

# *Discuss Tsunami Awareness*



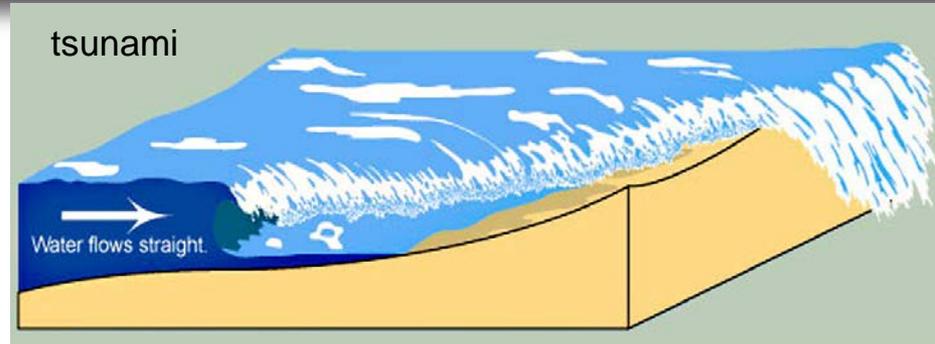
# Background

- Low probability of impacting Alameda
- High risk of significant damage



# Tsunami Description

- Caused by earthquakes, landslides, volcanic eruptions or meteors
- Rapid changes in water
- Magnified in marinas
- Can inundate bay communities
- Can last 24 hours or more
- First surge may not be the largest



*House boats in Sausalito (2011 Japan earthquake)*



# Tsunami Description (cont.)



# Tsunamis in California

- 100 tsunamis since 1800
- 13 caused damage
- 5 caused human casualties
- 1964 tsunami from Alaska M9.2 killed 13 in CA
- 2011 tsunami from Japan resulted in 1 death in CA



