

## CALIFORNIA COASTAL COMMISSION

45 FREMONT STREET, SUITE 2000  
SAN FRANCISCO, CA 94105  
VOICE AND TDD (415) 904-5200  
FAX (415) 904-5400



### General Checklist for Coastal Community Preparedness for El Niño

- 1. Know your watershed:** Recent fires have left behind large denuded areas, some on steep slopes and hillsides. Even if these burn areas are outside your community, winter rains may trigger detrimental mudslides and debris flows that can put downstream communities at risk. Determine as soon as possible the fire-affected portions of your watershed and identify possible risks. Some potential protective measures, like cleaning out debris basins and flood channels, are described below. Larger actions like debris dams or diversion structures should only be considered in situations of significant risk and in coordination with other at-risk communities. If considered for areas in the coastal zone, a permit will be needed, so discuss the action with staff as soon as possible.
- 2. Check debris basins and flood control channels:** If basins or flood channels are clogged with sediment, debris, or vegetation, they will not function as intended during a storm. Cleaning out debris basins and flood channels should be part of regular maintenance. If there is no approved maintenance plan or if the basins or channels have berm overgrown with vegetation due to deferred maintenance, contact Coastal Commission staff about permit requirements, possible need for vegetation surveys, sediment tests, or monitoring efforts.
- 3. Check storm drains and culverts:** Poor functioning storm drains and culverts can cause localized flooding, scour, and erosion. Storm drains and culverts need to be cleared out regularly. As with debris basins and flood channels, check with Coastal Commission staff about permit requirements.
- 4. Temporary stockpile sites:** If there is the potential for localized slides, debris flows or slumps that could affect public services (roads, utilities, *etc.*) consider developing a plan for transport, temporary storage and eventual disposal of this material. Contact Coastal Commission staff about possible permit requirements. Beach quality sand may be used in an opportunistic beach nourishment program if one exists.
- 5. Estuary breaching:** If estuary closures present a flood risk, consider developing an estuary breaching plan that covers conditions under which a breach might be done, method, pre-breaching studies, monitoring needs and appropriate breaching locations. Ideally a plan will have already been prepared and approved. If not, contact Coastal Commission staff about permit requirements for breaching.
- 6. Temporary beach berms:** Many California communities have effectively used sand berms as temporary protection from winter storm waves and a replacement for more permanent structures such as bulkheads, or revetments. Normally berms are built in the fall, maintained throughout the storm season, and knocked down before the summer season. Contact Coastal Commission staff about permit requirements.

**7. Protect street ends:** Street ends tend to be low spots along the coast and can become conduits for ocean waves to flood inland areas. Temporary berms or sand bag structures can provide targets flood protection and be designed to accommodate beach access. Contact Coastal Commission staff about permit requirements.

**8. Check community buildings:** If communities own or maintain public buildings, look at General Checklist for Property Preparedness for El Niño.

**9. Check shore protection structures:** If communities own or maintain shore protection such as bulkheads, seawalls, revetments, levees, or floodwalls, look at Shoreline Property Preparedness Checklist for El Niño.

**10. Outreach efforts:** Community staff, residents and visitors need to be prepared for El Niño storms and likely consequences to the community. Questions and Answers on El Niño, General Checklist for Property Preparedness for El Niño and Shoreline Property Preparedness Checklist for El Niño can be used to help with outreach. Outreach can encompass public meetings and web information. Additional local information could include contact information for local staff, links to FEMA flood maps, information of evacuation routes, *etc.*

For information on locations and contact information for the Coastal Commission Offices, please visit: <http://www.coastal.ca.gov/address/html> or reference the information below.

District Office	Coverage Areas	Address	Phone Number	Fax Number
North Coast	Del Norte, Humboldt & Mendocino	1385 8 <sup>th</sup> Street, Suite 130 Arcata, CA 95521	(707) 826-8950	(707) 826-8960
North Central Coast	Sonoma, Marin, San Francisco & San Mateo	45 Fremont Street, Suite 2000 SF, CA 94510	(415) 904-5200	(415) 904-5400
Central Coast	Santa Cruz, Monterey & San Luis Obispo	725 Front Street, Suite 300 Santa Cruz, CA 95060	(831) 427-4863	(831) 427-4877
South Central Coast	Santa Barbara, Ventura & Los Angeles	89 S. California Street, Suite 200 Ventura, CA 93001	(805) 585-1800	(805) 641-1732
South Coast	Los Angeles & Orange	200 Oceangate Long Beach, CA 90802	(562) 590-5071	(562) 590-5084
San Diego		7575 Metropolitan Drive, Suite 103 San Diego, CA 92108	(619) 767-2370	(619) 767-2384

Based on past El Niño events, some of the most damaging storms are those that coincide with times that have higher than normal tides. Some of the highest tides for the 2015/16 winter season are identified in the following table.

