

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

By

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FLOOD EMERGENCY RESPONSE (FLOOD ER)

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.

EMERGENCY RESPONSE SUPPORT

This subprogram includes various efforts that will further the Department of Water Resource (DWR) understanding of the flood system interactions with water supply systems and conjunctive use programs. It also includes the update of the Central Valley hydrology for use in risk assessment and project development. Another component includes developing a comprehensive plan to response to flood events in the Delta.

Annual preseason flood coordination meetings are scheduled and noticed for fall 2014. Ten meetings for flood emergency responders in various regions of the state will provide the opportunity to review flood emergency procedures, protocol, roles and responsibilities in an emergency; the availability of flood fighting resources; vulnerabilities and other flood concerns; and updates from local agencies in that particular region. In addition to DWR, partner agencies presenting information at each meeting include the National Weather Service, Governor's Office of Emergency Services (OES), California Conservation Corps, County OES, and the U.S. Army Corps of Engineers (USACE). New this year will be a short update on the emergency response component of the Regional Flood Management Plan (RFMP) for the meetings that occur in a RFMP location (San Joaquin, Fresno, Stanislaus, Sutter, and Sacramento Counties). More information, including the meeting schedule is available online: <http://water.ca.gov/floodsafe/>.

FLOOD EMERGENCY RESPONSE PROGRAM ENHANCEMENT

The DWR provides real-time information on the integrity of State Plan of Flood Control (SPFC) levees, channels, and structures through coordination and collaboration with Local Maintaining Agencies (LMAs) and the Central Valley Protection Board (Board). The information improves DWR's ability to assess the integrity of the flood system and together with ongoing training, enables DWR to maintain operational readiness in the event of an emergency. Flood ER Program Enhancement improves emergency response processes, information dissemination, and training through the development of response plans, training exercises, improved data collection systems, and web-based applications to centralize and distribute information effectively for rapid decision making during a flood event.

Real-Time Flood Conditions, Status, & Warning

The purpose of the Real-Time Flood Conditions, Status, and Warning program is to provide information needed to manage floods as they are occurring. This program 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.

No new information this month.

Climate Data Collection & Precipitation/Runoff Forecasting

This program supports Flood ER by providing information on current and forecasted water conditions, and by providing meteorological and climate information. Additionally, this program includes evaluating and improving the data collection exchange network and forecasting models; providing water supply, 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 June 30th, statewide hydrologic conditions were as follows:

- Precipitation – 50% of average to date;
- Runoff – 35% of average to date; and,
- Reservoir storage – 60% of average for the date.
- Sacramento River Region unimpaired runoff for Water Year 2014 (observed through June 30, 2014) was about 6.5 million acre-feet (MAF), which is about 39% of average. In comparison, the observed Sacramento River Region unimpaired runoff through June 30, 2013 was about 11.2 MAF, or about 66% of average.
- Northern Sierra 8-Station Precipitation Index Water Year total was 28.9 inches, which is about 59% of the seasonal average to date, and 58% of an average water year (50.0 inches). During June, the total precipitation for the 8-Stations was 0.1 inches, or about 10% of average for the month. Last year on June 30th, the Water Year 2013 seasonal total for the 8-Stations was 44.2 inches, or about 91% of average.
- San Joaquin 5-Station Precipitation Index Water Year total was 19.2 inches, which is about 48% of the seasonal average to date, and 47% of an average water year (40.8 inches). During June, the total precipitation for the 5-Stations was 0.0 inches. Last year on June 30th, the Water Year 2013 seasonal total for the 5-Stations was 26.2 inches, or about 66% of average.

Selected Cities Precipitation Accumulation as of 06/30/2014 (National Weather Service Water Year. July					
City	July 1 to Date 2013 – 2014 (in inches)	% Average	July 1 to Date 2012 – 2013 (in inches)	% Average	% Avg. "Water Year" July 1 to June 30 2013 - 2014
Eureka	21.11	52	32.31	80	52
Redding	17.77	51	28.46	82	51
Sacramento	9.79	53	15.20	82	53
San Francisco	12.54	53	16.61	70	53
Fresno	4.81	42	5.67	49	42
Bakersfield	2.41	37	3.15	49	37
Los Angeles	4.45	35	6.89	54	35
San Diego	5.06	49	6.50	63	49

Key Reservoir Storage (1,000) AF as 06/30/2014								
Reservoir	River	Storage	Average Storage	% Average	Capacity	% Capacity	Flood Control Encroachment	Total Space Available
Trinity Lake	Trinity	1,063	2,086	51	2,448	43	---	1,385
Shasta Lake	Sacramento	1,851	3,650	51	4,552	41	-2,701	2,701
Lake Oroville	Feather	1,511	2,887	52	3,538	43	-2,027	2,027
New Bullards Bar	Yuba	591	830	71	970	61	-375	375
Folsom Lake	American	471	810	58	977	48	-506	506
New Melones	Stanislaus	717	1,532	47	2,400	30	-1,703	1,703
Don Pedro Res	Tuolumne	1,005	1,618	62	2,030	50	-1,025	1,025
Lake McClure	Merced	274	732	37	1,032	27	-730	751
Millerton Lake	San Joaquin	326	416	78	520	63	-195	194
Pine Flat Res	Kings	352	691	51	1,000	35	-648	648
Isabella	Kern	73	313	23	568	13	-288	495
San Luis Res	(Off stream)	655	1,293	51	2,041	32	---	1,384

The latest National Weather Service Climate Prediction Center long-range, 1-month precipitation outlook for July 2014 issued June 30, 2014, suggests no tendency for above or below average rainfall for all of California, except for the extreme southeastern portion of the State where above average rainfall is suggested.

