

**DEPARTMENT OF WATER RESOURCES**

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JAN 07 2008

Mr. E. Dotson Wilson  
Chief Clerk of the Assembly  
State Capitol, Room 3196  
Sacramento, California 95814

Dear Mr. Wilson:

The Budget Act of 2006 requires the Department of Water Resources (DWR) to report quarterly, beginning August 1, 2006, on expenditures of funds pursuant to Assembly Bill 142 (Nunez, Chapter 34, Statutes of 2006) until such funds are exhausted. DWR is required to report on expenditures by project. This report is submitted in compliance with these requirements and covers the quarter ending May 31, 2007.

If you have any questions, please contact me at (916) 653-7007, or you staff may contact David Gutierrez, Director of FloodSAFE, at (916) 653-9502.

Sincerely,

**Original signed by**

Lester A. Snow  
Director

Attachment

cc: Honorable Denise Ducheny, Chair  
Joint Legislative Budget Committee  
State Capitol, Room 5035  
Sacramento, California 95814

Attention: Ms. Peggy Collins

Ms. Elizabeth G. Hill  
Legislative Analyst  
925 L Street, Suite 1000  
Sacramento, California 95814

Mr. Gregory Schmidt  
Secretary of the Senate  
State Capitol, Room 400  
Sacramento, California 95814

Ms. Diane Boyer-Vine  
Legislative Counsel  
925 L Street, Suite 900  
Sacramento, California 95814

Attention: Ms. Diane Anderson

bcc: Honorable Mike Chrisman  
Secretary for Resources  
The Resources Agency  
1416 Ninth Street, Room 1311  
Sacramento, California 95814

William "Chris" Mowrer  
Deputy Secretary of Legislation  
The Resources Agency  
1416 Ninth Street, Room 1311  
Sacramento, California 95814

Chris Kahn  
Legislative Secretary  
Governor's Office

Kasey Schimke  
Legislative Affairs Office

Sue Sims  
Acting Chief Deputy Director

David Sandino  
Office of the Chief Counsel

**Report to Legislature**

**ASSEMBLY BILL 142 EXPENDITURES**

**As of May 31, 2007**



**State of California**

**The Resources Agency**

**Department of Water Resources**

## Overview

The following is a summary of AB 142 expenditures and commitments as of May 31, 2007:

<b>Project</b>	<b>Expenditures</b>	<b>Commitments</b>	<b>Project Totals</b>
2005 Critical Erosion Repairs (33 Sites)	\$127,657,000	\$31,175,000	\$158,832,000
2006 Critical Erosion Repairs (24 Sites)	\$64,609,000	\$28,442,000	\$93,051,000
PL 84-99 Rehabilitation Assistance (47 Sites)	\$30,758,000	\$14,389,000	\$45,147,000
American River Common Features	\$3,446,000	\$2,902,000	\$6,348,000
Levee Evaluations Program	\$7,818,000	\$16,096,000	\$23,914,000
Flood Maintenance	\$3,447,000	\$908,000	\$4,355,000
Flood Fight Materials and Equipment	\$762,000	\$400,000	\$1,162,000
April 2006 Flood Fighting	\$8,983,000	\$4,870,000	\$13,853,000
Grants for Non-project Levees **	\$113,000	\$112,000	\$225,000
Grants for Non-project Levees in the Delta	\$1,800,000	\$200,000	\$2,000,000
Delta Emergency Response and Preparedness	\$95,000	\$205,000	\$300,000
<b>TOTAL</b>	<b>\$249,488,000</b>	<b>\$99,699,000</b>	<b>*\$349,187,000</b>

\* Some of the obligated funds will not be expended from AB 142 in order to stay within the total AB 142 revised allocation of \$332 million. Instead, DWR will use funds from Propositions 1E and 84.

## Critical Erosion Repairs

### **Introduction**

On February 24, 2006, Governor Arnold Schwarzenegger declared a state of emergency for California's levee system. Executive Order S-01-06 directs the Department of Water Resources (DWR) to identify and repair critical eroded levee sites on California's levee system to prevent catastrophic flooding and loss of life. Initially,

24 sites identified in a 2005 levee survey were determined to be critical and in need of immediate repair. Nine additional levee sites were later determined to be critical. Accordingly, a total of 33 sites were targeted for repair and are referred to as the "2005 Critical Erosion Repairs."

In 2006, the U.S. Army Corps of Engineers (Corps) identified an additional 24 Critical Erosion Sites on the Sacramento River and its tributaries. Furthermore, the January and April 2006 flood events damaged levees throughout the Sacramento and San Joaquin flood control systems. Hundreds of levee damage sites were prioritized by the Corps under the federal PL 84-99 Rehabilitation Program. Of these, 47 were identified as sites that were critically damaged and located on levees that protect areas for which immediate repairs were economically justified. In response, the Governor issued Executive Order S-18-06 on October 3, 2006, directing the immediate repair of these 71 new sites, referred to as the "2006 Critical Erosion and PL 84-99 Sites." DWR is spending AB 142 funds to respond to this emergency.

### **2005 Critical Erosion Repairs**

The 33 critical erosion sites (24 sites originally identified in 2005 were increased to 33 in 2006) are being repaired throughout the Sacramento River Flood Control System as a result of the 2005 survey. As shown in Figure 1, they are located in six counties: Colusa, Sacramento, Solano, Sutter, Yolo and Yuba. Table 1 summarizes construction status and cost. The structural repairs for all 33 2005 Critical Erosion Sites were completed by November 2006. Plantings and mitigation features at these sites will be completed by summer 2007. DWR repaired 22 sites while the Corps, in partnership with the Reclamation Board, took the lead on repairing the remaining 11 sites under the Sacramento River Bank Protection Project. The State has advanced \$32,883,000 of AB 142 funds for repairs handled by the Corps with the expectation that the State's funding toward these repairs will be used as a credit towards the State's share of future cost-shared projects with the Corps. DWR estimates the total cost to repair all 33 critical erosion sites to be approximately \$191.7 million, which includes \$152.7 million from AB 142 funds, \$15.8 million already paid from federal funds, and a \$23.2 million additional federal commitment. In addition to construction contracts for structural repairs, DWR is also purchasing plants and related materials for the repair sites. The plants are part of the environmental compliance requirements of the project and will be supplied to the repair contractor when needed. The Corps planted during the winter 2006/2007 while DWR began planting in spring 2007. As of May 31, 2007, DWR has expended \$127.7 million on the 2005 Critical Erosion Repairs.

