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SAN LUIS OBISPO COUNTY

**TSUNAMI
EMERGENCY RESPONSE PLAN**

San Luis Obispo County
Office of Emergency Services

October 2005
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Tsunami Response Plan

This document is intended as the County of San Luis Obispo, Office of Emergency Services Plan for initial response to tsunami related emergencies.

County of San Luis Obispo

Office of Emergency Services

AUTHENTICATION

This is the official County of San Luis Obispo plan for responding to tsunamis within the County of San Luis Obispo. This plan augments the San Luis Obispo County Emergency Operations Plan. This plan should be reviewed at least annually and after each emergency incident during which this plan is used. The purpose of such review will be to ensure changes are made based on lessons learned and updated emergency management procedures to make sure the plan remains current.

Original signed by Shirley Bianchi, November 1, 2005
Chairperson, Board of Supervisors
County of San Luis Obispo

PREFACE

This Plan is an Appendix to the San Luis Obispo County Emergency Operations Plan. Overall information on the County's emergency response organization is included in the Emergency Operations Plan. This Tsunami Emergency Response Plan contains information specific to actions that may be necessary in the event of certain notifications of a possible tsunami or as a result of an actual tsunami along the San Luis Obispo County coastline.

TSUNAMI PLAN DISTRIBUTION

The following departments or agencies have a complete copy(ies) of the San Luis Obispo County emergency operations plan (the plan may be distributed electronically):

<u>Department/Agency</u>	<u>No. of Copies</u>
County Administrator	1
County Sheriff's Department	2
CAL FIRE/County Fire Department	4
County Public Works Department	1
County Library	1
County OES, Administrative Office	1
County Emergency Operations Center	3
County Office of Education	1
County Health Agency	1
Cambria Fire Department	1
Cayucos Fire Department	1
Oceano Fire Department	1
City of Morro Bay	3
City of Arroyo Grande	3
City of Grover Beach	3
City of Pismo Beach	3
California Emergency Management Agency, Southern Region	1
California Emergency Management Agency, RPU	1
California Emergency Management Agency, Tsunami Program	1
Port San Luis Harbor District	1
California Highway Patrol, San Luis Obispo	2
California Highway Patrol, Templeton	2
California State Parks Department	4
United State Coast Guard Station, Morro Bay	1
Diablo Canyon Power Plant, Emergency Planning	1

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1. SECTION 1 - INTRODUCTION

1.1 Purpose

The primary purpose of this plan is to establish and define emergency management procedures, organizational response and coordination related to receipt of a tsunami advisory, warning, or the occurrence of an actual tsunami along the San Luis Obispo County coastline. The first priority of emergency management response will be the protection of life and property.

1.2 Objectives

- The objectives of this plan are to:
- Provide an overview of the threats posed by tsunamis.
- Define and explain initial emergency organizational responses to a tsunami advisory, warning, or actual event.
- Establish guidance under which the county emergency management organization will operate upon notification of a tsunami advisory, warning, or should an actual event occur.
- Provide initial response guidance to members of the county emergency organization.

1.3 Authorities

- Code of Federal Regulations (44CFR201.6) Part 201.6, 204 (3-5) - Disaster Mitigation Act
- California Government Code (Chapter 7, Div. 1, Title 2) Section 8550 et seq.- California Emergency Services Act
- San Luis Obispo County Code (Ord. No. 1384) Chapter 2.80 - Emergency Organization and Functions
- San Luis Obispo County Emergency Operations Plan (multi hazard functional plan)

1.4 Plan Organization

This plan is a component of the San Luis Obispo County Emergency Operations Plan (EOP). Many response actions will be based on the use of EOP supporting documents including Standard Operating Procedures (SOPs) for positions that will be staffed in the County Emergency Operations Center (EOC). This plan generally does not address specific field response actions by public safety, public works, and related agencies, although it does provide initial response guidance.

This Tsunami Emergency Response Plan consists of an administrative portion and separate attachments. The administrative portion of the plan contains an overview, hazard assessment, explains the planning basis for development of this plan, provides an

overview of the emergency management system, and explains the concept of operations. The attachments provide guidance for emergency management response actions, prescribed Emergency Alert System messages, basic coastal and anticipated tsunami inundation maps and additional related information.

The attachments are intended for use as initial response guides for the County Office of Emergency Services (OES) and guidance for the County Sheriff's Department, and other emergency management personnel. More specific response actions are detailed in each of the SOPs developed for many of the EOC positions that will be staffed to manage the county's response effort. Any developed individual SOPs are contained in separate documents available at the EOC or with specific responsible agencies and are not included with this guidance.

1.5 Plan Jurisdiction

This emergency response plan is intended to apply to those potentially at risk areas of the unincorporated county coastline and communities of Oceano, Avila Beach, Los Osos/Baywood Park, Cayucos, Cambria and San Simeon.

San Luis Obispo County has approximately 110 miles of coastline. Over 65% of that coastal exposure including beaches, bluffs and in most cases the land immediately adjacent to the beach front, are owned, managed or under the stewardship of California State Parks. State Parks has responsibility for emergency planning and management in these parks and beaches. Much of the remaining coastal land is under private ownership, undeveloped and generally not accessible to the public. Of the remaining shoreline, the cities and special districts of Grover Beach, Pismo Beach, Morro Bay, and Port San Luis Harbor District manage or are responsible for emergency management of the beaches and/or adjacent land within their jurisdictional boundary. The emergency plans developed by these entities are the guidance adopted for emergency response by those agencies to a potential or actual tsunami threat. San Luis Obispo County has and will continue to coordinate and provide assistance to these cities and special districts as they develop their tsunami response plans.

While this guidance covers responses within the unincorporated area of San Luis Obispo County, the County also fills the role of Operational Area Coordinator for Interagency Coordination in certain emergency circumstances, mutual aid and related resources requests, and related functions as described in the State's Standardized Emergency Management System (SEMS) regulations.

The Operational Area Coordinator role involves coordinating interagency response in a number of circumstances, including responding to a potential or actual tsunami. The role of OA Coordinator also includes obtaining situation status and resource requests from cities and other entities in the county. As such, when County OES is notified of a tsunami advisory, warning, or the occurrence of an actual tsunami, the county may take the lead role in coordinating the multi jurisdictional response under the provisions of this

plan, as well the County EOP and as consistent with SEMS and the National Incident Management System (NIMS).

1.6 Common Acronyms

The following common acronyms are used in this plan and/or related documents:

ARC	American Red Cross
ARES	Amateur Radio Emergency Services
CAWAS	California Warning System
Cal EMA	California Emergency Management Agency
CAL FIRE	California Department of Forestry and Fire Protection
Caltrans	California Department of Transportation
CHP	California Highway Patrol
COE	County Office of Education
DAC	Disaster Application Center
DOC	Department Operations Center
DPR	Department of Parks and Recreation
EAS	Emergency Alert System
EOC	Emergency Operations Center
ESC	Emergency Services Coordinator
ESD	Emergency Services Director
EWS	Early Warning System Sirens
FEMA	Federal Emergency Management Agency
IC	Incident Commander
ICS	Incident Command System
NIMS	National Incident Management System
NWS	National Weather Service
OA	Operational Area
OES	County Office of Emergency Services
PA	Public Address System
PIO	Public Information Officer
PSAP	Public Safety Answering Point
PTWC	Pacific Tsunami Warning Center (Hawaii)
RACES	Radio Amateur Civil Emergency Service
REOC	Regional Emergency Operations Center
SD	Sheriff's Department
SEMS	Standardized Emergency Management System
SWC	State Warning Center
USCG	United States Coast Guard
USGS	United States Geological Survey
WC/ATWC	West Coast/Alaska Tsunami Warning Center

2. SECTION 2 - HAZARD ASSESSMENT

2.1 Tsunami and Seiches Overview

Tsunamis are a series of ocean waves generated by vertical movement of the sea floor. The movement is typically caused by earthquake related faulting, but can also result from submarine landslides or volcanic eruptions. San Luis Obispo County could be affected by a tsunami caused by fault related ground displacement on a local, near or offshore fault, or on a more distant fault. Common sources of tsunamis affecting California in the past have been earthquakes on faults off the coast of Chile and the North American coast (up to Alaska).

In the open ocean, tsunami waves have a long wavelength (distance from the crest of one wave to the crest of the succeeding wave) normally over 100 miles, and a very low amplitude (height from crest to trough). As these waves approach shallow water, their speed is decreased from a deep-water speed of over 600 miles per hour to less than 30 miles per hour. The wave energy is transferred from wave speed to wave height. Thus, waves as high as 100 feet have been formed.

Tsunamis are a unique hazard because the arrival time of a wave generated far out to sea can be predicted fairly accurately. Unfortunately, the intensity of the wave when it reaches shore cannot be accurately predicted. Tsunamis are sometimes preceded by a trough or recession of ocean water that can attract people to the shore to examine what appears to be a very low tide. These recessions can also cause problems, when the water returns, for moored boats that are grounded.

Seiches are defined as oscillations of enclosed and semi-enclosed bodies of water, such as bays, lakes, or reservoirs, due to strong ground motion from seismic events, wind stress, volcanic eruptions, large landslides and local basin reflections of tsunami. Seiches can result in the creation of long-period waves that can cause water to overtop containment features or cause seiche run-up on adjacent landmasses, similar to tsunami run-up. The intensity of the damage caused by a seiche is proportional to the magnitude and proximity of the event causing the seiche. Freeboard is defined as the vertical distance from the free surface of water to the edge of the containment structure.

Information in various sections of this guidance is taken from the Technical Background Report of the San Luis Obispo County Safety Element (1999) and the California Emergency Management Agency, Local Planning Guidance on Tsunami Response, second edition and projected tsunami inundation mapping.

2.2 Effects of Tsunami

The local threat of tsunami related damage is primarily confined to low-lying coastal areas less than 50 feet above mean sea level. If the gradient is shallow, tsunami waves can travel upstream into river channels. The primary effects of a tsunami can be

widespread destruction and damage to coastal communities. In Crescent City, California, in 1964, tsunami waves up to 20-feet high caused over 11 million dollars in property damage and resulted in 11 deaths.

The effects of a tsunami can range from essentially no damage to heavy damage with fatalities. A moderate to heavily damaging tsunami may cause the following problems:

- Mass Injuries
- Emergency Medical Services Disruptions, Including Hospitals
- School Disruptions
- Hazardous Materials Releases
- Fires
- Need for Short Term Evacuations
- Utility Disruptions: Gas, Electric, Water, Sanitation
- Transportation System Disruptions
- Traffic Management Problems
- Communication Disruptions
- Disease and Health Hazards
- Loss of Commerce and Government Resources

Some special facilities of concern include Diablo Canyon and Duke Power Plant cooling water intake facilities; US Coast Guard Life Boat Stations and harbor management facilities, piers, docks and shore side fueling stations; vessel navigation buoys, lights, and horns that are located within at risk areas.

These potential effects could result in extensive, and long term, recovery efforts.

2.2.1 Potential Extent of Damage

Worldwide, tsunamis have been recorded over 100 feet high, however history of the Central Coast of California has recorded few significant damaging incidents. The closest and largest major tsunami was recorded on the Gaviota/Santa Barbara coast and had a run-up of up to 50 feet above sea level. Other local tsunamis have been documented as causing lesser damage to docks, boats and near shore structures.

Damage from a tsunami could range from minor to major property loss and death. Resulting fires account for over 50 percent of property damage following initial tsunami impact and flooding. These fires are often compounded by compromised emergency response capabilities and damage to water systems. Damage to roadways, communication systems, public services and infrastructure, along with emergency response and medical service can be expected.

Consequential damage could include electrical equipment such as well pumps near coastal areas being flooded, in turn resulting in a shock hazard:, stream, river

crossings and bridges may be washed out; sewage systems could be flooded resulting in possible overflow conditions and a disruption of normal water supplies to the public.

Potential damage from a significant tsunami is not confined to the immediate shoreline. Tsunamis have traveled up to two miles upstream from the shoreline with resulting life loss, injury and damage. Low lying areas along streams and rivers that empty into the ocean or bays are at risk of high water surge and inundation.

