

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

By

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FLOOD EMERGENCY RESPONSE (FER)

Flood ER prepares for and responds to flood threats in close coordination with local, state, and federal entities. Preparing for flood response requires continuous data collection, regular flood system inspections and evaluations, forecasts and information dissemination, annual training and exercises, review and replenishment of supplies and equipment, and preseason coordination.

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

Staff is conducting spring levee inspections. Staff continues to work with Central Valley Flood Protection Board staff inspecting and coordinating encroachment permits. The Encroachment Permit database continues to be updated. A program to field-verify the levee log data continues with staff from the Division of Integrated Regional Water Management. Staff continues to coordinate with DWR, USACE, CVFPB, and LMA staff in a number of venues.

Staff continued to improve the Levee Vulnerabilities web-application within the Flood Emergency Response Information Exchange (FERIX) interface.

HYDRO-CLIMATE DATA COLLECTION & PRECIPITATION/RUNOFF FORECASTING

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

As of March 31, statewide hydrologic conditions were as follows: precipitation, 75 percent of average to date; runoff, 60 percent of average to date; snow water content, 5 percent of average to date (5 percent of the April 1 average); and reservoir storage, 70 percent of average for the date. Sacramento River Region unimpaired runoff for Water Year 2015 observed through March 31, 2015 was about 6.9 million acre-feet (MAF), which is about 63 percent of average. In comparison to Water Year 2014, the observed Sacramento River Region unimpaired runoff through March 31, 2014 was about 4.3 MAF, or about 39 percent of average.

On March 31, the Northern Sierra 8-Station Precipitation Index Water Year total was 31.7 inches, which is about 76 percent of the seasonal average to date and 63 percent of an average water year (50.0 inches). During March, the total precipitation for the 8-Stations was 1.0 inch, or about 14 percent of average for the month. Last year on March 31, the Water Year 2014 seasonal total for the 8-Stations was 25.4 inches, or about 61 percent of average.

On March 31, the San Joaquin 5-Station Precipitation Index Water Year total was 13.7 inches, which is about 41 percent of the seasonal average to date and 34 percent of an average water year (40.8 inches). During March, the total precipitation for the 5-Stations was 0.4 inches, or about 7 percent of average for the month. Last year on March 31, the Water Year 2014 seasonal total for the 5-Stations was 15.0 inches, or about 45 percent of average.

Daily Precipitation (in inches) for Selected Stations as of 04/01/2015					
Station	October 1 to Date 2014-2015	% Average	Season to Date 2013-2014	% Average	% Average Oct 1 – Sep 30
Mount Shasta	30.58	86	10.86	30	70
Eureka	27.29	82	14.93	45	68
Redding	20.99	73	15.73	55	61
South Lake Tahoe	8.29	51	10.87	67	41
Sacramento Executive Airport	13.45	83	7.05	44	73
Santa Rosa (Sonoma Co AP)	20.84	65	12.94	40	57
San Francisco	16.04	76	10.20	48	68
Stockton	9.45	78	6.16	51	67
Yosemite	11.39	36	13.12	42	30
Monterey	13.32	94	7.04	50	83
Paso Robles	7.70	67	4.31	38	60
Fresno	4.60	47	4.01	41	40
Bakersfield	4.53	81	1.81	32	70
Death Valley	1.05	60	0.89	51	44
Los Angeles	7.33	55	5.39	40	49
Riverside	3.85	36	1.51	14	31
Palm Springs	2.07	46	0.87	19	36
San Diego	6.51	71	4.37	48	63

Key Reservoir Storage (1,000 AF) as of 03/31/2015								
Reservoir	River	Storage	Average Storage	% Average	Capacity	% Capacity	Flood Control Encroachment	Total Space Available
Trinity Lake	Trinity	1,191	1,927	62	2,448	49	---	1,257
Shasta Lake	Sacramento	2,689	3,691	73	4,552	59	-1,863	1,863
Lake Oroville	Feather	1,794	2,696	67	3,538	51	-1,369	1,744
New Bullards Bar Res	Yuba	602	701	86	970	62	-194	364
Folsom Lake	American	572	628	91	977	58	-129	405
New Melones Res	Stanislaus	553	1,510	37	2,400	23	-1,485	1,867

Don Pedro Res	Tuolumne	893	1,483	60	2,030	44	-797	1,137
Lake McClure	Merced	93	565	16	1,032	9	-643	932
Millerton Lake	San Joaquin	205	366	56	520	39	-316	315
Pine Flat Res	Kings	185	564	33	1,000	18	-726	815
Isabella	Kern	46	201	23	568	8	-315	522
San Luis Res	(Offstream)	1,354	1,846	73	2,041	66	---	685

The latest National Weather Service Climate Prediction Center (CPC) long-range 1-month precipitation outlook for April 2015, issued March 31, 2015, suggests equal chances of wet or dry conditions for all of California.

SNOWMELT & SEASONAL VOLUME RUNOFF FORECASTING

Snow Surveys and Snow Course Maintenance

The results of the May snow surveys reveal a nearly depleted snow pack with only a couple dozen snow courses actually showing snow, from over 160 measured.

The electronic snow sensors, as of the morning of May 13, 2015, stands at the following (based on snow sensors):

Region	Snow Water Equivalent (inches, April 8)	% of Average (May 13)
Northern	0.2	2
Central	0.2	2
Southern	0.1	0
Statewide	0.2	2

Of the 98 snow sensors reporting, only 14 are reporting snow water content, and of those only three are reporting snow water content greater than one inch.

The snow will be all but melted out within a week or so, should average temperatures resume.

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.

Bulletin 120 and Water Supply Index Forecasts

The May 1, 2015 Water Supply Index (WSI) and Bulletin 120 (B120) forecasts can be summarized as follows:

The forecasts are posted at:

WSI: <http://cdec.water.ca.gov/cgi-progs/iodir/wsi>

B120: <http://cdec.water.ca.gov/cgi-progs/iodir?s=b120>

The projected median April-July runoff in the major Sierra river basins ranges from 3 percent on the Tule River to 44 percent on the Pit River. Forecasted median Water Year runoff in the Sierra ranges from 7 percent for the Tule River to 61 percent for the Sacramento River above Bend Bridge.

For the runoff forecasts made by the Snow Surveys Section (which excludes the Scott, Klamath, and Owens Rivers), all median forecasts except those for the Trinity River, Sacramento River at Delta, and the Cosumnes River predict new historic low April-July runoff volumes. In the cases of the San Joaquin River inflow to Millerton Lake, the Kings River below Pine Flat Reservoir, and the Kern River inflow to Lake Isabella, the April-July forecasts are about **half** of the lowest unimpaired runoff on record.

The May 1, 2015 WSI forecast indicates a Critical classification for the Sacramento Valley Water Year Type and for the San Joaquin Valley Water Year Type.

Sacramento River Unimpaired Runoff Water Year Forecast (50 percent exceedance)	9.0 MAF (49 percent of average)
Sacramento Valley Index (SVI) (50 percent exceedance)	4.0 (Critical)
San Joaquin Valley Index (SJI) (75 percent exceedance)	0.7 (Critical)

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 this month.