RESERVOIR OPERATIONS & RIVER FORECASTING

This program supports Flood ER 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 program supports Flood ER 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 program provides accurate and timely runoff and river peak flow forecasts.

No new information this month.

DELTA FLOOD EMERGENCY PREPAREDNESS, RESPONSE, AND RECOVERY

A catastrophic levee failure in the Delta puts the water supply serving two-thirds of the State's population at risk. The State's ability to respond timely and effectively depends on a sound response plan and a regimen of preparedness training. Delta Flood Emergency Preparedness, Response, and Recovery aims to ensure operational readiness for the Delta through coordination and collaboration with partner agencies such as effected counties, reclamation districts, federal partners, and the Board. Operational readiness can minimize the negative water quality response to island inundation and disruptions to water use within and outside the Delta.

No new information this month.

FLOOD EMERGENCY RESPONSE GRANTS

Flood ER Grants are intended to improve local flood emergency response and increase public safety. They consist of three subprograms: 1) Statewide ER Grant, which excludes the Delta; 2) Delta ER Grant for Delta only; and 3) the Delta Emergency Communications Grant, a one-time grant to local Delta agencies only. Public agencies with primary responsibility for flood emergency response and coordination are eligible to apply for either Statewide or Delta competitive grants. A key priority of these grants is the development and coordination of flood emergency plans between local flood agencies and county emergency response operational areas.

Statewide Emergency Response Grants

Funded with \$5 million of Proposition 84 funds, this program has 14 contracts signed and all parties are early in implementation.

Delta Emergency Response Grants

Funded with \$5 million of Proposition 1E funds, this program has six contracts approaching signature.

Delta Emergency Communications Grants

Funded by \$5 million of Proposition 84 funds, this program has six contracts approximately halfway through their three-year term.

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 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).

Two basin wide feasibility studies, the Sacramento River Basin Feasibility Study and the San Joaquin River Basin Feasibility Study were initiated in September 2012. The DWR has completed study Milestone 2 which includes the development of a draft array of configurations based on the objectives and evaluations of individual system elements. The feasibility studies are currently in Phase 2 where the draft array of system configurations will be evaluated. The draft configurations have been shared with regional representatives and will be further revised based on stakeholder input and preliminary system evaluations currently underway. Phase 2 will culminate in mid-2016 along with the final basin wide feasibility reports. The next milestone for the feasibility studies is Milestone 3, which is scheduled for early 2015. At Milestone 3, a tentative State preferred configuration will be selected.

The communication and engagement for basin wide feasibility studies will continue to leverage existing venues and opportunities, including the Board's Coordinating Committee, venues established by RFMP efforts, informal meetings, and other processes. Work groups and other venues will be established as necessary, in collaboration with the Board.

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.

The DWR released the Administrative Draft Conservation Strategy (ADCS) to the Interagency Advisory Committee (IAC) members on July 17th. Agencies will have until August 29th to provide written comments on the ADCS and appendices. The DWR will receive preliminary feedback on the document at the August 14th IAC meeting. The DWR also released the ADCS to a small group of targeted stakeholders on July 18th and invited them to provide high level feedback by August 15th.

DWR managers met with the Interim Board Executive Officer to brief her on the rollout of the ADCS and discuss possible roles of the Board and outreach for the future Public Draft Conservation Strategy. The DWR will provide an update on the ADCS at the August 22nd Board Meeting.

STATEWIDE INTEGRATED FLOOD MANAGEMENT PLANNING (SIFMP)

During the last three years, SIFMP identified flood risks facing Californians and proposed solutions to 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, SFMP presented recommendations to improve flood management in a comprehensive report titled California's Flood Future. The report identified that more than 7 million Californians, or one in five, live in the 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, and losses to commerce. The impact of a major flood would be devastating to California and the nation.

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 SFMP program is working to further define ways to implement the *California's Flood Future* recommendations. The primary focus is on development of funding strategies for flood risk management throughout the state.

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.

No new information this month.

Delta Levees Maintenance Subvention Program

Staff, on behalf of the Board initiates and manages work agreements to fund levee maintenance and rehabilitation. The current status of work agreements is as follows:

Work Agreements for FY 2012-2013

- The Board's Executive Officer executed 65 work agreements.
- Staff received 60 final claims by the November 1, 2013 deadline totaling approximately \$12 million in work.
- Staff conducted 60 joint levee inspections with the California Department of Fish and Wildlife and local agencies.
- Claims are being reviewed for eligibility and completeness. The eligible amounts will be reimbursed to the local agencies after the review.
- Staff initiated the reimbursement process for 50 final claims totaling \$4 million in reimbursements.

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.
- Final claims for work completed July 1st through June 30th are due to DWR by November 1, 2014.

Work Agreements for FY 2014-2015

- Staff received applications from 67 local agencies to participate in the FY 2014-2015 Subventions Program.
- Staff will review the applications and prepare a funding allocation plan for Board approval.

