Agenda Item 12C

REPORT OF ACTIVITIES
OF THE
DEPARTMENT OF WATER RESOURCES

By

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

**Prepared for the Central Valley Flood Protection Board Meeting – January 22, 2016.*

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Table of Contents

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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.

Staff continued to update the Flood Emergency Response Information Exchange (FERIX) with the 2015 levee vulnerability data. Staff provided a hands-on demonstration of the Levee Vulnerabilities web-application for CalOES emergency managers.

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 November 30, statewide hydrologic conditions were as follows: precipitation, 80 percent of average to date; runoff, 35 percent of average to date; and reservoir storage, 50 percent of average for the date. Sacramento River Region unimpaired runoff, for Water Year 2016, observed through November 30, 2015, was about 0.6 million acre-feet (MAF), which is about 44 percent of average. In comparison to Water Year 2015, the observed Sacramento River Region unimpaired runoff through November 30, 2014, was about 0.8 MAF, or about 56 percent of average.

On November 30, the Northern Sierra 8-Station Precipitation Index Water Year total was 4.9 inches, which is about 53 percent of the seasonal average to date and 10 percent of an average water year (50.0 inches). During November, the total precipitation for the 8-Stations was 3.7 inches, or about 59 percent of average for the month. Last year on November 30, the Water Year 2015 seasonal total for the 8-Stations was 7.6 inches, or about 82 percent of average.

On November 30, the San Joaquin 5-Station Precipitation Index Water Year total was 7.0 inches, which is about 103 percent of the seasonal average to date and 17 percent of an average water year (40.8 inches). During November, the total precipitation for the 5-Stations was 5.1 inches or about 109 percent of average for the month. Last year on November 30, the Water Year 2015 seasonal total for the 5-Stations was 3.3 inches, or about 49 percent of average.

Daily Precipitation (in inches) for Selected Stations as of 11/30/2015					
Station	October 1 to Date 2015-2015	% Average	Season to Date 2014-2015	% Average	% Average Oct 1 – Sep 30
Mount Shasta	1.83	24	6.55	85	4
Eureka	6.01	77	8.03	102	15
Redding	1.65	25	5.79	88	5
South Lake Tahoe	3.68	73	1.33	26	18
Sacramento Executive Airport	1.69	56	1.79	59	9
Santa Rosa (Sonoma Co AP)	1.38	21	2.17	32	4
San Francisco	1.43	33	2.27	53	6
Stockton	2.13	85	1.75	70	15
Yosemite	8.22	124	2.93	44	22
Monterey	4.06	144	2.88	102	25
Paso Robles	1.28	78	1.22	74	10
Fresno	2.23	131	0.90	53	19
Bakersfield	0.75	80	0.65	69	12
Death Valley	1.08	432	0.00	0	46
Los Angeles	0.46	27	0.45	26	3
Riverside	0.46	36	0.28	22	4
Palm Springs	0.13	13	0.07	7	2
San Diego	1.97	125	0.37	23	19

Key Reservoir Storage (1,000) AF) as of 11/30/2015								
Reservoir	River	Storage	Average Storage	% Average	Capacity	% Capacity	Flood Control Encroachment	Total Space Available
Trinity Lake	Trinity	478	1,587	30	2,448	20	---	1,970
Shasta Lake	Sacramento	1,329	2,705	49	4,552	29	-1,923	3,223
Lake Oroville	Feather	929	2,138	43	3,538	26	-2,234	2,609
New Bullards Bar Res	Yuba	344	529	65	966	36	-452	622
Folsom Lake	American	137	468	29	977	14	-440	840
New Melones Res	Stanislaus	267	1,355	20	2,400	11	-1,703	2,153
Don Pedro Res	Tuolumne	648	1,320	49	2,030	32	-1,042	1,382
Lake McClure	Merced	66	450	15	1,025	6	-608	959
Millerton Lake	San Joaquin	163	219	74	520	31	-273	357
Pine Flat Res	Kings	133	371	36	1,000	13	-547	867
Isabella	Kern	30	156	19	568	5	-140	538
San Luis Res	(Offstream)	396	1,225	32	2,041	19	---	1,643

The latest National Weather Service Climate Prediction Center (CPC) long-range, 1-month precipitation outlook for December 2015, issued November 30, 2015, suggests equal chances of wet or dry conditions for all of California, except for the extreme northeastern region of the state.