FLOOD EMERGENCY PREPAREDNESS & OPERATIONS

This element includes preparing DWR to respond to flood emergencies by providing emergency response training, flood fight training, coordinating emergency preparedness endeavors with the various flood response partners, analyzing season flood threats, and assuring the staffing and function of the State-Federal Flood Center to coordinate state response to flood events.

No new information this month.

Delta Emergency Planning

The Flood Operations Branch hosted a Delta focused table top exercise on April 22 involving over 80 DWR staff from State Water Project Operations Control Office, Delta Field Division, Division of Safety of Dams, Flood Operations, Division of Engineering, Department Operations Center (Executive DOC), and other offices. Flood Operations staff is working to develop an After Action Report on this exercise. The Flood Operations Branch has completed a first draft of its DWR-USACE Delta Emergency Operations Integration Plan and is soliciting comments.

Delta Emergency Response Grants

Staff continued to manage executed contracts with local agencies and is currently requesting additional funding for the Contra Costa County award prior to execution of the agreement.

Delta Flood Emergency Facility Improvement Projects

Applications have been submitted for the Rio Vista site, which include a 404 Nationwide Permit, 401 Water Quality Certification, and an encroachment permit for City tie-in access ramp. Applications have been submitted for the Webber Stockton Site, which include a 404 Nationwide Permit, 401 Water Quality Certification, a 1600 Streambed Alteration Agreement, and a PG&E service permit. Staff continues to address supplemental requests from regulatory agencies related to these permit applications.

Delta Flood Emergency Preparedness, Response, and Recovery Program

Staff is improving the Delta Emergency Response Tool which estimates the cost and time of repairs and export reductions caused by levee damage or failure in the Delta. Improvements include the ability to simulate real-time operations and current hydrologic forecasts.

FLOOD EMERGENCY RESPONSE GRANTS

Statewide Flood Emergency Response Grants

Staff continued to manage the 14 executed grant contracts with local agencies to improve their flood emergency response capabilities. Staff has provided initial funding recommendations to the Director for approval for the second round of the Statewide Flood Emergency Response Grant. Following the Director's approval, there will be a 30-day public comment period.

Delta Emergency Response Tabletop Exercise

Staff controlled and evaluated the Delta Emergency Response Tabletop Exercise on April 22, 2015. During the exercise, staff presented the results from the Delta Emergency Response Tool for the given scenario. Staff is preparing the After Action Report for the exercise.

FLOOD MANAGEMENT PLANNING (FMP)

FMP formulates strategies, plans, and investment priorities for implementation of flood management projects and development of flood risk management policy. It includes the Statewide Flood Management Planning Program and the Central Valley Flood Management Planning Program, which developed California's Flood Future: Recommendations for Managing the State's Flood Risk (California's Flood Future) and the 2012 Central Valley Flood Protection Plan (CVFPP).

CENTRAL VALLEY FLOOD MANAGEMENT PLANNING (CVFMP)

The CVFMP focuses on working with stakeholders to formulate plans for reducing flood risk and increasing the resiliency of the State Plan of Flood Control (SPFC). As recommended in the CVFPP, this program is currently implementing major planning efforts: locally led RFMP, which is working with more than 180 local entities to prepare regional flood management plans; state led Basin-wide Feasibility Studies (BWFS); the Central Valley Flood System Conservation Strategy (CS); and the CVFPP Financing Plan. Each of these planning efforts will inform the 2017 update of the CVFPP, the first five-year update as required by the California Water Code (CWC).

Basin-wide Feasibility Studies

Two basin-wide feasibility studies: The Sacramento River Basin Feasibility Study and the San Joaquin River Basin Feasibility Study were initiated in September 2012. DWR has formulated a draft array of system configurations based on study objectives and evaluations of individual system elements. The draft array of system configurations is being evaluated consistent with the State Systemwide Investment Approach (SSIA). The draft system configurations have been shared with a wide range of stakeholders and will be further revised based on stakeholder input and technical evaluations currently underway.

The BWFS is scheduled for completion in mid-2016. The Regional Flood Management Plans (RFMPs) and draft Conservation Strategy are being used to guide formulation of potential ecosystem features associated with flood risk reduction improvements. The Central Valley Flood Planning Office (CVFPO) is coordinating with RFMPs, NGOs, resource agencies, USACE and other stakeholders and related programs in an iterative planning process that will further refine potential multiple-benefit opportunities within the expanded footprints of the system configurations. In the Sacramento Basin, the Yolo Bypass Feasibility Study has been initiated to accelerate multidisciplinary planning efforts within the Yolo Bypass as a subset of the Sacramento BWFS. Yolo Bypass planning efforts are being coordinated in alignment with the Yolo Bypass Salmonid Habitat Restoration and Fish Passage Project, Bay-Delta Conservation Plan, and local planning efforts of FloodProtect. A CVFPP workshop was held on the Yolo Bypass Feasibility Study on May 8th.

Revised system configurations have been formulated and shared with a diverse range of CVFPP stakeholders and technical evaluation of these system configurations is ongoing. The system configurations are being evaluated across a wide range of benefits, including flood performance, ecosystem benefits, water supply, recreation, and other IWM benefits, costs,

and alignment with key partners. The next milestone for the BWFS is the selection and recommendation of a State Preferred Plan in each basin, which is scheduled for late 2015.

Basin-Wide Feasibility Study Atlases

Sacramento and San Joaquin Basin –Wide Feasibility Study Atlases are being developed to identify a range of maximum flows that can be safely conveyed through each of the State Plan of Flood Control bypass systems. These Atlases will be living documents linking system performance to geospatial data. 100- and 200-year peak flows are being estimated using the Central Valley Hydrology Study (CVHS) hydrology and results will be compared to USACE 1957 design flows and design profiles for the Sacramento Basin and 1955 design flows and design profiles for the San Joaquin Basin. These Atlases will demonstrate performance of the system based on key assumptions and initial configurations for both basins.

Regional Flood Management Planning (RFMP) Phase 2

RFMP Phase 2 is intended to extend the constructive collaboration, coordination, and meaningful engagement developed in Phase 1 through adoption of the 2017 CVFPP update. All six RFMP amendments have been executed this month by DGS, each agreement having been amended for time, budget, and scope. RFMP Phase 2 activities through June 2017 include Project Management, Coordination, Communications and Engagement, Regional Governance, and developing strategies to deal with Institutional Barriers. SPFC coordinators are currently working with each region to develop their yearly work plan which will describe the budget and activities for this first year of RFMP phase 2 funding.

Public Engagement

Technical briefings are being conducted for technical representatives of each of the 6 RFMP's to provide transparency in BWFS technical approach, methodology, tools, and assumptions. Sacramento BWFS technical team met on May 5th and May 12th with technical representatives of the three Sacramento basin RFMPs to brief them on climate change, hydrology, and hydraulic analyses activities. A similar technical briefing will be provided to technical representatives of all three San Joaquin RFMP's on May 28th.

