California Tsunami Response Communication & Alerting Overview

2026 NORCAT Workshop | August 30, 2026

California Tsunami Program

Cal OES & Seismic Hazards Branch

Planning, Preparedness, and Response

California Governor's Office of Emergency Services (Cal OES) serves as the state's lead agency for emergency management and disaster response.

The **Seismic Hazards Branch (SHB) Duty Officer** provides dedicated, round-the-clock operational expertise, evaluating notifications and alerts, activating seismic hazards protocols, and synchronizing state operations with scientific information.

The **California State Warning Center (CSWC)** operates 24/7/365 in Sacramento, functioning as the primary warning point for all statewide geophysical and natural hazards.



Seismic Hazards Branch

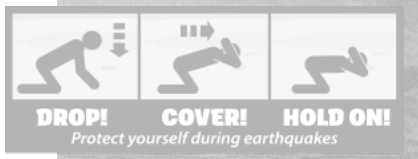
Planning, Preparedness, and Response



Earthquake, Tsunami, and Volcano Program (ETVP)

Earthquake Early Warning (EEW)





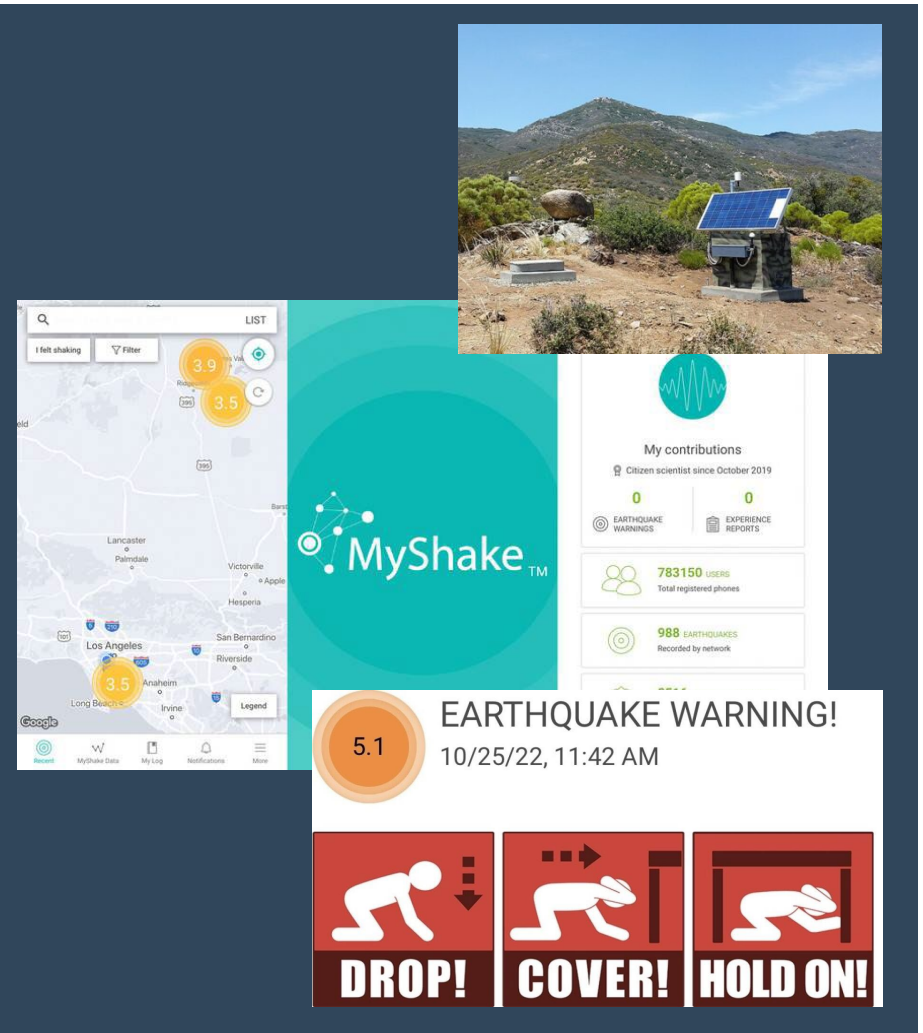






Seismic Hazards Branch

Planning, Preparedness, and Response



Earthquake, Tsunami, and Volcano Program (ETVP)

