

California Tsunami Program: An Overview

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California Office of Emergency Services
National Tsunami Hazard Mitigation Program 5-Year Review
Seattle, Washington
May 15, 2007



Staffing and Budget

- Staffing
 - Earthquake and Tsunami Program Manager (Research Specialist III)
 - Earthquake and Tsunami Program Specialists 2 (Research Specialist II)
- Budget
 - \$275,000 per year from NOAA currently
 - No state funds available

Budget Profile

Category	\$ Amount	% of Total
Salaries	84,000	30.4
Oper. Expenses	33,000	12.0
Contracts	142,000	51.6
Overhead	16,000	6.0
Total	275,000	100.0

Significant Accomplishments

- Completed coarse grid inundation maps for 90% of CA coast (all 15 counties)
- Promoted local tsunami planning by:
 - Holding planning workshops in 11 CA counties
 - Facilitating exercises in 6 counties
 - Reviewing 5 completed county tsunami plans
- Convened the CA Tsunami Steering Committee on an annual basis
- Developed a public-private partnership to support tsunami public education
- Worked with NTHMP on subcommittees on warning and outreach/hazard mitigation
- Published the Local Planning Guidance on Tsunami Response
- Worked with NOAA and FCC to clarify need for End-to-End tsunami warning communications tests
- Promoted the use of the CISN Display, a web-based earthquake/tsunami notification system

Impacts of Accomplishments

- Maps have facilitated tsunami planning
- Tsunami events have focused attention on the hazard
- Workshops and exercises have helped focus on plan strengths and deficiencies
- Warning system has benefited from state input
- Real-time tools have greatly improved tsunami notification capabilities

Challenges for NTHMP

- Funding
- Technical Assistance
- Leadership
- Promoting multi-state projects
- Defining TsunamiReady
- Promoting improved program integration