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 the 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.

Staff continued to improve 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. The improvements made to the tool include the ability to optimize real-time operational actions in response to Delta levee failures. Staff provided a hands-on demonstration for the State Water Project Operations Control Office, Bay Delta Office, FESSRO, and Bureau of Reclamation staff.

Statewide Flood Emergency Response Grants

Staff continued to manage the 14 executed grant contracts with local agencies to improve their flood emergency response capabilities.

Delta Emergency Planning

Flood Operations Branch is currently reviewing the second draft of the DWR-USACE Delta Emergency Operations Integration Plan.

Delta Emergency Response Grants

Staff continued to manage executed contracts with local agencies.

Delta Flood Emergency Facility Improvement Projects

The Rio Vista site has received all the False River Emergency Drought Barrier rock which totals 115,000 tons. For the Webber Avenue sites, negotiations on permit requirement are currently

taking place between staff, consultants, and regulatory agencies. These permits include the 404 Nationwide Permit, 401 Water Quality Certification, and a 1600 Streambed Alteration Agreement.

Delta Agency Coordination
Staff continues to meet monthly with Delta Stewardship Counsel in support of the Delta Levee Investment Strategy, with State Water Contractors, and with CalOES. Staff also continues to meet quarterly with USACE Emergency Response staff and with the Delta Working Group. The quarterly Delta Working Group Meeting is tentatively scheduled for February 2015. Staff has also assisted with Flood Fighting Methods class instruction for local agencies throughout the state.

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 2012 CVFPP, this program is currently implementing major planning efforts: locally led Regional Flood Management Planning 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).

2017 CVFPP
DWR has developed a high-level outline for the 2017 CVFPP and is in the process of developing draft content for the plan from draft supporting documents and information provided by partners as the information becomes available.

Basin-wide Feasibility Studies
The Sacramento Basin-Wide Feasibility Study is in the later stages of the planning process. DWR staff discussed a tentatively recommended plan with stakeholders and is moving forward with action items to refine the plan considering stakeholder feedback. A draft final report is planned for public review in late February 2016. The San Joaquin Basin-Wide Feasibility Study is also in the later stages of the planning process. Once DWR identifies a tentatively recommended plan, stakeholder meetings will be scheduled similar to the Sacramento BWFS.

Basin-Wide Feasibility Study Atlases
No new information this month.

Regional Flood Management Planning (RFMP) Phase 2
No new information this month.

Small Communities Flood Risk Reduction Program
The draft Guidelines for the Small Communities Flood Risk Reduction (SCFRR) Program, released for public comment in October 2015, will guide the selection and funding of SCFRR Program projects beginning in the Fiscal Year 2015-16 funding cycle. The release of the draft Program Guidelines started the 60-day comment period, which concluded on December 28, 2015.

A public workshop addressing the SCFRR Program Guidelines was held in the Delta town of Courtland on December 15, 2015. A webinar (web-based presentation) is also available as part of the Central Valley outreach. A recording of the webinar is posted on the DFM website (http://www.water.ca.gov/floodmgmt/funding/scfrr-guidelines.cfm).

The documents and information about the workshops are available to download at: http://www.water.ca.gov/floodmgmt/docs/Cost-Share-Guidelines-Final-12-11-14.pdf.

Public Engagement
CVFPO staff makes monthly presentations on the progress of development of the 2017 CVFPP at most monthly CVFPB meetings. The presentation can be viewed via archived video available at the CVFPB website CVFPB.ca.gov. Past presentations can be found on the CVFMP website at www.water.ca.gov/cvfmp/.

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 -** Because of the extended time period between IAC meetings, the Conservation Strategy Management Team has initiated a series of "check-in" meetings with our IAC partners to advise them on progress in completing the Final Draft Conservation Strategy document. The first of these meeting was held with CDWF on December 17.

- **Grasslands GGS Mitigation Bank** – Westervelt received the second credit release from USFWS and CDFW for the next 25% of the mitigation credits at the bank, so now DWR has access to a total of 74.4 GGS advance mitigation credits.. The Endowment Agreement has been established and the first deposit (15% of total estimated endowment) has been made into the account. Flood-up of all the GGS units at the bank has been completed.

