

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

By

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FLOOD OPERATIONS BRANCH

Flood Hazards

The Department of Water Resources (DWR) has initiated a statewide program to assist California communities with their flood emergency response and recovery plans. This program recognizes the four flood hazard types confronting each community, and assists the communities in developing new or enhancing existing response plans to mitigate these hazards. DWR will assess local flood response and recovery plans statewide to determine which communities need to develop or enhance plans.

The four flood hazard types DWR is seeking to address are:

- Deep floodplain flooding in flatlands;
- Flooding in coastal and tidal estuaries (where rivers meet the ocean);
- Flooding in banked rivers and headwater regions located in mountainous and hilly terrain; and
- Flooding in alluvial fan regions that have no defined river channel.

Three of the four flood hazard types will be addressed by Pilot Projects. The communities selected to participate include the cities of Marysville (deep floodplain), Arcata (banked rivers/headwaters), and San Bernardino (alluvial fan).

DWR will assist these three communities in developing comprehensive flood response and recovery plans - which will serve as examples for other communities facing the same or similar flood hazards. DWR will provide templates, tools, and technical assistance to assist other cities and counties in preparing their own flood response and recovery plans.

DWR will continue to work with officials responsible for flood emergency response in each community to learn about the particular flooding issues their communities are facing. Current flood emergency preparedness, response, and recovery plans used by various public and private agencies, utilities, and organizations will be reviewed and compared to DWR's list of components that a "best practices" flood plan should have identifying any gaps or areas in need of enhancement. The process used to develop these plans will be documented so that the communities can more easily update their plans in the future.

The remaining flood hazard type, coastal and tidal estuary flooding, will be addressed in the DWR Delta Flood Emergency Preparedness and Response Plan (DWR Delta EPRP). DWR will work with local responders and Reclamation Districts in the Delta to complete the DWR Delta EPRP.

FLOODPLAIN MANAGEMENT BRANCH

Building Standards Code Update Project (BSCUP)

DWR's BSCUP held its second round of Public Meetings in April 2009, including a Disabled Access workshop, where the proposed code and illustrations showing code compliance were discussed. The Building Code Team has elected to target three occupancy groups: Educational (E), Residential (R), and Institutional (I), focusing on vulnerable and dependent persons. The BCT is preparing the documents for the Building Standards Commission submittal in mid-June 2009. More information can be found at www.water.ca.gov/BuildingCodeUpdate

Community Rating System

The Federal Emergency Management Agency's (FEMA) Community Rating System Program is an incentive program that reduces flood insurance premiums and minimizes flood damage and loss of life. DWR has hired a CRS Coordinator and has developed a CRS strategy plan focusing on the following objectives: 1) Increase State activities that result in "uniform minimum credits" that all California CRS communities can receive automatically; 2) Increase the number of CA communities that participate in the CRS program, and 3) Help existing CA CRS communities increase their credits. Currently, only 12% of NFIP California communities participate in the CRS, saving CA flood insurance policy owners in CRS communities, \$9.3 million annually.

FLOOD PROJECT INTEGRITY AND INSPECTION BRANCH

California Water Code §9141 (Assembly Bill 156) Local Agency Reporting Requirements: In February 2009, FPIIB and California Data Exchange Center (CDEC) staff initiated efforts to streamline and improve the electronic reporting web application for the 2009 Local agency Reporting Program based on comments received from interested parties. Improvements to the 2009 version of the web application include development of new informational links from the Local Agency home webpage, a Local Agency contact review and editing page, a Local Agency map view and comment page, a Levee Mile/Inspection Report view page, and a view page for previously submitted information. Improvements also include Local Agency access to additional flood system information.

FPIIB and CDEC staff will be hosting a series of workshops in June 2009 to receive feedback from Local Agencies and their representatives on the additional functionality and new features of the updated 2009 electronic reporting web application. A workshop announcement has been developed in coordination with Graphic Services, and will be mailed to the Local Agencies and their representatives in mid-May 2009.

