled "Partnering to Mitigate Risk" featured speakers including Sandra K. Knight, PhD., P.E., Deputy Federal Insurance and Mitigation Administrator for Mitigation at FEMA and Mike Grimm, NFIP Reform Program Manager. Dr. Knight introduced the three key goals of FEMA's Mitigation and Insurance Strategic Plan: Value People and Relationships, Enhance Credibility, and Advance Hazard Mitigation in Support of Sustainability; and Mr. Grimm discussed NFIP Reform process and its 3 phases. The flowing website provides additional information:

http://www.fema.gov/pdf/business/nfip/nfip_reform_phase_II_report.pdf).

Technical sessions included specific training on implementing FEMA's Hazard Mitigation grants (which totaled nearly $250 Million nationwide in FY2010), State Best Practices, and Panel Discussions. An overall "take away" message that was strongly realized was the need for partnership among floodplain management and hazard mitigation programs, managers and staff.

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 General Reevaluation Report (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 State and local maintaining agencies are continuing to review the USACE alternative levee sections. USACE is waiting for the locals and the State to provide comments on or modifications to the draft alternative sections, the local and State alternative levee sections, or to accept the alternative levee sections.
- USACE is working under a continuing resolution for the GRR. There were no funds allocated under the President's budget for the GRR. The project is anticipated to continue for three weeks at a minimum until further guidance from the USACE headquarters is provided.
- USACE is requesting advanced funding from the State to continue the efforts of the GRR as a replacement for the lack of federal funds for FY2011 and FY2012.

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.

- There were no funds allocated under the USACE FY2012 Civil Works Budget for this study.
- Carry-over federal funds from previous appropriation will be used to move the study forward.

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.

- There were no funds allocated under the USACE FY2012 Civil Works Budget for this study.
- SJAFCA and the State are exploring options for expediting the study and alternative ways to advance funds to keep the study going.
- SJAFCA has received comments from USACE regarding the Smith Canal 104 crediting package, which is under revision.

Merced County Streams Project-Bear Creek GRR
The purpose of this project 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.

- There were no funds allocated under the USACE FY2012 Civil Works Budget for this study.

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.

- In a March 9, 2011 meeting, the USACE determined the State will need to provide additional funds for closeout of the federal and State-sponsored continuing authority program (CAP) project for Rock Creek before moving forward with a Rock Creek Feasibility Study.
- USACE approved the Work-In-Kind package completed by the State in the amount of $123,748 for the Rock Creek CAP study on March 15, 2011.
- USACE is providing an invoice for the funds requested for the CAP study of Rock Creek that will include the Work-In-Kind package submitted by the State. The invoice is anticipated to be complete by the beginning of April 2011.
- There were no funds allocated under the USACE FY2012 Civil Works Budget for this study.
- Carry-over federal funds from previous appropriation will be used to move the study forward.

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

- A payment in the amount of $105,007 was mailed to USACE in early March from two fund sources; Proposition 1E and Proposition 13.
- A Pilot Program meeting was planned for March 29, 2011 to discuss the new scoping document for the Pilot Program.

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.

- In preparation for the F3 conference, most disciplines have submitted their documents for Agency Technical Review (ATR).
- Work has begun on preliminary alternatives.

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.

- No new information.

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.

- There were no funds allocated under the USACE FY2012 Civil Works Budget for this study.
- Carry-over federal funds from previous appropriation will be used to move the study forward.

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 being processed through the Contracts Office and should be fully executed by mid-April.
- There were no funds allocated under the USACE FY2012 Civil Works Budget for this study.

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.

- A preliminary Alternative Formulation Briefing (AFB) Conference session was planned for March 17, 2011. Policy issues of concern to the AFB were discussed.
- USACE will use a series of vertical team meetings to complete the AFB. There is currently no completion date for the AFB but the schedule is not affected.

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 river mile 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 staff continue to work with RD-17 to ensure compliance with all EIP and Board permit conditions. RD-17 is preparing to install piezometers as required by DWR and CVFPB staff. DWR received the final Piezometer Work Plan on March 25, 2011 for final approval. There will be a three week bidding period, followed by piezometer installation. EIP received an updated Setback Levee Alternatives Report on March 23 and will move forward with that review in the following weeks.

