Agenda Item 7

REPORT OF ACTIVITIES OF THE DEPARTMENT OF WATER RESOURCES

Ву

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*Prepared for the Central Valley Flood Protection Board Meeting - February 27, 2015.

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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 are preparing to start spring levee inspections. Staff also continue to work with Central Valley Flood Protection Board 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. Section staff continues to coordinate with DWR, USACE, CVFPB, and LMA staff in a number of venues.

Staff continued to integrate the latest levee vulnerability data (serious and critical points of interest) into the Flood Emergency Response Information Exchange (FERIX) web portal.

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 December 31, statewide hydrologic conditions were as follows: precipitation, 110 percent of average to date; runoff, 105 percent of average to date; snow water content, 50 percent of average to date (15 percent of the April 1 average); and reservoir storage, 65 percent of average for the date. Sacramento River Region unimpaired runoff, for Water Year 2015, observed through December 31, 2014 was about 3.6 million acre-feet (MAF), which is about 115 percent of average. In comparison to Water Year 2014, the observed Sacramento River

Region unimpaired runoff through December 31, 2013 was about 1.0 MAF, or about 33 percent of average.

On December 31, the Northern Sierra 8-Station Precipitation Index Water Year total was 22.8 inches, which is about 129 percent of the seasonal average to date and 46 percent of an average water year (50.0 inches). During December, the total precipitation for the 8-Stations was 15.2 inches, or about 181 percent of average for the month. Last year on December 31, the Water Year 2014 seasonal total for the 8-Stations was 3.3 inches, or about 19 percent of average.

On December 31, the San Joaquin 5-Station Precipitation Index Water Year total was 9.1 inches, which is about 69 percent of the seasonal average to date and 22 percent of an average water year (40.8 inches). During December, the total precipitation for the 5-Stations was 5.9 inches, or about 95 percent of average for the month. Last year on December 31, the Water Year 2014 seasonal total for the 5-Stations was 3.0 inches, or about 23 percent of average.

Selected Citie	Selected Cities Precipitation Accumulation as of 12/31/2014 (National Weather Service Water Year. July through June)								
City	July 1 to Date 2014 – 2015 (in inches)	% Average	July 1 to Date 2013 – 2014 (in inches)	% Average	% Avg "Water Year" July 1 to June 30 2014 - 2015				
Eureka	21.51	126	5.12	30	53				
Redding	19.69	143	3.50	25	57				
Sacramento	10.85	164	1.90	29	59				
San Francisco	15.09	166	2.08	23	64				
Fresno	3.38	92	0.73	20	29				
Bakersfield	2.68	129	1.07	51	41				
Los Angeles	4.89	122	1.04	26	38				
San Diego	4.95	150	2.24	68	48				

	Key Reservoir Storage (1,000) AF) as of 12/31/2014									
Reservoir	River	Storage	Average Storage	% Average	Capacity	% Capacity	Flood Control Encroachment	Total Space Available		
Trinity Lake	Trinity	815	1,642	50	2,448	33		1,633		
Shasta Lake	Sacramento	1,867	2,828	66	4,552	41	-1,466	2,685		
Lake Oroville	Feather	1,347	2,174	62	3,538	38	-1,553	2,191		
New Bullards Bar Res	Yuba	485	546	89	970	50	-311	481		
Folsom Lake	American	430	476	90	977	44	-147	547		
New Melones Res	Stanislaus	547	1,382	40	2,400	23	-1,423	1,873		
Don Pedro Res	Tuolumne	794	1,339	59	2,030	39	-896	1,236		
Lake McClure	Merced	73	452	16	1,032	7	-601	952		
Millerton Lake	San Joaquin	180	271	66	520	35	-255	340		
Pine Flat Res	Kings	130	408	32	1,000	13	-395	870		
Isabella	Kern	45	159	28	568	8	-125	523		
San Luis Res	(Offstream)	820	1,388	59	2,041	40		1,219		

The latest National Weather Service Climate Prediction Center (CPC) long-range, 1-month precipitation outlook for January 2015, issued December 31, 2014, suggests above average rainfall for Southern California. Central and most of Northern California are shown as having equal chances of wet or dry conditions. For the extreme northeastern portion of the State, below average precipitation is suggested.