LEVEE REPAIRS BRANCH

Sacramento River Bank Protection Project (SRBPP)

DWR is preparing detailed landscape designs to meet offsite mitigation required by regulatory agencies for four DWR led sites; Sacramento River Mile (RM) 35.4, Feather River RM 7.0, and American River RM 10.0, and RM10.6. Land and Right of Way negotiations for two setbacks at Cache Creek LM2.8 and LM3.4 are in progress. The Corps of Engineers is Lead Agency for 13 sites (designs and permits) and has also completed 90% designs. An issue regarding a permanent access ramp at Larchmont Park American River Site 10.6 has been raised by the Sacramento Area Flood Control Agency. DWR needs only a temporary ramp for construction and any variation will be considered an improvement requiring cost sharing by the locals.

After construction of 19 sites, about 3000 linear feet (of the total 405,000 linear feet authorized under SRBPP Second Phase) will be left in the program. A total of 34 sites are under design for Year 2009 and 2010 construction; however, with limited authorization left in the program, construction in 2010 will depend upon completion of EIR/EIS for the additional 80,000 linear feet authorized under WRDA 2007. Scoping and Project Management Reports for this additional authorization are under review. Alternatives Report and a Draft Section 215 Agreement between the Corps and the Central Valley Flood Protection Board for the six DWR led sites have been submitted to the Corps.

San Joaquin River Critical Erosion Repairs

Further detailed investigations (including drilling) are in progress in order to obtain design parameters for 60% engineering design for four critical erosion sites on the San Joaquin River. Permit applications for Streambed Alteration Agreements have been submitted to the California Department of Fish and Game. Environmental assessment work for these sites and consultations for U. S. Fish and Wildlife Service and National Marine Fisheries Service Biological Opinions are ongoing.

Levee Stability Repairs

DWR has submitted three draft proposals for levee repairs to the Corps under the Calfed/Corps Delta Levee Stability Program. These underseepage sites (two in West Sacramento on the Sacramento River, and one in RD 404 on the San Joaquin River) have been identified through the ongoing Levee Evaluations Program. These proposals are being developed in coordination with the Reclamation Districts. As these sites are within the legal Delta, proposals are eligible for cost-sharing with the Corps under the WRDA 2007 authorized Calfed Bay-Delta Levee Stability Program.

In addition, an RD 2064 proposal (which had already been submitted to the Corps for the San Joaquin River Junction Site at RM 71.5) is eligible for cost-sharing. DWR is working with the Corps for completion of a Project Information Report for construction in 2010.

2006 Public Law (PL) 84-99 Rehabilitation Assistance Program

The Corps and DWR staff has completed joint field investigations for 19 sites planned for repairs in Summer 2009. Reclamation District (RD) 150 has 17 sites (Six Order 2 and eleven Order 4) to be repaired, and one site in RD 3 and one site in RD 755 will be included in the 2009 repair program.

FLOOD MAINTENANCE OFFICE

Colusa State Recreation Area Mitigation Site

River Partners has completed drilling of the irrigation well in preparation for planting in May 2009. The water supply main will be extended to the planting area and connected to the underground piping system installed last November. Electrical equipment installation will begin in early May. Approximately 34,000 plants will be delivered and planted this year. The site is expected to be operational by early June 2009.

River Partners has completed planting of native willow and cottonwood cuttings at the Tisdale Bypass site. Some of these cuttings are intended to stabilize bank erosion of a drainage canal.

DELTA-SUISUN MARSH OFFICE

Sixty-Four Local Agencies in the Delta have completed maintenance and improvement of 722 miles of levee under the FY 2007-08 Delta Levees Maintenance Subventions Program. Expenditures for work accomplished includes \$5.5 Million in maintenance, \$124,000 for fish and wildlife, \$2.8 Million in levee improvements to the Hazard Mitigation Plan standard, \$4.1 Million for levee improvements to the Bulletin 192-82 level and \$2.1 Million for priority 2 work (work exceeding \$100,000 per levee mile). The total of the claims is \$23.6 Million of which \$16.8 Million is the State reimbursement. The claims have been in hand and processed for more than a month; however, payment of these claims is subject to the current restrictions on spending of Bond fund.

