

The City of Austin will be
updating this plan in 2015



City of Austin
Emergency Operations Plan

Annex P

Hazard Mitigation

REVISED MARCH 3, 2011

Approved by

A handwritten signature in blue ink, which appears to read "Otis Latin".

Otis J. Latin, Sr.

Director Homeland Security
And Emergency Management

THIS PAGE LEFT INTENTIONALLY BLANK

TABLE OF CONTENTS

1.0 SECTION 1 – INTRODUCTION.....	7
1.1 Situation.....	7
1.2 Assumptions	7
2.0 SECTION 2 – ORGANIZATIONAL CONCEPTS.....	8
2.1 Task Assignments.....	8
2.1.1 Hazard Mitigation Coordinator.....	8
2.1.2 Hazard Mitigation Team	8
2.2 Assignment of Responsibilities	9
2.2.1 City of Austin Office of Homeland Security and Emergency Management.....	9
2.2.2 Watershed Protection.....	9
2.2.3 Public Works and Building Services	10
2.2.4 Austin Police Department.....	10
2.2.5 Austin Fire Department.....	10
2.2.6 Planning and Development Review Department.....	10
2.3 Hazard Mitigation Classifications	10
2.3.1 Prevention	10
2.3.2 Property Protection.....	10
2.3.3 Natural Resource Protection	10
2.3.4 Emergency Services.....	11
2.3.5 Structural Projects	11
2.3.6 Public Education.....	11
2.4 Hazard Mitigation Relationships.....	11
2.4.1 Pre-Event Mitigation	11
2.4.2 Post-Event Mitigation.....	11
3.0 SECTION 3 – CONCEPT OF OPERATIONS	12
3.1 Actions by Phases of Emergency Management.....	12
3.1.1 Mitigation & Preparedness	12
3.1.2 Response	12
3.1.3 Recovery	12
3.2 City of Austin Hazard Mitigation Action Plan	13
3.3 Department Devised Hazard Mitigation Strategies	14
3.4 Record Keeping	14
APPENDIX 1 – SAMPLE HAZARD MITIGATION TEAM REPORT	
FORMAT	15
Instructions for Completing Mitigation Team Report	17

APPENDIX 2 – ACRONYM LIST19

1.0 Section 1 – Introduction

The purpose of this annex is to provide the concepts for administrative and operational activities which could lead to the reduction and/or possible removal of those conditions that cause potential hazards or are hazardous to the public. Additionally, this annex provides guidelines to manage mitigation efforts in concert with state and federal policies.

Annex P - Hazard Mitigation is an on-going process that begins with the establishment of a local based planning group referred to as the local Hazard Mitigation Team (HMT). The team's first job is development of the local Hazard Analysis that provides a means for prioritizing mitigation and preparedness needs, based on levels of vulnerability and risk. The next step in the process is the development of the City of Austin Mitigation Action Plan that defines specific mitigation measures designed to address the needs identified in the hazard analysis, to include actions that are to be taken, who will take them, how much they will cost, and how they will be funded. The next step is to implement the measures identified in the Mitigation Action Plan by using a variety of funding sources identified through an on-going and active search for funding opportunities. The final step is to monitor and evaluate the effectiveness of those mitigation measures that are implemented and to repeat the process-review and update the Hazard Analysis and the Mitigation Action Plan, continue the active search for funding opportunities, implement mitigation measures consistent with availability of funds, and monitor and evaluate their effectiveness.

1.1 Situation

The City of Austin is susceptible to natural, technological, and human caused hazards. Mitigation efforts are taken to minimize or eliminate the effects of these hazards. Mitigation actions are rarely a quick fix. Many projects take several years to plan, fund and implement.

1.2 Assumptions

- Some events, such as severe weather, are unavoidable.
- The effects of some events can be minimized by mitigation actions.
- Actions can be taken which may eliminate or reduce the probability of a disaster's impacts.
- There is the need for the coordination of local, state and federal mitigation efforts with individuals, corporations, and public entities.

2.0 Section 2 – Organizational Concepts

Hazard Mitigation is a function that requires the coordination of a variety of multi-disciplined, on-going activities. The Director of the Office of Homeland Security and Emergency Management (HSEM) coordinates hazard mitigation activities among City departments and external stakeholders. The Director also appoints the Hazard Mitigation Coordinator. The line of succession for the Hazard Mitigation Coordinator is determined by the Director of HSEM. Lines of succession for members of the Hazard Mitigation Team are determined by the Director for each individual department.

2.1 Task Assignments

HSEM maintains the current assignment of the Hazard Mitigation Coordinator. HSEM also maintains the current listing of organizations and members of the Hazard Mitigation Team. Current lists can be obtained from the HSEM Office.

2.1.1 Hazard Mitigation Coordinator

The Hazard Mitigation Coordinator and his/her successor is appointed by the Director of HSEM. The Hazard Mitigation Coordinator serves as the primary point of contact on all hazard mitigation projects submitted for grant funding. The Hazard Mitigation Coordinator is responsible for:

- Serving as the liaison between State/Federal agencies and the City Departments on hazard mitigation projects
- Coordinating all hazard mitigation related activities including development, distribution, and maintenance of the local Hazard Analysis and Mitigation Action Plan
- Assisting in selecting supporting agencies and individual members of the Hazard Mitigation Team
- Assigning tasks, and managing the various activities of the team so as to accomplish mitigation functional responsibilities for the City of Austin
- Ensuring the development, distribution and retention of mitigation reports, records and associated correspondence, and managing the implementation of appropriate mitigation measures
- Serving as the point of contact and providing local assistance for federal, state, and local mitigation program and planning activities
- Developing methods for determining priority of efforts, preparing reports, and monitoring implementation and effectiveness of mitigation measures
- Periodically reviewing and utilizing the most current guidance material from the Texas Division of Emergency Management (TDEM) website: www.txdps.state.tx.us/dem

