

2016-17 Storm Season Preparation-Response-Damages

October 3, 2017
Castro Valley Rotary Club
by
Public Works Agency
Maintenance and Operations Department

Overview of Storm Related Incidents

For the Period January 1 – February 21, 2017

The Public Works Agency's Maintenance and Operation Department:

- Received and responded to 269 calls for service
- Logged approximately 10,875 labor hours
- Logged approximately 11,750 equipment hours
- Removed 5,600 cubic yards of mud/debris from County Right-of-Ways
- Closed 28 County roads from just a few hours to a several days
 - Palomares Road was reopened on September 22nd
 - One-lane traffic control in place on 3 roadways:
 - Redwood Road, Castro Valley; Foothill Road, Pleasanton; Koopman Road, Sunol

Overall Storm impact resulted in:

- Short-term Impacts (2 hours or less to manage)
- Intermediate Impact (more than 2 hours to manage)
- Long Term Impact (requires long-term fix)

Short Term Storm Impacts Flooding

- **Altamont Pass Road, Livermore**
- **Foothill Road, Pleasanton**
- **Greenville Road, Livermore**
- **May School Road, Livermore**
- **Stanley Boulevard, Pleasanton/Livermore**

Short Term Storm Impacts

Flooding



Altamont Pass Road, Livermore



Kilkare Road, Sunol

Short Term Impacts – Road Closures

- **Calaveras Road, Fremont** (slip-out)
- **Collier Canyon Road, Livermore** (slip-out)
- **Eden Canyon Road, Castro Valley** (large boulder in roadway)
- **Geary Road, Fremont** (slip-out)
- **Lake Chabot Road, Castro Valley** (slip-out)
- **Mines Road, Livermore:** (rockslide)
- **Norris Canyon Road, Castro Valley** (slip-out)
- **Patterson Pass Road, Livermore** (slip-out)
- **Redwood Road, Castro Valley** (slip-out)
- **Sunnyslope Avenue, Castro Valley** (slip-out)
- **Welch Creek Road, Livermore** (slip-out)

Downed Trees and Shoulder Repairs



Cull Canyon and Briar-Ridge, Castro Valley
100-foot eucalyptus tree fell blocking
both lanes of traffic



Norris Canyon Shoulder Slip-Out
Before and After



Mudslides and Slip-Outs



Dublin Canyon Road



Geary Road, Fremont

Calaveras Road, Livermore,
slip-out at mile marker 5.37



Mines Road, Livermore
slip-out



Intermediate Storm Impacts

➤ **Crow Canyon Road, Castro Valley:**

- Crow Creek overflowed its banks onto Crow Canyon Road in the vicinity of mile marker 6.3, resulting in a 12-hour road closure between Norris Canyon Road, Castro Valley, and Bollinger Canyon Road, San Ramon. ACPWA crews remained on scene for 48 hours, installing muscle wall to divert and contain creek water; then to monitor the situation.
- Downed tree and power lines, and a single vehicle incident in the vicinity of Coldwater Drive resulted in a 9-hour closure to all traffic between Greenridge Road and Norris Canyon Road.
- Multiple slip-outs along Crow Canyon Road between Greenridge Drive, Castro Valley, and Bollinger Drive, San Ramon, resulting in road closures between 2 and 4 hours in duration.

➤ **Kilkare Road, Sunol:**

- Crews have repeatedly responded to multiple slip-outs, downed trees and flooding in the vicinity of mile marker 3.5 due to the creek overtopping its banks. Road closures have been intermittent

➤ **Tesla Road, Livermore:**

- A slope failure on Tesla Road, in the vicinity of mile marker 3.63 resulted in a road closure, between Cross Road, Livermore, and the Alameda/San Joaquin County line, for approximately 24 hours. Crews responded and installed temporary barricades while simultaneously repairing the slope. The road has remained open to all traffic.

Localized Flooding on Crow Canyon Road



Crow Creek overflowed onto Crow Canyon Road at mile marker 6.3
Water diverted with newly installed muscle wall to keep water in the creek.