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 EMERGENCY PREPAREDNESS & OPERATIONS

This element includes preparing the Department 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.

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. A Proposal Solicitation Package for an additional \$5 million in Proposition 84 funds was released in December 2014. Staff began to review the 23 submitted applications for the second round of Statewide Flood Emergency Response Grants which closed on February 9, 2015.

Delta Flood ER Grants

A grant agreement with Yolo County for over \$900K was executed on February 10, 2015.

Delta Flood Emergency Facilities Improvement Project

Delta Emergency Response Tabletop Exercise

In coordination with the other DWR divisions and offices, staff continued to develop the materials and scenario for the April 22, 2015 Delta Emergency Response Tabletop Exercise.

CEQA MND-IS

A response to comments on the Initial Study/Mitigated Negative Declaration for the Facility Improvement Projects has been drafted. The response to comments and Notice of

Determination are in the approval process for the Division Chief's signature to be signed on February 11, 2015.

Rio Vista and Webber Improvement Projects

The 401 and 404 permits have been drafted and are under internal review.

Delta Flood Management Planning and Coordination

DWR-USACE Delta Emergency Operations Integration Plan

A draft outline was approved by program manager and work on the document kicked off January 28, 2015.

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 completed study Milestone 2, which includes the development of a draft array of system configurations based on study objectives and evaluations of individual system elements. The feasibility studies are currently in Phase 2, where 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 regional representatives and will be further revised based on stakeholder input and preliminary technical evaluations currently underway.

Phase 2 will culminate in mid-2016 along with the final basin-wide feasibility reports. 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 both the

RFMPs and NGOs in an iterative planning process that will further refine potential multiplebenefit opportunities within the expanded footprints of the system configurations. 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 Reference Documents (Atlases)

Sacramento and San Joaquin Basin Reference Documents will be developed as a tool to facilitate alignment between local, state, and federal agencies so that all can converge on sustainable systemwide solutions. These Atlases will contain maps, summaries, and photographs; and will be helpful sources of information in addressing the complex challenges of the flood management system in each basin.

Regional Flood Management Planning (RFMP) Phase 2

A RFMP Phase 2 Fact Sheet was finalized and sent to all Coordinating Committee attendees. 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. The six RFMP directed funding agreements expired in January 2015 and the state has proposed amending the agreements for time (through June 2017), budget (additional \$500,000 each), and scope. The focus of RFMP Phase 2 is to continue communication and engagement, establish regional governance, and develop strategies for dealing with institutional barriers.

Public Engagement

On December 9, 2014, CVFPO staff made a presentation at a UC Davis sponsored workshop "Meeting Nature Halfway on a Floodplain- The Yolo Bypass as a Reconciled Ecosystem." The CVFPO presentation focused on the History, Hydrology and Hydraulics of the Yolo Bypass. On January 28, 2015, CVFPO staff also made a presentation to the CVFPB Coordinating Committee on the 2017 Central Valley Flood Protection Plan Update, including basin-wide feasibility approaches, basin-wide feasibility Study Atlases, and Regional Flood Management Plans Phase 1 review.

CVFPO staff make 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 <u>CVFPB.ca.gov</u>.

FINAL FOR CONSERVATION STRATEGY JANUARY 2015 ACTIVITIES

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 and Appendix L are now posted on FESSRO's public website; the remaining appendices will be posted in February as they are available. DWR announced the availability of the documents at January's CVFPB meeting and Coordination Committee meeting. DWR will provide a walk-through of the document and Appendix L at a CVFPB public workshop on February 13th, and intends to provide additional information as part of DWR CVFPP public workshops during Spring 2015.