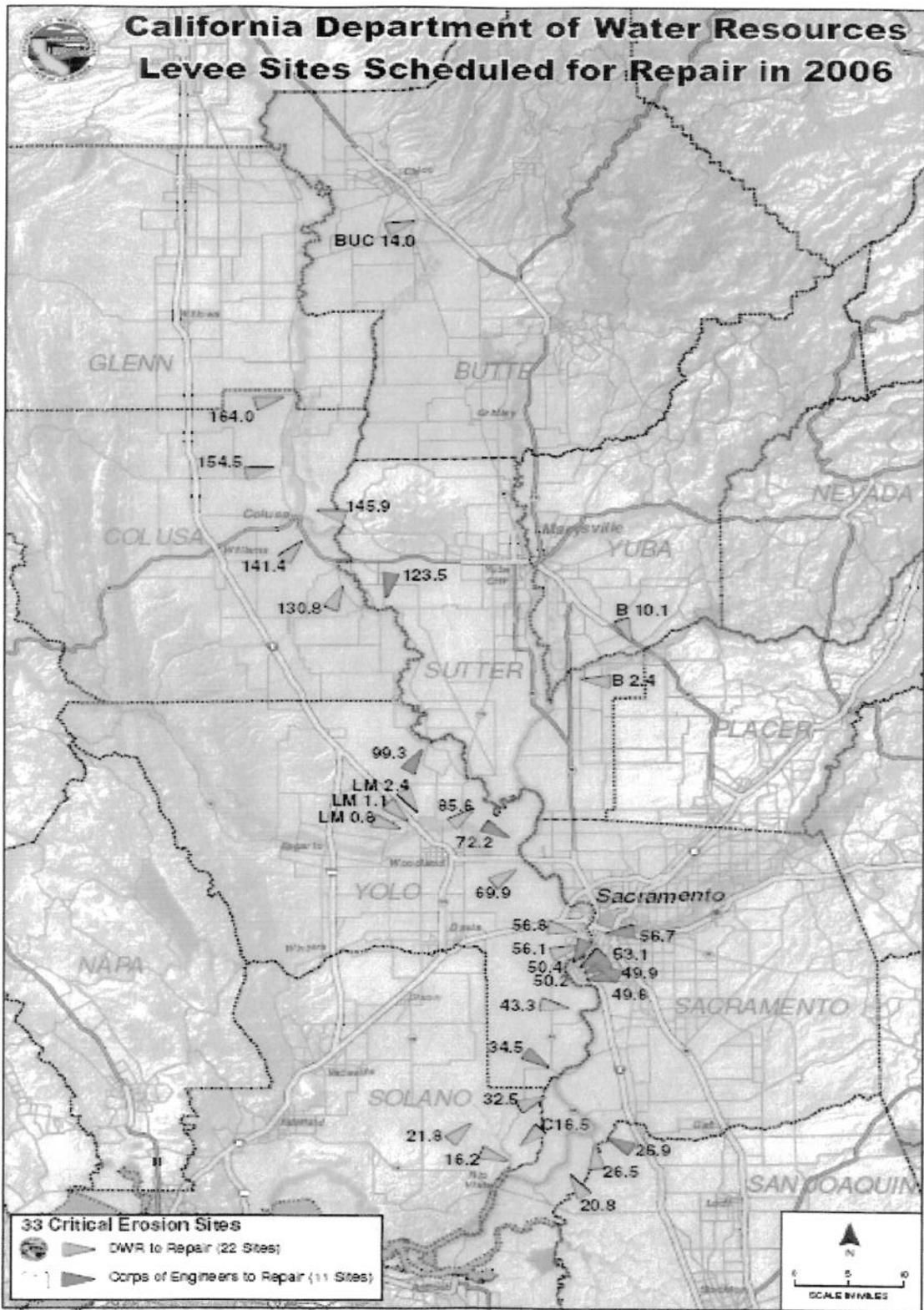


Figure 1: 2005 Critical Erosion Repairs

## **2006 Critical Erosion and PL 84-99 Repairs**

### ***Project Planning***

All 71 sites are shown in Figure 2. DWR, in coordination with the Corps, developed a plan to accomplish the work on a priority basis throughout the winter of 2006-2007. Due to the large number of sites, the potential for sustained inclement weather conditions, and a compressed repair schedule, 30 of the sites were phased to allow work to begin before final designs are completed in 2007. The Corps is repairing 14 Critical Erosion sites and DWR is repairing 10 Critical Erosion sites. Similarly, the Corps is repairing 22 PL 84-99 sites and DWR is taking the lead on 25 PL 84-99 sites. The repairs at 13 of the DWR sites are being designed and constructed by the Brannan Andrus Levee Maintenance District (BALMD).

In October 2006, the planning and design phase of the project began with site inspections, field surveys, and collection of relevant design information on each of the 71 sites. In November 2006, DWR and the Corps consulted with resource agencies to enable the State and the Corps to meet all environmental laws and permit requirements while maintaining the emergency schedule for construction. Coordination among the resource agencies, the Corps, and DWR is being done through a mutually agreed-upon Action Plan for Alternative Endangered Species Consultation Procedures for the State-federal expedited repairs during winter. A technical team composed of representatives from the Corps, DWR, U.S. Fish and Wildlife Service, National Oceanic and Atmospheric Administration Fisheries Service, Department of Fish and Game (DFG), and the State Water Resources Control Board (SWRCB) is reviewing and approving designs and mitigation plans for both the PL 84-99 and the new 24 Critical Erosion sites.

By November 2006, DWR received provisional letters allowing construction to proceed. All provisional permission will be followed by completed permits. The Action Plan enables timely completion of levee repairs and will allow DWR to meet all required federal environmental permits, including the Clean Water Act, Endangered Species Act, National Environmental Policy Act and other applicable federal laws. DWR also consulted with State environmental agencies to ensure this project meets all State environmental measures under the California Environmental Quality Act (CEQA). Those agencies include DFG, the California Department of Parks and Recreation, State Lands Commission, the Reclamation Board, SWRCB, and the Central Valley Regional Water Quality Control Board.

