

LOW RISK HAZARDS

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SECTION 4M

TSUNAMI

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Section 4M - TSUNAMI

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CITY OF LOS ANGELES HAZARD MITIGATION PLAN

MISSION, GOALS & OBJECTIVES

Mission

The mission of the City of Los Angeles Local Hazards Mitigation Plan is to establish and promote a comprehensive mitigation policy and program to protect City residents, their property, public facilities, the infrastructure and the environment from natural and manmade hazards.

Each one of the Tsunami mitigation measures is designed to address one or more of the following goals. This is indicated in the last item shown with each mitigation measure.

Goals

- **Goal 1 - Protect Life and Property**
- **Goal 2 - Increase Public Awareness**
- **Goal 3 - Strengthen Partnerships**
- **Goal 4 - Increase Emergency Service Effectiveness**
- **Goal 5 - Environmental & Historical Preservation**

Identification of Mitigation Measures

This section describes measures developed by City departments to mitigate the risks associated with identified hazards and to meet the Goals and Objectives of the Plan. Recently completed and ongoing mitigation programs and projects are listed, as well as proposed projects. Within each subsection projects are grouped by primary responsible City department or agency.

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(Example)

Field Name	Definition
Cost:	\$ = Estimated cost in dollars currently funded [\$] = Estimated cost in dollars not funded FTE = Full Time Equivalent staff currently funded [FTE] = Full Time Equivalent staff not funded TBD = Cost information to be determined later
Schedule:	Ongoing = a continuous program Start = estimated program start Finish = estimated program finish Not Scheduled = no start date has been established TBD = Schedule information to be determined later
Objective Addressed:	Objectives that relate to the program
Responsible Agency:	City Departments/Bureaus and outside agencies
Financing:	Funding sources for the identified program
Goals Addressed:	Identification of one or more of the five established goals

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PROPOSED MITIGATION MEASURES

Los Angeles Fire Department (LAFD)

TS-LAFD-01

Program/Project: Protect Fire Stations 40, 49, 110, 111, 112 From Tsunami Impact.
Description: Raise Fire Station living areas above maximum projected tsunami inundation levels; reinforce areas of impact with concrete style barricades to divert water and debris; streamline tsunami early warning systems to ensure timely notification to LAFD Dispatch.

Cost: TBD
Schedule: Projected
Objective Addressed: 1B, 4A
Responsible Agency: LADBS, Planning, LAFD; Harbor, DPW/Engineering, LAFD
Financing: TBA/Grants
Goals Addressed: -Protect life/property
-Increase emergency services effectiveness

Harbor Department (HAR)

TS-HAR-03

Program/Project: Installation of Public Notification and Early Warning System in Terminals No. 4, 6, 14, 34, 38, 55, 62, 63, 67, 77, 79, 80, 81, 82, 91, Ports O'Call and Pier 400.
Description: N/A

Cost: TBD
Schedule: TBD
Objective Addressed: 1A, 1B, 1C, 2A, 4A, 4B
Responsible Agency: Harbor
Financing: TBD
Goals Addressed: -Protect life/property
-Increase public awareness
-Increase emergency services effectiveness

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TS-HAR-04

Program/Project: Installation of Public Notification and Early Warning System
Description: Installation of Public Notification and Early Warning System in Terminals No. 4, 6, 14, 26, 34, 38, 55, 62, 63, 67, 77, 79, 80, 81, 82, 91, and Ports of Call.

Cost: \$500,000
Schedule: TBD
Objective Addressed: 1B, 4A
Responsible Agency: Harbor Department
Financing: TBD
Goals Addressed: -Protect life/property
-Increase Emergency Service Effectiveness

Department of Emergency Preparedness (EPD)

TS-EPD-01

Program/Project: Research and recommend the need to include a Tsunami element to the City's Emergency Response Master Plan.
Description: Create an Annex to cover the impact of tsunamis to the City.