The areas most at risk from tsunami impact are those coastal communities, recreation and developed areas below 50 feet above mean sea level. Areas not protected by bluffs, wide beaches, dunes, large manmade structures, distance or other barriers to the tsunami surge and rising water levels are most at risk. Those areas most likely to be impacted have been identified in the table found in Attachment 8 of this document.

2.3 Tsunami and Seiche Hazard Potential

The potential tsunami hazard for the San Luis Obispo County coastal areas is greatest for those communities or portions of communities located below the estimated elevations for the 100-to 500-year events, that is, below elevation 50 feet above mean sea level. In general, much of the Coast of San Luis Obispo County is protected from tsunami hazards by wide beaches, coastal dunes, or sea cliffs that provide protection for coastal developments. Coastal developments most vulnerable to the tsunami hazards are those located near mouths of streams that drain into the Pacific Ocean, such as:

- San Simeon Creek in San Simeon;
- Santa Rosa Creek in Cambria;
- Cayucos Creek, Little Cayucos Creek, Old Creek and Willow Creek in Cayucos;
- Morro Creek and Alva Paul Creek in Morro Bay; Chorro Creek in Morro Bay and the South Bay area;
- San Luis Obispo Creek in Avila;
- Pismo Creek in Pismo Beach; and
- Meadow Creek and Arroyo Grande Creek in Oceano.

Also at risk are those low lying developed and unprotected coastal areas and those adjacent creeks influenced by tidal fluctuation. The severity of the exposure to the tsunami hazard will vary locally depending on specific natural and artificial coastal conditions. Those areas of the county at highest risk are identified in Attachment 8 - Areas Requiring Evacuation.

Historically, large tsunamis have not been common on the Central Coast of California. As such, few incidents have been recorded and the historical record is not extensive enough to develop accurate recurrence predictions. The largest recorded tsunami to affect California was caused by an earthquake in the Santa Barbara Channel in 1812.

Resulting tsunami run-up was reported to have been up to 50 feet above sea level at Gaviota, and 35 feet at Santa Barbara.

Pacific Gas and Electric (PG&E) (1973) reported that the historical record for San Luis Obispo County includes no tsunamis that have exceeded the normal tidal range. PG&E (1973) suggests that faults in the offshore area could generate tsunami wave height as great as six feet. In San Luis Obispo County, coastal areas near Port San Luis, Cayucos, Morro Bay and San Simeon were designated as having a “potential danger” from tsunami. This potential hazard level was the lowest designation included in the study. The potential for damage to coastal structures could be increased if the tsunami event were to coincide with a high tide, storm related waves, or large winter storm runoff.

The historic record shows local tsunamis have resulted from distant sources. Houston and Garcia in a 1978 study estimated the Cayucos/Morro Bay coastline 100- and 500-year tsunami run-ups, based on distant source generation (such as the Aleutian or Chile-Peru Trenches), is approximately 9.5 feet to 24.2 feet, respectively. Those run-ups were calculated using astronomical high tides, and are consistent with recorded tsunamis that have occurred in Crescent City and other locations along the California coast. However, according to Kilbourne and Mualchin (1980), the worst case scenario would occur if a tsunami occurred during a meteorological tide (storm surge), which would add an estimated 14.5 feet to the run-up calculated by Houston and Garcia. Thus, with a worst-case scenario, the estimated tsunami run-up for the 100-year and 500-year event would be no greater than 50 feet above mean sea level.

The Houston and Garcia (1978) study did not evaluate the tsunami run-up potential generated from local seismic events or local submarine landslides. It is difficult to model tsunami run-up magnitudes based on local events; however, it is thought that local events could generate a tsunami of equal magnitudes as those from distant tsunami sources (Kilbourne and Mualchin, 1980).

Recent run-up and inundation modeling and mapping, done by the University of Southern California (USC) under contract to Cal EMA, indicates a general potential maximum inundation elevation of 40 feet above mean sea level. However, undersea geology or bathymetry and local natural or manmade structures may alter this estimate and the county has decided to utilize an inundation of 50 feet above mean sea level for emergency planning purposes.

Seiche Hazard Potential - Seiche are similar to tsunami in confined or nearly confined bodies of water. Seiche could occur in any reservoir located in the County, and in Morro and San Luis bays. According to Kilbourne and Mualchin (1980), seiches have been recorded in San Francisco, Monterey, and San Pedro bays. The extent of potential seiche run-up within Morro Bay is unknown, but is thought to be less in magnitude than the affects of a tsunami.

2.4 Tsunami Inundation Mapping.

A general analyses and projected tsunami inundation mapping of several California coastal counties has been completed by a University of Southern California special project that was contracted by the California Emergency Management Agency, Tsunami Mitigation Coordinating Committee. The coastline of San Luis Obispo County has been mapped and we are awaiting copies of the maps. The mapping of our county coastline was done using existing topographic, bathymetric and specially developed tsunami inundation computer modeling. Initial mapping will require subsequent local field verification and modification to reflect natural or man made conditions that could specifically impact local tsunami inundation e.g. - roads, structures, vegetation or trees.

The County Department of Agriculture, GIS group has produced maps that illustrate the potential tsunami run-up along our county coast. These maps use the 50 feet above mean sea level topographic elevation as a working maximum height potential for a tsunami incident. These topographic maps do not utilize historic or current tsunami prediction data, but are intended only as an emergency planning working tool. Attachment 8 –Areas Requiring Evacuation was developed utilizing these maps and through field inspection of all coastal areas throughout the County.

2.5 Geographic Area Information

Specific local areas of tsunami hazard potential include communities from Oceano north to Avila Beach and Port San Luis, coastal campgrounds, and mobile home parks in coastal areas. The tsunami hazard is estimated greatest for that portion of those communities located below elevations of the 100-year to 500-year events that are below 50 feet above mean sea level. Additional areas of potential inland tsunami impact are expected along the mouth of Arroyo Grande, Pismo, Meadow and San Luis Creeks. The specific exposure to the tsunami hazard will vary locally depending on natural and man made coastal conditions.

A Morro Bay and Cayucos tsunami hazard potential specific analyses has not been performed to estimate the potential run-up height. However, based on topographic maps developed by the County Department of Agriculture, GIS group and field inspection, specific areas of concern have been identified and are included in Attachment 8. The tsunami hazard is again greatest for that portion of the community below elevations of 50 feet above mean sea level; this includes a majority of the community of Cayucos. Additional areas of potential hazard are mouths and estuaries of Morro, Alva Paul, Whale Rock and Cayucos creeks, along with Chorro creek within Morro Bay. Generally, much of the coast of Morro Bay is protected from tsunami hazard by wide beaches, coastal dunes, or bluffs that provide protection to coastal development. The local severity of the exposure to a tsunami hazard can vary widely depending on natural and artificial coastal conditions.

2.6 Warning Challenges

A Tsunami generated by earthquakes or undersea landslides near our shore may offer little or no time for advance warning. Earthquakes or landslides with the potential to generate a tsunami anywhere in the Pacific Ocean are monitored and tracked by Warning Centers operated by the National Oceanic and Atmospheric Administration and in cooperation with other Pacific Nation systems. The West Coast/Alaska Tsunami Warning Center (WC/ATWC) in Palmer, Alaska is responsible for issuing tsunami information for California, Oregon, Washington, British Columbia and Alaska. The Pacific Tsunami Warning Center in Hawaii issues information to all other areas of the Pacific. Tsunami generating incidents around the Pacific can be detected, pinpointed and magnitude computed in from 2 to 12 minutes depending on distance from the Warning Centers.

“Information Statements” are issued to inform emergency management officials and the public that an earthquake has occurred, or that a tsunami warning, watch or advisory has been issued for another section of the ocean.

A “Watch” is issued to alert emergency management officials and the public of an event which may later impact the watch area.

An “Advisory” is issued due to the threat of a potential tsunami which may produce strong currents or waves dangerous to those in or near the water.

A “Warning” is issued when a potential tsunami with significant widespread inundation is imminent or expected.

The California Emergency Management Agency Warning Center and the National Weather Service in cooperation with the WC/ATWC additionally distribute tsunami information to law enforcement, public safety and media organizations.

San Luis Obispo County will distribute urgent tsunami information through notifications to local public safety contacts and the media and will consider distributing it through use of the Emergency Alert System (EAS). Additionally, should the immediate public notification of emergency protective actions be necessary, the County Office of Emergency Services can activate strategic coastal warning sirens to alert the public to tune into local radio and televisions stations for emergency information.

3. SECTION 3 – PLANNING BASIS

3.1 Guidance

Guidance applied in the development of this plan is based on a variety of experiences and emergency management concepts. These include the County Emergency Operations Plan (EOP) and Emergency Response Plans, state guidelines for the development of

emergency plans, and the Federal Emergency Management Agency's (FEMA) Guide for the Development of State and Local Emergency Operations Plans. This plan is consistent and compatible with the plans of other jurisdictions within the San Luis Obispo County Operational Area, State Emergency Plan, Standardized Emergency Management System (SEMS) and the National Incident Management System (NIMS).

3.2 Centralized Coordination

This plan is based on centralized coordination of emergency operations. Local control of response components in effect within the Operational Area (OA) should be maintained through a centralized system, even as the response effort escalates to a multi jurisdictional level. Centralized control will be coordinated from the County Emergency Operations Center (EOC) and/or related County Department Operations Centers such as the Public Works Department Operations Center (informally called the storm center), coordinating with jurisdictions and agencies throughout the OA. To assist with centralized coordination, the County EOC is equipped for staffing by private and quasi-private entities in addition to appropriate public agency staff. This includes the Red Cross, AT&T, Southern California Gas Company, and Pacific Gas and Electric Company.

This plan does not provide specific response actions for field response. Agencies and jurisdictions that may have a role in the event of a tsunami should develop standard operating procedures for their roles and responsibilities.

3.3 Facilities

The County EOC or a related facility will serve as the central point for command and coordination of the County's and the OA's emergency response operation. The EOC is located approximately five miles west of San Luis Obispo at 1525 Kansas Avenue, near Camp San Luis.

Additional County and OA functions may be accomplished at Department Operations Centers (DOC) and through the CAL FIRE/County Fire Department Emergency Command Center (ECC) at CAL FIRE/County Fire Department headquarters. DOCs are operated by individual agencies at various locations and coordinate between the EOC and field operations for emergency response activities that fall under their responsibility. DOCs are established for the County Health Agency, County Public Works Department, County Department of Social Services, County Office of Education, and other locations as needed.

3.4 Organizational Structure

The County of San Luis Obispo uses the Standardized Emergency Management System (SEMS), as described in the California Code of Regulations (Title 19, Division 2), as the basis for its emergency management and response operations. SEMS is primarily used

for planning for, and during response to, management of, and coordination of multiple agency or multiple jurisdiction incidents.

3.5 Communications

Standard communications systems are expected to remain intact after a tsunami with the exception of those local areas hardest hit, and will be used to coordinate response and recovery between agencies. This includes public agency radio communication systems, commercial and dedicated phone lines, and cellular phone systems. The Amateur Radio Emergency Services (ARES) and Radio Amateur Civil Emergency Services (RACES) organizations may provide additional communications support.

3.6 Emergency Public Information

There will be a need for a multifaceted approach to public information that may include emergency information for the public and information for emergency workers. The public will need and want information about the extent of the emergency and the need for evacuation, as well as instructions on proper survival and/or response actions. The local media will perform an essential role in providing emergency instructions and status information to the public.

The goal of this plan, in conjunction with the overall County Emergency Operations Plan, and EOC SOPs, is to provide a system of rapid dissemination of accurate instructions and information to the public, primarily through the use of the local Emergency Alert System (EAS). The establishment of a Media Center near the Emergency Operations Center (EOC) would facilitate management of the emergency public information system, and may be established if needed. It should be noted that in a sudden tsunami, there might not be sufficient time to activate EAS prior to areas being impacted with fast moving water.