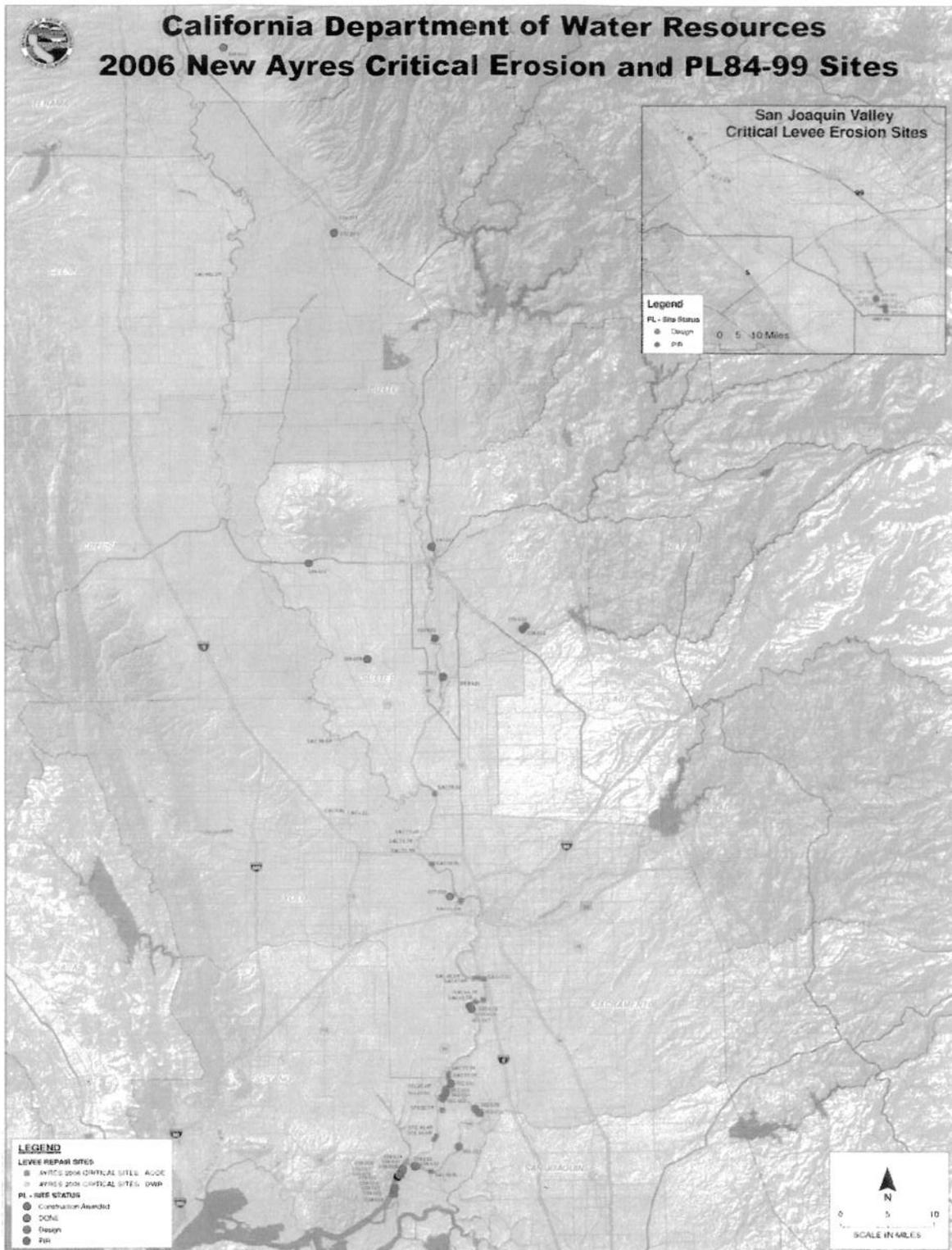


Figure 2: 2006 Critical Erosion and PL 84-99 Repairs (71 sites)

## ***Project Construction***

Current construction status is summarized in Table 1. Overall, Phase I or final construction has been completed on 65 sites, construction is underway at 3 sites, and design is underway at 3 sites. All sites are being repaired in a two-phase approach: Phase I repairs provide structural integrity for the levee, and Phase II repairs incorporate on-site mitigation features. Further details on the 2006 Critical Erosion and PL 84-99 Rehabilitation Programs follow:

**2006 Critical Erosion Sites (24):** Out of the ten DWR-led sites, Phase I construction work on eight sites is complete, and Phase II designs will be completed by mid-July 2007. The remaining two sites on Cache Creek are in the design stage. The Corps is leading construction of 14 sites and has completed all Phase I construction. Phase II construction and mitigation work began in May 2007.

As of May 31, 2007, DWR has expended \$64.6 million on 2006 Critical Erosion repairs. Out of this \$64.6 million, DWR has provided \$30 million to the Corps for construction of the 14 Corps-led sites to meet their construction funding shortfall. This \$30 million is expected to be credited for future work under the Sacramento River Bank Protection Project.

**PL 84-99 Sites (47):** The Corps' Public Law 84-99 Rehabilitation Assistance Program covers repairs for approximately 300 damaged sites on levees throughout the Sacramento and San Joaquin River Flood Control Systems. These sites were damaged during high water in January and April 2006. Repairs are prioritized, beginning with 40 critically damaged levees that protect urban infrastructure ("Order 1" sites). The second priority ("Order 2" sites) for repairs under PL 84-99 includes an additional 46 sites that are also critically damaged, but predominately protect agricultural property. Only seven of the Order 2 sites have been determined to qualify for repairs because the benefit-cost ratio for the repair exceeds 1.0. Additional Order 3, 4 and 5 sites account for the remaining damaged sites which are not as critical but eligible for repair. There are approximately 142 such sites.

Phase I construction on 43 Order 1 and Order 2 sites is complete. DWR is providing construction oversight to BALMD Phase 1 construction at one remaining site scheduled for completion at the end of June 2007. Phase II construction by BALMD for landscape plantings at all 13 sites is postponed until cooler weather in fall 2007. Completion of Phase 1 construction for three remaining PL 84-99 Order 1 and 2 sites include RD 1602 and RD 1500 (Corps) which are under construction, and Butte Creek (DWR) which is being designed. All three sites are scheduled to be completed by early fall 2007.

A Cooperation Agreement between the Corps and the Reclamation Board enables the Corps to receive State funds to perform the work. Normally, federal funds are used for PL 84-99 rehabilitation. However, the Corps was not expected to receive federal funding for PL 84-99 work until May 2007 and accepted \$13,713,000 in State funds to perform the work. As of May 31, 2007,

DWR has expended a total amount of \$30,758,000 in support of this federal program.