**Dates of Tides Greater than 6 Feet, for the 2015/16 Winter Season**

		Locations with Major Tide Stations and Corresponding Dates						
MONTH	Tides	San Diego	Los Angeles	Santa Barbara	Monterey	San Francisco	Humboldt	Crescent City
November	Tides > 6 ft	9 <sup>th</sup> -14 <sup>th</sup> 22 <sup>nd</sup> -29 <sup>th</sup>	22 <sup>nd</sup> - 28 <sup>th</sup>	23 <sup>rd</sup> -27 <sup>th</sup>	23 <sup>rd</sup> -27 <sup>th</sup>	22 <sup>nd</sup> -28 <sup>th</sup>	1 <sup>st</sup> -2 <sup>nd</sup> 5 <sup>th</sup> -17 <sup>th</sup> 19 <sup>th</sup> -30 <sup>th</sup>	1 <sup>st</sup> -2 <sup>nd</sup> 5 <sup>th</sup> -17 <sup>th</sup> 19 <sup>th</sup> -30 <sup>th</sup>
	Tides > 7 ft	24 <sup>th</sup> -27 <sup>th</sup>	25 <sup>th</sup>				10 <sup>th</sup> -14 <sup>th</sup> 22 <sup>nd</sup> -29 <sup>th</sup>	10 <sup>th</sup> -14 <sup>th</sup> 21 <sup>st</sup> -29 <sup>th</sup>
	Tides > 8 ft						24 <sup>th</sup> -27 <sup>th</sup>	24 <sup>th</sup> -27 <sup>th</sup>
December	Tides > 6 ft	8 <sup>th</sup> -14 <sup>th</sup> 21 <sup>st</sup> -27 <sup>th</sup>	10 <sup>th</sup> -13 <sup>th</sup> 21 <sup>st</sup> -27 <sup>th</sup>	22 <sup>nd</sup> -26 <sup>th</sup>	21 <sup>st</sup> -26 <sup>th</sup>	9 <sup>th</sup> -13 <sup>th</sup> 20 <sup>th</sup> -27 <sup>th</sup>	1 <sup>st</sup> -31 <sup>st</sup>	1 <sup>st</sup> -31 <sup>st</sup>
	Tides > 7 ft	23 <sup>rd</sup> -25 <sup>th</sup>					8 <sup>th</sup> -14 <sup>th</sup> 19 <sup>th</sup> -28 <sup>th</sup>	8 <sup>th</sup> -14 <sup>th</sup> 9 <sup>th</sup> -28 <sup>th</sup>
	Tides > 8 ft						22 <sup>nd</sup> -26 <sup>th</sup>	22 <sup>nd</sup> -26 <sup>th</sup>
January	Tides > 6 ft	7 <sup>th</sup> -12 <sup>th</sup> 19 <sup>th</sup> -25 <sup>th</sup>	8 <sup>th</sup> -11 <sup>th</sup> 20 <sup>th</sup> -24 <sup>th</sup>	10 <sup>th</sup> 21 <sup>st</sup> -22 <sup>nd</sup>	9 <sup>th</sup> -11 <sup>th</sup> 20 <sup>th</sup> -23 <sup>rd</sup>	6 <sup>th</sup> -12 <sup>th</sup> 17 <sup>th</sup> -25 <sup>th</sup>	1 <sup>st</sup> -31 <sup>st</sup>	1 <sup>st</sup> -31 <sup>st</sup>
	Tides > 7 ft						6 <sup>th</sup> -13 <sup>th</sup> 16 <sup>th</sup> -26 <sup>th</sup>	6 <sup>th</sup> -13 <sup>th</sup> 15 <sup>th</sup> -26 <sup>th</sup>
February	Tides > 6 ft	6 <sup>th</sup> -10 <sup>th</sup> 19 <sup>th</sup> -22 <sup>nd</sup>	7 <sup>th</sup> -9 <sup>th</sup>		1 <sup>st</sup> -8 <sup>th</sup>	5 <sup>th</sup> -10 <sup>th</sup> 13 <sup>th</sup> -21 <sup>st</sup>	1 <sup>st</sup> -29 <sup>th</sup>	1 <sup>st</sup> -29 <sup>th</sup>
	Tides > 7 ft						5 <sup>th</sup> -22 <sup>nd</sup>	5 <sup>th</sup> -22 <sup>nd</sup>
March	Tides > 6 ft	6 <sup>th</sup> -9 <sup>th</sup>	8 <sup>th</sup>			6 <sup>th</sup> -9 <sup>th</sup> 11 <sup>th</sup> -13 <sup>th</sup>	1 <sup>st</sup> -29 <sup>th</sup>	1 <sup>st</sup> -29 <sup>th</sup>
	Tides > 7 ft						6 <sup>th</sup> -14 <sup>th</sup>	6 <sup>th</sup> -14 <sup>th</sup>
April	Tides > 6 ft	6 <sup>th</sup> -9 <sup>th</sup>	7 <sup>th</sup> -9 <sup>th</sup>			7 <sup>th</sup> -11 <sup>th</sup>	3 <sup>rd</sup> -14 <sup>th</sup> 18 <sup>th</sup> -27 <sup>th</sup>	3 <sup>rd</sup> -13 <sup>th</sup> 19 <sup>th</sup> -27 <sup>th</sup>
	Tides > 7 ft						7 <sup>th</sup> -11 <sup>th</sup>	6 <sup>th</sup> -11 <sup>th</sup>