

**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.

LOCAL MAINTAINING AGENCY ANNUAL REPORTING PROGRAM (CWC 9140-9141)

On December 30, staff submitted the DRAFT 2011 Local Maintaining Agency Annual Report to the Board. The report is administered by DWR as part of the California Water Code Section 9141 initiated in Assembly Bill 156 in 2007. According to the code, the local maintaining agencies (LMAs) within the central valley are obligated to provide a status report on their levee maintenance practices to DWR by September 30 of each year and DWR is required to summarize the information and package it for the Board by December 30 of each year. In 2011, DWR received a 90% response from a total of 89 agencies which is the highest in four years. Approximately 55% of responding LMAs used the DWR developed electronic web application and 45% used hard copy formats to submit the information. Also this year, staff thrived to reduce the size of the report significantly to support the Department's environmental sustainability initiative without compromising the quality of important submitted information.

Staff is currently working on to deliver the final report to the Board and LMAs in February. A CD will be mailed to the Board and LMAs with the final product. The report will also be made available to the DWR and Board website.

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.

SNOWMELT & SEASONAL VOLUME RUNOFF FORECASTING

The progress on the PRMS modeling efforts for the Feather River has continued. The update of the existing model is showing promising results and more sub-watersheds are being added routinely in a cooperative effort with PG&E. The cooperation with PG&E is vital to the success of this model since they own several power facilities in the North Fork of the Feather River and have important operational data necessary for reconstructing full natural flow values to calibrate the model.

Progress on the Yuba and Merced models slowed down because the main contact with the USGS (who is developing these models for us) suffered a serious injury and has been sidelined for a few months. Her health is improving and she has resumed part time work on the models.

All PRMS teams will be meeting on February 10 to set deadlines, identify staffing needs, and clarify deliverables. We'll also engage partners in the Kings, Tuolumne, and Shasta drainages about expanding the PRMS model development into their watersheds.

SNOW SURVEYS AND SNOW COURSE MAINTENANCE

As of February 9, 2012, the regional snow pack conditions as reported by the remote snow sensors are as follows:

Northern Sierra - 7" of SWC for 25% of April 1 Avg. and 35% to date

Central Sierra - 6" of SWC for 20% of April 1 Avg. and 28% to date

Southern Sierra - 6" of SWC for 23% of April 1 Avg. and 34% to date

Statewide - 6" of SWC for 22% of April 1 Avg. and 31% to date

The fall and early winter have been characterized by anomalously dry conditions. To better demonstrate how dry it has been, consider the following. On November 20, 2011, the automatic snow sensors showed 2 inches of snow water content statewide. That value remained unchanged until January 21, 2012 when a good winter storm pushed into California and added 4 additional inches of snow water content over a couple of days. Historically, the December through February period is the Sierra Nevada's wettest period; on average accounting for about half of the expected water year's precipitation. This year, the state went through a full 61 days of this period before any appreciable water content was added to the statewide snow pack.

The second round of snow surveys for this season was conducted on or around February 1, 2012. For the stations along Highway 50 near Echo Summit the manual readings were as follows:

Location	Elevation	Snow Depth	Water Content	% of Average
Alpha	7600'	14.8"	3.6"	17
Phillips Station	6800'	15.6"	3.8"	19
Lyons Creek	6700'	21.8"	5.8"	30
Tamarack Flat	6500'	15.2"	4.8"	25

Statewide, the measurements from the snow courses around February 1 revealed comparable snow pack conditions. Measurements in the Sacramento River Valley watersheds recorded a snow pack that is 28 percent of the historical February 1 average. Measurements in the San Joaquin Valley watersheds indicated a snow pack that is 31 percent of the February 1 average while the snow pack for the Tulare Lake region was 47 percent of the February 1 average. Statewide the snow pack was measured at 35 percent of the February 1 average and 22 percent of the historical April 1 average.

The next snow course measurements will occur during a 10-day window surrounding March 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 extreme dry conditions have brought a lot of media attention and a lot of question from cooperating agencies. During the month Snow Surveys staff alone responded to over one dozen media requests. Many of the calls focused on a historical perspective for how dry it has been and if we have enough reservoir storage to endure the dry spell. Many news agencies are starting to ask if we are in a drought. Other calls were handled by other Hydrology Branch staff.

BULLETIN 120 AND WATER SUPPLY INDEX FORECASTS

From the February 1, 2012 Bulletin 120, the projected median April-July runoff in the major Sierra river basins ranges from 32 percent on the Cosumnes River to 79 percent on the McCloud River.

Forecasted median Water Year runoff ranges from 31 percent for the Cosumnes River to 66 percent on the Kern River.

This WSI forecast can be summarized as follows:

Sacramento River Unimpaired Runoff Water Year Forecast

9.4 MAF, (50 percent exceedance), (51 percent of normal)

Sacramento Valley Index (SVI)

6.0, (50 percent exceedance), (Dry)

San Joaquin Valley Index (SJI)

2.0, (75 percent exceedance), (Critical)

The SVI has fallen into the 'Dry' water year classification as it has decreased from 6.9 to 6.0 since the January 1, 2012 WSI. The SJI remained the same.

In a stark contrast from water year 2011, water year 2012 has gotten off to an extremely dry start drawing comparisons to some of the driest years in our historical records. As such, the April-July runoff forecasts are below average for all the basins in the Bulletin 120. Of the 25 basins where April-July runoff forecasts are produced, nine are at or below 50 percent of their 50-year average, while only three are above 70 percent (the McCloud, Pit, and Inflow to Shasta).

As a result of the dry start to 2012, unimpaired flows for the month of January remained well below average for all major Central Valley Rivers, continuing the trend from the end of 2011. Monthly inflow ranged from as low as 15 percent on the Cosumnes River to 72 percent on the Kern River at Isabella.

A Bulletin 120 Update for conditions on February 14, 2012 will be available Thursday, February 16. The March 1, 2012 Bulletin 120 forecast will be available on March 8, 2012.

The current 6-10 day weather outlook does include some precipitation, but not at a pace to meet median conditions. If less than average precipitation and snow are accumulated over the next week, then the February 16 Bulletin 120 update will likely show even lower April-July runoff forecast values.

Likewise, if the dry trend continues throughout February, as the current longer term weather and climate models indicate, the March 1 Bulletin 120 and WSI forecasts are expected to continue to drop.

