

California Tsunami Program Brief

San Mateo County



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California Tsunami Program



Hazard Assessment & Understanding

- Inundation Modeling & Maps
- Evacuation Modeling & Maps
- Probabilistic Modeling & Maps
- Hazus Assessments

Preparedness

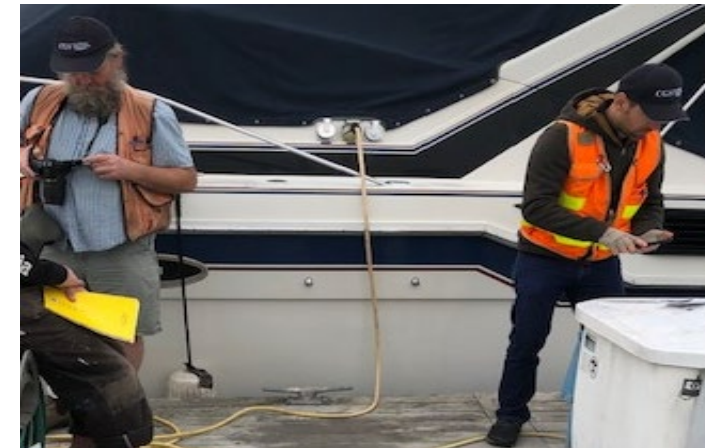
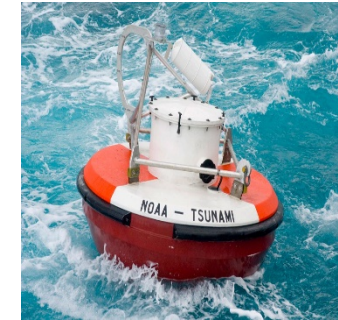
- Training & Exercise Support
- System & Communications Testing
- TsunamiReady® Program
- Tsunami Preparedness Week
- Public Education

Response

- 24/7 Duty Officer Program
- Evacuation/Maritime Playbooks
- Real-Time/Post-Tsunami Field Teams

Mitigation & Recovery

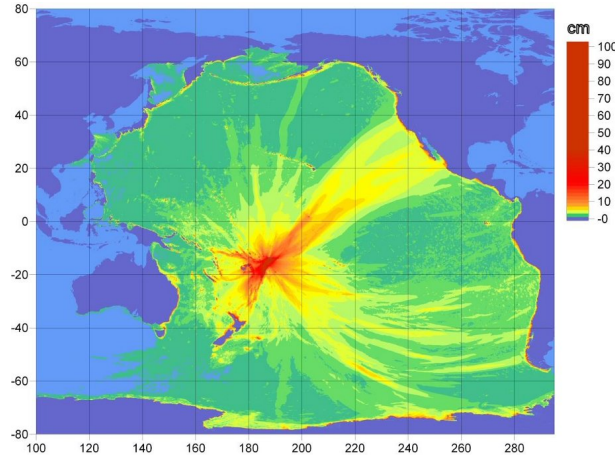
- Policy Analysis & Development
- Resiliency & Improvement Reports