Thirty-Nine work agreements have been processed by the Department and signed by the Board's Executive Officer for the FY 2008-09 Delta Levees Maintenance Subventions Program to maintain and improve 486 miles of critical Delta levees. An additional 29 work agreements have been signed by the Local Agency and are being held in the Department due to the current limitation on commitment of Bond funds. Levee reaches represented by those Agencies with unsigned work agreements totals 277 miles.

DWR recognizes that the restrictions on use of Bond funds may increase the threat to the Delta levee system. The Local Agencies that operate and maintain the levees rely on payment of claims to fund current year work. The inability to pay the FY 2007-08 claims means the Local Agencies must operate on cash reserves or on loaned money. Both of these conditions, reserves or loans, could create a hardship on the Agencies and ultimately result in reduced levee maintenance or delayed improvements. In the worst cases, Local Agencies must continue to pay interest on loans from cash reserves. Interest is a cost that does not qualify for reimbursement under the Program.

Recent General Obligation Bond sales and actions by Department of Finance should result in the ability to pay the FY2007-08 claims in the next several months. DWR staff is, also, working with the Office of Chief Counsel to make commitments to the remaining Local Agencies in the FY 2008-09 Program.

FLOOD PROJECT MODIFICATIONS & PERMITS BRANCH

Early Implementation Program (EIP)

The four current EIP projects have been shut down since November 2008 for the duration of the flood season. All projects had been anticipated to start construction by April 15, the normal start of the levee construction season. However, the projects have not started and without immediate additional funding it will be difficult to stay on task and complete the projects by the end of October 2009, as planned. Funding authority was received in April 2009 to allow DWR to process pending payments for the project. Almost \$30 million of payments have been submitted by Program staff for payment, which are pending release by the State Controller's Office.

In response to the EIP Proposal Solicitation Package posted on the FloodSAFE website, three EIP competitive applications were received. The proposed projects total could be as much as \$117 million of the available \$163 million funding. Beside the competitive applications, two capital outlay projects, SAFCA and WSAFCA, are under review.

Status of Current Projects:

Three Rivers Levee Improvement Authority (TRLIA) –TRLIA continues to work to resolve the archaeological issue they encountered in Segment 2. They are working with tribal representatives, DWR, and CVFPB to find an acceptable solution that is not only technically feasible, but also financially possible.

DWR is also reviewing a request from TRLIA to supplement their funding by \$10.2 million for the FY 07/08 to include the Segment 1 work that was previously rejected. DWR is evaluating the request for its technical merit and financial feasibility. It appears that this segment could be added to the contract, but not funded until the pending crack issue is resolved. Several meetings have been held on the cause and potential remediation for the crack, but no final resolution has been reached. TRLIA is continuing to engage with DWR, CVFPB, and Corps until a resolution is reached. Their intent is to fix the problem before the next flood season.

Sacramento Area Flood Control Agency (SAFCA) – All construction activities for last year have been completed. SAFCA received bids in late April for the Phase 2 work planned for this construction season. They have the Board permit and should start construction shortly, but are moving cautiously due to delay in payment of the requested advance.

Reclamation District 2103 (RD-2103) – RD-2103 has requested an increase in State funding for this project from \$7.35 to \$10.8 million to cover unauthorized eligible costs for work identified in the Funding Agreement. An amendment to the Funding Agreement has been prepared to provide additional funding from Fiscal Year 08/09 EIP funding.

RD-2103's contractor was used improper fill material to reconstruct their levee at the end of last year's construction season. Their request to allow the substandard work to be remediated was denied. RD-2103 has agreed to replace the improper fill this construction season.

Levee District No. 1 of Sutter County (LD-1) –CVFPB approved their permit to relocate irrigation pipes, which has to be completed before the setback levee construction can start. They also received a Board permit for construction of the setback levee. LD-1 plans to degrade the existing levee prior to building the setback levee. CVFPB and DWR have requested LD-1 to provide a plan to cover emergency measures if for any reason they are not able to complete the setback levee before the next flood season. If they do not receive the needed funding advance soon, this project may be postponed until next year.