The DWR BWFS Planning Team met with Feather River and Mid-Upper Sacramento River RFMP stakeholders on April 29 to brief on the latest progress and receive feedback on the Sacramento Basin-wide Feasibility Study. BWFS staff provided a presentation to the Upper San Joaquin RFMP on their work formulating a multi-benefit flood management project for the City of Firebaugh in coordination with local agencies and provided a BWFS update on April 29th. Recent progress on the San Joaquin BWFS plan formulation activities, preliminary technical results and findings for various elements/projects were discussed with Lower San Joaquin/Delta South RFMP stakeholders at a May 14 meeting. The BWFS Planning Team met with CVFPB staff on April 30 to present the latest progress and receive feedback on the Sacramento Basin-wide Feasibility Study.

CVFPO staff makes monthly presentations on the progress of development of the 2017 CVFPP at each monthly CVFPB meeting. The presentation can be viewed via archived video available at the CVFPB website CVFPB.ca.gov.

FLOODPLAIN RISK MANAGEMENT (FRM)

FRM promotes prudent management of floodplains to reduce flood risks by working closely with local governments and federal agencies including the Federal Emergency Management Agency (FEMA) and USACE. Policies, guidance documents, and technical products are developed to guide actions taken in floodplains. An important program of successful floodplain risk management includes educating the general public about flood risks so they can plan, prepare, and take individual actions to reduce flood risk for themselves, families, and property.

CALIFORNIA FLOODPLAIN RISK MANAGEMENT (CFRM)

The CFRM works with individuals, communities, and professionals to reduce the risk of flooding. It is a comprehensive integrated program that preserves and enhances the natural and beneficial functions of floodplains, and identifies opportunities to minimize the impacts of flooding. The goal of CFRM is to reduce the frequency and severity of flood loss, loss of life, damage to property, and damage to the natural resources of floodplains. One of the basic foundations of CFRM is the identification and delineation of flood hazard areas within the state. This program promotes awareness of flood risks through risk assessment and risk mapping; the community assistance program; Flood Risk Notification (FRN); floodplain management mitigation planning; and mitigation cost recovery.

FLOODPLAIN MANAGEMENT ASSISTANCE

Floodplain Management Assistance provides statewide technical support to federal, state and local agencies as well as the public for flood hazard maps, levee data, and the National Flood Insurance Program (NFIP) activities including the Community Rating System (CRS). As part of the NFIP Community Assistance Program (CAP) grant-partnership with the Federal Emergency Management Agency (FEMA), DWR conducts audits of communities participating in the NFIP, provides technical assistance to the public, and trains community officials.

- Staff conducted a Substantial Damage/Substantial Improvement Workshop for Butte County on May 13, 2015.

Flood Risk Notification (FRN)

No new information this month.

Coastal Floodplain Evaluation and Planning

In March, DWR working with the California Ocean Science Trust hosted a floodplain management and sea level rise focus group meeting to discuss incorporating Scripps Institution of Oceanography (via NOAA funded grant) sea level rise information into DWR's FPM Community "Quick Guide" 2007 document, as an appendix. The Ocean Science Trust, a nongovernmental organization, is working with DWR and federal, state and local stakeholders to develop a "Technical Methods Manual" on how to adapt "existing conditions" FEMA coastal flood insurance rate maps to reflect forecasted sea level rise. Scripps is updating sea level rise forecasts at five California locations using National Research Council west coast sea level rise estimates. The NOAA grant was awarded to OST and Scripps, and will result in the production of three products: a coastal sea level rise appendix to the DWR Quick Guide; a Technical Methods Manual that will assist floodplain managers and coastal planners; and a comprehensive report that links the Quick Guide Coastal Appendix with the Technical Methods Manual. The three reports will be completed by the end of 2015. The next FPM/SLR Focus Group meeting will be held on June 18, 2015. The grant also requires dissemination of the information through workshops.

CONSERVATION STRATEGY

The Central Valley Flood Protection Act of 2008 directs DWR to achieve multiple objectives through implementation of the CVFPP. Among these are environmental objectives to improve natural dynamic hydrologic and geomorphic processes; habitat quantity, diversity, and connectivity; and native species populations. The CS describes DWR's approach for achieving these objectives. It outlines actions to improve programmatic environmental permitting, provide advance mitigation for flood projects, improve systemwide vegetation management, integrate environmental stewardship into multi-benefit flood improvement projects, promote agricultural stewardship, and improve the quality of scientific and planning information needed for wise decision making.

Conservation Strategy Document:

The draft Conservation Strategy, Executive Summary and eleven Appendices are posted on FESSRO's public website. DWR expects to release the final appendix and announce a 60 day public review period for the draft Conservation Strategy and all related documents in May.

Measurable Objectives Technical Memorandum:

DWR received additional comments in April. It expects to finalize the Measurable Objectives Development Technical Memorandum in May.

Workshops:

DWR is planning an integrated CVFPP public workshop, including the Conservation Strategy, for late June.

STATEWIDE INTEGRATED FLOOD MANAGEMENT PLANNING (SIFMP)

Statewide Integrated Flood Management Planning (SIFMP) has identified flood risks facing Californians and proposed mitigation measures to manage the risks. Working closely with USACE and more than 140 public agencies, SIFMP compiled comprehensive information about exposure to flood risk in each of California's counties, and about specific projects and associated costs that local agencies are planning to implement to reduce flood risks to their communities. Using this information, SIFMP presented recommendations to improve flood management in a comprehensive report titled California's Flood Future: Recommendations for Managing the State's Flood Risk. The report identified that more than 7 million Californians, or one in five, live within a 500-year level of flood risk floodplain, and approximately \$580 billion in assets (crops, structures, and public infrastructure) are exposed to flooding. This estimate does not include the impacts of future development, population change, climate change, costs due to loss of major infrastructure and critical facilities, or losses to commerce. The impact of a major flood would be devastating to California and the nation.

On October 30, 2014, the Governor's Office released the California Water Plan Update 2013 which includes flood related risk reduction management actions. Information developed for *California's Flood Future* was used to create flood management content for the 2013 update of the *California Water Plan*. Currently, the SIFMP program is working to further define ways to implement the *California's Flood Future* recommendations. A primary focus is on development of funding strategies for flood risk management throughout California within the context of overall water management investment. A report is being developed that will describe the state's investment priorities and finance options necessary to support the programs and projects that help improve flood management and reduce residual flood risk, as detailed in *Action 8* of the *California Water Action Plan*, with a draft to be produced in early 2015. The program has wrapped up an information gathering effort, in which approximately 240 flood and other water management agencies were interviewed. Work continues on creating a draft report titled *Investing in California's Flood Future* and several technical attachments.

FLOOD RISK REDUCTION PROJECTS (FRRP)

FRRP works in coordination with local and federal agencies to implement new flood projects; provide funding that enables local agencies to repair and improve levees and other flood management facilities statewide; provide advanced mitigation for the SPFC to aid project delivery; and enhance ecosystems associated with the flood system. A primary responsibility of this program is to work closely with USACE.

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 of 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 for the project to result in no net loss of Delta habitat.