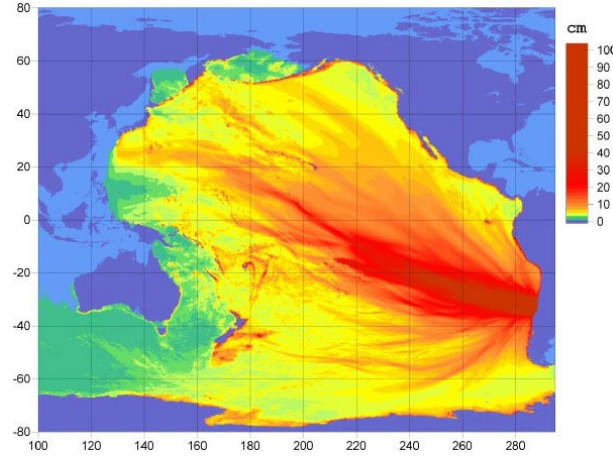
Recent Tsunamis

Six Tsunamis in Twelve Years

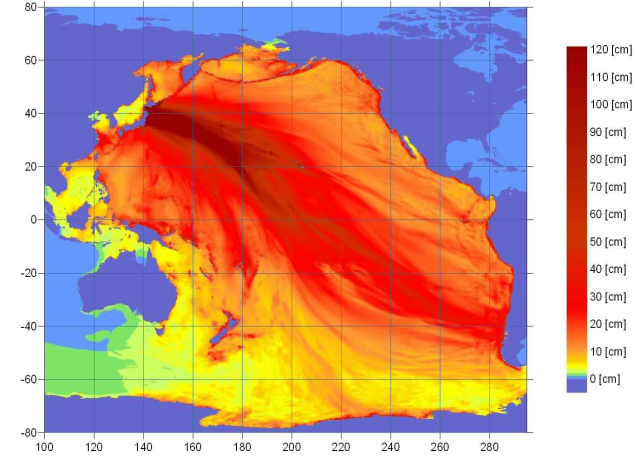
Samoa - Sept 2009



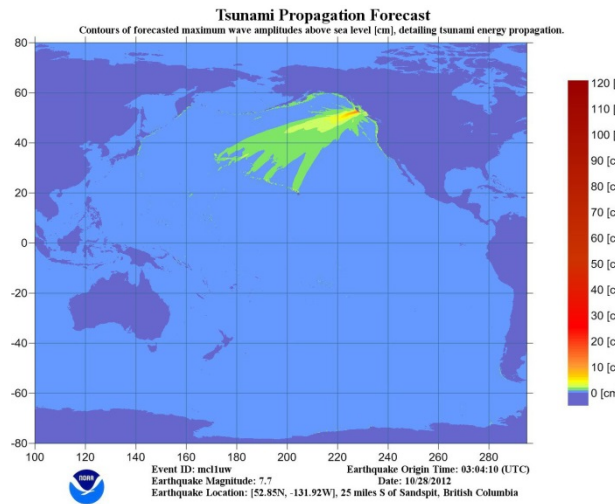
Chile - Feb 2010



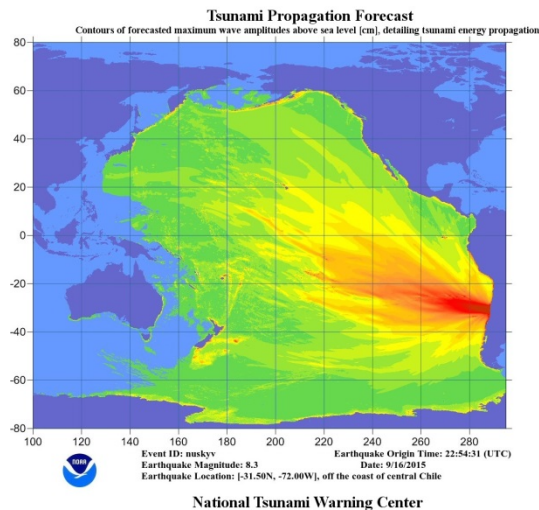
Japan - March 2011



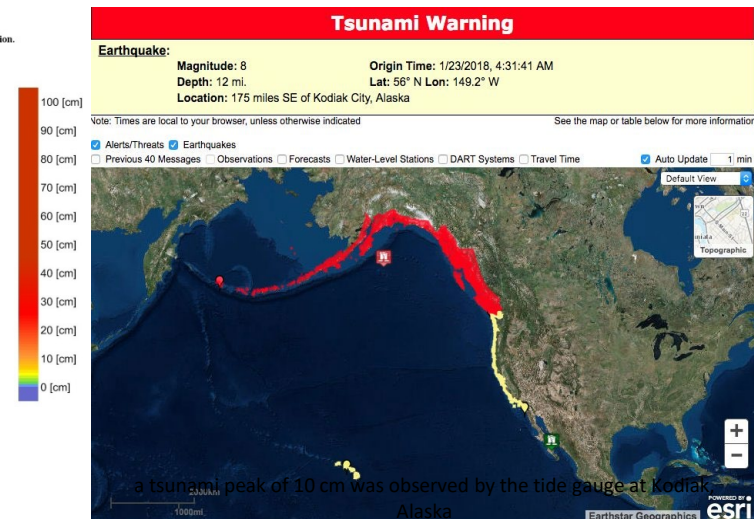
BC Canada - Oct 2012



Chile - Sept 2015



Alaska - Jan 2018



Lessons Learned from Recent Tsunamis in California

Public messaging / education

- Keeping people away from the water
- Language barriers

Evacuation issues

- Near source events
- Over-Evacuation

Maritime issues

- Who should evacuate to sea?

