

Current Monterey County El Niño Winter Storm Preparedness

A strong El Niño event is occurring in the Pacific tropical equator with significant warming of the ocean waters. El Niño is not a weather system itself but it has a great influence on our winter weather patterns. Winter Atmosphere Rivers pulling large storms across the northern Pacific will draw increase moisture from these warmed oceans resulting in storms with potentially record breaking levels of rain. Most models indicate that a strong El Niño will continue through the Northern Hemisphere winter 2015-16, followed by weakening during the late spring or early summer. The National Weather Service forecaster consensus remains nearly unchanged, with the expectation that this El Niño could rank among the top three strongest episodes going back to 1950.

The winter of 1997/1998 were the largest and strongest El Niño events of the recent history and resulted in catastrophic flooding throughout Monterey County. Those events are clearly on the minds of community residents and leadership as we prepare for this winter season.

No amount of preparation can guarantee absolute protection of local residence and property, but local agencies have come together to prepare and educate themselves and local residence to the greatest extent possible to promote and encourage preparedness and safety, even if 100% protection cannot be ensured.

Sandbagging/Flood Fighting Preparedness

The Monterey County Water Resource Agency (MCWRA) maintains the County's sandbag inventory and makes the bags available to local fire districts in unincorporated areas of Monterey County. To date MCWRA has distributed 52,000 sandbags and has a current reserve inventory of approximately 133,000 for immediate emergency response. The local fire districts distribute the sandbags to the public, free of charge, for use in flood fighting measures only. The County's Public Works Department maintains two mechanical sandbaggers, and has pre-staged 900 tons of sand at 25 locations throughout the County, including 1,200 filled sandbags to the residents in the Tassajara Fire area. In addition to the stockpile of sand and sandbag locations, County Public Works has distributed pallets of 22,500 bags to the most vulnerable geographical areas throughout the County. The sandbag distribution list and sand stockpile locations are updated as required/appropriate. Sandbag information including GIS map of locations is available on the County and Agency's websites.

MCWRA has hosted a Flood Fighting Class with participation from County staff of both MCWRA and Public Works. Environmental Health staff had also been trained in flood response and has equipped appropriate staff with Personal Protective equipment.

The Public Works Department Operations Center (DOC) has been trained and is ready to operate 24 hours/day with staff working pre-designated assignments in 12 hour shifts. The DOC and Operational Area Emergency Operations Center are coordinated to share information in real time. Plans are in place to staff proactive patrols during storm to reduce response time to verify

storm impacts and close roads as needed to promote public safety. Contractors are in place under pre-approved contracts to supplement County road crews if and as needed.

Monterey County Department of Health has been providing additional training to staff to prepare them to respond to flooding and other storm emergencies, in particular to sewage releases and electrical outages. Staff has been updating emergency contact lists for water system, sewage treatment facilities that may be impacted in a storm event. Food and water safety information to private industry, business owners and homeowners has been updated on website and provided during our community outreach programs.

Flood Monitoring/ Warning

The Monterey County Water Resources Agency's Automated Local Evaluation in Real Time (ALERT) Monitoring System consists of self-reporting remote sensors, located throughout the County, that transmit rain and stream level data via radio to base station computers at the MCWRA, National Weather Service, and the Monterey County Office of Emergency Services. Additionally ALERT data is sent through an Internet Protocol Concentrator to redundant computer databases to facilitate remote access via the internet. This real time data promotes the earliest possible flood warnings and river flow forecasts. Currently, the MCWRA's ALERT system consists of 23 rain gages, 9 combination rain and stream gages, and 17 stream or reservoir/lagoon level sensors. All 50 remote rainfall and streamflow monitoring sites have been inspected and received annual maintenance.

In addition, monitors have access to ALERT networks, USGS stream gage information and National Weather Service data for the Central Coast and San Francisco Bay Region, including San Luis Obispo, Santa Cruz, Santa Clara, and San Benito Counties; increasing the ability to more accurately forecast potential flooding conditions within Monterey County. The ALERT data access system was designed with redundancy in the communication paths, databases, and web servers used to access the real time data. A secure web based interface is designed to allow multiple operators to access and monitor the rainfall and stream conditions throughout the County simultaneously from any computer via the internet. This system is designed to allow Agency ALERT Team members to monitor County wide hydro logic conditions 24 hours per day remotely as required during storm events. Data received from the ALERT 2 system is utilized as a resource for County flood related decisions, and it is used by the National Weather Service in Monterey and the California Nevada River Forecast Center in Sacramento as part of the process to release local "flood warnings" to the public. Other uses of ALERT data include summer-time Salinas River flow monitoring and climatological and rainfall distribution studies.