There are initial, prescribed EAS messages located in attachments to this plan that could be broadcast, if needed. Follow up EAS and emergency Public Information Office (PIO) functions would be established using standard County EOC response procedures that are contained in documents separate from this plan.

4. SECTION 4 - EMERGENCY MANAGEMENT

4.1 National Incident Management System

On February 28, 2003, President Bush issued Homeland Security Presidential Directive 5 (HSPD 5). HSPD 5 directed the Secretary of Homeland Security to develop and administer a National Incident Management System (NIMS). NIMS provides for a consistent nationwide template to enable all government, private sector, and nongovernmental organizations to work together during domestic incidents.

NIMS provides for a comprehensive, national approach to incident management that is applicable at all jurisdictional levels and across functional disciplines. The intent of NIMS is to:

- Be applicable across a full spectrum of potential incidents and hazard scenarios, regardless of size or complexity;
- Improve coordination and cooperation between public and private entities in a variety of incident management activities;
- HSPD-5 requires Federal departments and agencies to make the adoption of NIMS by State and local organizations a condition for Federal preparedness assistance (grants, contracts, and other activities).

NIMS standard incident management structures are based on three key organizational systems:

1. The *Incident Command System (ICS)* defines the operating characteristics, management components, and structure of incident management organizations throughout the life cycle of an incident;
2. The *Multiagency Coordination System*, which defines the operating characteristics, management components, and organizational structure of supporting entities;
3. The *Public Information System*, which includes the processes, procedures, and systems for communicating timely and accurate information to the public during emergency situations.

As NIMS was just being integrated across the nation at the time of this plan update, additional information on NIMS will be included in future or updated versions of this plan.

However, it is the intent of the County of San Luis Obispo to comply with NIMS requirements, with the understanding that in to order to formally comply, approval may be needed by the Board of Supervisors.

4.2 Standardized Emergency Management System (SEMS)

The County of San Luis Obispo uses the *Standardized Emergency Management System (SEMS)*, as described in the California Code of Regulations (Title 19, Division 2), as part of its emergency management and response operations. SEMS is primarily used during response to, management of, and coordination of multiple agency or multiple jurisdiction incidents.

In the event of a tsunami that is within the scope of this plan, the authority to assume overall management of the emergency shall be vested with the County Emergency Services Director (ESD). The ESD is designated as the County Administrator. The ESD may consult with other agencies as appropriate, including public works, Sheriff's Department, fire, and the California Highway Patrol area representative.

In the event the ESD is not available, the San Luis Obispo County Emergency Operations Plan provides for alternate ESDs to take the role of overall management of the emergency. They are, in order: Deputy County Administrator, County Sheriff, County Health Officer, County General Services Director, County OES Coordinators, or the on-duty Sheriff's Watch Commander (until relieved by one of the preceding alternates or by a more senior Sheriff's Department representative).

4.3 Primary Components of SEMS

There are five primary components that make up SEMS and are used as part of the emergency management structure for responding to problems related to a tsunami. They are:

1. The *Incident Command System (ICS)*, which is a specific emergency management system used primarily at the field level;
2. *Interagency Coordination (IAC)*, which includes communicating and coordinating with various agencies and jurisdictions during an emergency, primarily at the EOC level;
3. The *Master Mutual Aid Agreement*, which is the master agreement and authority that allow jurisdictions to provide each other with mutual assistance during emergencies;
4. *Operational Areas (OA)*, which consist of all local jurisdictions within a county geographical area working together for emergency management and disaster response issues. The OA within San Luis Obispo County is coordinated by the County, which also serves as the coordination and communication link between the OA and the State.
5. *Operational Area Satellite Information System (OASIS)* which includes a satellite communications system in the County EOC and is also a resource ordering system for ordering and coordinating resource response between the OA and the State.

Additional information on SEMS and its components, as it is used within the San Luis Obispo County OA can be found in the EOP and The Introduction to SEMS Course developed by County OES specifically for this OA. A copy of this course and additional information can be obtained from County OES.

5. SECTION 5 - CONCEPT OF OPERATIONS

5.1 Tsunami Danger Levels

There are four tsunami danger levels. From MOST to LEAST severe, the danger levels are:

- **Warning** – Inundation wave possible – Full evacuation suggested
- **Advisory** – Strong currents likely – Stay away from the shore
- **Watch** – Danger level not yet known – Stay alert for more information

- **Information Statement** – Minor waves at most – No action suggested

5.1.1 Tsunami Warning

A tsunami warning is issued when a potential tsunami with significant widespread inundation is imminent or expected. Warnings alert the public that widespread, dangerous coastal flooding accompanied by powerful currents is possible and may continue for several hours after arrival of the initial wave. Warnings also alert emergency management officials to take action for the entire tsunami hazard zone. Appropriate actions to be taken by local officials may include the evacuation of low-lying coastal areas, and the repositioning of ships to deep waters when there is time to safely do so. Warnings may be updated, adjusted geographically, downgraded, or canceled. To provide the earliest possible alert, initial warnings are normally based only on seismic information.

5.1.2 Tsunami Advisory

A tsunami advisory is issued due to the threat of a potential tsunami which may produce strong currents or waves dangerous to those in or near the water. Coastal regions historically prone to damage due to strong currents induced by tsunamis are at the greatest risk. The threat may continue for several hours after the arrival of the initial wave, but significant widespread inundation is not expected for areas under an advisory. Appropriate actions to be taken by local officials may include closing beaches, evacuating harbors and marinas, and the repositioning of ships to deep waters when there is time to safely do so. Advisories are normally updated to continue the advisory, expand/contract affected areas, upgrade to a warning, or cancel the advisory.

5.1.3 Tsunami Watch

A tsunami watch is issued to alert emergency management officials and the public of an event which may later impact the watch area. The watch area may be upgraded to a warning or advisory - or canceled - based on updated information and analysis. Therefore, emergency management officials and the public should prepare to take action. Watches are normally issued based on seismic information without confirmation that a destructive tsunami is underway.

5.1.4 Tsunami Information Statement

A tsunami information statement is issued to inform emergency management officials and the public that an earthquake has occurred, or that a tsunami warning, watch or advisory has been issued for another section of the ocean. In most cases, information statements are issued to indicate there is no threat of a destructive tsunami and to prevent unnecessary evacuations as the earthquake may have been felt in coastal areas. An information statement may, in appropriate situations, caution about the possibility of destructive local tsunamis. Information statements may be re-issued with additional information, though normally these messages are not updated. However, a watch, advisory or

warning may be issued for the area, if necessary, after analysis and/or updated information becomes available.

5.2 Notification & Verification

In the event of tsunami advisory, warning or the occurrence of an actual tsunami along the San Luis Obispo County Coastline:

1. The Sheriff's Department Watch Commander will be contacted with information from the Cal EMA through one or more of the following; NAWAS and/or California Law Enforcement Telecommunications System (CLETS), California Alert and Warning System (CAWAS).
2. Verification of the message will then be sent from the National Weather Service (NWS) via CLETS to Watch Commander, local law enforcement agencies and County OES.
3. Cal EMA via CAWAS will then poll the Watch Commander to ensure receipt of the message.
4. Additional notification may be duplicated through EDIS and the NWS LA/Oxnard office or come from public safety officials, neighboring jurisdictions, or during situation assessment.
5. The Watch Commander will immediately notify the on call Duty Emergency Services Coordinator (ESC) who will determine what, if any, further notifications are necessary. If unable to reach ESC or time is critical Watch Commander will make notifications and take actions as deemed necessary.

Attempts should be made to verify all initial tsunami notifications if, in the opinion of the Sheriff's Watch Commander, the validity of the report is in question. The Watch Commander can verify initial notifications by contacting:

1. State Warning Center
2. Alaska and West Coast Tsunami Warning Center
3. National Weather Service LA in Oxnard

5.3 Plan Activation

This plan should be activated by the Sheriff's Watch Commander or County OES upon receipt of notification of a tsunami advisory, warning or actual tsunami impacting our county coastline. This plan may also be used as guidance for potential or actual seiches in local bays, estuaries, lakes, dams or other confined bodies of water.

5.4 Situation Reporting

The first priority upon activation of this plan is situation status reporting, which is the process of getting a complete and comprehensive summary of overall information on the Earthquake and/or Tsunami and the potential damages. An initial report on the nature of a tsunami or earthquake is needed in order to develop an effective immediate response.

Ongoing situation reporting is critically important for determining effects from tsunami or seiches, such as location of ocean water recession, rapidly rising coastal waters, amount of flooding occurring, special rescue efforts that may be needed, structural or transportation route damage and related response needs.

Situation reporting is generally divided into two components: overall situation assessment at the EOC and situation reporting from the field. Personnel such as dam tenders, public works crews, police and firefighters accomplish field situation reporting, reporting information back to their specific agencies. An important aspect of situation assessment is interagency coordination between the various agencies in order to develop an overall status of the incident, which allows for effective overall response coordination at the EOC level.

Please refer to Attachment 3 of the San Luis Obispo County Earthquake Emergency Response Plan for Initial Situation Reporting procedures.

5.5 Interagency Coordination

Interagency Coordination (IAC) is important for ensuring an effective response to an earthquake, tsunami or related problem. IAC allows for the exchange of information between the County EOC (acting in the role of Operational Area Coordinator) and affected jurisdictions. It is important for agencies to interact with the County EOC in order for an effective overall management of the incident, which in turn provides for the safety of the affected public and emergency workers.

In the case of activation of this plan, IAC includes the County EOC and related Department Operations Centers (DOC) communicating with each affected jurisdiction in order to provide information on what is happening, what the threat is, what the county is doing, and determining what additional resources each jurisdiction may need. In turn, it is important for the jurisdictions to provide the County EOC and related DOCs information on their actions and make resource requests through the EOC or DOC so an overall response effort can be coordinated. This IAC allows the County to know if additional resources from unaffected areas of the county can be requested for mutual aid assistance in numbers sufficient to meet the need of all jurisdictions if mutual aid must be requested from outside the county.

5.6 Public Information Coordination

For all public information functions, it is very important that all agencies and personnel involved in disseminating information provide consistent factual information. It is for this reason that upon activation and/or use of a public information section/person, that communications channels be established between everyone that will be releasing information.

All public information/instructions and EAS information being released from the EOC should be cleared through the ESD if possible. The only exception to this is if the immediate health and safety of the public or emergency responders would be adversely affected by a delay in obtaining ESD approval.

5.6.1 Public Warning

Depending on the level of the incident and the potential danger to the public, immediate notification of people in the affected area may be needed. This may be accomplished by methods such as using coastal warning sirens, emergency vehicle public address systems, door-to-door contacts and, if necessary, by activating the Emergency Alert System (EAS). The Watch Commander or County Office of Emergency Services staff accesses the coastal warning sirens and the EAS stations through the EOC.

If the EAS and/or tone alert system is to be activated, the incident PIO should prepare accurate, clear and timely Emergency Alert System/tone alert messages and provide them to the County EOC for broadcast. All messages must be approved by the ESD unless public safety and/or emergency worker safety dictate otherwise. To avoid confusion and conflicting information, all public warning information for all participating agencies should be coordinated and disseminated through one primary Information Officer.

5.6.2 Public Information

In addition to emergency information, the public information function will be necessary to keep the public updated on the incident. Emergency incidents arouse public attention, and attract the media. The media will respond to the area of a large incident, and will regularly call for updated information. If the media cannot find an official spokesperson to talk to they may talk to anybody near or affiliated with the incident.

The Public Information Officer (PIO) and his/her assistants will be responsible for developing current and accurate information, providing a central source of information, relieving the ESD and others from media pressure, and tracking down and dispelling rumors.

5.7 Emergency Declaration

Upon activation of the County EOC as a result of a tsunami warning or the occurrence of an actual tsunami the ESD, or his designated and authorized alternate, should consider declaring a local emergency, issue the necessary rules and regulations, and request the Governor to declare a "State of Emergency". This may be necessary in the event response to the effects of the tsunami overwhelm local resources.