Delta Levees Maintenance Subvention Program

This is a cost-share program providing financial assistance to local agencies for maintenance, rehabilitation, and improvement of approximately 700 miles of project and non-project levees. Due to the public-private partnership nature of this program, it provides significant improvement to critical levees at a very reasonable cost. Staff, on behalf of the Board initiates and manages work agreements to fund levee maintenance and rehabilitation. The current status of work agreements is as follows:

Work Agreements for FY 2013-2014

- The Board's Executive Officer executed 67 work agreements.
- Staff received 62 final claims by the November 1, 2014 deadline totaling approximately \$12 million in work.
- Staff conducted 62 joint levee inspections with the California Department of Fish and Wildlife and local agencies.
- Claims are being reviewed for eligibility and completeness. The eligible amounts will be reimbursed to the local agencies after the review.

Work Agreements for FY 2014-15

- On October 24, 2014, the Board approved the FY 2014-15 funding plan for \$12 million.
- Work agreements are due June 30, 2015.
- Final claims for work completed July 1 through June 30 are due to DWR by November 1, 2015.

DELTA LEVEES SPECIAL FLOOD CONTROL PROJECTS

No new information this month.

DELTA LEVEE SYSTEM INTEGRITY (DLSI)

This program focuses on levee repair, maintenance, and improvement within the Sacramento-San Joaquin Delta. Funding is also available for planning, research, and habitat enhancement. The program includes the following components:

Delta Stewardship Council (DSC) Interagency Agreement (IA)

The DSC IA funds the Delta Levees Investment Prioritization Study. The DSC has been collecting information and developing the framework for its investment strategy tool. The first draft Technical Memorandums (TMs) have been received by the DSC for review. The TMs supports the reports that are deliverables for the IA. The TMs and Delta Levees Issue Paper are available on the DSC website. The DSC held two public workshops (Stockton and Walnut Grove) in April and the DSC has convened two expert panels to assist with the development of Delta Levees Investment Prioritization Study. The DSC operates an email "Listserve" for the Delta Levees Investment Strategy Program to keep stakeholders up to date.

Delta Protection Commission (DPC) Interagency Agreement (IA)

The DPC IA funds the study to investigate the feasibility of a statewide benefit assessment district for the Delta.

USACE/BOARD PROJECTS

The Central Valley Flood Protection Board participates with the United States Army Corps of Engineers (USACE) to ensure that state flood management needs and mandates are met, and provides required non-federal cost-share funds and technical assistance to repair or upgrade the Central Valley's flood management systems. These congressionally authorized State Plan of Flood Control (SPFC) projects are being constructed to improve flood protection for urban or urbanizing areas to a 200-year level of flood protection; reduce flood risk in rural areas; reduce the risk to life, infrastructure, and property; and reduce the state's liability. The following are USACE/Board projects:

American River Common Features (ARCF) Project

The ARCF project improves levee systems along the American and Sacramento Rivers.

- Construction of Site L10, R7 and L7 are ongoing.
- NEMDC Extension Notice to Proceed (NTP) was issued on April 24, 2015; contractor mobilization is scheduled for May 14, 2015.

American River Watershed – Natomas Basin Project

The Natomas Basin Project was approved by President Obama in the Water Resources Reform and Development Act in June 2014. It includes significant improvements to the Natomas Basin levees resulting in a minimum of 100-year level of flood protection for the basin.

- Project Partnership agreement (PPA) for construction of the Natomas Basin project is pending USACE HQ release of the Water Resources Reform and Development Act implementation guidance. Earliest expected date for the implementation guidance is June 2015 leading to an executed PPA by September 2015.
- Phase 1 Reach I 90% design is complete; design completion schedule is May 2015.

Folsom Dam Modifications Joint Federal Project (JFP)

The purpose of the JFP is to construct an auxiliary spillway at Folsom Dam that will work in conjunction with the existing spillways to help the Sacramento region achieve a 200-year level of flood protection. The estimated construction completion date is October 2017.

- Construction and Design – The project status as of April 1, 2015, is as follows:

Phases	Planning & Design	Construction
Preconstruction Engineering and Design	100%	N/A
Phase III – Control Structure	100%	95%
Phase IV – Approach Channel, Chute, and Stilling Basin	100%	44%

Phases	Planning & Design	Construction
Phase V – Site Restoration	43%	8%
Project Overall	93%	67%

- Phase V – USACE evaluating Contractor’s proposals for the Right Bank Stabilization work. Anticipate to award in May 2015, with construction starting in June 2015.

Folsom Dam Raise Project

The Folsom Dam Raise Project will provide flood damage reduction by increasing the reservoir storage capacity by 3.5 feet and performing structural modifications to the existing Folsom Dam tainter gates for operational safety.

No new information this month.

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

The Lake Kaweah Enlargement Project was completed in 2006, and the remaining administrative, financial, and turnover work is planned to be complete by September 2014.

No new information this month.

Marysville Ring Levee Improvement Project

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

Permanent easement and maintenance agreement (the agreement) between the Union Pacific Railroad and the Marysville Levee District, for construction of Phase 4A berm on the Union Pacific Railroad property, is scheduled to execute by May 31, 2015; the agreement is needed to begin berm construction this fall.

South Sacramento County Streams Project

The South Sacramento County Streams Project will increase the flood protection level for south Sacramento County’s urbanized area and an area to the south and east of the City of Sacramento.

- SAFCA’s consultants completed the drainage analysis for the Florin Creek project in early April 2015. The analysis findings were submitted to USACE for incorporation of proposed modifications in the contract before the bid solicitation process.
- Permit-To-Enter (PTE) from Sacramento County was signed on April 30, 2015. With PTE in place, USACE is proceeding to solicit bid proposals for the construction contract on May 11, 2015.

USACE/BOARD STUDIES

The Board participates with USACE to ensure that state flood management needs and mandates are met, and provides required non-federal cost share funds and technical assistance for studies to repair or upgrade the Central Valley's flood management systems. These studies identify recommended project alternatives that lead to congressionally authorized projects. These multi-benefit projects will improve flood protection for urban or urbanizing areas; reduce flood risk in rural areas that are protected by the facilities of the State Plan of Flood Control (SPFC); reduce the risk to life, infrastructure, and property; and reduce the state's liability. The following are USACE/BOARD studies:

American River Common Features (ARCF) General Reevaluation Report (GRR)

The GRR will provide a 200-year level of flood protection for the Lower American River, downstream of the Folsom Dam, the Sacramento River (downstream of the Natomas Cross Canal), and the Natomas Cross Canal.

- USACE held four public outreach meetings in April 2015. Over 150 people attended these public meetings; overall public perception was positive.
- Comments period for the American River GRR and the Draft Environmental Impact Statement – Environmental Impact Report (EIS/EIR) ended on May 4, 2015. USACE will incorporate comments received on these draft documents and initiate Agency Decision Milestone (ADM) process, scheduled in July 2015, to finalize these documents. Final GRR and EIS/EIR will be presented to CVFPB – CVFPB is the CEQA-lead agency.