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. 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. It was produced working jointly with the USACE and more than 140 public agencies and presented 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. Information developed for "California's Flood Future" was used to create flood management content and recommended flood related risk reduction management actions presented in the "California Water Plan Update", published in October 2013.*

The SIFMP program is currently working to further define ways to implement the *California's Flood Future* recommendations. A primary focus is on development of a "water management effectiveness framework", which is the foundation of providing for investment for flood and water management. This framework will provide for a long-term, outcome-based approach to flood risk management throughout California within the context of overall water management investment. In addition, the program has wrapped up an expanded information gathering effort, in which approximately 240 flood and water management agencies were interviewed. A draft report titled *Investing in California's Flood Future* 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 using an outcome-based approach. This report supports *Actions 8 and 10* of the *California Water Action Plan.*

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 the 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 made revisions to and conducted a final quality control review of FEMA Zone A workshop materials with FEMA staff on December 13-15, 2015.

FLOOD RISK REDUCTION PROJECTS (FRRP)

FRRP works in coordination with local and federal agencies to implement new flood projects, provides funding that enables local agencies to repair and improve levees and other flood management facilities statewide, provides advanced mitigation for the State Plan of Flood Control (SPFC) to aid project delivery, and enhances ecosystems associated with the flood system. A primary responsibility of this program is to collaborate and work closely with the U.S. Army Corps of Engineers (USACE).

DELTA LEVEE SYSTEM INTEGRITY (DLSI)

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

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:

Subventions Program FY 2013-2014

- On October 13, 2013, the Board approved the FY 2013-14 funding plan for $12 million.
- Staff reviewed 62 claims for eligible reimbursements. Fifty-nine claims for $5.6 million were processed for payment. Three unresolved claims require CDFW approval before payment can be made.

Subventions Program FY 2014-15

- On October 24, 2014, the Board approved the FY 2014-15 funding plan for $12 million.
- Final claims for work completed between July 1, 2014 and June 30, 2015 are being reviewed and inspected.

Subventions Program FY 2015-16

- DWR received 71 applications for participation in the FY 2015-16 Delta Levees Subventions Program.
- On October 23, 2015, the CVFPB approved $12 million from Proposition 1E funds for the FY 2015-16 Subventions Program.
- Work Agreements for the FY 2015-16 Subventions Program have been prepared and distributed for signature.
- Final claims for work completed between July 1, 2015 and June 30, 2016 are due November 1, 2016.

Delta Stewardship Council (DSC) Interagency Agreement (IA)
The DSC IA funds the Delta Levees Investment Prioritization Study. No new information this month.

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 is planning a series of 4 stakeholder workshops where the consultant, M Cubed, will present their current findings and solicit feedback on the assumptions and methodologies that are being developed. The workshops are tentatively scheduled to begin the end of January.

USACE/ CENTRAL VALLEY FLOOD PROTECTION BOARD (CVFPB) PROJECTS
The CVFPB participates with the 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 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, property; and reduce the state's liability. The following are ongoing USACE/CVFPB projects:

American River Common Features (ARCF) Project
The ARCF project improves levee systems along the American and Sacramento Rivers.

- The waterside blanket construction at Site R7 was completed on December 15, 2015, three weeks ahead of schedule. The on-going finishing work is expected to be completed in four to six weeks, depending on the weather conditions.
- A final inspection walk-through was conducted at the L7 site on December 17, 2015. No significant issue has been identified.

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. This project in combination with other projects will provide the Natomas Basin with 200-year level flood protection.

- Reach H preferred alternative has been selected. Design schedule will be 60 percent complete on March 21, 2016, and 90 percent complete on May 20, 2016. Construction is scheduled to start in the 2018 construction season.
- Reach D modification design contract, to relocate the Vestal Drain and the Pumping Plant 4, has been submitted to contracting. 60 percent design submittal is due in June 2016. Construction is scheduled to start in the 2018 construction season.

