

**CITY OF MALIBU
PUBLIC WORKS DEPARTMENT**

Preparing for El Niño

MALIBU CITY COUNCIL MEETING
SEPTEMBER 28, 2015

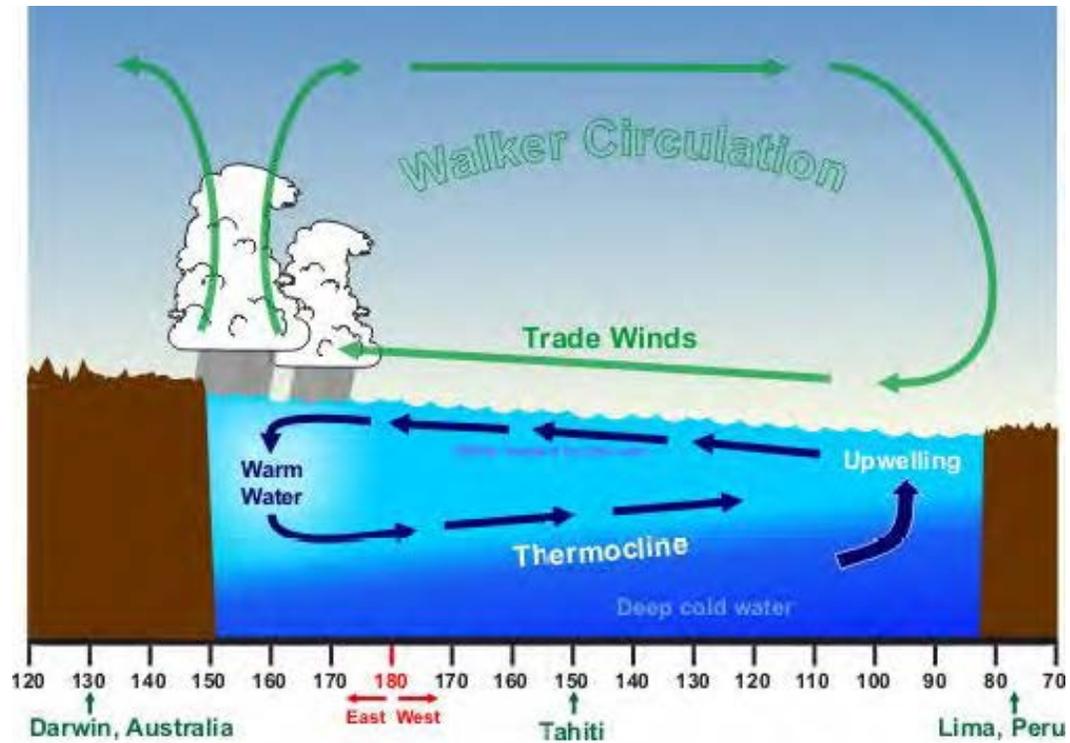


What is an El Niño?

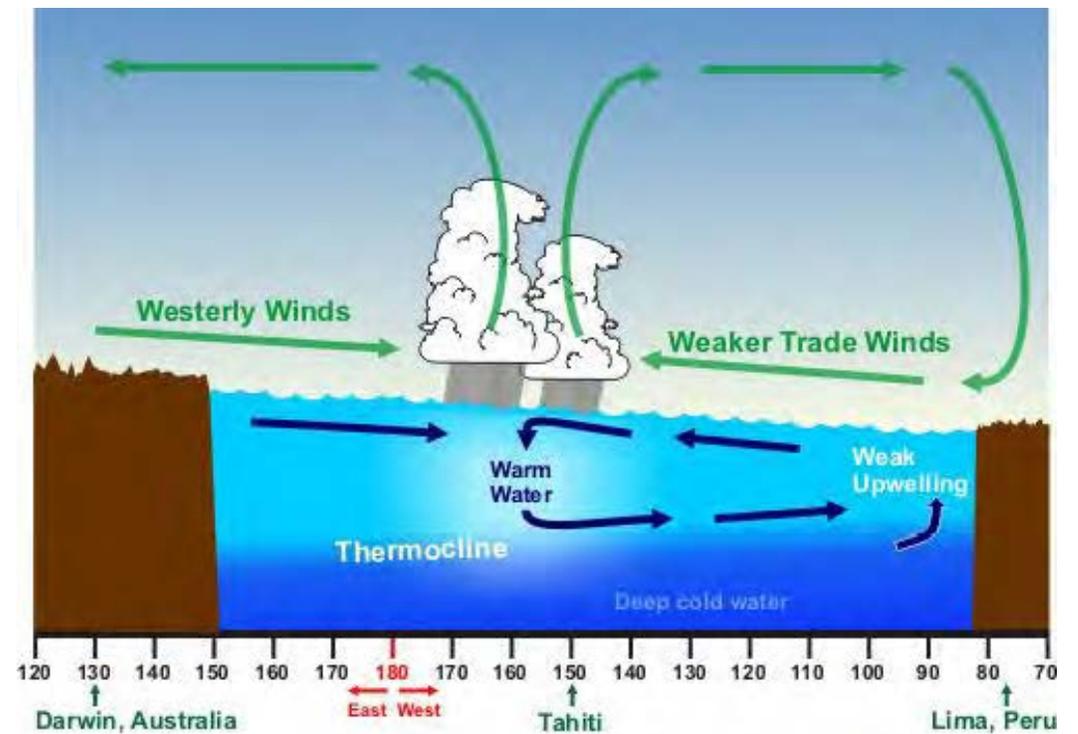
- Tropical weather pattern that occurs approximately every 3-7 years
- Characterized by above average surface water temperatures in the Pacific Ocean
- Warming patterns bring monsoonal moistures and disrupt normal weather patterns
- Results in extreme weather conditions throughout the world
- Southern California experiences wetter winters

