



City of Los Angeles

EMERGENCY OPERATIONS PLAN

TSUNAMI

Hazard Specific Annex

June 2018

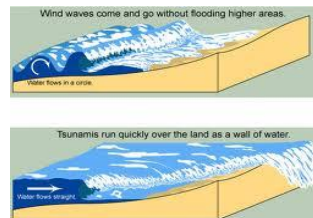


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ANNEX DEVELOPMENT AND MAINTENANCE

This Annex is developed in support of the City of Los Angeles Emergency Operations Plan (EOP) to facilitate response during tsunami incidents.

This Annex is developed in cooperation and with input from the City departments with primary response or support activities, as well as input from appropriate non-City agencies with identified activities related to tsunamis.

This Annex is developed to describe the overall citywide response function and capabilities, and is to be used by each department identified within this Annex to develop their own standardized operating procedures (SOPs) specifically for their department to direct tactical operations. When developing SOPs, each department is to take into consideration how all of the activities identified in this plan directly related to their own department, as well as how those activities interact with, support, or require support from other departments identified within this plan. Departments must ensure that their SOPs are inclusive of planning for people with disabilities and others with access and functional needs. If, at any time, any department identifies a conflict in how their field response or support activities are performed in comparison to what is described in this Annex, and/or identifies a conflict between their listed activities within this Annex and how they relate to or support another department's listed activities, such conflict is to be immediately reported to the Emergency Management Department – Planning Division.

If, at any time, a department, agency, or stakeholder to this plan changes, develops, or amends any policy, procedure, or operation that will change or affect the contents of this plan, that entity is to immediately notify the Emergency Management Department – Planning Division.

This Annex is to be corrected immediately upon notification or observation of any operational errors or conflicts. Such corrections are to be reflected within the Record of Changes.

Every other year, a formal review of this Annex will be conducted by departments and agencies that are identified within the Annex, as well as any other departments or agencies that may need to be part of the review process. The Emergency Management Department – Planning Division will lead such an effort. Upon completion of such formal review, all corrections to the plan will be reflected within the Record of Changes.

APPROVAL AND IMPLEMENTATION

This document is a Hazard Specific Annex to the City of Los Angeles Emergency EOP. It serves as either a stand-alone plan or companion document to an applicable Hazard Specific Response Annex to the EOP. The Annex was developed with input from all applicable City of Los Angeles departments and allied stakeholders. Upon completion, it is reviewed by the City's Emergency Management Committee (EMC). When approved by the EMC, it presents the document to the Emergency Operations Board (EOB) with a recommendation for approval. Upon review and approval by the EOB, the document goes to the Mayor of the City of Los Angeles with a recommendation to approve and forward to the City Council for adoption.

Upon formal approval by the Mayor and adoption by the City Council, this document becomes an official Annex to the City of Los Angeles EOP.

This Annex was developed with input from all applicable Los Angeles City Departments. This Annex is compliant with the Federal Emergency Management Agency (FEMA) *Comprehensive Preparedness Guide (CPG) 101, Developing and Maintaining Emergency Operations Plans*, Version 2.0 (CPG 101 V.2)¹.

¹ *Developing and Maintaining Emergency Operations Plans. Comprehensive Preparedness Guide (CPG) 101*, version 2.0 ed. (n.p.: U.S. Department of Homeland Security, Federal Emergency Management Agency, 2010).

RECORD OF CHANGES

Each revision or correction to this Annex must be recorded. The record contains the date, location, and brief description of change, as well as who requested or performed such change.

Table 1: Record of Changes

Date	Section/Page	Description of Change	Changed By
4-4-18	All	2 Year Revision Due	Larry Meyerhofer
1-28-19	All	Review for inclusion of new content and maps	Tayler Lorence

CITY EMERGENCY OPERATIONS PLAN/ANNEX CROSS REFERENCE

During the response to this identified hazard, the following functional support shall be used as deemed necessary:

- Throughout this document, where public information and communication with the public is referenced, see the **Emergency Public Information Annex**.
- Where internal communications systems is referenced, see the **Communications Annex**.
- Where early warning and notification is referenced, see the **Early Warning and Notification Annex**.
- Where sheltering, mass care, mass feeding and the provision of functional needs support services (FNSS) is referenced, see the **Mass Care and Sheltering Annex; Resettlement Processing Center Annex; and Logistics Annex**.
- Where reference is made to evacuations, see the **Evacuation Annex**.
- Where reference is made to Federal, State, Local or Non-Governmental Organizations providing recovery information, see the **Local Assistance Center Annex and Recovery Annex**.
- Where reference is made to response and restoration of critical infrastructure, see the **Critical Infrastructure Annex**.
- Hazard specific annexes include the **Earthquake Annex, Adverse Weather Annex, Brushfire Annex, Urban Flooding Annex, Off-Airport Major Aircraft Response Annex, Civil Disturbance Annex, Terrorism Prevention & Protection Annex and CBRN Annex (including the Chemical, Biological, Radiological, and Nuclear Appendixes)**.
- All actions related to fulfilling the purpose of this Annex will adhere to the City of Los Angeles Citywide American with Disabilities Act (ADA) guides, documents, and checklists.
- Where City departments have tasks assigned relative to this Annex, please refer to that specific department's Standard Operating Procedures.

BACKGROUND

While historic and geologic evidence suggests the threat of a tsunami is greater in Alaska, Hawaii, and the northern coastal areas of California, there is still potential for a tsunami to impact Southern California. Within the City of Los Angeles, areas of West Los Angeles, Pacific Palisades, Venice, Playa Del Rey, and San Pedro (collectively referred to as the Los Angeles coastal areas) could be directly impacted by a tsunami event.

A tsunami is a series of ocean seismic waves of extremely long length generated by earthquakes, volcanic eruptions, massive undersea landslides, or any other disturbance that displaces a large water mass from its equilibrium position. As a distant tsunami crosses the deep ocean the wave may be a hundred miles in length and only a few feet in height. Tsunamis may reach speeds of 600 miles per hour in deep water. Tsunamis are typically classified as either local or distant. These two types of tsunamis have different implications for comprehensive planning and evacuation warning.

Distant tsunamis are the most common type of tsunami observed along the Pacific Coast of the United States. The time required for a distant tsunami to reach the Hawaiian and mainland coasts will vary between 5 ½ to 18 hours, provided the tsunami place of origin. The effects of a distant tsunami on the City of Los Angeles coastal area may be negligible or severe depending upon the magnitude of the tsunami, its source distance, and the direction of its approach.

Local tsunamis usually result from earthquakes occurring off nearby coasts. In Southern California, large offshore or coastal fault movements could cause large submarine landslides along steep and unstable slopes of the Continental Shelf edge and offshore borderland ridges. The travel time of a local tsunami, from the source to coastal communities, is likely to be between five and 30 minutes. A local tsunami may require an earthquake response and the immediate need to evacuate from inundation areas to higher ground.

Several major earthquake faults are located off the California coast. While none of these are thought capable of a "great" earthquake of a magnitude of 8.0 or more, several could generate quakes in the 6.0 range. Such a quake could generate a local tsunami, especially if it involves major uplift of the undersea earth surface as seen in the Northridge earthquake.

In 2009², a tsunami inundation reassessment of California coastal areas was conducted in a joint effort by the California Governor's Office of Emergency Services, the University of Southern California, and the California Geological Survey. This reassessment resulted in the development of tsunami inundation maps, indicating inundation areas along the California coast, including the City of Los Angeles coastal areas. Tsunami inundation maps are critical in the development of tsunami evacuation plans, evacuation routes, sign location, and identifying Safe Refuge Centers as well as focused community outreach and educational programs, including detailed brochures. This Annex contains the inundation zone maps and tsunami

² Los Angeles County Tsunami Inundation Maps.

http://www.conservation.ca.gov/cgs/geologic_hazards/Tsunami/Inundation_Maps/LosAngeles

evacuation maps based on the 2009 study (Attachment C: Tsunami Inundation Area Maps and Attachment D: Evacuation Route Maps).

Any type of tsunami on the Los Angeles coastal areas would be most notable in the Venice, West Los Angeles, San Pedro and the Los Angeles Harbor areas. Continued development in the areas exposed to coastal inundation has increased the risk of property damage and loss of life from future tsunamis. Historic and geologic evidence suggest the threat of tsunami is greater in Alaska, Hawaii and the northern coastal areas of California; however, there is evidence of potential impacts to Southern California.

Additional detailed hazard analysis information regarding tsunami incidents in the City of Los Angeles can be found in the 2017 Local Hazard Mitigation Plan, Section 12.

I. PURPOSE, SCOPE, SITUATION AND ASSUMPTIONS

A. Purpose

This Annex details governmental responsibilities for the managed and communicated response to a tsunami event. This Annex can be used in conjunction with other annexes and plans designed for the protection of the population. Organizations, operational concepts, responsibilities, and procedures described in this annex are applicable to all locations and to all agencies, organizations, and personnel with responsibilities related to tsunami response.

A tsunami event, occurring in any of the Los Angeles coastal areas, has the potential to cause flooding, fire, disruption of public utilities, property damage, and personal injury. The purpose of this Annex is to provide direction and guidance to the City departments and agencies in responding to significant incidents involving a local or distant tsunami that would exceed the scope of incidents managed at the field level.

The Tsunami Annex has been developed to meet the following objectives:

- Provide a concept of operations and identify roles and responsibilities for each appropriate department within the City of Los Angeles;
- Define communication, coordination and evacuation procedures for rapid notification and response of City departments, stakeholders, and the public in the event of a tsunami related emergency;
- Identify Los Angeles coastal area tsunami inundation areas as well as associated evacuation routes and Safe Refuge Centers;
- Define City department's evacuation responsibilities related to critical facilities, including public schools and fire stations, within the inundation areas;
- Identify actions that can realistically be accomplished within a few hours to a few days to mitigate any adverse impact;
- Ensure consistency and continuity with Federal, State of California, the Los Angeles County Operational Area, and other local governments' emergency response plans and operations; and
- Ensure consistency with Federal and State laws pertaining to emergency management procedures relating to people with disabilities and others with access and functional needs.

Management of a significant incident such as a tsunami is a critical function performed by members of different responding departments and agencies. In addition to this Annex, it is vital for all personnel to be familiar with their own department's emergency plan, as well as those of assisting agencies. All emergency plans of City departments that have responsibilities during a tsunami occurrence should delineate that department's responsibilities during such an event.

B. Scope

This Annex is applicable to City departments with Emergency Operations Organization (EOO) responsibilities and essential resources. Of particular importance to this plan are:

- City departments with emergency public safety functions
- City departments that primarily support departments with public safety functions
- City departments with evacuation and sheltering functions
- City departments with public notification functions

The City departments identified in this plan have distinct roles and responsibilities as it relates to a tsunami emergency response. These departments include:

- Department of Aging (Aging)
- Department of Animal Services (Animal Services)
- Department on Disability (DOD)
- Emergency Management Department (EMD)
- Los Angeles Fire Department (LAFD)
- Port of Los Angeles (POLA)
- Los Angeles Police Department (LAPD)
- Department of Recreation and Parks (RAP)
- Los Angeles Department of Transportation (LADOT)

C. Situation Overview

1. Characteristics

Location

The City of Los Angeles covers 498 square miles with approximately 468 square miles of land (214 square miles of which are hills and mountains) and approximately 29 square miles of water. The San Gabriel and Santa Susana Mountains bound the City on the north and the Santa Monica Mountains extend across the middle of the City. The Palos Verdes Hills and Pacific Ocean bound the City on the south and west.

Demographics

According to the California Department of Demographic Research Unit's "E-1 Population Estimates for Cities, Counties, and the State³", the 2016 population estimate for the City of Los Angeles is 4,030,904. This breaks down to approximately 8094 persons per square mile.

The City of Los Angeles is one of the most diverse cities in the world. Angelinos speak nearly 200 languages and are part of many different religious and belief

³ California Department of Finance, E-1 Population Estimates for Cities, Counties, and the State, January 1, 2015 and 2016

systems. Community members who live, work, and play in Los Angeles include people with disabilities and others with access and functional needs.

This plan will use the phrase *people with disabilities and others with access and functional needs* to describe both those that meet the definition of disability as well as people who may or may not meet the definitions of civil rights laws or some of the 60 plus diverse definitions of disability⁴. The definitions for people with disabilities as well as others with access and functional needs are provided below:

People with Disabilities

“Disability” in this context is a legal term rather than a medical one. It refers to a federally protected class under the 1990 ADA. Nationally, people with disabilities make up about 20% of the population. To be in compliance with the law, emergency managers must apply the concepts of accessibility, inclusion, and nondiscrimination in providing services to the general public which includes communication of public information and warnings, transportation, mass care and sheltering, and evacuations.

Others with Access and Functional Needs

“Others with Access and Functional Needs” is a broad definition that includes anyone who might have additional needs before, during, or after a disaster in accessing services. This includes individuals that may or may not meet the definitions of disability under existing civil rights laws, such as people with limited or no English language proficiency, individuals that are institutionalized, women in late-term pregnancy, or those with limited or no access to transportation. With this broader definition, about 50% of the population is considered to have an access or functional need. Anyone with a disability has an access and functional need, but not everyone with an access and functional need has a disability.

2. Vulnerabilities

The City of Los Angeles has multiple, accessible, redundant warning and notification systems that it will utilize to reach the public for warnings, notification, and support. The primary mode of notification will be the Everbridge application. Other modes will include news releases and public service announcements to the media and directly through social media platforms. Factors to consider are specifics of the disaster, population density, and terrain in affected areas of Los Angeles. In some instances, the consequences of a disaster along with terrain and the geographical area may impact the effectiveness of notification systems.

The City of Los Angeles recognizes that disasters may exhaust local resources. The City continues to develop, update and/or maintain memorandum of understandings (MOU's), memorandums of agreement (MOA's), and contract amendments with private vendors to increase response capability and available resources. In addition, the City of

⁴ Los Angeles Department of Public Health, “Adult Disability in Los Angeles County.” LA Health. Sept. 2006

Los Angeles' Business Operations Center (BOC) maintains communication channels with the private sector who may provide donations in an emergency.

Due to the population density and terrain of the City of Los Angeles, the City recognizes that, despite a good faith effort, it may not have the capabilities or resources to reach every individual in terms of public warnings, notification and/or support.

D. Assumptions

This Annex was created to integrate the concepts and structure defined by the National Incident Management System (NIMS), the California Standardized Emergency Management system (SEMS), and the National Incident Command System (ICS).

- All City, State, and federal processes, procedures, and protocols reflected or referenced in this document were current as of the date of approval of this Annex. Before implementing this Annex, confirm that the processes, procedures, and protocols are unchanged. If necessary, before implementing, modify the Annex to reflect updated processes, procedures, and protocols.
- Only departments that have a response role or a role closely supporting the response to a tsunami event will be included in this plan. The departmental roles listed are limited to those applicable to the event.
- In any disaster, primary consideration is given to the preservation of life then incident stabilization, and property preservation. Additionally, time and effort must be given to providing critical life-sustaining needs.
- In a catastrophic incident, damage control and disaster relief will be required from the State and Federal government, other local governments and private organizations.
- The City Emergency Operations Center (EOC) may or may not be activated in support of an event. EOC activation will be determined based on the scope and scale of the event.
- Electronic communications utilizing information technology systems will be compliant with Section 508 of the Rehabilitation Act.
- All printed public education material produced to support this Annex for distribution to the general public shall be available in accessible formats.
- Many residential, commercial and institutional structures could be damaged; requiring a large Urban Search & Rescue/Heavy Rescue mobilization.
- Residents could be displaced; requiring shelter and social services needs. Sheltering activities could be short term or long term depending on the severity of the incident.
- Vital infrastructure such as potable water supplies, electrical power, natural gas and sewer services could be compromised. Re-establishment of these vital resources will be critical.
- Transportation infrastructure could be damaged and in limited operation. Vital vehicle and rail corridors could be damaged and impassible. Re-establishment of transportation infrastructure will be critical.

- Communications infrastructure could be damaged; causing disruption in land-line telephone, cellular telephone, radio, microwave, computer and other communication services. Re-establishment of communications infrastructure will be critical.
- Hazardous materials incidents could be widespread in the inundation areas, including the Port of Los Angeles.
- Shipping Terminal Operations could be suspended or shut down.
- Bridges could be unusable, creating an area of isolation.
- Cargo container trucks could be stranded and sheltering could be required for the drivers, the shore workers and maritime crews that work in the Port.
- Evacuation of federal prisoners and employees from Terminal Island could be affected requiring additional assistance from City departments.

II. CONCEPT OF OPERATIONS

A. Terminology

Amplitude: The rise above or drop below the ambient water level as read on a tide gauge.

Arrival Time: Time of onset, usually of the first wave of the tsunami, at a particular location.

Bathymetry: The measurement of the depths of oceans, seas, etc.

Bore: Traveling wave with an abrupt vertical front or wall of water. Under certain conditions, the leading edge of a tsunami wave may form a bore as it approaches and runs onshore. A bore may also be formed when a tsunami wave enters a river channel, and may travel upstream penetrating to a greater distance inland than the general inundation.

CREST: Consolidated Reporting of Earthquakes and Tsunamis. A project funded through the Tsunami Hazard Mitigation Federal/State Working Group to upgrade regional seismic networks in Alaska, Washington, Oregon, California, and Hawaii and to provide real-time seismic information from these networks and the United States National Seismic Network to the tsunami warning centers.

Estimated Time of Arrival (ETA): Computed arrival time of the first tsunami wave at coastal communities after a specific earthquake has occurred.

First Motion: Initial motion of the first wave. A rise in the water level is denoted by R, a fall by F.

Free Field Offshore Profile: A profile of the wave measured far enough offshore so that it is unaffected by interference from harbor and shoreline effects.

Harbor Resonance: The continued reflection and interference of waves from the edge of a harbor or narrow bay. This interference can cause amplification of the wave heights and extend the duration of wave activity from a tsunami.

Horizontal Inundation Distance: The distance that a tsunami wave penetrates onto the shore. Measured horizontally from the mean sea level position of the water's edge, it is usually measured as the maximum distance for a particular segment of the coast.

Inundation: The depth, relative to a stated reference level, to which a particular location is covered by water.

Inundation Area: An area that is flooded with water.

Inundation Line (limit): The inland limit of wetting, measured horizontally from the edge of the coast, defined by sea level.

Leading-Depression Wave: Initial tsunami wave is a trough, causing a drawdown of water level.

Leading-Positive Wave: Initial tsunami wave is a crest, causing a rise in water level, also called a leading-elevation wave.

Local/Regional Tsunami: Source of the tsunami is within 1000 kilometers of the area of interest. Local or near-field tsunami has a very short travel time (30 minutes or less); mid-field or regional tsunami waves have travel times on the order of 30 minutes to 2 hours. *Note: "Local" tsunami is sometimes used to refer to a tsunami of landslide origin.*

Maremoto: Spanish term for tsunami.

Marigram: Tide gauge recording showing wave height as a function of time.

Marigraph: The instrument which records wave height.

MLLW: Mean Lower Low Water. The average low tide water elevation often used as a reference to measure run-up.

Ms: Surface Wave Magnitude. Magnitude of an earthquake as measured from the amplitude of seismic surface waves. Often referred to by the media as "Richter" magnitude.

Mw: Moment Magnitude. Magnitude based on the size and characteristics of the fault rupture, and determined from long-period seismic waves. It is a better measure of earthquake size than surface wave magnitude, especially for very large earthquakes. Calibrated to agree on average with surface wave magnitudes for earthquakes less than magnitude 7.5.