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 Levees Special Flood Control Projects

Designed to reduce the risk of levee failure to preserve conveyance of export freshwater flows to 25 million Californians, more than 3 million acres of agriculture, and to reduce local flood risk. This program addresses subsidence, reuse of dredged material, and ecosystem enhancement.

No new information this month.

Delta Levees Maintenance Subvention

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.

No new information this month.

Delta Risk Management Strategy (DRMS)/Delta Knowledge Improvement Program (DKIP)

This program was created in response to AB 1200 requiring DWR to provide a risk analysis of the Delta and Suisun Marsh, then to develop improvement strategies to manage those risks. During the course of DRMS, a number of information gaps were identified and prompted the creation of the DKIP, a vehicle to fund studies to fill the data gaps.

No new information this month.

Dutch Slough Tidal Marsh Habitat Restoration

A program developed to restore essential tidal marsh, other natural habitats, and benefit declining native species. Funding will allow implementation of major re-grading in advance of habitat construction, levee upgrades, utility relocation, and native vegetation plantings.

No new information this month.

USACE/BOARD PROJECTS

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 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, 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.

- Constructions of Natomas East Main Drainage Canal (NEMDC) North, R7, L5A, L10, R3A and Jacob Lane sites are ongoing.
- Document circulation to allow nighttime construction across H Street Bridge at Site L7/R7 for the Environmental Assessment/Initial Study is scheduled for the September 2014, Board Meeting.
- Constructions of Site NEMDC Extension, L7, and Mayhew are scheduled to start in fall 2014.

American River Watershed – Natomas Basin Project

The Natomas Basin Project was signed by President Obama in the Water Resources Restoration and Development Act on June 10, 2014. It includes significant improvements to the Natomas Basin levees resulting in a 200-year level of flood protection for the basin.

Sacramento Area Flood Control Agency and the Board have submitted a draft crediting background document and draft project cooperation agreement. Both documents are critical to advancing this project as soon as possible.

Folsom Dam Modifications Joint Federal Project (JFP)

The purpose of the JFP is to construct an auxiliary spillway at the 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 June 15, 2014 is as follows:

Phases	Planning & Design	Construction
Preconstruction Engineering and Design	100%	N/A
Phase III – Control Structure	100%	76%
Phase IV – Approach Channel, Chute, and Stilling Basin	100%	22%
Phase V – Site Restoration	31.7%	0%
Water Control Manual Update	30%	N/A
Interim O&M Manual	30%	N/A
Project Overall	91.3%	45%

- Phase III – Control Structure: USACE completed concrete work for all six monoliths. Two tainter gates were installed.
- Phase III – Completion is scheduled for June 2015.
- Phase IV – USACE started blasting and excavation in the area between the rock plug and the control structure. The downstream concrete work for the chute and stilling basin is ongoing.

Folsom Dam Raise Project

This project will improve flood protection by increasing the reservoir storage capacity via a 3.5 foot dam raise and strengthening the existing tainter gates for operational safety. In addition, improvements to the temperature shutters and ecosystem restoration along the lower American River are planned.

- 65% design submittal is due for sponsor review in August 2014.
- A Project Partnership Agreement (PPA) for the dam raise part of the project between USACE, the Board, and SAFCA; and a local PPA between the Board and SAFCA are tentatively scheduled to be presented for Board approval in early spring 2015.
- The ecosystem restoration part of the project will begin under a future agreement.

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

The Lake Kaweah Enlargement Project construction was completed in 2006. Remaining administrative, financial, and turnover work completion is due by December 2015.

The next project meeting to restart the closeout process is anticipated to occur within the next two months. Work was delayed for approximately 1 year to execute Schedule and Cost Change Request #3, and provide nonfederal cost share to USACE.

Marysville Ring Levee Improvement Project

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

- Phase 2A design is 90% complete. The construction award is planned for summer 2015.
- Phase 2B design will begin toward the end of 2014.
- Phase 2C and 3 designs are 30% complete.
- Phase 4A construction contract award that was planned for federal FY 2014 is delayed. The delay is due to challenges with acquiring permanent easements from Union Pacific Railroad (UPRR). The DWR continues to negotiate terms with UPRR to obtain permanent easements.
- PPA Amendment No. 1 to allow \$26 million in Section 221 credit is under review by USACE.

South Sacramento County Streams Project

This project will increase flood protection for a portion of south Sacramento County's urbanized area, and an area to the southeast of the City of Sacramento.

The Florin Creek Flood Control Improvements Project construction contract award is scheduled for September 2014. The tentative construction start date is May 2015.

USACE/BOARD STUDIES

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

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 draft GRR is anticipated to be released for public review in mid-August 2014.

Central Valley Integrated Flood Management Study

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

No new information this month.

Cache Creek Settling Basin Project GRR

The settling basin was initially constructed in 1937 by USACE and most recent modifications were completed in 1993. As a part of the federal authorization for those modifications, USACE documents specified additional improvements to be considered at an estimated 25 years from 1993 (approximately 2018) based on sediment trapping efficiency below 30%.

USACE GRR funding request for federal FY 2015 was rejected. USACE plans to request funds again for federal FY 2016.