Response

- Duration Staffing fatigue / jurisdiction inconsistencies

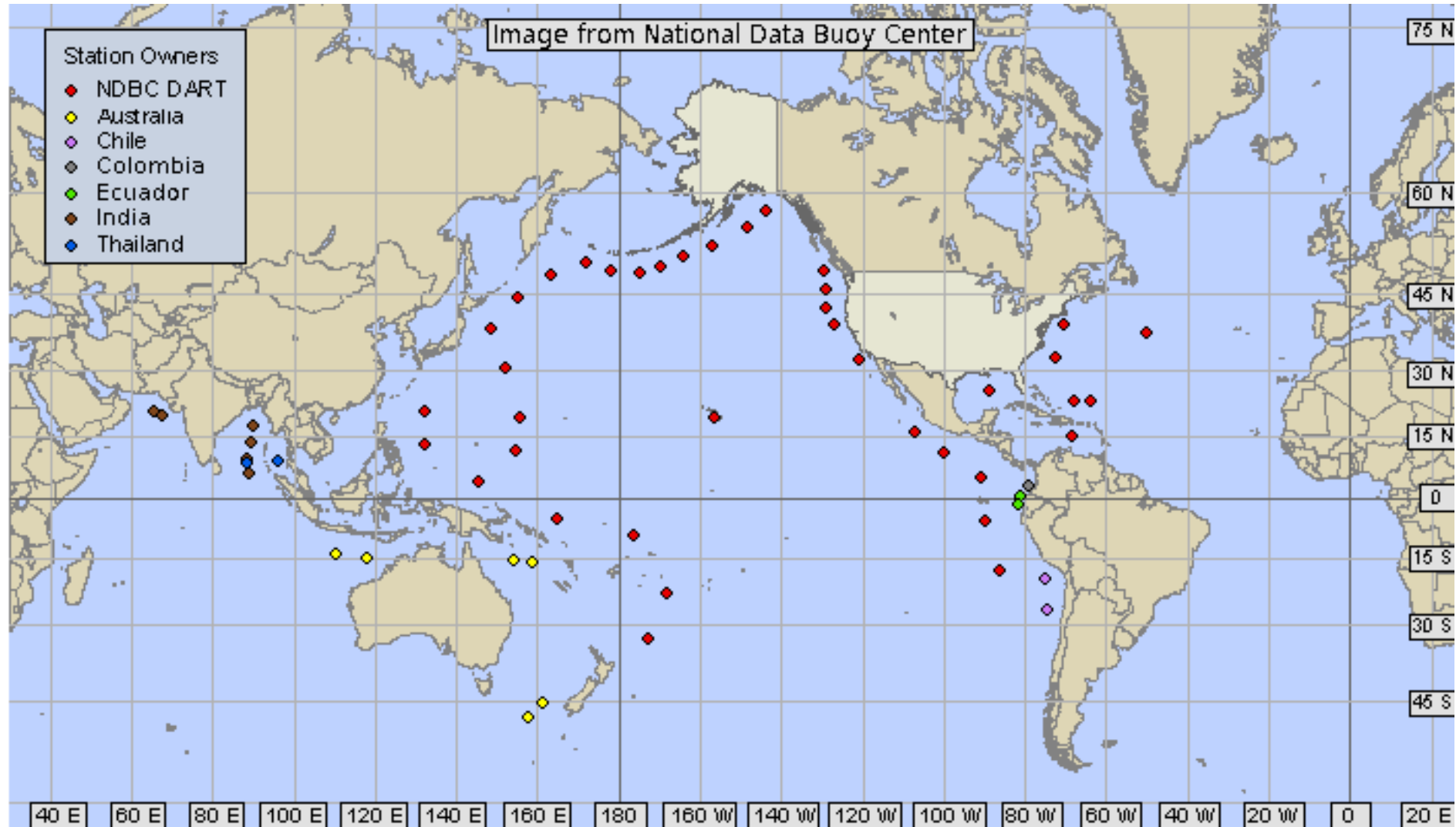


