

SECTION 4L

CRITICAL INFRASTRUCTURE INTERRUPTION

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Section 4L - CRITICAL INFRASTRUCTURE INTERRUPTION

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CITY OF LOS ANGELES HAZARD MITIGATION PLAN

MISSION, GOALS & OBJECTIVES

Mission

The mission of the City of Los Angeles Local Hazard 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 Critical Infrastructure 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**
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- **Goal 2 - Increase Public Awareness**
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- **Goal 3 - Strengthen Partnerships**
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- **Goal 4 - Increase Emergency Service Effectiveness**
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- **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.

CITY OF LOS ANGELES HAZARD MITIGATION PLAN

(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 Police Department (LAPD)

CI-LAPD-03

Program/Project: Critical Infrastructure Interruption Annex
Description: An Annex of the City of Los Angeles' Master Plan. Continue to update the Annex, make it a "living document" to increase preparedness of City departments to be more efficient and effective in pre-event, response and recovery phases of the interruption.

Cost: Staff time
Schedule: Ongoing
Objective Addressed: 1B, 3A, 4B, 4C
Responsible Agency: Emergency Preparedness Department
Financing: General Fund
Goals Addressed: -Protect life/property
-Strengthen partnerships
-Increase emergency service effectiveness

Department of Public Works (DPW)

CI-DPW-07

Program/Project: Information Systems Control Division Data Backup
Description: Provide off-site back up tape storage and archiving.

Cost: FTE
Schedule: Ongoing
Objective Addressed: 1C, 4B
Responsible Agency: DPW, Bureau of Sanitation
Financing: Mitigation Grant, TBD
Goals Addressed: -Protect life/property
-Increase emergency service effectiveness

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Department of Water and Power (DWP)

CI-DWP-01

Program/Project: DS HMPG Project Phase 2
Description: Seismic strengthening of substations (11 stations).

Cost: \$4,900,000 (currently not funded)
Schedule: 7/06 through 7/08
Objective Addressed: 1B, 1C, 4A
Responsible Agency: DWP, Power
Financing: TBD, Grants
Goals Addressed: -Protect life/property
-Increase emergency service effectiveness

CI-DWP-02

Program/Project: HMPG-High Voltage Facilities Seismic Project
Description: Seismic hardening of electrical equipment in 19 Receiving Stations, 2 Switching Stations, 2 Terminal Towers and 4 Generating Stations.

Cost: \$29,100,000 (currently funded) and \$19,400,000. (currently not funded)
Schedule: 7/06 through 7/08
Objective Addressed: 1B, 1C
Responsible Agency: DWP, Power
Financing: DWP, Grants
Goals Addressed: -Protect life/property
-Increase emergency service effectiveness

CI-DWP-03

Program/Project: HMP-GAP UNDER-RUN
Description: Seismic Project - Seismic hardening of electrical equipment in 5 Receiving Stations and one Switching Station.

Cost: \$12,100,000 (currently funded) and \$2,100,000 (currently not funded)
Schedule: 7/06 through 7/08
Objective Addressed: 1B, 1C, 5B
Responsible Agency: DWP, Power
Financing: DWP, Grants
Goals Addressed: -Protect life/property

CITY OF LOS ANGELES HAZARD MITIGATION PLAN

-Environmental and historical preservation

CI-DWP-04

Program/Project: Trunk lines and Major System Connections Program
Description: Seismic and fire protection improvements to Trunk lines and connections to protect life and infrastructure.

Cost: \$532,400,000 (currently funded)
Schedule: Ongoing
Objective Addressed: 1B, 1C
Responsible Agency: DWP, Water
Financing: Capital Improvement Budget (DWP), Mit G \$
Goals Addressed: -Protect life/property

CI-DWP-06

Program/Project: Infrastructure Reservoir Improvements Program (tanks only)
Description: Seismic and fire protection improvements to reservoir tanks to protect life and infrastructure.