Lower San Joaquin River Feasibility Study

This study is a coordinated effort by the State, USACE, and the San Joaquin Area Flood Control Agency (SJAFC) to evaluate feasible 200-year level of flood protection alternatives, opportunities for floodplain restoration, recreational enhancements, and ecosystem restoration and enhancement for the City of Stockton and surrounding areas.

No new information this month.

Merced County Streams Project – Bear Creek GRR

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

No new information this month.

Sacramento River Bank Protection Plan Phase 3 GRR

This study will investigate multipurpose bank protection and potential ecosystem restoration to improve the long-term reliability and functionality of the Sacramento River Flood Control Project.

No new information this month.

Sutter Basin Feasibility Study

This study evaluates 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 recreational enhancements opportunities.

No new information this month.

West Sacramento Project GRR

The West Sacramento Project GRR evaluates future work necessary to increase flood protection for the City of West Sacramento to a 200-year level of flood protection.

The USACE released the Draft GRR for a 45-day public review period on July 18, 2014. Public meetings for the Draft GRR are scheduled for August 19, 2014 from 2:00-4:00 pm and 6:00-8:00 pm at the City of West Sacramento City Hall.

Woodland/Lower Cache Creek Feasibility Study

This study is a State, USACE, and City of Woodland coordinated effort to investigate feasible 200-year level of flood protection and risk reduction alternatives, opportunities for floodplain restoration, recreational enhancements, and ecosystem restoration for the City of Woodland and the surrounding areas. This study will continue efforts initiated during the original study, which was suspended in 2004 due to local resistance to the USACE's selected flood barrier alternative.

No new information this month.

Yuba River Basin Project GRR

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

No new information this month.

URBAN FLOOD RISK REDUCTION PROGRAM (UFRR)

This program was created to address State investment priorities as a result of the adoption of the 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 SSIA. The program evolved from the Early Implementation Program (EIP) developed in 2007 in response to the passage of Propositions 1E and 84. The following projects were funded through EIP:

Knights Landing Levee Repair Project

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

No new information this month.

Levee District 1, Sutter County (LD-1 Sutter) – Setback Levee at Star Bend Feather River

LD-1 Sutter constructed a 3,400 foot long setback levee at Star Bend near river mile 18 on the right bank of the Feather River to relieve a pinch point on Feather River at Star Bend and provide increased flood protection for Yuba City.

No new information this month.

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

RD-17 levees have unacceptably low safety factors due to under-seepage and through-seepage. These issues are being addressed by constructing seepage berms, slurry walls, and a setback levee to increase the flood protection level for south Stockton, Lathrop, and Manteca. This project has supported their efforts to delay FEMA remapping until all improvements are complete.

No new information this month.

Three Rivers Levee Improvement Authority (TRLIA) – Feather River

This project has resulted in a 200-year level of flood protection for Highways 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

This project will result in a 200-year level of flood protection for Highways 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 and small section of Western Pacific Interceptor Canal.

A construction funding agreement amendment is being processed to add work to the scope of the Western Pacific Interceptor Canal, adding nine months to the schedule.

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

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 level of flood protection.

No new information this month.

SAFCA-Sacramento River East Levee

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 level of flood protection. SAFCA plans to complete components to program 12A (RM 67) along the Sacramento River and have USACE complete the remaining work.

No new information this month.

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

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

No new information this month.

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

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

An application for funding for the construction of the Southport project was submitted to DWR on July 28, 2014.

SMALL COMMUNITIES FLOOD RISK REDUCTION (SCFRR) PROGRAM

This program provides local assistance to small communities in the Central Valley that are considered high or moderate to high risk, which means they are in close proximity to the river system and may experience deep flooding. Through implementation of feasible local flood damage reduction projects, the SCFRR is intended to assist small communities by providing funding for feasibility studies, design, and construction of projects for achieving 100-year levels of flood protection.

No new information this month.

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.

Bedford – Temescal Wash Project

Purchase agreement documents for the project were executed on July 15, 2014. The agreement includes transfer of title of a \$300,000 fifteen acre parcel to the Riverside Corona Resource Conservation District, and preserves flood risk reduction benefits via an executed conservation easement. This moves the project close to being closed out with FCP grant funds.

Flood Control, Habitat, Restoration and Recharge on the San Diego River Project

Final payment was issued for the Lakeside River Park Conservancy to complete remaining work under the project's funding agreement. This project improves floodwater conveyance and restores over 125 acres of wetlands and riparian habitat.

FLOOD CONTROL SUBVENTIONS PROGRAM (FCSP)

The FCSP authorizes and administers reimbursements to nonfederal local partners for the State's share of nonfederal costs associated with federally authorized flood management projects including: land acquisition, land easement, right-of-way, relocation, fish and wildlife recreation, disposal, and multipurpose objectives of projects. The primary goal of the FCSP – increasing flood protection for communities outside the Central Valley – has not changed significantly over the years, though it has become more robust in requiring completed projects provide up to a 100-year level of flood protection to communities. Over time, other goals of the FCSP have come to reflect DWR's increasing awareness of the need to use an integrated water management approach to flood management.

Since July 1, 2013, this program disbursed just under \$72 million in financial assistance to five local agencies on eight flood control projects. At present time, 30 funding reimbursement requests for \$65 million are pending future review. Approximately \$11 million in total retention funds is pending release, upon the State Controller's audit of 113 claims.