1960 – Crescent City



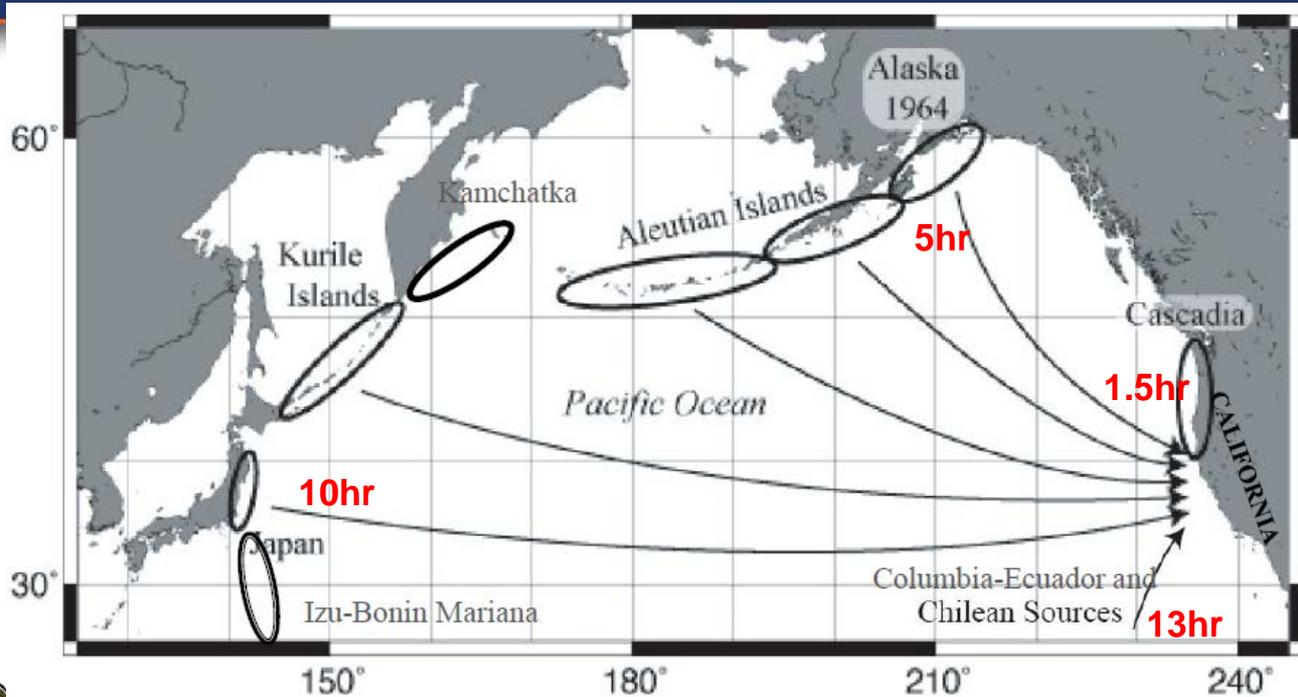
2011 – Santa Cruz



# Tsunamis in CA: 2011 Santa Cruz



# Tsunami Travel Time to Alameda

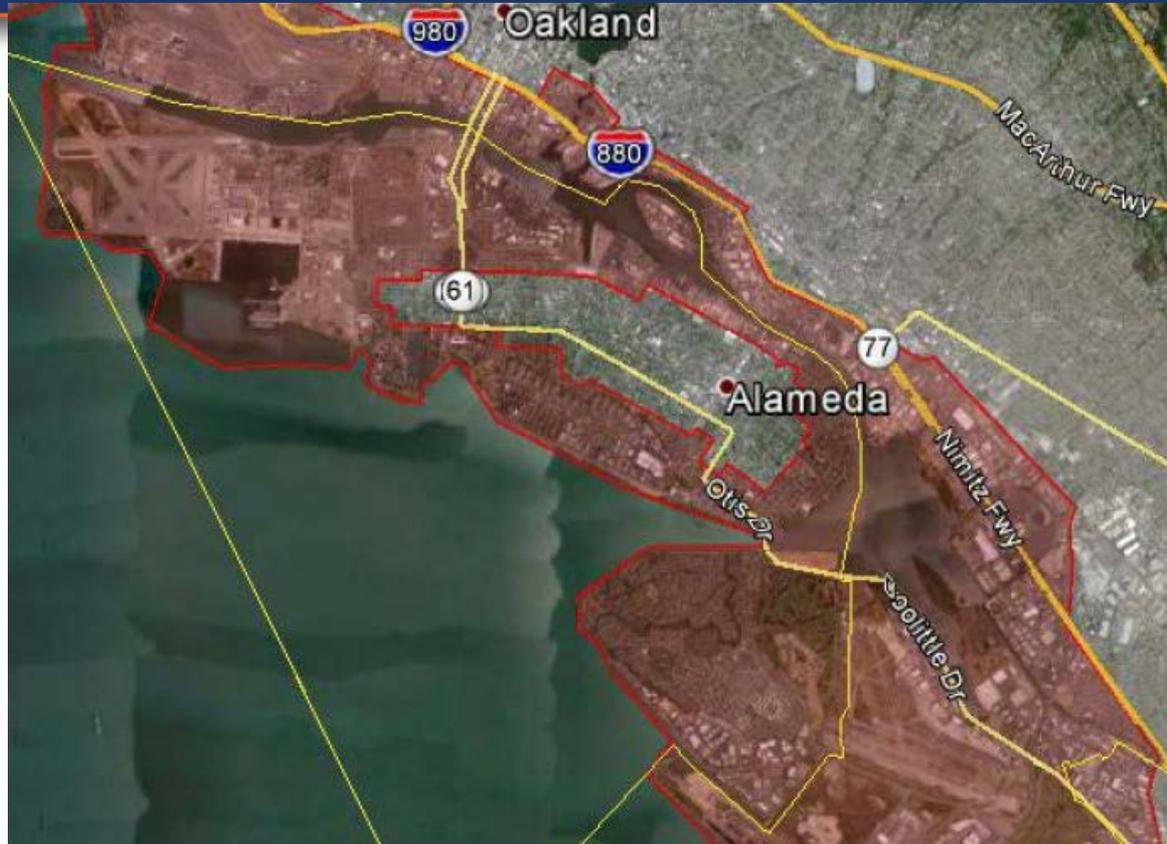