Normal Earthquake: An earthquake caused by slip along a sloping fault where the rock above the fault moves downward relative to the rock below.

Period: The length of time between two successive peaks or troughs. Periods may vary due to complex interference of waves. Tsunami periods generally range from 5 to 60 minutes.

Run-up: Maximum height of the water onshore observed above a reference sea level. Usually measured at the horizontal inundation limit.

Seiche: An oscillating wave (also referred to as a seismic seawave) in a partially or fully enclosed body of water. May be initiated by long period seismic waves, wind and water waves, or a tsunami.

Strike-Slip Earthquake: An earthquake caused by horizontal slip along a fault.

Teletsunami: Source of the tsunami is more than 1000 kilometers (~621 miles) away from area of interest. Also called a distant-source or far-field tsunami. Travel time is greater than 2 hours.

Thrust Earthquake: The most common type of earthquake source of damaging tsunamis caused by slip along a gently sloping fault where the rock above the fault is pushed upward relative to the rock below..

Tidal Wave: Common term for tsunami used in older literature, historical descriptions, and popular accounts. Tides, caused by the gravitational attractions of the sun and moon, may increase or decrease the impact of a tsunami, but have nothing to do with their generation or propagation. However, most tsunamis (initially) give the appearance of a fast-rising or fast-ebbing tide as they approach shore, and only rarely appear as a near-vertical wall of water.

Travel Time: Time (usually measured in hours and tenths of hours) that it took the tsunami to travel from the source to a particular location.

Tsunami: A Japanese term derived from the characters "tsu" meaning harbor and "nami" meaning wave. Now generally accepted by the international scientific community to describe a series of traveling waves in water produced by the displacement of the sea floor associated with submarine earthquakes, volcanic eruptions, or landslides.

Tsunami Earthquake: A tsunamigenic earthquake which produces a much larger tsunami than expected for its magnitude.

Tsunamigenic Earthquake: Any earthquake which produces a measurable tsunami.

Tsunami Magnitude: A number that characterizes the strength of a tsunami based on the tsunami wave amplitudes. Several different tsunami magnitude determination methods have been proposed.

For a list of acronyms, see Attachment A.

B. Pre-Event

Depending on the origin, certain pre-event operational activities will be dictated solely on the type of tsunami occurrence. A distant tsunami may have a considerable warning period, providing for ample time to conduct operational activities, whereas a local tsunami resulting from a local earthquake may have little or no warning and will require an immediate response.

However, no matter the type of incident or duration of the warning period, all City departments routinely participate in training specific to their employment roles and appropriate emergency response roles. A robust training and exercise program ensures that City personnel and partner agencies respond to emergencies in an efficient and effective

manner. The training may include an all-hazards approach, or be specific to tsunami, earthquake or other specific natural hazards. Training includes NIMS/SEMS/ICS courses as well as workshops, seminars, tabletop, and functional interactive exercises.

Additionally, many of the departments provide or participate in various informational lectures, speaking engagements, community outreach fairs, and citizen trainings that are directly related to a tsunami event.

1. Department of Aging (Aging)

The Department of Aging's role would be limited to coordinating with potentially impacted service providers and to work as requested with the City's tasked first responder agencies. Aging supports any City entity in providing for the FNSS of elderly adults. Aging would assist in any first responder agency training projects delivered to service providers, as well as sending information provided by EMD to the providers.

2. Department of Animal Services (Animal Services)

The Department of Animal Services (Animal Services) conducts training including seminars, workshops, tabletop exercises, and operation-based exercises for disaster response on a regular basis. Animal Services trains in ICS, NIMS, and conducts training for the Animal Services Volunteer Equine Emergency Response Team (VEERT). Animal Services also participates in speaking engagements and develops Public Awareness Information.

Animal Services has pre-identified locations to maintain evacuated animals, as well as off-site sheltering locations. The Care Center facilities maintain emergency supplies for sheltering evacuated animals.

3. Department on Disability (DOD)

The Department on Disability (DOD) provides training to people with disabilities on personal preparedness in addition to specialized training for City departments and agencies serving people with disabilities and others with access and functional needs.

DOD also provides Public Awareness Information at public meetings hosted by the City related to personal preparedness for people with disabilities and others with access and functional needs.

The DOD provides information on and referral to critical services offered throughout the greater Los Angeles area for people with disabilities and others with access and functional needs.

4. Emergency Management Department (EMD)

The Emergency Management Department (EMD) coordinates citywide comprehensive emergency response and recovery efforts involving all types of disasters, including responding to a tsunami threat. EMD activates and staffs the City's EOC as necessary.

EMD maintains a Key Contact List for emergency events, such as a tsunami (Attachment G: Tsunami Key Contact List).

The EMD engages in various pre-event preparedness activities such as emergency preparedness fairs and public outreach events. As part of its pre-event phase, EMD engages in trainings and exercises for City staff and Emergency Preparedness Coordinators specifically designed to test elements of this Tsunami Annex.

The EMD - Training and Exercise Division organizes trainings and exercises incorporating all EOP annexes and appendixes to ensure thoroughness and accuracy. Exercises include tabletops, and functional exercises involving all City departments and agencies that are part of the EOO. After Action Reports identify lessons learned and corrective measures are incorporated through plan revisions for future trainings and exercises.

EMD provides Tsunami brochures through mass mailings to all residents, business owners, schools and other public offices in the impacted areas. Brochures are available in accessible formats, when requested.

5. Los Angeles Fire Department (LAFD)

Using the 2009 tsunami inundation maps provided by the state of California, LAFD has developed a tsunami plan to address the coordination of evacuation, rescue, and recovery efforts in the event of a tsunami. These maps provide detailed information such as the location of pre-determined evacuation routes, safe refuge areas, schools, and medical facilities.

6. Port of Los Angeles (POLA)

POLA has multiple responsibilities within the Port of Los Angeles. These include providing Port security, evacuation of vessels for the safety of crew members, evacuation of Port facilities and the Port area, liaison with other City and government agencies, and procurement and maintenance of emergency supplies and equipment.

Pre-planning for all types of hazards, including tsunamis, are a priority for all divisions within POLA. Port Police and other division employees receive training in disaster response, ICS, SEMS, and NIMS. Divisions are trained and use exercises to enhance communications interoperability, public affairs, and incident management. POLA uses WebEOC and Geographic Information Systems (GIS), and incorporates these programs into exercises and scenario simulations.

POLA educates the public on the safety and practices of the Port of Los Angeles through public outreach opportunities.

7. Los Angeles Police Department (LAPD)

LAPD has developed tsunami specific evacuation routes based on the 2009 coastal area inundation maps. These evacuation routes have been developed for the San Pedro, Wilmington, Venice and West Los Angeles areas of the City (see Attachment E: Tsunami

Evacuation Routes). LAPD has also pre-identified schools in the Tsunami Hazard areas. (See Attachment F: Schools in Hazard Zone).

Public information dissemination is central to the effectiveness of this plan. LAPD is instrumental in distributing Tsunami preparedness information through the following methods:

- Discussing Tsunami information at community meetings hosted or participated by LAPD
- Utilization of Neighborhood Watch Block Captains and community web sites
- Use of LAPD websites
- Sharing information through LAPD community groups, including the Community Police Advisory Board and Police Boosters
- Involvement of various community groups, including housing associations and real estate organizations

8. Department of Recreation and Parks (RAP)

The Los Angeles Administrative Code (Chapter 03, Section 08), identifies that the Department of Recreation and Parks (RAP) functions as the head of the Public Welfare and Shelter Division of the City of Los Angeles EOO. As such, RAP engages in pre-event meetings to plan evacuation procedures and conduct shelter location identification.

A partnership among RAP, the Los Angeles Unified School District (LAUSD), and the American Red Cross Los Angeles Region (Red Cross) has been forged in the routine activation of shelters throughout the City, and in planning events and exercise simulations.

RAP has pre-identified locations to be utilized as Safe Refuge Centers, Relocation Centers, or Emergency Shelters in the event of a tsunami occurrence. Refer to the Mass Care and Shelter Annex regarding the list of City shelters that are ADA compliant.

RAP coordinates with the Red Cross to provide supplies (food, water, clothing, cots, blankets, functional needs support services, etc.) and staffing at Safe Refuge Centers and Emergency Shelter sites. In addition, RAP heads the Mass Care Branch in the EOC to identify additional shelter sites and support.

9. Los Angeles Department of Transportation (LADOT)

Pre-event activities include participating in regular exercises and/or drills, both internal and inter-agency, which test the knowledge of the tsunami plan and any other emergency procedures or plans.

LADOT also participates in pre-identifying intersections along the perimeter of the evacuation zones for the efficient deployment of traffic officers to effectively manage the ingress and egress of vehicular traffic in the evacuation areas.

10. Other Agencies:

The City of Los Angeles has multiple non-City agencies within and bordering the City and its properties that may be involved in response to a tsunami incident. The bordering cities include the City of El Segundo, the City of Santa Monica, and the City of Long Beach. Some of the agencies include the County of Los Angeles, United States Coast Guard, The Federal Correctional Institution Terminal Island, and the Metropolitan Transit Authority (Attachment R: Other Agencies, for contact information).

C. Activation of Plan

The Tsunami Annex may be activated when the Mayor declares a local emergency, or if there is an automatic activation. An automatic activation follows a disaster or event that the City has identified, in advance, as one that requires an immediate response. Disasters requiring command post and immediate EOC activation are those events that pose an imminent threat to public safety.

There may be a warning from the West Coast/Alaska Tsunami Warning Center that a distant earthquake has occurred and caused a tsunami that is likely to impact the West Coast of the United States. The arrival time will be estimated, and activation of appropriate portions of the plan will be dependent on the arrival time and anticipated height of the tsunami waves. The Annex may also be activated after a strong local earthquake that is likely to cause a tsunami, and the warning time is only minutes. In this case, the City may already be in earthquake response (Refer to Attachments H to K).

In advance of or simultaneous with the City plan activation, City departments and agencies including the LAPD, LAFD, LADOT, RAP and POLA will also activate their department tsunami plans.

D. Documentation and Time-Keeping

During an emergency situation or incident, it is important to keep specific records related to staff assignments and costs related to the response to and recovery from the emergency/incident. Each department has their own internal processes for ensuring proper documentation and record retention of incident specific cost tracking, and personnel time keeping.

In accordance with standard cost accountability practices for unique events, man-made and/or natural disasters, all City Departments are required to document their financial costs of labor, materials and equipment in addressing the event.

Each City department, proprietary and Council controlled, operates their respective accounting operations/practices within the guidelines of the Mayor's Executive Directives, the California Natural Disaster Assistance Act and the Federal Code of Regulations Title 44 of the Stafford Act to maximize potential reimbursement eligible costs and minimize ineligible costs.

III. ORGANIZATION AND ASSIGNMENT OF RESPONSIBILITIES

A. City of Los Angeles

1. Aging, Department of (Aging)

- a) Reconnaissance and Intelligence Gathering
 - Coordinate requirements for impacted Multipurpose Senior Centers.
 - Assist as requested by first responders to support the evacuation process of aging adults.
- b) Documentation
 - i. Record Keeping
 - The Department of Aging tracks personnel time through the use of a City developed electronic reporting system “Distributed Time” or “D-Time”. Staff routinely enters their hours and through the use of various work orders, report time based on hours worked, and compensated time (such as vacation, sick time, etc.).
 - In addition, Aging tracks hours charged to the various funding sources (the Department is approximately 90% grant funded and must report on the use of the grants).
 - If D-Time were not available, the City pays staff based on the last payroll period data, then corrects for exceptions. Regarding equipment, once an item of equipment is purchased, entered into inventory, and stationed, there is no other use record, until such time the item is salvaged. The Department could report damage/loss of items in the case of a disaster for possible reimbursement.

2. Animal Services, Department of (Animal Services)

Note: There is a difference between “service animals”, “pets” and “livestock.” Service Animals must be allowed to remain with their owners and not separated as if they were pets or livestock except under certain circumstances identified in the Americans with Disabilities Act.

Beginning March 15, 2011 the Americans with Disabilities Act only recognizes dogs as service animals. Pets and livestock will be handled by Animal Services as part of their standard operating procedures.

See the Mass Care and Sheltering Annex, Small Animal Support Appendix for information regarding service animals, how to determine if an animal is a “service animal”, how the “service animal” and its owner must be accommodated, how a “service animal” must be controlled, and when a “service animal” may be excluded from a shelter.

In addition to the provisions about service dogs, revised ADA regulations have a new, separate provision for miniature horses that have been individually trained to do work or perform tasks for people with disabilities and others with access and functional needs (Miniature horses generally range in height from 24 inches to 34

inches measured to the shoulders and generally weigh between 70 and 100 pounds.). Entities covered by the ADA must modify their policies to permit miniature horses where reasonable. The regulations set out four assessment factors to assist entities in determining whether miniature horses can be accommodated in their facility. The assessment factors are:

- Whether the miniature horse is housebroken;
- Whether the miniature horse is under the owner's control;
- Whether the facility can accommodate the miniature horse's type, size, and weight;
- Whether the miniature horse's presence will not compromise legitimate safety requirements necessary for safe operation of the facility.

a) Reconnaissance and Intelligence Gathering

i. Fact Gathering

- The agency representative (AR) is the department's Emergency Preparedness Coordinator and shall attend briefing on current situation and then brief staff members.
- Ensure initial reports from field units are received by the AR.
- Assessments of animal care facilities shall be performed and reported to the AR, including capacity capabilities and type of open cage space available.
- Intelligence received by the AR shall be compiled, evaluated, and acted upon as necessary.
- Specialized Mobile Animal Rescue Team (SMART) Leader shall organize a grid within the area for team assignments to ensure evacuation areas have been thoroughly searched.

ii. Assessment

- Animal Services will assess the overall anticipated needs of the Department.
- Assess potential need SMART and VEERT.
- Determine availability of Medical Personnel.

iii. Information Sharing

- The Animal Care Technician Supervisors (ACTS) shall perform an assessment of their animal care facilities and report the capacity capabilities and type of open cage space they have at this time to the AR.
- The ACTS shall prepare their facilities for the incoming evacuated animals.
- The ACTS shall keep the AR posted on capacity, needs, and activities at all times.
- The AR and the EOC Responder shall keep an open line of communication.
- The Field Personnel shall communicate with the SMART Leader.
- Intelligence information will be transmitted to the SMART Leader, then to the AR for compilation, evaluation and action.

- Initial reports shall originate from the field resources to the AR.
 - Keep the AR posted on capacity, needs, and activities at all times.
- b) Incident Stabilization
- i. Incident Response
- Animal Services will set up temporary and separate animal shelters nearby mass care shelter sites as necessary.
 - Open the North East Animal Care facility, Pierce College, Hansen Dam or LA Equestrian Center for the intake of evacuated animals/livestock as necessary and assign a Shelter Unit Leader as directed by the AR.
 - Staff shelters with Department staff.
 - Provide animal food, water, and other supplies as necessary.
 - If necessary, follow the Mobilization of Active Personnel protocol as outlined in the Department of Animal Service Emergency Plans Chapter 4.
 - Animal Services will also be working with Los Angeles County Animal Control, County lifeguards and volunteer rescue groups for beached animals.
 - Develop a continuity of operations plan which will include:
 - Existing operations
 - Potential problem development
 - Operation limitations
 - Logistical needs
 - Staffing requirements.
 - Off-site facilities to temporarily shelter animals/livestock
 - SMART Team shall:
 - Conduct animal and/or livestock evacuations according to the Incident Action Plan and as directed by the AR.
 - Rescue injured, unattended, and stray animals/livestock.
 - Record the preceding locations for all evacuated and deceased animals/livestock.
 - ACTS of each animal care facility shall:
 - Check the fire suppression equipment at the shelter to which he or she is assigned.
 - Coordinate activities within each of their facilities.
 - Provide necessary direction and control to ensure effective deployment and optimum utilization of available resources.
 - Reassign resources to meet the specific needs within that facility.
 - Coordinate resource allocation with the AR.
 - Prepare their facility for incoming evacuated animals.
- ii. Ongoing Information Gathering, Assessment and Sharing
- Animal Services will ensure initial reports from field units are received by the AR.
 - Ensure animal care facilities are adequate and assess the need for more or fewer facilities.
 - ACTS will continuously update the AR on the capacity of facilities and the types of open cage space available.

- Transmit intelligence information to the AR for compilation, evaluation and action.
- iii. Assess Transition to Recovery/Demobilization
 - Animal Services will develop a plan for reuniting animals with owners.
 - Determine threshold for beginning demobilization.
- c) Initial Recovery
 - i. Initial Recovery Operations
 - Based in immediate recovery assessment, Animal Services will reassess and determine need for activated positions.
 - Reunite animals with their owners or custodians.
 - Provide updated information as to the location of owners' animals and allow the owners / custodians to redeem and pick up their animals from shelters or temporary evacuation sites.
 - ii. Ongoing Information Gathering, Assessment and sharing
 - Animal Services will assess the capacity to de-escalate resources engaged in response operations and support.
 - Determine the gaps in response activities related to departmental roles and responsibilities.
 - Assess latent impact of weather event on operations and recovery.
 - Ensure the ordering of logistical supplies to facilitate requests in a timely manner.
 - Ensure initial reports from field units are received by the Agency Representative.

3. Disability, Department on (DOD)

- a) Reconnaissance & Information Gathering
 - i. Assessment
 - DOD will monitor and assess the overall anticipated needs of the Department and support services that may be needed by other City departments.
 - Identify staff to respond to the EOC and/or Safe Refuge Centers/Shelters to assist people with disabilities and other City departments.
 - ii. Information Sharing
 - DOD will communicate with disability service and resource providers as needed.
- b) Initial Stabilization
 - i. Incident Response
 - DOD will staff the position of Disabilities Access and Functional Needs (DAFN) Technical Specialist and will coordinate issues related to potentially evacuating and sheltering persons with disabilities.
 - Ensure effective communication and accommodations are provided for persons with disabilities at Safe Refuge Centers and shelters.
 - Provide staff to a Local Assistance Center, as necessary.
 - Upon request, provide technical support to the Mayor, Elected Officials,

LAFD, LAPD, EMD and other City departments to ensure notification messages to the public are accessible, inclusionary, and effective for people with disabilities and others with access and functional needs.

- Provide auxiliary aids and services.
- ii. Ongoing Information Gathering/Assessment/Sharing
 - DOD will evaluate the needs and services for people with disabilities and other with access and functional needs.
 - Determine potential recovery assistance and services needs for people with disabilities and others with access and functional needs impacted by the tsunami event.
- iii. Assess Transition to Recovery/Demobilization
 - DOD will determine resource drawdown procedures and needs as appropriate.
 - Continue to facilitate sheltering and assistance to people with disabilities and others with access and functional needs.
 - Continue to provide technical assistance to the Mayor's Office, Elected Officials, and all City departments whom interact with or provide information to the public, including people with disabilities and others with access and functional needs.
 - Continue to work with disability service providers to assist people with disabilities in receiving services and case management.
- c) Documentation
 - i. Record Keeping
 - DOD records staff hours through the online D-Time System and timesheets are reviewed and approved bi-weekly by senior management.
 - All hours associated with an incident are transmitted to Accounting and Administration Staff via memo. Once the incident has been completed, an internal form is completed notating all personnel involved in the incident and the number of hours each worked. Accounting can then calculate and record the total hours and dollars spent on the incident. Administration staff captures and summarizes in a cost report worksheet reflecting the salary and indirect costs associated with the incident. All costs associated with the incident are then submitted to the Chief Administrative Office (CAO) for inclusion in the Public Assistance Program.
 - Records will be kept of all costs for emergency services related to auxiliary aids and services and reasonable accommodation requests.
 - Staff will maintain records of staff expenditures of time and contractors utilized to obtain reimbursement.
 - All applications for reimbursement shall be prepared and submitted in an expeditious manner to the CAO.