ALERT sensor monitoring is integrated into the Operational Area EOC for real time monitoring by MCWRA and to provide data for situational analysis for County operational personnel. This information and flood warning will be generated as part of the public alert process through our emergency notification system (ALERTMONTEREY), EAS, WEA and social media formats.

Infrastructure Preparedness

Both County Public Works and the MCWRA have been working on cleaning culverts and removal of debris from drainage channels and pump stations as time and funds permit. Current activities to mitigate potential flood hazards include:

MCWRA Maintenance activities:

- **Reclamation Ditch:** Vegetation control and removal, trash and sediment removal, rodent control, and maintenance of five booster pumps
- **Carr Lake Area:** Sediment removal
- **Pajaro Levee:** Erosion control, vegetation control and removal, rodent control , and clearing of drains and lap gates
- **Moro Cojo:** Pursuing permits needed for repairs to deteriorated culverts; repaired flap gates at Moss Landing Harbor Tide Gate Facility
- **Tembladero Slough:** Maintenance and repair of tide gates under Potrero Road
- Permitted Stream Maintenance activities on the Salinas River in Chualar and Gonzales:
 - Two years of select vegetation and sediment removal in over 11 miles of the Salinas River (Fall of 2014 and 2015).
 - This works is designed to reduce water velocities and erosion, and increase channel flow capacity.
- Coordinating with the Resource Conservation District of Monterey County to help landowners work under existing permits to remove the invasive giant bamboo called Arundo Donax.
 - Available in the entire Salinas River
 - Reduces flood potential by clearing areas within the riparian zone
- Planning efforts in 92 miles of the Salinas River and three tributaries (Bryant Canyon Channel, San Lorenzo Creek, and Gonzales Slough) to clear vegetation and sediment
 - Robust technical and design development of activities
 - Permit applications currently being prepared for anticipated work in Fall 2016
- Santa Rita Creek is scheduled to have some minor debris removal and vegetation trimming in mid-January north of Rogge Road.

RMA Public Works had completed mitigation activities including:

- Cleared approximately 150 miles of dirt shoulder & drainage ditches
- Annual Carmel Lagoon flood management in place
- Developing plans to reduce flooding in CSA #50 (Carmel) by expansion of existing flood control notch and grading.

Community Preparedness Outreach

The County has been proactive in reaching out to communities and neighborhood to promote information on El Niño potential impacts, especially our vulnerable populations and area with historical flood risk. OES and County Departments have participated in over 15 community outreach events including flood preparedness workshops; Big Sur Hwy 1 workshop; community preparedness meetings; fairs; local news interviews enabling us to reach an audience of over 2400 residents. Our message to residents is simple: Understand the risks of flooding in your community; prepare yourself, your family and pets, and your home; and stay informed through AlertMontereyCounty.org emergency notification system; government alerts; websites and local radio and television. As of this report, there are 12,500 registered phones (cell, VoIP, additional land lines) in the Everbridge Emergency Notification System.

We are launching our new website in early December 2015. With a dedicated page for winter preparedness information and new and improved ability to rapidly change information and current emergency notices as needed and appropriate. We are utilizing our community engagement tools of Facebook, Twitter, and soon Nixle. We are attempting to link all information found through the various county webpages into one Winter Storm El-Niño information page.

MCWRA have developed brochures for homeowners on how to prepare their homes for potential flooding. These and information on flood insurance are available on our County webpages.

Department of Social Services Homeless Winter Preparedness Program

In a declared disaster all Department of Social Services (DSS) employees are disaster service workers and are required to participate in disaster response operations as assigned with functional responsibility for mass care and shelter. DSS conducted Mass Care and Shelter training in partnership with the Red Cross in November 2014 and April 2015.

DSS administers an Inclement Weather Shelter program in partnership with the Coalition of Homeless Services Providers during the period of November 1 - March 31 annually. During this period existing homeless shelters agree to expand their capacity if needed. Additionally, DSS distributes motel vouchers to local homeless shelter providers.

DSS partners with the City of Salinas to finance the Winter Warming Shelter that has a capacity of 68 persons and also operates during the Inclement Weather Season November 1- March 31.

Continuity of Government/Emergency Management:

In the last 6 months we have held seven trainings and three exercises to prepare County departments, executive leadership and public safety agencies. Exercises and training have focused on building capability and capacity for flood fighting and emergency management. County departments are addressing winter storm staffing plans should parts of the county be cut off due to storm or floodwaters. Facilities has been identifying buildings with potential storm water urban flood risks and making the necessary preparations.

We will be conducting an emergency communication drill for all County departments and executive teams in December 2015. County IT Department and radio specialists have been working on ensure adequate radio connectivity during power outages and storms. Included in this is re-establishing Monterey County radio communications capabilities for WRA. We will also have a microwave linked phone system that will connect Monterey County with San Benito, Santa Cruz and Santa Clara EOCS in the event of wide spread failures at any location.