Tsunami Notification



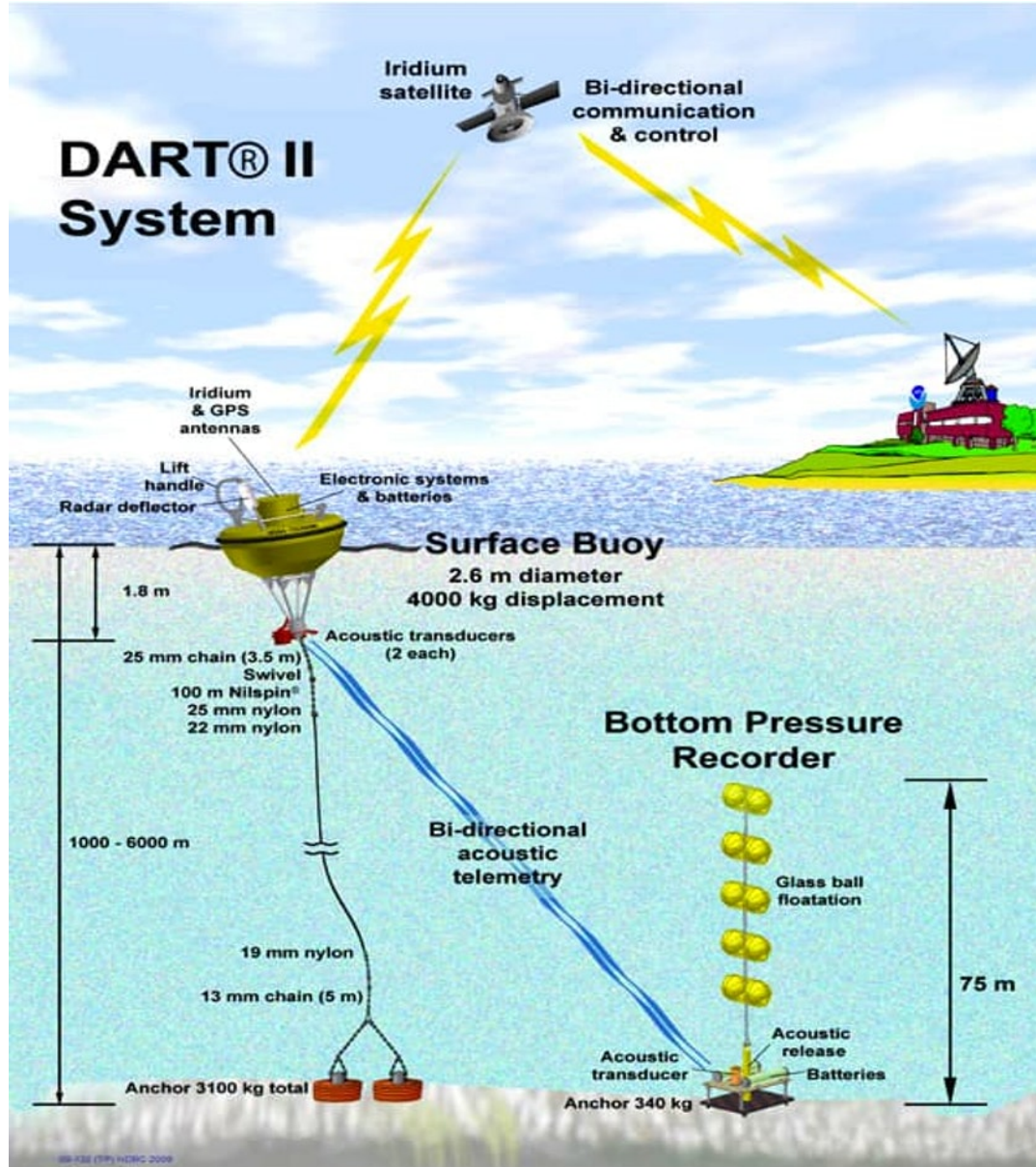
Deep Ocean Assessment and Reporting of Tsunami (DART) Buoy