Measurable Objectives Technical Memorandum:

The Technical Memorandum was shared with CVFPB Measurable Objectives Subcommittee members, who will provide comments in early February.

STATEWIDE INTEGRATED FLOOD MANAGEMENT PLANNING (SIFMP)

Statewide Integrated Flood Management Planning (SIFMP) has identified flood risks facing Californians and proposed solutions 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*.

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.

No new information this month.

Flood Risk Notification (FRN) No new information this month.

Coastal Floodplain Evaluation and Planning

No new information this month.

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. On behalf of the Board, staff 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

- On September 13, 2013, the Board approved the FY 2013-14 funding plan for \$12 million.
- The Board's Executive Officer executed 68 work agreements.
- Staff received 61 final claims by the November 1, 2013 deadline totaling approximately \$11 million in work performed.
- Staff conducted 24 joint levee inspections with the California Department of Fish and Wildlife and the local levee maintaining agencies.
- Claims are being reviewed for eligibility and completeness. The eligible amounts will be reimbursed to the local agencies after final review.

Work Agreements for FY 2014-2015

- Staff received applications from 69 local agencies to participate in the FY 2014-2015 Subventions Program.
- On October 24, 2014, the Board approved the FY 2014-15 funding plan for \$12 million.

• Staff sent out 69 work ageements to local levee maintaining agencies for signature.

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 (TM) have been received by the DSC for review. The TM will support the reports that are deliverables for the IA. The DSC plans to have a special panel to discuss levee investment issues at their board meeting February 26, 2015. The DSC has also scheduled a half day technical/policy workshop for March 11th. Both meeting are open to the public. Details will be available through the DSC website and via email through the Commission's Listserve.

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. The DPC released their Request for Proposal (RFP) in September; however, they didn't receive any bids on their proposal. The Commission revised the RFP and released it for bid. Proposals were due December 5th. Commission staff reviewed the proposals and selected a contractor. Their selection was submitted to the Commission for approval at their January meeting. However, that Commission was not comfortable with the decision process. They formed a special committee to review the selection process. The special committee met and after serious consideration concluded that the contract should be awarded to the selected contractor. The next Commission meeting is in March where it intends to award the contract.

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 at Sites R7, L7, R3A, and L10 are ongoing.
- Nighttime construction for Site L7 is complete.
- The NEMDC Extension site construction start is scheduled for April 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.

- Design Agreement Amendment #1 has been signed by CVFPB, SAFCA, and USACE, and is being routed internally for approval prior to routing through the State Department of General Services for final approval.
- Project cooperation agreement 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.
- In the Federal FY 15 work plan, USACE received \$825,000 in additional funds to add work to the existing Natomas design agreement. We anticipate USACE will request the non-federal partners to execute Design Agreement Amendment #2 to add additional design scope and cost.

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 December 15, 2014, is as follows:

Phases	Planning & Design	Construction
Preconstruction Engineering and Design	100%	N/A
Phase III – Control Structure	100%	90%
Phase IV – Approach Channel, Chute, and	100%	36%
Stilling Basin		
Phase V – Site Restoration	40.1%	5.5%
Project Overall	93.9%	59%

Folsom Dam Raise Project

No new information this month.

Lake Kaweah Enlargement Project (Terminus Dam, Kaweah River Project) No new information this month.

Marysville Ring Levee Improvement Project

No new information this month.

South Sacramento County Streams Project

No new information this month.

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 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 Re-evaluation Report (GRR)

No new information this month.

Central Valley Integrated Flood Management Study No new information this month.

Cache Creek Settling Basin Project GRR

No new information this month.

Lower San Joaquin River Feasibility Study

No new information this month.

Merced County Streams Project – Bear Creek GRR

No new information this month.

Sutter Basin Feasibility Study No new information this month.

West Sacramento Project GRR No new information this month.

Woodland/Lower Cache Creek Feasibility Study No new information this month.