**Table 1: Estimated Costs of Critical Repairs Program**

Program Lead Agency	No. of Sites	Phase I Completion Date	Phase II Completion Date	Estimated Cost
<b>2005 Critical Erosion</b>				
Corps	10	N/A	10/31/2006	
Corps	1	N/A	11/18/2006	
			Construction Cost (11 Sites)	\$49,100,000
DWR	19	11/30/2006	8/31/2007	
DWR	3	N/A	10/31/2006	
			Construction Cost (22 Sites)	\$107,300,000
			Design, R/W, Permitting, and Legal	\$7,600,000
			Plant Materials	\$1,600,000
			Contract Administration, O&M, and Contingencies	\$26,110,000
<b>TOTAL</b>	<b>33</b>			<b>\$191,710,000</b>
<b>2006 Critical Erosion</b>				
Corps	6	2/24/2007	7/31/2007	
	8	4/15/2007	7/31/2007	\$61,517,000
DWR	8	1/20/2007	9/12/2007	\$40,179,000
DWR	2	N/A	10/30/2007	\$2,965,000
<b>TOTAL</b>	<b>24</b>			<b>\$104,661,000</b>
<b>2006 PL 84-99</b>				
Corps Order 1	18	1/15/2007	2/28/2007	
	1	9/30/2007	11/30/2007	\$13,361,000
DWR Order 1	7	12/14/2006	2/28/2007	
	1	8/30/2007	10/30/2007	\$2,888,000
BALMD Order 1	7	2/28/2007	9/12/2007	
	6	6/28/2007	9/12/2007	\$23,280,000
Corps Order 2	2	12/14/2006	1/10/2007	
	1	7/30/2007	9/30/2007	\$3,450,000
DWR Order 2	4	12/15/2006	12/15/2006	\$1,093,000
<b>TOTAL</b>	<b>47</b>			<b>\$44,072,000</b>
<b>GRAND TOTAL</b>	<b>104</b>			<b>\$340,443,000</b>

**Note 1:** DWR construction of these sites was not phased; however, plantings (and mitigation features) were deferred to ensure a higher success rate.

## Land Acquisition and Transactions

Table 2 identifies parcel locations where permanent rights are being acquired for the four setback levees that were constructed as part of the 2005 Critical Erosion Repairs. No other permanent land rights have been acquired to date; however, there are additional transactions involving temporary access and utility relocations.

**Table 2: Land Acquisitions and Transactions to Date**

### Cache Creek

Location	Owner's Name	Parcel No.	Rights to Be Acquired	Size	Estimated Amount	Status
LM0.8 (Yolo County)	Cervantes	13594	Fee	0.87 acres	\$16,965	Completed
LM1.1 (Yolo County)	Dewey	13595	Fee	1.65 acres	\$32,175	Completed
			Perm Flood Easement	4.99 acres	\$87,575	Completed
LM2.4 (Yolo County)	Halett	13593	Perm Flood Easement	2.00 acres	\$90,000	Ongoing

### Sacramento River

Location	Owner's Name	Parcel No.	Rights to Be Acquired	Size	Estimated Amount	Status
LM145.9 (Colusa County)	Freschi	13621	Fee	11.44 acres	\$88,000	Ongoing
	Lorenzini	13622	Fee	0.99 acres	\$15,488	Ongoing
			Maintenance Easement Damages	0.10 acres	\$1,995	Ongoing
	Melton	13623	Fee	3.02 acres	\$7,000	Ongoing
TOTALS				25.06 acres	\$417,968	

**Project Budget**

Estimated total costs of all three programs (2005 Critical Repair Sites, 2006 New Critical Repair Sites, and PL 84-99 Rehabilitation Sites) were presented in Table 1. The actual expenditures as of May 31, 2007 are shown in Tables 3 and 4.

**Table 3: Critical Erosion Repair Expenditures to Date**

<b>Description</b>	<b>Amount</b>
<b>2005 Critical Erosion Repairs (33 Sites)</b>	
DWR AB 142 Funds	\$127,657,000
Corps Contribution	\$15,800,000
<b>2006 Critical Erosion Repairs (24 Sites)</b>	
Design and Construction	
DWR Contracts	\$34,609,000
Corps Contracts	\$30,000,000
<b>Total</b>	<b>\$208,066,000</b>
<b>Federal Contribution</b>	<b>(\$15,800,000)</b>
<b>AB 142 Funds</b>	<b>\$192,266,000</b>

**Table 4: PL 84-99 Rehabilitation Expenditures to Date**

<b>Description</b>	<b>Amount</b>
Design and Construction	
DWR Contracts	\$17,045,000
Corps Contracts	\$14,713,000
<b>Total</b>	<b>\$31,758,000</b>
<b>Federal Contribution</b>	<b>(\$1,000,000)</b>
<b>AB 142 Funds</b>	<b>\$30,758,000</b>

## ***Project Website***

DWR has developed a website (<http://www levees.water.ca.gov>) specifically for those interested in the emergency levee repair project. Visitors can find exact site locations, up-to-date construction progress, fact sheets by site, photos of erosion sites, and information for those living near or on a critical levee erosion site.

## **American River Common Features**

### **Introduction**

DWR is spending AB 142 funds to perform scheduled improvements to levees protecting the City of Sacramento under the American River Common Features Project (Project). The Project was authorized by the Legislature in 1997 to provide flood damage reduction improvements along the lower American River (downstream of Folsom Dam), the Sacramento River (downstream of the Natomas Cross Canal) and the Natomas Cross Canal (NCC). The Project's proposed improvements include: (1) strengthening the levees to reduce the chance of failure due to seepage and levee instability; (2) raising the levees to increase flood conveyance capacity to a level of performance consistent with providing system-wide minimum levee parity; and (3) providing bank protection on the American River for conveyance of the design flow. The Project has been funded and is continuing to be funded with capital outlay appropriations. However, an urgent need to fund \$2.1 million beyond available capital outlay funds developed in June 2006, and AB 142 funds were spent to fund the improvements and maintain the project construction schedule.