5.8 Evacuation

Evacuations may become necessary if tsunami warning or related information is received or the occurrence of an actual tsunami endangers or potentially endangers life or property. Individuals located within an area designated for evacuation (Attachment 8) will most likely be recommended to evacuate a half-mile inland or to a pre-designated evacuation area. All individuals on beaches, at ocean vista points or traveling next to the coast in low lying areas will be recommended to go to high ground. Depending upon warning time, additional evacuation route information may be provided through the news media.

As inundation maps are developed and made available by the State of California, this plan will evolve and information and changes developed through cooperative efforts such as the California Tsunami Steering Committee and/or related organizations will be implemented as appropriate. This may include cooperative efforts such as statewide development of standardized evacuation signs and common emergency planning procedures. County OES will continue to be involved with and monitor statewide improvements related to tsunami readiness and recommend implementation of any new protective or preparedness measures that may benefit the citizens and visitors of San Luis Obispo County.

Upon an evacuation decision, evacuated populations will be encouraged to report to local Reception and Care Centers, which will be identified during emergency broadcasts to the media. The American Red Cross can then register those individuals and affect a locator service through the San Luis Obispo County Chapter headquarters. The Red Cross can provide information on the location of relatives and friends.

5.9 Reception and Care Centers

If evacuations are necessary, a significant number of displaced citizens can be anticipated as a result of a tsunami or related problem. A considerable number of these will likely stay with friends, family, etc. Others may require public sheltering as provided by the American Red Cross. Significant logistical support will also be required, which is coordinated through the Shelter and Welfare function of the Incident Command System (ICS) when activated in the County/OA EOC.

Locations of shelters will depend on the extent of the emergency, and such factors as areas actually affected, and how many people were, or are being evacuated. As indicated in section 5.6, the locations of shelters will be passed on to the public through emergency alert messages.

5.10 Traffic Disruption

There could be problems with traffic management and flow as a result of tsunami flooding, a moderate to heavy damaging earthquake, or other damage; such problems might include:

- Difficulty in getting out of the area due to debris and damaged roadways/streets.
- Difficulty getting rescuers and other vital personnel into areas of extensive damage.
- Difficulty keeping sightseers out of damaged areas during the early hours and days after an emergency.

The means of coping with these impediments include; beginning debris removal, rerouting of traffic by law enforcement officials and public works assigned to areas by the Traffic Control Group of the ICS team, and limiting access to affected areas.

Should evacuation of any area after a tsunami or damaging earthquake be necessary, the Logistics Section, in coordination through the San Luis Obispo County/OA EOC will be responsible for coordinating the use of resources that may be needed to evacuate these people and others without transportation. These procedures may include arranging for bus or similar transportation modes to meet evacuees at strategic locations that can be reached by those forced to evacuate on foot. Procedures for obtaining such resources may be obtained by using the Nuclear Power Plant Standard Operating Procedures (SOP).

5.11 Recovery and Reentry

Recovery involves many aspects: reentry into affected areas including homes and businesses, demobilization of emergency response resources, cleanup and restoration, and long-term disaster assistance. During transition into the recovery phase, damaged structures may need to be inspected to determine if they are safe for public reentry or if they should be condemned until repaired or demolished. This task may require using qualified inspection personnel from other jurisdictions and private companies. These personnel can be obtained through the OES mutual aid system and the related building officials mutual aid program.

The Emergency Services Director and the EOC command group must determine when it would be safe to allow public reentry to any area that has been evacuated due to a tsunami. Based on joint concurrence of the ESD and other appropriate officials, reentry will be authorized after such threats have subsided and an EAS message to that effect will be issued.

5.11.1 Demobilization

When response agencies are nearing completion of the last remaining life safety and property safety missions, and when the ESD has determined that the disaster has entered into a recovery phase, the EOC command group should develop a formal demobilization plan. Consideration should be given to releasing mutual aid resources no longer needed. Consideration should also be given to assigning appropriate agencies to conduct short-term recovery operations, such as debris

removal, restoration of critical facilities and utilities/communications, and tending to the needs of the displaced.

The County EOC should be downgraded or shut down as soon as emergency operations cease. The EAS should be deactivated with a termination EAS message giving the public a contact point for follow up assistance. It is desirable to attempt to restore agencies to their normal working routine and environment as soon as possible. Both short term and long-term recovery operations can best be managed through the normal structure of government.

5.11.2 Cleanup, Rehabilitation and Restoration

Cleanup, rehabilitation and restoration may take a considerable amount of time. It may also take a considerable amount of effort and cooperation between the private sector and local, state, and federal governments. It is anticipated that local government resources and finances after a major tsunami will be strained and that aid from the state and federal governments may be required.

Long-term recovery considerations will be many and could include:

- Cleanup of debris on public property and repair of infrastructure such as roads and water systems
- Hazardous material specialists, under the supervision of the County, may need to be employed for any needed cleanup of hazardous material
- Health services may be needed for operations such as water purification, inoculations and sanitation
- Solid waste facilities may not be able to handle all debris disposal needs; plans for alternate sites and programs may need to be established
- Reconstruction of damaged critical facilities will need to be approved and initiated as soon as possible
- Temporary housing may need to be provided
- Building safety assessments will need to be conducted
- School resumption
- Fostering long-term economic recovery
- Restoring essential services
- Preserving historic buildings
- Encouraging immediate business recovery

5.11.3 Public Disaster Recovery Assistance

Provided the necessary emergency declarations were made during the emergency, the County will coordinate with state and federal officials in performing damage assessment to determine specific needs following a disaster. If a federal disaster has been declared, assistance may be provided through the Federal Emergency Management Agency (FEMA) and related agencies. Victims may register for

disaster assistance possibly by telephone or possibly through a Disaster Assistance Center (DAC). DACs are centers that are opened and staffed by government agencies for the purpose of applying for disaster relief assistance for both individual families and to the public sector. Generally, FEMA will use a teleregistration system instead of, or in addition to, opening DACs.

Disaster assistance services that could be provided include:

- Emergency family and individual needs, provided by volunteer relief organizations, such as the American Red Cross
- Disaster loans to individuals and businesses provided through state and federal agencies such as the Small Business Administration and FEMA
- Temporary housing through federal programs
- Crisis counseling through County Behavioral Health

5.11.4 Final Report and Documentation

All department heads from County agencies involved in the tsunami or related earthquake response will be required to complete a narrative report and a master activity log. The narrative report briefly describes the primary responsibility, the duties performed, and the total number of staff hours incurred by the agency during the emergency phase of the incident. The master activity log documents the names and times of agency personnel involved in a particular assignment, equipment and supplies used, and any contracts with private vendors to support emergency operations. Much of this information can be obtained from activity logs used by team leaders during the emergency. A copy of this narrative report and master activity log will become part of the County's official record of the tsunami.

5.11.5 After Action Report

As specified in California Code of Regulations, Title 19, section 2900(j), any city, city and county, or county declaring a local emergency for which the governor proclaims a state of emergency, is required to complete and transmit an after action report to Cal EMA within ninety (90) days of the close of the incident period.

The after action report shall, at a minimum, be a review of response actions taken, application of SEMS, suggested modifications to SEMS, necessary modifications to plans and procedures, identified training needs, and recovery actions to date.

5.11.6 Local Government Cost Recovery

When a state or federal disaster declaration is made, many local government costs related to the declared disaster may be reimbursable through state and/or federal programs. Eligible costs for reimbursement may include permanent repairs to

damaged facilities, including infrastructure, and certain emergency response and protective measure activities.

The Cal EMA is responsible for administering both the federal Public Assistance program in California and the State's Natural Disaster Assistance Act (NDAA) program. For the County of San Luis Obispo, County OES may be the lead agency for coordinating cost reimbursement programs between county agencies/departments and Cal EMA.

In most cases, local agencies must expend funds before they can receive payment of funds through the federal Public Assistance program an/or state NDAA program. This reimbursement process is a lengthy one involving the complete review of damage estimates and documentation. Actual receipt of funds may take months.

All county and related agencies and departments will need to document damages as thoroughly as possible; without proper documentation, it may not be possible to obtain reimbursement through the Public Assistance, NDAA, or any other program. This includes documenting all incurred costs, including labor and expenditures and tying documentation to specific geographic site(s). Photos should be taken and receipts and similar documentation need to be saved.

For more information on the public agency cost recovery process, contact County OES.

ATTACHMENT 1
CHECKLIST - ACTIONS IN THE EVENT OF A TSUNAMI ADVISORY

**COUNTY EMERGENCY SERVICES COORDINATOR OR WATCH COMMANDER
INITIAL RESPONSE GUIDELINES**

Upon notification by Watch Commander, National Weather Service, Emergency Digital Information System (EDIS), or other valid source for a Tsunami Advisory which includes the San Luis Obispo County coastline, the **Duty Emergency Services Coordinator** can make additional notifications as needed and may take other actions as needed. Guidelines include:

1. Notification

_____ 1.1 CAL FIRE/County Fire Department Emergency Command Center (ECC) and request notify:

- 1.1.1 Cambria Fire Department
- 1.1.2 Cayucos Fire Department
- 1.1.3 Morro Bay Fire Department
- 1.1.4 Fire Station 10 – Cambria
- 1.1.5 Fire Station 11 – Cayucos
- 1.1.6 Fire Station 15 – Los Osos
- 1.1.7 Fire Station 22 – Nipomo Mesa
- 1.1.8 Fire Station 62 – Avila Valley
- 1.1.9 Fire Station 63 – Pismo Beach
- 1.1.10 Fire Station 64 – Pismo Beach
- 1.1.11 Arroyo Grande Fire Department
- 1.1.12 Oceano Fire Department
- 1.1.13 Grover Beach Fire Department
- 1.1.14 Port San Luis Harbor Patrol
- 1.1.15 Hearst Castle Fire Department

_____ 1.2 Notify the following agencies and, if situation warrants, request an Agency Representative respond to the EOC:

- 1.2.1 County OES
- 1.2.2 County Emergency Services Director and Board of Supervisors
- 1.2.3 Sheriff's Department
- 1.2.4 California Highway Patrol
 - 1.2.4.1 Request CHP notify Caltrans
- 1.2.5 US Coast Guard Station, Morro Bay
- 1.2.6 California State Parks - CENCOM
- 1.2.7 County Public Works
- 1.2.8 County General Services - Parks
- 1.2.9 County Health Officer
- 1.2.10 CAL FIRE/County Fire Department
- 1.2.11 County Department of Social Services

- 1.2.11.1 Request activation of Phone Assistance Center if needed
- 1.2.12 County Office of Education
- 1.2.13 California Emergency Management Agency, State Warning Center
 - 1.2.13.1 Request Southern Region Duty Officer to be notified.
- _____ 1.3 Consider notification of any other agencies deemed appropriate based on location of the Advisory and invite an Agency Representative respond to the EOC:
 - 1.3.1 Diablo Canyon Power Plant – Control Room
 - 1.3.2 Phillips Conoco Refinery
 - 1.3.3 Morro Bay Power Plant
 - 1.3.4 Area Water Districts
 - 1.3.4.1 Avila Beach Community Services District
 - 1.3.4.2 City of Pismo Beach
 - 1.3.4.3 Cambria Community Services District
 - 1.3.4.4 South San Luis Obispo County Sanitation District
- _____ 1.4 Request the Watch Commander use the “Red Phone” system to notify PSAPs and the direct line to notify the Diablo Canyon Power Plant, Control Room
- _____ 1.5 Request the Watch Commander Have Sheriff’s Dispatch announce the Advisory on Law Enforcement Blue and Red Radio Nets.
- _____ 1.6 CHP San Luis Obispo Area Communications to confirm they received the Advisory via CLETS
- _____ 1.7 Contact CENCOM to confirm they received the Advisory information.