WATER CONDITIONS

As of January 31, statewide hydrologic conditions were as follows: precipitation, 60 percent of average to date; runoff, 40 percent of average to date; snow water equivalent, 35 percent of average for the date (20 percent of the April 1 average); and reservoir storage, 110 percent of average for the date. Sacramento River Region unimpaired runoff observed through January 31, 2012 was about 2.3 million acre-feet (MAF), which is about 41 percent of average. For comparison, on January 31, 2011, the observed Sacramento River Region unimpaired runoff through that date was about 6.2 MAF, or about 108 percent of average.

Precipitation in January, for most regions of California, was below normal. On January 31, the Northern Sierra 8-Station Precipitation Index Water Year total was 14.5 inches, which is about 54 percent of the seasonal average to date and 29 percent of an average water year (50.0 inches). During January, the total precipitation for the 8-Stations was 7.6 inches, which is about 84 percent of the monthly average. Last year on January 31, the seasonal total for the 8-Stations was 33.9 inches, or about 127 percent of average for the date.

On January 31, the San Joaquin 5-Station Precipitation Index Water Year total was 10.1 inches, which is about 49 percent of the seasonal average to date and 25 percent of an average water year (40.8 inches). During January, the total precipitation for the 5-Stations was 6.1 inches, which is about 80 percent of the monthly average. Last year on January 31, the seasonal total for the 5-Stations to date was 35.0 inches, or about 170 percent of average for the date.

Selected Cities Precipitation Accumulation as of 01/31/2012 (National Weather Service Water Year: July through June)					
City	Jul 1 to Date 2011 - 2012 (in inches)	% Avg	Jul 1 to Date 2010 - 2011 (in inches)	% Avg	% Avg "Water Year" Jul 1 to Jun 30 2011- 2012
Eureka	18.34	78	22.84	97	45
Redding	12.12	61	17.51	89	35
Sacramento	4.78	47	11.06	108	26
San Francisco	6.05	44	13.23	97	26
Fresno	2.95	50	9.87	169	26
Bakersfield	1.75	54	7.65	236	27
Los Angeles	4.19	62	11.79	175	33
San Diego	4.97	94	8.41	159	48

Key Reservoir Storage (1,000 AF) as of 01/31/2012								
Reservoir	River	Storage	Avg Storage	% Average	Capacity	% Capacity	Flood Control Encroachment	Total Space Available
Trinity Lake	Trinity	1,956	1,763	111	2,448	80	---	492
Shasta Lake	Sacramento	3,107	3,133	99	4,552	68	-721	1,445
Lake Oroville	Feather	2,545	2,384	107	3,538	72	-552	993
New Bullards Bar Res	Yuba	649	581	112	966	67	-147	317
Folsom Lake	American	413	516	80	977	42	-164	564
New Melones Res	Stanislaus	1,972	1,392	142	2,420	82	2	448
Don Pedro Res	Tuolumne	1,526	1,385	110	2,030	75	-164	504
Lake McClure	Merced	662	500	132	1,025	65	-12	363
Millerton Lake	San Joaquin	317	340	93	520	61	-100	203
Pine Flat Res	Kings	584	478	122	1,000	58	-46	416
Isabella	Kern	171	169	101	568	30	1	397
San Luis Res	(Offstream)	1,938	1,626	119	2,039	95	---	101

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

HYDRO-CLIMATE ANALYSES

Work continues on the University of California Task Orders for studies supporting climate change hydrology effort. Quarterly meetings with the principal investigators have been held or identified and progress reports obtained. Projects are on track and meeting expectations to date. Two-page summaries of projects and products will be developed in the near future.

The Central Valley Flood Protection Plan (CVFPP) Climate Change Technical Work Group is developing a document to detail how the different climate change hydrology studies will feed information to the Threshold Analysis Approach developed for the Central Valley Flood Protection Plan. The document will also outline additional studies needed to complete a full analysis for the CVFPP 2017 update.

REAL-TIME DATA COLLECTION NETWORK

Snow level radar and soil moisture monitoring equipment have been installed and communications are being connected. Components for the wind profilers have been ordered after a delay due to a legal challenge in the bidding portion of the effort. The challenge has been resolved but delayed the purchase process. The California Nevada River Forecast Center has developed a routine to pull the snow level radar and total column water vapor from the National Weather Service Data Feed MADIS. Efforts are now underway to coordinate moving the data into CDEC. The appropriate codes to transfer the soil moisture and temperature data have been identified and efforts are underway to move that data into CDEC as well. Coordination with NOAA's Earth Systems Research Lab and Scripps Institute of Oceanography continue.

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.

No new information.

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

Flood Fight Training

On-going training continues with several classes scheduled for February and March. Recent January training included Cal Fire and the California Conservation Corps, Butte County, City of Modesto, and the US Bureau of Reclamation staff in Folsom.

Basic Incident Command System Training

Basic Incident Command System training is a requirement of all Department staff to prepare and aid in the Department's flood emergency response. The Flood Operation Center has taken on the responsibility of providing the training of all DWR staff. Basic ICS training includes FEMA IS-100 (introduction to Incident Command Systems), FEMA IS-200 (ICS for single resources and initial action incidents), IS-700 (introduction to national incident management systems (NIMS), and Intro to SEMS. Class frequency has increase to bi-monthly until we decrease the backlog of DWR certified and qualified emergency responders.

Communications Exercise

On January 24-25, 2012, Incident Command Team Two (ICT2) met at the South Central Region Office (SCRO) in Fresno to conduct a team meeting and communications drill with an ECCT. The meeting discussed how to develop the context for functional ICT work groups that develop DWR specific flood emergency training for the Flood Operations Center and the field Incident Command Teams. The identified work groups are: Command, Operations, Plans, Logistics, Finance, Communications, Environmental Compliance and Safety. The team identified concepts and context for future section working groups.

The ICT2 Communications Drill was conducted by deployment of Emergency Communication Command Trailer #1 (ECCT) to Eastman Lake to conduct a demonstration/drill for Corps of Engineers staff and a local Boy Scout troop (who were also taught an abbreviated version of DWR's Flood Fight Methods training course). The satellite communications capabilities of the trailer were demonstrated to several groups and the Boy Scout troop was afforded the opportunity to learn and use proper radio procedures using the ICT-2 handheld radio cache in car-to-car mode. Next, the ECCT was moved to the SCRO office and on Tuesday, January 24th, ICT-2 conducted a team communications drill. Team members participated in a 1 hour class room discussion of the trailer and the equipment within the trailer and then took turns in the trailer operating and communicating with the VHF radios, the BGAN satellite phones, and the Iridium satellite phones. The ability to VPN to DWR's network through the ECCT was demonstrated as was the startup and shutdown procedures for the ECCT. Participants also were briefed on the various physical idiosyncrasies of ECCT#1 and the management of the trailer. Suggestions for improved equipment and operational procedures were identified in the after-action and improvement plan report.