Central Valley Integrated Flood Management Study

This Study will identify federal interest in the Sacramento River Basin by identifying opportunities to reduce flood risk and protect floodplain and environmental assets.

DWR and CVFPB staff attended the Vision Milestone Vertical Team Briefing for the Central Valley Integrated Flood Management Study (CVIFMS) on May 11, 2015. Representatives from SPK, SPD and HQUSACE attended.

Cache Creek Settling Basin Project GRR

This settling basin was initially constructed in 1937 and modifications were completed in 1993. As a part of the federal authorization for the most recent improvements completed in 1993, the project authorization specified additional improvements to be considered at year 25, or when the sediment trapping efficiency fell below 30%.

No new information this month.

Lower San Joaquin River Feasibility Study (LSJRFS)

The LSJRFS will evaluate feasible flood risk reduction alternatives focused in the Stockton, Lathrop and Manteca areas, identify a project having federal interest that is consistent with the Central Valley Flood Protection Plan and complete a Final Chief's Report.

No new information this month.

Merced County Streams Project – Bear Creek GRR

This project will evaluate options to increase the Merced urban area level of flood protection from a 50-year to 200-year event.

No new information this month.

Sutter Basin Feasibility Study

This multipurpose study will address levee improvement measures for existing levee systems protecting Yuba City and the surrounding communities in the Butte/Sutter basin, as well as environmental restoration and recreation opportunities.

No new information this month.

Sacramento River Bank Protection Plan Phase 3 GRR

The GRR will evaluate flood risk reduction alternatives within the Sacramento River Flood Control Project area, identify a project having federal interest that is consistent with the Central Valley Flood Protection Plan and complete a Final Chief's Report.

No new information this month.

West Sacramento Project GRR

The GRR will evaluate flood risk reduction alternatives within the West Sacramento area, identify a project having federal interest that is consistent with the Central Valley Flood Protection Plan and complete a Final Chief's Report.

USACE completed the Agency Decision Milestone conference (ADM) on May 4, 2015. ADM confirmed the Tentatively Selected Plan (TSP) that includes the Southport setback levee. Next is feasibility design on TSP, before the final report milestone in September 2015.

Woodland/Lower Cache Creek Feasibility Study

This study is a state, USACE, and the City of Woodland coordinated effort to investigate the feasible 200-year level flood protection and risk reduction alternatives and opportunities for floodplain restoration, recreational enhancements, and ecosystem restoration for the City of Woodland and surrounding areas. The study will continue efforts, suspended in 2004, after significant local resistance to the USACE-selected flood barrier option alternative halted the study.

No new information this month.

Yuba River Basin Project GRR

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

No new information this month.

URBAN FLOOD RISK REDUCTION PROGRAM (UFRR)

This program was created to address state investment priorities as a result of the adoption of the Central Valley Flood Protection Plan (CVFPP). UFRR supports implementation of regional flood damage reduction projects for urban and urbanizing areas protected by SPFC facilities in the Sacramento-San Joaquin Valley to achieve at least a 200-year level of flood protection. UFRR provides cost-share funding to local agencies to repair and improve levees and facilities of the SPFC. UFRR is based on competitively awarded grants and directed funding. Projects must be multi-benefit flood projects consistent with the CVFPP and State Systemwide Investment Approach. The program evolved from the Early Implementation Program (EIP) developed in 2007 in response to the passage of Propositions 1E and 84. The following projects were funded through EIP:

Knights Landing Levee Repair Project

This project will repair 3.4 miles of levee along the left (east) bank of the Knights Landing Ridge Cut back to the USACE 1957 Design Profile.

Construction bids were opened on May 5, 2015; five companies bid on this construction project. The lowest bid was \$4.6 million, by Magnus Pacific. Contract award is pending USACE issuance of Section 404 permit, expected in May 2015. Construction start expected in June 2015.

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

RD-17 levees have unacceptably low safety factors due to under-seepage and through-seepage. These issues are being addressed by constructing seepage berms, slurry walls, and a setback levee to increase the flood protection level for south Stockton, Lathrop, and Manteca.

No new information this month.

Three Rivers Levee Improvement Authority (TRLIA) – Feather River Levee Improvement Project

This project will result in a 200-year flood protection level for Highway 65 and 70, and will also improve flood protection for 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 on-site mitigation, agricultural use, and habitat.

No new information this month.

TRLIA – Upper Yuba River Levee Improvement Project

This project will result in a 200-year level of flood protection for Highway 65 and 70, and will also improve flood protection for Olivehurst, Linda, Plumas Lake, Marysville, and Yuba City. This project includes a portion of the Yuba River's south levee.

No new information this month.

SAFCA Levee Accreditation Project

SAFCA proposes levee improvements along 3-4 miles of levees along Arcade Creek and NEMDC in the Sacramento North area and 5-6 miles of levees along the Sacramento River between downtown and the town of Freeport. Improvements are required to meet requirements under the Urban Levee Design Criteria Program (ULDC) and FEMA standards. This project is still under review for state funding from DWR.

- Draft Environmental Impact Report (DEIR) was released for public review and comment on March 18, 2015. Comments were accepted until May 1, 2015.
- SAFCA, USACE, CVFPB, and DWR held four joint public meetings to inform the community about this project on April 8, 9, 15 and 17. Over 150 people attended these public meetings; overall public perception was positive.

Sacramento Area Flood Control Agency (SAFCA) – Natomas Cross Canal Project

This Natomas Levee Improvement Program project will install cutoff walls to prevent seepage, under-seepage, and raise the levee to improve the Natomas Basin's flood protection and create a 200-year minimum flood protection level.

No new information this month.

SAFCA-Sacramento River East Levee Project

This Natomas Levee Improvement Program project will install cutoff walls to prevent seepage, under-seepage, and raise the levee to improve the Natomas Basin's flood protection and create a 200-year minimum flood protection level. SAFCA plans to complete components to element 12A (RM 67) along the Sacramento River and have the USACE complete the remaining work.

No new information this month.

San Joaquin Area Flood Control Agency (SJAFC) – Smith Canal Closure Structure Project

The Smith Canal Closure Project will construct a miter gate at the mouth of the Smith Canal on the San Joaquin River/Stockton Deep Water Ship Channel to provide a 100-year level of flood protection to a portion of the City of Stockton. The state share of this project's design cost is \$2,412,500.

No new information this month.

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

The California Highway Patrol Academy, Rivers, and I-Street Bridge projects are part of the North Area Plan. All construction is complete for these sites. These projects correct through-seepage and foundation under-seepage that have excessive hydraulic gradients, embankment instability, and erosion problems. All three projects are designed to provide a 200-year flood protection level for about 47,000 residents.

No new information this month.

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

FRWLP repairs approximately 35 miles of levees along the west bank of the Feather River from the Thermalito Afterbay to the north end of Star Bend. This project includes construction of slurry walls and seepage berms to protect Gridley, Biggs, Live Oak, Yuba City, and parts of Sutter and Butte counties. FRWLP's highest priority segment is identified as Project Area C. DWR chose Project Area C for the first construction contract.