Current Program Priorities

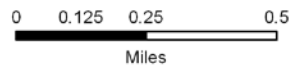
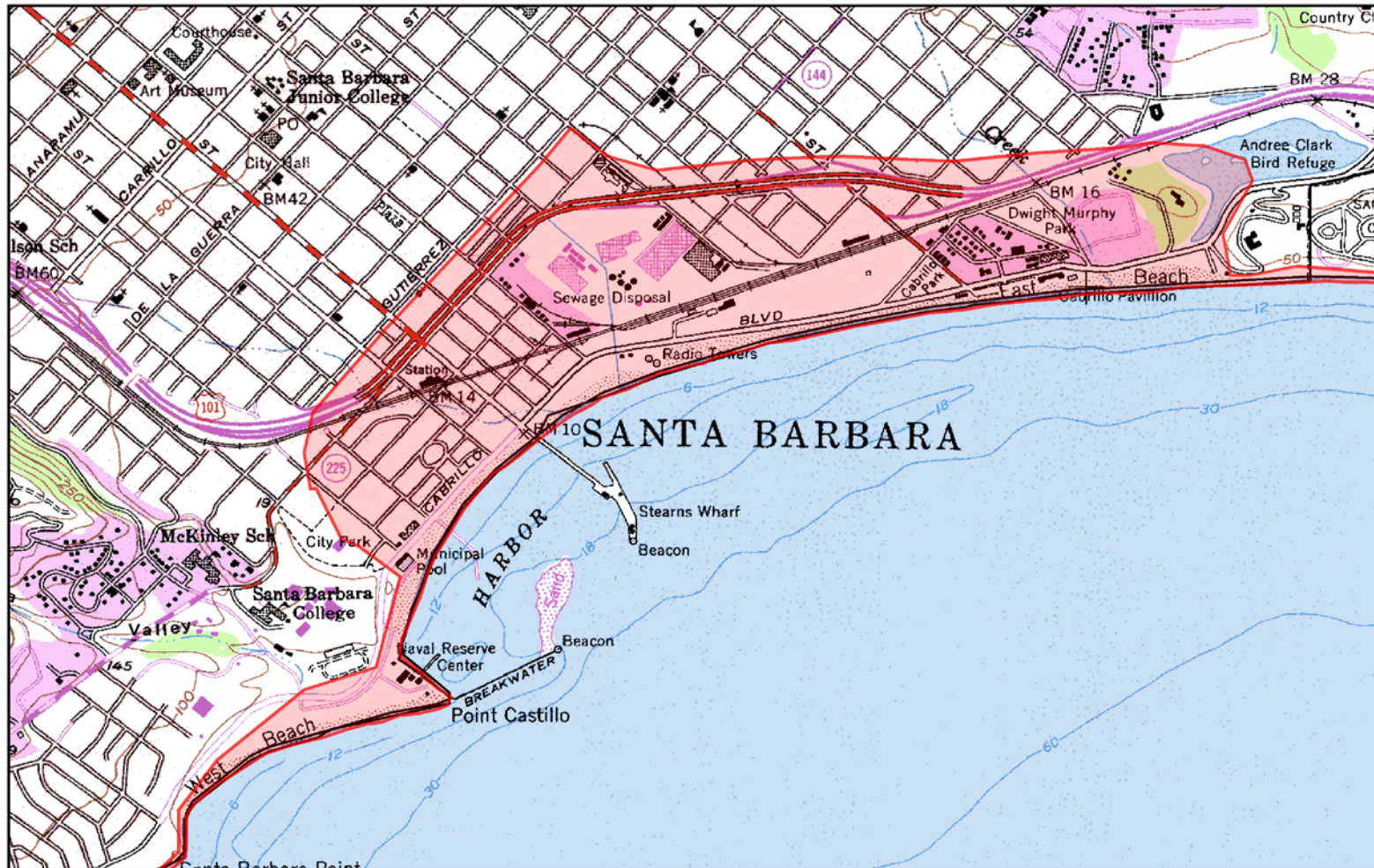
- Complete and transfer 2nd generation coastal tsunami inundation maps to all CA coastal communities
- Promote and assist planning for tsunamis in all CA coastal counties
- Coordinate with NOAA/WFO in promoting tsunami hazard mitigation and outreach statewide
- Enhance warning and notification capabilities
- Assist local coastal jurisdictions with tsunami awareness and public education including placement of signs and signaling devices
- Obtain clear picture of where we are- assess status

Port of Los Angeles



City of Santa Barbara

City of Santa Barbara Tsunami Inundation Area



- City of Santa Barbara
- Tsunami Inundation Area

Planning Assistance to Counties

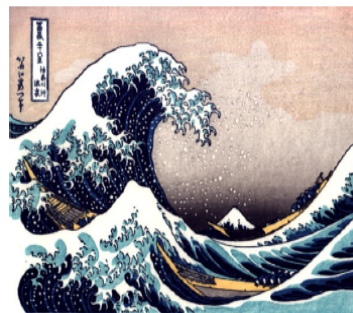
- Ongoing Planning Assistance via:
 - Workshops in Each County
 - Plan Review
 - Exercise Facilitation
- Interpretation of Inundation Maps
- Distribute Planning Guidance Document