4. Emergency Management Department (EMD)

- a) Reconnaissance & Information Gathering
 - i. Fact Gathering

- The EMD Duty Officer and Duty Team will assess the tsunami watch, tsunami advisory, or tsunami warning and will communicate the intelligence information to the EMD General Manager or Assistant General Manager and a decision to activate the EOC will be made.
- Direct staff in collecting and consolidating ongoing reconnaissance information from field units and other available information sources.
- If the situation warrants, EMD will send as representative to the Incident Command Post.

ii. Assessment

- If a Tsunami Watch, Advisory, or Warning is issued by the National Oceanic and Atmospheric Administration (NOAA) for the Southern California area, the EMD Duty Officer shall call the Oxnard National Weather Service for additional information or assistance at 805-988-6613 or the 24-hour monitoring center. Both phone numbers are in the Duty Phone Directory.
- EMD Duty Officer will call the Los Angeles County Office of Emergency Management (OEM) Duty Officer to obtain additional information regarding the incident. Phone number is in the Duty Phone Directory.
- EMD Duty Officer will obtain additional information such as the whether a Watch, Advisory or Warning has been issued; the time of the first wave arrival; and the energy map of the earthquake/wave via the National Tsunami Warning Center website at <http://wcatwc.arh.noaa.gov/>.
- After obtaining information regarding the threat and suggested protocols, the EMD Duty Officer will contact LAPD Department of Operations (DOC), LAFD Metro Communications Division, POLA Police Watch Commander, and Los Angeles World Airport (LAWA) Police Department Watch Commander to brief them on the status of the Tsunami Watch, Advisory or Warning. All phone numbers are in the Duty Phone Directory under contacts (See Attachment G: Tsunami Key Contact Phone List and Attachment H: Alert and Notification of Tsunami for more detailed information).
- EMD will work with other Departments to determine the scope of the incident and its impact on City functions and facilities, as well as residents.

iii. Information Sharing

- EMD may notify staff and activate the EOC should the watch or warning warrant such action.
- EMD Duty Officer will evaluate the tsunami watch or warning and inform the General Manager and Assistant General Manager of the situation.
- EMD will facilitate information sharing between departments. This is typically done via conference call initiated by the Duty Officer/Team.

b) Initial Stabilization

i. Incident Response

- The EMD Duty Officer and Duty Team coordinate and execute the processes to activate the City EOC, if necessary, in accordance with EMD standard operating procedures.
 - If the EOC is activated, relevant stakeholders, including City department representatives, the Mayor, EOB members, and the Los Angeles County OEM will be notified of activation of the City EOC and level of activation.
 - See Attachments M: Sample Tsunami Watch briefing and Attachment O: Sample Tsunami Cancellation Briefing
 - EMD Duty Officer will assist in the coordination with LAPD to initiate a NotifyLA message to the public if an evacuation is necessary.
 - NotifyLA is a public mass notification system powered by the Nixle 360 platform.
 - NotifyLA is a web-based application that leverages comprehensive databases of geographically located hard-line (copper-wire) phone numbers that do not require citizen opt-in for emergency usage.
 - NotifyLA allows the City of Los Angeles EMD to initiate voice messages, text messages and e-mails to the public based on their geographic location. Examples of emergency notifications include evacuation notices, shelter-in-place notices and imminent threat to life or property.
 - NotifyLA has the capability to send messages through the Wireless Emergency Alerts (WEA) system. This system allows those with mobile devices to receive geographically targeted, text-like messages alerting them of imminent threats to safety in their area.
 - All critical and communications functions provided by EMD in support of Citywide response/recovery are related to the operations of the EOC.
 - Verify WebEOC is functional and incoming information from departments is posted to the Significant Events Board.
 - Ensure priority phone service lines are activated for EMD staff phones.
 - Verify senior level staff has been issued 800 MHz radios.
 - Establish availability and accessibility of EOC communications devices either in the office or EOC:
 - City Satellite Telephone System
 - Operational Area Satellite Information System (OASIS)
 - 800/900 MHz radio system
 - GETS System
 - 311 Call Center
 - Emergency Alert System (EAS) or other media system
 - Voiceover IP
 - Telephones
 - Cellular telephones
 - Ring-down (direct lines) phones
 - Hard wired backup telephone system to 100+ key personnel and sites
 - Fax machines
 - Voice mail system
- ii. Ongoing Information Gathering/Assessment/Sharing

- The EMD Duty Officer will communicate with the County Office of Emergency Management Duty Officer to monitor the incident.
- Monitor, record, evaluate and assess information obtained by LAFD, LAPD, Port Police, LA County Fire Department, LA County Lifeguard, the National Weather Service, and the USCG during initial size up to anticipate future emergency management needs of the departments.
- iii. Assess Transition to Recovery/Demobilization
 - Assign an EMD staff person as the Recovery Officer.
 - Initiate recovery coordination working with all appropriate City, County, State and Federal agencies.
 - Process Recovery Funds from State and Federal Agencies.
 - Develop strategies related to the recovery phase of the incident.
- c) Initial Recovery
 - i. Initial Recovery Operations
 - Evaluate long-term recovery needs, and facilitate resource coordination between stakeholders.
 - ii. Ongoing Information Gathering/Assessment/Sharing
 - Continuously improve situational awareness by evaluating and disseminating information from field operations and relevant stakeholders.
 - The Communications Division and Joint Information Center (JIC) will ensure that the City has a unified voice during a crisis.
 - iii. Demobilization of Department Resources
 - EMD management staff will evaluate its ability to demobilize resources and personnel, determine intervals or timelines for demobilization of resources and personnel and communicate plans to relevant Departments.
 - Determine a plan and time period in which assets will be relinquished and restoration to normal activity will occur. Reductions of resources may coincide with restoration of public services and lifting of temporary safety restrictions.
- d) Department Command and Control
 - The EMD Duty Officer will be in charge of the EMD Duty Team and other department resources.
 - The EMD Duty Officer will take direction from the EMD General Manager and/or Assistant General Manager.
 - If the situation warrants, EMD will send as representative to the Incident Command Post.
 - In the event that the EOC is activated, EMD personnel will be folded into the EOC organization and assume various EOC roles and responsibilities as assigned.
- e) Documentation
 - i. Record Keeping

- All situational awareness notifications and bulletins released by EMD are saved in a uniquely named event folder located in the Department Share Drive.
- Whenever the EOC is activated, or EMD personnel are assigned to a command post, all EMD employees are required to complete a 214 form.

ii. Time Keeping

- Every EOC responder is responsible for completing an ICS 214 form.
- In the case of EOC activation, the 214 form are collected by the Finance/Admin Section of the EOC.
- The time spent on an incident is recorded on electronic time sheets as a separate line item.
- EMD's Administrative Division can then calculate and record the total hours and dollars spent on the incident.

iii. Financial Reporting

- EMD's Administrative Section is responsible for tracking disaster related response costs incurred by the Department.

5. Fire Department, Los Angeles (LAFD)

a) Reconnaissance and Information Gathering

i. Fact Gathering

- LAFD Battalion Commanders shall, as necessary, initiate reconnaissance patrols to develop situational awareness.
- Reconnaissance shall be conducted along the pre-established map route of "special considerations" within each company district. This may vary due to time of day or existing conditions.
- Field resources will provide initial intelligence reports to Battalion Commanders as a result of the preliminary assessment in the immediate area.
- Initial intelligence reports will originate from field resources to Battalion Commanders as a result of the preliminary assessment in the immediate area by radio/status check.
- Battalion Commanders shall, as necessary, initiate reconnaissance patrols to develop situational awareness. Helicopters, vehicles, foot patrols, and amateur radio systems can be utilized as availability and existing conditions permit. This may be the only source of reporting fires, structural damage or rescue/medical needs.
- Reconnaissance shall be conducted along the pre-established map route of "special considerations" within each company district. This may vary due to time of day or existing conditions.
- Reconnaissance/intelligence reports shall be directed to Bureau Commanders.

ii. Assessment

- LAFD will transmit information through channels to the proper command level for compilation, evaluation and action.
- Subsequent intelligence reports will require in-depth reconnaissance of each geographic area of responsibility, from the ground and air.
- Information shall be forwarded concerning the following situations:
 - Tsunami water inundation zone safety and evacuation.
 - Fires: Life threatening, conflagration potential, evacuation needs, exposure potential, product involvement.
 - Structural Damage: Buildings, evacuation needs, bridges, dams, etc.
 - Physical Rescue: Problem evaluation, technical assistance required.
 - Medical Needs or Disability Needs: Problem evaluation, availability of casualty collection points, assistance required.
 - Hazardous Materials: Life threatening incidents, product, potential, evacuation needs.
 - Water Supply: Broken mains, dry system, etc.
 - Access Routes: Impassable streets, essential routes, clear access routes.
 - Utilities: Area wide disruption of telephone service, power outages, gas leaks.

iii. Information Sharing

- Establish communications with the Los Angeles County Fire Department and other state and local resources to provide immediate notification and advisories affecting the coastal areas.
- Maintain radio watch on designated Division Tactical channels and normal Los Angeles Fire Department Metro Fire Communications (MFC) dispatch channels.
- Each Battalion and Assistant Bureau Commanders or Command Post shall provide "interdepartmental/interagency liaison."
- Fire Department radio capability will be maintained at such locations. And a Communication Plan shall be developed.
- Mobile and hand held radios will be the primary field communications systems due to their self-contained configuration.
- Landline communication will be established, if practical, in a concerted effort to reduce radio traffic.
- Multi-channel synthesized radios in command vehicles may be used to communicate with mutual aid and assisting agencies.
- Amateur radio networks may be implemented to assist Bureau and Battalion Commanders.
- All resources shall monitor the Division Disaster Frequency and their Normal MFC Dispatch Frequency for that area.
- Chief Officers shall also monitor the Command Frequency.
- Battalion and Bureau Commanders shall control radio traffic within their commands and, as conditions warrant, may re-designate the use of their allocated frequencies.

- Internal Fire Department communications will be accomplished with the Department's 800 MHz radio system.
- Communications with other City Departments, State and Federal agencies will be coordinated at the Unified Command Post (UCP) and through Fire Department Metro Fire Communications.
- Media release.
 - To ensure a successful evacuation in the event of an approaching tsunami, public notification efforts must be well coordinated and delivered in a variety of formats.
 - Information must be updated and released frequently and it is imperative that a unified message is provided.

b) Initial Stabilization

i. Incident Response

- LAFD will establish a unified command post, outside the inundation area, with the Police Department.
- Assistant Bureau Commanders will conduct a status check for situation status on all field apparatus, personnel and quarters through their respective Battalion Commanders.
- Coordination and meeting with Mayor and Police Chief to address evacuation needs from local or distant tsunami event.
- Bureau Commanders shall develop plans on a Bureau wide basis. Battalion Commanders have the primary responsibility for development of plans to ensure the optimum utilization of the resources within their commands.
 - Short-range Plan: Develop a plan to cope with the immediate problems and related contingencies. Such plans shall be predicated on Battalion self-sufficiency, until availability of additional resources is determined. Base the operation on established priorities and realistic objectives. Consider the use of an ICS-201 form.
 - Long-range Plan: Develop a plan for an operation which will continue for an extended period of time. Such planning shall consider the overall plan for the Department's operation, when available. Considerations must be given to the existing situation, potential problem development, operational limitations, logistic needs, staffing requirements, etc. Long-range plans will need review and updating as situations change. Consider the development of Incident Action Plans (IAP).
- Implement pre-planned tsunami inundation response plan
- Commanders shall determine the total needs to maintain a sustained operation within a planning framework.
- Commanders shall consider needs for staffing, apparatus, specialized equipment and technical expertise, personnel relief, food, water, fuel, and other supplies.

- Battalion Commanders will communicate to their Assistant Bureau Commander, logistical needs which are beyond their procurement capabilities.
- Recall, if initiated, and if possible, will be conducted as outlined in Vol. 1, 2/7, Manual of Operation. Refer to Recall instruction card (RF-1) that should be carried by all members. Recall Information phone number 213-485-2337 or 485-BEEP.
- In the event of widespread telephone disruption or other notification difficulties, recall instructions may be broadcast over local radio and television stations. During a declared disaster, the Emergency Broadcast System and/or “NotifyLA” will be utilized for the City of Los Angeles.
- ii. Ongoing Information Gathering/Assessment/Sharing
 - LAFD will continually assess viability of hazard and determine appropriate resource needs.
- iii. Assess Transition to Recovery/Demobilization
 - LAFD will determine resource drawdown procedures and needs as appropriate.
 - Transition command to appropriate department/agency.
- c) Command and Control
 - LAFD Bureau Commanders will provide direction to Battalion Commanders and determine OCD Metro Fire Communications (MFC) communication capabilities.
 - Battalion Commanders shall be responsible for notifying their commands and giving instructions regarding ensuing actions and operational plans.
 - Fire Chief will establish overall policies and coordinate with the City EOB when activated.
 - Deputy Department Commander will assess the overall needs of the Department, and cause deployment of resources based on that determination.
 - Bureau Commanders will coordinate activities within their commands and provide the necessary direction and control to ensure effective deployment and optimum utilization of available resources. They will reassign Battalion Commanders and resources to meet specific needs within that Bureau, and may coordinate resource allocations with other Bureaus.
 - Fire Department Helicopters shall be requested through the Battalion Commander.
 - Emergency Operations shall have overall control of helicopter operations and the establishment of use priorities.
 - The Command Post Vehicles will be activated to assist field commanders at the direction of the Emergency Operations.
 - LAFD will coordinate with LAPD Air Operations to make airborne verbal alerts via helicopter public address systems to notify the public and evacuate the designated inundation areas in the Los Angeles Harbor, Venice, and West LA areas.

- In the event of a confirmed tsunami warning, evacuation of LAFD resources from Fire Stations within the tsunami inundation zone and establishment of a unified post in each affected Battalion will occur.
- This immediate action will allow LAFD to more effectively assist with evacuation and rescue of affected civilians.
- Fire Department will primarily concentrate on coordinating and assisting with the evacuation of people with disabilities and others with access and functional needs and the preservation of life. Lookouts will be established for the purpose of providing real time information to concerned officers.
- Battalion Chiefs at each of the three locations would be in charge of Fire Department staff and response decisions.
- LAFD would be responsible for assisting in the evacuation of hospitals and other facilities housing medically fragile persons.
- The following battalions and fire stations would relocate to fire stations identified below:
 - Los Angeles Harbor Area - Battalion 6
 - Fire Station 112 to Fire Station 48.
 - All Fire Boats may go out to sea five (5) miles off shore at a heading of 230.
 - Primary consideration will be given to have the Unified Command Post at Angels Gate.
 - Venice Area - Battalion 4
 - Fire station 63 to Fire Station 62.
 - Fire Station 67 to Fire Station 5.
 - Primary consideration will be given to have the Unified Command Post at Fire Station 5.
 - West Los Angeles Area - Battalion 9
 - Fire Station 23 will stage at Sunset and Palisades Dr.
 - Primary consideration will be given to have the Unified Command Post at Sunset and Palisades Dr.
- Commanders shall consider needs for staffing, apparatus, specialized equipment and technical expertise, personnel relief, food, water, fuel, supplies, etc.
- Fire and Emergency Medical Services (EMS) resources will provide assistance as needed at Temporary Refuge Areas and Shelters.
- Provide fire protection, rescue and medical aid in evacuated and relocated areas.
- Ensure sufficient resources are on scene to accomplish the action plan
- Implement Command and General Staff positions as necessary.
- Lookouts will be established for the purpose of providing real time information on the incoming tsunami status to concerned officers. Battalion Chiefs at each of the three locations would be in charge of Fire Department staff and response decisions.
- Manage Medical Unit/Rehab.

- Manage Base.
 - Provide and manage any needed supplies or equipment.
 - Forecast and obtain future resource needs (coordinate with the Planning Section).
 - Provide any needed communications equipment.
 - Provide fuel and needed repairs for apparatus and equipment.
 - Obtain specialized equipment per Incident Command.
 - Provide food and associated supplies.
 - Secure and maintain any needed fixed or portable facilities.
 - Coordinate immediate Critical Incident Stress Debriefing.
 - Provide any other logistical needs as requested by Incident Command.
 - Supervise assigned personnel.
 - Ensure sufficient resources are on scene to accomplish the action plan.
- d) Red Cross Search and Rescue
- When organizing Search and rescue operations within complex structures or geographic areas, develop a map of area to be searched, establish grids, define responsibilities, and Search area using these guidelines.
 - Shut off all utilities for safety, if needed.
 - LAFD will coordinate with LAPD to determine who will not be able to evacuate due to disability or otherwise with access and functional needs. Systems that may be used are Reverse 911, LAPD door knocks, "NotifyLA", wireless emergency alerts, or other systems that may help with people that are dependent on electricity or other utilities.
 - Locate trapped victims.
 - Record locations where victims are found. Dead bodies shall not be moved prior to arrival of the coroner, unless absolutely necessary.
 - Request needed light and heavy rescue equipment, lighting, and personnel (A list of special equipment available from other agencies is located at MFC.
 - Assess availability of rescue ambulances for the emergency.
 - Assign EMS personnel to Medical Alert Center (MAC) for liaison.
 - Supervision and staffing for triage and treatment operations Disaster Medical Assistance Teams (DMAT), casualty collection points, alternate methods of treatment and transportation (i.e.) mobile field hospitals, hospital ships, air resources, buses, and private ambulances.
 - Assess availability of medical treatment facilities.
 - Notification of Police Department and coroner of fatalities and establishment of temporary morgue as time and resources permit. Extreme care shall be exercised in handling fatalities to preserve identification, location found, witnesses, etc.
- e) Fire Department Air Operations
- Emergency Operations shall, as necessary, make provisions for activating all available helicopters.
 - Field Commanders should consider the following helicopter functions in meeting their responsibilities:

- Utilizing a Helicopter Command (Helco) for direction of air operations.
 - Transportation of work teams, medical personnel, medical supplies, patients etc.
 - Patrol for incident reporting and perimeter observation of response areas
 - Specialized Air Operations (i.e.) hoist, rescue, air ambulance, FLIR thermal imaging, etc.
- f) Hazardous Materials Incidents
- Damage from tsunami inundation or a local earthquake causing a local tsunami may cause life hazards. Underground high-pressure gas and petroleum pipelines may be severed by earthquake. Consider ruptured storage tanks, container breakage in Port of Los Angeles storage facilities, and transportation mishaps. Flammable liquids or toxic chemicals could be in the streets, harbor, and inside structures. Toxic gases/products may permeate an area. Incident commanders shall consider the following:
 - Rescue if possible
 - Provide for personnel and public safety
 - Establish a perimeter
 - Deny entry
 - Identify product
 - Isolate
 - Contain
 - Identification/Notification of the responsible agency
 - Evacuation - Notify Police Department if evacuation is indicated
 - Use of Mobile Lab or Hazardous Materials Squad Companies for monitoring, technical expertise, and control information
- g) Documentation
- i. Record Keeping
 - Firefighters are to complete daily logs per department protocol.
 - Audio recording of responses are compiled and archived at the dispatch center.
 - At the conclusion of non-medical incidents Field resources complete a National Fire Incidents Report System report as a record keeping function.
 - ii. Time Keeping
 - Accurate digital documentation of response time/s and chronology of incidents is maintained for each incident via the Metropolitan Fire Communications.
 - Hand written entries are completed for each incident at the field level.
 - At the conclusion of a significant incident a historian is assigned the task of incident chronological documentarian and custodian of the incident.
 - iii. Financial Reporting
 - Currently financial record keeping is maintained within the personnel staffing function of the Department.

