

**REPORT OF ACTIVITIES
OF THE
DEPARTMENT OF WATER RESOURCES**

By

**Keith Swanson, Chief,
Division of Flood Management
Department of Water Resources
California Natural Resources Agency
State of California***

*Presented before the Central Valley Flood Protection Board on May 25, 2012

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 and, despite staff vacancies and other challenges, it is anticipated that all levees will be able to be inspected by the end of May. A new inspector has been hired to fill a vacancy. Inspectors continue to inspect CVFPB Encroachment Permit projects for compliance with permit conditions. With the end of flood season these projects are becoming more active. Coordination regarding inspections, permits, and other topics with LMAs, CVFPB staff, and USACE staff continues.

FLOOD PROJECT INTEGRITY/VULNERABILITY ASSESSMENT ACTIVITIES

San Joaquin River Erosion Surveys

- Developing a revised levee erosion scoring and ranking methodology that is unique to the San Joaquin Flood Control System.
- Met with the USACE to discuss the changes they made to their methodology.
- Developing a prototype scoring system that will be tested in the field.

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

The 2011 Local Maintaining Agency Annual Report and CDs were distributed to the 89 Local Maintaining Agencies (LMA) in April, 2012. DWR also sent CDs of the report to the libraries within the jurisdiction of the LMAs. In addition, this year DWR also provided a copy of the report in CD format to cities and counties within the jurisdiction of LMA boundaries per CWC 9141.

CLIMATE DATA COLLECTION & PRECIPITATION/RUNOFF FORECASTING

This Element supports Flood Emergency Response by providing information on current and forecasted water conditions, and by providing meteorological and climate information. Additionally, this Element includes evaluating and improving the data collection and exchange network and forecasting models, providing water supply and watershed runoff information and forecasting, and the development of a new generation of forecasting and data collection tools to improve the quality, timeliness, and length of watershed and river forecasts. Real-time data, its timely availability, and quantities and quality are all critical to improving forecasting quality and timeliness.

WATER CONDITIONS

As of April 30, statewide hydrologic conditions were as follows: precipitation, 75 percent of average to date; runoff, 65 percent of average to date; snow water equivalent, 40 percent of average for the date (30 percent of the April 1 average); and reservoir storage, 115 percent of average for the date. Sacramento River Region unimpaired runoff observed through April 30, 2012 was about 8.5 million acre-feet (MAF), which is about 64 percent of average. For comparison, on April 30, 2011, the observed Sacramento River Region unimpaired runoff through that date was about 16.5 MAF, or about 124 percent of average.

Precipitation in April was generally above average or near average across California. On April 30, the Northern Sierra 8-Station Precipitation Index Water Year total was 39.7 inches, which is about 87 percent of the seasonal average to date and 79 percent of an average water year (50.0 inches). During April, the total precipitation for the 8-Stations was 6.5 inches, which is about 167 percent of the monthly average. Last year on April 30, the seasonal total for the 8-Stations was 64.3 inches, or about 141 percent of average for the date.

On April 30, the San Joaquin 5-Station Precipitation Index Water Year total was 24.0 inches, which is about 65 percent of the seasonal average to date and 59 percent of an average water year (40.8 inches). During April, the total precipitation for the 5-Stations was 4.8 inches, which is about 137 percent of the monthly average. Last year on April 30, the seasonal total for the 5-Stations to date was 57.7 inches, or about 156 percent of average for the date.

Selected Cities Precipitation Accumulation as of 04/30/2012 (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	38.02	101	42.41	112	94
Redding	22.75	71	31.02	97	66
Sacramento	12.18	69	21.46	122	66
San Francisco	15.58	68	25.75	113	66
Fresno	8.15	75	15.25	140	71
Bakersfield	4.93	79	10.02	161	76
Los Angeles	7.60	61	17.30	138	59
San Diego	8.01	79	12.23	120	77

Key Reservoir Storage (1,000 AF) as of 04/30/2012								
Reservoir	River	Storage	Avg Storage	% Average	Capacity	% Capacity	Flood Control Encroachment	Total Space Available
Trinity Lake	Trinity	2,338	2,049	114	2,448	96	---	110
Shasta Lake	Sacramento	4,440	3,974	112	4,552	98	-112	112
Lake Oroville	Feather	3,422	2,939	116	3,538	97	139	116
New Bullards Bar Res	Yuba	930	760	122	966	96	34	36
Folsom Lake	American	933	730	128	977	96	131	44
New Melones Res	Stanislaus	1,945	1,482	131	2,420	80	-281	475
Don Pedro Res	Tuolumne	1,652	1,470	112	2,030	81	-65	378
Lake McClure	Merced	773	612	126	1,025	75	-77	252
Millerton Lake	San Joaquin	370	365	101	520	71	-150	150
Pine Flat Res	Kings	744	610	122	1,000	74	-256	256
Isabella	Kern	201	224	90	568	35	-160	367
San Luis Res	(Offstream)	1,647	1,861	88	2,039	81	---	392

The latest National Weather Service Climate Prediction Center (CPC) long-range, 1-month precipitation outlook for May 2012, issued April 30, 2012, suggests below average precipitation for Northern and Central California. The outlook suggests no tendency for above or below average rainfall for the southern part 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. Drafts of two-page summaries of projects and products have been developed and are being reviewed.