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 1, 2015, is as follows:

Phases	Planning & Design	Construction
Preconstruction Engineering and Design	100%	N/A
Phase III – Control Structure	100%	99%
Phase IV – Approach Channel, Chute, & Stilling Basin	100%	80%
Phase V – Site Restoration	50%	8%
Project Overall	94%	87%

- Phase III – Granite is finalizing closeout items on the Control Structure.
  - ✓ Bulkhead Gate Dry Testing held on December 19, 2015.
- Phase IV Progress:
  - ✓ Interim Excavation #2 near completion;
  - ✓ Construction of the leveling slab and walls of the upper chute continue;
  - ✓ Stilling basin baffle blocks, foundation, and walls completed on December 4, 2015.
- Phase V Progress:
  - ✓ USACE design work is 95 percent complete, due in January 2016;
  - ✓ Continue preparation of Environmental Assessment/Environmental Impact Report (EA/EIR) document for certification by June 2016;

- ✓ Rossmoor Bar Mitigation Site – Obtained a Permit to Enter for the Rossmoor Bar Mitigation Site from the County of Sacramento.

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.

- USACE Headquarters is reviewing the Project Partnership Agreement (PPA) and intends to complete final review by the Assistant Secretary of the Army (ASA) by March 2016. Flood Projects Office staff will present the PPA for Board signature as early as the September 2016 Board meeting, following completion of the Final Supplemental Environmental Impact Statement/Environmental Impact Report (EIS/EIR). USACE plans to award the construction contract for the gates modification package in April 2017.
- USACE plans to submit the 95 percent design package for the tainter gates modification in March 2016. The design includes additional structural supports to address cracking in the trunnion ring casting and may or may not include top seals across the service and emergency tainter gates due to operational constraints. Plate extensions on the service gates may or may not be included as well. With these features, additional re-enforcement supports are necessary and could raise the project cost by $20 million, bringing the total cost for the gates modification and dike to $229 million, which exceeds the PPA project cost estimate of $224 million. These features are essential to maintain control over spillway releases and prevent overtopping of the gates.
- USACE is expected to complete the Final Supplemental EIS/EIR in September 2016 and complete National Environmental Policy Act (NEPA) review in October 2016. The Board will consider approval of the Final Supplemental EIS/EIR at the September 2016 meeting to complete the California Environmental Quality Act (CEQA) process.
- USACE plans to begin developing a 65 percent design for raising Dikes 4, 5 & 6 in March 2016.
- USACE is currently conducting an economic re-evaluation of the Folsom Dam Raise project to update project costs and benefits and should be completed by May 2016.

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 for completion by September 2015.

- 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.

- The language for Project Partnership Agreement (PPA) amendment, which allows the state to receive credit for improvements in the Yuba River Basin, is still under review for approval by USACE headquarters.

- An informational presentation to the CVFPB on the Marysville Ring Levee Improvement Project status was made at the December 18, 2015, Board meeting.

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.

- No new information this month.

Success Reservoir Project – General Re-Evaluation Report (GRR)

The Success Reservoir is a multi-purpose facility built to provide flood control and irrigation. The Success Reservoir is currently under evaluation for flood risk. The USACE and the non-Federal sponsors intend to move forward with improvements which reduce the risk of the Dam and provide the multipurpose flood control and irrigation improvements.

- USACE, Lower Tule River Irrigation District (LTRID), and the Department of Water Resources (DWR) met on December 16, 2015, to discuss the path forward for the Success Reservoir Enlargement Project. USACE stated that a Validation Report and an Issue Evaluation are necessary for this project. USACE will conduct both under a Dam Safety Modification Study (DSMS) which will be 100 percent funded by USACE. The DSMS will determine the best alternative for improvement of the Success Dam. USACE anticipates Dam Safety Oversight Group's approval of the DSMS by the first quarter of 2017.

USACE/CVFPB Studies

The CVFPB 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, property; and reduce the state's liability. The following are USACE/CVFPB 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.

- The USACE Civil Works Review Board (CWRB) approved the ARCF GRR on December 8, 2015. Leslie Gallagher of the CVFPB, as well as Gary Bardini (DWR Executive) and Mike Mierzwa from DWR, attended the meeting in Washington, D.C. Several DWR staff members attended the web broadcast at the USACE Sacramento District office. USACE will request formal adoption of the ARCF GRR at the February 26, 2016, CVFPB meeting.
- Flood Projects Office staff continue to work with the Department of General Services in processing the Contract Amendment #1 to increase total study costs to $15.5 million as approved by the Board earlier this year.

