

SECTION 4.1

INTRODUCTION

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Section 4 - MITIGATION STRATEGY

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MITIGATION STRATEGY

INTRODUCTION

Section 4 contains a comprehensive set of more than 200 hazard mitigation projects and programs designed to reduce the risks associated with the 16 categories identified in the Plan. Over the past 50 years the City of Los Angeles has experience a large number of serious emergency and disaster situations including fires, floods, earthquakes, severe weather, and civil unrest, among others. As a result, the City and its constituent departments have for many years deployed an aggressive program to mitigate the effects of hazards and disasters. In addition to the efforts of individual departments, the City has developed an organizational structure designed to coordinate the activities of the individual departments in hazard mitigation and emergency response efforts. These efforts predated DMA 2000.

In response to DMA 2000, the City determined that a Local Hazard Mitigation Plan Advisory Task Force should be formed with representatives from each City department, business groups, community groups, other government agencies, and other external stakeholders. The LAHMP Task Force oversaw the development of the Plan.

Organization of the Action Plan

Because of the extensive number of hazard mitigation projects and programs included in the Hazard Mitigation Action Plan, it was decided to organize mitigation measures by hazard. Therefore, there is a subsection of Section 4 (also in Section 3, Risk Assessment) for each of the 16 hazards addressed in the Plan. In addition, there is an “All Hazards” section (Section 4.2) that includes measures designed to mitigate all hazards.

Some mitigation measures address more than one hazard. In these cases, the measures are listed in each hazard section to which they apply for the convenience of the reader.

As noted above, the City already has an aggressive hazard mitigation program. Almost every department in the City is actively engaged in hazard mitigation projects. Therefore, in order to provide a comprehensive view of the overall hazard mitigation

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program, each hazard subsection is further divided into two sections, one listing existing/ongoing programs, and one for proposed projects and programs.

Goals and Objectives

During the Plan development process, the Task Force developed goals and a number of specific objectives for each goal (see Section 2). These goals and objectives are universal, applicable to all hazards. To assist the reader with correlating mitigation measures with the Goals and Objectives, and the Goals are listed at the beginning of each hazard subsection. In addition, each mitigation measure includes a reference to the specific goal(s) and objective(s) addressed by that particular measure.

Identification and Analysis of Mitigation Measures

Section 4 contains more than 200 discrete hazard mitigation measures. Taken together, the existing/ongoing projects along with the new proposed projects constitute a comprehensive set of measures designed to reduce the potential losses identified in the Risk Assessment (Section 3). Mitigation measures include a broad range of approaches to hazard mitigation including retrofit/relocation, code enforcement, development of new regulations, public education, surveillance and security, development of redundant facilities, among others. Measures are included to mitigate risks to existing buildings and infrastructure, as well as new buildings and infrastructure. Each project description identifies the specific goal(s) and objective(s) addressed by the measure.

Prioritization of Projects

New proposed projects in the Plan are prioritized by implementing agency for several reasons. First, since agencies already have ongoing hazard mitigation programs, new projects can be most efficiently “folded” into ongoing programs. This assures continuity in project delivery. Secondly, it is anticipated that new projects will be funded from a wide variety of funding sources in addition to Federal Hazard Mitigation Grants. Lastly, some City departments are quasi-independent, “proprietary” departments (Airport and Harbor Department, Department of Water and Power) with their own revenue streams, boards of directors, etc.

Each implementing agency prioritized proposed new projects based upon a number of factors. Factors included, but were not limited to:

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- The five goals identified in Section 4.2, "Goals and Objectives"
- The availability of funding
- The relative cost-effectiveness of the project compared to alternatives
- The extent to which the proposed project complements existing programs, and/or fill gaps in existing programs
- The extent to which the project addresses the risks assessed in Section 3
- Potential economic and social damage

The procedures followed by Departments in prioritizing projects are included in the Appendix. In addition to these factors, the prioritization also took into account the protection of Critical Response Facilities, Critical Infrastructure, and Critical Operating Facilities. (These identified facilities have threats to them, which are analyzed in Section 3.) The weighting applied to various factors varied from department to department, depending upon department priorities.

In prioritizing projects, departments took into account costs, potential benefits, and potential funding opportunities. Projects will be funded from a variety of sources, including operating funds, the City's capital budget, special bond proceeds, user charges, and fees. In addition, some projects will be proposed for Federal Hazard Mitigation Grant funding. The City's process for developing mitigation proposals includes some degree of cost benefit analysis, depending on the type of project and the source of potential project funds. For those projects submitted to the federal government for grant funding, the City is prepared to elaborate on project benefits and costs using FEMA's Benefit/Cost Toolkit.

Implementation and Administration of Mitigation Actions

As previously stated, individual agencies will be responsible for implementing specific mitigation projects. The responsible agency, existing and potential resources, and implementation time frame are specified for each proposed and existing/ongoing mitigation action in the project description. The Local Hazard Mitigation Plan Task Force is responsible for monitoring Plan implementation, and for ensuring that Mitigation Actions implemented by individual departments are implemented according to schedule.

The Plan will be updated annually in November, rather than in five-year increments. The LAHMP Advisory Task Force will (1) coordinate and monitor plan implementation; and (2) develop the annual plan update for submittal to the Emergency Operations

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Board (EOB) for approval. Administrative and staff support for Plan monitoring, maintenance and update will be provided by the Planning Division of the Emergency Preparedness Department.