Status of New Project Applications

Reclamation District 17 (RD-17) – RD-17 has submitted an application for competitive funding. DWR has reviewed the application and is working with the District on completing all the requirements. Their proposed "Area Project" is intended to resolve all seepage issues and result in 100-Year level of protection. The project will cost approximately \$99 million with \$70 million State share. DWR is working with RD-17 to justify a funding agreement for the whole project, but only fund the design and any construction that could be cleared environmentally until such time that the overall environmental impact is clearly identified, which should happen later this year. Pending issues include final determination of the State cost share percentage and the local match fund availability.

Reclamation District 2062 (RD-2062) – RD-2062 requested \$6.3 million for design of the setback levee and sediment removal on Paradise Cut. This project is part of their larger development project, but with the current economy will likely not happen for another 5-10 years. The project was proposed as having regional benefit. The application was missing significant key information that is required by EIP Guidelines. The applicant withdrew the application for this round of funding. They may apply next time around when they are able to provide the needed information.

Three Rivers Levee Improvement Authority (TRLIA) – TRLIA has proposed another project as part of their overall effort to reach the 200-Year level of protection. The new project has many elements with the main portion located in the south bank of the Yuba River at a total cost of approximate \$68 million with \$47.5 million State share. This application meets all the requirements and will be moving to the contract preparation stage shortly.

Sacramento Area Flood Control Agency, Capital Outlay (SAFCA-CO) – Review of SAFCA's submittal is complete and the Funding Agreement and Director's Decision Memo was approved. The Funding Agreement for \$193.3 million State share is anticipated was signed by DGS in early May. SAFCA's planned bid opening for the first phase of work on the Sacramento River is being pushed back to later in May due to lack of certainty on availability of State funds.

West Sacramento Area Flood Control Agency, Capital Outlay (WSAFCA-CO) – WSAFCA has submitted documentation for a design-only project at this time. The project is under review with Program staff. Since the Funding Agreement will not likely be signed until late June 2009, WSAFCA will be prepared to include the FY 08/09 and 09/10 design work and previously completed 2008 work at I-Street Bridge as credit. WSAFCA is planning to request a construction funding agreement upon completion of their environmental and hydraulic analysis by late 2009.

LEEVE EVALUATIONS BRANCH

Urban Levee Evaluations Project

The Urban Levee Evaluations Branch was originally charged with performing geotechnical evaluations on approximately 350 miles of project urban levees. Recently, approximately 120 miles of non-project urban levees were added to the scope of work. An urban levee is defined as protecting at least 10,000 people. Levee evaluations focus on urban levees in the geographic areas of Reclamation District (RD) 17, RD 404, Natomas, West Sacramento, Marysville, Woodland, Davis, Stockton, MA9, American River, Sacramento, the Sutter Basin, and RD 784.

The purpose of these evaluations is to support the Central Valley Flood Management Planning (CVFMP) and other flood management related programs by determining if these levees meet defined geotechnical criteria and, if appropriate, identify remedial measure(s) to meet those criteria. This evaluation will be conducted with the goal of providing 200-year protection for urban areas using the DWR and the Corps levee design criteria.

General

1. The recent State's budget crisis resulted in halting authorization of all new task orders, which has impacted the schedule of projects within the Levee Evaluations Branch. It will take a significant amount of time to essentially restart the levee evaluation program and determine the impacts to schedule and budget.
2. New Task Orders are being developed to restart the levee evaluation project.
3. The Levee Evaluations Branch continues to work closely with RD 17, Natomas (SAFCA and RD 1000), Three Rivers, West Sacramento, and others within the Department and the Corps to review issues concerning early implementation projects.
4. At the request of the CVFP Board's Chief Engineer, the Levee Evaluations Branch continues to support the Central Valley Flood Protection Board in assessing a crack in segment 1 of the Feather River levee across from Star Bend. This crack was first observed after slurry wall construction was completed. At this time, winterization measures and additional explorations and characterization of this area was recommended.
5. Weekly coordination meetings with the Corps continue so that subsurface explorations plans are approved in advance of work and efforts are not duplicated.
6. A program to further evaluate strength characteristics of the levee soils underway.
7. The effects of budget crisis has resulted in the preparation of numerous financial reports pertaining to Bond funded contracts.