The State Climatologist participated in the federal Hydrologic Frequency Analysis Work Group (HFAWG) conference call and meeting. The meeting discussed the testing of the new parameter estimation method proposed for updating the Bulletin 17B Guidelines for Flood Frequency Analysis. The Work Group is interested in forwarding recommendations that the Bulletin 17B be updated to include a paragraph on climate change, change the methodology used to compute the uncertainty bounds and outliers, and employ the Expected Moments Analysis (EMA) approach to evaluate data and parameters used to compute the flood peak estimates. The Work Group did not achieve consensus in a vote to bring these recommendations forward to the Surface Water Committee and discussion is ongoing.

REAL-TIME DATA COLLECTION NETWORK

The partners for the Extreme Precipitation Network (DWR, Scripps, and the National Oceanographic and Atmospheric Administration's Earth Systems Research Laboratory) met in April and discussed progress on the network installation of snow level radar, atmospheric river observatories, total column water vapor sensors, and soil moisture sensors. Discussion also focused on the next agreement needed to manage the operations and maintenance of the network after installation. Efforts continue to coordinate moving the extreme precipitation network GPS-Met, snow level radar, and soil moisture data into CDEC from NOAA's Earth Systems Research

Laboratory. The snow level radar data is now flowing to the California Nevada River Forecast Center.

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.

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

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 emergency response. 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. Two classes were held on April 19th and 25th.

Communications Exercise

On May 16, 2012, Incident Command Teams will conduct communication drills utilizing our Emergency Command Communication Trailers (ECCTs). The satellite bandwidth for our communication system will be opened to its maximum capability. The satellite communications capabilities of the trailers are drilled to provide an opportunity to enhance training of our ICT telecommunication staff and to test the operability of the ECCTs to transfer data between the remote field access of the ECCT and the Flood Operations Center. The test data is transferred via individual VPN devices to DWR's secured network through the ECCT.

RASS OUTREACH

The DWR Incident Command System (ICS) Field Operations Guide has been updated and reproduced and is being distributed to our Incident Command Team field personnel. The pocket guide provides a quick reference of the roles and responsibilities for every position in the ICS organization. The guide also provides a

checklist of the duties, as job aids, for each position. Copies are available electronically or as a pocket guide by contacting Rick Burnett at rburnett@water.ca.gov.

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.

No new information this month.

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 fallen trees at Cache Creek Settling Basin is 75 percent complete (23 acres).
- Debris removal is on-going in seepage ditches in Sutter area (50 miles).
- Debris removal is on-going in Little Chico Diversion Weir (10 Acres).
- Beaver dam removal is on-going in seepage ditches in Sutter area (50 miles).
- Sutter Yard is performing ongoing preventative maintenance on 4 mowers.
- Spraying is ongoing at Little Chico Diversion Weir (10 Acres)
- Gravel screening is ongoing at the Feather River Channel Pit (50 Tons).
- Clean up of fallen trees at the Cache Creek Settling Basin is 75 percent complete (23 Acres).

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.

- Repair of gates and barricades is 50 percent complete in the Sacramento area (20 each).
- Supply building remodel at the Sacramento Maintenance Yard is 95 percent complete.
- Concrete repairs at the Sutter Yard are 60 percent complete.

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.

- Mowing Levee Slopes is ongoing at MA3, 15 percent complete at MA9 (3 Miles), and 5 percent complete at Cache Creek (1 Mile).
- Rodent Program (poison, trapping, grouting) for all areas in Sacramento and Sutter is ongoing.
- Spraying levee slopes is 35 percent complete on MA4, Putah Creek, and Cache Creek (25 acres). Spraying is ongoing at MA1, MA12, MA5, MA13, MA16, MA7, and East Levee of the Sacramento River.
- Tree trimming is 50 percent complete on Cache Creek (2 Acres) and 70 percent complete on MA9 (3 Acres).
- Cleaning levee slopes on Cache Creek and Putah Creek is 75 percent complete (20 miles).
- Levee gate repairs are ongoing at MA1, Interceptor Canal, and MA7.
- Safety Assessment findings are ongoing at the Sutter Yard.
- Pipe inspection repairs are ongoing at MA5.
- Pipe Inspections on Putah Creek, Willow Slough, and Unit 4 are 100 percent complete.
- Vegetation control by CDF crews is ongoing at the north levee of the Colusa Weir (15 acres).
- Grading crown roadways on Putah Creek is 10 percent complete (4 Miles).
- Corps encroachment removal is 100 percent complete on the East Levee of the Sutter Bypass (3 acres).
- Levee gate repairs are 100 percent complete at Wadsworth Canal and McClatchy Road.
- Grading and or gravelling crown roadways are 100 percent complete at MA1 (5.2 Miles) and East Levee of the Sacramento River (4.5 Miles).
- Mowing Levee Slopes is 100 percent complete at MA4 (3 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.

STREAMBED ALTERATION AGREEMENT FOR ROUTINE MAINTENANCE 2011 ANNUAL REPORT

The Flood Maintenance Office (FMO) has a Streambed Alteration Agreement (SAA) with the California Department of Fish and Game (DFG) for routine maintenance activities the Sacramento and Sutter Maintenance Yards conduct on the portions of the Sacramento River Flood Control Project (SRFCP) the State is responsible for maintaining.

The SAA provides a mechanism that allows the Maintenance Yards to obtain timely authorizations from DFG for routine maintenance activities that include removing debris, sediment, vegetation, rubbish, downed trees, and other material that could obstruct the natural flow of water; controlling weeds, grasses, emergent vegetation, and woody vegetation; maintaining restoration and mitigation areas; controlling rodents and grouting rodent holes; dragging and burning levee slopes; making repairs to control erosion and stabilize banks; and maintaining crown and toe roads as well as fire breaks. This and other routine maintenance work is conducted to provide for visibility and accessibility for levee inspections and flood fighting, and to maintain channel capacity and integrity of levees and flood control structures.