In addition to updating the LHMP, the Local Hazard Mitigation Plan Task Force will prepare recommendations for revisions to other related plans, as may be indicated. Such plans may include the Safety Element of the General Plan, codes and ordinances, and the various parts of the City's Emergency Operations plans. Task Force recommendations will be reviewed by the Emergency Operations Board, and if approved, forwarded to the appropriate agency for consideration.

Project Funding

The funds required to implement the mitigation action plan will come from a variety of sources including, but not limited to:

- Federal Hazard Mitigation Grants
- City Budget
- Bond Proceeds
- Other Federal Grants (HUD, FAA, etc.)
- Special Fees and Assessments
- User Fees
- Permit Fees

Some projects are (or will be) included in agency capital improvement budgets, while some, especially ongoing projects, are included in agency operating budgets.

Project Descriptions

The following information is found in each hazard subsection and is provided for each project:

Project Title
Project Description
Cost (if known)
Schedule (start and end dates)
Responsible Agency (lead agencies)
Financing (source of funding)
Goals Addressed

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Each project is identified with a unique alphanumeric designation which identifies the hazard addressed, the responsible department, and the project priority (projects are numbered in priority order by responsible agency). The abbreviations used to identify responsible agencies are listed in the table below.

| DESIGNATION | AGENCY |
|-------------|-----------------------------------|
| DOT | Dept. of Transportation |
| EPD | Emergency Preparedness Department |
| LAFD | Fire Department |
| LAPD | Police Department |
| DWP | Department of Water and Power |
| DPW | Department of Public Works |
| LAWA | Department of Airports |
| HAR | Harbor Department |
| LADBS | Department of Building and Safety |
| GSD | General Services |
| LAHD | Housing Department |
| ITA | Information Technology Agency |
| DAG | Department of Aging |
| DIS | Department on Disabilities |

Figure 4-1. Agency Designations

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HIGH-RISK HAZARDS

| DESIGNATION | HAZARD |
|-------------|------------------------------|
| EQ | Earthquake |
| TE | Terrorism |
| BF | Brushfire |
| FL | Flood |
| PH | Health Issues |
| CU | Civil Unrest |
| HZ | Hazardous Materials Incident |

Figure 4-2. Hazard Designations/High/Risk

MODERATE-RISK HAZARDS

| DESIGNATION | HAZARD |
|-------------|--------------------------------------|
| DT | Drought |
| SE | Special Events |
| SW | Severe Weather |
| DR | Dam/Reservoir Failure |
| CI | Critical Infrastructure Interruption |

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**Figure 4-2.a Hazard Designations/Moderate-Risk
LOW-RISK HAZARDS**

| DESIGNATION | HAZARD |
|-------------|-------------------------------|
| TS | Tsunami |
| LM | Landslides/Mudslides |
| HO | High Occupancy Building Fires |
| RD | Radiological Accident |

Figure 4-2.b Hazard Designations/Low /Risk

Correlation of Vulnerability Assessment, Goals, and Mitigation Projects

The table on the following page depicts the correlations between vulnerability assessments contained in Section 3, Goals, priorities, and the mitigation action projects listed in Section 4.

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| | GOALS ADDRESSED | PAGE | NO 1. PROTECT LIFE AND PROPERTY | NO 2. INCREASE PUBLIC AWARENESS | NO.3 STRENGTHEN PARTNERSHIPS | NO.4 INCREASE EMERGENCY SERVICES EFFECTIVENESS | NO. 5 ENVIRONMENTAL AND HISTORICAL PRESERVATION |
|----|---|-------|--|--|------------------------------------|--|--|
| | HAZARD/VULNERABILITY | | | | | | |
| 1 | EARTHQUAKE/ VULNERABILITY | 3A-74 | X | X | X | X | X |
| 2 | TERRORISM VULNERABILITY | 3B-7 | X | X | X | X | |
| 3 | BRUSHFIRE VULNERABILITY | 3C-21 | X | X | X | X | X |
| 4 | FLOOD VULNERABILITY | 3D-33 | X | X | X | X | X |
| 5 | HEALTH ISSUES VULNERABILITY | N/A | N/A | N/A | N/A | N/A | N/A |
| 6 | CIVIL UNREST VULNERABILITY | 3F-9 | X | | | | X |
| 7 | HAZARDOUS MATERIALS INCIDENT VULNERABILITY | 3G-15 | X | X | X | X | X |
| 8 | DROUGHT VULNERABILITY | 3H-19 | X | X | | | X |
| 9 | SPECIAL EVENTS VULNERABILITY | 3I-7 | X | | X | X | |
| 10 | SEVERE WEATHER VULNERABILITY | 3J-10 | X | X | X | X | X |
| 11 | DAM/ RESERVOIR FAILURE VULNERABILITY | 3K-9 | X | X | X | X | X |
| 12 | CRITICAL INFRASTRUCTURE INTERRUPTION VULNERABILITY | 3L-5 | X | X | X | X | X |
| 13 | TSUNAMI VULNERABILITY | 3M-8 | X | X | X | X | X |
| 14 | LANDSLIDE/ MUD-SLIDES VULNERABILITY | 3N-13 | X | X | X | X | X |
| 15 | HIGH-OCCUPANCY BUILDING FIRE VULNERABILITY | 3O-7 | X | X | X | X | |
| 16 | RADIOLOGICAL ACCIDENT VULNERABILITY | 3P-5 | X | | | X | |

Column one lists the citywide priority for each hazard. The stated goals are displayed across the top of the matrix. The PAGE column displays the Chapter and page where the listed goals can be found for a project's specific hazards. Each **X** identifies which addressed goal(s) are found in the specific hazard located in the subsection.