Cost: \$2,200,000 (currently funded)
Schedule: TBD
Objective Addressed: 1B, 1C
Responsible Agency: DWP, Water
Financing: Capital Improvement Budget (DWP), Mit G \$
Goals Addressed: -Protect life/property

CI-DWP-07

Program/Project: Griffith Park Improvements Project
Description: Seismic and fire protection improvements to Griffith Park to protect life and infrastructure.

Cost: \$55,100,000 (currently funded)
Schedule: Ongoing (est. completion date 10/2011)
Objective Addressed: 1B, 1C
Responsible Agency: DWP, Water
Financing: Capital Improvement Budget (DWP), Mit. Grant \$
Goals Addressed: -Protect life/property

CI-DWP-08

CITY OF LOS ANGELES HAZARD MITIGATION PLAN

Program/Project: Terminal Hill Tunnel Project
Description: Seismic improvements to Terminal Hill tunnel to protect life, infrastructure and prevent landslides.

Cost: \$13,300,000 (currently funded)
Schedule: Ongoing
Objective Addressed: 1B, 1C
Responsible Agency: DWP, Water
Financing: Capital Improvement Budget (DWP), Mit Grant \$
Goals Addressed: -Protect life/property

CI-DWP-09

Program/Project: Van Norman High Speed and Bypass Channels Project
Description: Seismic improvements to channels to protect life, infrastructure and prevent landslides.

Cost: \$2,000,000 (currently funded)
Schedule: Ongoing (est. completion date 04/2005)
Objective Addressed: 1B, 1C
Responsible Agency: DWP, Water
Financing: Capital Improvement Budget (DWP), Mit Grant \$
Goals Addressed: -Protect life/property

CI-DWP-10

Program/Project: Western District HQ Water Yard Renovation -
Description: Renovate water yard infrastructure to increase effectiveness of City emergency service and strengthen infrastructure.

Cost: \$32,900,000 (currently funded)
Schedule: Ongoing (completion expected in 10/2009)
Objective Addressed: 1B, 1C
Responsible Agency: DWP, Water
Financing: Capital Improvement Budget(DWP), Mitigation Grant \$
Goals Addressed: -Increase emergency service effectiveness

CI-DWP-11

Program/Project: Chloramine Conversion Program

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Description: Construct chloramination stations, amoniation stations, tank inlet-outlet modifications, and other associated improvements to provide for a system-wide conversion to chloramines disinfection of the City's water supply.

Cost: \$43,100,000
Schedule: Ongoing
Objective Addressed: 1B
Responsible Agency: Department of Water and Power
Financing: DWP
Goals Addressed: Protect Life/Property

CI-DWP-12

Program/Project: Cement Lining Program
Description: Clean and cement mortar line, in-place, small diameter distribution mains throughout the City.

Cost: \$3,100,000
Schedule: Ongoing
Objective Addressed: 1B
Responsible Agency: Department of Water and Power
Financing: DWP
Goals Addressed: Protect Life/Property

CI-DWP-13

Program/Project: WQIP Reservoir Improvements Program
Description: Plan, design and construct reservoirs, install covers and related water facilities in compliance with EPA and DHS regulations

Cost: \$789,600,000
Schedule: Ongoing
Objective Addressed: 1B
Responsible Agency: Department of Water and Power
Financing: DWP
Goals Addressed: Protect Life/Property

CI-DWP-14

Program/Project: Regulator Stations Program

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Description: Construction of new pump stations and modification of existing regulator stations throughout the City.

Cost: \$14,200,000
Schedule: Ongoing
Objective Addressed: 1B
Responsible Agency: Department of Water and Power
Financing: DWP
Goals Addressed: Protect Life/Property

CI-DWP-15

Program/Project: Terminal Hill Tunnel Project
Description: Relocate portion of Second Los Angeles Aqueduct on north face of Terminal Hill into a tunnel extending through Terminal Hill.

Cost: \$23,800,000
Schedule: Ongoing
Objective Addressed: 1B
Responsible Agency: Department of Water and Power
Financing: DWP
Goals Addressed: Protect Life/Property

CI-DWP-16

Program/Project: Infrastructure Reservoir Improvements Program (dams only)
Description: Design and construct new embankment dam north of the existing dams for seismic hazard mitigation.