### **Location**

The Project includes approximately 12 miles of the north and south banks of the lower American River, immediately upstream of the confluence with the Sacramento River; approximately 10 miles of the east levee of the Sacramento River from near the confluence with the American River to the lower Pocket area; approximately 12 miles of the east levee of the Sacramento River, immediately downstream of the NCC; and approximately five miles of the north and south levees of the NCC, immediately upstream of the confluence with the Sacramento River. The Project reaches are located within the jurisdictional boundaries of Sacramento County, Sutter County, the City of Sacramento, Reclamation District No. 1000, the American River Flood Control District, the Sacramento Area Flood Control Agency (SAFCA), and DWR.

### **Description**

The Project is sponsored and cost shared by the Corps, the Reclamation Board, and SAFCA. The Project has been under construction since 1998. Planned and constructed Project features include:

- Strengthening and raising approximately 12 miles of the Sacramento River east bank levee downstream of the NCC.

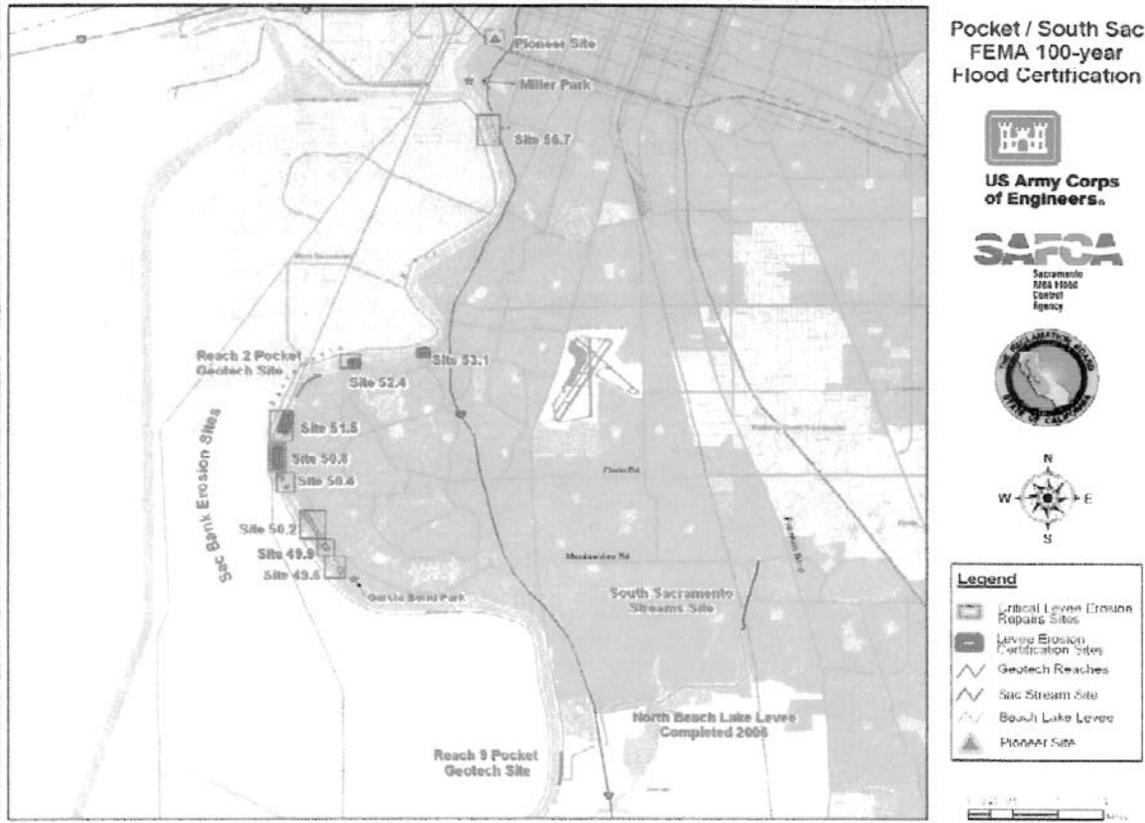
- Installing slurry walls in approximately 12 miles of the American River north and south bank levees (24 miles total), immediately upstream of the confluence with the Sacramento River.
- Raising approximately 4,500 feet of the American River south bank levee immediately upstream of Mayhew Drain by approximately 2.5 feet.
- Raising approximately 5,500 feet of the American River north bank levee in the vicinity of Howe Avenue by approximately one foot.
- Modifying approximately five miles of the NCC south bank levee to provide a level of performance consistent with that provided by proposed improvements to the Sacramento River east bank levee.
- Modifying approximately five miles of the NCC north bank levee to provide a levee height equivalent to that provided for the NCC south bank levee.
- Installing a closure structure for the Mayhew Drain to prevent American River outflow and flood backwater at Folsom Boulevard.
- Installing approximately 1.2 miles of slurry walls in the American River north bank levee near Natomas East Main Drainage Canal.
- Installing approximately one mile of slurry wall in the American River north bank levee near Jacobs Lane.
- Repairing four erosion sites along the American River totaling approximately 7,000 feet.

AB 142 funds totaling \$2.1 million were paid to the Corps in June 2006 to facilitate construction for the following features:

- Modifying approximately 600 feet of the Sacramento River East Levee near the Pioneer Reservoir (near the Pioneer Bridge over the Sacramento River) to control excessive seepage.
- Installing a 110-foot deep slurry wall for a distance of approximately 800 feet of the Sacramento River East Levee in the Pocket Area to control excessive seepage.
- Installing a 40-foot deep slurry wall for a distance of approximately 1,500 feet of the Sacramento River East Levee in the Pocket Area to control excessive seepage.