USACE authorized SBFCA to return the cultural materials to the United Auburn Indian Community, thereby averting a potential shutdown of the project on April 17, 2015. USACE and SBFCA are revising the Programmatic Agreement and the Historic Properties Treatment Plan to incorporate measures to prevent future reoccurrences of these issues. Pending the development of these agreements, the Native American Heritage Commission may ask the State Attorney General for an injunction to stop the project on May 13, 2015.

SMALL COMMUNITIES FLOOD RISK REDUCTION (SCFRR) PROGRAM

This program provides local assistance to small communities in the Central Valley located in "high" or "moderate to high" flood risk areas. SCFRR program assists small communities by cost sharing feasibility studies, design, and construction of projects to improve flood protection to 100-year level of flood protection.

Colusa County

DWR met with Colusa County, the City of Colusa, and the Local Maintaining Agency, on April 2, 2015. The purpose of this meeting was to relay DWR's available geotechnical related data, and to discuss alternative levee alignments for potential future projects.

FLOOD CORRIDOR PROGRAM (FCP)

The FCP is a statewide grant program in which non-structural flood risk reduction is the primary goal, with habitat and agricultural conservation incorporated as prominent program components. The goal of FCP is to reduce flood risk by enabling waterways to function more naturally, while enhancing native wildlife habitat, and preserving agricultural uses. To do this, the program provides grant funding to local agencies statewide for FRRP that improve floodwater conveyance and transitory floodwater storage, using primarily non-structural methods while preserving or enhancing agricultural production and/or wildlife habitat.

Flood Corridor Program – Magpie Creek Floodplain Conservation Project – The California Department of Finance contacted DFM on April 22, 2015, to initiate a project audit. FPO program management and staff are preparing documentation for the initial inquiry.

LOCAL LEVEE ASSISTANCE PROGRAM (LLAP)

The LLAP was created to help fund projects implemented by flood management agencies, mainly outside of the Sacramento-San Joaquin Delta. The goals of LLAP include minimizing flood risk; identifying deficiencies in flood control structures and levees; and eliminating high flood insurance costs related to FEMA unaccredited levees. LLAP projects must fulfill at least one of the two goals of inspection and evaluation of the integrity and capability of existing flood control project facilities; or improvement, construction, modification, or relocation of flood control levees, weirs, or bypasses, including repair of critical bank and levee erosion.

No new information this month.

YUBA-FEATHER FLOOD PROTECTION PROGRAM

The Yuba-Feather Flood Protection Program provides Proposition 13 financial assistance to local entities that can demonstrate nonstructural flood management projects that show a peak flood flow reduction, flood stage, and flood risk in the Yuba and Feather River and Colusa Basin (including wildlife habitat enhancement and/or agricultural land preservation).

No new information this month.

LEVEE EVALUATIONS (NON-URBAN AND URBAN)

Levee Evaluations consists of urban levee evaluations (ULE) and non-urban levee evaluations (NULE). The program was developed to evaluate current levels of performance for SPFC levees and associated non-SPFC levees whose failure would flood areas protected by the SPFC. Information and data obtained under this effort will assist flood managers at federal, state, and local levels in understanding overall flood risks and support them to better manage those risks in areas of the Central Valley protected by the SPFC.

Urban levees provide protection to developed areas with a population of at least 10,000 people. ULE is evaluating 415 miles of levees in 27 study areas to determine if they meet defined urban geotechnical criteria and when not, identifying remedial measures and providing cost estimates to meet the urban criteria.

Non-urban levees provide protection to agricultural areas and developed areas with a population of at least 1,000 to less than 10,000 people. NULE is evaluating 1,231 miles of levees in 22 study areas to determine if they meet defined non-urban geotechnical criteria at current design water surface elevations (USACE 1955/57 water surface profiles) When the criteria is not identified, remedial measures and cost estimates will be provided.

The unprecedented program in both scope and magnitude was successfully completed on April 30, 2015. This program assessed 1646 miles of levees in California's Central Valley. A

guidance document for assessing the levees in a consistent manner was completed and will serve as a template for future USACE engineering manual updates. The program also completed a seismic vulnerability study of the urban levees including a memorandum for performing such evaluations.

The overall status of the ULE program intermediate and final deliverables for the 27 urban levee study areas is shown in the table below:

No.	Urban Study Area	Historic Data Collection (TRM)	Initial Field Investigations (P1GDR)	Preliminary Analyses	Supplemental Field Investigations (SGDR)	Final Analyses & Geotechnical Evaluation Report (GER)
1	Chico	Done	Done	Done	Done	Done
2	Marysville	Done	Done	Done	Done	Done
3	RD 784	Done	Done	Done	Done	Done
4	Feather River West Levee	Done	Done	Done	Done	Done
5	Sutter Bypass Wadsworth	Done	Done	Done	Done	Done
6	American River	Done	Done	Done	Done	Done
7	Sacramento River	Done	Done	Done	Done	Done
8	Davis	Done	Done	Done	Done	Done
9	Woodland	Done	Done	Done	Done	Done
10	NEMDC East	Done	Done	Done	Done	Done
11	NEMDC West	Done	Done	Done	Done	Done
12	Natomas North	Done	Done	Done	Done	Done
13	Natomas South	Done	Done	Done	Done	Done
14	West Sacramento	Done	Done	Done	Done	Done
15	Deep Water Ship Channel [DWSC]	Done	N/A	N/A	Done	Done
16	South Sac Streams	Done	N/A	Done	Done	Done

No.	Urban Study Area	Historic Data Collection (TRM)	Initial Field Investigations (P1GDR)	Preliminary Analyses	Supplemental Field Investigations (SGDR)	Final Analyses & Geotechnical Evaluation Report (GER)
17	RD 404	Done	Done	Done	Done	Done
18	RD 17	Done	Done	Done	Done	Done
19	Bear Creek	Done	Done	Done	Done	Done
20	Calaveras River	Done	Done	Done	Done	Done
21	Lincoln Village	Done	N/A	N/A	Done	Done
22	Brookside	Done	N/A	N/A	Done	Done
23	Rough and Ready	Done	N/A	N/A	Done	Done
24	Boggs Tract	Done	N/A	N/A	Done	Done
25	Shima Tract	Done	N/A	N/A	Done	Done
26	Smith Canal	Done	N/A	N/A	Done	Done
27	Walthall Slough	Done	N/A	N/A	Done	Done
28	Bear Creek Wing	Done	N/A	N/A	Done	Done (SJAFCA areas combined into one GER)
29	Walker Slough	Done	N/A	N/A	Done	
30	Pixley Slough	Done	N/A	N/A	Done	
31	Mosher Diversion	Done	N/A	N/A	Done	
32	Mosher Slough	Done	N/A	N/A	Done	
33	Upper Calaveras	Done	N/A	N/A	Done	

ULE Summary

- Overall, ULE is 100 percent complete.
- Final GER Volume 1 completed for Davis, South Sacramento Streams, RD 17, Rough and Ready.
- Final GER Volume 2 completed for Davis, Woodland, NEMDC East, NEMDC West, South Sacramento Streams, RD 17, Calaveras River, Rough and Ready, Smith Canal, and SJAFCA Areas.