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.

Mission Beach Seawall Repair Project, San Diego

Design and implementation grant agreements for this project were executed. The project will support the design of improvements to repair and replace portions of an existing seawall.

YUBA-FEATHER FLOOD PROTECTION PROGRAM

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

No new information this month.

LEEVE EVALUATIONS (NONURBAN AND URBAN)

Levee Evaluations consists of urban levee evaluations (ULE) and nonurban 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.

Nonurban 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 nonurban geotechnical criteria at current design water surface elevations (USACE 1955/57 water surface profiles) and when not, identifying remedial measures and providing cost estimates to meet the nonurban criteria.

The overall status of the ULE program intermediate and final deliverables for the 27 urban levee study areas are 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 & Report (Geotechnical Evaluation Report)
1	Chico	Done	Done	Done	Done	Draft volume 1 and 2 in preparation
2	Marysville	Done	Done	Done	Done	Volume 1 Done; Draft volume 2 in preparation
3	RD 784	Done	Done	Done	Done	Volume 1 Done; final volume 2 in preparation

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No.	Urban Study Area	Historic Data Collection (TRM)	Initial Field Investigations (P1GDR)	Preliminary Analyses	Supplemental Field Investigations (SGDR)	Final Analyses & Report (Geotechnical Evaluation Report)
4	Feather River West Levee	Done	Done	Done	Done	Draft volume 1 under review by DWR
5	Sutter Bypass Wadsworth	Done	Done	Done	Done	Volume 1 Done ; Draft volume 2 in preparation
6	American River	Done	Done	Done	Done	Draft volume 1 and 2 in preparation
7	Sacramento River	Done	Done	Done	Done	Volume 1 Done ; Draft volume 2 in preparation
8	Davis	Done	Done	Done	Done	Draft volume 1 in preparation
9	Woodland	Done	Done	Done	Done	Draft volume1 under review by DWR and Stakeholders
10	NEMDC East	Done	Done	Done	Done	Draft volume 1 under review by DWR
11	NEMDC West	Done	Done	Done	Done	Draft volume 1 under review by DWR, ICB, and Stakeholders
12	Natomas North	Done	Done	Done	Done	Draft volume 1 and 2 in preparation
13	Natomas South	Done	Done	Done	Done	Volume 1 Done
14	West Sacramento	Done	Done	Done	Done	Volume 1 Done; Volume 2 Done
15	DWSC	Done	N/A	N/A	Done	Draft 2 volume 1 under review by DWR, ICB, and Stakeholders
16	South Sac Streams	Done	N/A	Done	Done	In Progress
17	RD 404	Done	Done	Done	Done	Volume 1 Done ; draft volume 2 under review by DWR
18	RD 17	Done	Done	Done	Done	Draft volume 1 in preparation
19	Bear Creek	Done	Done	Done	Done	Draft volume 1 under review by DWR, ICB, and Stakeholders
20	Calaveras River	Done	Done	Done	Done	Draft volume 1 under review by DWR
21	Lincoln Village	Done	N/A	N/A	Draft GDR Complete	Analyses Completed; Draft volume1 in preparation
22	Brookside	Done	N/A	N/A	Draft GDR Complete	Analyses Completed; Draft volume1 in preparation
23	Rough and Ready	Done	N/A	N/A	Draft GDR under review by DWR	Analyses Completed; Draft volume1 in preparation
24	Boggs Tract	Done	N/A	N/A	Draft GDR Complete	Analyses Completed; Draft volume1 in preparation

No.	Urban Study Area	Historic Data Collection (TRM)	Initial Field Investigations (P1GDR)	Preliminary Analyses	Supplemental Field Investigations (SGDR)	Final Analyses & Report (Geotechnical Evaluation Report)
25	Shima Tract	Done	N/A	N/A	Draft GDR Complete	Analyses Completed; Draft volume1 in preparation
26	Smith Canal	Done	N/A	N/A	Draft GDR Complete	Analyses Completed; Draft volume1 in preparation
27	Walthall Slough	Done	N/A	N/A	Draft GDR Complete	Analyses in progress
28	Bear Creek Wing	Done	N/A	N/A	In Progress	Analyses completed; draft volume 1 in progress (SJAFCA areas to be combined into one GER)
29	Walker Slough	Done	N/A	N/A	In Progress	
30	Pixley Slough	Done	N/A	N/A	Draft GDR under review by DWR	
31	Mosher Diversion	Done	N/A	N/A	In Progress	
32	Mosher Slough	Done	N/A	N/A	In Progress	
33	Upper Calaveras	Done	N/A	N/A	In Progress	

ULE Summary

- Overall, ULE is 91% complete.
- The current date for completion of all Geotechnical Evaluation Reports (GER) is planned for the end of 2014.
- An Independent Consulting Board (ICB) meeting/teleconference is scheduled for August 14th, 2014.
- Conducted an expert elicitation session to solicit input about probability of failure of levees during seismic events.
- GER Volume 1 for Sacramento River, Marysville, and Natomas South were finalized.
- GER Volume 1 Draft 2 for NEMDC West, Southwest Sacramento, and Bear Creek are under review by ICB, DWR and stakeholders.
- GER Volume 1 Draft 2 for Woodland is under review by DWR and stakeholders.
- GER Volume 1 Draft 1 for Calaveras River and NEMDC East are under review by DWR.
- GER Volume 2 Draft 1 for RD 404 is under review by DWR.
- Geotechnical analyses are completed for each urban area.