Yuba River Basin Project GRR

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:

2015 UFRR Program Guidelines and Proposal Solicitation Package (PSP)

The final UFRR Program Guidelines and associated PSP were publically posted in January 2015. Concept proposals under the PSP are due on March 9, 2015. A minimum of \$150 million is available for funding under this solicitation.

Knights Landing Levee Repair Project

No new information this month.

Reclamation District 17 (RD-17) – 100-Year Levee Seepage Area Project No new information this month.

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

No new information this month.

TRLIA – Upper Yuba River Levee Improvement Project

No new information this month.

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

No new information this month.

SAFCA-Sacramento River East Levee Project

No new information this month.

San Joaquin Area Flood Control Agency (SJAFCA) – Smith Canal Closure Structure Project No new information this month.

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

No new information this month.

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

No new information this month.

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.

Draft Program Guidelines are under internal review. Program is concurrently meeting with interested local land use agencies to provide them with available state data and potentially gain additional data, where there are gaps.

FLOOD CORRIDOR PROGRAM (FCP)

The FCP is the only 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. By incorporating non-structural solutions, the program achieves flood benefits at a fraction of the cost of traditional structural solutions.

Middle Creek Flood Damage Reduction and Ecosystem Restoration Project

Ten appraisals for property acquisitions were approved by the Real Estate Branch. This allows the grantee to move forward with the project and offer the appraised amount to willing sellers within the project footprint.

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.

2014-2015 LLAP Proposal Solicitation Package (PSP)

Staff conducted three grant assistance workshops (Sacramento, Oakland, and Cypress) for their 2014-2015 Solicitation. The solicitation period ends on March 17, 2015. Applications are being accepted for new grants based on the <u>2011 Guidelines</u> and the <u>2014 Proposal Solicitation</u> <u>Package (PSP)</u>. A minimum of \$13 million is available for grant awards this cycle.

Alameda Creek Zone 5 Line A Local Levee Critical Repair Project

This project is complete; final payment is released and files for grant Agreement #4600009961 were closed out by DWR on January 7, 2015.

Arroyo Simi Local Levee Evaluation Project

This project is complete; final payment is released and files for grant Agreement #4600009940 were closed out by DWR on January 16, 2015.

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).

Dry Creek Levee Feasibility Study Project

The Dry Creek Levee Feasibility Study Agreement with Reclamation District 2103 was executed on January 30, 2015. This study does feasibility study of the South Bank of Dry Creek and analyzes alternatives to achieve 100-year level of flood protection for the City of Wheatland.

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 470 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 approximately 1,500 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 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	Draft Volume 1 and 2 under review by ICB
2	Marysville	Done	Done	Done	Done	Done
3	RD 784	Done	Done	Done	Done	Done
4	Feather River West Levee	Done	Done	Done	Done	Volume 1 Done ; Print Check Volume 2 in preparation
5	Sutter Bypass Wadsworth	Done	Done	Done	Done	Done
6	American River	Done	Done	Done	Done	Print Check Volume 1 and 2 under review by DWR
7	Sacramento River	Done	Done	Done	Done	Done
8	Davis	Done	Done	Done	Done	Volume 1 draft 2 under review by ICB and stakeholders; Draft Volume 2 in preparation
9	Woodland	Done	Done	Done	Done	Volume 1 Done ; Draft Volume 2 under review by DWR
10	NEMDC East	Done	Done	Done	Done	Print check Volume 1 in preparation; Draft Volume 2 in preparation