The overall status of the NULE program intermediate and final deliverables for the 21 non-urban levee study areas is shown in the table below.

No.	Non-Urban Study Area	Geotechnical Assessment Report (GAR)	Remedial Alternatives and Cost Estimate Report (RACER)	Geotechnical Data Report (GDR)	Geotechnical Overview Report (GOR)
1	Chico/North/South	Done	Done	Done	Done
2	Clarksburg	Done	Done	Done	Done
3	Colusa Drain	Done	Done	Done	Done
4	Colusa North	Done	Done	Done	Done
5	Colusa South	Done	Done	Done	Done
6	Gerber	Done	Done	Done	Done
7	Knights Landing	Done	Done	Done	Done
8	Sutter	Done	Done	Done	Done
9	Wheatland	Done	Done	Done	Done
10	Woodland South	Done	Done	Done	Done
11	Ash Slough	Done	Done	Done	Done
12	Berenda Slough	Done	Done	Done	Done
13	Black Rascal/Fairfield	Done	Done	Done	Done
14	Diverting Canal/Mormon	Done	Done	Done	Done
15	ESB/Chowchilla	Done	Done	Done	Done
16	Fresno River	Done	Done	Done	Done
17	Gravelly Ford	Done	Done	Done	Done
18	RD 2064	Done	Done	Done	Done
19	RD 2075	Done	Done	Done	Done
20	RD 2095	Done	Done	Done	Done
21	SJRRP/CCID	Done	Done	Done	Done
22	SJAFCA upland levees	Done	NA	NA	NA

NULE Summary

- Overall, Non-Urban Levee Evaluations are 100 percent complete.
- GOR Volume 1 was finalized for Eastside Bypass/Chowchilla and RD 2075.
- GOR Volume 2 was finalized for Eastside Bypass/Chowchilla, RD 2075, and RD 2095.

SAN JOAQUIN RIVER RESTORATION PROJECT (SJRRP)

Division of Flood Management has created the SJRRP Project to assist the United States Bureau of Reclamation (Reclamation) in assessing flood risks associated with the San Joaquin River Restoration Program. The San Joaquin River Restoration Program is a comprehensive long-term effort to restore flows to the upper San Joaquin River and restore a self-sustaining Chinook salmon fishery while avoiding adverse water supply impacts. Reclamation, lead agency for the SJRRP, has initiated Interim releases from Friant Dam and is evaluating alternatives for releases and routing of restoration flows up to 4,500 cubic feet per second to support reintroduction of fish into the San Joaquin River as required by the Stipulation of Settlement (Settlement). DWR has offered technical and funding assistance to the program in recognition of the DWR's role in habitat restoration and flood management.

The purpose of the SJRRP is to assist the San Joaquin River Restoration Program in assessing the flood risk impacts of Restoration flows under this program due to seepage and stability and identifying potential remedies to address increased flood risks under Restoration flows in coordination with the CVFPP.

- Geotechnical Condition Report (Eastside Bypass) is complete.
- Geotechnical Condition Report (Gravelly Ford) is complete.
- Field investigation of Priority 2/3 levees is complete.
- Laboratory analyses and log preparation are complete.
- Geotechnical data reports are complete.

FLOOD SYSTEM OPERATIONS AND MAINTENANCE (FSO&M)

FSO&M focuses on maintaining individual elements such as levees, hydraulic control structures, pumping plants, bridges, and channels to continue to achieve risk reduction benefits the system was designed to provide communities and the state. Local agencies and the state share responsibility for this work. LMAs operate and maintain a majority of the system through management of their individual levee systems, while the state is required to operate and maintain those portions of the State Plan of Flood Control (SPFC) identified in the California Water Code (CWC). Local agencies and the state work closely with the Flood Board, USACE, and environmental resource agencies to ensure that operation and maintenance activities meet statutory requirements that promote public safety, environmental stewardship, and economic stability.

CHANNEL EVALUATION AND REHABILITATION

As part of the FSO&M mega program, the Channel Evaluation and Rehabilitation Program is responsible for operating, maintaining, and repairing SPFC channels identified in assurances to the federal government and defined in CWC Section 8361. DWR operates and maintains approximately 1,200 miles of SPFC channels of the Sacramento River Flood Control Project to ensure proper flood protection function and conveyance capacity.

Proposition 1E funding is being used for extraordinary operation and maintenance activities, including SPFC channel evaluations, mercury characterization and control implementation, and channel conveyance capacity deficiency correction. Routine operations and maintenance requirements will be separately funded by General Fund augmentation.

Specific Channel Evaluation and Rehabilitation Program activities include channel inspections and evaluations, as well as developing and utilizing hydraulic models to identify critical areas within channels requiring the removal of vegetation or sediment to maintain channel capacity and flood protection function.

Channel responsibilities also include those under the Central Valley Regional Water Quality Control Board's adopted Total Maximum Daily Loads (TMDLs) and Basin Plan Amendment, wherein the DWR is assigned responsibility for monitoring, evaluating and reducing total mercury and methyl mercury loads passing through the Flood Control System and into the Yolo Bypass and the Delta. DWR is mandated to conduct characterization and control studies for activities including flood control improvements, modifications, and wetland mitigation work with the potential to impact methyl mercury concentrations in the Yolo Bypass and Delta.

Bear River Hydraulic Model

Final draft model and report was submitted to the Northern Region Office (NRO) for Quality Assurance/Quality Control (QA/QC).

Butte Creek Hydraulic Model

No new information this month.

Cache Creek Hydraulic Model

No new information this month.

Cache Creek Settling Basin

Staff from FMO, the USACE/CVFPB Studies Section, and the CVFPB Planning Section, along with staff and consultants representing USACE and the City of Woodland, met to identify objectives and issues related to alternatives being considered to improve flood conveyance in the vicinity of the Cache Creek Settling Basin and the Yolo Bypass. Each group has considered improvement alternatives as they relate to the Lower Cache Creek Feasibility Study (USACE/CVFPB), Total Maximum Daily Load (TMDL) compliance requirements (FMO), and basin-wide regional planning and implementation (CVFPB Planning) efforts. This outreach initiated the effort to align the alternative to satisfy each interested parties' objectives.

Cherokee Canal Hydraulic Model

No new information this month.

Chico Area Streams Hydraulic Model

The Northern Region Office (NRO) has completed a draft Channel Management Plan. A meeting has been scheduled for mid-May with staff from NRO, FMO, and the Sutter Maintenance Yard to review recommended channel maintenance actions based on the model results to improve channel capacity compared to existing conditions in the Chico area.

East Side Canal (aka Coon Creek Interceptor, Sacramento County)

As a follow up to model development, FMO staff has been conducting wetland delineation and field biological surveys to provide data needed to eventually incorporate the East Side Canal into the Routine Maintenance Agreement (RMA) between DWR and California Department of Fish and Wildlife (CDFW).

Knights Landing Ridge Cut/Colusa Drain Hydraulic Model

Staff is working on a draft model report for the Knights Landing Ridge Cut. Staff is initiating work on the Colusa Drain model.