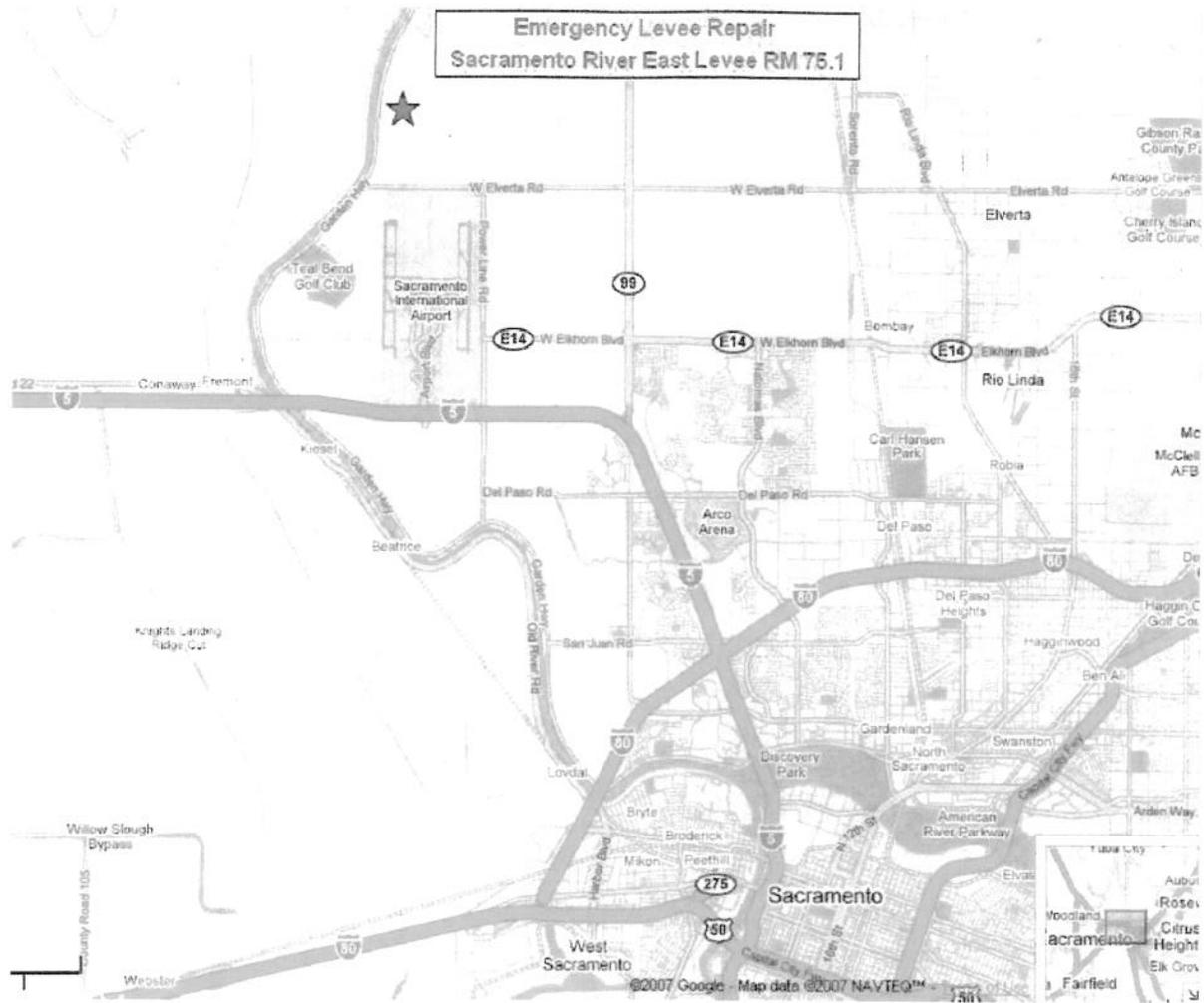
DWR's \$2.1 million payment enabled the Corps to open bids in July and complete work on schedule. Without this payment, the work would have been deferred until 2007.

Figure 3 shows work in the Pocket Area of Sacramento necessary for achieving FEMA 100-year level protection. The map shows the Pioneer Reservoir site and two Geotechnical Repair sites funded by AB 142 under the American River Common Features Project, along with erosion site repairs performed with other funds under the Sacramento River Bank Protection Project (Critical Erosion Repairs).



**Figure 3: Pocket and Nearby Areas Map Depicting Locations of Flood Control Improvements**

An additional \$4.2 million in AB 142 funds are obligated through a contract with the SAFCA for the State's share of construction costs associated with the emergency levee repair at the east levee of the Sacramento River at River Mile 75.1 near the Pritchard Lake area. This work is an emergency response being conducted by SAFCA and the State to correct a chronic seepage problem that became acute in January of 2006. Initial repairs performed in late 2006 by Reclamation District 1000 consisted of driving sheetpiles along the waterside levee slope to cut off problem underseepage. This area has a history of seepage and sinkhole activity. This levee is adjacent to the Natomas Basin and is part of the Federal Sacramento River Flood Control Project and the State of California's Plan of Flood Control in the Central Valley. In addition, this site is located in an area currently being studied by the Corps in their Natomas Basin General Reevaluation Report. DWR has entered into a Section 104 crediting agreement with the Corps for this work. When this report is completed, the State may be eligible for federal credits under Section 104 for the funds DWR paid to SAFCA. Figure 4 shows the project site location. As of May 31, 2007, \$1.3 million has been expended on payments to SAFCA and State operations, and an additional \$2.9 million has been committed.



**Figure 4: Sacramento River at RM 75.1 near Pritchard Lake**

### Levee Evaluations

DWR is currently evaluating approximately 350 miles of State-federal project levees that protect urban areas in the Sacramento and San Joaquin Valleys. This evaluation program includes geotechnical exploration, testing, analyses, and pre-feasibility design. The levees are evaluated with respect to seepage, static and seismic stability, settlement, and erosion. A 200-year level of flood protection is the goal for urban areas. URS Corporation continues to assist DWR with levee evaluation efforts under a \$35 million three year contract that expires on December 31, 2009.

### **Progress**

Draft preliminary geotechnical data reports have been completed in West Sacramento, RD 17, and Marysville. These reports include data from the initial phase of drilling (borings logs and associated laboratory testing results) as well as geomorphology and past performance issues. In addition, DWR continues to review levee evaluations being conducted by consultants for the City of West Sacramento and began reviewing levee

evaluations previously conducted by consultants in Stockton on portions of the SJAFCA project. DWR has initiated review work in RD 404 (Stockton) and along the Sacramento River (East bank) from the American River to Freeport.

Review of existing geotechnical data in RD 787 (Olivehurst) is nearly completed. The need for additional drilling along the Yuba River has been noted by the Three Rivers Levee Improvement Agency (TRLIA). Initial field explorations (drilling) commenced in March 2007 in Sutter County and in April 2007 in Natomas (along the eastern side of the basin). Levee crown borings in Sutter County will be completed in July. In addition, a more detailed investigation has started in the vicinity of Abbot Land and Star Bend where significant seepage and boils occurred in December/January 2005/2006. During 2007, all urban areas will have some level of effort of drilling operations commencing.

Preliminary analyses for seepage and underseepage in West Sacramento and RD 17 have identified deficiencies in the levees and foundations. Further explorations and analyses are planned to further identify/quantify these deficiencies.

