

Sutter County

2011 Spring Storms After Action Report (Executive Summary)



Prepared by:

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No CDAA/FEMA # Assigned

Emergency Declaration Resolution #11-025

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PRIVACY STATEMENT

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Any decision to disclose information in the AAR outside Sutter County Operational Area or to withhold information in the AAR from a non-operational requester must be coordinated with the Sutter County Emergency Operations Manager.

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During the week of March 15, 2011, the Sutter County Office of Emergency Management (OEM) began surveillance on a series of storms forecasted for the region. The local chapter of the American Red Cross contacted the Sutter County Emergency Operations Manager at approximately 1700 hrs on March 16th and expressed concerns they had received from community partners that the indigent population in the Feather River river-bottoms were in danger from the rising waters. As this was in the jurisdiction of Yuba City, they were referred to the Yuba City Fire Department. On March 17th, the Feather River at Nicolaus was forecasted to be at MONITOR Stage through the weekend. This was due to the forecasted rainfall, snow melt, and releases from Oroville Dam. Due to similar conditions on the Sacramento River, several points on that river and the Sutter Bypass were at, or forecast to rise to, MONITOR Stage. The local chapter of the American Red Cross opened a shelter on March 17, 2011, for displaced indigent population from along the Feather River in Yuba City.

Starting on March 19, 2011, a series of winter storms caused conditions of extreme peril to the safety of persons and property within this county. Disruption of electrical power at flood control pumping stations threatened homes, businesses, and roads throughout the county. Localized flooding was present in low lying areas due to the large amount of precipitation and associated drainage. The Department of Water Resources (DWR) Pumping Station 3 on the Sutter Bypass lost power due to the high winds on March 19 at approximately 2000 hrs. Additionally, Reclamation Districts (RD) 1001 and 70 also lost power at their pumping stations. The DWR pumps situated along the Sutter Bypass remove water from low lying areas for flood control. The RD 70 pumps along the Sacramento River and the RD 1001 pumps along the Natomas Cross Canal also remove water from low lying areas for flood control. When power is lost these areas see flooding when there is significant rainfall.

Starting at 0800 on March 20th, the Emergency Operations Manager patrolled affected levees and noted all areas were within system capacity. At approximately 1300 hrs, DWR notified the Emergency Operations Manager that power had not been restored and Hwy 20 near Sutter could be affected by standing water. Contact was made within PG&E and power was restored at 1841 hrs. Pumping operations resumed and the hazardous conditions at Hwy 20 was averted. During the course of this event, PG&E also restored power to the RD1001 pumps.

On March 21, 2011, Reclamation District 70 notified OEM that they had been without power since 2000 on March 19th. The Emergency Operations Manager coordinated with PG&E to remedy the situation. Power was restored at 1758 hrs.

At approximately 1127 hrs on March 21, Reclamation District 1001 reported cracking and material movement on the North levee of the Natomas Cross Canal in Verona. An area of the levee had cracking approximately 160 feet long and a drop of 3 inches on the landside at the north side of the road. RD1001 requested a DWR Technical Assist and OEM contact Flood Operations Center to request assistance. On the afternoon of March 21, 2011, RD1001 declared a local emergency for imminent danger of potential levee failure. It was determined that covering the cracking with Visqueen would prevent further deterioration of the levee.

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On March 22, 2011, the damage had extended to approximately 240 feet. DWR called in California Conservation Corps who, with the assistance of local volunteers, put Visqueen and sandbags over the cracking. Over the next five days the damage grew to approximately 1000 feet long with vertical drops of material up to three feet in places. There was noticeable lateral bulging on the landside of the levee. During the course of this period of material movement, the river levels on the Sacramento River fluctuated between 34-36 feet. Once river levels dropped below 34 feet, the movement and cracking appeared to stop.

National Weather Service and Department of Water Resources forecasted weather patterns and hydrological reports that continued to indicate potential threatening conditions for the next week in the area of the damage.

