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**SHERIFF-CORONER DEPARTMENT  
COUNTY OF ORANGE  
CALIFORNIA**

**SANDRA HUTCHENS  
SHERIFF-CORONER**

**UNDERSHERIFF  
JOHN L. SCOTT**

**EXECUTIVE COMMAND  
JACK ANDERSON  
JOHN B. DAVIS  
RICK DOSTAL  
MICHAEL R. HILLMANN  
MIKE JAMES**

November 23, 2008

The Honorable Nancy Wieben Stock  
Presiding Judge  
Orange County Superior Court  
700 Civic Center Drive West  
Santa Ana, CA 92702

Subject: Amended response to the Orange County Grand Jury Report, "PARADISE  
LOST: If a Tsunami Strikes the Orange County Rivera..."

Dear Judge Stock:

Per your request and in accordance with California Penal Code sections 933 and 933.05,  
enclosed please find the Orange County Sheriff's Department amended response to the above  
referenced FY 07-08 Grand Jury Report.

If you have any questions regarding this response document, please contact Assistant Sheriff  
Michael R. Hillmann at (714) 647-1803

Respectfully,

SANDRA HUTCHENS  
SHERIFF-CORONER

cc: Jim Perez, Grand Jury Foreman  
Members, Board of Supervisors  
Thomas G. Mauk, County Executive Officer

**PROUDLY SERVING THE UNINCORPORATED AREAS OF ORANGE COUNTY AND THE FOLLOWING CITIES AND AGENCIES:**

ALISO VIEJO • DANA POINT • LAGUNA HILLS • LAGUNA NIGUEL • LAGUNA WOODS • LAKE FOREST • MISSION VIEJO  
RANCHO SANTA MARGARITA • SAN CLEMENTE • SAN JUAN CAPISTRANO • STANTON • VILLA PARK  
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**DRUG USE  
IS  
LIFE ABUSE**



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October 9, 2008

Dear members of the Grand Jury,

The Orange County Sheriff's Department Emergency Management Bureau has received your additional information request dated September 8, 2008 regarding the Orange County Grand Jury report titled "PARADISE LOST: If a Tsunami Strikes the Orange County Rivera..." After collaborating with the OC Parks Coastal Division, we have decided to amend the response filed May 19, 2008.

**Finding No.2**

*Existing tsunami sign along roadways are small, difficult to read and, in at least one city, not visible to visitors driving into the tsunami hazard zone.*

**Response**

*We disagree with this finding.*

The Manual of Uniform Traffic Control Devices (MUTCD), Chapter 21 governs Emergency Management signage, including color, shape, size and placement. The currently posted Tsunami Hazard zone signage in the areas cited in the grand jury report complies with the standards set forth in the MUTCD. However, the MUTCD also states that larger signs may be used when appropriate.

The unincorporated beachfront community of Sunset Beach is surrounded by adjacent incorporated Cities of Huntington Beach and Seal Beach. Highway access is provided by roads under the jurisdiction of the State of California (Pacific Coast Highway) or the City of Huntington Beach (Warner Avenue). OC Parks Coastal Division has advised that the Sunset Beach community is within the area identified as the Tsunami Run Up Area on the City of Huntington Beach's Tsunami Signs Map, and is thus afforded appropriate emergency signage.

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Should improvements to existing "Entering Tsunami Hazard Zone" signage on surrounding highways be recommended, it would be the responsibility of the agency having jurisdiction over those streets, i.e. the State of California or the City of Huntington Beach.

**Recommendation No.2a**

*All beach cities and the County on behalf of Sunset Beach: Replace all small and medium sized tsunami signs with the largest tsunami signs authorized by Caltrans.*

**Response**

*The recommendation will not be implemented due to the reasons below.*

The Manual of Uniform Traffic Control Devices (MUTCD), which governs emergency signage, designates three sizes for the Tsunami Hazard Zone sign EM-1 E (CA) sign: small, medium and large. The MUTCD states that the size of the Standard Conventional Highway sign is medium. Smaller sign sizes are designed for use off road or for facilities such as bike trails and large sign sizes are for use on freeways or high speed facilities. As stated before, the MUTCD also allows the use of larger signs as appropriate.

Twenty-nine (29) Tsunami Hazard Zone signs were recently installed within Sunset Beach by the OC Sheriff. These signs are located off-road at all pedestrian access points to the beach, such as the dead-ends of alleys and streets within Sunset Beach. OC Parks Coastal Division has advised that according to current standards these signs are appropriately sized for the intended pedestrian viewing audience and are readily visible to motorists on the adjacent one lane, low speed, local street. No nearby high speed highways are within the jurisdiction of the County of Orange.

**Recommendation No.2b**

*All beach cities and the County on behalf of Sunset Beach: Post the largest tsunami hazard zone signs visible to inbound traffic on major roads and on Pacific Coast Highway if tsunami hazard signs are not already posted there.*

**Response**

*The recommendation will not be implemented due to the reasons below.*

As stated in the response to Finding F.2, the County has no jurisdiction over the areas cited. OC Roads did, however, share the grand jury report and findings with Caltrans for their consideration.

In addition, currently all ENTERING/LEAVING TSUNAMI HAZARD ZONE signs are located on facilities under the jurisdiction of the State of California or the City of Huntington Beach. The City of Huntington Beach has addressed the need for signs by placing them on Pacific Coast Highway entering the Tsunami impact area. This roadway then leads into the Sunset Beach area (unincorporated Orange County). OC Parks Coastal Division has advised that an additional sign could be placed on westbound Warner Avenue, entering the lower Tsunami zone area. However, this would be at the City's discretion as the County has no jurisdiction in this location.

**Recommendation No.4**

*All beach cities and the Sheriff Department's Emergency Management Bureau: Develop methods to communicate tsunami public education messages to beach visitors.*

**Response**

***This recommendation has not been implemented, but will be implemented during the planned revision during the 2009-2010 fiscal year, with a completion date of June 10, 2010.***

An additional section in the Orange County Operational Area Tsunami Annex focusing solely on Public Education will be developed during this revision period. This section will include a public education plan and materials to be distributed to various locations that reach beach visitors to possibly include beach kiosks and life-guard towers, hotel lobbies, rental car agencies and other locations as found necessary. Additionally, San Diego County is developing a broad-based Public Safety Advisory regarding tsunami safety, which will be made available to other counties. This advisory will also be considered for incorporation into a comprehensive public education campaign.

In the past, the Emergency Management Bureau has requested the addition of staff positions specifically for public education. At this time, the Board of Supervisors has not approved additional positions. The Emergency Management Bureau will continue to seek funding for positions dedicated to the public education of our community members.

Sincerely,

  
SANDRA HUTCHENS  
Sheriff-Coroner