Cost: TBD
Schedule: Start July/2005
Policy Addressed: 1A, 1B, 3A, 4A, 4C
Responsible Agency: Department of Emergency Preparedness
Financing: General Fund
Goals Addressed: -Protect life/property
-Strengthen partnerships
-Increase emergency services effectiveness

Tsunami Task Force (TTF)

Following the disastrous December 26, 2004 earthquake and tsunami in the Indian Ocean, the City Council formed a Tsunami Task Force consisting of both City and non-City agencies to assess the threat to the City, and to develop recommendations for appropriate hazard mitigation actions. The composition of the Task Force, and its findings and assumptions are detailed in Section 3M of this Plan.

The following tsunami hazard mitigation actions were recommended by the TTF and submitted to the City Council for approval. In most cases, the implementing agency has

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not yet been identified, and is noted “TBD” (to be determined).

TS-TTF-1

Program/Project: Community Outreach/Educational Program
Description: In cooperation with Los Angeles County and neighboring communities, establish a long-term community outreach and educational program to ensure individual, family and business preparedness in tsunami hazard areas.

Cost: TBD
Schedule: TBD
Objectives Addressed: 1C, 1E, 2A, 2B
Responsible Agency: TBD
Financing: TBA/Grants
Goals Addressed: -Protect life/property
-Increase public awareness

TS-TTF-2

Program/Project: Tsunami Emergency Response Plan/Annex
Description: Create a Tsunami Emergency Response Plan/Annex to the Emergency Operations Master Plan and Procedures. Identify in the Plan tsunami early warning systems, alert notification procedures, agency contact information, evacuation policies and procedures, City Department pre-event, response, and post event responsibilities, and specific City facility procedures.

Cost: TBD
Schedule: TBD
Objectives Addressed: 1A, 1B, 4A
Responsible Agency: TBD
Financing: General Fund
Goals Addressed: -Protect life/property
-Increase emergency service effectiveness

TS-TTF-3

Program/Project: Los Angeles County Operational Area Tsunami Task Force
Description: Continue to participate in the Los Angeles County Operational Area Tsunami Task Force. Provide information as requested; disseminate information developed by the task force to appropriate City

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departments; ensure consistency between City Emergency Response Plan and plans of other participating jurisdictions.

Cost: TBD
Schedule: Ongoing
Objectives Addressed: 3A, 4C
Responsible Agency: TBD
Financing: General Fund/Staff time
Goals Addressed: -Strengthen partnerships
-Increase emergency service effectiveness

TS-TTF-4

Program/Project: Update Tsunami Section of Hazard Mitigation Plan
Description: Update plan to include recommendations and other appropriate material and information developed by the Tsunami Mitigation Task Force

Cost: TBD
Schedule: October, 2005
Objectives Addressed: 1A, 1D, 5A
Responsible Agency: EPD
Financing: Grants/General Fund
Goals Addressed: -Protect life/property
-Environmental and historic preservation

TS-TTF-5

Program/Project: Tsunami Alert/Evacuation/Safety Program
Description: In coordination with appropriate City agencies, Los Angeles County, and neighboring jurisdictions, implement and deploy measures to alert potentially affected citizens and business of tsunami hazards, evacuation routes, warning systems, and evacuation centers. These would include:

- Tsunami Hazard Signage
- Tsunami Evacuation Route Map/Signage
- Alert and Warning Systems
- Safe Refugee/Evacuation Centers
- Tsunami Awareness Campaign

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Cost: TBD
Schedule: TBD
Objectives Addressed: 1B, 1D, 1E, 2A, 2B, 2C, 3A, 4A, 4C
Responsible Agency: TBD
Financing: Grants/General Fund
Goals Addressed:
-Protect life/property
-Increase public awareness
-Strengthen partnerships
-Increase emergency service effectiveness

Department of Water and Power (DWP)

TS-DWP-01

Water

Program/Project: Emergency Telephone Pilot Project
Description: A contractor shall provide automated, prerecorded, high volume telephone calling and tracking services to LADWP so customers can be quickly notified about boil water notices, water outages, emergency alerts, power outages, post-earthquake notices, other emergency situations related to water and power service, etc.