Sometimes, due to location and/or timing of the work, DFG requests additional information to determine if conservation measures beyond what are already specified in the SAA and practiced by the Maintenance Yards are needed to protect sensitive environmental resources. FMO environmental scientists conduct the resource surveys, report to DFG, and provide any needed support to the yards. Annual reports are submitted to DFG in February each year summarizing the type and number of routine maintenance activities DWR conducted in the previous calendar year. In 2011, the Sacramento and Sutter Maintenance Yards conducted a total of 63 routine maintenance projects between January 1 and December 31 (24 and 39, respectively) under the SAA.

The Maintenance Yards have commenced routine maintenance activities for 2012 and FMO environmental scientists have been conducting nesting bird surveys as requested by DFG to support authorization of the proposed work. An annual meeting between FMO and DFG is being scheduled for late May/early June to discuss potential improvements to process and work flow under the SAA.

SMALL EROSION REPAIR PROGRAM (SERP)

At the April 27th Board meeting, Board members unanimously voted to support SEPP. A SERP subcommittee meeting was held May 9, 2012, following the Board meeting, to define the path forward for the various program permits and

authorizations. The SERP manual is being revised to incorporate all elements of the Board resolution and will be finalized by June 2012. The Program EIR is being finalized, with DWR management and legal review set to be completed by mid-July 2012. Agency permits and authorizations are contingent on finalizing these two documents.

LEEVE REPAIRS

The Levee Repairs Program consists of projects for repair, rehabilitation, reconstruction, or replacement of levees, weirs, bypasses, channels, and other facilities of the SPFC. Types of repairs are critical (has likelihood of failure during next high water event), serious (can withstand one high water event; likelihood of failure on subsequent high water events), and proactive (small deficiencies that are worsening rapidly and that can be designed and constructed by the Local Maintaining Agency (LMA)). Levee repair projects are implemented through collaboration with federal and State resource agencies, USACE, and LMAs. Levee repairs are done under three federal authorized programs; Sacramento River Bank Protection Project (SRBPP), Levee Stability Project (LSP), and PL84-99 Rehabilitation Assistance Project (PL84-99). In addition, the State is developing guidelines for a new project, Flood System Repair Project (FSRP), to address deficiencies in the entire State Plan of Flood Control Facilities in the Central Valley Watershed; FSRP replaces the San Joaquin River Bank Protection Project.

FLOOD SYSTEM REPAIR PROJECT

- The FSRP Guidelines have gone through internal review, including DWR legal review; a copy of the Guidelines was sent to key local stakeholders and a meeting is scheduled for May 22, 2012 to seek their input.
- A Technical Advisory Team (TAT) was formed to establish protocols for the FSRP implementation. The FSRP TAT is finalizing their first deliverable, Ranked Leveed Areas, which is based on the structural integrity of the levees considering human and economic factors.

SACRAMENTO RIVER BANK PROTECTION PROJECT

Sacramento River RM 57.2R Setback Levee Project

Construction has resumed with completion of construction expected by 10/30/2012.

Cache Creek LM 3.9L & 4.2L Setback Levee Projects

These two sites were scheduled for construction in 2012. This schedule is at risk and likely be delayed to 2013 due to a five-weeks delay in the NEPA document delaying the 408 permit to 8/15/2012 at the earliest. Right-of-way certification schedule is also at risk due to complications with the PG&E power line relocation. PG&E may be required to obtain an encroachment permit in which case the right-of-way certification delivery would likely be too late for 2012 construction.

FUNCTIONAL AREA 3 FLOODPLAIN RISK MANAGEMENT

The primary purpose of Floodplain Risk Management is to empower local communities through floodplain management program support and technical assistance to make wise land use decisions in flood prone areas that result in reduced flood risk and preservation of the beneficial uses of floodplains. FPM projects and programs work towards development of a statewide integrated approach for flood risk reduction and long term floodplain sustainability that reduces loss of life and property damage and minimizes the economic impacts associated with flooding.

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 the National Flood Insurance Program activities including the Community Rating System (CRS).

Staff participated and assisted in the May 5, 2012 Southern California CRS Users Group meeting where a presentation on “DWR’s CA 2012 CRS Update” was given. Staff revised the “DWR’s CA 2012 CRS Update” presentation to include new information on the Draft 2012 CRS Coordinator’s Manual which can be downloaded at – www.crsresources.org. FPM staff has prepared the training manuals for the CFM refresher course, NFIP basic course, Elevation Certificate and Zone A course. Concurrently, staff is scheduling statewide 2012 NFIP workshops with regional offices and local officials. As a part of the NFIP Community Assistance Program (CAP) contract: (1) Southern Region staff presented a NFIP workshop “Floodplain Management and Duties of the Local Administrator” in the City of Temecula, (2) two NFIP workshops were conducted in Sacramento: Flood Insurance Training for Floodplain Managers and Flood Insurance Training for Agents and Lenders (Basic Course).

FPM staff conducted a CFM refresher course on May 11, 2012 in the City of West Sacramento. Floodplain Risk Management (FPM) Branch staff followed up with FEMA Region IX to correct problems with the NFIP Community Information System (CIS) database. Staff is working to resolve a floodplain permit issue in Ventura County. Staff is coordinating with FEMA to acquire California NFIP information regarding comparison of premiums paid vs. claims paid.