Sutter County declared a local emergency on 3/22/2011 and sent declaration and request for state/federal declaration on 3/23/2011 to CalEMA.

On March 24, 2011, Caltrans reported severe scouring of the Tenth Street Bridge (Hwy 20) and started monitoring the bridge for movement.

From March 17 to April 1, 2011, OEM monitored the weather and hydrology status. Each of the Reclamation Districts, (RD 1001, RD70/1660, and RD 1500), were contacted and asked to provide any situational updates as needed. Roads, culverts, and drainage were affected by different degrees throughout Sutter County. Sutter County Public Works closed flooded roads and assisted the public in low lying flooded areas. OEM performed patrols and coordinated with state and local agencies.

On March 25 at 0700, the Emergency Operations Manager recommended Level 1 Activation of the Emergency Operations Center (EOC) and notification of the Emergency Management Team. At 0800, Level 1 Activation was established and the CalEMA Regional Emergency Operations Center was notified. The Assistant CAO, as the Emergency Operations Director, assembled the Emergency Management Team (which included representatives from Sheriff, Fire, Community Services, Health, and Human Services) at 1500, briefed the situation regarding Natomas Cross Canal, discussed plans/options, and placed team members on-call through the weekend. The EOC was located in the Community Services Conference Room and several times during the weekend was mobilized to the field using the OEM vehicle as an EOC. This allowed the Emergency Operations Director and Manager to coordinate, plan, and manage the County's response in the field. On Mar 29, the EOC was deactivated and situation continued to be monitored after hours by the Emergency Operations Manager as the on-call Duty Officer.

By March 26, significant debris had piled against the Reclamation Bridge in the Tisdale Weir. This was determined not to be causing a problem for the bridge. However, there was some concern that water flow around the debris might cause scouring to the levee. Situation was monitored and would need to be evaluated as the waters receded.

On April 14, 2011, Sutter County OEM and Public Works accompanied FEMA and CalEMA personnel to assess the damage. The initial damage estimate (IDE) for Sutter County was

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\$22,988,000. See the Fact Sheet (page 9) for details. The Acting Agency Secretary held a conference call to address the Spring Storms and made the decision not to give California Disaster Assistance Act (CDAA) funds to affected Operational Areas (OA). Due to state fiscal issues, the Governor had directed CalEMA to be more restrictive in their awarding CDAA funds. He identified requirements to meet in order to be considered for funds.

On April 15th, the governor proclaimed an emergency for 19 counties (including Sutter County). However, the declaration was written poorly addressing the potential levee failure in Sutter County as “also caused a levee to crack...” Additionally, the governor declined to provide CDAA funds to assist in funding repairs. These two actions (or inactions), along with the length of time taken by the governor to declare a state of emergency existed did not provide the sense of urgency needed or expected in a crisis.

On April 21, 2011, the Emergency Operations Manager sent a letter to the CalEMA Acting Secretary Dayton requesting reconsideration of CDAA funds for Sutter County. Additionally, the Acting Secretary toured the damage levee and the area affected by the potential levee failure.

The governor waited a week to ask for a Presidential Declaration of a Major Disaster (April 22, 2011). This request was again written poorly and FEMA asked for more information on the damages. The final (corrected) response with information FEMA requested was resubmitted on May 11, 2011.

Repairs began on the Tenth Street Bridge (Hwy 20) on June 21st. Caltrans anticipated 17 million dollars in costs and a completion date of sometime in December 2011. Meetings were held to discuss alternate routes for traffic in case of closure during the repair.

On June 21, 2011, FEMA denied federal assistance and July 13, 2011 an appeal was filed by the Governor, which was subsequently denied on August 4, 2011. The Governor refused to grant California Disaster Assistance Act funds citing “budgetary concerns” which resulted in the Reclamation District 1001 and Sutter County to search for alternative funding to repair the levee. A meeting was held with Congressman Herger, USACE, RD1001, Sutter County, and Central Valley Flood Protection on July 1, 2011 at the RD1001 office to discuss the USACE role in the repair of the levee.