OUTREACH

Grant applications were due mid-January for the Delta Communications Equipment Flood Emergency Response grant (directed expenditure). Two valid applications were received. Draft funding recommendations are currently being reviewed by Executive. The total amount of available funding is \$5 million with no local match and is limited geographically to the legal Delta. Awards can be expected this spring.

The FOC continues working on the grant guidelines for the Local Flood Emergency Response Projects grant. The goal of this grant program is to improve the effectiveness of, and reduce the time required for, emergency response by local agencies. The total amount of funding available in this round is \$5 million. There is no local match required for this competitive grant. We anticipate the guidelines for the grant to be finalized in early 2012.

FOC staff is attending monthly meetings with the Delta Levees Habitat Advisory Committee to facilitate additional communication.

FLOOD SYSTEM ANALYSIS SECTION (FSAS)

The Flood System Analysis Section continues working on the development of a pre-season flood system vulnerability assessment tool that will utilize existing data being collected throughout DWR to identify weak, deficient, or vulnerable reaches of levees and establish a consolidated reference to detailed information describing the vulnerability. Current efforts are focused on qualifying data sources for inclusion in the assessment. FSAS continues updating the Levee Distress Database by assembling data from within the Hydrology and Flood Operations Office (levee inspections, erosion survey, etc). The FSAS continues collecting and cataloging flood control system as-built plans for quick access during emergency operations. FSAS has been supporting the Statewide Flood Management Planning Program by providing assistance with Information Gathering, technical review of the Exposure to Flood Hazard attachment, and project development team participation.

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:

- Completed calibration and verification of rainfall-runoff models for un-gauged watersheds. Watershed analyses are complete or underway, depending on basin in question.
- Continued internal coordination with USACE.
- Continued unregulated flow period of record simulations for development of unregulated time series.

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.

- Bear River – mowed (55 acres) and is ongoing.
- Colusa Weir – hand cleared 15 acres and is complete.
- MA3 (Feather) – hand cleared 2.5 miles and is ongoing.
- MA5 (Butte Creek) – hand cleared 15 acres and is ongoing.
- MA13 (Cherokee Canal) – hand cleared 20 acres and is ongoing.
- Cache Creek Settling Basin – Cleared 14 acres of debris and is ongoing.
- Debris removal along 50 miles of drainage ditches is ongoing.
- Removal of beaver dams along 50 miles of channels is ongoing.

FLOOD FACILITIES OPERATION AND MAINTENANCE

DWR operates, maintains, and repairs or replaces flood control structures located throughout the Sacramento River Flood Protection Project to ensure readiness in the event of emergencies and that facilities function as designed. Actions include inspection and evaluation, routine operation and maintenance, and non-routine maintenance. Facilities include pumping plants that transfer runoff and excess water from the land-side of levees in the flood system to flood channels; bridges providing access over and to flood facilities; flow gages; and water control structures such as weirs.

- The Sutter Bypass Pumping Plant Rehabilitation Project is currently under construction. Control buildings are being completed and tested at the manufacturer's facility prior to delivery. All pumping operations at the plants will continue using the temporary generators furnished by the contractor. The pumps and generators are being operated by Sutter Maintenance Yard personnel.

- The notice to begin work was provided to Disney Construction on January 24, 2012 for the rehabilitation of the Knights Landing Outfall Gates. Construction is expected to begin March 1, 2012 and be complete by October 31, 2012.
- Design has started for the Butte Slough Outfall Gates rehabilitation project.

LEEVE MAINTENANCE

This element maintains levees and roads under DWR jurisdiction (State-maintained Maintenance Areas and bypasses) in accordance with USACE Operations and Maintenance Manuals. Annually, after high water recedes, levees are evaluated and repairs are made as necessary. Routine and extraordinary maintenance are also performed as necessary to meet maintenance assurances provided to the federal government.

- Rodent Program (poison, trapping, grouting) for all areas in Sutter Yard and Sacramento Yard jurisdiction are ongoing.
- Tree trimming is 25% complete on Cache Creek (3 miles) and 50% complete on MA9 (2.5 miles).
- MA9 known erosion site protected with plastic for flood season.
- Vegetation control using spraying and CDF crews is 100% complete for east levee Sutter Bypass (26 miles), MA16 (4 miles), MA7 (12 miles), MA1 (16 miles), east levee Sacramento River (22 miles), MA12 (11 miles), Moulton Weir levees (2 miles), and Colusa Weir levees (4 miles).

ENVIRONMENTAL INITIATIVES

DWR is responsible for planning projects in a way that avoids or minimizes environmental impacts, and for obtaining state and federal environmental permits and clearances for projects within the Operations and Maintenance Functional Area. Environmental Initiatives touches all aspects of this functional area and therefore is considered a close partner to the other maintenance elements and their activities. As such, it should be considered a part of each of the other major elements rather than a stand-alone element. Also, with DWR's established open collaborative process, various local, state, and federal agencies examine issues and develop integrated solutions to the complex environmental compliance requirements and resource opportunities as flood control maintenance activities are undertaken. Components include developing and managing environmental programs, and managing mitigation requirements for lands and habitats developed or acquired by the Department to mitigate for flood management maintenance and improvement projects.

- The environmental assessments and clearances (i.e., cultural, CEQA, etc.) for the collection of geotechnical data needed for the preliminary design of the Butte Slough Outfall Gates Rehabilitation Project began on February 7, 2012.

LEVEE REPAIRS

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

- **Cache Creek LM 3.9L & 4.2L setback levee projects – SRBPP**
Design is complete, finalizing 408 application, working with PG&E to relocate power poles. Construction is scheduled for 2012.
- **Cache Creek LM 2.8L & 3.4L setback levee projects – SRBPP**
Design is complete, finalizing 408 application, DWR Real Estate Branch is working on right-of-way needs. Construction is scheduled for 2013/2014.
- **San Joaquin River RM 71.5R – LSP**
Rock Slope Protection (RSP) was placed along the 2,000-foot repair for the 2011-2012 flood season. Additional construction for the bench and other environmental mitigations will occur in 2012.