Middle Creek Hydraulic Model (Lake County)

The Northern Region Office (NRO) has completed the initial draft version of the model and is in the process of calibrating the model.

Natomas East Main Drainage Canal (NEMDC)

No new information this month.

Putah Creek Hydraulic Model

Staff is finalizing the model and hydraulic report based on comments received during the QA/QC process.

Tisdale Bypass Hydraulic Model

No new information this month.

Wadsworth Canal Hydraulic Model

No new information this month.

Yuba River Hydraulic Model

An initial version of the model was run. Staff is revising the model geometry due to an apparent discrepancy in levee crown elevations in the initial FMO model.

Additional activities during the month of April include:

- Channel erosion repair is complete along the waterside toe road in the East Borrow Canal of the Sutter Bypass (10 miles).
- Tree trimming is 80% complete at Cache Creek Settling Basin (35 acres).
- Burning debris piles are 75% complete at Cache Creek (three each) and 75% complete at Cache Creek Settling Basin (3 each).

- Tree removal in Little Chico Creek is ongoing (2 trees).
- A re-spray is ongoing at Elder Creek (12 acres).
- Debris removal is ongoing in 50 miles of seepage ditches in the Sutter area, Little Chico Diversion, and all low water State Plan of Flood Control bridges in the Sutter Bypass.
- Beaver dam removal is ongoing in Cherokee Canal and 25% complete in Natomas East Main Drain (4 each).

FLOOD CONTROL FACILITIES EVALUATION AND REHABILITATION (FCFER)

The FCFER program includes evaluating, operating, maintaining, and repairing Sacramento River Flood Control Project facilities defined in CWC Section 8361 and state assurance to the federal government. DWR is responsible for operating and maintaining SPFC facilities including 11 weirs, 5 gate structures, 4 pumping plants, and specific bridges associated with the east levee of the Sutter Bypass, ensuring proper flood protection function and facility condition. Rehabilitation and improvement work includes proactive repair of known and documented problems with prioritization based on flood risks and safety.

Butte Slough Outfall Gates (BSOG)

No new information this month.

Additional activities during the month of April include:

- Debris removal at all three Sutter pumping plants is ongoing.
- Repairs to gates and barricades at Putah Creek are 100% complete (1 each) and 10% complete at Willow Slough Bypass (2 each).

Bridge CC-2 Repair

FMO is evaluating alternatives for repairing Bridge CC-2 in Sutter County. The bridge is part of the drainage system of Project No. 6 east of the Sutter Bypass. As part of the Sutter Maintenance Bridge Inspection Program, Bridge CC-2 was identified as needing immediate repair. DWR has maintenance and operation responsibility of the bridge and the collecting canal it crosses as identified in California Water Code, Section 8361(c). The bridge provides access for DWR to conduct required maintenance activities and for Westervelt Ecological Services to manage the Sutter Basin Conservation Bank for Giant Garter snake mitigation.

Bryte Yard Groundwater Investigation

No new information this month.

LEEVE OPERATIONS AND MAINTENANCE COMPONENTS

The Levee Operation and Maintenance Program includes the following components:

- *Inspection and Evaluation*
- *Routine Operations and Maintenance*
- *Non-Routine Projects*

The Levee Maintenance Program, like the Channel Maintenance Program, is generally organized around the continual and ongoing maintenance of specific levee structures in the Sacramento River Flood Control Project. Both the Sacramento and Sutter Yards have assigned responsibilities for specific levee reaches to provide performance-based levee maintenance to help ensure the levee will perform satisfactorily during any high water flood event.

When a levee evaluation and inspection report indicates that a significant repair or rehabilitation is required, the design and construction will be turned over to the levee repair program and constructed as a capital outlay project under the flood risk reduction mega-program. Otherwise the three component activities are considered as “operations and maintenance”.

Activities during the month of March include:

- Toe road repairs are 100% complete at Wadsworth Canal (4.5 miles).
- Tree trimming is 100% complete at Cache Creek (95 acres), 100% complete at East Yolo (3 acres), 70% complete at Putah Creek (10 acres), and 60% complete at MA9 (15 acres).
- Vegetation spraying is 100% complete at Cache Creek (110 acres) and 100% complete at Yolo Bypass units 1, 2, and 3 (30 acres).
- Rodent baiting and trapping is ongoing on all levees.
- Pipe inspections are 100% complete at Cache Creek, and Yolo Bypass (28 each).
- Mowing is 100% complete at MA 4 (30 acres), 75% complete at MA 9 (110 acres), ongoing at MA 3 (1.5 miles), ongoing at the east levee of the Sutter Bypass (2 miles), and ongoing at MA 1 (0.5 miles).
- Spraying is 90% complete at Willow Slough Bypass (13 acres).
- Fire guarding is 75% complete at Cache Creek (20 acres) and 50% complete at MA 9 (20 acres).
- Crown road grading is 100% complete at Putah Creek (10 acres).
- Rock has been placed on ramps at Willow Slough Bypass (7 ramps).
- A pilot program in MA 9 was started to remove encroachments identified in the U.S. Army Corps of Engineers’ (USACE) Periodic Inspection Report. To date, four of those encroachments have been removed.

FLOOD SYSTEM EVALUATION AND REHABILITATION (FSER)

The FSER program includes evaluating, operating, maintaining, and repairing SPFC facilities pursuant to state assurances to the federal government. This FSER program supports implementation of the SSIA laid out in the CVFPP. The program improves DWR’s integrated flood protection mission. Specific FSER activities include: program management; policy development; support for Board permitting and encroachment enforcement; corridor management strategy development; Title 23 regulation updates; easement identification and reconciliation; management of state-owned properties and easements; and integrated water management activities.

Lower Feather River Corridor Management Plan

No new information this month.

Small Erosion Repair Program (SERP)

Construction is planned for May 18, 2015, to repair four erosion sites along the Willow Slough Bypass levee. Three other sites along this bypass are being permitted this year and may also be repaired. Additionally, DWR is planning to repair five sites along the Wadsworth Canal levee starting in June 2015.

LEVEE REPAIRS

The Levee Repairs Program in DFM/FMO makes repairs to the State Plan of Flood Control facilities (primarily levees) through several projects. Among these are the Flood System Repair Project (FSRP), the Sacramento River Bank Protection Project (SRBPP), and the Federal Public Law 84-99 Emergency Repair Project (PL 84-99). FSRP is a bond funded program that repairs rural SPFC facilities of the Sacramento and San Joaquin River Systems under a state-local cost share. SRBPP is a USACE-led program that repairs urban SPFC critical erosion sites along the Sacramento River and tributaries. PL 84-99 repairs minor damages incurred from a significant flood event. DWR is cost-sharing partners and manages the state's responsibilities for the SRBPP and PL 84-99 projects.

Flood System Repair Project (FSRP)

No new information this month.

Sacramento River Bank Protection Project (SRBPP)

No new information this month.

Federal Public Law 84-99 Emergency Repair Project (PL 84-99)

No new information this month.