Changing Weather Patterns

Normal Pacific Ocean Pattern



El Niño Pattern

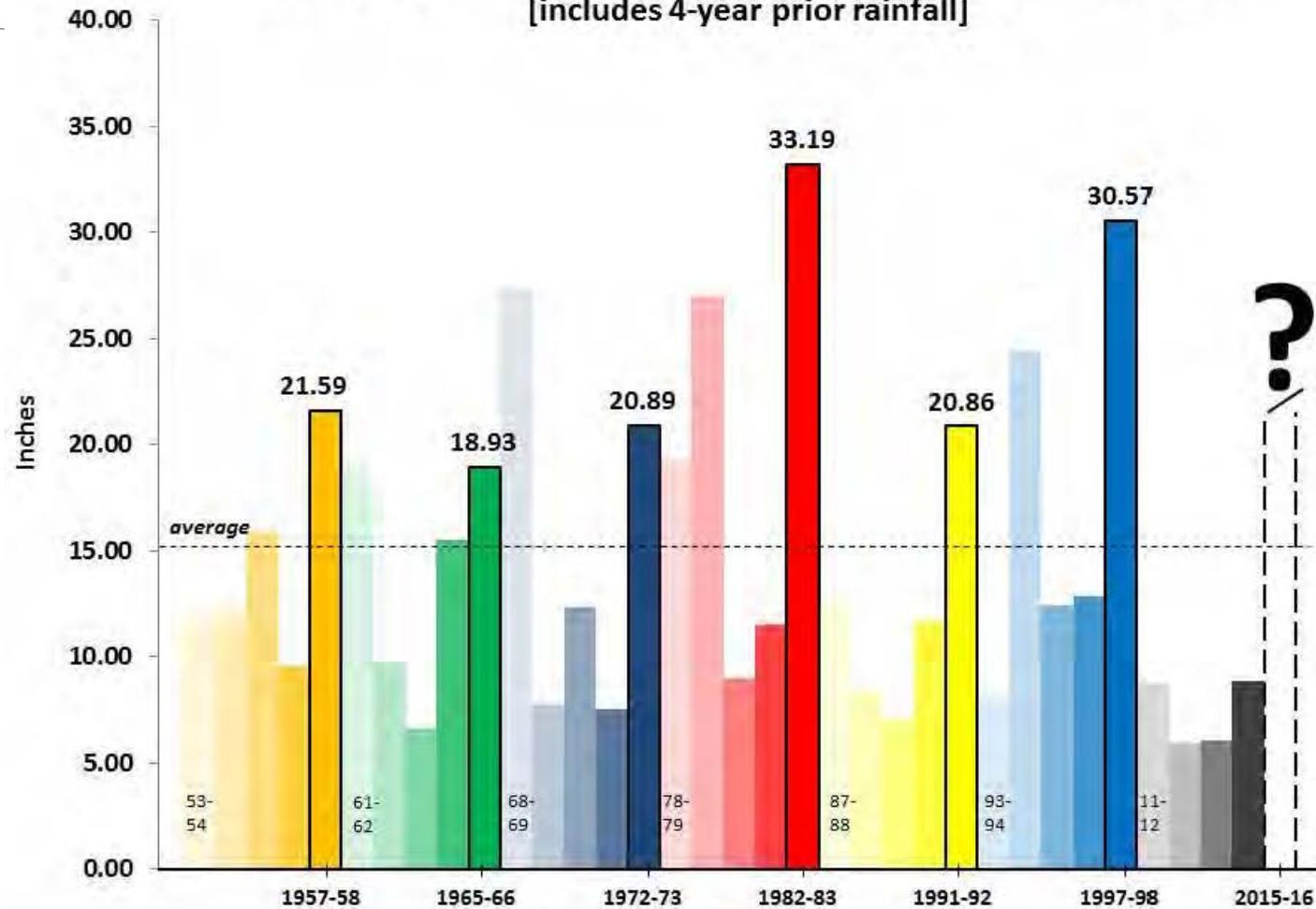


Current El Niño Predictions

- **Key benchmark** of the presence and severity of El Niño is ocean water temperatures specifically **when surface waters increase by 3° or more**
- Recently, ocean temperatures are **reported to have increased as much as 4°**
- Meteorologists predict there is a greater than 95% chance of El Niño
- Forecasters unanimously favor a “**strong**” El Niño

Strong El Niño Rainfall

Past Strong (6) El Niño Rainfall in Los Angeles CA
[includes 4-year prior rainfall]



Why are we concerned about El Niño ?

POTENTIAL CONDITIONS	ASSOCIATED IMPACTS
Increased Rainfall and Winds	<ul style="list-style-type: none">• Flooding• Debris Flows• Overtopping of streams and creeks
Multiple Storm Events (January-March)	<ul style="list-style-type: none">• Soil Saturation• Landslides• Overturned Trees
Large Wave Action	<ul style="list-style-type: none">• Coastal Erosion• Coastal Structure Damage• Strong Rip Currents



What can we do now?

Prepare! Prepare! Prepare!

How do we prepare?

3-Step Process

1. Prevention
2. Storm Response
3. Communication

1. Prevention

- Clean & clear all catch basins, pipes, culverts and waterways of debris
- Check flood control devices and valves
- Check stream and creek banks
- Patch and fill cracks in pavement
- Trim trees
- Secure sign posts
- Give special attention to known problem areas or “hot spots”
- Coordinate preventative maintenance efforts with outside Agencies:
 - Caltrans, Los Angeles County Flood Control District, Los Angeles County Public Works, Los Angeles County Beaches and Harbors, State Parks, National Parks, Army Corps of Engineers, Los Angeles County Sheriff, California Highway Patrol, & Utility Companies

1. Prevention Continued

- Confirm all preventive maintenance measures have been implemented
- Reach out to property owners to clean private drains, clear debris & prevent sediment from flowing from their property as needed
- Develop preliminary work plan and schedule for the PW staff and City's street crew
- Stock up on materials and safety equipment:
 - K-rails
 - Sandbags
 - Barricades
 - Plastic sheeting
 - Flashing beacons & traffic control devices
 - Street signs, posts and hardware
 - Water pumping equipment