FUNCTIONAL AREA 3 FLOODPLAIN RISK MANAGEMENT

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

FLOODPLAIN MANAGEMENT TECHNICAL SUPPORT

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

- The newest version of the California Levee Database (CLD) Version (v3.0 R1) was released in January 2012 and is now available for use at DWR's California Data Exchange Center (CDEC).
- DWR's GIS workgroup has been informed of the release of the new version of CLD. The release notes that describe the updates, changes, and improvements to the CLD (since the previous release) can be obtained from Nickolas Perez at nmperez@water.ca.gov of CDEC or Senarath Ekanayake sekanaya@water.ca.gov of FRMB.
- FRMB staff are providing quality control (QC) review of the International Building Codes (I-Codes), soon to be followed up with a QC review of the California Building Codes, against the National Flood Insurance Program (NFIP) regulations to ensure that NFIP communities in California are fully compliant.
- Staff participated in FEMA Region IX annual Community Assistance Program meeting that included representatives from Hawaii, Nevada, and Arizona. Staff made 4 presentations at the 2-day meeting.
- Staff participated in the Southern California CRS Users Group meeting on February 7th. Issues raised included: (1) concern that per credit point costs for outreach activities will increase significantly under the new manual, and (2) whether an appendix to the 2012 CRS Coordinator's Manual will need to be made if FEMA's mapping procedures change for regions behind non-accredited levees (e.g., Zone D). The Users Group also recommended that DWR develop a CRS training class for building officials.

STATEWIDE FLOODPLAIN EVALUATION AND DELINEATION

Floodplain Evaluation and Delineation works to estimate the frequency, depth, and limits of potential flooding throughout the state providing building blocks in terms of floodplain assessments, standards, methodologies, tools, and analyses supporting multiple applications including FloodSAFE programs and projects and FEMA's National Flood Insurance Program.

Staff will meet with Ventura County to discuss their participation in the Alluvial Fan Floodplain Evaluation and Delineation pilot study.

CENTRAL VALLEY FLOODPLAIN EVALUATION AND DELINEATION

Floodplain Evaluation and Delineation works to estimate the frequency, depth, and limits of potential flooding in the Central Valley by providing building blocks in terms of floodplain assessments, standards, methodologies, tools, and analyses supporting multiple applications including FloodSAFE programs and projects and FEMA's National Flood Insurance Program.

Floodplain Evaluation Branch staff, in conjunction with CVFED, continue processing data requests for LiDAR and Aerial Imagery data, which adds up to approximately 390 gigabytes and covers a land area of about 712 square miles. Floodplain Evaluation Branch staff, in conjunction with CVFED, delivered on January 31, 2012, the first of a series of four calibrated HEC-RAS models to the USACE for its use in screening study areas for the Lower San Joaquin River Feasibility Study.

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 FRN team continues to develop the 2012 Flood Risk Notice.

FLOOD RISK PLANNING

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

- Plans are underway to reconvene the Urban Level of Flood Protection Working Group late February/early March to review final revisions to the Criteria for Demonstrating Urban Level of Flood Protection (ULOP) document as well as plans to prepare a public draft document. The Board is scheduled to adopt the Central Valley Flood Protection Plan (CVFPP) in June 2012 and Attachment 3 of the CVFPP incorporates the Criteria document by reference into the CVFPP. DWR is committed to providing the Board with a public draft document in mid-March, to provide the Board with adequate time to review the document before taking action on the CVFPP in June.
- On January 31st, FPM Branch staff participated in the DWR sponsored Climate Change, Extreme Weather, and Southern California Floods Workshop held in Alhambra, CA. The workshop focused on climate change impacts on Southern California floods and FPM staff presented Alluvial Fan Task Force Findings and Recommendations relative to the Alluvial Fan Floodplain Evaluation and Delineation project.
- On February 14, staff will be presenting at a second DWR sponsored Climate Change-Extreme Events workshop in West Sacramento.

FUNCTIONAL AREA 4 FLOOD PROJECTS & GRANTS

Flood Protection Projects and Grants are responsible for the State's input to project selection and funding. The program is responsible for the majority of physical improvements to the flood management system and provides grant money in the Delta and Statewide. Flood Protection Projects and Projects Grants has been a long-standing DWR base program and is expected to continue indefinitely into the future due to the ongoing need for system improvements and the long-lead time to implement federal flood control projects. The work is based on the acknowledgement that the State will continue to be a significant partner in viable flood management projects in the Central Valley, Delta, and Statewide.

CENTRAL VALLEY FLOOD PROJECTS

This element is responsible for the review of flood projects and cost-sharing on federal feasibility studies. It contains three components: Feasibility Studies, Early Implementation Program (EIP) Projects, and Flood Control Projects.

USACE/CVFPB STUDIES SECTION

The State participates and provides cost-share for feasibility studies with USACE and local partners. Several studies are underway and new ones are expected in the near future.

American River Common Features GRR

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

- USACE is preparing a draft existing conditions report for the Scoping Meeting. The scoping meeting is anticipated for Mid February.

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.

- DWR's Legal Counsel has concurred with the provisional language for the draft Feasibility Cost Sharing Agreement (FCSA). A date has not been established to bring the FCSA before the Board.

Lower San Joaquin River Feasibility Study

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

- USACE has agreed to use existing available geotechnical, hydraulic, and economic data to complete the preliminary screening of alternatives for this project. This decision will allow the PDT to meet the goal of completing the screening by June 2012.
- The non-federal sponsors are working with USACE to amend the Feasibility Cost Share Agreement (FCSA) to allow In Kind Contributions (IKC) and cash payments to be accelerated to USACE up to the cost share per the FCSA. This allows the Study to move forward should USACE receive no funding in the President's budget. Once the amendment language is agreed upon by all sponsors, the amendment will be presented to the Board.
- On November 30, 2011 DWR issued the Notice to Proceed for additional geotechnical work including mapping, data gathering and field investigations in support of the preliminary screening process.

Merced County Streams Project-Bear Creek GRR

This project's purpose is to evaluate options to increase the level of flood protection from a 50-year event to 200-year event for the Merced Urban Area.

- No new information.

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 and the Board Staff continue to complete the closeout process of the Continuous Authority Project (CAP) for Rock Creek. USACE is in the process of providing tasks completed during the life of the project in order to process the final accounting documentation.

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.

- No new information.

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.

- On November 30, 2011, USACE conducted the In Progress Review (IPR) #3. The purpose of this review was to present the USACE Vertical Team with the Recommendation of Final Array of Alternatives. The Array resulted from the Value Engineering Charrette which was completed on November 4, 2011. These activities are a continuation of the USACE National Pilot Program.

- On December 21, 2011, DWR and Sutter Butte Flood Control Agency (SBFCA) met with USACE to discuss the increase in study cost and status of Feasibility Cost Sharing Agreement (FCSA) Amendment #2 to the FCSA and the Project Management Plan (PMP). DWR and SBFCA requested an accounting of the cost increase; USACE is revising the PMP which will show how project costs have increased.

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.