# Tsunami Simulation in Alameda

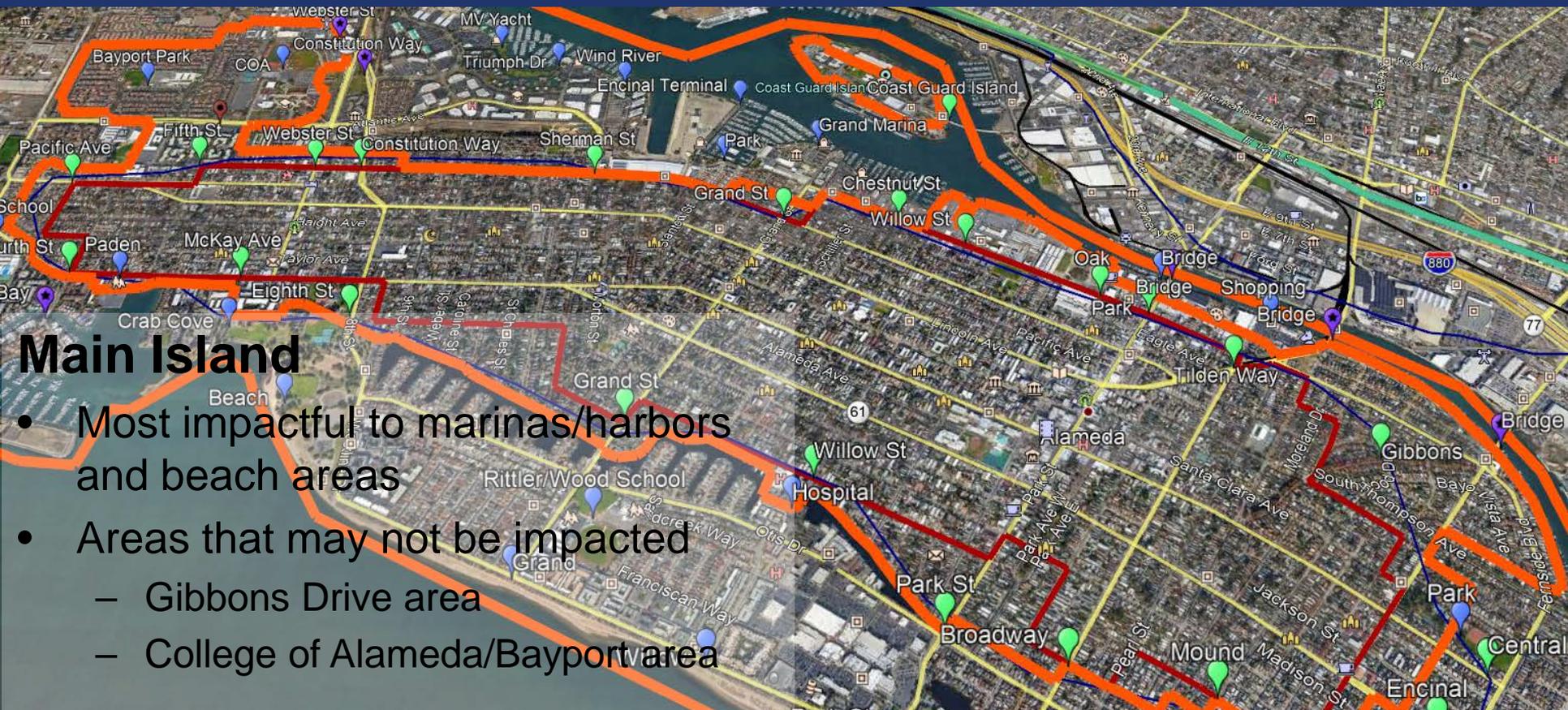


# Alameda: Maximum Inundation

- Maximum: 18 ft elevation
- Central Avenue is highest point
- Walk/bike to center of island
- Drive/bus/bike to beyond I-880