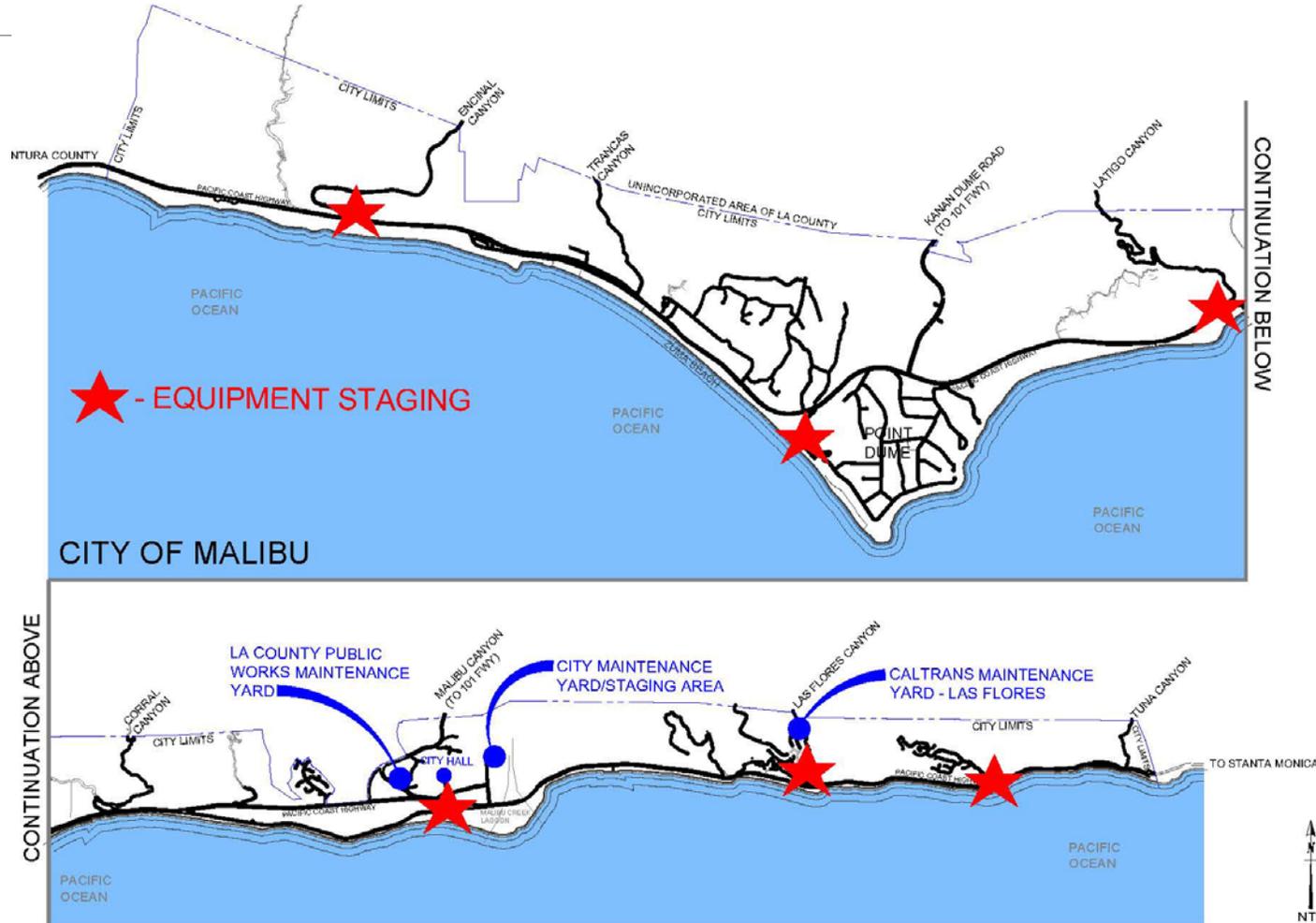
2. Storm Response – Before/During/After

Before Storm Event

- Track weather conditions
- Stage equipment throughout City
- Deploy portable changeable message signs (in coordination with CHP)
- Coordinate with City's Emergency Services Coordinator (ESC) & Media Information Officer (MIO) to initiate public outreach
- Notify Contractors to implement BMPs
- Communicate with outside agencies to gather information and coordinate plans

Equipment Staging Locations

EQUIPMENT STAGING LOCATIONS



2. Storm Response – Before/During/After

During Storm Event

- Implement “Storm Watch” protocol
- Monitor and coordinate storm activities with outside agencies
- Deploy street crew to monitor and maintain all City roads (clear debris, trees, rocks, etc.)
- Manage traffic control on City streets
- Regularly monitor and maintain known problem areas (additional crews if needed)
- Coordinate with Utility Companies regarding service outages
- Update City’s ESC & MIO on storm response activities
- Provide regular status reports to City Manager and City Council



2. Storm Response - Before/During/After

After Storm Event

- Inspect all roads, assess conditions and ensure all roads are safe for public use
- Contact Caltrans and/or County if issues are identified on state or county roads
- Check with Utility Companies on damage assessments and repair schedules
- Maintain traffic control for areas needing additional debris removal or repair and remove traffic control whether no longer needed
- Haul away debris to landfill