As part of interagency partnership effort: (1) staff participated in a USACE Silver Jackets Program webinar on Coming Changes to the Community Rating System on May 1, 2012, (2) staff assisted in the Interagency NFIP Update meeting (Delta Stewardship Council, Cal EMA, DWR, and FEMA) on May 1, 2012, (3) staff participated in the FEMA/DWR/Cal EMA Hazard Mitigation Projects Coordination meeting on May 2, 2012. Overall, FPM staff provided approximately 40 hours of technical assistance for local communities regarding the NFIP, Certified Floodplain Manager Exam, and federal Hazard Mitigation grants.

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.

Progress is being made on development of approximate flood hazard and depth-velocity maps for alluvial fan floodplains in Riverside and Ventura Counties. These two counties are pilot study areas for the Alluvial Fan Floodplain Evaluation and Delineation (AFFED) Project.

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.

The Central Valley Floodplain Evaluation and Delineation Program (CVFED) completed the last phase of its Central Valley Topography Acquisition Project. The Central Valley Topography Acquisition Project is the first of three projects to be executed as part of CVFED. The project finalized high accuracy channel geometry information through bathymetric & field surveys covering 1,300 miles of Central Valley streams. Approximately 3,000 field survey cross sections have been collected within the Central Valley from Tehama County to south of Fresno County. Approximately 2,500 bathymetry (channel) survey cross sections as well as approximately 100 additional miles of multi-beam bathymetry survey data is available for portions of the San Joaquin River, Sacramento River, Calaveras River, and the American River. These datasets are now available for use by public agencies. CVFED previously released digital aerial photography (covering 9,000 sq miles) and post-processed LiDAR topography (covering 7,800 sq miles) completed in earlier phases of the project.

FLOOD RISK NOTIFICATION

Flood Risk Notification focuses on communicating flood risk and risk mitigation strategies to the public and to local, state and federal agencies for areas protected by the facilities of the State Plan of Flood Control.

The draft 2012 FRN flyer is being circulated for review and approval of text and graphic design. Subscription for 2012 parcel data for Central Valley counties has been renewed for completion of the 2012 risk notice. The FRN team and USACE staff are developing a short flood risk video with USACE financial support. The USACE developed a video for the FRN website in 2011.

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 creation of integrated planning approaches and datasets that help agencies, communities, and individuals make well informed decisions.

The public comment period for the Draft Urban Level of Flood Protection Criteria closed Friday, May 4th with the receipt of 8 comment letters. The Draft ULOP Criteria document was included as a technical attachment to the CVFPP document and provided to the Central Valley Flood Protection Board in April 2012 in support of the adoption process of the CVFPP. FPM staff is preparing documentation to submit to the California Building Standards Commission for code change without regulatory effect to correct errors. Additionally, FPM staff is progressing on a best management practices handbook addressing flood resilient construction in riverine conditions.

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

- USACE is moving forward to the Alternative Review meeting milestone which will determine the Tentatively Selected Plan (TSP). USACE anticipates having a TSP selected by August 2012. The schedule for the Alternative Review meeting is yet to be determined, but is anticipated to be scheduled after the TSP has been selected.
- USACE is working on re-scoping the study to fit the new USACE HQ "3x3x3" ruling for studies. This is an aggressive schedule to complete the study in 3 years, cost no more than 3 million dollars, and fit in a 3-inch binder. USACE anticipates reducing the detail in the alternatives analysis process and developing a more robust analysis of the TSP in order to meet the new "3x3x3" ruling.

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 and Strathmore Creek in Tulare County.

- Nothing new to report this month.

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.

- On March 29, 2012, the State, USACE, and San Joaquin Area Flood Control Agency (SJAFCA) met to discuss the Re-Scoping of the Study. Items addressed included the revised Study process, scope and detail requirements, and schedule and resourcing changes. The goal of this Re-Scoping process is to bring the Study as close as possible to meeting the new “3x3x3” Rule directed by USACE HQ. The intent of the “3x3x3” Rule is to decrease the time, cost, and complexity of USACE’s study 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.

- Nothing new to report this month.

Rock Creek/Keefer Slough Feasibility Study

This study will generate an EIS/EIR and feasibility study to evaluate federal, State, and local interests in planning, designing, mitigating, and improving existing levee systems of Rock Creek and Keefer Slough in Butte County.

- Nothing new to report this month.

Sacramento River Flood Control System Evaluation

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

- Nothing new to report this month.

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.

- DWR and Sutter Butte Flood Control Agency (SBFCA) met with USACE on April 25 - 26, 2012 to perform a Cost and Schedule Risk Analysis. The purpose of this analysis is to estimate the amount of uncertainty and risk for each discipline (Geotechnical, Hydrology & Hydraulics, Economics, etc.) involved in the Study. This estimated uncertainty and risk is then used by USACE to estimate the risks to both Study cost and Study schedule. This determines the amount of contingency applied to the Study at this point in its development. The results of the effort have been released for comment. Comments were due Monday, May 7, 2012 and USACE expects the preliminary project contingency will be ready for review by May 21, 2012.

West Sacramento GRR

The General Reevaluation Report (GRR) is being conducted to study future work necessary to provide a minimum of 200-year level of protection for the City of West Sacramento.

- USACE has sent their draft Alternative Formulation Briefing (AFB) Milestone Conference Report out for sponsor review May 3, 2012. The draft document will need to go through USACE's internal review process before the scheduling the AFB conference. Details on the AFB conference and draft document review process will be discussed at the next Project Delivery Team meeting to be held May 10, 2012.

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.

- Nothing new to report this month.

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.

- Nothing new to report this month.