- Amendment No. 2 to the Feasibility Cost Sharing Agreement (FCSA) is being processed. This amendment will allow the non-federal sponsors to increase the study costs from \$5.7M to \$10M and allow In Kind Contributions (IKC) and cash payments to be accelerated up to the cost share per the FCSA. This acceleration of funds allows the Study to move forward should USACE receive no funding in the President's budget.

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 preparing for the Alternative formulation meeting, a major USACE milestone in the feasibility process. USACE is producing a draft report which will be presented at the Alternative formulation meeting. The alternative formulation briefing is anticipated for April 16, 2012.

White River/Deer Creek Feasibility Study

This study will generate an EIS/EIR and feasibility study to evaluate federal, State, and local interests in planning, designing, mitigating, and improving existing levee system of White River and Deer Creek in Tulare County.

- DWR's Legal Counsel has concurred with the provision language for the draft Feasibility Cost Sharing Agreement (FCSA). A date has not been established to bring the FCSA before the Board.

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.

- DWR's Legal Counsel has concurred with the provisional language for the draft Feasibility Cost Sharing Agreement (FCSA) that will allow the Nonfederal Sponsors to advance fund contributions, payments, ahead of USACE to the cost share outlined in the FCSA. This allows the Study to move forward should USACE receive no funding in the President's budget.

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.

- DWR is preparing the Nonfederal Sponsor's preference document to pursue the National Economic Development Plan for the GRR instead of the Locally Preferred Plan; this will result in a loss of potential credit. This decision will be brought before the Board in the January 26, 2012 Board meeting.

EARLY IMPLEMENTATION PROGRAM (EIP) PROJECTS

EIP includes projects that are ready to proceed in advance of the CVFPP. An element of approval for these projects ensures that they do not eliminate opportunities or prejudice the flood risk reduction alternatives that would provide regional or system wide benefits.

Levee District 1 - Setback Levee at Starbend Feather River (LD-1)

Levee District 1 constructed a 3,400 foot long setback levee at Star Bend near RM 18.0 on the right bank of the Feather River.

- No change since last month. DWR staff is waiting for LD-1 to provide closeout documents to begin the closeout process.

Reclamation District 17 - 100-Year Seepage Area Project (RD-17)

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

- RD-17 presented their plans for 60% design in mid January.
- DWR is currently awaiting further results from the piezometers installed in June of 2011 to verify proper construction.

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

The Feather River Levee Improvement Project (FRLIP) will offer 200-year flood event protection for both Highways 65 and 70. FRLIP will lower water surface elevations by 1.5 feet along the Feather River and the lower Yuba River benefiting the communities of Olivehurst, Linda, Plumas Lake, Marysville, and Yuba City. This project includes one of the largest setback levees west of the Mississippi River and creates 1600 acres for site mitigation, agricultural use and habitat.

- Construction of the Vegetated Wave Buffer, Segment 2, is now complete and a post construction job-walk will be scheduled for February 2012.
- The Board has required TRLIA to remove all existing asbestos concrete piping left in the floodway within the setback area and all PVC irrigation lines within 100 feet from the water side toe of the setback levee as well as removing visible PVC risers. This work is now 100 percent complete. A post construction job-walk will be scheduled for February 2012.
- Permit No. 18690 to install chain link fencing, K-rails, and a maintenance road within the Sacramento San Joaquin Drainage District Right-of-Way, parallel to and on the landside of the Feather River east (left) bank levee and Yuba South Levee. (Yuba County) was heard at the January Board meeting. Due to late notification of one of the lot owners, the CVFPB rescheduled one of the hearings

to a special Board meeting that will take place in Marysville sometime in early March 2012.

- Additionally, several parcel owners complained about a drainage problem between the affected parcels and the levee. This issue will also be heard at the same Board meeting.

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

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

- Construction work is about 90 percent complete. CVFPB has approved a time extension request, for winterization work to be performed during in the flood season, to February 29, 2012. Gate and pipe fence installation continues.
- Minor erosion levee embankment areas have occurred following the latest storm and contractors are in the process of repairing the damaged locations.
- Amendment 1 to extend the Funding Agreement time to September 2013 has been executed by DGS on January 25, 2012.

Sacramento Area Flood Control Agency - Natomas Cross Canal (SAFCA-NCC)

This project, part of the Natomas Levee Improvement Program, would improve the level of flood control protection to the Natomas Basin by providing at least 200-year level of flood protection. This is accomplished by installing cutoff walls to prevent seepage, underseepage, and raise the levee.

- SAFCA has submitted the NCC Project Completion Report, dated May 9, 2011, which was received on June 24, 2011. EIP has processed a 10% retention payment for Phases 1/1B in the amount of \$404,991.49. A CVFPB reviewer has requested a permeability test on Phases 1/1B that will be coordinated with CVFPB staff. SAFCA has submitted a closeout request for the remainder of NCC 2, an amount of approximately \$2.23 million.

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

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

- Construction is currently underway on Elements 10 to 12A (I5 to Powerline Rd). Sukut Construction has completed approximately 90% of the demolition and 50% of the total construction (total contract amount - \$19.2 million). SUKUT has filed a claim with SAFCA for approximately an additional \$6 million which is going to be settled by negotiations between the SAFCA and Sukut attorneys. DWR is not a party to these negotiations but we have asked for a detailed explanation of the settlement.

- Construction is continuing by Nordic Construction on Elements 6B to 9A (Teal Bend to I5) and is approximately 90 percent complete. Nordic has recently been issued two Notice of Violations (NOVs) by the CVFP Board for unacceptable work. SAFCA is working with Nordic, the Board, and EIP staff to resolve the NOVs quickly. EIP Program staff notified SAFCA that no payments will be made for this portion of the work until the work has been completed to the satisfaction of the Board (in compliance with the plans and specs).
- SAFCA is in discussions with EIP staff and management for an increase in the Funding Agreement amount of \$193,270,000 by an additional amount not to exceed 10 percent. This increase is due to increased project costs. A Decision Memo has been drafted and is under review.
- EIP has processed a payment to SAFCA of approximately \$11 Million for work completed.

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

The CHP Academy, the Rivers and the I-Street Bridge projects are part of the North Area Plan and 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. All major construction is complete at the rivers and CHP Academy. Contractors continued working on completing punch list items.

- Amendment 1 to extend the Funding Agreement time to September 2013 and increased the design cost by \$14.3 million was approved by DGS on January 26, 2012.
- A final construction walk to inspect all contractors' completed punch list items is scheduled to take place on February 2, 2012.

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

The Feather River West Levee Project will repair approximately 35 miles of levee along the west bank of the Feather River from Thermalito Afterbay to near Star Bend.