Local Planning Guidance on Tsunami Response

SECOND EDITION

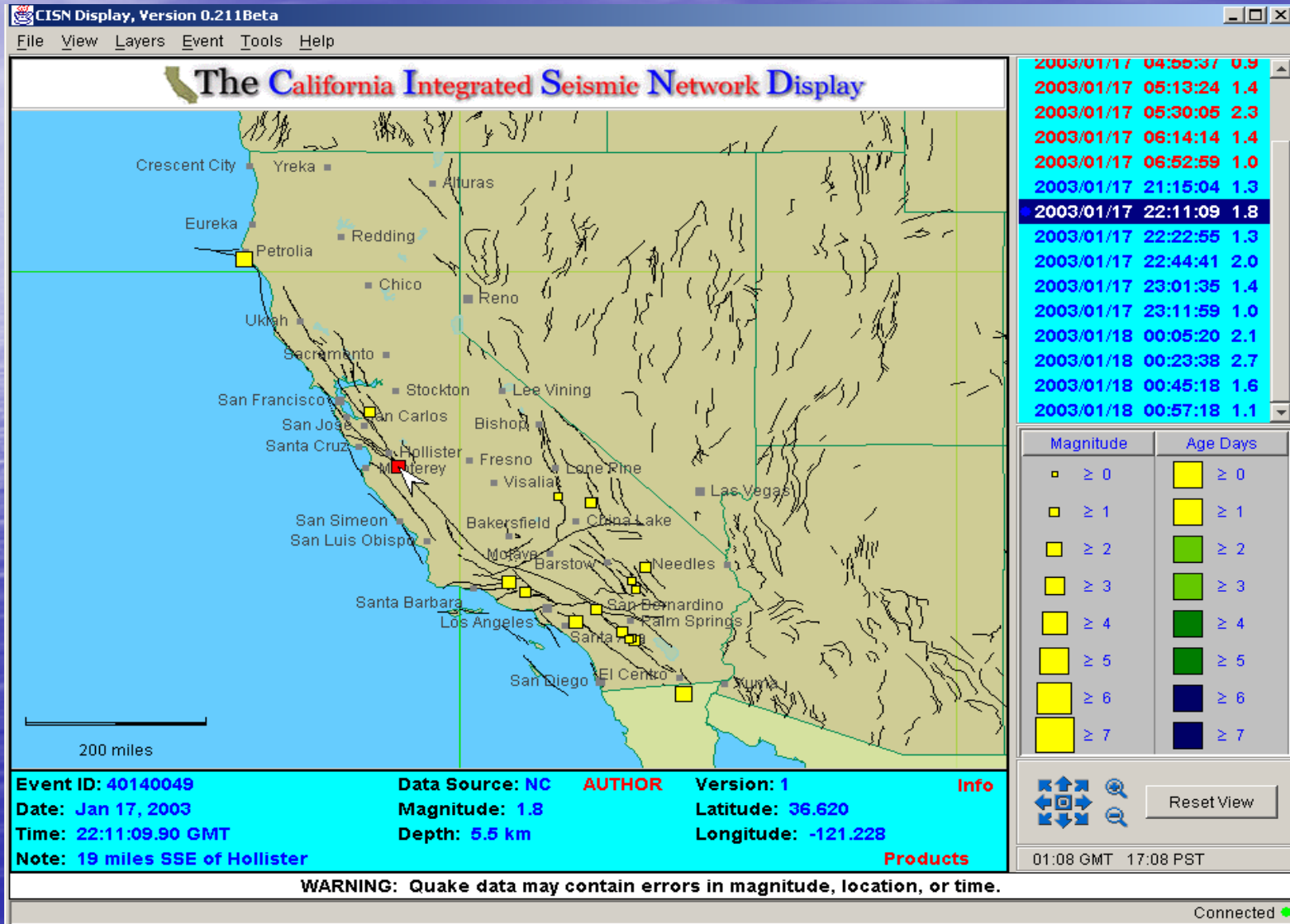
*A Supplement to the Emergency Planning Guidance
for Local Governments*