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 the USACE-selected Flood Barrier Option alternative.

- A meeting was held on April 25, 2012 with Caltrans, USACE, and the City of Woodland regarding the possibility of Caltrans becoming a Non-federal participant (financial or otherwise) on portions of the Study. Caltrans was not prepared with a likely immediate financial solution but offered to attend (observe) PDT meetings, if invited, and continue considering available funding possibilities for future discussion. It was noted by USACE that they need to adapt the study to the USAC HQ "3x3x3" ruling; this was good news to the Non-federal sponsors since the original completion date was set for 2017.

Yuba River Basin Project GRR

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

- USACE, DWR, and the local sponsors met April 19, 2012 to discuss the direction that should be taken to make credits available for the construction of the Marysville Ring Levee and completion of the GRR. USACE had recently revised the cost estimate based on new information developed by the USACE economics team. This resulted in the entire perimeter levee meeting the Benefit Cost Ratio

required to qualify for the National Economic Development (NED) plan. This is the plan to be recommended by USACE Sacramento District Office to USACE Assistant Secretary of the Army (ASA) for Chief's approval. If this approach is taken, it would most likely extend the schedule for the GRR and delay credit for the Marysville Ring Levee and possibly cause the Non-federal sponsors to come up with additional cash. The proposal is to move forward with the Post Authorization Change Report (PACR) combined with an Integral Determination Report (IDR). The combination PACR/IDR is located in Appendix A of the GRR so it would not take significant preparation time and could be submitted in a short amount of time. The Combination PACR/IDR can be approved by the ASA and would not require Congressional Authorization. This would make sufficient credits available sooner and allow the Non-federal sponsors to move forward with the Marysville Ring Levee construction without providing any additional State cash. The remainder of the GRR would be completed and submitted to assist the ASA after their approval of the PACR.

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 to provide increased flood protection for Yuba City.

- DWR staff received the construction closeout documents on May 1st and is coordinating with LD1 to receive a complete package before starting the DWR review.

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 a setback levee to increase the level of flood protection for South Stockton, Lathrop, and Manteca communities.

- DWR is working with RD-17 to establish the direction of the Phase III design.
- 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)

This project will offer 200-year flood event protection for both Highways 65 and 70; benefiting the areas 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.

- Central Valley Flood Protection Board 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, and the drainage issue, the CVFPB rescheduled all the hearing to a special Board meeting that took place in Marysville on March 2, 2012. . The Board heard the individual lot owners' arguments but decided to postpone their decision until August 2012 Board meeting.

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

This project will complete a levee system designed to provide 200-year level of protection for 40,000 residents in South Yuba County.

- Minor erosion levee embankment areas have occurred following the latest storm and contractors are in the process of repairing the damaged locations.
- TRLIA is in the process of completing a report that will be submitted to DWR in May 2012. The Report will outline how TRLIA will plan to address the crown rut issue in one segment. It will also address the question raised by DWR and CVFPB regarding why ASTM D698 was used as the compaction test method for the TRLIA-YR and not ASTM D1557 per CVFPB permit requirement.

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 will be accomplished by installing cutoff walls to prevent seepage, under-seepage, and raising the levee.

- EIP has processed a 10% retention payment for Phases 1 and 1B in the amount of \$404,991.
- SAFCA has submitted and DWR Staff is reviewing a SAFCA closeout request for the remainder of NCC 2, approximately \$2.23 million. DWR Staff returned the SAFCA report as incomplete and directed them to follow a format which DWR provided. EIP has prepared a decision memo for a two year extension to the funding agreement to take the end date beyond June 2012. This is necessary due to the length of time ESA compliance is taking to be completed by the REB.
- CVFPB staff request sampling of the NCC cutoff wall as part of the permit and SAFCA submitted a sampling plan. Sampling was completed in March and a report issued in April. EIP is awaiting comments from CVFPB staff.

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, under-seepage, and raising the levee. SAFCA plans to complete components to Element 12A (approximately RM 67) along the Sacramento River in 2012 and have USACE complete the remainder, estimated to occur in 2014.

- SUKUT claim with SAFCA has not been settled yet.
- Board issued two Notice of Violations (NOVs) to Nordic for unacceptable work on Elements 6B to 9A, which are still pending resolution. 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 in compliance with the plans and specs to the satisfaction of the Board.

- 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 is being prepared. We currently are waiting to receive the revised SAFCA Work Plan for the remainder of the Capital Outlay project. This project will also require a two year extension to allow REB to finish their work. Therefore, EIP will submit a time extension as part of the extension to take the project through May, 2016.

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 all major construction is complete for these sites. Contractors continue working on punch list items. All three projects are designed to provide 200-year level of protection for about 47,000 residents. The Southport Area, which may include a large setback levee, is currently under design.

- On April 2, 2012, DWR received the WSAFCA Southport Final Project report. This Report identifies one proposed alternative and another proposed alternate for development at the 15% design level.

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

The Feather River West Levee Project will be for the repair of approximately 35 miles of levee along the west bank of the Feather River from Thermalito Afterbay to the north end of Star Bend. The design will include use of slurry walls and seepage berms to protect the communities of Gridley, Biggs, Live Oak, Yuba City, and parts of Sutter and Butte counties.

- DWR received the 65% design documents which are currently in the review process.
- A Decision Memo proposing a construction funding agreement for \$56.78 million for critical levee improvements next to Yuba City is under management review and consideration.

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.