- Inspect all catch basins, pipes, culverts and drainage structures & clear debris
- Direct street sweeper to sweep City streets and parking areas
- Check with County, California OES and FEMA regarding declarations of emergency and begin the reimbursement process
- Continue to monitor weather and prepare for next storm event



3. Communication

The public will be kept informed of storm conditions and activities before, during and after storm events via the following communication tools:

- City Emergency Hotline: **310-456-9982**
- City website: **www.malibucity.org**
- Blackboard Connect (reverse 911)
- Nixle – subscription based notification system (sign up on the City’s website)
- City’s Emergency Notification System - subscription based
- City’s social media sites (Facebook and Twitter)

Residents' El Niño Preparation Checklist

- Clean storm drains and gutters
- Clean debris around your property
- Improve drainage and water issues around your property
- Check roof for potential leaks
- Inspect structural support piles, if applicable
- Restock emergency kits & equipment
- Obtain and strategically deploy sandbags (Los Angeles County Fire Department & Beaches and Harbors)
- Check flood insurance
- Stay aware of weather forecasts
 - Follow National Weather Service: <http://www.weather.gov/>
 - Listen to local media on TV, radio and/or internet
 - Sign up for County of Los Angeles Notifications: <http://portal.lacounty.gov/wps/portal/alertla>
 - Sign up for City of Malibu Notifications: <http://malibucity.org/news>

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