- Incident financial reporting is completed in compliance with FEMA requirements for reimbursement. A proclamation of emergency is also required to complete this function.

6. Police Department, Los Angeles (LAPD)

a) Reconnaissance & Information Gathering Assessment

i. Assessment

- LAPD DOC will immediately be activated and will begin to monitor the tsunami activities.
- Area Watch Commanders shall provide the DOC with the status reports.
- DOC will provide information to the Chief of Police.
- Provide information to the Chief of Police who will advise the Mayor on law enforcement related issues.
- Air operations will assist in gathering situation impact data in the inundation area and give current updates.
- Police helicopter shall provide an aerial assessment.

ii. Information Sharing

- LAPD will establish communications with other state and local resources.
- Field officers will provide area Watch Commanders with current status.
- Communicate anticipated logistical needs.
- Establish availability and accessibility of communications systems and devices:
 - City Satellite Telephone System
 - Operational Area Satellite Information System (OASIS)
 - 800/900 MHz radio system
 - GETS System
 - 311 Call Center
 - Emergency Alert System (EAS) or other media system
 - Voice over IP
 - Telephones
 - Cellular telephones
 - Ring-down (direct lines) phones
 - Hard wired backup telephone system to 100+ key personnel and sites
 - Fax machines
 - Voice mail system
- Ensure a communications plan is written.
- Re-establish communications systems, if disrupted, or utilize back-up systems.
- Incident commanders may consider utilizing public address systems available on:
 - Police helicopters
 - Police ground units
 - Police motor units
 - Department sound trucks

b) Initial Stabilization

i. Incident Response

- Field officers assigned to observation locations, outside the inundation areas.
- Establish a Unified Command Post, outside of the inundation area, with the Fire Department.
- Establish a Unified Command Post with the Fire Department and other response agencies based upon pre-existing protocols.
- Give priority action to managing previously identified evacuation, establishing a UCP outside of the inundation area and announcing locations of Safe Refuge Center.
- Direct voluntary or mandated evacuations of the threatened areas within the Police Department's Harbor, Pacific and West Los Angeles Areas as necessary.
- Follow established guidelines in the current Emergency Operations Guide and existing Area Standing Plans.
 - Location of initial evacuation centers and designation of unit(s) assigned to log disaster survivors' arrival.
 - Additional department personnel required, and location of staging area.
 - Location and radio designation of the Incident Command Post/Operations Post.
 - Provide the Department Operations Center with a personnel status report, damage assessment of key installations as well as a general damage assessment of the Area.
 - Account for Area/division personnel by conducting a roll call for all on-duty Area/division personnel.
- Utilize factors related to the tsunami, such as earthquake origin location, magnitude, intensity, speed of onset, and duration to determine potential impact on the inundation zones and the population to be evacuated.
- Include commuter, visitors and homeless populations in forecasts of evacuations.
- Process logistics needs promptly to facilitate requests arriving in a timely manner.
- Ensure staffing, apparatus, specialized equipment and technical expertise, personnel relief, food, water, fuel, supplies, etc., are provided to field units.
- Provide law enforcement/ security in and around all identified tsunami inundation zone areas.
- Support the orderly movement of evacuees to Safe Refuge Centers and Reception Centers.
- Support Safe Refuge Centers and Shelter facilities by:
 - Maintaining law and order.
 - Providing security and crowd control officers.

- Priority consideration will be given to initiating evacuation procedures.
- Consider needs for staffing, apparatus, specialized equipment and technical expertise, personnel relief, food, water, fuel, supplies, etc.
- Activate the DOC based on the information in the tsunami watch or warning.
- With input from the Chief of Police and the Fire Chief, the Mayor, order a voluntary or mandatory evacuation.
- Provide the DOC with the personnel status report, damage assessment report from field unit surveys or aerial assessments.
- Emergency response objectives are to be based on life safety, property preservation, incident stabilization and environmental impact.
- Air coordinators will restrict the air space over the emergency area and:
 - Ensure private aircraft are aware of the restrictions.
 - Support the land, air and sea perimeter.
- Ensure that a situation status report is given including:
 - Size of the involved area (actual and potential).
 - Area to be evacuated.
 - Ingress/egress routes for emergency vehicles, evacuation buses and evacuation routes.
- ii. Ongoing Information Gathering/Assessment/Sharing
 - Assessment of operational capabilities will be continuously updated.
- iii. Assess Transition to Recovery/Demobilization
 - Facilitate and work in support of other emergency response departments and other agencies to provide safety to emergency workers in response and rescue efforts.
 - Damage to Department facilities should be documented with photographs and other reports.
- c) Command and Control
 - Assume the role of lead agency for evacuations due to a tsunami watch or warning.
 - Order off-duty personnel to report to duty, by Executive Order of the Mayor, during a major disaster.
 - Off-duty personnel should monitor the EAS messages broadcast over commercial radio and television stations for further instructions.
 - If telephone systems are functioning, officers will be recalled by telephone
 - Any recall of off-duty personnel shall be accomplished according to the Mobilization Plan.
- d) Documentation
 - i. Record Keeping
 - Officers are to complete daily logs per Department protocol.
 - Assign personnel in each Area to record After-Action Reports.
 - ii. Time Keeping

- Officers assigned to positions requiring ICS 214 forms to be completed will complete them before end of watch and submit to supervisors. All ICS 214 forms shall be collected and forwarded to Planning Section Chief and Fiscal Operations Division.
- iii. Financial Reporting
- Cooperation and exchange of information with Fiscal Operations Division to estimate damages and available mutual/financial aid for recovery efforts.

7. Port of Los Angeles (POLA)

a) Reconnaissance & Information Gathering

i. Fact gathering

- Each POLA division will conduct an initial assessment of operational capabilities and workforce within the first hour.

ii. Assessment

- POLA will complete damage assessments to critical infrastructure, department facilities and assess response capability.
- If roadways are lost, site assessments will be conducted via the waterways.
- Terminals will be accessed for damage and all information will be reported to the DOC.
- The Operations Section will coordinate the department's site assessment teams.
- Assess workforce and operational capability.

iii. Information Sharing

- POLA will verify lines of communications between management, staff, and other City agencies.
- Information shall be forwarded concerning the following situations:
 - Fires: Life threatening, conflagration potential, evacuation needs, exposure potential, product involvement.
 - Structural Damage: Buildings, evacuation needs, bridges, dams, etc.
 - Physical Rescue: Problem evaluation, technical assistance required.
 - Medical Needs or assistance for people with disabilities and others with access and functional needs: Problem evaluation, availability of casualty collection points, assistance required.
 - Hazardous Materials: Life threatening incidents, product, potential, evacuation needs.
 - Water Supply: Broken mains, dry system, etc.
 - Access Routes: Impassable streets, essential routes that can be readily cleared, safe, clear access routes.
 - Utilities: Area wide disruption of telephone service, power outages, gas leaks.
 - Other Situations: Identify problems requiring Department assistance or situations affecting Department operations:
 - Status of Harbor Department teams deployed.

- Damage reports received.
- Status of interactions with the EOC or Mayor's Office.
- Public and private entities involved in the response.
- Impacts to landside cargo movement infrastructure.
- Impacts to waterways.
- Current vessel locations within and in the approaches to the Port.
- Restrictions to cargo movement placed by any regulatory agency
- Status of repair activities.
- Status of any financial transactions, contracting, and procurements.
- Status of the Longshore labor force.
- Status of media interactions.
- Status of interactions with offices of elected officials.
- Status of Communication Assets.
- The Port Police Watch Commander will work with the Harbor Communications Division and implement an Everbridge notification with Harbor Department personnel from the various Harbor department divisions and sections.
- The Los Angeles Harbor Department can communicate internally and with other agencies using a number of different resource methods
- Primary Communications Modes:
 - Everbridge Notification or (888) 440-4911 Or Live Operator (877) 220-4911.
 - Employee Telephone Notification System (All Employees) Out of area "800" telephone number (800) 734-7678.
 - Police Communications (TX 452.250 Access Code 3E8, RX 458.250 Access Code 3E9) Astro/Saber Radio System.
 - Police Patrol Boat and Port Pilots Astro/Saber Radio System and Marine Radio.
 - Internet and email Access.
 - Employee Public Address System, Bullhorns, LRAD, Helicopter Assisted with Public Address (PA) System.
 - CANS, EAS, Dialogic, Electronic Message Boards.
 - Landlines.
 - 800 MHz Trunk Radio.
 - Public Information and Emergency Response (PIER) System.
 - Port Police Dispatch Telephonic Notification.
- Ideally there will be enough time for radio and television stations to broadcast the required evacuation information (via the Emergency Alert System).
- Preparation and dissemination of Public Service Announcements (PSAs).
- Establish public information and assistance hotlines if deemed necessary.
- Deploy Port Police Interoperability truck if necessary.
- Locate and redistribute the 12 satellite phones as necessary.

- Deploy additional Trunk Radios as needed.
 - The DOC will be activated and will serve as the coordination center for the Harbor Department.
- b) Initial Stabilization
- i. Incident Response
 - POLA will identify critical equipment resource locations and available operators.
 - First responder equipment will be moved to an outdoor location, outside the inundation area.
 - ii. Ongoing Information Gathering/Assessment/Sharing
 - Continue to support other departments and agencies by prioritizing:
 - Calls for service on life safety.
 - Critical response effort.
 - Preservation of property.
 - All other requests for service.
 - iii. Assess Transition to Recovery/Demobilization
 - Interface with all levels of government for restoration of government controlled services:
 - Roadways and Bridges.
 - Water and Power.
 - Sanitation.
 - Debris Removal.
 - Law and Fire Enforcement interface with tenants for restoration of privately owned operations:
 - Liquid Bulk Facilities.
 - Containerized Cargo Facilities.
 - Non-Containerized Cargo Facilities.
 - Shipyards.
 - Passenger and Ferry Terminals.
 - Coast Guard, Terminal Island Prison, and ICE facility.
 - Unified Command/Incident Commander will make the determination of transition of forces. The transition can be a recovery/investigative role or simply the release of responding units. Usually a demobilization unit will make that determination within the Incident Action Plan.
 - Ensure safety inspection of Terminal buildings and piers.
 - Prioritize all terminal repairs.
 - Red Cross Search and Rescue.
 - Port Police will continue with Red Cross Search and rescue operations as needed.
 - Within the DOC, damage assessment reports will be compiled by the Operations Group and the Planning Group. Damage reports will be classified as follows:
 - Potential life/safety issue.
 - Harbor Department responsibility.
 - On/off a Port terminal.

- Type of infrastructure:
 - Road
 - Bridge
 - Wharf
 - Rail
 - Cargo movement equipment
 - Power/water/gas/telecommunications
 - Directly impacting cargo movement
- Ensure normal business functions are available to both tenants and regular employees.
- Identify alternate locations that employees can work in case of primary work locations are damaged and will take a long time to repair.
- Deployment of barricades, K-rails, and other safety devices for road closures and detour routes.
- Coordinate, design & construct temporary roadways and re-construction of permanent roadways and bridges.
- Priority debris clearing and removal from public right-of-way.
- Restore landside Port infrastructure.
- Restock and replace emergency supplies, as needed.
- Restore Waterway Navigability.
- Continue to provide food, water and shelter for field personnel and others as needed.
- Interface with the United States Coast Guard (USCG), Army Corps of Engineers, Harbor Department Survey Group, and Harbor Department Port Pilots to access and maintain Navigational Waterways.
- Ensure that essential functions and or incidents are restored and brought back to normal:
 - Aid to Navigation
 - Vessel Salvage/Wreck Removal
 - Oil Pollution Incidents
 - Hazardous Material Incidents
- Restore Cargo Operations.
- Establish priority list of transportation corridors that need to be repaired and/or reconstructed.
- Establish priority list of locations for debris clearance and removal.
- Focus priorities on movement of goods once all Health and Safety issues have been addressed.
- Establish a temporary living quarters for employees who live outside the area and have a difficult time making it into work.
- Continue to update equipment and supply list critical to the response.
- Procure and distribute emergency supplies.
- Review and designate alternate worksites for employees.
- Restock and replace emergency supplies as needed.

- Establish contact/vendors to supply barrier supplies and devices in the event City departments exhaust its resources.
 - Interface with Terminal Operators and assist where possible with cargo movement.
 - Coordinate with United States Army Corps of Engineers for restoration of:
 - Deep Draft Channels
 - Non-Deep Draft Channels
- c) Command and Control
- Port Police will provide a representative for the City EOC when activated
 - Activate DOC and the Port Police Operations Center.
 - The Port Police Watch Commander must ensure that a liaison officer of supervisory rank has been assigned to the Fire Department Incident Command Post or to the command post of any other involved agency.
 - The order to evacuate would ultimately rest with the Mayor, the Los Angeles Chief of Police and the Fire Chief.
 - Establish criteria and/or ordinances for post event issues (i.e. debris removal, demo, reimbursements, etc.).
- d) Police, Port of Los Angeles
- Follow established Los Angeles Port Police Evacuation Checklist.
 - Evacuate impacted tsunami inundation zone.
 - Ingress/egress routes for emergency vehicles, evacuation buses and evacuation routes.
 - Activate notification procedures.
 - Location and radio designation of the Incident Command Post/Operations Post.
 - Ensure all employees and all first responder equipment is moved to a safe location.
 - Assist in Red Cross Search and rescue operations.
 - Support Fire Department requests to provide equipment for road access.
 - Coordinate heavy equipment and debris removal crews with other emergency response agencies.
 - Dispatch damage assessment teams to impacted areas.
 - Maintain Security of the Port.
- e) Documentation
- i. Record Keeping
 - Incident/Event Action Plan (IAP/EAP) personnel roster.
 - Daily Patrol Watch Deployment and Checkout Log.
 - Command Post Check-in/Check-out roster.
 - ii. Time Keeping
 - LAPP Fiscal Operations.
 - iii. Financial Reporting
 - If a disaster proclamation is provided or if management wants to make a determination of the cost of the incident, both the department

Emergency Manager as well as the departments accounting personnel will collect all the associated costs of the event and provide a report.

8. Recreation and Parks, Department of (RAP)

a) Reconnaissance & Information Gathering

i. Assessment

- RAP will analyze the situation and determine the best facilities to be opened to shelter persons.
- Provide situation assessment through the DOC to the EOC.
- The Department will identify and ensure that availability of the full range of resources necessary to perform the critical Shelter and Social Services function.
- Identify Employees who will remain to perform critical operations.
- Deploy inspection teams to gather intelligence.
- Analyze the situation and determine the best facility or facilities to be opened to shelter persons rendered homeless as a result of the emergency.

ii. Information Sharing

- Park Ranger Communications is the pre-determined DOC for Recreation and Parks.
- Establish communications with EOC, Executive Staff, and field staff.
- Maintain radio with OCD.
- Establish availability and accessibility of communications devices:
 - Telephones
 - Cellular telephones (Nextel two-way and group)
 - Pagers
 - 800/900 MHz radio system
 - Low-band radio system
 - Mobile radio vehicles
 - Fax machines
 - GroupWise e-mail
 - Messengers
 - Ham radio operations
 - Emergency Alert System or other media system
 - Out-of-state 800 voicemail system
 - Park Ranger Communications Center
 - Satellite telephone
- DOC computer link from the Department's Operations Center to the Emergency Operations Center at 500 Temple St.
- Receive requests for services from other City Departments and outside agencies for the Welfare and Shelter Division.
- Gather and coordinate information to transmit to the EOC Coordinator to determine staffing for the incident.

b) Initial Stabilization

i. Initial Response

- May respond to unified command post, outside the inundation area, with the lead agencies.
 - Will respond and staff the Mass Care Branch of the EOC.
 - Assign Personnel to the Emergency Operations Center and DOC when activated.
 - Coordinates shelter-social services functions in the anticipation of the tsunami.
 - Ensure employees respond to the EOC to activate Safe Refuge Centers, Shelters, or staging areas as needed.
 - Coordinate with the Red Cross to provide food, beds, and comfort.
 - Coordinate with LAUSD for similar shelter activations.
 - Coordinate with other City Department members of the Shelter Welfare Section of the EOC, such as Housing and DOD.
 - Provide temporary facility and open space for an Incident Command Center.
 - Coordinate of Shelter-Social Services functions.
 - Making arrangements for accessible housing and shelter facilities for persons rendered homeless as a result of a local emergency.
 - Making arrangements for the services of the Red Cross, LAUSD, and other governmental agencies as needed to furnish food, clothing, functional needs support services, registration, information services, and rehabilitation services to individuals affected by a local emergency.
 - Provide full-time Department personnel to the DOC, and sheltering facilities.
 - Provide personnel to perform disaster worker functions to other Departments, including:
 - Evacuation teams
 - Traffic control
 - Park ranger law enforcement
 - Coordinate with supporting Departments to ensure services during shelter operations and Department operations.
 - Provide equipment resources to other Departments as needed.
 - Coordinate with the Red Cross to provide supplies and staffing at shelter sites.
 - Supply some types of heavy equipment and operators and four-wheel drive vehicles to support other departments as requested.
 - Implement pre-determined public safety, customer service, media, emergency response operations, or other essential position to respond to their pre-established emergency response assignments as instructed.
 - Initiate employee call-out by management for emergency duty as directed by the Mayor's Office or the City EOB.
- ii. Ongoing Information Gathering/Assessment/Sharing
- Initiate report to the CAO relative to all casualties, damage, losses, expenditures incurred.

- Provide the DOC with further assessment of damage to Critical Facilities and resources.
 - Re-establish communications if interrupted.
 - Deploy inspection teams to facilities and develop an initial report utilizing appropriate database.
 - Perform detailed damage assessment, design and implement remedial measures to abate imminent threats to and from infrastructure.
 - Assign Park Rangers and other employees to inspect facilities and report on:
 - Numbers of people spontaneously sheltering
 - General condition and need of the people spontaneously sheltering
 - Document equipment on site such as tents, port-a-potties, etc.
 - Situational awareness
 - Road closures
 - Park closures
- iii. Assess Transition to Recovery/Demobilization
- Account for all Recreation and Parks Personnel.
 - Remove hanging limbs, downed trees, and other debris at designated sheltering facilities and other facilities.
 - Continue to facilitate sheltering for all people, including people with disabilities and others with access and functional needs.
- c) Command and Control
- The Emergency Management Coordinator or the Senior Park Ranger will be the Operations Section Chief of the DOC and will have:
 - Constant communication and coordination with Executive Staff.
 - Constant communication and coordination with the Incident Command or Unified Command.
 - Constant communication and coordination with the EOO through the EOC or EMD Duty Officer.
 - Command and control of the DOC Staff.
 - Per the Los Angeles Administrative Code (Chapter 03, Division 08), the Department of Recreation and Parks functions as the head of the Public Welfare and Shelter Division of the City of Los Angeles EOO.
 - Park Ranger Division will maintain the DOC.
 - General Manager is designated as the Chief of the Recreation and Parks EOO Division.
- d) Documentation
- i. Record Keeping
- The Department implements certain procedures for documenting costs associated with emergency/disaster response. The emergency management coordinator is responsible for gathering all forms, time-keeping data, and other reports. A comprehensive report is submitted to Finance and Executive Staff for approval and then submitted to the CAO.
 - Recreation and Parks utilizes a database system known as “D-Time”. During an incident, specific work order codes are assigned so that all

employees who worked the incident can document exact times. Cost tracking methods include the use of a designated work order number relative to the incident by all employees expending time, fuel, material and equipment. The information is gathered to calculate time used and cost incurred. A report is submitted to the executive staff and then to the CAO of the City of Los Angeles.