Downed Tree and Powerlines on Crow Canyon Road



The large bay tree brought powerlines down in the vicinity of Coldwater Drive.
Tree removal and power restoration (by PG&E)
took approximately 4 hours.

Flooding, Slip Outs, Debris on Kilkare Road, Sunol



Flooding and creek debris
in the roadway



Kilkare Road at Mile Marker 3.07

Slope Failure on Tesla Road



Tesla Road mm 3.63 slope failure along shoulder (before)



Barricades installed for traffic control while Tesla Road way was repaired. (after)



Long-Term Storm Impacts Road Closures

- Foothill Road, Pleasanton
- Koopman Road, Livermore
- Redwood Road, Castro Valley
- Palomares Road, Castro Valley

Long-Term Storm Impacts

Road Closures



Foothill Road, Pleasanton
Slope Failure at mile marker 6.92
(before)



Foothill Road, Pleasanton
One-lane traffic control
(after)

Long-Term Storm Impacts

Road Closures



Koopman Road, Livermore
Slip-Out at mile marker 0.23
(before)



Slope protection (barricades) were installed and Koopman Road
is open with one-lane traffic control
(after)

Long-Term Storm Impacts

Road Closures

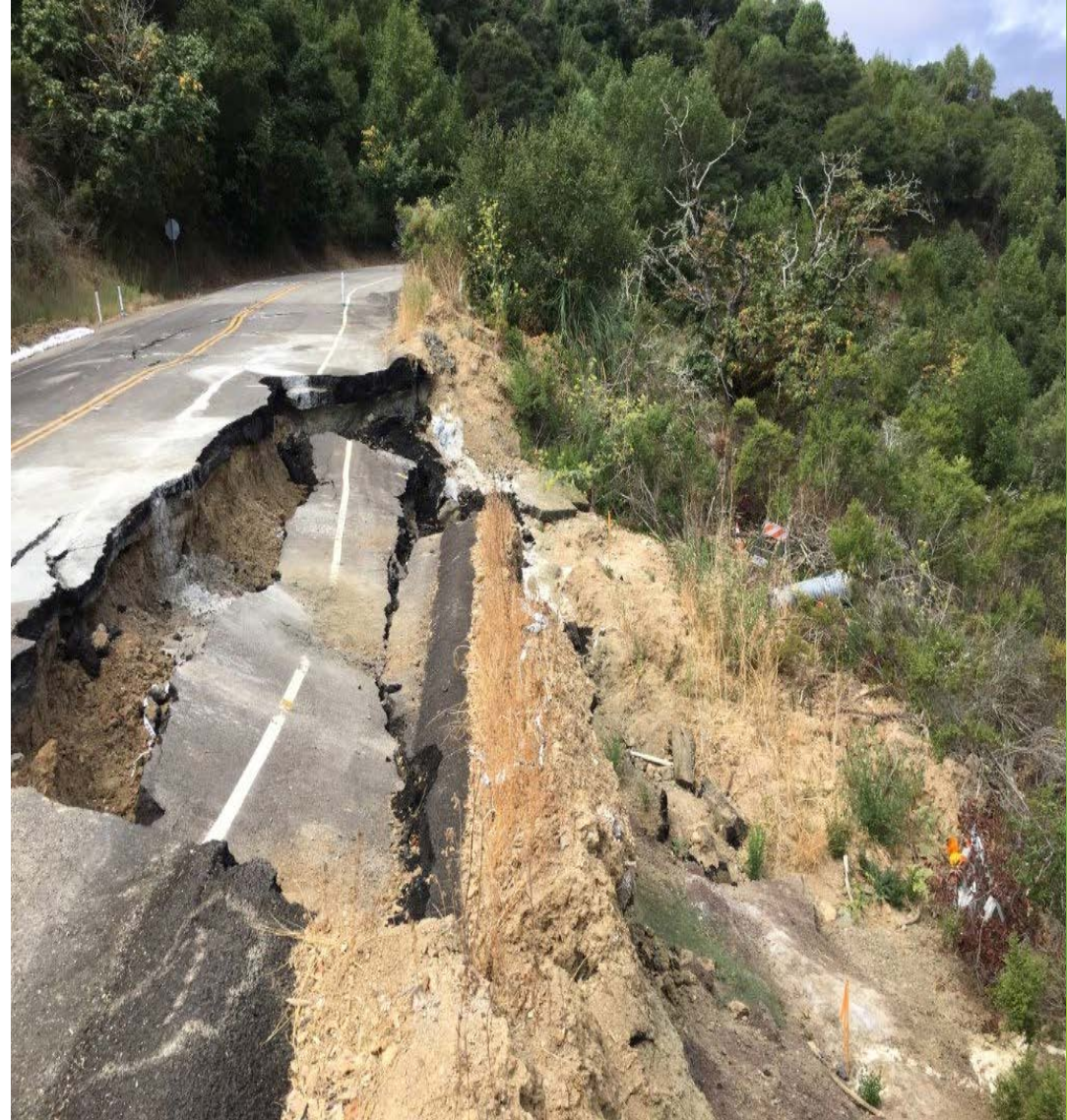


Redwood Road, Castro Valley
Slip-out at mile marker 7.38
(before)



Redwood Road, Castro Valley
one-lane traffic control
(after)