The work performed in April 2009 is broken into three geographic urban levee areas of North, Central, and South is as follows:

North Urban Levee Area

1. Sutter Basin: URS is providing response to comments for the Phase 1 Geotechnical Report (P1GER) from the various reviewing agencies. The report will be finalized in June 2009. URS is continuing the preparation of the Supplemental Geotechnical Data Report (SGDR).
2. Marysville: A check print of the Draft SGDR was submitted to DWR for review in March 2009. DWR will provide review comments To URS in May 2009.

3. RD784: Drilling activities will commence in May 2009. A total of 22 borings will be drilled. DWR at the request of the Central Valley Flood Protection Board is continuing to monitor GEI/TRLIA mitigation measures associated with the slope failure in Segment 1 along the Feather River.

Central Urban Levee Area

1. Natomas NLIP: Levee Evaluations is reviewing the 90 percent NLIP documents provided by SAFCA for SREL-1, 4b. Levee Evaluations participated in the BSOC April meeting.
2. Davis: Analysis using a new strength criteria has been initiated for a trial reach along the Yolo Bypass Levee. Results will be ready for review in May 2009. This analysis approach will be used to better inform the GER. Until this approach is finalized, additional analysis work is on hold.
3. Woodland: A meeting with the FloodSAFE Yolo Pilot Program in coordination with the Flood Projects Office was held on April 16th, 2009. Incorporation of final review comments to the final P1GDR is in process; this report expected to be finalized in May 2009. The final GDR will incorporate the supplemental field work that is scheduled for summer 2009. Seven samples are proposed from the Woodland study are for the special strength testing program. The program will better inform the GER. Until this approach is finalized, additional analysis is currently on hold.

South Urban Levee Area

1. Due to the bond funding delays and the inability to issue new tasks orders or amend existing ones for several months, all work on the RD 404 P1GER and the RD 17 SGDR has been delayed.
2. Greater Stockton Area Urban Non-Project Levees: Field explorations continued at RD 1614. The drilling of these borings were postponed until May 1st to avoid the hibernation period of the Giant Garter Snake. Lab testing of soil samples and data collection from piezometers continued. The preparation of a P1GDR at RD 403 continued. The field exploration for remaining Urban Non-Project levees in the Greater Stockton Area is scheduled to commence in the summer of 2009.

Non-urban Levee Evaluations

The Non-urban Levee Evaluations Branch was created to perform geotechnical levee evaluations on about 1,250 miles of non-urban State/Federal project levees. A non-urban levee is defined as protecting 10,000 or less people. The project focuses on the non-urban State/Federal project levees in the Sacramento River and the San Joaquin River flood control systems. This project is in the process of expanding to include the 388 miles of appurtenant non-project levees.

The purpose of these evaluations is to support the Central Valley Flood Management Planning (CVFMP) and other flood management related programs by determining if these levees meet defined geotechnical criteria and, if appropriate, identify remedial measure(s) to meet those criteria. This evaluation will be conducted with the goal of providing the design profile level of protection in non-urban areas using the DWR and the Corps levee design criteria.

Activities in April 2009:

1. The State's budget crisis has resulted in halting authorization of all new task orders; can only work on existing task orders. This will result in project delays and may affect levee evaluations ability to support the State Plan of Flood Control.
2. USACE met with DWR to finalize the Letter of Agreement (LOA) between DWR and the Corps.
3. Project management plan completion is pending policy change on new task order issuance.
4. Continue refining the Process Activity Tool (workflow documentation).
5. Level 2-1 geomorphic studies for the Sacramento and San Joaquin River flood control systems is completed. URS & Kleinfelder will provide the Level 2-1 geomorphic study report table of content to vet with DOE, who is in charge of QA/QC.
6. Kleinfelder and URS team are about 90% done with data collection and field reconnaissance work for the Sacramento and San Joaquin River flood control system.
7. Continue with preparation of financial reports pertaining to Bond funded contracts to respond to inquiries stemmed from the budget crisis.
8. Began preparing new task orders for phase 1 evaluation of non-urban levees based on historical performance, site reconnaissance and geomorphology.
9. Began preparing new task orders for early phase 2 exploration.