Tsunami Alert Response



DART System

Tsunami Warning System



National Tsunami Warning Center (NTWC)



Palmer, Alaska

Official NOAA Alert Bulletins



Tsunami WARNING (>3 feet)

Widespread inundation is imminent or occurring
Full Evacuation Suggested, Move to Higher Ground



Tsunami ADVISORY (1 foot to 3 feet)

Strong currents are imminent or occurring
Move Away From Shore, Harbors, Marinas



Tsunami WATCH

There is potential tsunami which may later impact your area
Stay Alert For More Info, May be upgraded to Warning/Advisory

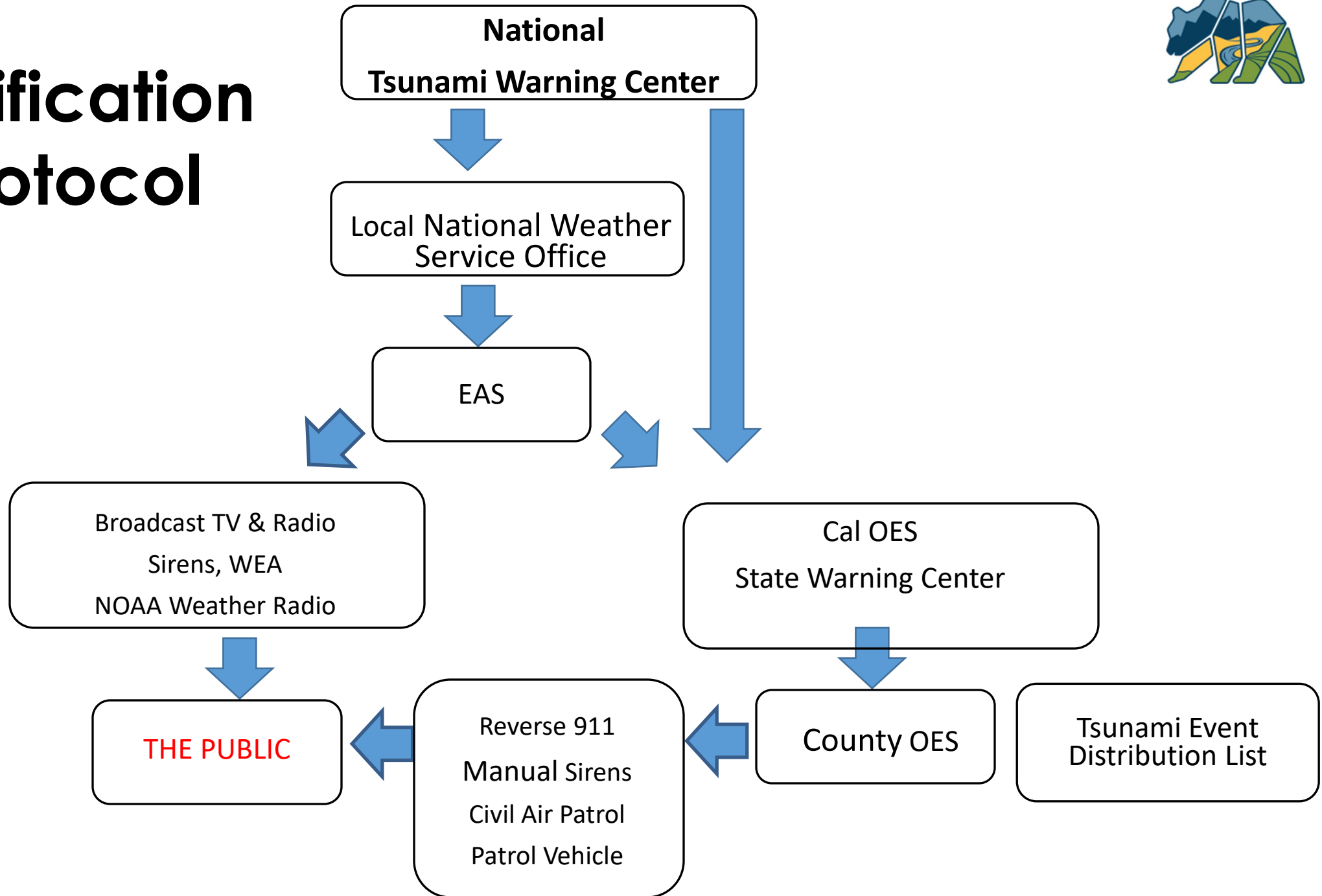


Tsunami INFORMATION

Minor Waves at Most
No Action Suggested <https://tsunami.gov>



Notification Protocol



California Notification Process



- California State Warning Center – Notification to County Warning Points (Usually Sheriff's Dispatch)
- Tsunami Event Distribution List –
 - Tsunami Program Contacts: Text, Email, Phone
 - UCSB – Jim Caesar
 - Notification Contains: Info Regarding Tsunami Event (What we Know), Basecamp Information, Box.com Conference Call Information
 - Distribute Playbook Recommendation (Maritime & Evacuation)
- Begin Conference Call Process



Local Tsunami Threat

Natural Warning Signs

- **Feel** – Strong Earth Shaking