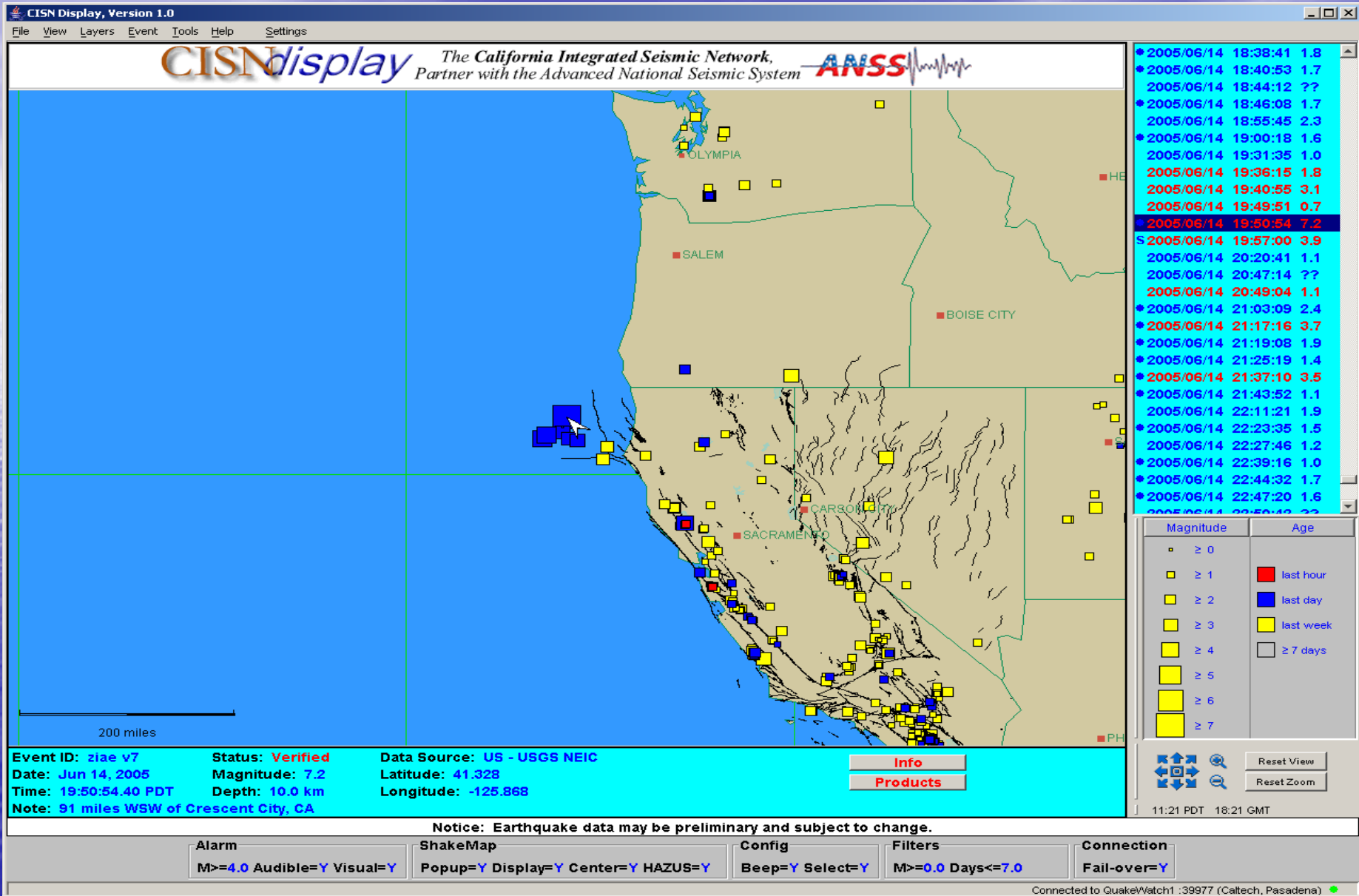
Gray Davis
Governor
State of California

Dallas Jones
Director
Governor's Office of Emergency Services

Notification and Warning Technologies



CA Tsunami Warning: 6-14-05



CISN Display: Provided Rapid Notification

CISN Display, Version 1.0
 File View Layers Event Tools Help Settings

CISNdisplay The California Integrated Seismic Network, Partner with the Advanced National Seismic System **ANSS**

Select Product for usziae

- Tsunami Bulletin [2005/06/14 19:56:56.86 PDT]
- Waveforms for ShakeMap [2005/06/14 20:00:51.38 PDT]
- Waveforms [2005/06/14 20:12:29.32 PDT]
- "Did you feel it?" [2005/06/14 20:21:58.27 PDT]