A Geographical Information System (GIS) database for levee evaluations is still under development and is partially operational. Work continues to populate this GIS with existing data on the urban project levees.

The independent consulting board (ICB) consisting of Dr. Raymond Seed (UC Berkeley), George Sills (USACE, ERDC), and Chris Groves (Shannon & Wilson) was established for the purpose of providing independent, expert review of geotechnical policies and procedures with regard to safety, performance, state-of-practice, and economy. To date, the ICB has had five meetings (December, January, and February and April).

A workshop for local flood control officials was held at DWR on May 22 through 24, 2007. The workshop included presentations by DWR staff associated with levee evaluations, maintenance, projects, project integrity, and floodplain mapping. USACE presented a summary of their National Levee Database Inventory program. In addition, a Geographical Information System was presented by PBS&J, a consultant to both DWR and USACE. The next workshop is planned in August 2007. Public outreach events in conjunction with the City of West Sacramento and USACE occurred in March and April 2007.

### **Technical Issues**

A study to address seismic issues with regard to urban levees is being developed. The first phase of this study is called a seismic vulnerability assessment. It is essentially a first step in understanding the seismic risk that urban levees face, and is general in scope. Results for RD 17, West Sacramento, and Marysville should be completed this summer.

The hydrology and hydraulics ad hoc committee has worked on determining which hydraulic models should be used to model water surface elevations throughout the system. Additional consulting engineers with expertise in hydraulics were contacted in

an effort to find additional models for areas not already included in the system wide models. A comprehensive list of models and locations has been developed and staff is now collecting data from the multiple sources to be shared with the levee evaluation team. This ad hoc committee will continue to meet in order to coordinate ongoing efforts to develop more comprehensive hydrologic and hydraulic models for the State.

## **Costs**

DWR costs to date for staff time administering the URS contract, management of the program, and field activities, the USACE contract, and the URS contract is \$7,818,000. Of these costs, \$1,000,000 is for the URS contract.

## **Flood Maintenance**

A total of \$3,447,000 of AB 142 funds have been expended to date to repair Sacramento River Flood Control Project facilities for which DWR has maintenance responsibilities. Details for these repairs are provided below.

### **Sutter Bypass Weir 2**

Weir 2 was built in 1925 in the Sutter Bypass to maintain water surface elevations in the Sutter Bypass East Borrow Canal for diversion of water to farms. The original structure was replaced in 1946, but recent inspections of the weir have revealed that the downstream apron is worn and the underlying soil is exposed. This condition indicates seepage is eroding the soil and has rendered the weir structure unsafe, making it imperative that the weir be replaced. If the weir were to fail, DWR could be exposed to liability associated with crop loss as irrigation flows from the East Borrow Canal would be interrupted. Additionally, the existing fish ladder at the weir does not meet today's standards for fish ladders. Fish passage is difficult due to the ladder's low flow capacity and insufficient steps. The Endangered Species Act (ESA) listing of spring-run Chinook salmon and steelhead, which are both found in the Sutter Bypass, requires provision of adequate passage at the weir.

AB 142 funds have been expended for preliminary engineering analyses, preparation of construction drawings and specifications, analyzing environmental impacts resulting from the project, and determining mitigation requirements. The final design is currently under review. This design includes detailed plans and specifications for the repair of the existing Weir No.2 design, installation of a new state of the art fish ladder and weir gates with remote control capability. A new control building is included in the project. The total allocated from AB 142 for this project is \$2.5 million. Costs to date are shown in Table 5.

### **Willow Slough Weir**

Willow Slough Weir is an earthen dam with three 60-inch culverts with slide gates that control flow from the lower end of the Sutter Bypass East Borrow Canal into Willow Slough. The weir was completed in 1925 to control water levels downstream of Weir 2 in the East Borrow Canal so irrigation water could be diverted to farms. A fish ladder was constructed through the weir in the 1980s. The weir does not drain quickly enough

to allow water to drain by gravity through adjacent drainage canals. After rebuilding this weir, DWR will improve the efficiency of the flood control operation by doubling its flow capacity. This will allow for improved gravity drainage of adjacent canals and will reduce the amount of DWR pumping presently required to increase water drainage from the weir. Additionally, the rebuilt fish ladder will reduce the migration delays of salmon and reduce stranding of salmon protected under the ESA.

AB 142 funds have been expended for preliminary engineering analyses, preparation of construction drawings and specifications, analyzing environmental impacts resulting from the project, and determining mitigation requirements. The concept design is currently under review. This design includes detailed plans and specifications for the repair of the existing Willow Slough Weir. The design includes installation of a new state of the art fish ladder and weir gates with remote control capability. The total allocated from AB 142 for this project is \$2.5 million. Costs to date are shown in Table 5.

### **Pump Rehabilitation**

The Sutter Maintenance Yard operates and maintains three pumping plants along the east levee of the Sutter Bypass. These plants pump agricultural return water and rainfall runoff into the Bypass so that the water can be safely moved through the flood control system. The nearby ditches drain water from as far away as Yuba City, and the pumping of water into the Sutter Bypass prevents localized flooding throughout Sutter County. Two of the pumping plants (Plants 1 and 3) have four electric motors and pumps, and one plant (Plant 2) has six electric motors and pumps.

These plants were put into service approximately 25 years ago. The motors and pumps are reaching the end of their normal life expectancy, and the yard staff have reported lost pumping efficiency and increased motor run-times due to age and wear. The Flood Maintenance Office has determined that all of the pumps and motors should be systematically removed and refurbished or replaced.

One half of motors and pumps from Plants 1,2 and 3 were refurbished and put back into service in 2006. The other half of the motors and pumps from Plants 1,2 and 3 were removed in May 2007 and are currently undergoing refurbishment. The total allocated from AB 142 for this project is \$2.5 million. Costs to date are shown in Table 5.

### **Fremont Weir**

DWR is obligated to operate and maintain the Fremont Weir at the northern end of the Yolo Bypass under Water Code Section 8361. Sediment deposits in the Yolo Bypass reduce the flow capacity of the weir and the efficiency of the flood control system by blocking water from entering the Bypass and forcing flows to remain in the Sacramento River. This results in higher flood stages in the Sacramento River in the vicinity of the City of Sacramento. As a part of the maintenance of the Yolo Bypass, sediment removal contracts for Fremont Weir were awarded in 1986, 1987, and 1991. In 1986, 560,000 cubic yards of sediment were removed from the west end of Fremont Weir. In 1987, approximately 930,000 cubic yards were removed from the Yolo Bypass at the Fremont Weir. In 1991, an additional 1.9 million cubic yards were removed from the eastern side of Yolo Bypass at the Fremont Weir.