- **See** – Water Receding Exposing Sea Floor
- **Hear** – Loud Ocean Roar

Response: One or more Natural Warning Signs –

- Go Immediately to High Ground or Inland
- Stay There

Prepare: Sign up for Alert Notifications -

- Follow NTWC on Twitter, Activate Notifications on Twitter Account
- Download MyShake App
- Sign up for USGS Earthquake Notifications



Offshore Safety

- Local Source Tsunami – Leave Boat
- Distant Source Tsunami: Stay/go offshore – 30 fathoms/180 feet
- Stay there until local officials allow return
- Have a Plan
- Be Prepared for at least 2 Days
 - Gas
 - Food
 - Water
 - Other provisions?
- Home Harbor May be Destroyed
- Neighboring Harbors May be Destroyed
- Weather



Resources



**Tsunami Hazard Information, Education/Outreach Resources,
Preparedness Activities Registration**

www.TsunamiZone.org

**National Tsunami/Tsunami Program Information (NOAA):
<http://www.tsunami.gov/>**



**California Tsunami Program Information:
California Governor's Office of Emergency Services**

<http://www.caloes.ca.gov/> & <http://myhazards.caloes.ca.gov/>

**California Geological Survey
<http://www.tsunami.ca.gov/>**

**Emergency Supplies:
Department of Homeland Security
<https://www.ready.gov/>**





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