Earthquake Early Warning (EEW)

The California Tsunami Program

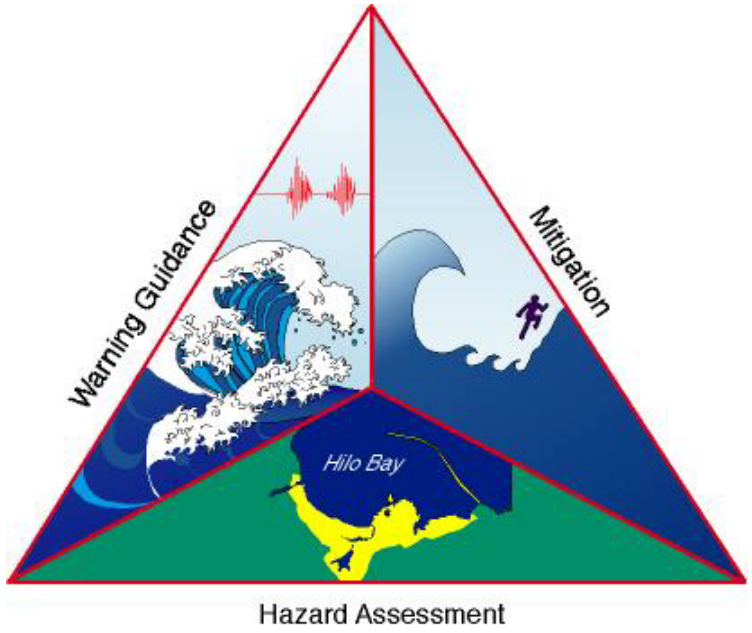
Tsunami Planning, Preparedness, and Response

Cal OES
GOVERNOR'S OFFICE
OF EMERGENCY SERVICES

California Geological Survey
Seismic Hazards | Tsunami Unit

NOAA
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
U.S. DEPARTMENT OF COMMERCE

National Tsunami Hazard Mitigation Program



SHB Duty Officer Program

Planning and Preparedness into Response

Reporting to the Cal OES EDO and the California State Warning Center

Monitoring and sharing seismic hazard information

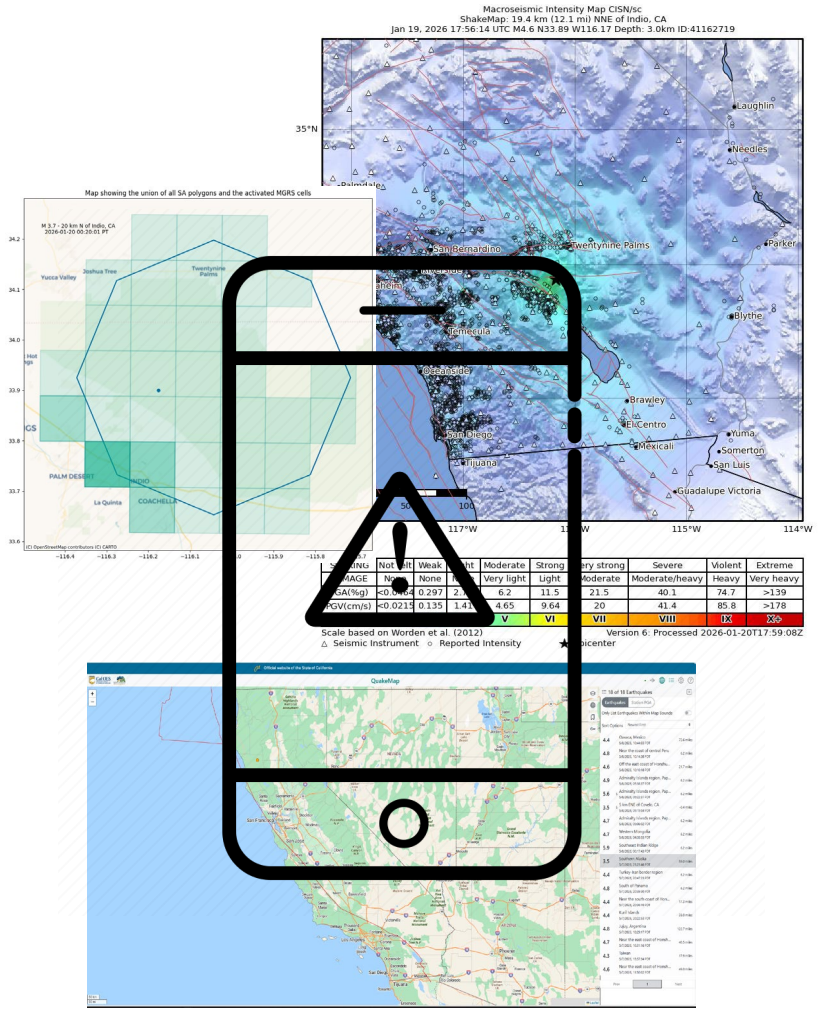
Gathering initial intelligence about earthquake, tsunami, or volcanic activity