# Alameda: Partial Inundation



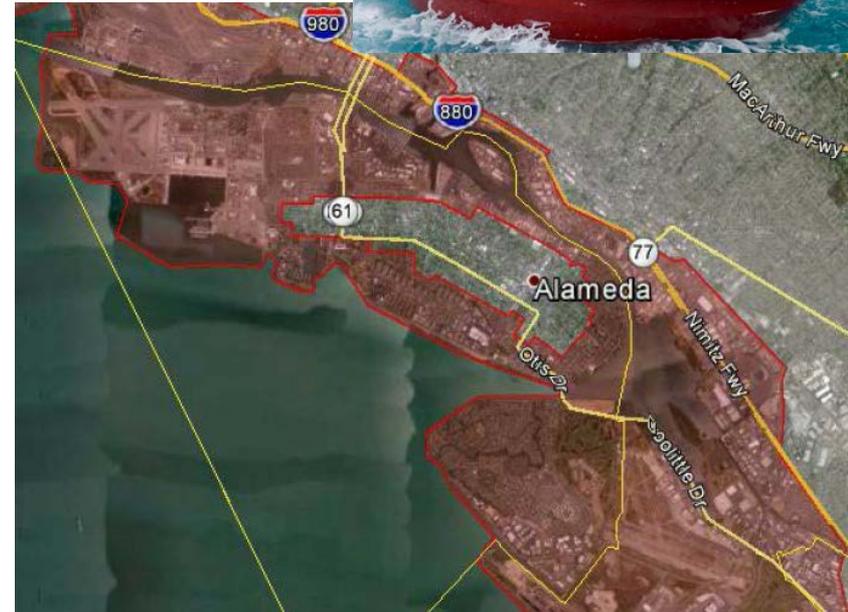
# Alameda: Partial Inundation (cont.)

- Bay Farm
  - Bay Farm School area = highest point on Bay Farm
  - Evacuation via car, bus, bike or walk
  - Contraflow on Doolittle towards Oakland expected



# Alameda: Key Messages

- Worst: Aleutian Islands earthquake: 5 hrs to evacuate
- Evacuating by car: more likely to put self/others at risk
- Vertical evacuation to multi-story stable structures is option if not safe to evacuate
- Prepare a go-kit and talk to agent about flood insurance



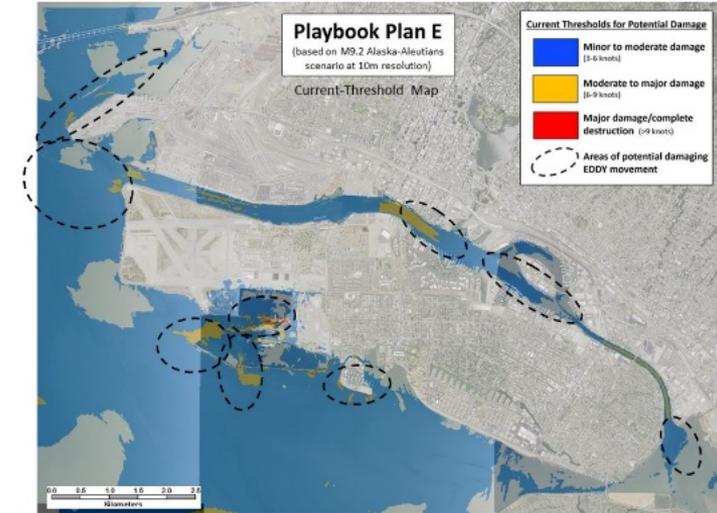
# Alameda: Key Messages (cont.)

- Notifications to come from:
  - Alameda County Office of Emergency Services
    - AC Alert to subscribers
    - Reverse 911
  - Broadcast TV & Radio
  - Wireless emergency alerts
    - text-like messages
    - mobile devices in the alert zone



# Boating: Key Messages

- Not recommended to evacuate in boat offshore
- Safer to keep boat docked
- Difficult to:
  - Reach offshore safe depth in water at 30-fathoms (180 ft)
  - Navigate
  - Have supplies for 24 hrs or more
- Risk to harbor personnel if need to assist people in boats



# Alameda: Next Steps

- Installing tsunami signs
- Ongoing outreach/planning
- TsunamiReady Community designation by the National Weather Service
  - Mitigation, Preparedness and Response steps



# Alameda Next Steps: Signs

Sign Type	Total
Entering / Leaving (at maximum inundation)	48
Entering	24
Leaving	24
Go to High Ground / Inland (at waterfront paths)	40
Tsunami Hazard Zone (at City gateways)	10
<b>Total</b>	<b>98</b>



# Tsunami Information

- U.S. Tsunami Warning System: [tsunami.gov](https://tsunami.gov)
- AC Alert – Subscribe to receive alerts: [ACAlert.org](https://ACAlert.org)
- City Alerts: [alamedaca.gov/alerts](https://alamedaca.gov/alerts)
- City Preparedness: [alamedaca.gov/prepare](https://alamedaca.gov/prepare)



Source: Santa Cruz harbor,  
*Mercury News*