To comply with DWR's maintenance responsibility, funds were expended to remove approximately 1 million cubic yards of sediment from the areas in front of and downstream of the weir. In addition, two scour holes that were eroding the weir were filled, and the protective rock apron was restored. Total budgeted AB 142 funding for this project is \$2.2 million. Costs to date are shown in Table 5.

**Table 5: Flood Maintenance Expenditures**

<b>Project</b>	<b>Description</b>	<b>Amount</b>
Sutter Bypass Weir 2	Project Management and Design/Analysis	\$367,000
Willow Slough	Project Management and Design/Analysis	\$111,000
Pump Rehabilitation	Project Management and Design/Analysis	\$760,000
Fremont Weir	Project Management, Contract Administration, and Design/Analysis	\$2,209,000
<b>Total</b>		<b>\$3,447,000</b>

**Flood Fight Materials and Equipment Purchase**

Under the direction of Executive Order S-18-06 to improve emergency response capability, DWR is purchasing flood fight materials and equipment. DWR has obligated \$400,000 of AB 142 funds and has expended \$762,000 to date; additional fund sources will be used to complete the purchases. Supplies purchased with AB 142 funds include sandbags, plastic sheeting, twine, stakes, geotextile fabrics, and large polypropylene bags. These flood fight materials are important for improving DWR's emergency response capabilities in the event of a major flood, especially considering the number of critical damage sites in the Sacramento and San Joaquin Rivers Flood Control Systems identified in the 2005 levee survey.

In addition, DWR has experienced significant communications problems between the field and the Flood Operations Center during recent flood events. Therefore, DWR is purchasing two emergency communications trailers with AB 142 funds. The trailers are expected to cost \$200,000 each and will enhance cell phone communications and provide for two-way radio communications, facsimile transmission, and land-line connection capability.

**April 2006 Flood Fighting**

In early April 2006, DWR's Division of Flood Management mobilized its flood fighting force due to forecasted warm storms that prompted high snow levels and increased releases from many reservoirs in Northern and Central California. As a result of this effort, DWR expended \$8,983,000 with no flood emergency budget appropriation (plus an additional estimated \$4.87 million expected in acquisitions and environmental compliance expenses for flood fight activities). To offset emergency costs associated with the April 2006 floods, the Department of Finance authorized the use of AB 142 funds.

This offset includes all known flood emergency expenditures and estimated future cost obligations associated with environmental compliance and land acquisition in the flood impacted areas.

### **Grants for Non-project Levee Repairs and Evaluations**

DWR has allocated \$50 million of AB 142 funds for grants to local flood control agencies. The proposed grant program financially assists local agencies in performing urgent levee repairs and geotechnical evaluations of existing local levees. The allocation was to be expended through competitive and directed grants to local agencies responsible for flood control at the project location and support program and contract administration by DWR as needed. However, due to the remainder of the AB 142 funds being withdrawn, DWR plans to utilize Proposition 84 funds to award grants under this program.

Prior to switching to Proposition 84 funds, \$113,000 was expended, primarily for development of draft guidelines, applications, and other supporting documents for the grant program. The expended funds also include staff hours spent reviewing proposed projects and developing and negotiating agreements for emergency levee repairs in Yolo and Santa Barbara Counties (i.e., Cache Creek and Santa Maria River).

DWR has authorized \$112,000 in directed grants to Yolo and Santa Barbara Counties for the State's share of the projects along Cache Creek and Santa Maria River, respectively. The work on these projects is complete, and DWR and the grantees will be executing the grant agreements in August 2007. The required funds are committed, but not yet expended. The committed funds will be disbursed after execution of the grant agreements.

### **Grants for Non-project Delta Levee Repairs**

DWR allotted \$20,000,000 for critical levee repairs and evaluations to levee maintaining agencies that participate in the Delta Levee System Integrity Program. DWR has authorized two \$1 million grants for critical repairs identified on the RD 830, Jersey Island levees. Two critical levee sections on Jersey Island were identified in urgent need of repair along the San Joaquin River. Blind Point (levee station 540+00 to 590+00) and the Jersey Island Headquarters (levee station 450+00 to 500+00) both face stability problems and require rock work and rehabilitation of levee elevations. Two agreements for \$1 million each have been executed with Jersey Island to fund engineering, environmental permitting, geotechnical evaluations and construction and construction oversight. A total of \$1.8 million has been advanced to the district to initiate engineering and construction. Plans and specifications will be completed by July 2007 and construction is scheduled to be completed by 1 November 2007.

### **Delta Emergency Response and Preparedness**

DWR has initiated the development of an Emergency Operations Plan (EOP) specific to the Department's response role and strategies to a natural or human-caused failure of levees in the Sacramento-San Joaquin Delta. This plan will include descriptions of the individual actions DWR might presently use in its response to a levee failure event and

address which organizational units within DWR that will be responsible for responding to this event. The EOP will be designed to address both large and small scale Delta levee failures and will undergo periodic updates as emergency response techniques and options change. DWR has completed an Interim EOP, entitled "Delta Emergency Operations Plan, Concept Paper", that will be presented to Delta stakeholder groups in order to stimulate public input into the development of a formal EOP. Key participants from these stakeholder groups will be brought together to form a Delta EOP Advisory Group that will participate in the development of a formal EOP and make additional recommendations to enhance DWR's ability to respond to a Delta levee failure through use of current technology or management practices.

The Interim EOP made recommendations on several ways that DWR's current pre-event response capabilities could be enhanced within the next few years. DWR has started work on implementing several of these recommendations, including supporting regional and local emergency response preparation efforts, designing new emergency response transfer / storage facilities in the Delta, designing channel barriers that could be used to help improve the quality of water in the Delta, designing typical levee breach closures for several different Delta regions, purchasing of additional flood fight and levee repair materials, and pre-negotiating emergency response contracts. DWR's implementation of these pre-event planning activities will be overseen by an Emergency Response Technical Design Task Group, which will consist of national and regional experts in the areas of emergency planning, preparation, response and recovery in relation to flood events.

As of May 31, 2007, a total of \$95,000 has been expended on Interim EOP recommendations and \$205,000 has been committed to complete planning activities.