9. Transportation, Los Angeles Department of (LADOT)

a) Reconnaissance and Information Gathering

i. Assessment

- LADOT will conduct initial safety assessment of the transportation infrastructure including streets, bridges, railroads, and harbor facilities.
- Determine if response and evacuation assistance vehicles are able to reach their destinations using pre-identified emergency response routes.
- Identify locations to be controlled or closed by barricade placement.
- Assess Department facilities for damage to determine status of essential services and public services.

ii. Information Sharing

- Utilize 800 MHz radios as well as telephone and computer access to ensure communications internally with staff.
- Establish means of communication with Department personnel and regularly brief them of the emergency status.
- Establish Departmental hotline as needed (213-482-6515) and/or City hotlines.
- Make announcements about road closures and evacuation routes to local radio and TV stations, or via the Emergency Alert System (EAS).
- Use mobile changeable message signs and mobile broadcaster to inform the public of evacuation/detour routes.

b) Initial Stabilization

i. Initial Response

- Contact the Department Engineer-in-Charge of emergency response for activation of the LADOT Tsunami Evacuation Plan and in addition, to the General Manager and LADOT management team.
- Activate DOC at appropriate level based on information from tsunami watch or warning.
- Maintain and/or restore transportation services and facilities.
- Assist in disaster response and recovery efforts by other Departments.
- Provide for the safe and orderly movement of emergency, rescue and other traffic.
- Maintain resources necessary to maintain services essential to public safety.
- Assist in the implementation of the evacuation plans developed for the Harbor, Venice and West Los Angeles areas.
- Assist LAPD in prohibiting the ingress of any unauthorized vehicular traffic into the evacuation zones and facilitate the egress of evacuees.

- Post evacuation routes and refuge sites on the Website.
- Develop and designate emergency detours and alternate travel routes.
- Prepare special traffic control plans to direct and control traffic around disaster sites and along commuter and other important travel routes.
- Initiate the LADOT Automatic Activation procedures in the event of an actual tsunami.
- Develop plans for the maintenance of traffic control devices.
- Determine emergency travel routes to be used in the event of an emergency.
- Ensure placement of barricades as necessary or as directed by the Chiefs of Police, Fire Suppression, and Rescue Divisions.
- Establish direction and control of traffic.
- Coordinate with all other agencies supplying carrier/transportation services.
- Ensure that response and evacuation assistance vehicles are able to reach their destinations using pre-identified emergency response routes.
- Manage traffic signals through the Automated Traffic Surveillance and Control (ATSAC) Center to synchronize the egress of evacuees where possible.
- Coordinate the mass transit of evacuees from the evacuation zone perimeters to refuge areas.
- Provide assistance to the Police and Fire Departments during evacuations and in maintaining emergency routes.
- Mobilize emergency transportation resources, including buses and taxis, to:
 - transport emergency workers
 - evacuate populations
 - expedite emergency operations
- Enforce parking and other traffic regulations as necessary.
- Provide for the safe and efficient movement of people and goods.
- Ensure the safety of all department employees during the course of their duties.
- Deploy traffic control officers and traffic engineering strike teams along the inundation boundaries of the security perimeter and at key intersections on the pre-identified evacuation routes to:
 - Prevent gridlock conditions.
 - Facilitate the egress of traffic.
- ii. Ongoing Information Gathering/Assessment/Sharing
 - Ensure communication is established with essential facilities, field employees, other Divisions and the City's EOC.
- iii. Assess Transition to Recovery/Demobilization
 - Develop incident objectives related to recovery and demobilization during the response phase of the incident.
 - Repair and maintain traffic control systems Citywide.

- Materials and temporary traffic controls will remain in place until the completion of repairs to roadways and other transportation facilities
- Continue to gather information on equipment.
- Continue to assess roads and damage to infrastructure for recovery.
- Equipment and materials used during the incident should be inventoried as they are removed from use, and all damages should be documented.
- Efforts must be made to account for lost or abandoned equipment, and recovery attempted.
- Unused supplies should be returned to their source.
- Provisions must be made for service, repair or replacement of damaged equipment and restocking of expended supplies.

c) Command and Control

- Special Traffic Operations and Parking Enforcement:
 - Directs and controls traffic.
 - Assist in the implementation of the evacuation plans developed for the Harbor, Venice and West Los Angeles areas.
 - Assist Police Department in prohibiting the ingress of any unauthorized vehicular traffic into the evacuation zones and facilitating the egress of evacuees.
 - Secure the perimeters of the evacuation zones by deploying traffic officers to pre-identified intersections to prohibit the ingress of traffic.
- The Acting Senior Transportation Engineer in charge of Special Traffic Operations has the role of the 24-hour Engineer-On-Call. This position is responsible for emergency calls for engineering assessments during any type of emergency or disaster. This position has the authority to activate the LADOT Department Operations Center for emergencies wherein LADOT employees will be activated to respond to a situation requiring the services of the LADOT.

d) Documentation

i. Record Keeping

- Request a work order number from LADOT accounting for the Emergency Event.
- All employees will maintain an ICS-214.

ii. Time Keeping

- LADOT Emergency Management Coordinator coordinates the collection of all response information for staff and resources deployed to an emergency incident. Responding staff hours are processed and recorded through the online D-Time System timesheets which are reviewed and approved by-weekly by division supervisors.
- Time designated to a specific incident, both regular and overtime hours, is delineated by applying the hours worked to a work order number for that specific incident. All hours associated with the specific work order number are then calculated and a summary of work hours is completed.
- All hours associated with an incident are also captured and summarized into cost tracking worksheets. Worksheets are then processed and

calculated using established LADOT practices and in conformance with the Public Assistance Program.

- Once staffs report their incident response hours, the payroll/timekeeping and accounting units review the documentation and generate a cost report based on the work order number. The accounting cost report is then cross checked with other documentation and worksheets.
- Equipment use is gathered from both equipment use logs and activity and reports generated by responding staff. An equipment usage report which identifies type of equipment used, hours used and reason for use is generated.

iii. Financial Reporting

- Initiate a Disaster Accounting System to document disaster costs for potential cost recovery and reimbursements.

IV. DIRECTION, CONTROL, AND COORDINATION

The Tsunami Annex may be activated when the Mayor proclaims a local emergency, or if the EMD Duty Officer, after consulting with the EMD General Manager or Assistant General Manager, determines the situation warrants a Level I, II, or III EOC activation and the implementation of the Appendix's policies and procedures.

If there is a warning from the West Coast/Alaska Tsunami Warning Center (WC/ATWC) that a distant earthquake has occurred and caused a tsunami that is likely to impact the West Coast of the United States, the tsunami arrival time can be estimated. Dependent on the arrival time and anticipated height of the tsunami waves, activation of appropriate portions of this Annex will occur. The Annex may also be activated after a strong local earthquake that is likely to cause a tsunami, and the warning time is only minutes. In this case, the City may already be in earthquake response (Refer to Attachments H to K).

Some portions of this Annex, such as the initial response, go into effect immediately following a Tsunami Watch, Advisory or Warning incident. The remainder of this Annex is only activated when the incident grows in scope to a point where activation of the EOC is warranted.

In advance of or simultaneous with the City plan activation, City departments and agencies will also activate their departmental emergency response plans.

V. ADMINISTRATION, FINANCE, AND LOGISTICS

Each department is required to have documented internal administrative procedures in place to track financial costs related specifically to the response and/or recovery of an incident. These procedures must include tracking all expenditures specifically related to the incident, including personnel costs such as straight and overtime payroll costs related specifically to the incident. Departments are also required to document internal administrative procedures for requesting, fulfilling, and tracking internal, department to department (DOC-to-DOC), field to department (field-to-DOC), and department to EOC (DOC-to-EOC) resource requests. Each department is responsible for the tracking of their own resources, including the tracking of personnel.

If an incident meets designated thresholds for Proclamation or Declaration of a State and/or Federal Emergency or Disaster, the CAO, acting as the City's Authorized Agent, will develop a method for collecting financial documentation from departments as needed for submission as part of the City's reimbursement application process.

VI. AGREEMENTS AND UNDERSTANDINGS

Currently there are no Memoranda of Agreement or Understanding for this Annex.

VII. AUTHORITIES AND REFERENCES

A. Authorities

1. Federal

- a) The Robert T. Stafford Disaster Relief and Emergency Assistance Act, Public Law 93-288, as amended. <https://www.fema.gov/robert-t-stafford-disaster-relief-and-emergency-assistance-act-public-law-93-288-amended>
- b) Homeland Security Presidential Directive-5 (HSPD-5). <http://www.gpo.gov/fdsys/pkg/PPP-2003-book1/pdf/PPP-2003-book1-doc-pg229.pdf>
- c) National Incident Management System. Department of Homeland Security. December 2008. http://www.fema.gov/pdf/emergency/nims/NIMS_core.pdf
- d) National Response Framework. Department of Homeland Security. January 2008. <http://www.fema.gov/pdf/emergency/nrf/nrf-core.pdf>
- e) Americans with Disabilities Act of 1990, as amended. <http://www.ada.gov/pubs/ada.htm>

2. State of California

- a) California Constitution. <http://law.justia.com/california/constitution>
- b) California Emergency Services Act, 2015. <http://www.caloes.ca.gov/LegalAffairsSite/Documents/Cal%20OES%20Yellow%20Book.pdf>
- c) California Code of Regulations, Title 19, Chapters 1 through 6, including:
 - i. Chapter 1, Standardized Emergency Management System. <http://www.caloes.ca.gov/PlanningPreparednessSite/Documents/12%20SEMS%20Guidelines%20Complete.pdf>
 - ii. Chapter 6, Disaster Assistance Act Regulations. <http://www.caloes.ca.gov/PlanningPreparednessSite/Documents/02%20California%20Code%20of%20Regulations%202900q.pdf>
- d) California State Emergency Plan.

<http://caloes.ca.gov/PlanningPreparednessSite/Documents/2017%20SEP%20Executive%20Summary.pdf>

3. County of Los Angeles

- a) Operational Area Emergency Response Plan. <http://lacoa.org/oaerp.htm>

4. City of Los Angeles
 - a) City Emergency Operations Plan

B. References

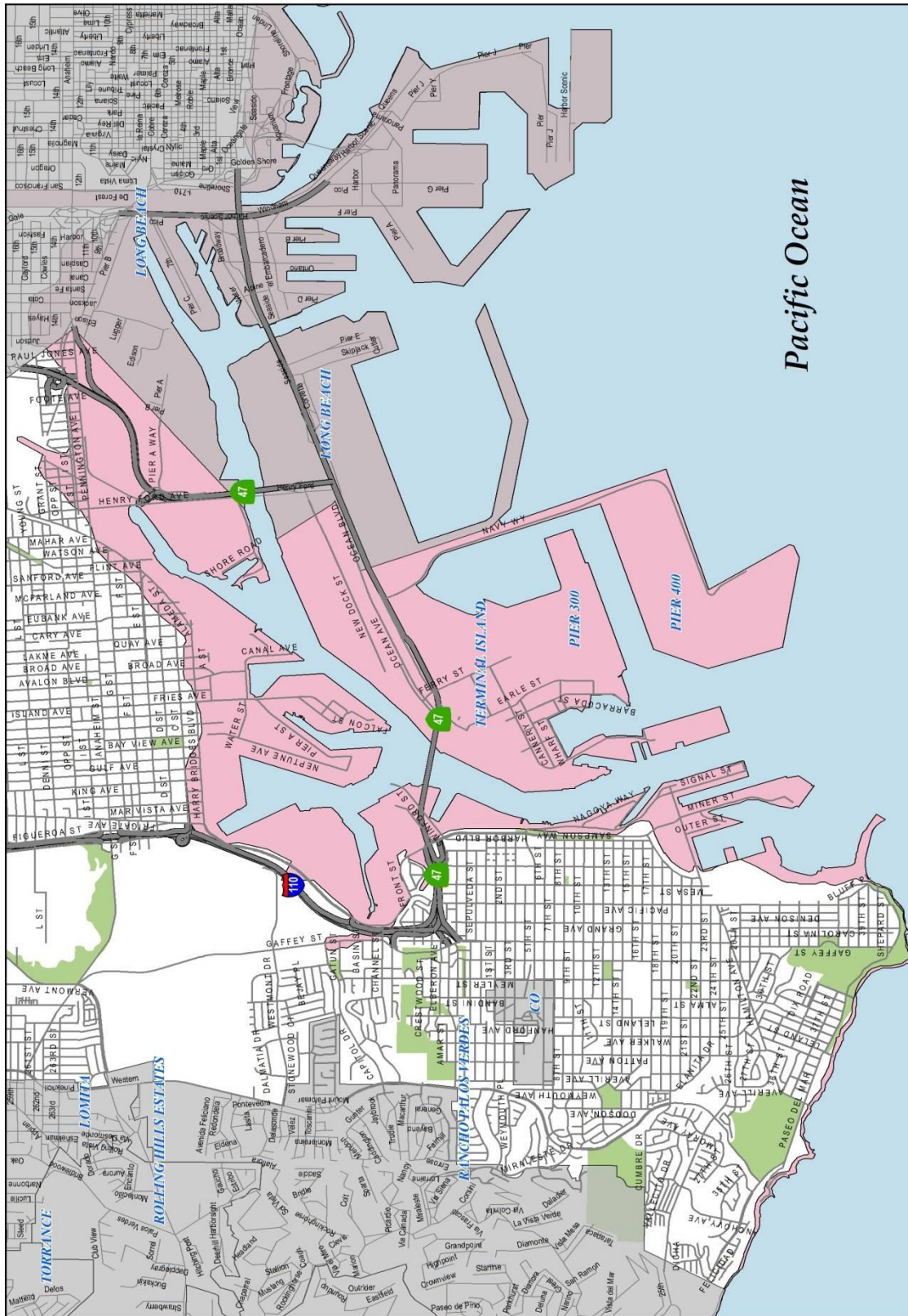
1. Los Angeles Department of Public Health, "Adult Disability in Los Angeles County." LA Health. Sept. 2006.
2. Kailes, J. and Enders, A. in "Moving Beyond 'Special Needs' A Function-Based Framework for Emergency Management Planning," Journal of Disability Policy Studies, Vol./No. 44/207, pp. 230-237.

ATTACHMENT A: ACRONYMS

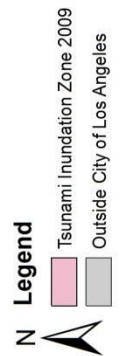
ACRONYM	Full Name
ACTS	Animal Care Technician Supervisors
ADA	Americans with Disabilities Act
Aging	Department of Aging
Animal services	Department of Animal Services
AR	Agency Representative
ATSAC	Automated Traffic Surveillance and Control
CALWAS	California Alert and Warning System
CAO	Chief Administrative Office
CLETS	California Law Enforcement Telecommunications (Teletype) System
CPG	Comprehensive Preparedness Guide
CSWC	California State Warning Center
DAFN	Disability Access and Functional Needs (DAFN) Technical Specialist
DMAT	Disaster Medical Assistance Teams
DOC	Department Operations Center
DOD	Department on Disability, City of Los Angeles
EAP	Event Action Plan
EAS	Emergency Alert System
ECC	Los Angeles County Fire Emergency Command and Control Center
EDIS	Emergency Digital Information System
EMC	Emergency Management Committee
EMD	Emergency Management Department
EMS	Emergency Medical Services
EOB	City of Los Angeles Emergency Operations Board
EOC	Emergency Operations Center
EOO	Emergency Operations Organization
EOP	Emergency Operations Plan
ETA	Estimated time of arrival
FEMA	Federal Emergency Management Agency
FNSS	Functional Needs Support Services
GIS	Geographic Information Systems
Helco	Helicopter Command
IAP	Incident Action Plan
ICS	Incident Command System
JIC	Joint Information Center
LADOT	Los Angeles Department of Transportation
LADWP	Los Angeles Department of Water and Power
LAFD	Los Angeles Fire Department
LAPD	Los Angeles Police Department
LAPD	Los Angeles Police Department Communications Division

LAUSD	Los Angeles Unified School District
LAWA	Los Angeles World Airport
LSDP	Life Saving Dependency Program
MAC	Medical Alert Center
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MTA	Metropolitan Transit Authority
NAWAS	National Alert and Warning System
NIMS	National Incident Management System
NOAA	National Oceanic and Atmospheric Administration
NWS	National Weather Service
OASIS	Operational Area Satellite Information System
OCD	Los Angeles Fire Department Operations Control Division
OEM	Los Angeles County Office of Emergency Management
PA	Public Address
PIER	Public Information and Emergency Response
POLA	Port of Los Angeles
PSA	Public Service Announcement
LAPD	LAPD Communications Division
RAP	Department of Recreation and Parks
Red Cross	American Red Cross Los Angeles Region
SCC	Sheriff's Department Communications Center
SEMS	California Standardized Emergency Management System
SMART	Specialized Mobile Animal Rescue Team
SOP	Standard Operating Procedure
UCP	Unified Command Post
USCG	United States Coast Guard
VEERT	Volunteer Emergency Equine Response Team
WC/ATWC	West Coast/Alaska Tsunami Warning Center
WEA	Wireless Emergency Alerts