On July 11, 2011, the Emergency Operations Manager for Sutter County, using the Response Information Management System (RIMS), submitted a mission tasking request to CalEMA for DWR to provide support in repairing the Natomas Cross Canal Levee as it is a state project levee. On July 14, 2011, DWR accepted the mission tasking and began looking at alternatives to repair, or fund a repair to, the levee. Mission Number was 2011-INL-8020.

On August 23, 2011, an Off-Agenda Urgency item was discussed at the Regular Meeting of the Sutter County Board of Supervisors. This item was to secure funding from Sutter County for the 25 percent match needed by Reclamation District 1001 to repair the levee. Reclamation District 1001 did not have the funds to meet this requirement and due to time constraints action was needed to move forward on the levee repair. After a discussion and presentation by Reclamation District 1001 the Board of Supervisors agreed to provide up to \$110,000 in funding to meet the 25 percent match requirement. Remaining funding for the repair would come from a state bond.

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On August 30, 2011, a contract was given to repair the levee. Civil Engineering of Loomis was awarded the contract and repairs began the first week of September.

During the 2011 Spring Storms, the Tisdale Weir flowed in excess of six weeks. On August 31, it was reported the debris (trees) from upstream Sacramento River that had created eddies and swift flows that scoured material away from the bent piles and foundation creating a 60X50X15 foot hole and exposing the piles. Ground water had filled the hole as the weir was now dry. This washed out material needed to be replaced and compacted to restore pile bearing capacity and protect the piles from future erosion. Caltrans Bridge Engineers were consulted on the repair specifications.

On September 28, 2011, Natomas Cross Canal repairs were completed and final inspection of the repair was accomplished on October 3, 2011. On October 25, 2011, after a review of the repairs made and damage sustained, the Board of Supervisors determined that there was no longer a threat to life or property and terminated the Local Emergency with Resolution #11-093.

In November 2011, Public Works reported the scouring at Reclamation Bridge had been repaired at a cost of \$50,000. At this point, the majority of damage had been repaired with the exception of the Brewer Road culvert. Completion of that project is currently on hold until funding is approved. Estimated cost of the repair is from \$100,000 to \$400,000.

On December 15, 2011, repairs to the Tenth Street Bridge were completed. The actual costs were 12 Million Dollars and had taken seven months to complete. The project used 2,200 cubic yards of concrete and 3,000 linear feet of 48 inch diameter steel pipe.

From the March 22, 2011 until October 25, 2011, the Sutter County Board of Supervisors was continually updated as to the status of the ongoing emergency. The Board of Supervisors continued Resolution #11-025 at its regular meetings on March 29th, April 5th, May 3, May 24, June 21, July 12, August 9, August 30, and September 27, 2011. Additional updates were made by the Emergency Operations Manager informally at regular meetings when needed, as well as the urgency item on August 23, 2011.

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Fact Sheet

Title: 2011 Spring Storm

FEMA Designation: None State Designation: None

County Designation: Resolution #11-025

Declaration Date

Local: 3/21/11 (RD1001)
County/OA: 3/22/11 Termination Resolution: 10/25/11
Gubernatorial: 4/15/11 ***Rewrite/Re-submittal: 5/11/11***
Presidential: ***Denied: 6/21/11 Appealed: 7/15/11 Denied: 8/4/11***

Affected Agencies/Jurisdictions

Sutter County
City of Yuba City
Reclamation District 1001
Caltrans

Initial Damage Assessment

Public Assistance (PA) Damage: \$5,988,000
Individual Assistance (IA) Damage: None
Federal Highway Damage: \$17,000,000
Total Estimated Cost of Damages (County-wide): \$22,988,000

Sutter County (PA) Estimated Cost of Damage: \$240,000

Debris removal, Tisdale Weir parking area clean up/repair, and bridge/road repair

City of Yuba City (PA) Estimated Cost of Damage: \$1,000,000

Fifth Street Bridge damage due to scouring (under evaluation)

Reclamation District 1001 (PA) Estimated Cost of Damage: \$4,748,000

Damage to north levee of Natomas Cross Canal

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Caltrans (FHWA)

Estimated Cost of Damage: \$17,000,000

10th Street Bridge (Hwy 20) damage due to aggressive scouring

Disaster Assistance

Individual Assistance: **Not Authorized**

Public Assistance: **Not Authorized**

Applicant Briefing was not held.