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.

- Pre Construction Meeting for Vegetated Wave Buffer, Segment 2 was held on March 22, 2011 between TRLIA representative, River Partners, and DWR. The earliest tentative schedule for the planting is April 15, 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.

- The Section 104 credit approval is still pending from USACE. The Section 104 credit request must be approved prior to contract advertisement. TRLIA is concerned that if the approval is not received by April, the construction may be delayed and the levee may lose FEMA accreditation (No change as of March 29, 2011). EIP staff have spoken to the USACE Program staff about this issue and TRLIA has asked their Congressional Representative for assistance on this issue. Assistance was provided, but the issue is still unresolved.

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 closeout.
- SAFCA is working to complete their real estate contracts to allow for submittal of payments.

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 seepage, underseepage, and raise the levee. SAFCA plans to complete Phase 4A along the Sacramento River in 2011 and have USACE complete the remainder, estimated to occur in 2014.

- Construction continues on Phases 1B, 2A, and 2B, though at a greatly reduced "wet winter rate." SAFCA has re-bid SREL and the bids were slightly higher than the original bid. The preliminary winning bidder is Wood Brothers with a bid of $18,836,288.60.
- The Notice to Proceed is expected in April 2011.
- Staff continues to work on the review of invoices to make a reimbursement payment to SAFCA. The amount submitted to Finance for payment is equal to about $17.43 million which should allow SAFCA to finish construction through SREL 12A, the point at which USACE is expected to pick up construction. Also, Finance submitted a payment for an additional $3.5 million in real estate payments.

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.

- DWR is drafting a Decision Memo recommending funding of the CHP Academy and The Rivers projects construction costs.
- On January 7, 2011 and January 20, 2011, DWR met with WSAFCA to discuss the various setback alternatives in the Southport area.
- On February 1, 2011, WSAFCA met with DWR executives, Acting Deputy Director Stein Buer, and Division Chief, Gary Bardini to seek DWR's support in concurring with WSAFCA's selection of the setback-preferred alternative and requested DWR's support and collaboration in maximizing the State's cost-share.

- On February 7, 2011, DWR's EIP Section met with WSAFCA and discussed various cost-share options.
- DWR met with WSAFCA on March 23, 2011 to discuss early results of preliminary alternative screening analyses and to continue discussing the means and methods for integrating different DWR and WSAFCA funding sources.

USACE/CVFPB PROJECTS

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

American River Common Features Project

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

- The Mayhew project site is currently undergoing preparations for turnover to the local maintaining agency.
- Site R5 is to begin construction in the April 2011 construction season.
- The DWR Real Estate Branch is currently working on acquiring real estate certification from the State Lands Commission for the R5 staging area.

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 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.

- The Blasting Plan has been accepted and test blasting was scheduled to begin by the end of March, weather permitting.
- Brainstorming meetings have been held between all agencies involved to discuss construction schedule acceleration to attempt to complete the project sooner.

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 set to begin on May 1, 2011.
- Weekly environmental bird surveys are underway to account for nesting hawks along the Phase 1 Project Footprint.
- Phase 4 design is at 60 percent.
- The Phase 1A utilities issue involving relocation of a gas line and power pole owned by PG&E has been resolved through collaboration between USACE, MBK Engineers, DWR, CVFPB, Sprint, PG&E, and AT&T.

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

- USACE is scheduling a periodic inspection for Area 1 (RD-1500) to investigate several additional sites of concern outside of the original area authorized by the Mid-Valley Project. This inspection must be done before the Supplemental O&M Manual can be delivered.

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.