- The Design Funding Agreement is at the Department of General Services awaiting execution.
- Design for the SBFCA project is projected to be at 65% complete in March of 2012.

USACE/CVFPB PROJECTS

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

American River Common Features Project

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

- Construction of two sites, Site R5 and Mayhew Staging Area Revegetation/Erosion Site Repair, are complete.

- DWR Real Estate is currently negotiating with Sacramento County and City for a programmatic approach to permanent and temporary easements for future Phase 2 and Phase 3 projects including Site L5A, L9A, R9, R10, L13 and NEMDC. Real estate acquisition request for Site L5A received by State real estate.
- USACE is currently in negotiation with WAPA to de-energize powerlines along FY12 site R6 during FY 13 construction season.
- Howe Ave Site and R6 are on track for construction in 2012 with no extra permanent real estate acquisitions needed.

American River Watershed – Natomas Features Project

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

- Staff completed this aged project review and concluded there are funds available to pay \$496,000 in outstanding State-share obligations to SAFCA.
- Requested re-appropriation of \$3.74 million in general funds for reimbursement to SAFCA of approximately \$3.7 million remaining in state-share obligations.
- Initiated paperwork to amend via CVFPB the Local Project Cooperation Agreement with SAFCA for authority to reimburse SAFCA \$3.7 million in additional state-share obligations.

Folsom Dam Raise and Bridge Element

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

- The Folsom Dam Raise PDT is currently developing optimal construction plans to make best use of projected Congressional authorization and funding.
- A Project Partnership Agreement (PPA) is scheduled for discussion and execution in 2014 for the dam raise portion of the project. The Temperature Control Shutters design is 35% complete and will be put on hold. The focus is shifted to updating the three existing emergency spillway gates.

Folsom Dam Modifications (Joint Federal Project)

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

- The estimated completion for the JFP is October 2017.
- An OMG partnering session for charter update and executive leader partnering took place 17-18 January to develop the interagency collaboration.
- **Construction**
Control Structure excavation of over 245,000 CY is 78% complete, 117,000 yards of loose rock stockpiled. Rock crushing operations moved to Mormon island Auxiliary Dam.
- **Real Estate**
Folsom Prison land lease is being processed with DGS, DWR and DCR. Lease signing is scheduled for March 2012.

- **Operations Study**
Formulation Strategy Group meetings are on-going to evaluate the feasible alternatives for operations. A value engineering workshop will be performed in March to provide screened alternatives and guidance to the Corps to perform hydraulic modeling.
- **Design**
Chute and Stilling Basin design is 65% complete. Design is approximately one month ahead of schedule. Approach Channel design 35% review scheduled for February 2012.
- **Federal Air Quality Standards**
Updated calculations of projected air emissions for the Approach Channel work indicate that it will exceed the federal de minimums standard of the Clean Air Act each year. Current outlook of mitigation without extending the schedule is positive.
- **FY12 Funding**
The Corps capability predictions for FY12 are \$28M and the President's Budget is \$21M. Project Cooperation Agreement Amendment No. 3, allowing partner acceleration of funds, was approved by the Central Valley Flood Protection Board on December 2nd. The amendment is being signed by all partnering agencies.

Marysville Ring Levee Improvement Project

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

- Phase 1 levee is now shut down for 2011. Reconstruction activities will be resumed in the summer 2012 following Phase 1 test panel procedures. USACE Levee Safety finalizing testing procedure to evaluate installed soil cement bentonite wall (SCB) for continuity, verticality and homogeneity. Wall evaluation scheduled for December 2011 with final wall evaluation results released in March, 2012. Phase 2B geotechnical investigation underway by Fugro and HDR for Phases 2B and 4.
- Local Partners and Board staff are currently in negotiation with USACE to resolve the denial of Section 103 Deferral extension and Section 104 credit denial.

Mid-Valley Area Levee Reconstruction Project

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

- DWR Real Estate is working with PG&E on cost estimates for utility relocation.
- The turnover letter for the O&M supplemental manual for RD 1500 is scheduled to be delivered to DWR in February.

South Sacramento Streams Project

The South Sacramento County Streams Project will increase the level of flood protection from 1-in-50-years to up 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 initial stages of scheduling and documentation with the construction contractor who will construct 2,850 feet of floodwall along Morrison Creek and UPRR tracks. Construction is scheduled to begin in May 2012.
- SAFCA is pursuing a contract with the City of Sacramento to share in costs to design and construct improvements on Unionhouse creek upstream of Franklin Boulevard, apart from USACE. A design contract has been issued to a design consultant, and a preliminary cost estimate of \$1.95 million is made between SAFCA and the City of Sacramento for the work. The Unionhouse Creek portion of this project will remain in the USACE authorized project for potential future improvements, however, for the immediate future; it is being handled for the local agencies.
- USACE, the State and SAFCA are performing a conceptual design for the PACR on all of the remaining creeks, and updated floodplain information was reviewed in January which is likely to cause a significant reduction in work effort on Florin Creek.

West Sacramento Area Project, Slip Repair

- Repairs on the south slip are complete and there are no outstanding issues with the south repair. As-built drawings are being prepared for both the North and South repair sites.
- At the north repair site that was completed in October 2011, the dewatering wells were improperly abandoned. The work is scheduled to be performed between February 13th and 24th.

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.

- Draft funding recommendations were announced in January 2012 for non-structural flood risk reduction projects selected as a result of the most recent FCP competitive proposal solicitation. Twelve projects were recommended for funding, totaling \$48 million in grant funding. The public comment period closed on February 8, 2012.

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.

- Four claims for total of \$13,501,176.81 were approved for payment
- Thirteen claims for \$47.6 million are currently being reviewed
- No audit payments were processed
- Twelve new claims for total of \$2,035,277 were received
- In total, thirty eight claims for \$90.8 million are pending review
- Revision of Program Guidelines is pending review and comment

LOCAL LEVEE ASSISTANCE PROGRAM (LLAP)

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

- Contra Costa County's invoice #4 was reviewed and approved. Additional funds have been encumbered as a result of an amendment to the contract and invoice #4 is in the payment process. Payment has been processed through the budget office. Del Norte County submitted the Klamath Glen Levee Final Geotechnical Report. Review of the report has been completed. Release of retention funds is being processed through the budget office. Once funds are released, the project will be closed out.
- Marin County continues to hold up project operations as it awaits information from USACE. An amendment to the contract, extending the termination date an additional 6 months, is currently in approval process.