2. Monitor Situation

- _____ 2.1 Continue monitoring the situation via any or all of the following:
 - 2.1.1 Sheriff Watch Commander and CALWAS
 - 2.1.2 Alaska and West Coast Tsunami Warning Center
 - 2.1.3 Pacific Tsunami Warning Center
 - 2.1.4 National Weather Service, Los Angeles / Oxnard
- _____ 2.2 Monitor international, national, and local media for news stories in order to be prepared to address any local media needs

Note: If the event that caused the Advisory is of a significant magnitude that it seems possible a tsunami warning is imminent proceed with the actions outlined for tsunami warning in Attachment 2.

ATTACHMENT 2

CHECKLIST - ACTIONS IN THE EVENT OF A TSUNAMI WARNING

**COUNTY EMERGENCY SERVICES COORDINATOR
INITIAL RESPONSE GUIDELINES**

Upon notification by Watch Commander, National Weather Service, Emergency Digital Information System (EDIS), or other valid source of a Tsunami Warning that includes the San Luis Obispo County coastline, the Duty Emergency Services Coordinator can make additional notifications as needed and may take other actions as needed. Guidelines include:

1. Notification

_____ 1.1 Perform notifications outlined in Attachment 1.

2. Monitor Situation

_____ 2.1 Monitor situation as outlined in Attachment 1.

3. EOC Activation

_____ 3.1 Set up EOC as needed and confirm full/partial activation and mobilization.

_____ 3.2 Notify and request specific County Personnel to staff the following EOC positions (see Basic Activation Guide for list of qualified personnel):

_____ Operations Section Chief

_____ Plans Section Chief

_____ Logistics Section Chief

_____ 3.3 Request or confirm Phone Assistance Center activation (refer to NPP Plan, Social Services SOP for additional information).

_____ 3.4 Confirm following Agency Representatives are en route to the EOC (if not or unconfirmed, request a representative from the agency respond to the EOC):

_____ Sheriff's Department

_____ CHP

_____ County Emergency Services Director and Board of Supervisors

_____ County Public Works

_____ CAL FIRE/County Fire Department

_____ County General Services – Parks

_____ County Health Officer

_____ County Department of Social Services

- County Office of Education
 - County Communications;
 - Request Communications to notify and activate ARES/RACES at the EOC
 - California State Parks
 - U S Coast Guard Station, Morro Bay
 - Diablo Canyon Power Plant
- 3.5 Notify the following agencies and request a representative respond to the EOC:
- EMSA
 - Caltrans
 - County Environmental Health
 - American Red Cross
 - PG&E Distribution Office
 - Southern California Gas Company
 - AT&T
- 3.6 Notify and advise the following agencies of the situation:
- Cal EMA
 - Union Pacific Railroad
 - US Nuclear Regulatory Commission, Headquarters Ops Center
- 3.7 Assume role of "Liaison Officer" until relieved by other Liaison qualified staff.
- 3.8 If time of potential Tsunami impact is 6 hours or greater, under standing orders of Emergency Services Director (ESD) close access to county controlled beaches, request visitors be notified, and advise all impacted jurisdictions of county's actions.
- 3.9 If time of potential Tsunami impact is less then 6 hours, under standing orders of Emergency Services Director evacuate county controlled beaches, and advise all impacted jurisdictions of county's actions.
- 3.10 Develop and release appropriate Emergency Alert System message(s) (multiple versions are available in the following attachments).

ATTACHMENT 3

CHECKLIST - ACTIONS IN THE EVENT OF A TSUNAMI WARNING

**COUNTY EMERGENCY SERVICES DIRECTOR
INITIAL RESPONSE GUIDELINES**

Upon notification by Watch Commander, National Weather Service, Emergency Digital Information System (EDIS), Duty Emergency Services Coordinator, or other valid source of a tsunami warning that includes the San Luis Obispo County coastline, the ESD will respond to the Emergency Operations Center (EOC) as soon as practical and take the following actions:

1. Notification
 - 1.1 Upon notification, make contact with Duty ESC and determine if proper notifications have been initiated.
 - 1.2 Provide estimated time of arrival at EOC to Duty ESC or Watch Commander.
 - 1.3 No other notifications are needed by ESD prior to responding to the EOC unless deemed necessary.
2. Upon Arrival at EOC
 - 2.1 Receive a briefing from the duty ESC or Watch Commander.
 - 2.2 Determine the level of staffing that is occurring and ensure appropriate command Staff are responding or being notified.
 - 2.3 Announce when EOC is activated.
3. EOC Operational Actions
 - 3.1 Review the EOC Emergency Management Organization document positions for Non-DCPP emergencies (a copy can be found in the ESD Non-DCPP SOP); ESC should be notifying people to staff these positions as needed.

____ Operations Section Chief
____ Plans Section Chief
____ Logistics Section Chief
 - 3.2 If time of potential Tsunami impact is 6 hours or greater, close access to county controlled beaches, request visitors be notified, and advise all impacted jurisdictions of county's actions.

- 3.3 If time of potential Tsunami impact is less than 6 hours, evacuate county controlled beaches, and advise all impacted jurisdictions of county's actions.
- 3.4 Have a charge code developed and put in use for all county departments for use with incident related activities.
- 3.5 Approve requests for emergency expenditures, which may include additional communications equipment, costs for bringing in mutual aid resources, and related needs.
- 3.6 Approve Emergency Alert System messages and Media releases.
- 3.7 Confirm Phone Assistance Center activation.
- 3.8 Hold command briefings and direct staff as appropriate.

ATTACHMENT 4
EMERGENCY ALERT SYSTEM (EAS) MESSAGES

TSUNAMI EAS WARNING MESSAGE
EVACUATION OF ALL COASTAL AREAS

Attention, attention ... this is an Emergency message for the public along the coast of San Luis Obispo County. The National Weather Service has issued a Tsunami Warning. This could cause major flooding and risk to life in low lying areas along the coast.

The County Office of Emergency Services is advising residents, visitors and businesses in any low lying areas along the coast to evacuate to high ground immediately. This includes areas of San Simeon, Cambria, Cayucos, Morro Bay, Los Osos/Baywood Park, Avila Beach, Shell Beach, Pismo Beach, Grover Beach and Oceano. Evacuate immediately

PLEASE USE 9-1-1 ONLY FOR LIFE THREATENING EMERGENCIES.

THE COUNTY OFFICE OF EMERGENCY SERVICES WILL PROVIDE ADDITIONAL INFORMATION AS SOON AS POSSIBLE.

Approved By: _____

Time Approved: _____

Time Distributed: _____

NOTE: UTILIZE THIS MESSAGE WHEN TIME PROHIBITS USE OF INDIVIDUAL AREA EVACUATION MESSAGES

TSUNAMI EAS WARNING MESSAGE #1

EVACUATION, NORTH COAST AND SAN SIMEON

Attention, attention ... this is an Emergency message for the public along the coast of San Luis Obispo County. The National Weather Service has issued a Tsunami Warning. This could cause major flooding and risk to life in low lying areas along the coast.

The County Office of Emergency Services is advising residents, visitors and businesses in any low lying areas along the coast to evacuate to high ground immediately. This includes areas of San Simeon, Cambria, Cayucos, Morro Bay, Los Osos/Baywood Park, Avila Beach, Shell Beach, Pismo Beach, Grover Beach and Oceano. Evacuate immediately.

SOME AREAS THAT NEED TO EVACUATE OR MOVE TO HIGHER GROUND IMMEDIATELY INCLUDE:

ALL LOW LYING AREAS OF THE NORTH COAST, HWY 1, BEACHES AND OCEAN VISTA POINTS, ALL AREAS OF SAN SIMEON STATE BEACH AND PIER AREA, SAN SIMEON ACRES, SAN SIMEON STATE PARK CAMP GROUND AND ALL PRIVATE RESIDENCES WEST OF HWY I.

REPEATING, ALL LOW LYING AREAS OF THE NORTH COAST HWY 1, BEACHES AND OCEAN VISTA POINTS, ALL AREAS OF SAN SIMEON STATE BEACH AND PIER AREA, SAN SIMEON ACRES, SAN SIMEON STATE PARK CAMP GROUND AND ALL PRIVATE RESIDENCES WEST OF HWY I.

MOVE TO HIGH GROUND NOW OR LEAVE THE AREA USING HWY 1 NORTH TO THE HEARST CASTLE VISITORS CENTER OR SOUTH TO HWY 46. IF YOU ARE LOCATED IN THE SAN SIMEON STATE PARK CAMPGROUND YOU MAY RELOCATE ON FOOT TO WASHBURN CAMPSITES.

PLEASE USE 9-1-1 ONLY FOR LIFE THREATENING EMERGENCIES.

THE COUNTY OFFICE OF EMERGENCY SERVICES WILL PROVIDE ADDITIONAL
INFORMATION AS SOON AS POSSIBLE.

Approved By: _____

Time Approved: _____

Time Distributed: _____

TSUNAMI EAS WARNING MESSAGE #2

EVACUATION, CAMBRIA

Attention, attention ... this is an Emergency message for the public along the coast of San Luis Obispo County. The National Weather Service has issued a Tsunami Warning. This could cause major flooding and risk to life in low lying areas along the coast.

The County Office of Emergency Services is advising residents, visitors and businesses in any low lying areas along the coast to evacuate to high ground immediately. This includes areas of San Simeon, Cambria, Cayucos, Morro Bay, Los Osos/Baywood Park, Avila Beach, Shell Beach, Pismo Beach, Grover Beach and Oceano. Evacuate immediately.

LOCATIONS IN CAMBRIA THAT NEED TO EVACUATE OR MOVE TO HIGHER GROUND IMMEDIATELY ARE:

- LEFFINGWELL LANDING, MOONSTONE BEACH DRIVE, THE BOARDWALK, SHAMEL PARK INCLUDING ALL RESIDENTS ON WINDSOR BLVD, PARK HILL AND THE WEST RANCH FROM COASTAL MARINE TERRACE TRAIL TO THE COAST.
- MAIN ST FROM HWY 1 TO SANTA ROSA CREEK RD AND SANTA ROSA CREEK RD TO AND INCLUDING THE HIGH SCHOOL.
- BURTON DRIVE AND ALL SIDE STREETS BETWEEN MAIN ST TO AND INCLUDING VILLAGE LANE.
- MARINE TERRACE BETWEEN MARLBOROUGH AND THE OCEAN TO ARDATH, INCLUDING LAMPTON CLIFFS COUNTY PARK AND PRIVATE RESIDENCES AT END OF MARLBOROUGH.

MOVE TO HIGH GROUND NOW OR LEAVE THE AREA USING HWY 1 SOUTH TO
HWY 46.

PLEASE USE 9-1-1 ONLY FOR LIFE THREATENING EMERGENCIES.

ADDITIONAL INFORMATION WILL BE PROVIDED AS SOON AS POSSIBLE.

Approved By: _____

Time Approved: _____

Time Distributed: _____

TSUNAMI EAS WARNING MESSAGE #3
EVACUATION, ESTERO BLUFF AND CAYUCOS

Attention, attention ... this is an Emergency message for the public along the coast of San Luis Obispo County. The National Weather Service has issued a Tsunami Warning. This could cause major flooding and risk to life in low lying areas along the coast.

The County Office of Emergency Services is advising residents, visitors and businesses in any low lying areas along the coast to evacuate to high ground immediately. This includes areas of San Simeon, Cambria, Cayucos, Morro Bay, Los Osos/Baywood Park, Avila Beach, Shell Beach, Pismo Beach, Grover Beach and Oceano. Evacuate immediately.

AREAS OF ESTERO BLUFF AND CAYUCOS THAT NEED TO EVACUATE OR MOVE TO HIGHER GROUND IMMEDIATELY ARE:

- ESTERO BLUFF BEACH AREAS AND HIGHWAY TURNOUTS.
MOVE TO HIGH GROUND NOW OR RELOCATE TO HARMONY!
- N OCEAN AVE AT HWY 1 TO E ST FROM HWY 1 WEST, INCLUDING OCEAN FRONT LN, THE PIER AND THE BEACH.
- E ST FROM OCEAN AVE WEST AND 10TH SOUTH TO HWY 1 FROM CASS AVE TO THE BEACH.
MOVE TO HIGH GROUND NOW OR RELOCATE TO ST. JOSEPHS CHURCH!
- OBISPO/STUDIO DRIVE TO CHANEY AVE FROM HWY 1 TO THE BEACH, INCLUDING THE AREAS OF OCEAN AVE BETWEEN HACIENDA AND STUART AND THE CEMETERY
MOVE TO HIGH GROUND NOW!