The overall status of the NULE program intermediate and final deliverables for the 21 nonurban levee study areas are shown in the table below.

No.	Nonurban Study Area	Geotechnical Assessment Report (GAR)	Remedial Alternatives and Cost Estimate Report (RACER)	Geotechnical Data Report (GDR)	Geotechnical Overview Report (GOR)
1	Chico/North/South	Done	Done	Done	Volume 1 Done ; draft volume 2 in preparation
2	Clarksburg	Done	Done	Done	Volume 1 Done ; Print check of volume 2 in preparation

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No.	Nonurban Study Area	Geotechnical Assessment Report (GAR)	Remedial Alternatives and Cost Estimate Report (RACER)	Geotechnical Data Report (GDR)	Geotechnical Overview Report (GOR)
3	Colusa Drain	Done	Done	Done	Volume 1 Done; Draft volume 2 under review by ICB
4	Colusa North	Done	Done	Done	Volume 1 Done; Draft volume 2 under review by DWR
5	Colusa South	Done	Done	Done	Volume 1 Done; draft volume 2 in preparation
6	Gerber	Done	Done	Done	Volume 1 Done, Print check of volume 2 in preparation
7	Knights Landing	Done	Done	Done	Volume 1 Done, Print check of volume 2 in preparation
8	Sutter	Done	Done	Done	Volume 1 Done, Draft volume 2 under review by ICB
9	Wheatland	Done	Done	Done	Volume 1 Done, Draft volume 2 in preparation for ICB review
10	Woodland South	Done	Done	Done	Volume 1 Done, Volume 2 Done
11	Ash Slough	Done	Done	Done	Print check volume 1 in preparation
12	Berenda Slough	Done	Done	Done	Draft volume 1 under review by DWR
13	Black Rascal/Fairfield	Done	Done	Done	Volume 1 Done
14	Diverting Canal/Mormon	Done	Done	Done	Draft volume 1 in preparation for review by ICB
15	ESB/Chowchilla	Done	Done	Done	Draft volume 1 in preparation
16	Fresno River	Done	Done	Done	Draft volume 1 under review by DWR
17	Gravelly Ford	Done	Done	Done	Volume 1 Done
18	RD 2064	Done	Done	Done	Analyses Completed
19	RD 2075	Done	Done	Done	Analyses Completed
20	RD 2095	Done	Done	Done	Analyses Completed
21	SJRRP/CCID	Done	Done	Done	Draft volume 1 in preparation for ICB review
22	SJAFCA upland levees	Final GAR in progress	NA	NA	NA

NULE Summary

- Overall, Nonurban Levee Evaluations are 92 percent complete.
- Preparation of Geotechnical Overview Reports (GOR) is continuing, with the current delivery dates scheduled between July and mid-late 2014. The results presented in the GORs will support the Flood Maintenance Office, regional plans, and SJRRP studies.
- Colusa North GOR Volume 1 was finalized.
- Colusa South GOR Volume 1 was finalized.
- Chico North and South GOR Volume 1 were finalized.
- Black Rascal/Fairfield GOR Volume 1 was finalized.
- A geotechnical assessment of nonurban levees in upper Bear Creek is underway. The final Geotechnical Assessment Report is in preparation.
- An effort is currently underway to transfer ULE/NULE data to the California Data Exchange Center. The goal of this effort is to make ULE/NULE data available to other potential users at DWR (e.g., maintenance and inspections personnel). Data exchange requirements are being developed. This effort will be completed in parallel with the completion of the ULE/NULE projects.
- An additional effort is currently underway to add an interface to the DWR web site to make final ULE and NULE data and documents available to the public.
- An ICB meeting/teleconference is scheduled for August 14, 2014.
- Clearances are being obtained for an additional field investigation in the Knights Landing area. The additional field and lab data will support the LMA's geotechnical evaluation of potential remediation alternatives.

SAN JOAQUIN LEVEE EVALUATION PROJECT (SJLE)

The SJLE project was developed to assist the Bureau of Reclamation (Reclamation) in assessing flood risks associated with the San Joaquin River Restoration Program (SJRRP). The SJRRP 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). The DWR has offered technical and funding assistance to the program in recognition of DWR's role in habitat restoration and flood management.

The purpose of the SJLE is to assist the SJRRP in assessing the flood risk impacts of Restoration flows under the SJRRP due to seepage and stability; and identifying potential remedies to address increased flood risks under Restoration flows in coordination with the CVFPP.

The ULE/NULE team is supporting the SJRRP's efforts to meet the requirement of the Settlement to increase the flow in the upper San Joaquin River. This support consists of providing Reclamation and LMAs analyses of the geotechnical conditions of levees so they can manage increases in flow with an understanding of the potential increased flood risk. Standard

geotechnical criteria (factor of safety, exit gradient) are being used. The first phase of field explorations has been completed. Laboratory testing is complete for soil samples from these explorations. Additional geomorphic mapping is complete.