Cost: \$56,000,000
Schedule: 2007 through 2012
Objective Addressed: 1B
Responsible Agency: Department of Water and Power
Financing: DWP
Goals Addressed: Protect Life/Property

CI-DWP-17

Program/Project: IT Security Program
Description: Supports an Information Technology Security Strategy for security

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management, business continuity management, data application and infrastructure security, mitigation of security breaches and vulnerabilities, responses plans.

Cost: \$12,000,000
Schedule: Ongoing
Objective Addressed: 3A, 4A
Responsible Agency: Department of Water and Power
Financing: DWP
Goals Addressed: Strengthen Partnerships
Increase Effectiveness of City Emergency Services

CI-DWP-18

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.

Cost: \$2,000,000
Schedule: 1/01/08 through 1/01/11
Objective Addressed: 1A, 2A, 3A, 4A
Responsible Agency: Department of Water and Power
Financing: DWP
Goals Addressed: Protect Life and Property
Increase Public Awareness
Strengthen Partnerships
Increase Effectiveness of City Emergency Services

CI-DWP-19

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: \$3,000,000
Schedule: 1/01/08 through 1/01/13
Objective Addressed: 1A, 4A

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Responsible Agency: Department of Water and Power
Financing: DWP
Goals Addressed: Protect Life and Property
Increase Effectiveness of City Emergency Services

EXISTING/ONGOING MITIGATION MEASURES

Los Angeles Police Department (LAPD)

CI-LAPD-01

Program/Project: Terrorist Early Warning (TEW) "Response Information Folders"
Description: Pre-Incident plans developed for first responders. The plans are completed on critical infrastructure buildings in the Los Angeles area. They identify: hazardous materials, life loss potential and specific operational guides to control and suppress the incident and minimize life loss.

Cost: \$120,000. Salary for one Battalion Chief in TEW.
Schedule: Started in 1997.
Objective Addressed: 1B, 3A, 4B, 4C,
Responsible Agency: LAPD, LAFD
Financing: General Fund
Goals Addressed: -Protect life/property
-Strengthen partnerships
-Increase emergency service effectiveness

CI-LAPD-02

Program/Project: Terrorist Early Warning (TEW) "Play Book" ("What if this happens . . ."; then first responders refer to this guide book.)
Description: Pre-incident plans developed for first responders. The plans are completed on critical infrastructure buildings in the Los Angeles area. They identify hazardous materials, life loss potential and specific operational guides to control and suppress the incident and minimize life loss.

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Cost: \$120,000. Salary for one Battalion Chief in TEW.
Schedule: Started in 2000.
Objective Addressed: 1B, 3A, 4B, 4C
Responsible Agency: LAPD, LAFD
Financing: General Fund.
Goals Addressed: -Protect life/property
-Strengthen partnerships
-Increase emergency service effectiveness

Department of Public Works (DPW)

CI-DPW-01

Program/Project: Northridge Earthquake Repairs
Description: \$180 million to manage design, repair and retrofit of 388 buildings damaged during the 1994 Northridge Earthquake including City Hall and Van Nuys City Hall.

Cost: \$180,000,000.
Schedule: 1994 - 2005
Objective Addressed: 1B, 1C, 5B, 5C
Responsible Agency: DPW, Bureau of Engineering
Financing: General Fund, Special Fund
Goals Addressed: -Protect life/property
-Environmental and historical preservation

CI-DPW-02

Program/Project: Bridge Improvement Program
Description: \$300 million program including 80 bridge improvement projects: bridge replacements, widening, seismic retrofits, structural improvements, and historical renovations under the federal Highway Bridge Rehabilitation and Replacement (HBRR) program and Metropolitan Transportation Authority grant funds.