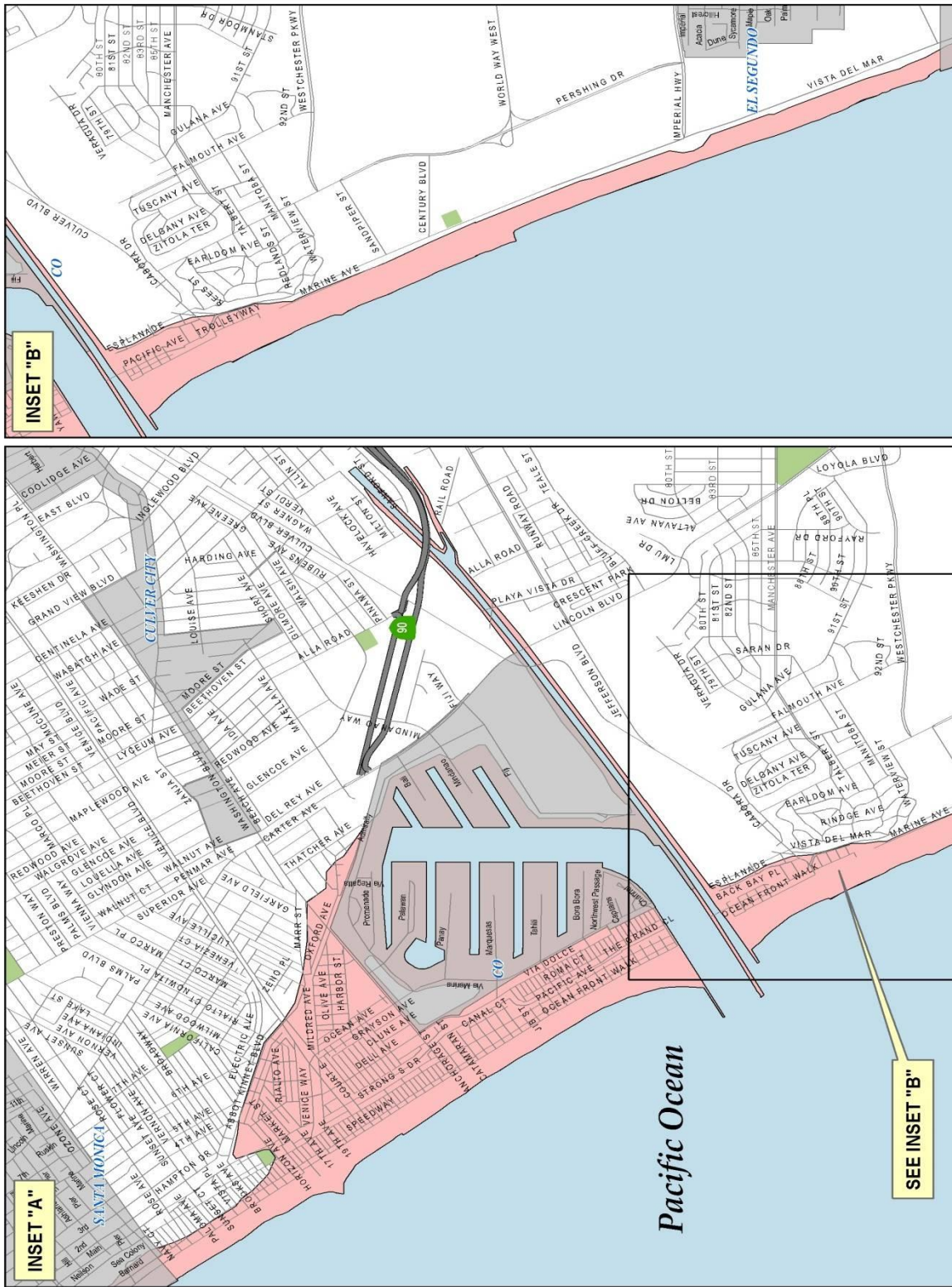
ATTACHMENT B: TSUNAMI INUNDATION AREA MAPS



TSUNAMI INUNDATION ZONE San Pedro & Harbor Area



WILLDAN | extending your reach



TSUNAMI INUNDATION ZONE *Venice, Playa Del Rey, & Westchester*

Tsunami Inundation Zone 2009
 Outside City of Los Angeles



TSUNAMI INUNDATION ZONE

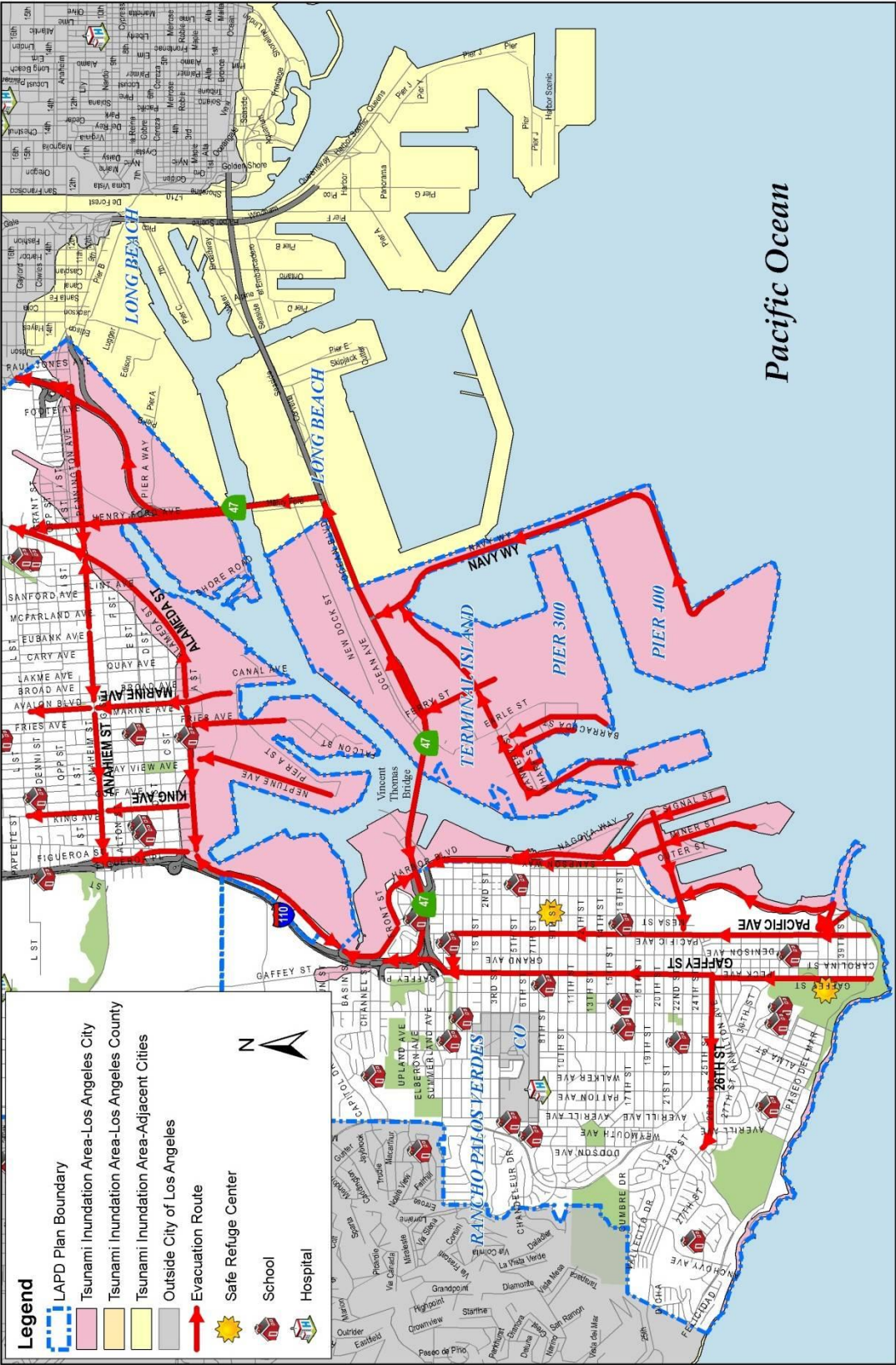
West Los Angeles & Pacific Palisades

N Legend

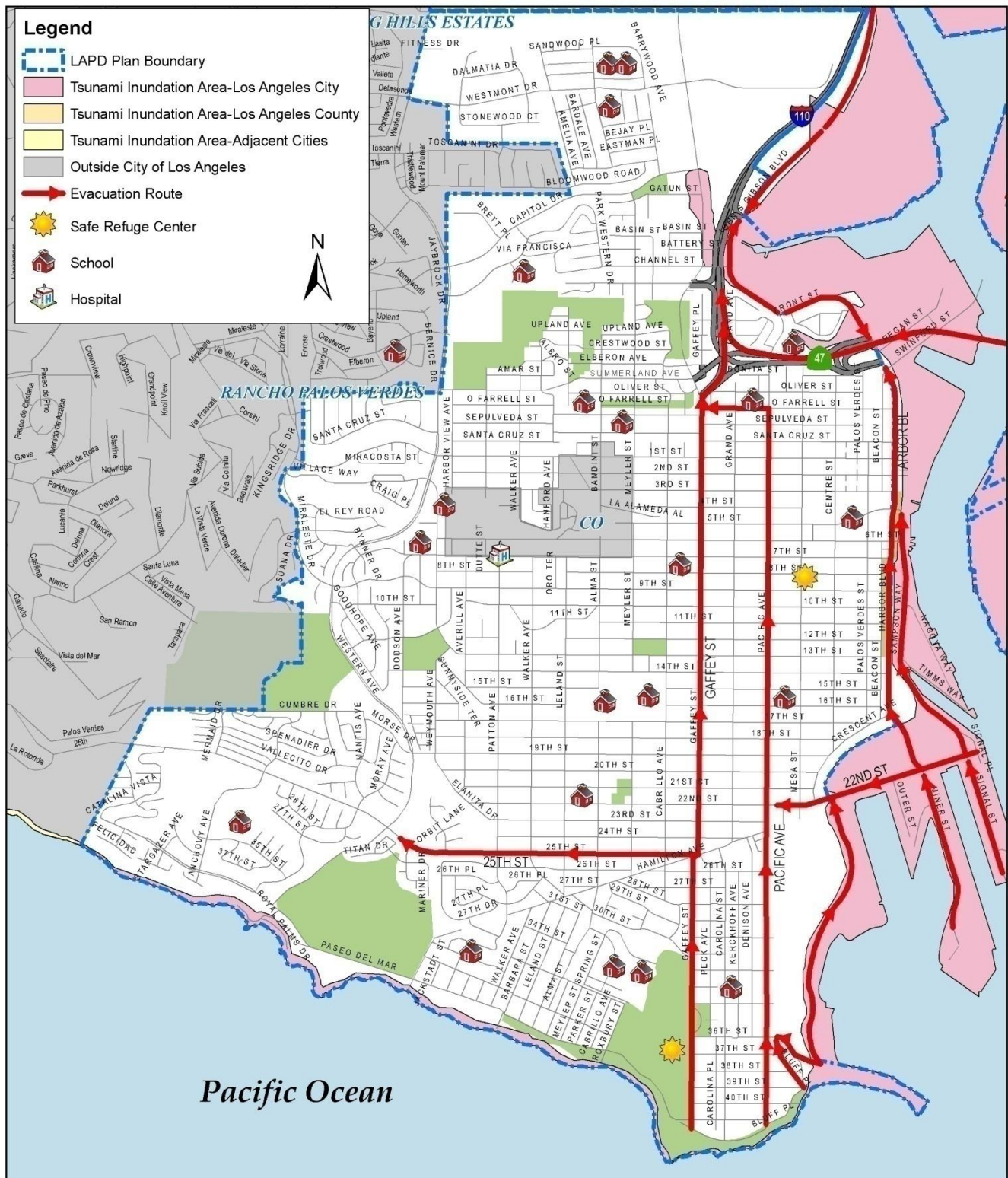
- Tsunami Inundation Zone 2009
- Outside City of Los Angeles