Analyses for areas with significant channel fill have been completed and a summary technical memorandum was prepared. A geophysical resistivity study, including a summary data report was completed. Data from the geophysical surveys was used to identify potential anomalous levee embankment and foundation conditions between existing exploration locations and were used to aid in the planning for supplemental field explorations in Phase 2. Phase 2 field work is underway and will be completed by the end of August 2014. A meeting was held with DWR and DWR's consultants to review reach and analysis cross selection.

LEVEE REPAIRS

Levee Repairs includes two major projects: the Flood System Repair Project (FSRP) and the Sacramento River Bank Protection Project (Sac Bank). Additionally, a new Flood System Encroachment and Penetration Project (FSEPP) will begin under FSRP. The Levee Repairs program also manages the State's responsibilities to Federal PL 84-99 Emergency Repairs Project and the Small Erosion Repair Program (SERP).

As one of the SSIA's near-term priority actions identified in the CVFPP, DWR developed FSRP to help LMAs reduce flood risks in nonurban areas. Through FSRP, DWR will provide LMAs with technical and financial support to repair documented critical problems of the SPFC in nonurban areas. Project guidelines typically establish a 15% local cost-share toward project costs. FSEPP will identify and address existing easements, boundaries, encroachments, and penetrations of the SPFC related to system repairs. The information will inform the Board and support their permitting and enforcement efforts, along with DWR and LMA maintenance activities throughout the system.

Sac Bank is a long-standing Federal project where the State serves as a 35% cost-share partner, with the USACE assuming the remaining 65%. Sac Bank identifies, designs, and repairs erosion-related damage to the Sacramento River Flood Control System, primarily in urban areas. DWR, on behalf of the Board, provides LERDS (lands, easements, right of way, disposal and stockpile) acquisitions as part of the State cost share. The State's responsibilities as the nonfederal sponsor under PL 84-99 are managed under Levee Repairs. USACE has authority under PL 84-99 to supplement local efforts in the repair of flood control projects (i.e. levees) which are damaged by a flood.

The Small Erosion Repair Program (SERP) is a streamlined regulatory permitting and authorization process to facilitate the repair of small erosion sites during the same season erosion sites are identified. The initial phase of SERP (Phase 1) is a five-year pilot effort that authorizes up to 15 sites each year determined eligible for the program, covering levees that are maintained by DWR within the Sacramento River Flood Control Project area.

No new information this month.

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.

FLOOD RISK NOTIFICATION

The annual FRN focuses on communicating flood risk to the public and local, state and federal agencies to increase flood hazard awareness for areas protected by SPFC. The objective of this notice are to 1) Meet all requirements of State law, including other relevant information as determined by DWR; 2) Inform property owners about flood risk and encourage them to take appropriate preventative actions to minimize potential losses caused by flooding; 3) Increase Community Rating System (CRS) points for Levee Flood Protection Zone (LFPZ) communities that participate in FEMA's National Flood Insurance Program (NFIP); and, 4) Make notices unique for each property owner by providing information about potential flooding sources customized for each property address.

This year, DWR's annual FRN program identified more than 367,000 parcels in the Sacramento-San Joaquin River basins that are protected by project levees. Based on our Geographic Information System (GIS) and parcel data analyses, about 275,000 property owners in 17 counties are to receive a written notice. Of these owners, 50 own at least 100 parcels within the LFPZs and over 29,000 own at least 2 properties. About 246,000 property owners receive a notice for a single parcel. For the multiple-property owners, we will send a cover letter with the 2014 FRN and a table listing the parcels and flooding sources. This approach will avoid sending duplicate notices to owners of multiple parcels.

The 2014 FRN for single property owners and multiple-property owners are scheduled to be mailed out by September 1, 2014.

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 NFIP activities including the CRS. As part of the NFIP Community Assistance Program (CAP) grant-partnership with the Federal Emergency Management Agency (FEMA), DWR conducts audits with communities participating in the NFIP, provides technical assistance to the public, and trains community officials.

- Community Assistance Visit inspections were conducted for Del Norte, Trinity and Butte Counties, Crescent City and the City of Redding.
- Staff participated in Community Information System, General Technical Assistance training presented by FEMA.
- Staff conducted approximately 40 hours of general technical assistance for Stanford, Willows, Siskiyou County, Glenn County, and Del Norte County.

CENTRAL VALLEY FLOODPLAIN EVALUATION AND DELINEATION (CVFED)

The CVFED is tasked with obtaining new physical data and developing analytical tools and other work products such as topography acquisition, riverine and overland flow hydraulic models, and floodplain delineation maps. The project will develop datasets and tools allowing State, federal, and local entities to use CVFED developed models or develop new models using CVFED datasets for integrated flood management of the Central Valley's primary rivers and streams.

In July 2014, the Hydraulic Analysis Section (HAS) continued to manage the hydraulic model development as well as the development of applications and tools using CVFED models. The enhanced and extended systemwide flow hydraulic routing models for the Sacramento and San Joaquin River basins are 44% and 39% complete, respectively. These models are expected to support enhanced flood warning systems and general Flood ER programs. In addition, CVFED continued to plan, scope, design and implement geospatial tools and applications for hydrology, hydraulics and topographic data management related to the program including inventory, update, visualization and dissemination of data and tools for Flood ER, FloodSAFE and DWR partner agencies.

