



State Of California  
**SEISMIC SAFETY COMMISSION**

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*Geology*

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*Assembly  
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*Structural  
 Engineering*

Keith Wheeler  
*(Emergency Services)*

Gary McGavin  
*Architectural  
 Planning*

Jeff Sedivec  
*Fire Protection*

Richard McCarthy  
 Executive Director

California Seismic Safety Commission's  
 Ad Hoc Committee on Tsunami Safety  
 Minutes of Meeting  
 September 28, 2005

**Committee Members Present**

- Chief Donald Parker, Chairman (City of Vallejo)
- Mr. Linden Nishinaga (City of Long Beach)
- Mr. Jose Borrero (University of Southern Calif.)
- Dr. Lori Dengler (Humboldt State University)
- Dr. Lucile Jones (CSSC/USGS)
- Ms. Crystal Rockwood (Pillsbury Winthrop Shaw Pittman LLP)
- Mr. Daniel Shapiro (CSSC)

**CSSC Staff Present**

- Mr. Richard McCarthy
- Mr. Robert Anderson
- Mr. Henry Reyes
- Mr. James Lee

**Observers**

- Mr. Michael McMillan (Port of Oakland)
- Mr. Hong Kie Thio (URS Corporation)
- Mr. Gene Ichinose (URS Corporation)

**Call to Order**

The Seismic Safety Commission's Ad Hoc Committee on Tsunami Safety Chairman Mr. Donald

Parker called the meeting to order at 10:10am.

Minutes of the August 12 meeting in Sacramento – changes:

Page 3, 1<sup>st</sup> line- Change Executive Directory to Executive Director.

Page 3- 4<sup>th</sup> paragraph-Delete paragraph that begins with “There were questions about how, etc. as it is a repetition of the 2<sup>nd</sup> paragraph.

Parker: Minutes stand as corrected.

Parker introduced the Committee's host Mr. Michael McMillan, Environmental Engineer, with the Port of Oakland. He thanked Mr. McMillan for arranging for the meeting room.

## **Review of Committee's task and Priorities of Report**

The task is to examine the potential tsunami hazards and risk to California and identify areas needing improvement and to prepare a report with no more than five findings and recommendations.

Need a good executive summary. That's all the legislators are going to read but their staff will read the whole document. The executive summary should be kept at one page, simple and straightforward, with a lead in sentence and one paragraph followed with the findings and recommendations.

It was agreed that would first work on the findings. Lucile Jones was acknowledged for preparing the text of the report for review by the Committee and commended for the way she included the findings so they stood out in the text.

The Committee agreed to devote the meeting to work and arrive on a consensus on the findings and follow with the recommendations based on the findings and recommendations submitted on draft text and those discussed and suggested at the August 12, 2005 meeting. There was much discussion on the clarity of the wording and the order in which to list the findings and recommendations based on the recommended priorities. There was agreement that there was a need to add quite a bit to the text to support them.

After much discussion the Committee came to an agreement on the wording of seven findings and five recommendations as follows:

### **Findings**

1. Californians face a significant risk to life and property from tsunamis generated both locally and from events elsewhere in the Pacific Basin.
2. Tsunamis present a substantial risk to the economy of the State and Nation, primarily through the impact on our ports.
3. Present codes and guidelines do not adequately address the impacts of tsunamis on engineered structures.

4. Californians are not adequately educated about tsunamis and the risk they pose; consequently, many are unaware how to respond to natural or official tsunami warnings.
5. Federal programs have provided resources for California tsunami hazard assessment and mitigation. However, more information is required to bring tsunami planning and response applications to a level commensurate with the plans for other hazards such as earthquakes.
6. The existing tsunami warning system has not achieved all of its objectives for several reasons including problems with communications, agency coordination and protocols.
7. The Governor's Office of Emergency Services and local governments have been proactive in addressing the State's tsunami risk and since the June 14, 2005 Gorda Plate earthquake and tsunami warning, have begun to improve the tsunami warning system and other aspects of tsunami planning and preparedness.

## **Recommendations**

The State of California should:

1. Improve education about tsunami issues in the State:
  - a. Include education about tsunami hazards and how to respond to natural and official tsunami warnings in all California schools.
  - b. Signs delineating tsunami hazard zones and tsunami evacuation routes should be deployed immediately in California.
  - c. Support updates of earthquake preparedness materials from the State and local governments to include tsunami safety issues.
  - d. Include tsunami issues in the safety training for workplaces that are in inundation zones, especially ports.
2. Support and provide matching funds for tsunami mitigation programs in coastal counties and in OES, including improvements to the communications and emergency response systems. These funds will leverage federal support for tsunami mitigation programs.

3. Support and provide matching funds for the development of improved technologies and methodology to assess the tsunami risk and possible inundation areas. These new technologies and risk assessments should be used to support better long-term and emergency response planning.
4. Work with other coastal states to call for an external expert review of the NOAA tsunami warning system criteria for issuing and canceling warnings as well as the procedures for distribution.
5. Commission the development of standards for engineered structures to resist both strong ground motion and high velocity wave impact combinations. These are particularly important in the seaports of California.

**Conclusions:**

Parker commended Jones for taking on the task of editing the draft report based on the testimony of local governments and the scientific community as well as the input from the written assignments of the Committee members. The Committee members who had not completed their assignments were urged to send them, with suggested pictures, tables and graphics, to Jones over the weekend. Jones could then provide a more complete draft for the mail out to the Commission by October 4, 2005 for its first review at its meeting of Thursday, October 13, 2005.

The Committee agreed to conduct one more meeting to address comments from the Commission and for the Committee members to complete the text to support the Findings and Recommendations. The meeting is to be held on Friday, October 21, 2005 at the Oakland Airport from 10 am to 3 pm. The final draft report would then be completed for the Commission's approval at its meeting of November 10, 2005.

Parker adjourned the meeting at 2:10 pm.