Serving as a technical specialist in the State Operations Center

Generating initial situation report and executive briefs (15-30 minutes)

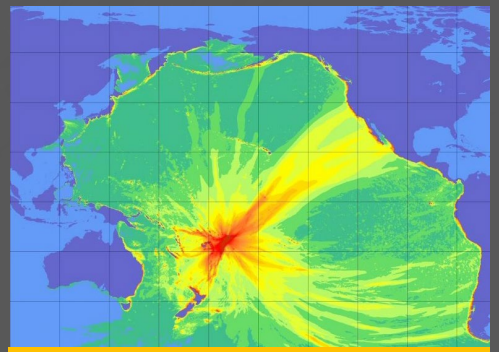
Facilitating information sharing and coordination with scientific partners

SHB DO coordinates with the State Operations Center



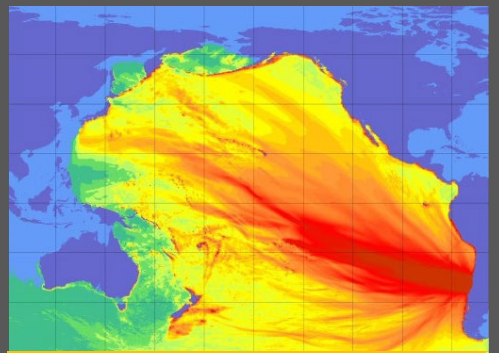
Tsunami Alerts in California Over the Past 16+ Years

Samoa - Sept 2009



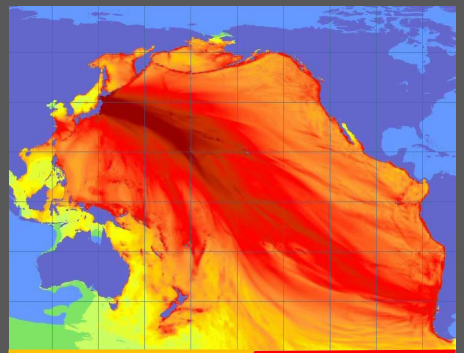
ADVISORY

Chile - Feb 2010



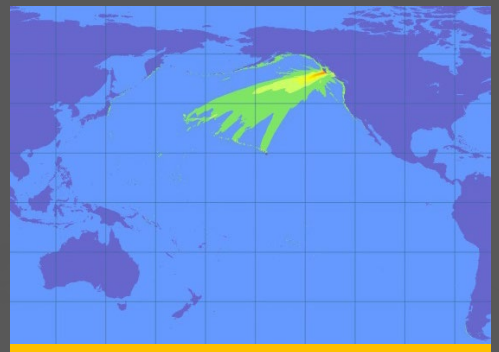
ADVISORY

Japan - March 2011



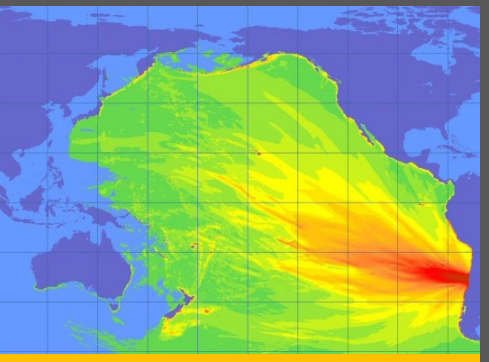
ADVISORY WARNING

BC Canada - Oct 2012



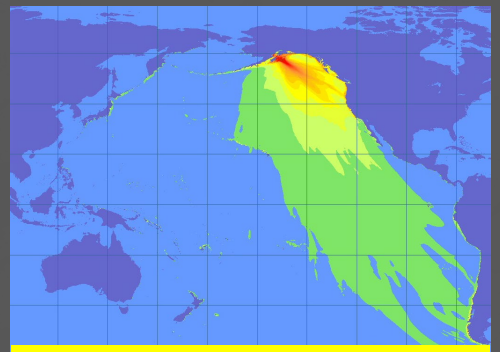
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Chile - Sept 2015