- DWR Real Estate is currently negotiating with Sacramento County and City for a programmatic approach to temporary easements for Sites L5A, L9A, R9, R10,

L13, Jacob Lane C and NEMDC. L13 may require permanent construction easement rights which could prevent project contract award in FY12.

- USACE has negotiated with WAPA to de-energize power lines along Site R6 during FY 13 construction season.
- The Howe Ave Site and R6 Site are scheduled to begin construction in the FY12 construction season.
- Work on the Natomas Basin and American River Design and Construction (NBARDC) component has been postponed indefinitely until federal authorization and funding has been approved.
- Currently, the State and local sponsors are working on a LERRD crediting package to submit to the USACE to prevent decreases in credit estimate.

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 the outstanding State-share obligation of \$ 4,207,700 to SAFCA. The payment is expected to be made within the next two months.

Folsom Dam Raise and Bridge Element

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

- A Project Partnership Agreement (PPA) is scheduled for discussion and execution in 2014. The Temperature Control Shutters design is 35% complete and will be shelved to focus on updating three existing emergency spillway gates.
- The State, local and federal government partners have revised the Project Management Plan and broadened the scope of the project to include emergency gate replacement and raise.

Folsom Dam Modifications (Joint Federal Project)

The purpose of the Folsom Dam Modifications Project (Joint Federal Project) is to construct an auxiliary spillway at Folsom Dam that will work in conjunction with ancillary projects to help the Sacramento region achieve a 200-year level of flood protection. The estimated completion for the JFP is October 2017.

- Construction - Phase III Common excavation area is 100% complete (20,000 CY). Rock excavation is 95% complete (281,561 CY). Grade beam excavation is 50% complete (3,000 CY). Excavated material is been stockpiled at Dike 7 (99% complete, 157,819 CY).
- Real Estate – The USACE is seeking a lease with Folsom Prison from the California Department of Corrections and Rehabilitation (CDCR) for additional staging area. The initial lease is being re-drafted by the USACE, CDCR and DWR legal counsels. The DWR and CDCR counsels did not agree on some lease terms in the first draft.
- Water Control Manual Update - A Project Alternatives Solutions Study (value engineering) was performed to provide screened alternatives and guidance to the

USACE to perform hydraulic modeling. The Project Management Plan will be ready for partner review in May.

- Design - Phase IV Approach Channel 65% design review conference was completed in April 2012. Chute & Stilling Basin and Approach Channel phases have been integrated into one plan and specification set.
- Environmental Impact – An Administrative Draft EIS/EIR was completed on March 1. The final EIS/EIR is expected to complete by April 2013.
- FY12 Funding – The Federal 2012 work-plan included the full \$28 million USACE estimated capability.

Lake Kaweah Enlargement Project (Terminus Dam, Kaweah River Project)

The Lake Kaweah Enlargement Project was completed in 2006 and remaining work is focused on turning over the O&M to the local sponsors, finalizing all financial balancing, and completing final real estate documents.

- DWR soon anticipates preparing a crediting package for LERRD expenses. Initial estimates suggest upwards of \$1.5 million in creditable costs. DWR would expect to receive approximately \$1.125 million in credit or cash reimbursement from the USACE after approval of the crediting package.
- DWR also will sell its shared interest in the Davis Ranch mitigation site to the KDWCD, valued at approximately \$135,000. Initial meetings with DWR counsel have been scheduled to discuss this transaction.

Marysville Ring Levee Improvement Project

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

- Phase 1 construction and wall testing is scheduled to begin in June 2012. Wall evaluation will take place concurrently with construction of the remaining Phase 1 slurry wall. Increases in wall construction costs are estimated at \$2.1 million.
- Geotechnical investigation underway by consultants (Fugro and HDR) for Phases 2B and 4.
- The Phase 4 design is at 90%.
- The State and local partners are currently undergoing funding negotiations with USACE to reduce cash contributions. A recent payment of \$400,000 has been submitted to the USACE to cover increase in Phase 1 construction costs efforts.

Mid-Valley Area Levee Reconstruction Project

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

- The turnover letter for the O&M supplemental manual for RD-1500 is being revised to include additional repair sites and is expected to be delivered to the State in June 2012.

South Sacramento Streams Project

The South Sacramento County Streams Project will increase the level of flood protection for the urbanized area of South Sacramento County and an area to the south and east of the City of Sacramento. Portions of the project have been completed on the four creeks, and additional improvements are forthcoming.

- On May 1, 2012, construction began on 2,850 feet of floodwall along Morrison Creek and UPRR tracks. USACE, DWR, and SAFCA have all been involved in on-site activities to kick-off the project properly.
- SAFCA has begun its design efforts to construct improvements on Unionhouse Creek upstream of Franklin Boulevard. The work will be funded by SAFCA and the City of Sacramento; DWR and the USACE have been excluded from this portion of the work, due to SAFCA's desire for early flood improvements.
- USACE is reprioritizing remaining funding and work on the remaining creeks based on updated floodplain information. Future funding from the USACE may be limited to the remaining \$8 million available in federal funds. The Non-Federal contribution is paid up to approximately 98% of the non-federal obligation.
- DWR is in the process of preparing a crediting package for LERRD expenses. Initial estimates suggest upwards of \$1.5 million in LERRD creditable costs for DWR and over \$2 million for SAFCA.

West Sacramento Area Project, Slip Repair

The West Sacramento Area Project raised and strengthened five miles of levees by a maximum of five feet on the east side of the Yolo Bypass and the south side of the Sacramento Bypass. Initial repairs were completed in 2001, but additional slips were identified during high water events in 2006 and March 2011.