Cost: \$2 M
Schedule: 1/01/08 through 1/01/11
Objective Addressed: 1A, 2A, 3A, 4A
Responsible Agency: Department of Water and Power - Water
Financing: DWP
Goals Addressed:

- Protect life/property
- Increase Public Awareness
- Strengthen Partnerships
- Increase Effectiveness of City Emergency Services

TS-DWP-02

Water

Program/Project: On-line Water Quality Monitoring
Description: Installation of on-line, real time, remote monitoring for the following types of water quality constituents: 1) physical, 2) inorganic, 3) organic, 4) microbial, and 5) radiologicals. These monitors will be installed at key water supply locations and in the distribution system.

Cost: \$3 M
Schedule: 1/01/08 through 1/01/13
Objective Addressed: 1A, 4A
Responsible Agency: Department of Water and Power - Water

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Financing: DWP
Goals Addressed:

- Protect life/property
- Increase Effectiveness of City Emergency Services

EXISTING/ONGOING MITIGATION MEASURES

Department of Building and Safety (LADBS)

TS-LADBS-01

Program/Project: Code Compliance Verification
Description: Verify, through the plan check process, that new development complies with the regulations in the City's Specific Plan for the Management of Flood Hazards, Ordinance No. 172,081, including freeboard requirements on new construction and substantial improvements

Cost: TBD
Schedule: Ongoing
Objective addressed: 1B, 1C, 1E
Responsible Agency: LADBS; Planning; Harbor, PW/Engineering
Financing: General Fund; Storm Water Pollution Abatement Fund
Goals Addressed: -Protect life/property

TS-LADBS-02

Program/project: Annual FMP Report
Description: Provide information to the Flood Hazard Mitigation Coordinator for preparation of the Annual FMP Evaluation Report.

Cost: TBD
Schedule: Start (July/2002); Ongoing
Objective Addressed: 1A, 1C, 3A
Responsible Agency: LADBS, Planning, LAFD; Harbor, PW/Engineering, PW/Sanitation, DWP
Financing: General Fund; Storm water Pollution Abatement Fund
Goals Addressed: -Protect life/property
-Strengthen partnerships

Department of Public Works (DPW)

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TS-DPW-01

Program/Project: Flood Zone Notification

Description: Continue to notify insurance agencies and Realtors of the requirement that all lessors or renters give written notice to all prospective and interested parties, including but not limited to, purchasers, lessees and renters, prior to finalization of such a transaction when the subject land and/or structures are located within FEMA designated flood zones. The notice shall contain the following information:

- The nature and classification of the designated flood zone,
- The zone designation,
- Whether waivers have been granted for development located within the designated flood zone, and
- That premium rates for flood insurance of new structures built at elevations below the base flood shall substantially increase as the elevations decrease. Failure to give such notice shall be a basis for rescinding any sale, lease or rental agreement.

Cost: 0.05 FTE
Schedule: Ongoing
Objective Addressed: 1B, 1C, 1D, 1E
Responsible Agency: PW/Engineering
Financing: Storm water Pollution Abatement Fund
Goals Addressed: -Protect life/property

Harbor Department (HAR)

TS-HAR-01

Program/project: Participate in the Los Angeles County Operational Area Tsunami Mitigation Task Force.

Description: N/A

Cost: TBD

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Schedule: Ongoing
Objective Addressed: 1A, 1B, 3A, 3B
Responsible Agency: Harbor
Financing: Harbor Department
Goals Addressed: -Protect life/property
-Strengthen partnerships

TS-HAR-02

Program/project: Maintain membership in the tsunami warning system.
Description: N/A

Cost: TBD
Schedule: Ongoing
Policy Addressed: 1B, 3A
Responsible Agency: Harbor
Financing: Harbor Department
Goals Addressed: -Protect life/property
-Strengthen partnerships