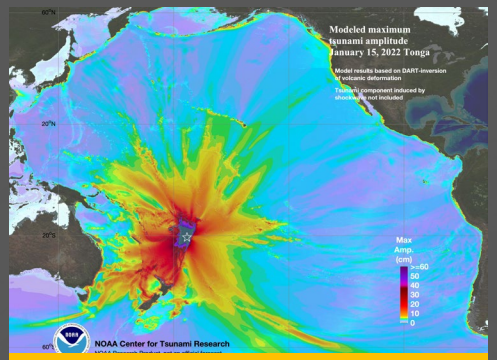
ADVISORY

Alaska - Jan 2018



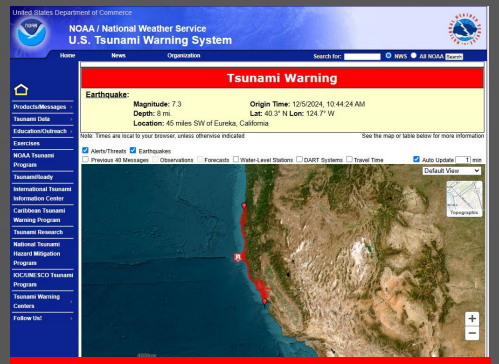
WATCH

Tonga - Jan 2022



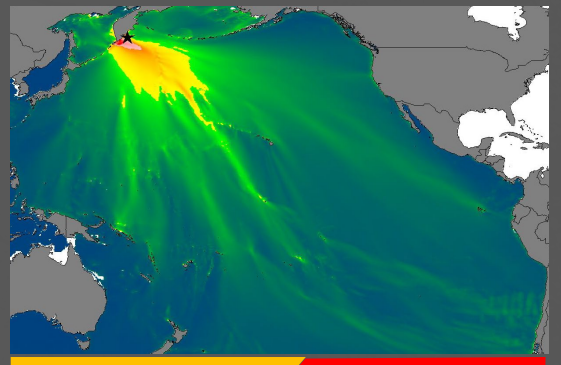
ADVISORY

Northern CA - Dec 2024



WARNING

Kamchatka - July 2025



ADVISORY WARNING

Tsunami Notification Process



Tsunami Alerts

Alert Name	Actions	Potential Hazards
WARNING	Get to high ground or inland IMMEDIATELY Follow tsunami evacuation signage	DANGER! TSUNAMI IMMINENT! Flooding/powerful currents Wave heights > 3 ft. or unknown
ADVISORY	Stay out of the water and away from the shore	STRONG CURRENTS AND DANGEROUS WAVES in or very near coastal water Wave heights of 1 - 3 ft.
WATCH	Be prepared to take action Stay tuned to local radio/TV/ NOAA “alert” weather radios	TSUNAMI IS POSSIBLE Alert level may change once more information is known
INFORMATION STATEMENT	No action needed	NO TSUNAMI IMPACT EXPECTED Alert level may change once more information is known

THREAT Message: Intended to alert international partners only. Not applicable to U.S. coasts

THE NATIONAL TSUNAMI WARNING CENTER ISSUES OFFICIAL TSUNAMI ALERTS.
CHECK TSUNAMI.GOV OR WEATHER.GOV WEBSITES FOR TSUNAMI ALERT DETAILS.