Central Valley Integrated Flood Management Study (CVIFMS)
This study will identify federal interest in the Sacramento River Basin by identifying opportunities to reduce flood risk and protect floodplain and environmental assets.

- The Central Valley Flood Protection Board President, William H. Edgar, signed the revised Letter of Support for the release of the CVIFMS Draft Watershed Plan at the December 17, 2015, Executive Committee Meeting. The revised letter clarified that the CVIFMS Watershed Plan will be the federal companion document to the 2012 Central Valley Flood Protection Plan (CVFPP), and it establishes a partnership with USACE to allow necessary coordination of state flood risk management goals outlined in the CVFPP.

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 percent.

- 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 CVFPP 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.

- The USACE assigned a Project Manager and has initiated the Sutter Basin Project Preconstruction Engineering and Design (PED) phase of the project and plans to prepare a Design Agreement for execution by April 2016. USACE received funding in July 2015 for the PED phase of the Sutter Basin Project but was unable to initiate the PED due to lack of staff.

Sacramento River GRR (previously known as Sac Bank Phase 3)
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.

- The USACE Civil Works Review Board (CWRB) approved the West Sacramento GRR on December 8, 2015. Leslie Gallagher of CVFPB, as well as Gary Bardini (DWR Executive) and Mike Mierzwa from DWR, attended the meeting in Washington, D.C. Several DWR staff members attended the web broadcast at the USACE Sacramento District office. USACE will request formal adoption of the West Sacramento GRR at the February 26, 2016, CVFPB meeting.

Woodland/Lower Cache Creek Feasibility Study

This study is a State, USACE, and 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.

- DWR, with support of the city of Woodland, is preparing a letter to the USACE requesting an official pause in the study for approximately 6 months. The intent is for DWR and the city of Woodland to perform additional investigations to either support the USACE's Tentatively Selected Plan, or to develop a Locally Preferred Plan.

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 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 are EIP and UFRR projects:*

Knights Landing Levee Repair Project (EIP)

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 was completed December 29, 2015.

Lathrop Study and Preliminary Design (UFRR)
This project has a long-term plan to fully comply with SB5 requirements, which is well beyond the RD-17 seepage project funded under EIP. The state is requiring the area to regain federal interest and meet the Central Valley Flood Protection Plan requirements, which will require looking at floodplain development and a multi-benefit project.

- No new information this month.

Reclamation District 17 (RD-17) – 100-Year Levee Seepage Area Project (EIP)
RD-17 levees have 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.

Sacramento Area Flood Control Agency (SAFCA) – Levee Accreditation Project (UFRR)
SAFCA proposes levee improvements along 3-4 miles of levees along Arcade Creek and Natomas East Main Drain Canal 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.

- No new information this month.

SAFCA – Natomas Cross Canal Project (EIP)
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 (EIP)
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 (SJAFCA) – Smith Canal Closure Structure Project (EIP & UFRR)
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.

- No new information this month.

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

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.

- No new information this month.

Three Rivers Levee Improvement Authority (TRLIA) – 200-year Goldfields Levee Project (UFRR)

This project proposes to construct a new levee south of the Goldfields (Yuba River) area to complete 200-year flood protection for the Yuba Basin east of the Feather River.

- No new information this month.

TRLIA – Feather River Levee Improvement Project (EIP)

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 1,600 acres for on-site mitigation, agricultural use, and habitat.

- No new information this month.

TRLIA – Upper Yuba River Levee Improvement Project (EIP)

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.

West Sacramento Area Flood Control Agency (WSAFCA) – Design (EIP)

Design agreement funds all design activities for project elements in the North basin and majority of the project design in Southport.

- No new information this month.

West Sacramento Area Flood Control Agency (WSAFCA) – Construction (EIP & UFRR)

Construction for the California Highway Patrol Academy, Rivers, and I-Street Bridge projects in the north basin is complete. These projects corrected through-seepage and foundation under-seepage that had excessive hydraulic gradients, embankment instability, and erosion problems. The Southport Improvement Project will construct flood risk reduction measures along approximately 5.6 miles of the Sacramento River right (west) bank levee. The project consists of approximately 1.6 miles of strengthen-in-place measures and 4 miles of setback levee. For setback levee areas, the work will include the breaching and degrading of the existing levee and allow for natural restoration of the Sacramento River floodplain.