- USACE briefed the project status to the SAFCA Board of Directors on March 17, 2011 and received comments from the Board and the public regarding the remaining project schedule and dissatisfaction with perceived recent slow progress. The public concern was focused on FEMA mapping and flood insurance payments. The public is anxious to be removed from the flood plain, so they will no longer have to pay for flood insurance.
- Complications with right of way limitations, design considerations, and funding have all contributed to recent challenges in project efforts. Funding would be most concerning if designs are pursued that may potentially exceed the USACE 902 authorization limit.
- USACE, SAFCA, Sacramento County, City of Sacramento, and DWR met to discuss updated hydraulic modeling, which will be used to ensure no adverse impacts are made to downstream flow conditions related to design conditions at the start of the project. DWR will continue to work with federal and local partners on modeling requirements and standards.

West Sacramento Area Project, Slip Repair

- At the March 25, 2011 Board Meeting, CVFPB approved PCA Amendment 1, LPCA Amendment 2, and the USACE Schedule and Cost Change Request (SACCR), which addressed environmental issues and increased funding.
- DWR is processing a partial payment to USACE for the scheduled 2011 construction to keep the project moving forward and on schedule.

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, 2011. A total of 36 proposals were received. FCP staff members are making necessary preparations to begin evaluations of the proposals, and staff from other departments will be assisting with this process. In addition to DWR staff, the Project Evaluation Team includes members from the Department of Fish and Game, the Department of Conservation, and the California Emergency Management Agency. Onsite inspection of proposed project sites will take place in April.

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 are evaluating the current processes in an effort to improve program delivery.
- Staff are evaluating the State cost-share for Lower Mission Creek in Santa Barbara County.
- Three claims for $14.5 million were completed.
- Three new claims for $4.6 million were received this month.
- Four claims for $5.9 million are under review.
- Two audit payments for $7.9 million were processed.
- One claim for $4.6 million is in process of payment.
- 51 claims for $123 million are pending processing.

LOCAL LEVEE ASSISTANCE PROGRAM (LLAP)

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

- Contra Costa County's request for agreement amendment was approved and the documents are currently receiving management approval. The amendment will increase the overall grant amount and update the project work plan, schedule, and budget. The agreement term is also amended.
- Humboldt County requested a one year extension on the contract term and an update to the project's Work Plan. Amendment documents were approved and are in final stage of execution.
- The Del Norte County Amendment to extend the contract term was signed and executed.
- The Marin County Amendment to extend the contract term was signed and executed.
- All LLAP project information has uploaded to the FloodSAFE Bond Accountability website.
- City of Oroville requested execution of a grant agreement and submitted an updated project work plan. The agreement has been reviewed by both DWR's and the City's legal counsel. Four copies of the agreement were sent to the City for signature.

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 payment request to release $52,503.50 of the $650,000 approved local share funds directly to USACE for Sutter Basin Feasibility Study, on behalf of Sutter County.
- Amendment to extend the contract terms for YCWA Feasibility Study was executed by DWR. Staff confirmed with the Accounting Office that $9,666.91 of the approved invoices for this agreement remains unpaid. Following execution of the contract amendment, staff requested the Accounting Office and SCO release the remaining funds to allow closure of the contract. This is now pending action by DWR's Accounting Office.

PROGRAM SUPPORT

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

GRANT GUIDELINES

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

- LLAP conducted four workshops on the LLAP Draft Guidelines to solicit for public comment. A WebEx was also completed. Comments on the LLAP Draft Guidelines have been collected and are being reviewed. A Response to Comments is being prepared. The LLAP Draft Guidelines will be amended based on the efficacy of public comments received.
- A brochure advertizing the LLAP Draft Guidelines for public comment was developed and mailed to about 600 state entities. Information is now being collected on the effectiveness of the mailing and the correctness of entity contact information.
- LLAP web postings have been updated with current program information and a link to the WebEx presentation which was recorded this month.
- EIP staff and support staff are nearing completion of the review of the EIP applications submitted for review.

ENVIRONMENTAL SERVICES

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

- Activities are described under the individual project headings.