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 is currently reviewing a new application for geotechnical evaluations along the Yuba River with the Three Rivers Levee Improvement Authority. A decision memo is being drafted to request approval for a new agreement once review has completed.
- Yuba County Water Agency submitted request to amend language in the Flood Coordinated Operations Contracts. Staff is determining the details of the request and is working to draft an amendment and decision memo.
- Staff is working to obtain data for a funding table at the IO level. Table will be used to update YFFPP funds in DWR's internal database as well as determine program funds.

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 and PROGRAM SOLICITATIONS

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

- The Program Solicitation Package (PSP) application period ended on December 8, 2011. About 50 applications were received for a total of \$87 million. Staff has completed the Acceptability and Completeness Review of all applications. A kick off meeting was held and applications are currently in the formal consensus team review process.

ENVIRONMENTAL SUPPORT

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

- Most activities are described under the individual project headings.
- Staff reviewed and provided comments for various sections of the Delta Plan Draft EIR and Delta Plan.
- As part of the Lower Feather River Corridor Management Plan development, staff conducted a Work Group meeting involving regulatory agencies and stakeholder to review proposed future conditions for the corridor, to be evaluated by hydraulic models. Also, work began on drafting the Task Order for the Phase 3 work which will involve completion of CEQA environmental review for maintenance and restoration activities to be permitted, and preparation and submittal of regulatory permit applications for these activities.

TECHNICAL ASSISTANCE

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

The final AB 1788 regulations package has been submitted to the Office of Administrative Law. The regulatory action was published in the Regulatory Notice on October 7, 2011. Public hearings are scheduled for the Sacramento and Long Beach areas on November 30, 2011 and December 1, 2011.

- Staff has developed a white paper for the FAXCT 9 Feasibility Studies Sub-Team. The white paper was review by team members and DWR staff. Comments on this document resulted in a re-write of the document to shorten and simplify the document as well as incorporate several schematics into the document. Staff has developed a second white paper describing the Problem Identification Clearinghouse. This white paper is currently under review by DWR management staff.
- Staff participated in the final revision of Urban Levee Design Criteria for formal publication.

REGIONAL PLANNING

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

- ULE data was collected for the Lower Sacramento, Feather River, and Lower San Joaquin regions.
- NULE data for all 9 regions was organized.
- An electronic file structure was created within FPO to manage data collection.
- A list of contacts by region was produced.
- Development of Regional Atlases.
- Coordination with FMO, FESSRO, Planning, and consultants is on-going.
- A PMP for regional planning is underway.

DELTA FLOOD PROJECTS

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

DELTA LEVEES MAINTENANCE SUBVENTION PROGRAM

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

Work Agreements for FY 2009-2010

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

Work Agreements for FY 2010-2011

- DWR staff has mailed work agreements to 68 reclamation district and has received signed work agreements from 65 reclamation districts.
- Final Claims have been received from 61 reclamation districts totaling \$17.9 million.
- DWR staff has completed 45 joint levee inspections and received DFG approval for 29 claims. Payments will be processed by staff as DFG approves the claims.

Work Agreements for FY 2011-2012

- The FY 2011-2012 funding allocation plan presented to the Board on September 23, 2011 has been approved by the Board. The plan allocates the funding of \$12 million to 66 reclamation districts.

- Staff mailed Work Agreements on October 25, 2011 to participating districts for signature.
- To date, staff has received 43 agreements back from the districts. Agreements signed by the districts will be routed to the Board's Executive Officer for final signature.

DELTA LEVEES SPECIAL FLOOD CONTROL PROJECTS

DWR initiates and manages project funding agreements in support of local agencies' levee rehabilitation, habitat, or other projects. DWR is executing agreements authorizing the work proposed under Project Solicitation Packages.

- The HMP Project Solicitation Package was released on January 20, 2012. The PSP is focused on HMP work, and allows the local agencies to improve their levees to the HMP standard. The deadline for the local agencies to submit proposals is February 27, 2012.

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 LEEVE 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	34	NEMDC East	44
Marysville	48	Natomas	16
Sutter	35	Bear Creek	29
RD 784	45	Calaveras River	29
Davis	14	RD 404	41
Woodland	14	RD 17	52
American River	44	Stockton Non-Project	36
West Sacramento	98	W. Sac. Non-Project	15
Sacramento River	50	South Sac. Streams	14

Changes shown in bold.

- Overall, ULE is 70% complete.
- The West Sacramento GER (Volumes 1 and 2), the template for all GERs has received comments from the city and LMA and is continuing to be finalized.
- Drilling continued is completed. Further drilling is being planned for South Sac Streams and RD 17.
- Schedules for completion of the Geotechnical Evaluation Reports (GERs) Program are continuing to be modified and tracked with the current delivery date of the GERs scheduled for the middle of 2013.
- Marysville, Sacramento River, RD 784, NEMDC East, American River, RD 404, and RD 17 GERs continue to be active. The Natomas South GER was initiated during the reporting period.

NON-URBAN LEVEE EVALUATION (NULE)

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

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

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

- Overall, Non-Urban Levee Evaluations are 51% complete.
- Drilling activities other than a few locations with access constraints were completed during this reporting period.
- Schedules for completion of the GORs are continuing to be prepared with the current delivery date of the GORs scheduled for the middle of 2013.
- GOR pilot studies are ongoing in the Woodland South and Gravelly Ford study areas.
- In support of the draft CVFPP, NULE effort is being redirected to prioritize support for the FMO critical repairs program and the FAXCT9 Regional Plans.

TECHNICAL REVIEW

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

- Technical reviews are currently being performed for SAFCA (AR Common Features), the Sutter Butte Area Flood Control Agency, and the (LSJFS) Lower San Joaquin Feasibility Study, and RD 17.
- ULE/NULE provided additional supporting data to USACE for the LSJFS.

TECHNICAL POLICY

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

- Vegetation management policies and research continues.
- With the completion of the draft West Sacramento GER, seismic studies are continuing in the study area for an overall general cost estimate for seismic deficiencies and cost benefit analysis of these fixes.
- Participated in various FloodSAFE FAXCTs (Functional Area Cross Coordination Teams).
- Continuing support for Version 5 of the Urban Levee Design Criteria was provided.

FUNCTIONAL AREA 6 FLOOD MANAGEMENT PLANNING AND CONSERVATION STRATEGY

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

CENTRAL VALLEY FLOOD MANAGEMENT PLANNING (CVFMP)

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

STATE PLAN OF FLOOD CONTROL (SPFC)

The SPFC primarily includes: (1) SPFC Descriptive Document and (2) Flood Control Systems Status Report (FCSSR). The SPFC Descriptive Document and FCSSR were completed and provided to Board in November 2010 and December 2012, respectively.