No.	Urban Study Area	Historic Data Collection (TRM)	Initial Field Investigations (P1GDR)	Preliminary Analyses	Supplemental Field Investigations (SGDR)	Final Analyses & Geotechnical Evaluation Report (GER)
11	NEMDC West	Done	Done	Done	Done	Volume 1 Done; Draft2 Volume 2 in preparation
12	Natomas North	Done	Done	Done	Done	Print Check Volume 1 and 2 in preparation
13	Natomas South	Done	Done	Done	Done	Volume 1 Done; Final Volume 2 in preparation
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	Draft 2 Volume 1 under review by ICB and stakeholders; Draft Volume 2 under preparation
17	RD 404	Done	Done	Done	Done	Done
18	RD 17	Done	Done	Done	Done	Draft 2 Volume 1 under review by ICB and stakeholders; Draft Volume 2 under review by DWR
19	Bear Creek	Done	Done	Done	Done	Volume 1 Done; Draft 2 Volume 2 under review by ICB and stakeholders
20	Calaveras River	Done	Done	Done	Done	Print check Volume 1 under review by DWR; Draft 1 Volume 2 under review by DWR

No.	Urban Study Area	Historic Data Collection (TRM)	Initial Field Investigations (P1GDR)	Preliminary Analyses	Supplemental Field Investigations (SGDR)	Final Analyses & Geotechnical Evaluation Report (GER)
21	Lincoln Village	Done	N/A	N/A	Final GDR in preparation	Draft Volume 1 under ICB Review; Draft Volume 2 under DWR Review
22	Brookside	Done	N/A	N/A	Final GDR in preparation	Draft Volume 1 closing ICB comments; Draft Volume 2: under DWR Review
23	Rough and Ready	Done	N/A	N/A	Draft GDR under review by DWR	Draft Volume 1 under DWR review; Draft Volume 2: in progress
24	Boggs Tract	Done	N/A	N/A	Final GDR in preparation	Volume 1 Done; Volume 2 under review by ICB
25	Shima Tract	Done	N/A	N/A	Final GDR in preparation	Draft Volume 1 closing ICB comments; Draft Volume 2 under DWR review
26	Smith Canal	Done	N/A	N/A	Final GDR in preparation	Draft Volume 1 under DWR review; Draft Volume 2 in progress
27	Walthall Slough	Done	N/A	N/A	Final GDR in preparation	Draft Volume 1 closing DWR comments; Draft Volume 2 in progress
28	Bear Creek Wing	Done	N/A	N/A	Final GDR in preparation	Draft Volume 1 under ICB review;

No.	Urban Study Area	Historic Data Collection (TRM)	Initial Field Investigations (P1GDR)	Preliminary Analyses	Supplemental Field Investigations (SGDR)	Final Analyses & Geotechnical Evaluation Report (GER)
29	Walker Slough	Done	N/A	N/A	Draft GDR under review by DWR	Draft Volume 2 in preparation (SJAFCA areas to be combined into
30	Pixley Slough	Done	N/A	N/A	Draft GDR under review by DWR	one GER)
31	Mosher Diversion	Done	N/A	N/A	Draft GDR in preparation	
32	Mosher Slough	Done	N/A	N/A	Draft GDR in preparation	
33	Upper Calaveras	Done	N/A	N/A	Draft GDR in preparation	

ULE Summary

- Overall, ULE is 96 percent complete.
- Tasks 5 and 6 completed for all study areas.
- Task 7 completed for multiple study areas.
- DWR completed review of Sutter Feather, Bear, Woodland, and NEMDC West Print Check GER Volume 1.
- DWR completed review of Sutter Bypass and Natomas South Print Check GER Volume 2 and draft NEMDC West GER Volume 2.
- DWR, Independent Consulting Board (ICB), and Stakeholders completed review NEMDC East, Calaveras, Brookside, and Shima Tract GER Volume 1 and Deep Water Ship Channel GER Volume 2.
- Final GER Volume 1 completed for Sutter Feather, Bear Creek, Woodland, NEMDC West, and Boggs Tract and Final GER Volume 2 completed for Sacramento River, Sutter Bypass, and Deep Water Ship Channel.