TECHNICAL ASSISTANCE

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

- A work group was formed to update the AB 1147 regulations based on changes in AB 1788 and is preparing a draft document based on the recent Cost Sharing Formulas. The Notice of Proposed Action, Form 400, Initial Statement of Reasons, and Express Terms compile the regulations packaged for submittal is the Office of Administrative Law. A decision memo and regulations package is undergoing management review. Form 399, Fiscal Impact Statement, is part of the regulations package and is under review by DWR economists.
- A Project Managers Group was created to develop an office standard template for project charters, QAQC Manuals, and other project management aids. The group has worked with and provided feedback to the Project Services Office (PSO) for the production of an Enterprise Process Guide. PSO staff has updated the standard charter for FPO and the charter is under management review for formal approval.
- Staff attended discussions and meetings with the Desk Reference Manual development team and coordinated with the consultant team (GEI and North Highland) to complete preparation of presentation material for the DFM Quarterly Office and Branch Chief meeting.
- The Flood Corridor Programs and Environmental Support Branch continued leading the effort to develop a Corridor Management Plan (CMP) for the Lower Feather River. Phase 1 has been completed and Phase 2 will begin soon, with a completion date of December 2011. Phase 2 deliverables are:
  - development of the project description for maintenance and restoration work to be permitted;
  - ongoing efforts to refine the permitting strategy;
  - development of hydraulic modeling tools and modeling of alternative scenarios for roughness patterns in the study area;
  - stakeholder outreach;
  - preparing the CMP;
  - and beginning efforts toward environmental document scoping.

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 2009-10
- DWR staff has completed 54 joint levee inspections and received DFG approval for 50 claims. Payments will be processed by staff as DFG approves the claims.
- Staff has received 61 final claims for the maintenance work totaling $13 million. To date, we have paid 49 reimbursements totaling $6.8 million.

Work Agreements for FY 2010-11
- DWR staff has mailed work agreements to 68 reclamation district and has received signed work agreements from 52 reclamation districts. An additional 5 work agreements since the March CVFPB meeting.
- The agreements will be finalized once signed by the Board's Executive Officer.

DELTA LEVEES SPECIAL FLOOD CONTROL PROJECTS
DWR initiates and manages project funding agreements in support of local agencies' levee rehabilitation, habitat, or other projects. DWR is executing agreements authorizing the work proposed under Project Solicitation Packages.
- No relevant significant changes since March 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	**27**
West Sacramento	**87**	W. Sac. Non-Project	**12**
Sacramento River	45	South Sac. Streams	**11**

Changes shown in bold.

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

NON-URBAN LEVEE EVALUATION (NULE)

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

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

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

- Overall, Non-Urban Levee Evaluations are 40% complete.
- No drilling activities occurred during the reporting period. However, field work will likely resume in April 2011.
- A revised draft Geotechnical Assessment Report was completed.

TECHNICAL REVIEW

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

- Technical reviews are currently being performed in RD 17, AR Common Features, and Sutter Butte Area Flood Control Agency. ULE staff participated in BOSC meetings during March for SBFCA.

TECHNICAL POLICY

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

- Interim Levee Design Criteria, Version 4, was completed and work on Version 5 commenced in March. Additional meetings are scheduled for med April.
- Vegetation management policies and research continues.

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

FUNCTIONAL AREA 6 FLOOD MANAGEMENT PLANNING AND CONSERVATION STRATEGY

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

CENTRAL VALLEY FLOOD MANAGEMENT PLANNING (CVFMP)

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

STATE PLAN OF FLOOD CONTROL (SPFC)

The SPFC includes two primary deliverables: (1) SPFC Descriptive Document and (2) Flood Control Systems Status Report (FCSSR). The SPFC Descriptive Document is an inventory and description of the State-federal flood protection system in the Central Valley. The 2010 SPFC Descriptive Document was released at the end of November 2010. The FCSSR describes a number of factors associated with current status of the SPFC and recommendations of future work activities. An Administrative Working Draft of the FCSSR was provided to the Corps of Engineers and operators and maintainers of the SPFC in January 2011 for an initial review. The FCSSR Project Delivery Team is coordinating with the various document reviewers to insure that the comments are understood in order for appropriate responses can be developed. Efforts are also underway to prepare the Public Review Draft FCSSR which is anticipated for release this summer.