- No new information this month.

Woodland Study and Preliminary Design (UFRR)
This project's long-term objective is to provide flood protection to the city of Woodland while improving flood system elements in Yolo County. The state is requiring the city to continue to work with USACE to determine federal interest in the project and to meet Central Valley Flood Protection Plan requirements. The city is working to develop a multi-benefit project which will consider deep floodplain development, existing maintenance issues, and residual risk measures.

- No new information this month.

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 the 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.

- The public comment period closed for the Ecosystem Restoration and Flood Attenuation (ERFA) Project on December 13, 2015. On December 18, 2015, the CVFPB approved an encroachment permit for the installation of the pipes for the ERFA project, which is located on the San Joaquin River National Wildlife Refuge in Stanislaus County, adjacent to the left bank of the San Joaquin River at its confluence with the Tuolumne River.

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 the LLAP include minimizing flood risk; identifying deficiencies in flood control structures and levees; by 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, 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 reduction, and flood risk reduction in the Yuba, Feather River and Colusa Basin (including wildlife habitat enhancement and/or agricultural land preservation).

- No new information this month.

SAN JOAQUIN RIVER RESTORATION PROJECT (SJRRP)
The Division of Flood Management has created the SJRRP to assist the United States Bureau of Reclamation (USBR) 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. USBR, 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 selected fish species 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 as well as identifying potential remedies to address increased flood risks under Restoration flows in coordination with the CVFPP.

- No new information this month.

FLOOD SYSTEM OPERATIONS AND MAINTENANCE (FSO&M)

FSO&M focuses on maintaining system features such as levees, hydraulic control structures, pumping plants, bridges, and channels to continue to achieve risk reduction benefits the system was designed to provide riverside communities, rural areas 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 CVFPB, the USACE, and environmental resource agencies to ensure that operations 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 operations and maintenance activities, including SPFC channel evaluations, mercury characterization and control implementation, and channel conveyance capacity deficiency correction. Routine operations and maintenance requirements are ***funded by the General Fund****.*

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 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.

The Channel Evaluation and Rehabilitation Program reports progress within the following components:

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

INSPECTION AND EVALUATION:

Bear River Hydraulic Model
Staff finalized the Channel Evaluation Report. Staff began work on the Channel Management Plan.

Cache Creek Settling Basin
No new information this month.

Cherokee Canal Hydraulic Model
No new information this month.

Linda and Arcade Creek Hydraulic Model
Staff completed model combining features of USACE and MBK models and completed initial model runs. Staff is now drafting a model results summary.

Llano Seco Riparian Sanctuary
Staff are continuing to work with the Flood Planning Office on development of the Butte Basin 2-D Model.

Marcuse Road Bridge Replacement (CC-2 Bridge)
No new information this month relative to hydraulic evaluation.

Middle Creek Hydraulic Model (Lake County)
No new information this month.

Natomas East Main Drainage Canal (NEMDC)
No new information this month.

Putah Creek Hydraulic Model
Staff completed Draft Channel Management Plan (CMP).

Yuba River Hydraulic Model
Staff is modifying 1-D HEC-RAS model to incorporate 2-D features available in new version of HEC-RAS to see if results are significantly different.

ROUTINE OPERATIONS AND MAINTENANCE:
The Maintenance Yards' routine channel maintenance is limited to vegetation management through such methods as spraying, mowing, and trimming. These activities are planned at the end of flood season and are completed before the next flood season. Although DWR manages large areas in channels, only a small percentage is actively maintained by DWR. Reporting on planned activities in actively maintained areas started on November 1, 2014, and ended on October 31, 2015. Additional work that is completed as needed includes removing debris, removing trees, removing sediment, and removing beaver dens. These activities are reported as they are completed.

The following activities were completed in the month of December:

- In Butte Creek, 50 cubic yards of debris was removed.
- In the Colusa Bypass, 68 acres of vegetation were mowed and 60 cubic yards of debris was removed.
- In Elder Creek, tree removal occurred on 10 acres.
- In Lindo Creek, 50 cubic yards of debris was removed.
- In Lake of the Woods, 175 acres of vegetation were mowed.
- In the Sutter Bypass, 210 acres were mowed and 3 acres were mulched.
- At Sycamore Creek, 300 acres of vegetation were mowed.