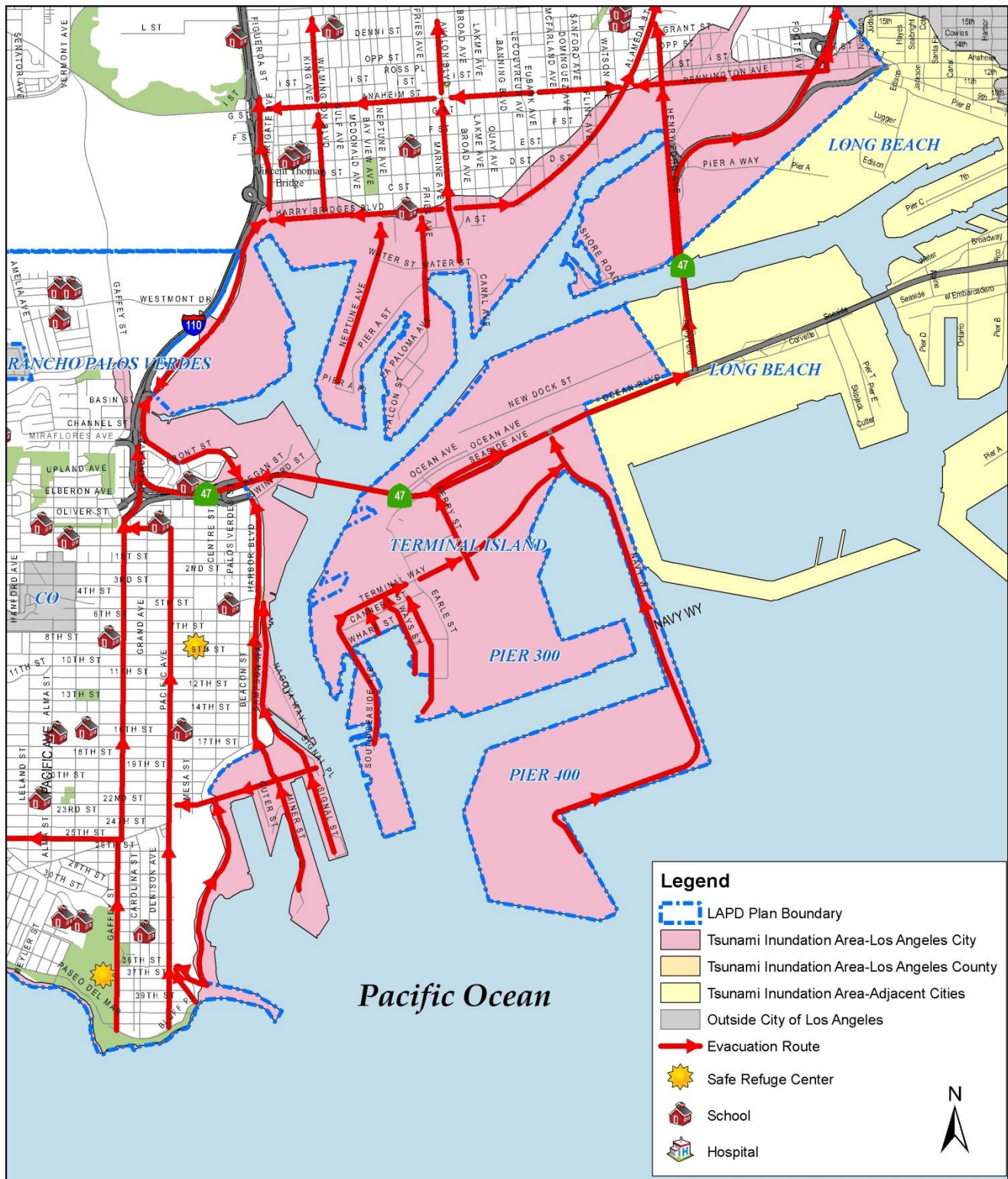


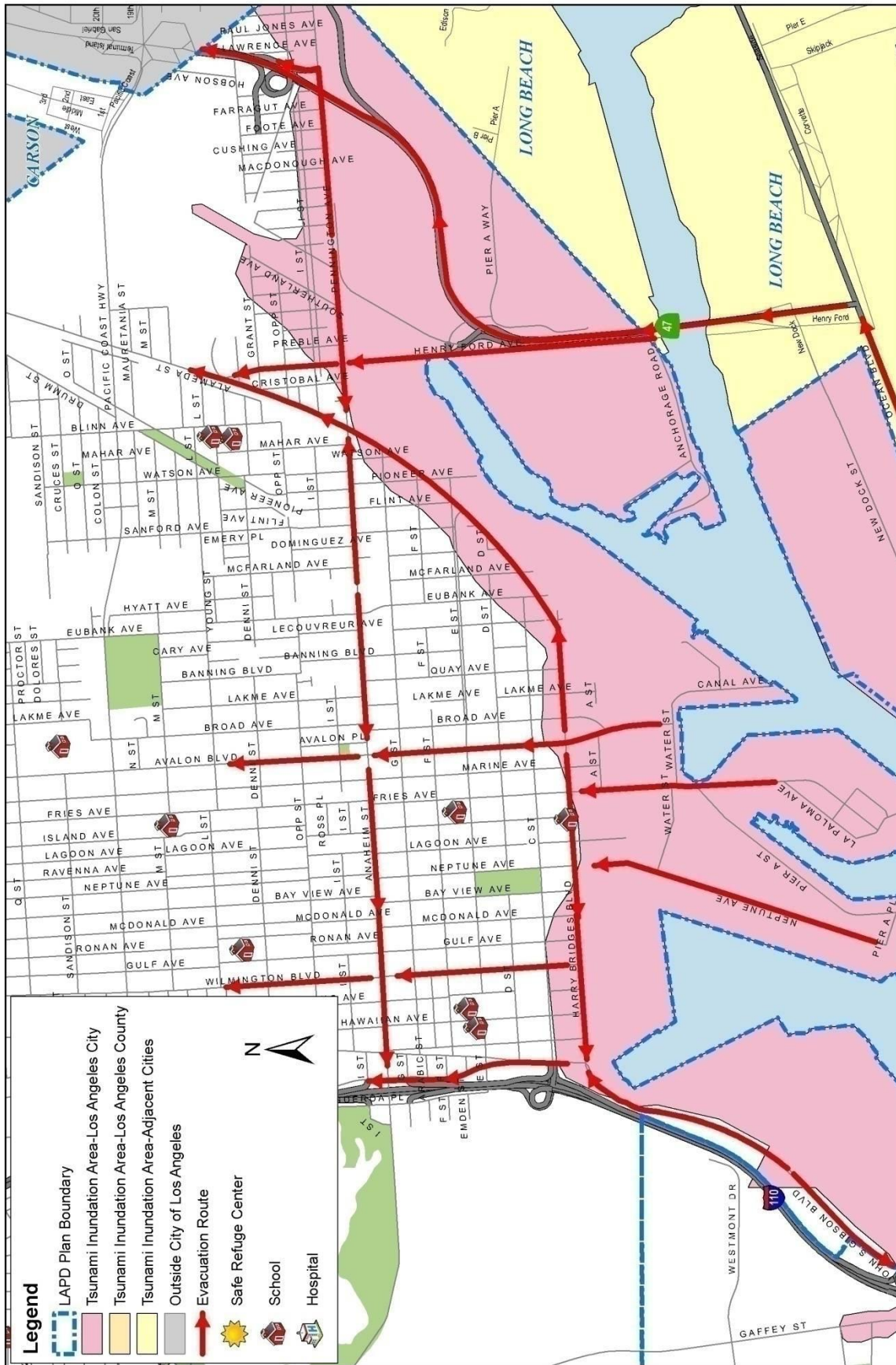
ATTACHMENT C: TSUNAMI EVACUATION MAPS



LAPD/LAPP TSUNAMI EVACUATION MAP
Harbor Area Overview







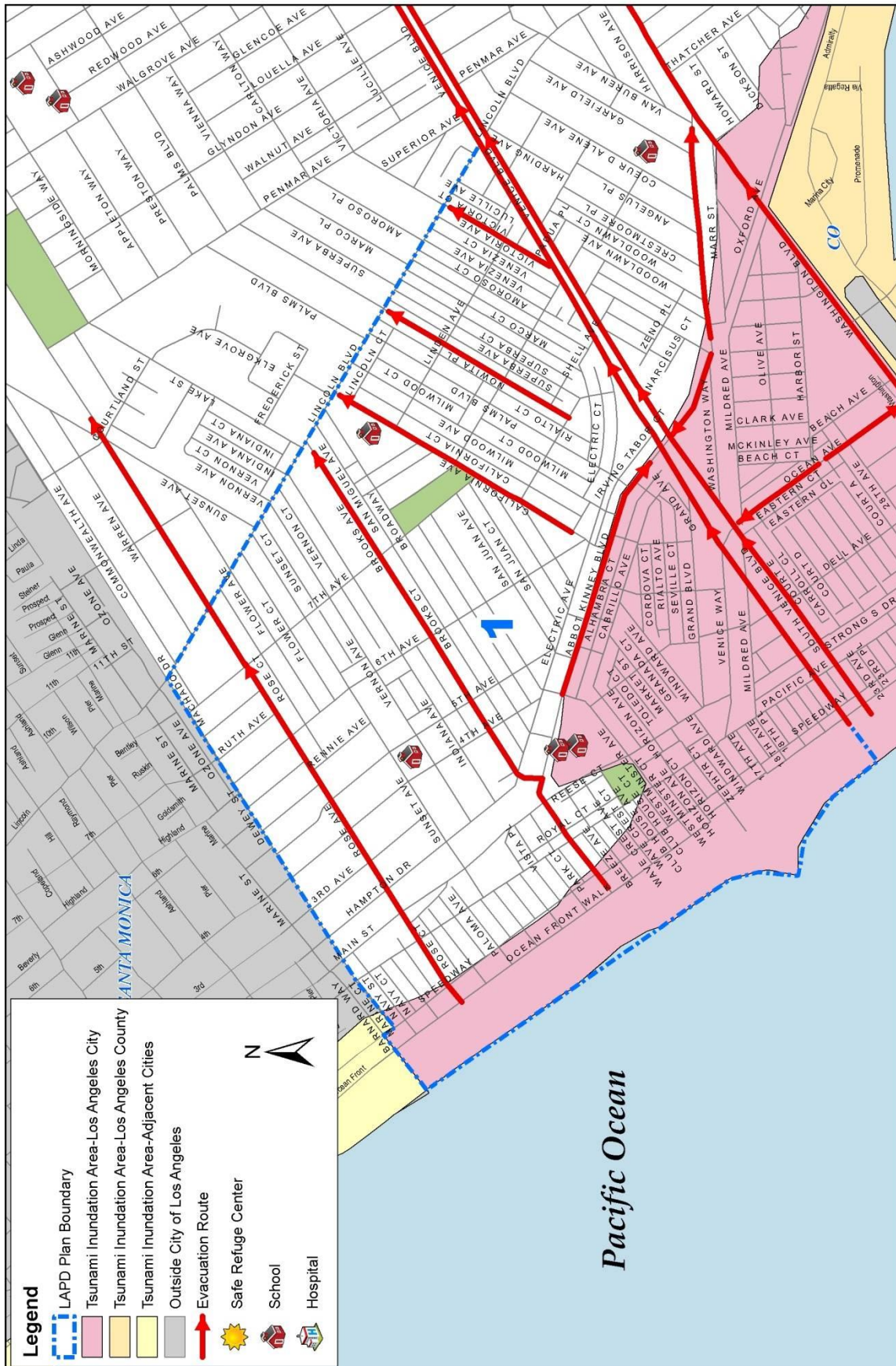
LAPD/LAPP TSUNAMI EVACUATION MAP

Harbor Area ~ Wilmington

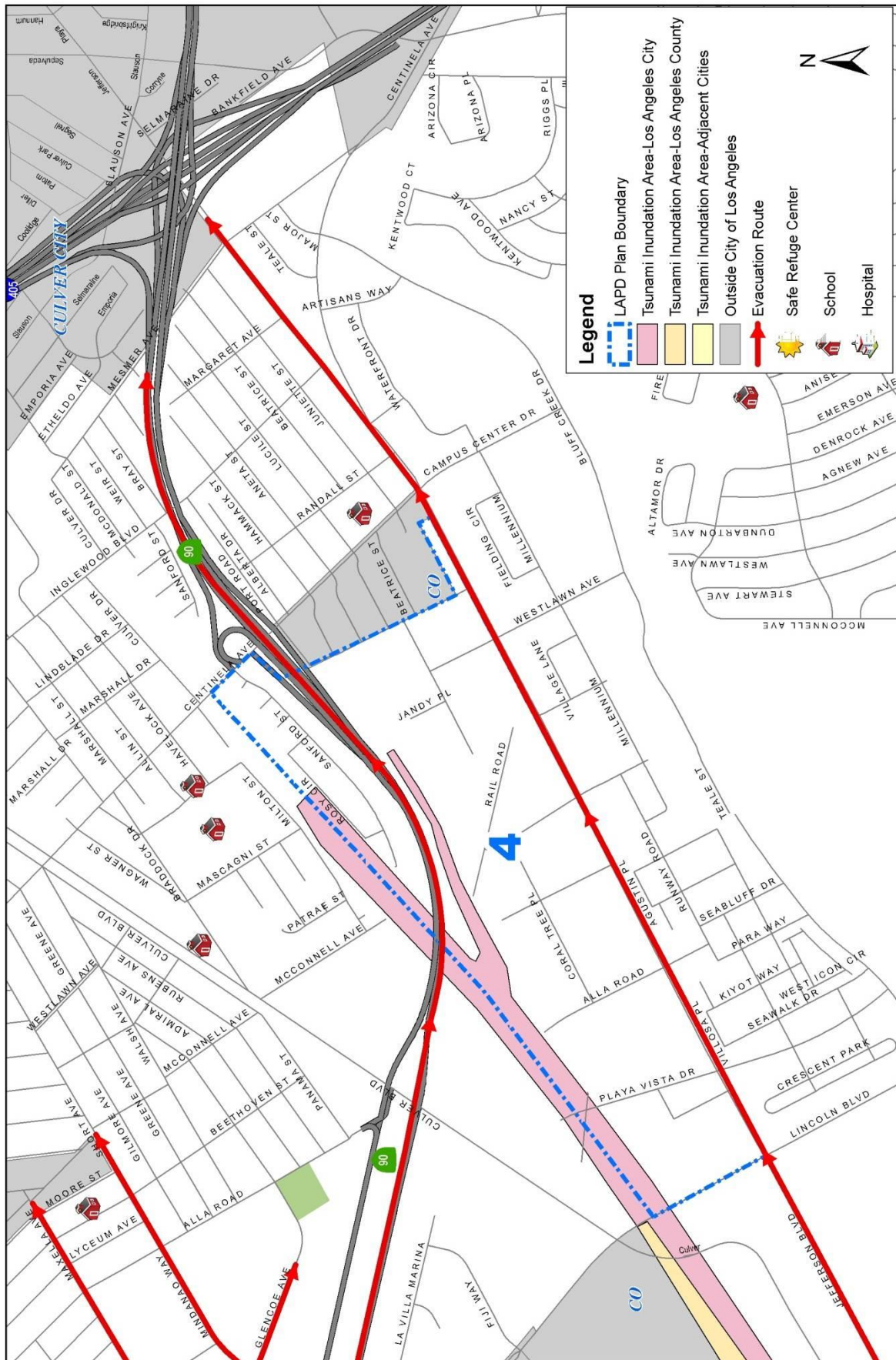
Pre-Identified Tsunami Evacuation Routes



LAPD TSUNAMI EVACUATION MAP *Venice Area Overview*



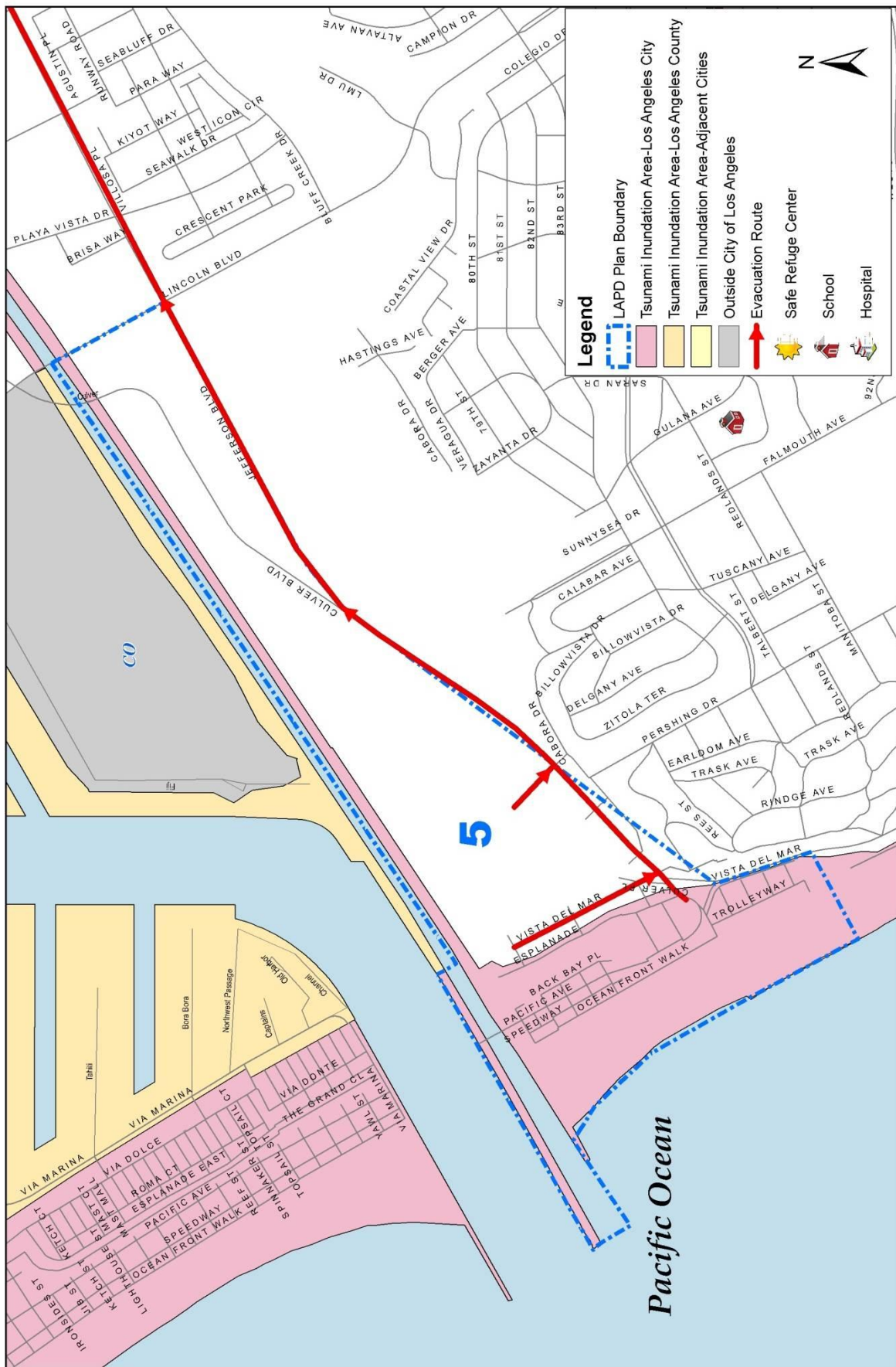
LAPD TSUNAMI EVACUATION MAP
Venice Area ~ Division 1
 Pre-Identified Tsunami Evacuation Routes



LAPD TSUNAMI EVACUATION MAP

Venice Area ~ Division 4

Pre-Identified Tsunami Evacuation Routes



LAPD TSUNAMI EVACUATION MAP

Venice Area ~ Division 5

Pre-Identified Tsunami Evacuation Routes

ATTACHMENT D: TSUNAMI EVACUATION ROUTES

San Pedro and Wilmington Area

Egress and Ingress Routes for Emergency Responders

The California Highway Patrol will regulate the ingress and egress of the (110) Harbor and (710) Long Beach Freeways as listed within their standing plans. The inbound lanes (southbound) lanes of the Harbor and Long Beach Freeways will be restricted for emergency responders only.

San Pedro Area - The citizens in the inundation area will be directed to evacuate utilizing north and west oriented streets.

Northbound Traffic

- Gaffey Ave towards The Harbor Gateway
- Pacific Ave towards the Harbor Freeway or Wilmington

Westbound Traffic

- 25th Street towards Western Ave and northbound Western Ave. (Western Ave is approx. 200' above sea level and is well out of the inundation zone). Evacuees can also continue W/B 25th Street past Western Ave.
- Harbor Blvd towards the Harbor Freeway or Wilmington

Intersection Staffing required at the following locations:

- Gaffey Ave at Anaheim Street
- Gaffey Ave at the Harbor Freeway
- Gaffey Ave at 7th Street
- Gaffey Ave at 9th Street
- Gaffey Ave at Paseo Del Mar
- Pacific Ave at Channel Street
- Pacific Ave at Front Street
- Pacific Ave at 7th Street
- Pacific Ave at 22nd Street
- 25th Street at Western Ave

Wilmington Area - The citizens in this area should evacuate by proceeding north and /or west on designated roadways.

Northbound Traffic

- Figueroa Street towards Carson
- Main Street towards Carson
- Wilmington Blvd towards Carson
- Avalon Blvd towards Carson
- Alameda Blvd towards Carson
- Neptune Ave towards Carson
- Fries Ave towards Carson

Westbound Traffic

- Anaheim Street towards the Harbor Freeway
- Harry Bridges Blvd towards the Harbor Freeway

Intersection Staffing required at following locations:

- Wilmington Blvd at Anaheim Street
- Avalon Blvd at Anaheim Street
- Alameda Street at Anaheim Street

Terminal Island - The citizens in this area should evacuate by proceeding north, east and west on designated roadways.

- All lanes on the Vincent Thomas Bridge will be westbound only from Seaside Ave
- All lanes on the Gerald Desmond Bridge will be east bound only from Seaside Ave
- All lanes on the Terminal Island Freeway will be northbound only from Seaside Ave.
- Intersection Staffing required at the following locations:
- Seaside Ave at Henry Ford Ave
- Seaside Ave and Navy Way

Venice Area

For ease of operation, the involved inundation area within the Venice Area shall be divided into five sectors. Each sector has designated evacuation routes.

Sector One - The area bordered by Rose Avenue on the north and Venice Boulevard on the south. Stakeholders in this area should evacuate by using the following routes.

- Rose Avenue away from the coast
- Brooks Avenue away from the coast
- Palms Boulevard away from the coast
- California Avenue away from the coast
- Victoria Avenue away from the coast
- Venice Boulevard away from the coast

Sector Two -The area bordered by Venice Boulevard on the north and Washington Boulevard on the south. Stakeholders in this area should evacuate by using the following routes.

- Venice Boulevard.
- Northbound Abbott Kinney Boulevard then eastbound Venice Boulevard.
- Southbound Abbott Kinney Boulevard then eastbound Washington Boulevard.
- Northbound Ocean Avenue then eastbound Venice Boulevard.
- Southbound Ocean Avenue then eastbound Washington Boulevard.

Sector Three - The area is bordered by Washington Boulevard on the north and Ballona Creek on the south. Stakeholders in this area should evacuate by using the following routes.

- Eastbound Maxella Avenue
- Mindanao Avenue to eastbound Short Avenue
- Eastbound Glencoe Avenue.

NOTE: Sector Three encompasses Marina Del Rey. This is the jurisdiction of the Los Angeles County Sheriff's Department.

Although not directly within the inundation zone, Los Angeles residents living east of Lincoln Boulevard, north of the Ballona Creek Channel, and south of the Marina Freeway, shall evacuate eastbound to the Marina Freeway. This area is adjacent to the inundation zone.

Sector Four -The area is bordered by Lincoln Boulevard on the west, the Ballona Creek Channel on the north, the Westchester bluffs on the south (Jefferson Blvd. for practical sense), and the 405 Freeway on the east. Stakeholders in this area should evacuate by using the following routes.

- Jefferson Boulevard to the 405 Freeway and Sepulveda Boulevard.

Sector Five - The area bordered by Lincoln Boulevard on the east and the Ballona Creek Channel on the North. The Westchester Bluffs on the south (Jefferson and Culver Blvd. for practical sense). Stakeholders in this area should evacuate by using the following routes

- Southbound Nicholson Avenue.
- Southbound Vista Del Mar to the Vista Del Mar Bluffs (located above the tsunami impact zone)

West Los Angeles

Stakeholders in this area should evacuate by using the following routes.

- Sunset Boulevard away from the coast.
- Temescal Canyon Drive away from the coast.
- Chautauqua Boulevard away from the coast.

ATTACHMENT E: SCHOOLS IN THE HAZARD ZONE

Available with the City of Los Angeles

ATTACHMENT F: ALERT AND NOTIFICATION OF TSUNAMI

Pacific Ocean Tsunami Alert System

In 1994, the United States Senate Appropriations Committee directed NOAA to formulate a plan for reducing tsunami risks to the nation's coastal residents. A monitoring and warning system has been created. Potential tsunamis are monitored by the West Coast/Alaska Tsunami Warning Center (WC/ATWC) in Palmer, Alaska and the Hawaii-based Pacific Tsunami Warning Center. The WC/ATWC is responsible for: (1) reporting seismic movement along the North American Coast from the Aleutian Islands south through Baja California; and (2) providing technical advice to emergency managers within its area of responsibility. A network of tsunami detection oceanic buoys provides immediate warning about any indications of a tsunami being generated or moving. The monitors are linked with satellites so that a real-time warning can be given. *This warning system is only effective for tsunamis of distant origin.*

Since California is vulnerable to local-source tsunamis, the current tsunami warning system does not fully meet California's needs. There are areas along the California Coast considered to be tsunami generation regions. The WC/ATWC may not detect a locally generated tsunami in sufficient time to warn local authorities to evacuate potential tsunami-impact areas. At present, detection of such local-source tsunamis is possible only where the shore can be observed.

An earthquake near our coast could cause a local-source tsunami. A strong earthquake felt along the coastal areas of the City lasting longer than 20 seconds should be considered a warning sign of a potential near source tsunami. If an earthquake is felt, coastal residents, business owners and visitors should evacuate tsunami inundation areas. The first visible indication of an approaching tsunami is often a recession of water. Any withdrawal of the sea, therefore, should be considered a warning of an approaching wave. On the other hand, a rise in water level may be the first event.

When a Tsunami Alert is issued, the information is received by the California State Warning Center (CSWC) operated by the California Emergency Management Agency (Cal EMA) via the National Warning System (NAWAS). All information received from the WC/ATWC is passed immediately to the local operational areas via the California Law Enforcement Telecommunications System (CLETS), California Warning System (CALWAS) and Emergency Digital Information System (EDIS), and simultaneously to designated local response agencies, for example the Los Angeles Police Department, Los Angeles Fire Department, Los Angeles Emergency Management Department and Harbor Department. (The following table illustrates this).

Levels	Notification Actions
Cal OES State Warning Center	<ul style="list-style-type: none"> • Notify potentially impacted jurisdictions through the Los Angeles County Operational Area (OA).
Cal OES Southern Region	<ul style="list-style-type: none"> • Verify receipt of information by OA and cities, unincorporated areas and special districts.
Los Angeles County Operational Area	<ul style="list-style-type: none"> • Confirm tsunami alert • Notify cities and special districts within the County that may be impacted. • Notify County departments (Sheriff, Fire, medical, etc.), as appropriate. • Notify other levels, depending upon nature of threat and security considerations.
Cities/Special Districts	<ul style="list-style-type: none"> • Notify City departments and agencies (Law enforcement, fire, medical, etc.), as appropriate.

Depending on the content of the warning, the County EOC staff, under the guidance of the Sheriff, will make several immediate decisions. If the first wave is expected to reach the coast with enough time for evacuation, the decision to make a complete, immediate evacuation may be necessary. However, if the wave is expected in 3-hours or more, a phased evacuation is possible with the closing of beaches and removal of emergency equipment and personnel from coastal areas. It should be noted that the decision to evacuate populations and to close businesses may be questioned if the tsunami does not occur. In order to reduce individual liability, the County and City may elect to declare a local emergency.









Tsunami Alerts

The WC/ATWC monitoring station will issue a tsunami alert initially based on seismic information as a means of providing the earliest possible alert. Tsunami alert text includes: type of alert (warning/watch); applicable regions; earthquake parameters (location and magnitude); evaluation; and tsunami ETA's for sites throughout the WC/ATWC's area of responsibility. (See Attachment K for Sample Warning Center Tsunami Alerts). The WC/ATWC updates messages every 30 minutes (as of August 2005). Updated messages will be continued, expanded or restricted, upgraded or downgraded, or cancelled. There are four types of tsunami alerts:

- Tsunami Warning
- Tsunami Advisory
- Tsunami Watch
- Tsunami Information Statement

Domestic Tsunami Messages

Domestic tsunami messages are issued for U.S. and Canadian coastlines and the British Virgin Islands. These messages include alerts and also serve to cancel alerts, when appropriate. There are four levels of tsunami alerts: warning, advisory, watch, and information statement. Each has a distinct meaning relating to local emergency response. Recommended protective actions vary within areas under warnings and advisories. Be alert to and follow instructions from local emergency officials because they may have more detailed or specific information.