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	Remedial Alternatives	Geotechnical Data Report	Geotechnical Overview Report
		Report (GAR)	and Cost Estimate Report (RACER)	(GDR)	(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	Volume 1 Done; Draft Volume 2 review by DWR
13	Black Rascal/ Fairfield	Done	Done	Done	Done
14	Diverting Canal/ Mormon	Done	Done	Done	Done
15	ESB/ Chowchilla	Done	Done	Done	Draft Volume 1 in preparation; Draft Volume 2 in preparation
16	Fresno River	Done	Done	Done	Volume 1 Done
17	Gravelly Ford	Done	Done	Done	Done
18	RD 2064	Done	Done	Done	Volume 2 under review by ICB; Volume 2 in preparation
19	RD 2075	Done	Done	Done	Draft Volume 1 in preparation; Draft Volume 2 in preparation
20	RD 2095	Done	Done	Done	Volume 1 Done; Draft Volume 2 in

No.	Non-Urban Study Area	Geotechnical Assessment Report (GAR)	Remedial Alternatives and Cost Estimate Report (RACER)	Geotechnical Data Report (GDR)	Geotechnical Overview Report (GOR)
					preparation
21	SJRRP/CCID	Done	Done	Done	Volume 1 Done ; Draft Volume 2 under review by DWR
22	SJAFCA upland levees	Done	NA	NA	NA

NULE Summary

- Overall, Non-Urban Levee Evaluations are 97 percent complete.
- GOR Volume 1 was finalized for Berenda Slough and RD 2095.
- GOR Volume 2 was finalized for Colusa South, Gravelly Ford, and Ash Slough

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.

- Final Phase 1/2 Geotechnical Data Report completed.
- Geotechnical analysis of the Eastside Bypass continues.
- Draft GER for Eastside Bypass in under review by DWR.
- Geotechnical analysis of the Gravelly Ford underway.
- Planning for field investigation of Priority 2 and Priority 3 levees is underway.

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 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

Staff is continuing work on model calibration and verification. A survey will be conducted to correlate existing gage datum to the 1088 NAVD elevation datum in January.

Butte Creek Hydraulic Model

No new information this month.

Bryte Yard Groundwater Investigation

A pilot test utilizing ozone-injection to remediate dissolved petroleum hydrocarbons in the groundwater underlying the Sacramento Maintenance Yard is ongoing. The test which has yielded significant hydrocarbon mass reduction since implemented in May 2014 is scheduled to continue through the end of June 2015 and will be followed by four quarters of groundwater monitoring.

Cache Creek Settling Basin

FMO staff are coordinating with the United States Geological Survey and the University of California Davis to perform Control Studies that provide essential input data for modelling the basins trap efficiency. These studies include the collection of concurrent flow, sediment, and mercury data as well as mercury bioavailability evaluations in caged fish and bird eggs. A Progress Report summarizing these studies and identifying conceptual remedies to improve the basins trap efficiency and reduce mercury loads leaving the basin is scheduled for completion in October 2015.

Cherokee Canal Hydraulic Model

No new information this month.

Chico Area Streams Hydraulic Model

FMO staff and Sutter Yard staff met with the Northern Regional Office (NRO) who is developing the proposed Channel Management plan. NRO is refining model assumptions for the Sycamore Creek area based on discussions during the meeting and is working on finalizing proposed maintenance activities.

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

No new information this month.

Knights Landing Ridge Cut/Colusa Drain Hydraulic Model

Model development is continuing.

Middle Creek Hydraulic Model (Lake County)

NRO is continuing model development.

Natomas East Main Drainage Canal (NEMDC)

No new information this month.

Putah Creek Hydraulic Model

No new information this month.

Tisdale Bypass Hydraulic Model

No new information this month.

Wadsworth Canal Hydraulic Model

No new information this month.

Yuba River Hydraulic Model

Staff is drafting initial sections of a report dealing with O&M requirements and hydrology. Staff is reviewing the TuFlow model for Yuba River developed for CVFED.