NON-ROUTINE ACTIVITIES:
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 functionality and facility condition. Rehabilitation and improvement work includes proactive repair of known and documented problems with prioritization based on flood risks and safety.

The Flood Control Facilities Evaluation and Rehabilitation Program reports progress within the following components:

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

INSPECTION AND EVALUATION:

Two times a year, once immediately after flood season and once prior to flood season, the Flood Maintenance Office (FMO) conducts inspections of structures, bridges, and pipes that penetrate the levee. Deficiencies are identified with corrective actions. Minor deficiencies can be remedied through maintenance practices while larger issues will require a project level effort.

- No new information this month.

ROUTINE OPERATIONS AND MAINTENANCE:

The Maintenance Yards' routine maintenance for flood facility structures varies based on the type of structure. Pumping plants require periodic mechanical and electrical maintenance while weir maintenance primarily consists of concrete repairs. Additional work that is completed as needed includes removing debris and sediment, and emergency repairs. These activities are reported as they are completed.

The following activities were completed in the month of December:

- At the Middle Creek Pumping Plant, the repaired pumps were tested and they are operational.
- At the Cache Creek Low Flow Outlet, debris was removed from the intake side.
- At Knights Landing Outfall Gates, the new fish screens constructed by RD 108 are up and running. Sacramento Maintenance Yard crews are working out some operational issues.
- At the Sacramento Weir, pre-emergent was sprayed around the weir.

NON-ROUTINE PROJECTS:

Bridge CC-2 Repair (Marcuse Road Bridge)
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 operations and maintenance responsibility for 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
Staff are preparing the third groundwater monitoring report evaluating potential petroleum hydrocarbon rebound effects following remedial pilot testing at the facility. Results from the groundwater monitoring events support that the pilot testing was successful in remediating the petroleum hydrocarbon contamination in the groundwater beneath the site. No significant increases in contaminant concentration have been reported since completion of the pilot test.

Butte Slough Outfall Gates (BSOG)
Environmental staff is coordinating with regulatory agencies on the remaining environmental permits that are needed for the proposed rehabilitation work. Environmental and engineering staff are working on a path forward on the USACE engineering 408 permit so operations and maintenance coverage can be obtained from the federal regulatory agencies. Real Estate continues to work on access and right of entry agreements. Additional electrical updates are being incorporated into the design plans.

Completion Contract
This is a project to complete some items that were not included in the contracts for recent projects. The completion contract covers the Weir 2 project, Willow Slough project, Pumping Plant project, and Knights Landing Outfall Gates project. The contract was awarded to Valentine Construction with the notice to begin work on December 24. Construction is expected to commence in the summer of 2016.

LEVEE OPERATIONS AND MAINTENANCE COMPONENTS

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 operating and 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".

The Levee Operation and Maintenance Program reports progress within the following components:

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

ROUTINE OPERATIONS AND MAINTENANCE:
The Maintenance Yards' routine levee maintenance includes vegetation management through spraying, mowing, and trimming, maintaining levee geometry through dragging levee crown roads, dragging levee slopes, repairing minor erosion, and maintaining waterside and landside toe roads where they exist, protecting levees from rodent damage and repairing damage that has occurred through FMO's Rodent Abatement/Damage Repair and Rehabilitation Program, and removing or remedying encroachments. Reporting on routine maintenance activities started on November 1, 2014, and ends on October 31, 2015. Additional activities that are completed as

needed include repairing or replacing gates, barricades, and mile markers; placing gravel on crown roads; and repairing or replacing pipes that penetrate the levee. These activities are reported as they are completed.