Alert Level	Potential Hazard(s)	Action
 	Dangerous coastal flooding and powerful currents	Move to high ground or inland
 	Strong currents and waves dangerous to those in or very near water	Stay out of water, away from beaches and waterways
 	Not yet known	<ul style="list-style-type: none"> Stay tuned for more information Be prepared to act
 	No threat or very distant event for which hazard has not been determined	No action suggested at this time

Tsunami Warning – A tsunami warning is issued when a tsunami with the potential to generate widespread inundation is imminent, expected, or occurring. Warnings alert the public that dangerous coastal flooding accompanied by powerful currents is possible and may continue for several hours after initial arrival. Warnings 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 based on updated information and analysis.

Tsunami Advisory – A tsunami advisory is issued when a tsunami with the potential to generate strong currents or waves dangerous to those in or very near the water is imminent, expected, or occurring. The threat may continue for several hours after initial arrival, but significant 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 may be updated, adjusted geographically, upgraded to a warning, or cancelled based on updated information and analysis.

Tsunami Watch – A tsunami watch is issued when a tsunami may later impact the watch area. The watch may be upgraded to a warning or advisory or canceled based on updated information and analysis. Emergency management officials and the public should prepare to take action.

Tsunami Information Statement – A tsunami information statement is issued when an earthquake or tsunami has occurred of interest to the message recipients. In most cases, information statements are issued to indicate there is no threat of a destructive basin-wide tsunami and to prevent unnecessary evacuations. Information statements for distant events requiring evaluation may be upgraded to a warning, advisory, or watch based on updated information and analysis.

A **cancellation** is issued after an evaluation of water-level data confirms that a destructive tsunami will not impact an area under a warning, advisory, or watch or that a tsunami has diminished to a level where additional damage is not expected.

LAPD Notification

- Tsunami alerts and notifications originate from the National Oceanic and Atmospheric Administration (NOAA).
- Information is forwarded to the California Emergency Management Agency (Cal EMA) Warning Center via NAWAS.
- The Los Angeles County Office of Emergency Management (OEM), the Los Angeles County Fire Department and the Los Angeles Sheriff's Department (LASD) will receive an immediate notification. LA County OEM Duty Officer will notify the LA City EMD Duty Officer. LA County Sheriff will notify the LAPD Communications Division. LA County Fire Department will notify LAFD Metro Communications.
- EMD Duty Officer will notify the EMD General Manager, the EMD Assistant General Manager, Port Police and LAWA PD. EMD Duty Officer will also confirm the information with the LAPD Communications Division and LAFD Metro Communications.
- EMD General Manager or Assistant GM will notify the Mayor's Office
- The LAPD DOC will immediately notify the LAPD's Harbor Area Watch Commander, the Pacific Area Watch Commander, the West Los Angeles Area Watch Commander and Air Support Division (ASD) of the tsunami notification.
- In addition, LAPD DOC will notify the Chief of Police, Director of Office of Operations, and all appropriate Command, and Staff Officers of the tsunami notification.
- Police Department Command Staff will communicate with other state and local resources using established communication procedures.

ATTACHMENT G: SAMPLE WARNING CENTER TSUNAMI ALERT

Information regarding seismic movement and the possible generation of seismic sea waves is collected by the West Coast/Alaska Warning Center at Palmer, Alaska (AL) and the Pacific Tsunami Warning Station at Honolulu, Hawaii (HO). Tsunami alerts contain the following elements:

SAMPLE MESSAGES

1. From Alaska Warning Station
2. To Office of Emergency Services
3. Pacific Coastal Earthquake 081527 GMT
4. Region - Prince William Sound, Alaska
5. 8.4
6. Johnson, Palmer Observatory

Lines 1 - 2 Self-explanatory

Line 3 Refers to the arrival time of ground-transmitted seismic waves (NOT tsunami or tidal waves) in Greenwich Mean Time (GMT or "Zulu") at the Palmer Observatory.

In the Sample Message "08" is the hour; "15" stands for minutes after the hour; and "27" stands for seconds.

Line 4 Indicates the general location of the earthquake. Sometimes only a general direction or approximate mileage will be given.

Line 5 Gives the magnitude of the earthquake.

Line 6 Provides the name of employee sending the report.

Sample Tsunami alerts distributed via EDIS are provided on the following page(s).

ATTACHMENT H: SAMPLE EDIS TSUNAMI INFORMATION BULLETIN

WEPA43 PAAQ 021946

TIBWCA

TO - TSUNAMI WARNING SYSTEM PARTICIPANTS IN

ALASKA/BRITISH COLUMBIA/WASHINGTON/OREGON/CALIFORNIA

FROM - WEST COAST AND ALASKA TSUNAMI WARNING CENTER/NOAA/NWS

SUBJECT - TSUNAMI INFORMATION BULLETIN

BULLETIN NUMBER 1

ISSUED 06/02/2004 AT 1946 UTC

THIS IS A SAMPLE TSUNAMI INFORMATION PRODUCT

...THIS TSUNAMI INFORMATION BULLETIN IS FOR ALASKA - BRITISH
COLUMBIA - WASHINGTON - OREGON AND CALIFORNIA ONLY...

NO - REPEAT NO - WATCH OR WARNING IS IN EFFECT.

EARTHQUAKE DATA

PRELIMINARY MAGNITUDE - 7.0

LOCATION - 9.1S 150.8E - EASTERN NEW GUINEA REG., P.N.G.

TIME - 1130 ADT 06/02/2004

1230 PDT 06/02/2004

1930 UTC 06/02/2004

EVALUATION

BASED ON LOCATION AND MAGNITUDE THE EARTHQUAKE WAS NOT
SUFFICIENT TO GENERATE A TSUNAMI DAMAGING TO CALIFORNIA -
OREGON - WASHINGTON - BRITISH COLUMBIA OR ALASKA. SOME AREAS MAY
EXPERIENCE SMALL SEA LEVEL CHANGES. IN AREAS OF INTENSE
SHAKING LOCALLY GENERATED TSUNAMIS CAN BE TRIGGERED BY SLUMPING.

THE PACIFIC TSUNAMI WARNING CENTER WILL ISSUE TSUNAMI BULLETINS
FOR HAWAII AND OTHER AREAS OF THE PACIFIC.

THIS WILL BE THE ONLY BULLETIN ISSUED FOR THIS EVENT BY THE
WEST COAST AND ALASKA TSUNAMI WARNING CENTER UNLESS CONDITIONS
WARRANT. REFER TO THE INTERNET SITE [HTTP://WCATWC.ARH.NOAA.GOV](http://WCATWC.ARH.NOAA.GOV)
FOR MORE INFORMATION.

ATTACHMENT I: SAMPLE EDIS TSUNAMI WATCH/WARNING

e0296c1bwa00000

News-NWS_LOX-A_TSUNAMI_W 06/14 213

A TSUNAMI WARNING IS IN EFFECT FOR THE COASTAL AREAS FROM...

NATIONAL WEATHER SERVICE LOS ANGELES/OXNARD CA
845 PM PDT TUE JUN 14 2005

CAZ034-035-039-040-041-087-150600-
SANTA BARBARA COUNTY CENTRAL COAST-
SAN LUIS OBISPO COUNTY CENTRAL COAST-
SANTA BARBARA COUNTY SOUTH COAST-
VENTURA COUNTY COAST-
LOS ANGELES COUNTY COAST INCLUDING DOWNTOWN LOS ANGELES-
CATALINA ISLAND-
845 PM PDT TUE JUN 14 2005

...A TSUNAMI WARNING IS IN EFFECT FOR THE COASTAL AREAS FROM THE
CALIFORNIA-MEXICO BORDER TO THE NORTH TIP OF VANCOUVER ISLAND
BRITISH COLUMBIA INCLUSIVE...

EARTHQUAKE DATA...
PRELIMINARY MAGNITUDE 7.4
LOCATION... 41.3 NORTH 125.7 WEST... OR 90 MILES NW OF EUREKA, CA
AND 300 MILES NW OF SAN FRANCISCO CA AT 751 PM PDT.

IT IS NOT KNOWN...REPEAT NOT KNOWN...IF A TSUNAMI EXISTS...BUT A
TSUNAMI MAY HAVE BEEN GENERATED. THEREFORE, PERSONS IN LOW LYING
COASTAL AREAS SHOULD BE ALERT TO INSTRUCTIONS FROM THEIR LOCAL
EMERGENCY OFFICIALS. PERSONS ON THE BEACH SHOULD MOVE TO HIGHER
GROUND IF IN A WARNED AREA. TSUNAMIS MAY BE A SERIES OF WAVES WHICH
COULD BE DANGEROUS FOR SEVERAL HOURS AFTER THE INITIAL WAVE ARRIVAL.

THIS TSUNAMI WARNING INCLUDES THE ENTIRE CALIFORNIA COAST. ESTIMATED
TIME OF ARRIVAL AT SAN PEDRO IS APPROXIMATELY 10 PM PDT AND AT LA
JOLLA AT 1014 PM PDT.

\$\$

GOMBERG

EDIS-06-14-05 2047 PDT

ATTACHMENT J: SAMPLE BRIEFING FORMAT

We have been warned by the National Weather Service that a Tsunami, or seismic sea wave, (may have) (has been) generated in the Pacific and may strike our coast. If a wave was generated, it will arrive here at approximately _____.

Tsunamis can cause great loss of life and property damage. Most people lost their life from a tsunami when they were not evacuated in time or were allowed to return to the evacuated area too soon.

Our responsibility is to warn everyone within the inundation area shown on the maps on the back of this briefing sheet, and to insure that special facilities in the risk area are evacuated. Temporary staging areas are being established at the (facility) on (cross streets) in (area).

A tsunami is not a single wave, but a series of waves. Keep people out of the risk area until you are advised that re-entry may begin. Waves may be as far apart as one hour and may be as high as twenty feet on this section of coast.

Traffic Control Points may be set up at strategic locations to reduce traffic flow toward the coast. If you are on a Traffic Control Point, you may allow the following people through after warning them of the danger and expected time of arrival:

- Residents who have a local address on their driver's license
- Boat owners who can give you either a berth or CF number
- Commercial trucks enroute to non-affected areas
- Emergency services personnel including Red Cross Volunteers enroute to support operations
- Sign Language Interpreters and ADA assistants

ATTACHMENT K: SAMPLE TSUNAMI WATCH BRIEFING

For information to the Mayor, EOB, EMC and to all EOC Staff.

A severe earthquake has occurred at (location). It is not known, repeat, not known at this time that a tsunami has been generated. You will be kept informed as further information becomes available.

Additional Information

Earthquake Location: _____

Latitude: _____ Longitude: _____

Vicinity of: _____

Time: _____ PST or PDT

Date: _____

Magnitude: _____

ETA information (if wave is generated) is as follows:

Los Angeles County Coast _____ AM/ PM (TIME)

ATTACHMENT L: SAMPLE TSUNAMI WARNING BRIEFING

For information to the Mayor, EOB, EMC and to all EOC Staff.

A severe earthquake has occurred at (location). A tsunami has been generated which is spreading over the Pacific Ocean. Wave heights cannot be predicted. The tsunami may cause great damage to coastal cities in the Pacific area.

Wave heights (these are not necessarily maximum) have been reported to (Alaska/ Hawaii) as follows:

Place	Height
_____	_____
_____	_____
_____	_____

You will be kept informed as further information becomes available.

Additional Information

Earthquake Location: _____

Latitude: _____ Longitude: _____

Vicinity of: _____

Time: _____ PST or PDT

Date: _____

Magnitude: _____

ETA information (if wave is generated) is as follows:

Los Angeles County Coast _____ AM/ PM (TIME)

ATTACHMENT M: SAMPLE TSUNAMI CANCELLATION BRIEFING

For information to the Mayor, EOB, EMC and to all EOC Staff.

No tsunami reports have been received. No tsunami/seismic sea wave has been generated. (Warning/Watch) status is canceled. All agencies assume all clear upon receipt of this message.

SAMPLE

ATTACHMENT N: SAMPLE MEDIA RELEASES

MESSAGE 1

According to the (West Coast/Alaska-Pacific) Tsunami Warning Center, a severe earthquake has occurred at (location) at (time). The earthquake was measured at (Magnitude). It is (known/not known) at this time (that/if) a tsunami has been generated. If a tsunami has, in fact, been generated, the wave heights cannot be accurately predicted; however, the tsunami waves could cause great damage to coastal cities and communities.

Residents of affected areas are urged to keep tuned to your local Emergency Alert System station (_____) for further information. People should stay away from low lying coastal areas until further notice. A tsunami is a series of waves and may be dangerous for several hours after the initial wave arrives at any particular point.

MESSAGE 2

A tsunami, or seismic sea wave, has been generated in the Pacific and may strike our coast. If the wave was generated, it will arrive here at approximately _____. All persons in risk areas (low areas adjacent to the ocean) are ordered to evacuate to safe areas. Staging areas have been established at the following site(s):

- _____ (site) on _____ (cross streets) in _____ (city).
- _____ (site) on _____ (cross streets) in _____ (city).

You should be able to return to your homes within _____ hours. Law enforcement will prevent anyone from entering the evacuated areas. Additional information is available on the Emergency Alert System.

ATTACHMENT O: SAMPLE EVACUATION ORDERS

****These are sample evacuation orders only.**

Sample EVACUATION ORDER 1

We have been warned by the National Weather Service that a tsunami, or seismic sea wave (may have been) (has been) generated in the Pacific and may strike our coast. If a wave was generated, it will arrive here at approximately _____.

Under provisions of the, I am ordering all persons in the risk area to evacuate out of the impacted areas and to Safe Refuge Centers. Persons evacuating from the Harbor Area and San Pedro should evacuate to either the Anderson Senior Citizen Center located at West 8th Street & Mesa Street or to Angels Gate Recreation Center located at Gaffey Street and West 36th Street in San Pedro. Persons evacuating from the Venice Area should evacuate to Glen Alla Park located at Glencoe Ave. and Alla Road. Persons evacuating from the West Los Angeles Area should evacuate to **(no location is specified)**. You should be able to return to your homes within (number of hours, if known). Security patrols will prevent anyone from entering the evacuated areas.

Tsunamis can cause great loss of life and property damage. Most people lost their life from a tsunami when they were not evacuated in time or were allowed to return to the evacuated area too soon.

A tsunami is not a single wave but a series of waves. Stay out of the risk area until you are advised that reentry may begin. Waves may be as far apart as one hour and up to twenty feet high on this part of the coast.

There is no way to determine in advance the size of tsunamis in specific locations. A small tsunami at one beach can be a giant wave a few miles away. Don't let the modest size of one make you lose respect for all.

All tsunamis - like hurricanes - are potentially dangerous even though they may not strike each coastline or do damage when they do strike.

Never go down to the beach to watch for a tsunami. The wave moves much faster than you can run.

During this emergency, local police, fire, and emergency services officials are trying to save your life. Give them your fullest cooperation.

Mayor of the City of Los Angeles

Sample EVACUATION ORDER 2

This is the Los Angeles Police Department. A recent seismic event has triggered a potential tsunami along the Los Angeles coastline. Move inland beyond two miles of any beach area and at least 100 feet above sea level. Leave on foot if possible. Do not return to the beach area until an "ALL CLEAR" message has been broadcast by local emergency officials. Further information will be broadcast on your local radio and television stations. Thank you for your immediate cooperation.

SAMPLE

ATTACHMENT P: OTHER AGENCIES

City of Santa Monica Information Summary:

1. City of Santa Monica
2. We are located in the City of Santa Monica, which borders the City of Los Angeles to Santa Monica's south and eastern ends.
3. In the case of Tsunami, the City of Santa Monica will encourage and participate in evacuation of its residents and others located in the "Tsunami Inundation Zone". People will be encouraged to seek higher ground, at least four blocks east of the Ocean. This will ensure that anyone who may be located in the potential inundation zone would be out of danger.
4. The City of Santa Monica has several "overlapping relationships" regarding the potential response to a tsunami warning and or evacuation order. The main overlapping relationship is with the County of Los Angeles, Lifeguards, since they are the agency with primary emergency response responsibilities along the beach in Santa Monica. Additionally, we would work with the City of Los Angeles to coordinate both organizations evacuation orders and directions. Further, the Santa Monica Malibu School District and the Santa Monica Pier Corporation are additional partners with overlapping relationships regarding tsunami response.

Federal Correctional Institution Terminal Island

MEMORANDUM FOR EVERETT COTTRELL, CAPTAIN

FROM: M. Booker, SHU Lieutenant

SUBJECT: Tsunami Annex Information

The following information is provided in case of a Tsunami on the coast of Long Beach and Port of Long Beach area.

Federal Correctional Institution Terminal Island. Located at 1299 Seaside Ave. San Pedro, California, 90731.

In case of a Tsunami, the institution will evacuate all staff and inmates to higher ground within the institution. If time permits the institution will coordinate with the Coast Guard, Port of Long Beach Police, and other law enforcement agencies to remove and transport all staff and inmates to a safer location.

City of El Segundo Information Summary

1. The City of El Segundo
2. We are located just south and adjacent to the Los Angeles World Airport (LAX) divided by Imperial Highway, and north of Manhattan Beach on Vista Del Mar and meets Vista Del Mar at Grand which is also LA City.
3. In case of a Tsunami, the City of El Segundo would encourage all personnel on El Segundo beach to evacuate eastward. The City will be installing Tsunami Route signs from just north of 45th Street in Manhattan Beach to Grand Avenue, making a right on Grand Avenue in the City of Los Angeles which turns into the City of El Segundo. We would also encourage the City of Los Angeles to put signs from the entrance to the RV Park on Dockweiler south to Grand Avenue, turning left. After entering the City, height of 150 ft, we would show a route out towards Sepulveda, away from the beach.
4. As we share borders with Los Angeles and the Beach Cities, we would be in contact with the City of LA and let them know if we have initiated an evacuation from our portion of the beach. I am also confident that the Los Angeles County Lifeguard unit of the FD will advise on their immediate actions.

United States Coast Guard (USCG)

In the event of a tsunami warning, the US Coast Guard, Captain of the Port (COTP) will employ their USCG Alert Warning System (AWS) which will notify all Port of LA & LB Maritime Transportation Security Act (MTSA) regulated facilities, stake-holders and applicable port partners.

Due to the proximity of some USCG assets and personnel (in relation to the Tsunami inundation zone) activation of our USCG “Continuity of Operations Plan” (COOP) may be required. Doing so will enable USCG Sector/Station LA to continue essential Security and Red Cross Search and Rescue missions from an alternate work site-out of the hazardous area.

Additional actions that may be undertaken:

- Activate or participate in the ‘Terminal Island Evacuation Plan’, and/or the Port of LA and/or Port of LB Evacuation Plans.
- Activate or participate in a ‘Unified Command’ structure alongside other pertinent LA/LB Area Maritime Security Committee (AMSC) members and/or responders.
- Direct applicable vessels to evacuate the port and move to deeper water.
- Mandate applicable vessels that do not evacuate, to double or triple mooring lines and cables.
- Initiate Red Cross Search and Rescue (SAR) missions as appropriate.

City of Long Beach Information Summary

The City of Long Beach is located in the south east corner of Los Angeles County, about 20 miles south of downtown Los Angeles. Long Beach borders the City of Los Angeles on its western edge and Orange County on its southeast edge.

In the case of Tsunami, the City of Long Beach will encourage and participate in an evacuation of its residents and others located within the Tsunami inundation zone. People will be encouraged to seek high ground to ensure that anyone who may be located in the inundation zone would be out of danger.

The City of Long Beach has several “overlapping relationships” regarding potential response to a tsunami warning and or evacuation order. These relationships include the Port of Long Beach, The United States Coast Guard, the County of Los Angeles, and the Long Beach Unified School District.