- The O&M supplemental manual is nearly complete and will be sent to the State and locals for review in May/June 2012.
- USACE has identified two potential tree mitigation sites and will determine if either of the sites will meet project requirements.

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 Program has been working with the new grant recipients in order to hold public hearings in the vicinity of the new projects prior to release of over \$58 million in grants to 13 localities statewide to reduce flood risk in their communities while protecting wildlife habitat and agriculture. The flood risk reduction projects will be funded by Propositions 84 and 1E and will benefit communities and

resources from Siskiyou County in the North to San Bernardino County in the South. The Flood Corridor Program anticipates that there will be \$28.3 million in remaining funds available for future grant awards.

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. During the last month:

- Four claims for total of \$2,365,106 were approved for payment.
- Seven claims for \$41.24 million are currently being reviewed.
- No audit payments were processed.
- One new claim for total of \$524,209 was received.
- In total, forty six claims for \$97.46 million are pending review (excluding amount pending State Controller's Office audit release).

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.

- A Controlled Correspondence letter to Senator Loni Hancock was sent to respond to her support letter for the Port of Oakland's three LLAP applications.
- A map and list of LLAP 2011 Program Solicitation Package applicants was presented to the FAIR Committee for review and discussion. This map is a step towards coordinating grant approvals with other grant programs who may have received applications for similar work at the same location or from the same local agency.

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.

- YFFPP drafted a funding agreement for the Goldfields Feasibility study and a work plan was submitted. Staff is working with TRLIA to finalize the agreement.

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 & PROGRAM SOLICITATIONS

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

- LLAP Staff compiled a Draft Director's Decision Memo (DDM) package for management review and approval. The Draft DDM requests approval of the LLAP Draft List of Grantees as a result of the LLAP 2011 Proposal Solicitation Period (PSP). Within the next 4 weeks, the decision memo and draft list must be approved in order to meet the internal deadline of June 2012 to publish the draft list online for a 15-day comment period.
- LLAP 2011 PSP applicants did not submit enough information with their proposals to sufficiently prove the active status of their Labor Compliance Programs. Only work performed under an approved Labor Compliance Plan is eligible for LLAP funds. LLAP staff contacted each applicant, performed an extensive review of project work plans, and coordinated with legal counsel in order to confirm the labor compliance status of applicants. This information was then used to finalize the Draft List of Grantees.

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.
- The Lower Feather River Corridor Management Plan preparation is continuing. The prime consultant, AECOM, has submitted chapters 1-3 in draft for review. A draft Technical Memorandum on strategies for obtaining regulatory permits for flood system maintenance and compatible habitat enhancement was submitted as part of Phase I, and an expanded and updated version of that previous report is now under review by DWR.

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. They required the Department of Finance to sign Form 399, which is pending.
- Staff provided input and review comments on the updated FAPP #1 document.

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.

- Draft Regional Atlases were created for each region.
- FPO and other DFM staff are creating write-ups for the Regional Atlas maps.

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, and 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 61 joint levee inspections and received DFG approval for 47 claims.
- Reimbursements are being processed by staff as DFG approves the claims. To date, staff has initiated reimbursements totaling \$8.1 million.

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.
- On October 25, 2011, Staff mailed Work Agreements to participating districts for signature. To date, staff has received 66 signed agreements from the districts. The signed agreements 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 executes agreements authorizing the work proposed under Project Solicitation Packages (PSPs).

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	37	NEMDC East	47
Marysville	52	Natomas	19
Sutter	37	Bear Creek	32
RD 784	49	Calaveras River	32
Davis	19	RD 404	49
Woodland	20	RD 17	55
American River	49	Stockton Non-Project	39
West Sacramento	99	W. Sac. Non-Project	17
Sacramento River	55	South Sac. Streams	17

Changes shown in bold.

- Overall, ULE is 73% complete.
- The West Sacramento GER (Volumes 1 and 2), the template for all GERs is planned to be finalized in May.
- Drilling occurred in RD 784 along WPIC and is planned for South Sac Streams and RD 17. Some additional drilling will occur in Chico.
- 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.
- All GER's except Bear Creek, Calaveras River, Davis, Deep Water Ship Channel, and South Sac Streams are underway.
- The GER for Woodland was initiated in April 2012.
- Laboratory testing is continuing for some of the urban areas such as all of Stockton, Davis, and Woodland.
- An Independent Consulting Board (ICB) meeting was held in April, 2012. Overall, the ICB is pleased with the ULE process, including QA/QC, but wants to perform a high level review as they are concerned about the vast amount of work and aggressive schedules.

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 the nine regional plans.

- Overall, Non-Urban Levee Evaluations are 57% complete.
- No drilling occurred during this reporting period.
- Laboratory testing is still occurring in several areas.
- 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 and nearly completed.
- GOR's were initiated during April in Wheatland, Gerber, Clarksburg, Knights Landing, Sutter, and RD 2095. These GOR's will support FMO, regional plans, and SJRRP studies.
- GDR's for NULE study areas are ongoing and nearing completion.
- 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.
- Task orders to support FMO critical repairs were prepared during the reporting period.
- An ICB meeting was held in April, 2012. Overall, the ICB is pleased with the NULE GOR process, including QA/QC, but wants to perform a high level review as they are concerned about the vast amount of work and aggressive schedules. In addition, the ICB concurs with the methods that NULE is using to support the FMO critical repairs program.

TECHNICAL REVIEW

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

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

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 2011, 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.