The following activities were completed in the month of December:

- At Cache Creek (21.63 miles), the following activities were completed:
    - Pre-emergent was sprayed along 21 miles,
    - Vegetation was burned along 1 mile,
    - Trees were trimmed along 13 miles,
    - Spot spraying of vegetation occurred along 7 miles,
    - Road grading along 21 miles, and
    - Mile markers were repaired or replaced along 20 miles.
- At the upper 2 miles of the East Yolo Bypass Levee (2 miles), the following activities were completed:
    - Pre-emergent was sprayed along 21 miles, and
    - Mile markers were repaired or replaced along 2 miles.
- At Maintenance Area (MA) 4 (3.4 miles), the following activities were completed:
    - Pre-emergent was sprayed along 3.4 miles,
    - Trees were trimmed along 1 mile, and
    - Spot spraying vegetation occurred along 3.4 miles.
- At MA 9 (19.61 miles), the following activities were completed:
    - Pre-emergent was sprayed along 19.61 miles,
    - Trees were trimmed along 2.5 miles,
    - 2,300 tons of gravel was placed on a section of railroad for a maintenance road,
    - Spot spraying vegetation occurred along 15.5 miles, and
    - One gate was repaired or replaced.
- At Putah Creek (10 miles), the following activities were completed:
    - Pre-emergent was sprayed along 19.61 miles,
    - Trees were trimmed along 2.5 miles, and
    - Two gates were repaired or replaced.
- At the Sacramento Bypass (3.56 miles), the following activity was completed:
    - Pre-emergent was sprayed along 3.5 miles.
- At the West Yolo Bypass levees Units 1-4 (15.42 miles), the following activities were completed:
    - Pre-emergent was sprayed along 6 miles,
    - Road grading occurred along 4.5 miles, and
    - Mile markers were repaired or replaced along 5 miles.
- At Willow Slough Bypass (12.82 miles), the following activity was completed:
    - Pre-emergent was sprayed along 10 miles.
- At Colusa Bypass (4.58 miles), the following activity was completed:
    - Rodent baiting along 4.58 miles.
- At the East Levee of the Sacramento River (20.31 miles), the following activities were completed:

    - Rodent baiting along 20.31 miles, and
    - 5 gates were repaired or replaced.
- At the East Levee of the Sutter Bypass (22.37 miles), the following activities were completed:
    - Pre-emergent was sprayed along 22.37 miles,
    - Spot spraying vegetation occurred along 22.37 miles, and
    - Mile markers were repaired or replaced along 22.37 miles.
- At the East-West Interceptor Canal (4.76 miles), the following activity was completed:
    - Mile markers were repaired or replaced along 4.76 miles.
- At MA 1 (17.12 miles), the following activities were completed:
    - Pre-emergent was sprayed along 17.12 miles,
    - Spot spraying vegetation occurred along 17.12 miles, and
    - Rodent baiting along 17.12 miles.
- At MA 3 (5.19 miles), the following activities were completed:
    - Pre-emergent was sprayed along 5.19 miles, and
    - Spot spraying vegetation occurred along 5.19 miles.
- At MA 12 (11.31 miles), the following activities were completed:
    - Pre-emergent was sprayed along 11.31 miles,
    - Spot spraying vegetation occurred along 11.31 miles, and
    - Rodent baiting along 11.31 miles.
- At MA 13 (41.97 miles), the following activity was completed:
    - Road grading occurred along 41.97 miles.
- At Tisdale Bypass (9 miles), the following activities were completed:
    - Pre-emergent was sprayed along 9 miles,
    - Spot spraying vegetation occurred along 9 miles,
    - Road grading occurred along 8 miles, and
    - Mile markers were repaired or replaced along 9 miles.
- At Wadsworth Canal (9.32 miles), the following activities were completed:
    - Pre-emergent was sprayed along 9.32 miles,
    - Spot spraying vegetation occurred along 9.32 miles,
    - Road grading occurred along 2 miles, and
    - Mile markers were repaired or replaced along 9.32 miles.

NON-ROUTINE PROJECTS:
No new information to report.

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 CVFPP-SSIA. 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 the Division of Flood Management, Flood Maintenance Office, makes repairs to the State Plan of Flood Control (SPFC) 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 a cost-sharing partner and manages the state's responsibilities for the SRBPP and PL 84-99 projects on behalf of the CVFPB.

Flood System Repair Project (FSRP)
As of December 2015, FSRP has committed approximately $19.6 million for all-weather access road improvements and levee repair projects to rural portions of the SPFC, including an emergency levee repair on Elder Creek in Tehama County. This amount includes approximately $1.7 million in local-share contributions. These projects are in various stages of planning, design and construction. FMO Staff continue to develop work agreements to commit additional FSRP funding for these types of rural levee repair projects.

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.