Cost: \$300,000,000.
Schedule: Continuing since 05/01/2000
Objective Addressed: 1B, 1C, 4A, 5B
Responsible Agency: DPW, Bureau of Engineering
Financing: Special Fund
Goals Addressed: -Protect life/property
-Increase emergency service effectiveness

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-Environmental and historical preservation

CI-DPW-03

Program/Project: FEMA Hazard Mitigation Grant Program
Description: \$17 million Program for non-structural seismic retrofit of 125 Police and Fire facilities and 77 other municipal buildings, and structural seismic retrofit for 145 municipal facilities.

Cost: \$17,000,000.
Schedule: 1998 - 2004
Objective Addressed: 1B, 1C, 4A, 5B
Responsible Agency: DPW, Bureau of Engineering
Financing: General Fund, Special Fund
Goals Addressed: -Protect life/property
-Increase emergency service effectiveness
-Environmental and historical preservation

CI-DPW-04

Program/Project: Municipal Facilities
Description: Ongoing program to design and build new City facilities and modify existing facilities to meet current needs and code requirements.

Cost: \$10,515. (currently funded)
Schedule: 11/01/02 - 11/01/08
Objective Addressed: 1B, 1C
Responsible Agency: DPW, Bureau of Engineering
Financing: CIP
Goals Addressed: -Protect life/property

CI-DPW-05

Program/Project: Seismic Bond Program
Description: \$966 million program to design and retrofit seismically deficient municipal buildings identified under Proposition G.

Cost: \$996,000,000. (currently funded)
Schedule: Started in 1998
Objective Addressed: 1B,C, 4A, 5A, 5B, 5C
Responsible Agency: DPW, Bureau of Engineering
Financing: Special Fund, General Fund
Goals Addressed: -Protect life/property

CITY OF LOS ANGELES HAZARD MITIGATION PLAN

- Increase emergency service effectiveness
- Environmental and historical preservation

CI-DPW-06

Program/Project: Standby Power Generation for All Wastewater Pumping and Treatment Plants

Description: N/A.

Cost: TBD, Varies by Project
Schedule: Ongoing
Objective Addressed: 1C, 4C
Responsible Agency: DPW, Bureau of Sanitation
Financing: Special Fund
Goals Addressed: -Protect life/property
-Increase emergency service effectiveness

CI-DPW-08

Program/Project: Emergency Street Repairs

Description: Respond to emergency asphalt repairs as they occur.

Cost: \$679,527
Schedule: Ongoing
Objective Addressed: 1C, 4A
Responsible Agency: DPW, Bureau of Street Services
Financing: General Fund, Special Fund, Full Time Staff
Goals Addressed: -Protect life/property
-Increase emergency service effectiveness

CI-DPW-09

Program/Project: Structural Bridge Repairs

Description: Repair and maintain City bridges due to traffic accidents and/or natural hazards.

Cost: \$2,695,057
Schedule: Ongoing
Objective Addressed: 1B, 1C, 4A
Responsible Agency: DPW, Bureau of Street Services
Financing: General Fund, Special Fund, Capitol Improvement Fund, Full Time Staff
Goals Addressed: -Protect life/property

CITY OF LOS ANGELES HAZARD MITIGATION PLAN

-Increase emergency service effectiveness

Department of Water and Power

CI-DWP-05

Program/Project: Pump Stations Program
Description: Seismic and fire protection improvements to Pump Stations to protect life and infrastructure.

Cost: \$134,200,000. (currently funded)
Schedule: Ongoing
Objective Addressed: 1B, 1C
Responsible Agency: DWP, Water
Financing: Capital Improvement Budget 9DWP0, Mit. G \$
Goals Addressed: -Protect life/property

CI-DWP-12

(Remove)

Program/Project: Central District/Ascot Yard Consolidation
Description: Consolidate Central District and Ascot Yard to increase effectiveness of City emergency services and strengthen infrastructure.

Cost: \$1,400,000 (currently funded)
Schedule: 07/01/05 - 06/30/13
Objectives Addressed: 4B
Responsible Agency: DWP, Water
Financing: Capital Improvement Budget (DWP)
Goals Addressed: - Increase emergency services effectiveness