IN ADDITION TO MOVING TO HIGH GROUND YOU MAY LEAVE THE AREA USING HWY 1 NORTH TO HWY 46. PLEASE USE 9-1-1 ONLY FOR LIFE THREATENING EMERGENCIES.

THE COUNTY OFFICE OF EMERGENCY SERVICES WILL PROVIDE ADDITIONAL INFORMATION AS SOON AS POSSIBLE.

Approved By: _____

Time Approved: _____

Time Distributed: _____

TSUNAMI EAS WARNING MESSAGE #4

EVACUATION, MORRO BAY

Attention, attention ... this is an Emergency message for the public along the coast of San Luis Obispo County. The National Weather Service has issued a Tsunami Warning. This could cause major flooding and risk to life in low lying areas along the coast.

The County Office of Emergency Services is advising residents, visitors and businesses in any low lying areas along the coast to evacuate to high ground immediately. This includes areas of San Simeon, Cambria, Cayucos, Morro Bay, Los Osos/Baywood Park, Avila Beach, Shell Beach, Pismo Beach, Grover Beach and Oceano. Evacuate immediately.

AREAS OF MORRO BAY THAT NEED TO EVACUATE OR MOVE TO HIGHER GROUND IMMEDIATELY ARE:

- **NORTH MORRO BAY BETWEEN HWY 1 AND THE OCEAN, INCLUDING MORRO STRAND STATE PARK AND BEACH, CLOISTERS, MORRO BAY HIGH SCHOOL, SEWAGE TREATMENT PLANT, ATASCADERO RD AND MORRO CREEK.**
- **ALL TRAILER PARKS AND ASSOCIATED AREAS ON INLAND SIDE OF HWY 1. MOVE TO HIGH GROUND EAST OF HWY 1 NOW!**
- **MORRO BAY EMBARCADERO AND MORRO ROCK AREA, INCLUDING COLEMAN BEACH AND PARK AND TIDELANDS PARK AND BOAT LAUNCH.**
- **BAY SIDE OF MAIN ST FROM OLIVE TO STATE PARK MOVE TO HIGH GROUND EAST OF MAIN ST NOW!**

- MORRO BAY STATE PARK, INCLUDING MARINA, CAMPGROUND AND EMPLOYEE HOUSING.

MOVE TO HIGH GROUND ABOVE GOLF COURSE NOW!

PLEASE USE 9-1-1 ONLY FOR LIFE THREATENING EMERGENCIES.

THE COUNTY OFFICE OF EMERGENCY SERVICES WILL PROVIDE ADDITIONAL INFORMATION AS SOON AS POSSIBLE.

Approved By: _____

Time Approved: _____

Time Distributed: _____

TSUNAMI EAS WARNING MESSAGE #5

EVACUATION, LOS OSOS/BAYWOOD PARK AND MONTANO DE ORO

Attention, attention ... this is an Emergency message for the public along the coast of San Luis Obispo County. The National Weather Service has issued a Tsunami Warning. This could cause major flooding and risk to life in low lying areas along the coast.

The County Office of Emergency Services is advising residents, visitors and businesses in any low lying areas along the coast to evacuate to high ground immediately. This includes areas of San Simeon, Cambria, Cayucos, Morro Bay, Los Osos/Baywood Park, Avila Beach, Shell Beach, Pismo Beach, Grover Beach and Oceano. Evacuate immediately.

AREAS OF LOS OSOS/BAY WOOD PARK THAT NEED TO EVACUATE OR MOVE TO HIGHER GROUND IMMEDIATELY ARE:

- ALL RESIDENTS OCCUPYING THE BAY SIDE OF 7TH ST, MITCHELL INLET AREA, CUESTA BY THE SEA, THE BAY SIDE OF HENRIETTA, SUNSET TERRACE AND THE DOWNTOWN AREA OF BAYWOOD PARK.

MOVE TO HIGH GROUND NOW!

AREAS OF MONTANO DE ORO STATE PARK THAT NEED TO EVACUATE OR MOVE TO HIGHER GROUND IMMEDIATELY ARE:

- HAZARD CANYON AREA, SPOONERS COVE, SAND SPIT, HORSE CAMP, MONTANO DE ORO CAMPGROUND AND ALL BEACHES AND BLUFF TRAILS.
MOVE TO HIGH GROUND OR RELOCATE TO SAND SPIT PARKING LOT OR PECHO VALLEY RD ABOVE HAZARD CANYON, ISLAY CREEK AND COON CREEK!

PLEASE USE 9-1-1 ONLY FOR LIFE THREATENING EMERGENCIES.

THE COUNTY OFFICE OF EMERGENCY SERVICES WILL PROVIDE ADDITIONAL
INFORMATION AS SOON AS POSSIBLE.

Approved By: _____

Time Approved: _____

Time Distributed: _____

TSUNAMI EAS WARNING MESSAGE #6

EVACUATION, PORT SAN LUIS AND AVILA BEACH

Attention, attention ... this is an Emergency message for the public along the coast of San Luis Obispo County. The National Weather Service has issued a Tsunami Warning. This could cause major flooding and risk to life in low lying areas along the coast.

The County Office of Emergency Services is advising residents, visitors and businesses in any low lying areas along the coast to evacuate to high ground immediately. This includes areas of San Simeon, Cambria, Cayucos, Morro Bay, Los Osos/Baywood Park, Avila Beach, Shell Beach, Pismo Beach, Grover Beach and Oceano. Evacuate immediately.

AREAS OF PORT SAN LUIS AND AVILA BEACH THAT NEED TO EVACUATE OR MOVE TO HIGHER GROUND IMMEDIATELY ARE:

- ALL AREAS OF PORT SAN LUIS, INCLUDING PIER, BEACHES AND PARKING LOTS.
MOVE TO HIGH GROUND EAST OF SAN LUIS CREEK BRIDGE NOW!
- ALL OF DOWNTOWN AVILA BEACH AREA, INCLUDING THE BEACH.
MOVE TO HIGH GROUND OR RELOCATE TO CAVE LANDING AND/OR UNOCAL PARKING LOTS!
- AVILA VALLEY COMMUNITY PROPERTIES, INCLUDING MALLARD GREEN, ANNA BAY, COFFEE BERRY, LOWER LUPINE CANYON AND LUPINE CYN INTERSECTION EAST, AND ALL OF THE GOLF COURSE.
- ALL RESIDENTS AND PROPERTIES ALONG CREEKS THAT FLOOD, INCLUDING SYCAMORE HOT SPRINGS, AVILA BARN, AVILA VALLEY HOT SPRINGS, OCEAN CANYON PINES RESORTS AND AVILA BEACH DRIVE.

- HIDDEN CREEK CANYON ROAD AND BELLVUE ORCHARD DRIVE
RESIDENTS AND BELLVUE SANTE FE SCHOOL.
**MOVE TO HIGH GROUND OR RELOCATE TO THE PG & E COMMUNITY
CENTER NOW!**

PLEASE USE 9-1-1 ONLY FOR LIFE THREATENING EMERGENCIES.

THE COUNTY OFFICE OF EMERGENCY SERVICES WILL PROVIDE ADDITIONAL
INFORMATION AS SOON AS POSSIBLE.

Approved By: _____

Time Approved: _____

Time Distributed: _____

TSUNAMI EAS WARNING MESSAGE #7
EVACUATION, SHELL BEACH AND PISMO BEACH

Attention, attention ... this is an Emergency message for the public along the coast of San Luis Obispo County. The National Weather Service has issued a Tsunami Warning. This could cause major flooding and risk to life in low lying areas along the coast.

The County Office of Emergency Services is advising residents, visitors and businesses in any low lying areas along the coast to evacuate to high ground immediately. This includes areas of San Simeon, Cambria, Cayucos, Morro Bay, Los Osos/Baywood Park, Avila Beach, Shell Beach, Pismo Beach, Grover Beach and Oceano. Evacuate immediately.

AREAS OF SHELL BEACH AND PISMO BEACH THAT NEED TO EVACUATE OR MOVE TO HIGHER GROUND IMMEDIATELY ARE:

- INDIO DRIVE TO THE OCEAN FROM ENCANTO TO THE END OF STREET, SHELL BEACH ROAD TO THE OCEAN FROM SPY GLASS TO DINOSAUR CAVES AND STATE PARKS NORTH BEACH CAMPGROUND.
MOVE TO HIGH GROUND EAST OF HWY 101 NOW!

- HWY 1 TO THE OCEAN FROM FRANKLIN TO HINDS AND HWY 101 TO THE OCEAN FROM WADSWORTH TO PRICE CANYON,
MOVE TO HIGH GROUND OR RELOCATE TO JUDKINS MIDDLE SCHOOL NOW!

- JAMES WAY TO THE OCEAN FROM PRICE CANYON TO 4TH STREET.
MOVE TO HIGH GROUND OR RELOCATE TO THE REAR PARKING LOT OF THE FIVE CITIES CENTER (BEHIND MARSHALLS) NOW!

- PISMO BEACH MOBILE HOME, RV PARKS, WATER TREATMENT FACILITY, AND BASE BALL FIELDS.

MOVE TO HIGH GROUND OR RELOCATE TO THE REAR PARKING LOT OF THE FIVE CITIES CENTER (BEHIND MARSHALLS) NOW!

PLEASE USE 9-1-1 ONLY FOR LIFE THREATENING EMERGENCIES.

THE COUNTY OFFICE OF EMERGENCY SERVICES WILL PROVIDE ADDITIONAL INFORMATION AS SOON AS POSSIBLE.

Approved By: _____

Time Approved: _____

Time Distributed: _____

TSUNAMI EAS WARNING MESSAGE #8

EVACUATION, GROVER BEACH

Attention, attention ... this is an Emergency message for the public along the coast of San Luis Obispo County. The National Weather Service has issued a Tsunami Warning. This could cause major flooding and risk to life in low lying areas along the coast.

The County Office of Emergency Services is advising residents, visitors and businesses in any low lying areas along the coast to evacuate to high ground immediately. This includes areas of San Simeon, Cambria, Cayucos, Morro Bay, Los Osos/Baywood Park, Avila Beach, Shell Beach, Pismo Beach, Grover Beach and Oceano. Evacuate immediately.

AREAS OF GROVER BEACH THAT NEED TO EVACUATE OR MOVE TO HIGHER GROUND IMMEDIATELY ARE:

- FIVE CITIES DRIVE/EL CAMINO TO MARGARITA FROM 4TH STREET TO OAK PARK BLVD.
MOVE TO HIGH GROUND OR RELOCATE TO LONGS PARKING LOT ON OAK PARK BLVD NOW!
- 2ND STREET TO THE OCEAN, 6TH STREET TO THE OCEAN FROM BRIGHTON TO MANHATTAN, AND 14TH STREET TO THE OCEAN FROM MANHATTAN TO THE PIKE.
- GRAND AVE FROM 2ND STREET TO OCEANO, INCLUDING LA SAGE RIVERIA.
MOVE TO HIGH GROUND EASTWARD TOWARDS OAK PARK BLVD. NOW!

PLEASE USE 9-1-1 ONLY FOR LIFE THREATENING EMERGENCIES.

THE COUNTY OFFICE OF EMERGENCY SERVICES WILL PROVIDE ADDITIONAL
INFORMATION AS SOON AS POSSIBLE.

Approved By: _____

Time Approved: _____

Time Distributed: _____

**TSUNAMI EAS WARNING MESSAGE #9
EVACUATION, OCEANO AND OSO FLACO LAKE**

Attention, attention...this is an Emergency message for the public along the coast of San Luis Obispo County. The National Weather Service has issued a Tsunami Advisory/Warning. This could cause major flooding and risk to life in low lying areas along the coast.