Tsunami Alert Bulletins

State to Local Operational Areas

1. Origin: NTWC

National Tsunami Warning Center (Palmer, AK) issues a tsunami alert bulletin:

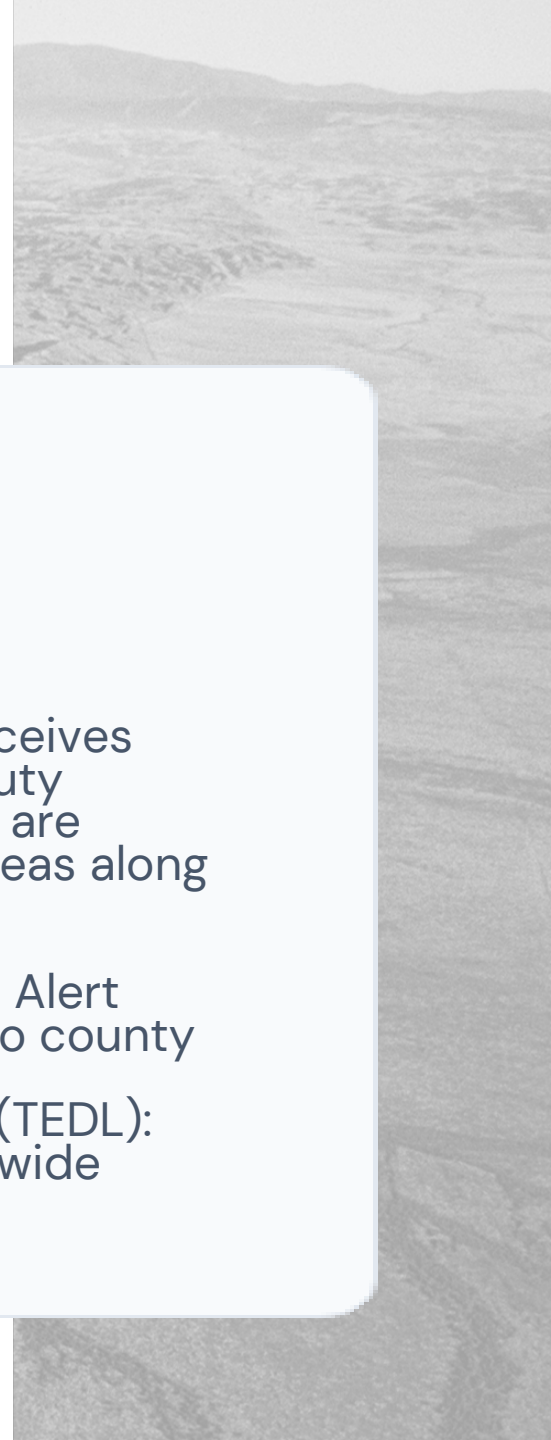
- Information Statement
- Watch
- Advisory
- Warning

EAS/WEA: Broadcast alerts and localized Wireless Emergency Alerts pushed to mobile phones.