No Public Officials Briefings were held by CalEMA/FEMA

Final Damage Report (as of February 9, 2012)

Public Assistance (PA) Damage: \$ 762,740

Individual Assistance (IA) Damage: None

Federal Highway Damage: \$12,000,000

Total Repair Costs to Date: \$12,762,740

Total Estimated Cost of Damages Remaining: \$400,000

Sutter County (PA)

Actual Cost of Repair: \$224,000

Debris removal, Tisdale Weir parking area clean up/repair, and bridge/road repair

<u>Location</u>	<u>Date Repaired</u>	<u>Repair Cost</u>
Tisdale Weir Debris Removal	Aug 2011	\$30,000
Tisdale Weir Parking Lot Repair	Oct 2011	\$24,000
Reclamation Road Bridge Scour Repair	Nov 2011	\$50,000
Debris Removal Costs (county wide)	May 2011	\$10,000

Sutter County Contribution to RD1001 for Levee Repair (25% match)

\$110,000

Estimated Cost of Remaining Repair:

\$400,000

Brewer Road Culvert (Repair delayed, estimated cost \$400,000)

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City of Yuba City (PA)

Cost of Damage: None

After evaluation, it was determined Fifth Street Bridge had no damage due to the storm

Reclamation District 1001 (PA) *Actual Cost of Repair: \$600,000*

Damage to north levee of Natomas Cross Canal

<u>Location</u>	<u>Date Repaired</u>	<u>Repair Cost</u>
Natomas Cross Canal Levee Repair	Oct 2011	\$648,740

Sutter County paid \$110,000 towards cost (see above)
RD1001 provided fill material and labor
State bond paid remainder

Caltrans (FHWA)

Actual Cost of Repair: \$12,000,000

10th Street Bridge (Hwy 20) damage due to aggressive scouring

<u>Location</u>	<u>Date Repaired</u>	<u>Repair Cost</u>
10 th Street Bridge (Hwy 20) Repair	Dec 2011	\$12,000,000

Primary Contacts

Sutter County

John DeBeaux, Emergency Operations Manager

City of Yuba City

Bill Fuller, Administrative Analyst

Reclamation District 1001

Diane Fales, Manager

Caltrans District 3

Mark Dinger, Public Information Officer

The actual costs above were costs as of the completion of this report. Caltrans reported a difference of \$5,000,000 from their original estimate. RD1001 difference was based on the type of repair made and the changes to the scope of work. The levee's structural integrity was not jeopardized by the change in style/cost of repair. The repair of the levee was funded using County funds of \$110,000 and state bond funding for the remainder.

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Pictures of the Local Emergency**



Tisdale Weir



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Debris pile at Reclamation Road Bridge (Tisdale Weir) – View from west



Debris pile at Reclamation Road Bridge (Tisdale Weir) – View from east

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Scouring Damage from debris pile at Reclamation Bridge) – View from west



Scouring Damage from debris pile at Reclamation Bridge) – View from east

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Damage at Brewer Road



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Levee Crack/Slipping at Natomas Cross Canal (RD 1001)



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Mitigating Damage on Natomas Cross Canal Levee (RD1001)



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Damage to Natomas Cross Canal shown before repairs start (RD1001)



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Levee Repairs underway – Natomas Cross Canal (RD1001)



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Finishing work on Natomas Cross Canal (RD1001)



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Natomas Cross Canal Levee Repaired and Inspection Completed (RD1001)



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Sutter Bypass flowing and resulting clean-up