The County Office of Emergency Services is advising residents, visitors and businesses in any low lying areas along the coast to evacuate to high ground immediately. This includes areas of San Simeon, Cambria, Cayucos, Morro Bay, Los Osos/Baywood Park, Avila Beach, Shell Beach, Pismo Beach, Grover Beach and Oceano. Evacuate immediately.

AREAS OF OCEANO AND OSO FLACO LAKE THAT NEED TO EVACUATE OR MOVE TO HIGHER GROUND IMMEDIATELY ARE:

FROM HWY 1 (PACIFIC BLVD. OR FRONT STREET) TO THE OCEAN AND SOUTH OF CINEGA FROM 19TH TO VALLEY RD, INCLUDING OCEANO STATE PARK CAMPGROUND, PISMO STATE BEACH, OCEANO COUNTY CAMPGROUND AND OCEANO AIRPORT.

MOVE TO HIGH GROUND NORTH AND EAST NOW!

OCEANO DUNES STATE RECREATIONAL VEHICLE PARK.

MOVE TO HIGH DUNES ALONG PARK'S EAST BOUNDARY OR OUT OF PARK TO HWY 101 NOW!

ALL FARM LAND AND AREAS AROUND OSO FLACO LAKE.

MOVE TO HIGH GROUND EAST OF RAIL ROAD TRACKS NOW!

PLEASE USE 9-1-1 ONLY FOR LIFE THREATENING EMERGENCIES.

THE COUNTY OFFICE OF EMERGENCY SERVICES WILL PROVIDE ADDITIONAL INFORMATION AS SOON AS POSSIBLE.

Approved By: _____
Time Approved: _____
Time Distributed: _____

EAS MESSAGE FOR TSUNAMI ADVISORY/WARNING – NO EVACUATION.

This is the San Luis Obispo County Sheriff's Department (or Emergency Operations Center).

On ____/____/____ at ____:____ AM / PM , we received a

tsunami advisory / tsunami warning,
repeating, a

tsunami advisory / tsunami warning

from the West Coast Tsunami Warning Center (or: _____).

At this time there is no evidence that a tsunami may hit the coastline of San Luis Obispo County.
– repeating there is no evidence that a tsunami may hit the coastline of San Luis Obispo County.
The County has issued no evacuation orders.

If it becomes necessary for coastal areas to evacuate the San Luis Obispo County Office of
Emergency Services will provide information via your radio and television. Please tune in to this
or any other local radio or TV station for updated information and instructions.

Please do not call 911, the Sheriff's Department or other emergency response agencies for
further information. Please use 9-1-1 only for life threatening emergency purposes.

The County Office of Emergency Services will provide additional information as soon as
possible.

End of message.

Approved By: _____

Time Approved: _____

Time Distributed: _____

GENERIC EAS MESSAGE FOR TSUNAMI WARNING

This is the San Luis Obispo County Sheriff's Department (or Emergency Operations Center).

On ____/____/____ at ____:____ AM / PM , we received a tsunami warning – repeating a tsunami warning - from the West Coast Tsunami Warning Center (or: _____) advising they estimate a tsunami may hit the coastline of San Luis Obispo County and other California counties.

Please tune in to this or any other local radio or TV station for instructions and information. It may be necessary for coastal areas to evacuate – individuals on beaches, near ocean vista points and other low lying coastal areas should prepare to move inland or to higher ground as soon as possible. Repeating, individuals on beaches, near ocean vista points and other low lying coastal areas should prepare to move inland or to higher ground as soon as possible. Standby for follow up messages with specific evacuation instructions.

Please do not call 911, the Sheriff's Department or other emergency response agencies for further information. Please use 9-1-1 only for life threatening emergency purposes.

The County Office of Emergency Services will provide additional information as soon as possible.

End of message.

Approved By: _____

Time Approved: _____

Time Distributed: _____

EMERGENCY ALERT SYSTEM MESSAGE – TERMINATION OF EMERGENCY

The San Luis Obispo County Emergency Services Director has announced that as of _____:_____ AM / PM today, _____/_____/_____, that the Tsunami Advisory/Warning has been terminated and an emergency condition no longer exists.

This message will be repeated frequently. Stay tuned to this station, or any local radio or television station for the latest information. Additional information will be provided as it becomes available.

End of message.

Approved By: _____

Time Approved: _____

Time Distributed: _____

NEWS RELEASE TSUNAMI WARNING MESSAGE

EVACUATION, ALL SAN LUIS OBISPO COASTAL AREAS

Attention, attention ... this is an Emergency message for the public along the coast of San Luis Obispo County. The National Weather Service has issued a Tsunami Advisory/Warning. This could cause major flooding and risk to life in low lying areas along the coast.

The County Office of Emergency Services is advising residents, visitors and businesses in any low lying areas along the coast to evacuate to high ground immediately. This includes areas of San Simeon, Cambria, Cayucos, Morro Bay, Los Osos/Baywood Park, Avila Beach, Shell Beach, Pismo Beach, Grover Beach and Oceano. Evacuate immediately.

AREAS OF THE COAST LINE IN THE COUNTY OF SAN LUIS OBISPO THAT NEED TO EVACUATE OR MOVE TO HIGHER GROUND IMMEDIATELY ARE:

NORTH COAST AND SAN SIMEON:

- ALL LOW LYING AREAS OF HWY 1, BEACHES AND OCEAN VISTA POINTS.
- ALL AREAS OF SAN SIMEON STATE BEACH AND PIER AREA, SAN SIMEON ACRES, SAN SIMEON STATE PARK CAMP GROUND AND ALL PRIVATE RESIDENCES WEST OF HWY 1.

MOVE TO HIGH GROUND NOW OR LEAVE THE AREA USING HWY 1 NORTH TO THE HEARST CASTLE VISITORS CENTER OR SOUTH TO HWY 46. IF YOU ARE LOCATED IN THE SAN SIMEON STATE PARK CAMP GROUND YOU MAY RELOCATE ON FOOT TO WASHBURN CAMPSITES.

CAMBRIA:

- LEFFINGWELL LANDING, MOONSTONE BEACH DRIVE, THE BOARDWALK,

SHAMEL PARK INCLUDING ALL RESIDENTS ON WINDSOR BLVD, PARK HILL AND THE WEST RANCH FROM COASTAL MARINE TERRACE TRAIL TO THE COAST.

- MAIN ST FROM HWY 1 TO SANTA ROSA CREEK RD AND SANTA ROSA CREEK RD TO AND INCLUDING THE HIGH SCHOOL.
- BURTON DRIVE AND ALL SIDE STREETS BETWEEN MAIN ST TO AND INCLUDING VILLAGE LANE.
- MARINE TERRACE BETWEEN MARLBOROUGH AND THE OCEAN TO ARDATH, INCLUDING LAMPTON CLIFFS COUNTY PARK AND PRIVATE RESIDENCES AT END OF MARLBOROUGH.

MOVE TO HIGH GROUND NOW OR LEAVE THE AREA USING HWY 1 SOUTH TO HWY 46.

ESTERO BLUFF AND CAYUCOS:

- ESTERO BLUFF BEACH AREAS AND HIGHWAY TURNOUTS.
MOVE TO HIGH GROUND NOW OR RELOCATE TO HARMONY
- N OCEAN AVE AT HWY 1 TO E ST FROM HWY 1 WEST, INCLUDING OCEAN FRONT LN, THE PIER AND THE BEACH.
- E ST FROM OCEAN AVE WEST AND 10TH SOUTH TO HWY 1 FROM CASS AVE TO THE BEACH.
MOVE TO HIGH GROUND NOW OR RELOCATE TO ST. JOSEPHS CHURCH.
- OBISPO/STUDIO DRIVE TO CHANEY AVE FROM HWY 1 TO THE BEACH, INCLUDING THE AREAS OF OCEAN AVE BETWEEN HACIENDA AND STUART AND THE CEMETARY
MOVE TO HIGH GROUND NOW OR LEAVE THE AREA USING HWY 1 NORTH TO HWY 46.

MORRO BAY:

- NORTH MORRO BAY BETWEEN HWY 1 AND THE OCEAN, INCLUDING MORRO STRAND STATE PARK AND BEACH, CLOISTERS, MORRO BAY HIGH SCHOOL, SEWAGE TREATMENT PLANT, ATASCADERO RD AND MORRO CREEK.
- ALL TRAILER PARKS AND ASSOCIATED AREAS ON INLAND SIDE OF HWY 1.
MOVE TO HIGH GROUND EAST OF HWY 1 NOW.
- SOUTH MORRO BAY EMBARCADERO AND MORRO ROCK AREA, INCLUDING COLEMAN BEACH AND PARK AND TIDELANDS PARK AND BOAT LAUNCH.
- BAY SIDE OF MAIN ST FROM OLIVE TO STATE PARK
MOVE TO HIGH GROUND EAST OF MAIN ST NOW.
- MORRO BAY STATE PARK, INCLUDING MARINA, CAMPGROUND AND EMPLOYEE HOUSING.
MOVE TO HIGH GROUND ABOVE GOLF COURSE NOW.

LOS OSOS/BAYWOOD PARK AND MONTANO DE ORO:

- ALL RESIDENTS OCCUPYING THE BAY SIDE OF 7TH ST, MITCHELL INLET AREA, CUESTA BY THE SEA, THE BAY SIDE OF HENRIETTA, SUNSET TERRACE AND THE DOWNTOWN AREA OF BAYWOOD PARK.
MOVE TO HIGH GROUND NOW.
- HAZARD CANYON AREA, SPOONERS COVE, SAND SPIT, HORSE CAMP, MONTANO DE ORO CAMPGROUND AND ALL BEACHES AND BLUFF TRAILS.
MOVE TO HIGH GROUND OR RELOCATE TO SAND SPIT PARKING LOT OR PECHO VALLEY RD ABOVE HAZARD CANYON, ISLAY CREEK AND COON CREEK.

PORT SAN LUIS AND AVILA BEACH:

- ALL AREAS OF PORT SAN LUIS, INCLUDING PIER, BEACHES AND PARKING LOTS.
MOVE TO HIGH GROUND EAST OF SAN LUIS CREEK BRIDGE NOW.
- ALL OF DOWNTOWN AVILA BEACH AREA.
MOVE TO HIGH GROUND OR RELOCATE TO CAVE LANDING AND/OR UNOCAL PARKING LOTS.
- AVILA VALLEY COMMUNITY PROPERTIES, INCLUDING MALLARD GREEN, ANNA BAY, COFFEE BERRY, LOWER LUPINE CANYON AND LUPINE CYN INTERSECTION EAST, AND ALL OF THE GOLF COURSE.
- ALL RESIDENTS AND PROPERTIES ALONG CREEKS THAT FLOOD, INCLUDING SYCAMORE HOT SPRINGS, AVILA BARN, AVILA VALLEY HOT SPRINGS, OCEAN CANYON PINES RESORTS AND AVILA BEACH DRIVE.
- HIDDEN CREEK CANYON ROAD AND BELLVUE ORCHARD DRIVE RESIDENTS AND BELLVUE SANTE FE SCHOOL.
MOVE TO HIGH GROUND OR RELOCATE TO THE PG & E COMMUNITY CENTER NOW.

SHELL BEACH AND PISMO BEACH:

- INDIO TO THE OCEAN FROM ENCANTO TO THE END OF STREET, SHELL BEACH ROAD TO THE OCEAN FROM SPY GLASS TO DINOSAUR CAVES AND STATE PARKS NORTH BEACH CAMPGROUND.
MOVE TO HIGH GROUND EAST OF HWY 101 NOW.
- HWY 1 TO THE OCEAN FROM FRANKLIN TO HINDS AND HWY 101 TO THE OCEAN FROM HINDS TO PRICE CANYON, INCLUDING WATER TREATMENT FACILITY, BASE BALL FIELDS AND MOBILE HOME PARK.

MOVE TO HIGH GROUND OR RELOCATE TO JUDKINS MIDDLE SCHOOL NOW.