Close

Time	Magnitude	Age
2005/06/14 18:38:41	1.8	
2005/06/14 18:40:53	1.7	
2005/06/14 18:44:12	??	
2005/06/14 18:46:08	1.7	
2005/06/14 18:55:45	2.3	
2005/06/14 19:00:18	1.6	
2005/06/14 19:31:35	1.0	
2005/06/14 19:36:15	1.8	
2005/06/14 19:40:55	3.1	
2005/06/14 19:49:51	0.7	
2005/06/14 19:50:54	7.2	
2005/06/14 19:57:00	3.9	
2005/06/14 20:20:41	1.1	
2005/06/14 20:47:14	??	
2005/06/14 20:49:04	1.1	
2005/06/14 21:03:09	2.4	
2005/06/14 21:17:16	3.7	
2005/06/14 21:19:08	1.9	
2005/06/14 21:25:19	1.4	
2005/06/14 21:37:10	3.5	
2005/06/14 21:43:52	1.1	
2005/06/14 22:11:21	1.9	
2005/06/14 22:23:35	1.5	
2005/06/14 22:27:46	1.2	
2005/06/14 22:39:16	1.0	
2005/06/14 22:44:32	1.7	
2005/06/14 22:47:20	1.6	
2005/06/14 22:50:40	2.2	

Magnitude	Age
≥ 0	
≥ 1	last hour
≥ 2	last day
≥ 3	last week
≥ 4	≥ 7 days
≥ 5	
≥ 6	
≥ 7	

Event ID: **ziae v7** Status: **Verified** Data Source: **US - USGS NEIC**
 Date: **Jun 14, 2005** Magnitude: **7.2** Latitude: **41.328**
 Time: **19:50:54.40 PDT** Depth: **10.0 km** Longitude: **-125.868**
 Note: **91 miles WSW of Crescent City, CA**

Info Products

Notice: Earthquake data may be preliminary and subject to change.

Alarm ShakeMap Config Filters Connection
 M>=4.0 Audible=Y Visual=Y Popup=Y Display=Y Center=Y HAZUS=Y Beep=Y Select=Y M>=0.0 Days<=7.0 Fail-over=Y

Connected to QuakeWatch1 : 39977 (Caltech, Pasadena)

Linked to Tsunami Warning Message

CISN Display, Version 1.0
File View Layers Event Tools Help Settings

The California Integrated Seismic Network,
Partner with the Advanced National Seismic System

Http://www.ahmessage/message0003334.cdf Microsoft Internet Explorer

Address: http://www.ahmessage/message0003334.cdf

Subject: ...A TSUNAMI WARNING IS IN EFFECT FOR THE COASTAL AREAS FROM THE CALIFORNIA-MEXICO BORDER TO THE NORTH TIP OF YAKUPOWEE I., CA. INCLUSIVE...

ESTIMATED TIMES OF INITIAL WAVE ARRIVAL

Crescent City, CA	2025 19:17	7:38 14
Grass Valley, CA	2025 19:17	7:38 14
San Francisco, CA	2025 19:17	7:38 14
Seattle, WA	2025 19:17	7:38 14
Beach, WA	2025 19:17	7:38 14

2005/06/14	18:38:41	1.8
2005/06/14	18:40:53	1.7
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2005/06/14	22:50:45	2.2

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[Info](#)

[Products](#)

Alarm

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ShakeMap

Popup=Y Display=Y Center=Y HAZUS=Y

Config

Beep=Y Select=Y

Filters

M>=0.0 Days<=7.0

Connection

Fail-over=Y

Notice: Earthquake data may be preliminary and subject to change.

11:21 PDT 18:21 GMT

Connected to QuakeWatch1 : 39977 (Caltech, Pasadena)

Funding Requirements

- New federal legislation includes \$6.75 annually for NTHMP through 2012
- Allocation of funds should reflect level of tsunami hazard
- Specific requirements difficult to ID but CA needs \$500-\$700K annually to broaden program
 - Beyond Emergency Managers as target audience
 - Beyond a focus on plans and exercises
- State of CA unlikely to provide funding

The background is a smooth blue gradient. On the left side, there is a bright, glowing area that resembles a sun or light source, with a vertical streak of light extending downwards, creating a shimmering effect. The rest of the background is a deep, uniform blue.

Thank You!