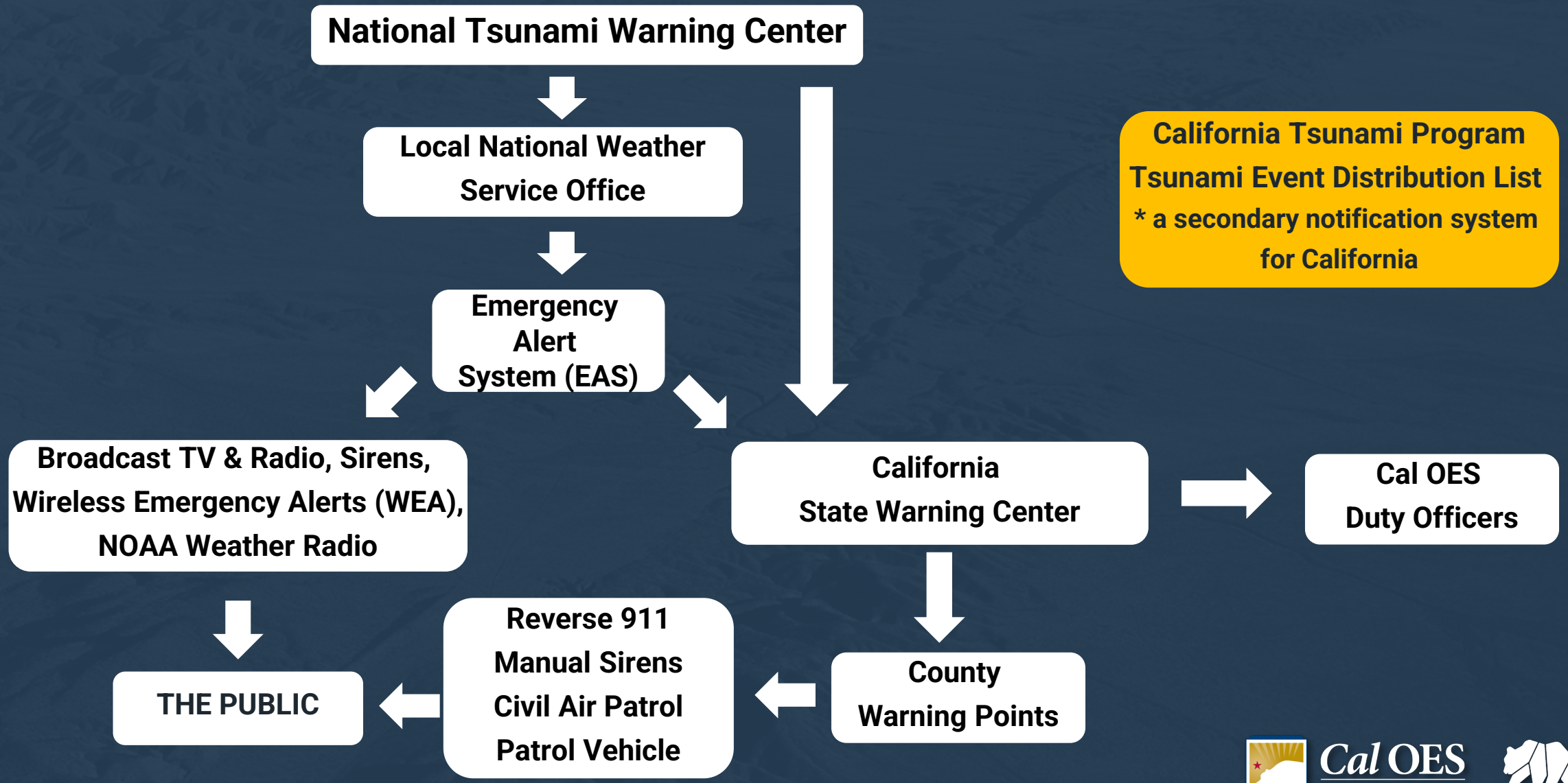
2. CSWC & SHB Duty Officer

California State Warning Center receives tsunami bulletins, alerts the SHB Duty Officer, and determines if bulletins are disseminated to the operational areas along the coast.

- CalWAS (California Warning and Alert System): Direct dedicated line to county 24/7 warning points.
- Tsunami Event Distribution List (TEDL): NTWC bulletins, California Statewide Tsunami Coordination Calls



Tsunami Notification Process in California



California Statewide Tsunami Coordination Call

Tsunami Event Distribution List (for Tsunami Alert Bulletins)

- Notifications from California State Warning Center to Tsunami Program Contacts (Text, Email, Phone)
- Information regarding Tsunami Event
- Follow-up Emails
- Conference Call Information
- Online Link to Data/Documents
- Ongoing Conference Calls throughout the tsunami event

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California Geological Survey
Seismic Hazards | Tsunami Unit

Tsunami Event Communication and Coordination Timeline

National Tsunami Warning Center - EQ detected

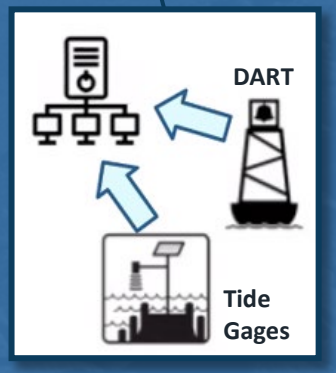
NTWC Alert #1 Message/ CSWC Notifies County Warning Points

First conference call between NTWC and States/NWS WFOs

First conference call between State and Counties

NTWC Follow-up messages every 30-60 minutes.

NTWC tsunami forecast amplitudes



NTWC: Review of precomputed forecasts. Coastal observations verify forecasts. Alert levels adjusted based on observations and refined forecasts.

Conference call between NTWC and States/NWS WFOs

FASTER calculation, Playbook information sent to Tsunami Distribution List

Conference call between State and Counties

Tsunami Arrives in California

Tsunami Alert Cancellations in California

NTWC tsunami forecast amplitudes may not be available for 2 hours after detection of an earthquake. It could take the NTWC anywhere from 1-3 hours to send an Advisory/Warning to California.

Contact Us!

California Governor's Office of Emergency Services

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