- JAMES WAY TO THE OCEAN FROM PRICE CANYON TO 4TH STREET.
MOVE TO HIGH GROUND OR RELOCATE TO THE REAR PARKING LOT OF THE FIVE CITIES CENTER (BEHIND MARSHALLS) NOW.
- PISMO BEACH MOBILE HOME, RV PARKS, WATER TREATMENT FACILITY, AND BASE BALL FIELDS.
MOVE TO HIGH GROUND OR RELOCATE TO THE REAR PARKING LOT OF THE FIVE CITIES CENTER (BEHIND MARSHALLS) NOW.

GROVER BEACH:

- FIVE CITIES DRIVE/EL CAMINO TO MARGARITA FROM 4TH STREET TO OAK PARK BLVD.
MOVE TO HIGH GROUND OR RELOCATE TO LONGS PARKING LOT ON OAK PARK BLVD NOW.
- 2ND STREET TO THE OCEAN, 6TH STREET TO THE OCEAN FROM BRIGHTON TO MANHATTAN, AND 14TH STREET TO THE OCEAN FROM MANHATTAN TO THE PIKE.
- GRAND AVE FROM 2ND STREET TO OCEANO, INCLUDING LA SAGE RIVERIA.
MOVE TO HIGH GROUND EASTWARD TOWARDS OAK PARK BLVD. NOW.

OCEANO AND OSO FLACO LAKE:

- FROM HWY 1 (AKA PACIFIC BLVD. OR FRONT STREET) TO THE OCEAN AND SOUTH OF CINEGA FROM 19TH TO VALLEY RD, INCLUDING OCEANO STATE

PARK CAMPGROUND, PISMO STATE BEACH, OCEANO COUNTY
CAMPGROUND AND OCEANO AIRPORT.

MOVE TO HIGH GROUND NORTH AND EAST NOW.

- OCEANO DUNES STATE RECREATIONAL VEHICLE PARK.
**MOVE TO HIGH DUNES ALONG PARK'S EAST BOUNDARY OR OUT OF
PARK TO HWY 101 NOW.**
- ALL FARM LAND AND AREAS AROUND OSO FLACO LAKE.
MOVE TO HIGH GROUND EAST OF RAIL ROAD TRACKS NOW.

PLEASE USE 9-1-1 ONLY FOR LIFE THREATENING EMERGENCIES.

THE COUNTY OFFICE OF EMERGENCY SERVICES WILL PROVIDE ADDITIONAL
INFORMATION AS SOON AS POSSIBLE.

Approved By: _____

Time Approved: _____

Time Distributed: _____

ATTACHMENT 5

PROJECTED INUNDATION MAPS – UNDER DEVELOPMENT

ATTACHMENT 6

TABLE – EMEGENCY CONTACT INFORMATION

AGENCY	PHONE	TIME CONTACTED
Alaska and West Coast Tsunami Warning Center		
Pacific Tsunami Warning Center		
National Weather Service, LA/Oxnard		
County Fire Emergency Command Center		
County Public Works		
County Parks (General Services)		
County Health Officer		
County Social Services		
County Communications*		
California Emergency Management Agency		
U.S. Coast Guard Station, Morro Bay		
Port San Luis Harbor Patrol		
State Parks Dispatch (CENCOM)		
Diablo Canyon Power Plant		
Phillips Conoco Refinery		
Morro Bay Power Plant		
Sheriff's Department, Watch Commander		
CHP Dispatch		
EMSA*		
Caltrans Dispatch		
County Environmental Health*		
American Red Cross		
P G & E Distribution Office		
Southern California Gas Company		
AT&T		
Union Pacific Railroad		
US Nuclear Regulatory Commission, Ops Center		

ATTACHMENT 7

MULTILINE UNIT MESSAGE FOR TSUNAMI WARNING

(This message may also be used for an initial EAS broadcast if necessary)

This is the San Luis Obispo County Emergency Operations Center. On _____ [day of week], ____/____/____, at _____: _____ AM / PM, the County Sheriff's Office received a tsunami warning from _____.

This means that the Alaska or Pacific Tsunami Warning Center believes our coastline will, or may be, hit by a tsunami.

This tsunami warning was issued because of an earthquake (or other reason) near _____.

If you are required to take specific protective action or evacuate, that information will be broadcast over radio and television stations via the Emergency Alert System. . Stay tuned to any local radio or TV station broadcasting emergency information should it become necessary to issue specific emergency instructions and updates on the tsunami warning.

In the meantime, the following instructions and safety precautions should be taken immediately:

1. Do not go to the beach or coastline to watch for a tsunami. Keep away. Stay at least 1 –2 miles away from the coast, or 50 feet above sea level in elevation.
2. If a tsunami occurs, even a small one, stay away from the beach or coastline until you are told it is okay to do so from emergency officials; a tsunami IS NOT a single wave, but a series of waves. Again, stay away from the beach or coastline until you hear official information from public safety personnel that it is okay to do so.

3. Remember that a small tsunami in one area may be a giant tsunami just a few miles away. Do not let the modest size of one let you lose respect for all tsunami waves.

4. Please do not call 9-1-1 for information. Use 9-1-1 only if you have a life-threatening emergency.

5. If evacuations or more specific instructions are ordered, they will be broadcast to the media. Again, stay tuned to local radio and TV stations for updated information.

This message will be updated when additional information becomes available.

Again, please do not call 9-1-1 for information.

Approved By: _____

Time Approved: _____

Time Distributed: _____

ATTACHMENT 8

TABLE – AREAS REQUIRING EVACUATION

LOCATION	AREA REQUIRING EVACUATION	EAS MESSAGE
HWY 1, North of Cambria	Low lying areas of Hwy 1, beaches, and ocean vista points.	Move to high ground
San Simeon	San Simeon State Beach and Pier Area	Relocate to Hearst Castle Visitor Center
	San Simeon Acres	Relocate to Hearst Castle Visitor Center or south to Hwy 46.
	San Simeon State Park Camp Ground and private residences West of Hwy 1.	Relocate to “Washburn” campsites.
Cambria	Leffingwell Landing and Hwy 1.	Move to high ground east of Hwy 1 or south to Hwy 46.
	Moonstone Beach Drive and Boardwalk	Move to high ground east of Hwy 1 or south to Hwy 46.
	Shamel Park and Park Hill; all residents on both sides of Windsor Blvd from Hwy 1 to the West Ranch, to the coast.	Move to high ground or South to Hwy. 46.
	West Ranch from coastal Marine Terrace Trail (both sides) down to the Coast.	Move upslope to West Ranch Ridge Trail or off West Ranch South to Hwy 46.
	Main St from Highway 1 to Santa Rosa Creek Road and Santa Rosa Creek Road to and including High School.	Move to high ground or south to Hwy 46.
	Burton Drive and all side streets between Main St. and Village Lane, including the East Ranch, Rodeo Grounds Drive and all of Village Lane (Tin City).	Move to high ground or south to Hwy 46.
	Marine Terrace, between Marlborough and the Ocean to Ardath; including Lampton Cliffs County Park and private residence at end of Marlborough.	Move to high ground or south to Hwy 46.
Estero Bluff	Beach and highway turnouts.	Relocate to Harmony
Cayucos	N Ocean Ave at Hwy 1 to E Street from Hwy 1 west to the beach, including all of Ocean Front Lane, the pier and beach.	Relocate to St. Josephs Catholic Church.

	E Street to 10 th from Ocean Ave west to the beach and 10 th South to Hwy 1 from Cass Ave. to the beach, including Water Treatment and Sanitation District facilities on Cabrillo Drive.	Relocate to St. Josephs Catholic Church.
	Obispo/Studio Drive to Chaney Ave. from Hwy 1 to the beach, including the areas of Ocean Ave between Hacienda and Stuart, including the cemetery.	Move to high ground East of S Ocean Ave.
Morro Bay	North Morro Bay between Hwy 1 and the Ocean including; Morro Strand State Park and Beach, Cloisters, Morro Bay High School, Sewage Treatment Plant, Atascadero Rd and Morro Creek	Move to high ground, East of Hwy 1
	All trailer parks and associated areas on inland side of Hwy 1 South of Hwy 41, near Morro Creek drainage to 50 ft elevation.	Move to high ground
	Morro Bay Embarcadero area, including Morro Rock area, Coleman Beach and Park, and Tidelands Park & boat launch.	Move to high ground, East of Main St.
	The bay side of Main St from Olive to the State Park.	Move to high ground, East of Main St.
	Morro Bay State Park area including; Marina, Campground, and Employee housing	Move to high ground above the golf course
Los Osos	All residents occupying the Bay side of 7 th St, Mitchell Inlet area, Cuesta by the Sea, the Bay side of Henrietta, Sunset Terrace and the downtown area of Baywood Park.	Move to high ground
Montano De Orro (MDO) State Park	The Hazard Canyon area, Spooners Cove, Sand Spit, Horse Camp, MDO campground, and the beaches and bluff trails. All beaches	Relocate to Sand Spit Parking Lot or Pecho Valley Rd above Hazard Canyon, Islay Creek, and Coon Creek.
Port San Luis	All areas including pier, beaches and parking lots.	Move to high ground near upper storage yard.
Avila Beach	All of downtown Avila Beach area, including the beach.	Relocate to Cave Landing and/or Unocal Parking lot.

	Lupine Canyon properties bordering bike trail; Avila Valley Community Properties, including Mallard Green Development, Anna Bay, Coffee Berry, lower Lupine Canyon and Lupine Cyn intersection East; and all of golf course.	Move to top of Lupine Canyon, Heron Crest or King Fisher Developments or PG & E Community Center
	All residents along creeks that flood during normal rain year.	Relocated to PG & E Community Center.
	Avila Barn, Avila Valley Hot Springs, and Ocean Canyon Pines Resorts.	Relocate to P G & E Community Center.
	Hidden Creek Cyn Road and Bellvue Orchard Drive residents and Bellvue Sante Fe School.	Relocate to PG & E Community Center.
	Sycamore Hot Springs	Utilize on site flood and evacuation plan.
	Avila Beach Drive	Move to high ground East of Highway 101.
Shell Beach	Indio to the Ocean from Encanto to the end of the street.	Move to high ground East of Highway 101.
	Shell Beach Rd to the Ocean from Spy Glass to Dinosaur caves.	Move to high ground East of Highway 101.
Pismo Beach	State Parks North Beach Campground	Move to high ground east of Highway 101.
	Hwy 1 to the Ocean from Franklin to Hinds	Relocate to Judkins Middle School.
	Hwy 101 to the Ocean from Wadsworth to Price Canyon,	Relocate to Judkins Middle School.
	James Way to the Ocean from Price Canyon to 4 th street.	Move to high ground or relocate to the rear parking lot of the Five Cities Center (behind Marshalls)
	Pismo Beach Mobile Home, RV Parks, Water Treatment Facility and Baseball fields.	Move to high ground or relocate to the rear parking lot of the Five Cities Center (behind Marshalls)
Grover Beach	Five Cities Drive/El Camino to Margarita from 4 th Street to Oak Park.	Move to high ground or relocate to the rear parking lot of the Five Cities Center (behind Marshalls)
	2 nd street to the Ocean	Move to high ground, eastward, toward Oak Park Blvd

	6 th street to the Ocean from Brighton to Manhattan	Move to high ground, eastward, toward Oak Park Blvd
	14 th street to the Ocean from Manhattan to the Pike.	Move to high ground, eastward, toward Oak Park Blvd
	Grand Ave from 2 nd St to Oceano, including La Sage Riveria.	Move to high ground, eastward, toward Oak Park Blvd
Oceano	From Hwy 1 (aka Pacific Blvd. Or Front Street) to the Ocean and south of Cienaga from 19 th to Valley Rd.	Move to high ground north and east.
	Oceano State Park Campground (Pismo State Beach), Oceano County Campground and Oceano Airport	Move to high ground
	Oceano Dunes State Recreational Vehicle Park	Move to high dunes along parks east boundary or out of park to Hwy 101.
Oso Flaco Lake	All farm land and areas around Oso Flaco Lake.	Move to high ground east of rail road tracks.