- The public comment period for the Draft 2012 CVFPP ended on May 4, 2012. An informational presentation on the Public Draft of the 2012 CVFPP was made to the Central Valley Flood Protection Board (Board) on December 30, 2011, formally presented to the Board at their January 27 meeting, and released to the public for review on January 2, 2012.
- DWR released the *Public Review Draft Program Environmental Impact Report* (DPEIR) for the 2012 CVFPP on March 6th for a 45-day public comment period, which ended on April 20, 2012. The DPEIR was formally presented to the Board on March 23, 2012. The DPEIR will inform the public and decision makers about potential program-level environmental effects and mitigation measures that may result from implementation of the CVFPP.
- DWR and the Board held four joint public hearings to receive comments on the 2012 CVFPP and the DPEIR in April at locations in Sacramento, Marysville, Stockton, and Woodland. The CVFPP and the DPEIR hearings were separate and scheduled for different times during the day with DPEIR hearings to occur after completion of the Board's CVFPP hearings. DWR staff has begun formulation of responses to comments received on both documents in anticipation of certification of the final PEIR and adoption of the CVFPP in late June.

- DWR participated in a workshop with Board members on April 20th to consider comments received during the April joint public hearings and discuss potential Board recommendations for the plan. DWR and Board staff have collaborated on a process for Board adoption of the 2012 CVFPP and PEIR findings. A Special Board meeting was held on May 11, 2012, where the draft adoption package was presented. Public comments will open on this topic and will be received in the same manner as the Plan comments.
- DWR has posted for public download, the 13 Program Fact Sheets on topics related to the CVFPP at their website
<http://www.water.ca.gov/cvfmp/documents.cfm>.
- The 13 fact sheets concisely summarize the following topics:
 - State Plan of Flood Control Descriptive Document
 - Flood Control System Status Report
 - Central Valley Flood Protection Plan: Geographic Scope
 - Central Valley Flood Protection Plan Organization
 - 2012 Central Valley Flood Protection Plan: Maps of Levee Conditions, Proposed Improvements, and Assets Protected
 - Central Valley Flood Protection Plan: Communications and Engagement
 - Central Valley Flood Protection Plan: Major Physical and Operational Elements of Preliminary Approaches and State System-wide Investment Approach
 - Central Valley Flood Protection Plan: Levee Vegetation Management Strategy
 - Central Valley Flood Protection Plan and Bay Delta Conservation Plan
 - Central Valley Flood Protection Plan and the Delta Plan
 - Central Valley Flood Protection Plan: Rural-Agricultural Community Sustainability
 - Central Valley Flood Protection Plan and San Joaquin River Restoration Program
 - Central Valley Flood Protection Plan: Draft Program Environmental Impact Report
- DWR staff is currently finalizing errata sheets for the 2012 CVFPP as well as Volumes 1 through 1V of the attachments. The errors and omissions within the Draft CVFPP will be incorporated in a revised document. Errors and omissions related to the CVFPP attachments will be addressed in errata sheets only and the documents themselves will not be updated.
- Coordination continued between the DWR staff and USACE on the federal *Central Valley Integrated Flood Management Study* (CVIFMS). USACE has notified DWR staff that the CVIFMS will need to conform to current “3x3x3” guidance for a \$3,000,000 watershed study.

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

Staff attended public hearings on the draft CVFPP on April 5, 6, 9 and 11 to hear public comments relating to the Conservation Framework attachment. Staff also participated in the April 20th CVFPB/DWR workshop to understand CVFPB members perspectives on those comments and how they might be handled in revising the documents.

Conservation Strategy

Staff continues to work on refining and expanding the Conservation Strategy outline. Staff held another meeting of the Conservation Strategy Team to seek input and advice on approaches for developing indicators and measurable objectives.

Conservation Strategy Funding Guidelines

Staff is conducting internal staff-level review of the 2012 Project Solicitation Proposal for the Conservation Strategy Funding Guidelines. Submittal to the Director's office is expected in May 2012, with approval for public release shortly thereafter. These guidelines authorize DWR to spend Proposition 1E money on projects and activities that advance the goals of the Conservation Framework and that will provide mitigation for improvements to State Plan of Flood Control facilities.

Conservation Strategy Outreach

- Staff has developed a draft plan to interview stakeholders about their interests, expectations, and needs related to the developing Conservation Strategy. This includes draft interview questions and potential interviewees. Staff briefed the FAXCT 1 Communication, Coordination, Outreach and Engagement (CCOE) subcommittee to ensure good coordination with similar outreach for regional planning. This briefing also included a summary of recent outreach to agricultural interests.
- Staff is working with DFM to coordinate a session on the Conservation Strategy at the upcoming 2012 Floodplain Management Association Conference.

REGIONAL CONSERVATION PLANNING

Regional Advanced Mitigation Planning (RAMP)

Staff has drafted outlines for the pilot region's Regional Assessment and for the RAMP "How-to" manual. Staff provided presentations on RAMP to a quarterly statewide meeting of Habitat Conservation Supervisors and Managers from the California Department of Fish and Game, to the National Mitigation and Ecosystem Banking Conference and to the annual conference of the Association for Environmental Professionals.

Regional Permitting

Staff has drafted an outline of a system-wide strategy for regional permitting, in consultation with regulatory agencies and other DWR programs. Staff also met with staff from the Yuba-Sutter NCCP/HCP to discuss opportunities for coordinating regional permitting activities.

Regional Planning and Corridor Management Strategies

FES Branch managers met with DFM managers to discuss ways that FES Branch can help support the regional planning effort. FESB provided an expanded list of data sets for ecological topics that could be used in the proposed planning atlases.

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.

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.

No new information this month