Redwood Road MM 7.38



Redwood Road MM 7.38



DOWN SLOPE VIEW OF SLIP OUT



WORK BEGINS WITH ROUGH GRADING

Redwood Road MM 7.38



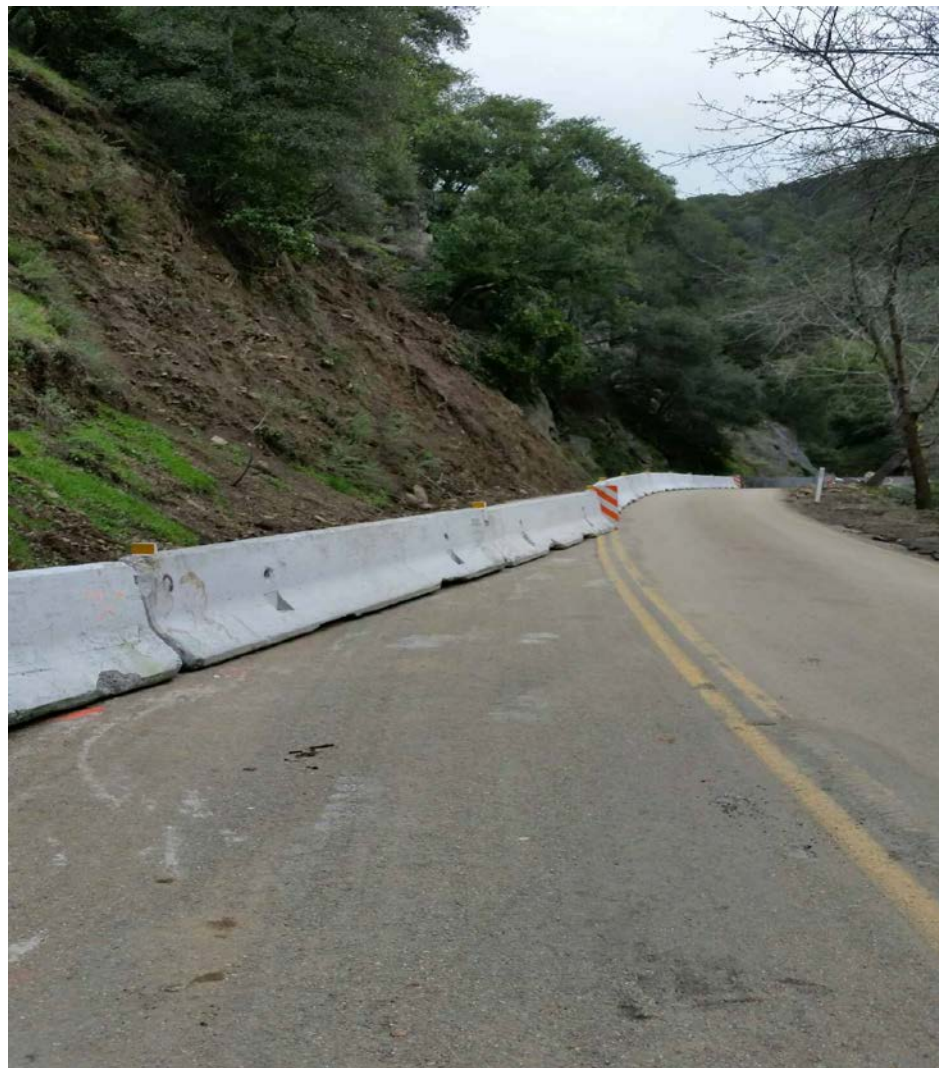
DRILLING AND PLACEMENT OF STEEL PIERS

Redwood Road MM 7.38



Long-Term Storm Impacts

Road Closures



Palomares Road, Castro Valley,
mile marker 8.73 (before)



Palomares Road, Castro Valley
mile marker 8.73 (after)

Palomares Road, Castro Valley mile marker 8.73



Public Information Efforts

Updates were provided in real time (24/7) during storm events to:

Board of Supervisors

Alameda County Sheriff's Office of Emergency Services

Alameda County Fire Department

Public Works Agency Website (www.acpwa.org)

Various Social Media

County of Alameda

Alameda County Sheriff's Department

Alameda County Fire Department

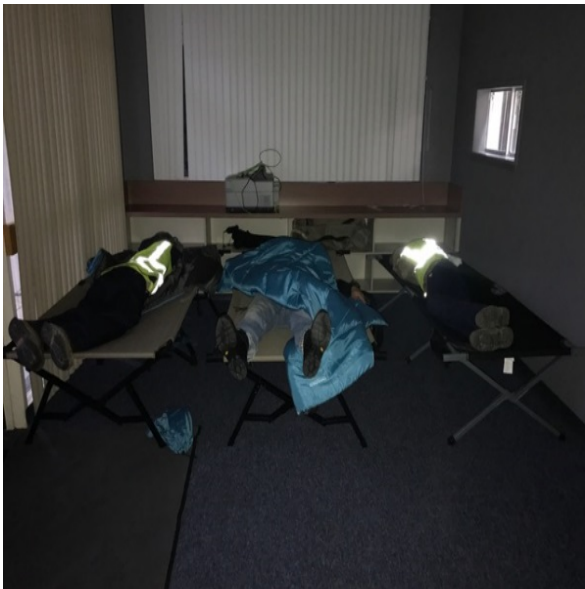
News Media (print, online, radio, TV)

E-Subscribe Notices

Winter Storm Preparedness and Educational Video Series ran routinely on County social media accounts providing preparedness tips as well as reminders on what to do in emergency situations (flooding, downed trees, downed powerlines, etc.)

Staff Efforts

- Public Works staff have logged approximately 10,875 hours in response to storm impacts between January 1 and February 21, 2017.
- Agency employees worked alternating shifts, ensuring 24/7 availability of resources (including weekends and holidays) to promote the safety of the general public.



During the height of the storms, staff worked shifts ranging from 12 to 16 hours. To maximize response time and ensure adequate rest breaks, cots were provided in the Dublin Operation Center's conference room to facilitate adequate rest breaks, which allowed the Agency to maintain safe operations, and keep operations running 24/7.

OVERALL DAMAGE ASSESSMENT

- The Agency is currently assessing approximately 28 sites that sustained substantial damage, estimates will likely be several million dollars.
- On January 20, 2017, a proclamation declaring a local emergency was issued by the County Department of Emergency Services.
- On February 10, 2017, the Governor's Office declared a statewide Declaration of Emergency for damages caused by this winter storm. This will assist the County in obtaining State and Federal disaster relief funds.

Acknowledgements

I want to extend my greatest appreciation to the Maintenance and Operations Department personnel of the Agency, who are truly some of the most remarkable and dedicated public servants in the County. Their extraordinary effort in responding and handling the multitude storm related emergencies is highly commendable.

THANK YOU!

The background features abstract, overlapping green geometric shapes, primarily triangles and polygons, in various shades of green, creating a modern, layered effect. A solid green horizontal rectangle is positioned in the upper-middle section of the slide.

Questions?