Following the deliveries of the ULOP 200-year Informational Floodplain Maps (SB 1278 and AB 1965) for SPFC urban communities in June 2013, CVFED continues to respond to public comments and to provide support to communities regarding the 200-year level Informational Floodplain Maps. In July, the program processed one request for 200-year informational mapping data.

CVFED continues to populate the Library of Models (LOM) with CVFED models as they are completed and approved. Approximately 95% percent of the comprehensive riverine and over land flow hydraulic models corresponding to the CVFED program are populated in LOM.

In July, the program processed ten requests for data, and transferred a total of 13,551 LIDAR tiles and 53,162 tiles of aerial imagery. Three of these requests also included bathymetric and field survey data. Four of the requests were from DWR and six were from outside public agencies. Approximately 2,245 GB of data were transferred covering a land area of approximately 12,150 square miles.

FLOOD SYSTEM OPERATIONS AND MAINTENANCE (FSO&M)

FSO&M focuses on maintaining individual subprograms 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 SPFC identified in the California Water Code (CWC). Local agencies and the State work closely with the 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 (CER)

The CER program is responsible for operating, maintaining, and repairing SPFC channels identified in assurances to the federal government and defined in CWC Section 8361. The 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 CER 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 methyl mercury loads passing through the flood control system and into the Yolo Bypass and the Delta. The 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 began collecting background data for development of Bear River HEC-RAS model for the entire channel (approximately 13 miles). FMO previously modeled the lower reach (approximately 5 miles) in 2011 to evaluate a proposed sediment removal project that was determined to be unnecessary at that time. The model will also incorporate the Western Pacific Interceptor Channel.

Cache Creek

No new information this month.

Cache Creek Settling Basin

Tree and vegetation removal is about 75% complete.

Chico Area Streams Hydraulic Model

No new information this month.

East Side Canal (aka Coon Creek Interceptor)

Staff received final confirmation from DWR's Office of Chief Counsel that we are responsible for channel maintenance. The DWR has not routinely performed channel maintenance in the East Side Canal. We are initiating the permitting process to allow maintenance to be performed in the channel and to eventually add it into the routine maintenance agreement between DWR and CDFW.

Natomas East Main Drainage Canal (NEMDC)

Staff met with SAFCA, MBK, and AECOM (consultants for SAFCA), to review maintenance work done at NEMDC last year and planned maintenance activities for this year. FMO and MBK discussed model assumptions for current conditions based on maintenance completed last year. AECOM is working as a consultant for SAFCA to explore the possibilities for improving channel capacity and environmental enhancements that could be incorporated into the project description of SAFCA's SREL North Streams project.

Putah Creek Hydraulic Model

Received a HEC-RAS model of Putah Creek from North Regional Office (NRO) for model QA/QC and are revising model as needed to address comments.

Sutter Pumping Plants Fish Screen Investigation

FMO and NRO met to review the draft Fish Screen Investigation Report from NRO which summarizes over three years' collection of real time velocity data of flow (primarily irrigation water supply) through the old pumping plant culverts. Based on NRO's evaluation, it does not appear that fish screens will be needed at these locations. FMO will provide final comments to NRO in mid-July. NRO will then finalize the report and provide recommendations.

Tisdale Bypass Hydraulic Model

No new information this month.

Wadsworth Canal Hydraulic Model

No new information this month.

FLOOD CONTROL FACILITIES EVALUATION AND REHABILITATION (FCFER)

The FCFER program includes evaluating, operating, maintaining, and repairing SPFC facilities defined in CWC Section 8361 and State assurance to the federal government. The DWR is responsible for operating and maintaining Sacramento River Flood Control Project 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)

Staff has completed an Initial Study/Mitigated Negative Declaration, California Environmental Quality Act document for the BSOG Rehabilitation project is currently under review by management. The document is scheduled to be released for public comment by the middle of August 2014. Staff is further completing access and right of entry agreements and completing requisite permit applications in an effort to begin construction activities by May 2015.

Sacramento and Sutter Maintenance Yards

Staff is mowing levee slopes, conducting toe road maintenance, and removing vegetation and debris from channels.

LEVEE OPERATIONS AND MAINTENANCE COMPONENTS

The Levee Operation and Maintenance Program include the following components: 1) inspection and evaluation; 2) routine operations and maintenance, and 3) non-routine projects. It 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".

The following table shows the status of routine levee maintenance activities from April 1, 2014 to March 31, 2015.

Maintenance Activities completed from April 1, 2014 to March 31, 2015

	Vegetation Control	Rodent Grouting	Encroachment Removal	Levee Restoration	Levee Road	Minor Structures
MA 1		N/A	0%	0%		0%
MA 3		N/A	0%		0%	0%
MA 4		0%	0%	0%	0%	0%
MA 5		0%	0%	0%		0%
MA 7	0%	0%	0%	0%	0%	0%
MA 9		0%	0%	0%	0%	0%
MA 12		N/A	0%	0%	0%	0%
MA 13		0%	0%	0%	0%	0%
MA 16	0%	0%	0%	0%	0%	0%
MA 17	0%	N/A	0%	0%	0%	0%
WC 8361 State Maintained		0%	0%			

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.