CENTRAL VALLEY FLOOD PROTECTION PLAN (CVFPP)

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

Planning Activities

- Management actions developed in Phase 2 are being refined and assembled into several alternative approaches.
- From these alternative approaches, management actions that appear to best address the planning goals are being used as a basis for formulating a “State Preferred Approach.”
- Hydrologic and hydraulic baseline evaluations within the Sacramento and San Joaquin watersheds, SPFC levee stability assessments, economic flood damages, and a number of other technical evaluations are underway.
- An outline for the 2012 CVFPP document has been completed and work is progressing on preparing initial sections of the plan.

- Key policy level issues associated with implementation of the 2012 CVFPP have been defined and efforts are underway to describe potential solutions to these issues.
- Drafts of initial sections to the Programmatic Environmental Impact Report (PEIR) have been prepared and work is progressing on impact analysis of the alternative approaches and "State Preferred Approach."
- DWR will meet with the USACE on April 27 to review first draft of the Project Management Plan for the federal Central Valley Integrated Flood Management Study.

STATEWIDE INTEGRATED FLOOD MANAGEMENT PLANNING

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

No new information.

CONSERVATION STRATEGIES

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

VEGETATION ACCESSIBILITY AND VISIBILITY REPORT

Staff worked collaboratively with DFM, DFG and USFWS staff to assess levels of compliance and reasons for non-compliance according to the visibility and accessibility criteria defined in the California's Central Valley Flood System Improvement Framework. The majority (98.5%) of the State and federal levees were compliant with the interim criteria. A 2010 Summary of Compliance with the Interim Criteria Report was provided to DFM on March 7, 2011.

REGIONAL ADVANCED MITIGATION PLANNING (RAMP)

- The Statewide Framework, the first major work product of RAMP, is currently undergoing final edits with RAMP partner agencies. The report provides statewide context and organizational structure to the RAMP effort, and it identifies key planning components, regulatory issues, funding, and future guidance.

- A regional assessment for RAMP in the northern Sacramento pilot region is currently in preparation by the consultant team. DWR's RAMP lead has provided briefings to selected Regional Offices, DES, Regional Office Managers, and Regional Coordinators.

CORRIDOR MANAGEMENT PLANNING

- Staff continues collaboration with DFM to develop the Lower Feather River Corridor Management Plan. Recent activities include coordination and comments on task order development, key objectives, permitting strategies, funding and modeling efforts. Additional work includes refining linkages to the CVFS Conservation Strategy.

SCIENTIFIC AND PLANNING INFORMATION

- Staff continued development of reports which will provide baseline ecological information for the Conservation Strategy, CVFPP, and CEQA document preparation. Reports in development include: Biological Status and Trends Report, Fish Passage Barriers Assessment, and Habitat Conservation Objectives from Overlapping Plans Summary. Staff gathered information from regional experts to contribute to the Fish Passage Barriers Assessment. Internal drafts are under review for each of these reports.
- Habitat mapping: Work progresses toward completion of a medium-scale habitat map for the Central Valley. The map will provide a medium-scale, system-wide assessment of the distribution and acreage of riparian habitats within the CVFPP planning area.
- Fine-scale mapping: Staff is developing an agreement for a high-resolution riparian vegetation map which will provide additional detail for project-level planning.

FUNCTIONAL AREA 7 LEGISLATION, BUDGETS, AND COMMUNICATION

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

COMMUNICATION AND BRIEFING MATERIALS

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

No new information.

FUNDING ADVOCACY & AGENCIES' ALIGNMENT

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

In late March/early April, the Department of Water Resources met in Washington, DC with Congressional Members and staff as well as key staff from the Office of Governor Edmund G. Brown, the U.S. Army Corps of Engineers, the Office of Management and Budget, and the Council on Environmental Quality to discuss funding for critical State-Federal Flood Control Projects, the Department's legislative proposal for crediting and reimbursement as well as the Corps' vegetation policy. Central Valley Flood Protection Board President Ben Carter participated in this endeavor.

DWR's FloodSAFE Leadership will meet with USACE Leadership from the South Pacific Division and Sacramento District on April 27 to discuss DWR/USACE alignment on FloodSAFE technical 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.