Additional activities during the month of January include:

- Mowing is ongoing at Bear River (20 acres), and ongoing at Little Chico Diversion (5 acres).
- Mulching is ongoing at Bear River (5 acres).
- Tree removal at MA1 is 100% complete (7 each) and is 100% complete on the East Levee of the Sutter Bypass (10 each).
- A re-spray is ongoing at Elder Creek (2 acres).
- Debris removal is ongoing in 50 miles of seepage ditches in Sutter area, Little Chico Diversion, and Sutter Bypass low water bridges.
- Beaver dam removal is ongoing in Cherokee Canal.

FLOOD CONTROL FACILITIES EVALUATION AND REHABILITATION (FCFER)

The FCFER program includes evaluating, operating, maintaining, and repairing Sacramento River Flood Control Project (SPFC) 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)

Environmental staff is coordinating with regulatory agencies on environmental permit applications and associated documents for the proposed rehabilitation work. Real Estate is working on access and right of entry agreements. Changes from the 95% design review are being incorporated into the design plans.

Additional activities during the month of January include:

- Debris removal at all three Sutter pumping plants is ongoing.
- Repairs to low flow structures in the Sacramento area is 50% complete.
- Repair to hand rails at Knights Landing Outfall Gates is 100% complete.
- Repairs to fence and barricade at Willow Slough Bypass are 100% complete.

LEVEE 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 January include:

- Fire guarding is 75% complete on the north levee of Cache Creek (5 acres), 100% complete at Willow Slough Bypass (5 acres), 60% complete at Putah Creek (15 acres), and 25% complete at MA9 (10 acres).
- Pre-emergent spraying on Cache Creek crown roads is 100% complete (15 acres), 100% complete on Cache Creek slopes (310 acres), 100% complete on MA9 slopes (65 acres), and 100% complete on Sacramento Bypass slopes (30 acres) and is ongoing in all areas of Sutter area.
- Mowing is 100% complete at Prospect Island (20 acres).
- Crown road repair is 100% complete at MA13 (4 miles).
- Tree trimming is 99% complete at Cache Creek (5 acres) and 99% complete at MA9 (6 acres).
- Grouting is 100% complete at MA9 (40 acres).

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)

No new information this month.

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)

At the CVFPB meeting held on January 23, 2015, DWR requested and received approval of Resolution 2015-01 that authorizes the Executive Officer to approve O&M agreements for FSRP site repairs. A program status briefing was also provided. The Board requested that progress on FSRP be reported regularly (through these reports) and that a status briefing on FSRP be presented to the Board in approximately six months.

Sacramento River Bank Protection Project (SRBPP)

The Public Draft Post Authorization Change Report and programmatic Environmental Impact Statement/Environmental Impact Report (PACR/EIS/EIR) for the Sacramento River Bank Protection Project (SRBPP) Phase II Supplemental Authority (proposed Program) is now available for review and comment. The proposed program would implement up to 80,000 linear feet (FL) of additional bank protection in the Sacramento River Flood Control Project (SRFCP) area as authorized by Section 3031 of the Water Resources Development Act (WRDA) of 2007. The programmatic EIS/EIR accompanying the PACR analyzes the environmental effects associated with implementing bank protection measures along the 80,000 LF of the SRFCP to arrest stream bank erosion that threatens the integrity of the SRFCP levee system. The proposed program spans portions of Butte, Colusa, Glen, Placer, Sacramento, Solano, Sutter, Tehama, Yolo and Yuba Counties in California. The U.S. Army Corps of Engineers (USACE) is the federal lead agency for this EIS/EIR, and the Central Valley Flood Protection Board (CVFPB) is the state lead agency, pursuant to the National Environmental Policy Act and the California Environmental Quality Act, respectively.

The public Draft PACR/EIS/EIR is available on the USACE's website, and hard copies are available for viewing at libraries in the previously listed counties. The USACE and the CVFPB hosted four public workshops to present information and to accept public comments on the PACR/EIS/EIR.

These workshops were held in West Sacramento, Walnut Grove, Colusa, and Chico. The closing date for submitting public review comments is February 27, 2015.