CENTRAL VALLEY FLOOD PROTECTION PLAN (CVFPP)

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

- A Public Draft of the 2012 CVFPP was provided to the Central Valley Flood Protection Board (Board) on December 30, 2011 and formally presented to the Board at their January 27 meeting.
- At the Board's February 24th meeting, the public will be invited to make recommendations for topics where the Board should focus its review of the Public Draft 2012 CVFPP to adoption.
- Work continued on reviewing and finalizing technical attachments for the 2012 CVFPP. Organized by volume, 25 of 29 attachments are available at the CVFMP and the remaining attachments are expected to be released by the end of February.
- A number of program factsheets and three program videos are also now available at the CVFMP website.
- Work continues on preparing the Public Review Draft Program EIR which is scheduled for public release on March 6 and with a 45 day review period and closing on April 20.
- Coordination continued between the CVFPP Product Delivery Team and USACE staff on the Project Management Plan (PMP) for the federal 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 recommendations to 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 program will publish major work product is a report titled "Report on Flood Future: Recommendations for Managing California's Flood Risk" (Flood Future Report). In addition, SFMP includes integration of flood-related information into the California Water Plan.

FLOOD FUTURE REPORT

- The recommendations team is working on the refinement of the recommendations that will be included in the Flood Future Report.
- A final draft of the Exposure to Flood Hazard Technical Memorandum has been completed. The Technical Memorandum presents the analysis of the number of people and value of properties within the 100-year and 500-year FEMA floodplains statewide.
- Several other Technical Memoranda, including the Information Gathering, Risk Information Inventory, Finance, Integrated Flood Management, and Opportunities and Challenges memos are being prepared for inclusion in the Flood Future Report.
- Work continues on the Working Draft the Flood Future Report. A Public Review draft will be completed by June 15, 2012.

INTEGRATED FLOOD MANAGEMENT IN THE CALIFORNIA WATER PLAN

- The California Water Plan 2013 Design and Work teams and the Flood Caucus membership are being formed.
- A Flood Caucus meeting was held at the California Water Plan Public Advisory Committee meeting on February 2nd.

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 AND STRATEGY

- **Conservation Framework**
The technical attachments that support the Conservation Framework were posted on the CVFMP website in January. At the January 27th monthly CVFP Board meeting, staff presented the Conservation Framework and Vegetation Management section as part of the formal CVFPP presentation.

- **Conservation Strategy Funding Guidelines**
Staff has completed addressing public comments received on the Draft Guidelines. These guidelines will be submitted to DWR's Director for approval. Staff is preparing a "Frequently Asked Questions" summary document, which will be posted to the FESSRO website along with the Guidelines. To implement these Guidelines, staff is initiating development of an RFP to fund selected projects under the Conservation Strategy

CONSERVATION STRATEGY OUTREACH

- **Interagency Advisory Committee (IAC)**
The next bi-monthly IAC meeting will be February 15th. A new IAC subcommittee, which will focus on regional permitting approaches for the CVFPP and Conservation Strategy, will meet February 10th.
- **Education**
In a response to a request from the San Joaquin County Office of Education, Director Cowin committed DWR funds and support to this year's Floodplain and Delta Ecology Teacher Institute.
- **Local Land Owner/Agriculture**
Staff continues to interview representatives of the agricultural community to build collaboration and obtain input on the Conservation Strategy. The interviews have included meetings with representatives of the Family Water Alliance, Reclamation District 108, North Delta Water Agency, Coalition of Urban/Rural Environmental Stewardship, Sacramento West Side Levee District, Lower San Joaquin Levee District, San Joaquin Farm Bureau Federation, San Joaquin River Restoration Program, Colusa County Farm Bureau, and the California Association of Resource Conservation Districts.

REGIONAL CONSERVATION PLANNING

Regional Advanced Mitigation Planning (RAMP)

- The comment period for partnering agencies on the draft Regional Assessment closed January 31st. Staff from regional offices of these partnering agencies provided valuable input because of their expertise with local conditions.
- A RAMP Work Plan is being written to lay out the steps to complete Action Plans and revise the draft Regional Assessment by fall 2012. The Work Plan will be presented to the RAMP Work Group in March. New FESSRO staff will begin assisting with RAMP tasks starting in February.
- RAMP staff developed a RAMP briefing for the Strategic Growth Council (SGC), which was presented by deputy directors from DWR, Caltrans, and DFG. RAMP is referenced in the revised SGC's Strategic Plan as a program that could benefit from the Council's assistance. SGC staff was tasked with forming a Technical Advisory Committee to assist RAMP as part of the SGC's Action Plan.

Corridor Management Strategies (in coordination with DFM):

- **Lower Feather River Corridor Management Plan**
Staff attended the January Work Group meeting. Topics for discussion included a Geomorphic Assessment Technical Memorandum, Ecosystem and Floodway

Benefits of Proposed Future Conditions, and an update on Permitting Subcommittee activities.

SCIENTIFIC AND PLANNING INFORMATION

- **Medium-scale Vegetation Mapping**

The final version of the medium-scale map is complete and will be posted to the DFG BIOS website in February 2012.

- **Fine-scale Vegetation Mapping**

Chico State University contractors are continuing work on map and polygon classification. Several new vegetation classifications were prepared by the DFG Vegetation Classification and Mapping Program for the map study area. The fine scale map is scheduled to be complete in 2013.

FUNCTIONAL AREA 7 LEGISLATION, BUDGETS, AND COMMUNICATION

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

COMMUNICATION AND BRIEFING MATERIALS

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

- No new information.

FUNDING ADVOCACY & AGENCIES' ALIGNMENT

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

The Federal Advocacy Team conducted a comprehensive training program on October 24, 2011, that included personnel from the U.S. Army Corps of Engineers (USACE) and the Division of Flood Management of the Department of Water Resources (DWR). This training provided an overview of the Federal Advocacy Program to the individuals that provide the detailed information on each of the flood control projects and established a procedure that promotes closer coordination between the two agencies' Project Managers.

On January 23, 2012, USACE and DWR Project Managers made presentations to the Federal Advocacy Team and management from both agencies regarding Fiscal Year 2013 federal funding needs.

This coordinated information will be the basis for what is provided by the Federal Advocacy Team to the Office of Management and Budget, USACE headquarters, and various Congressional offices this spring when discussing the funding needs for Fiscal Year 2013 cost shared flood control projects.

LEGISLATION LIAISON & LEGAL

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

- No new information.

PROGRAM MANAGEMENT, BUDGET, & FISCAL SERVICES

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

- No new information.

FLOODSAFE PROGRAM ADMINISTRATION & COORDINATION SERVICES

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

- No new information.