2.1.2 Hazard Mitigation Team

The City of Austin Hazard Mitigation Team is a multi-departmental committee that coordinates existing City of Austin hazard mitigation projects, proposes and coordinates new projects, coordinates resources to implement the projects, reviews funding options, and helps develop the State-required Hazard Mitigation Plan. The Hazard Mitigation Team also:

- Assists in the accomplishment of team objectives as assigned by the Hazard Mitigation Coordinator
- Assists the Hazard Mitigation Coordinator to develop, distribute, and maintain the local Hazard Analysis

- Provides assistance to the designated local Project Officer(s) responsible for administering mitigation program grants such as the Hazard Mitigation Grant Program (HMGP) and the Pre-Disaster Mitigation Grant Program (PDM).

2.1.2.1 Hazard Mitigation Team Membership

Directors from the following City departments are responsible for assigning a representative(s) and an alternate(s) to sit on the committee:

- Austin Energy (AE)
- Austin Fire Department (AFD)
- Austin/Travis County EMS (EMS)
- Austin/Travis County Health & Human Services (HHSD)
- Austin Police Department (APD)
- Austin Water Utility (AWU)
- Building Services
- Planning & Development Review
- Neighborhood Housing & Community Development Office
- Office of Homeland Security and Emergency Management
- Parks & Recreation Department (PARD)
- Public Works
- Solid Waste Services (SWS)
- Transportation Department
- Watershed Protection

2.2 Assignment of Responsibilities

2.2.1 City of Austin Office of Homeland Security and Emergency Management

- Review mitigation projects and initiatives
- Monitor hazard mitigation activities
- Coordinate meetings of Hazard Mitigation Team
- Apply for and manage grants to assist with hazard mitigation

2.2.2 Watershed Protection

- Manage the Flood Plain Management programs for the City
- Identify flood hazard areas and develop engineered facilities for transport of storm drainage
- Maintain drainage channels to facilitate storm water runoff
- Develop storm water management strategies

2.2.3 Public Works and Building Services

- Coordinate mitigation actions at City Facilities
- Develop mitigation strategies for post-incident evaluation, planning, and implementation

2.2.4 Austin Police Department

- Maintain records, identify hazardous routes prone to transportation accidents
- Enforce regulated hazardous cargo routes to minimize the population's exposure to potential transportation accidents involving hazardous cargo

2.2.5 Austin Fire Department

- Conduct inspections and enforce adopted codes
- Conduct pre-fire planning

2.2.6 Planning and Development Review Department

- Coordinate with HSEM on issues pertaining to land use
- Inspect and enforce adopted codes
- Provide mapping and other demographic information on the City

2.3 Hazard Mitigation Classifications

Hazard mitigation strategies can be either elaborate or simple and they are often comprised of one or more mitigation measures or programs. These measures or programs are usually classified into categories:

2.3.1 Prevention

Prevention measures are intended to keep a hazard risk problem from getting worse. They ensure that future development does not increase hazard losses. Using prevention measures, future development can be guided away from hazards, while maintaining other community goals such as economic development and quality of life. For example, floodplains, steep slopes and areas prone to wildfires can be designated for open space or other low-density uses.

2.3.2 Property Protection

Property protection measures are used to modify buildings and surrounding areas subject to hazard risk, rather than to prevent the hazard from occurring. Examples of property protection measures include: acquisition and relocation of structures in floodplains; floodproofing of structures; installation of storm shutters or safety film to protect windows and glass doors from flying debris in areas at risk from high winds; installation of safe rooms, and fireescaping. Additionally, manufactured homes can be anchored to withstand high winds.

2.3.3 Natural Resource Protection

These measures are intended to reduce the intensity of hazard effects as well as to improve the quality of the environment and wildlife habitats. Examples of natural resource protection include erosion control, wetlands protection, water and air quality initiatives, and water conservation programs.

2.3.4 Emergency Services

Emergency services measures protect people before and after a hazard event. These measures include flood early warning; warning messages disseminated via radio, television, pagers, telephone, etc.; activating the Emergency Operations Center; restricting access to hazard prone areas; provision of safe drinking water, and cleaning up debris and garbage after a disaster.

2.3.5 Structural Projects

Structural measures involve construction of man-made structures to control hazards and protect people and property at risk. Some examples of structural projects are dams, reservoirs, detaining walls, detention and retention ponds, channel modifications, storm sewers, and elevated roadways.

2.3.6 Public Education

These activities inform and remind people about hazardous areas, hazards the community is subject to, and the measures necessary to avoid potential damage and injury.

2.4 Hazard Mitigation Relationships

Hazard mitigation activities not only are a response to an event and a known hazard, but also are an active search for ways to prevent or reduce the impact from newly discovered hazards. The mitigation process is long-term in nature and, therefore, is an on-going element of the emergency management program that directly influences preparedness, response, and recovery requirements. Mitigation activities can be initiated at any time, but are classified as either pre-event or post-event actions. These actions are not mutually exclusive and may be merged into a coordinated, continuous mitigation process.

2.4.1 Pre-Event Mitigation

Pre-event mitigation involves activities that take place prior to the occurrence of an emergency situation. This time frame provides a more relaxed atmosphere for the development and implementation of long-term, multi-hazard oriented-mitigation measures. This time frame is preferred and is the most appropriate for reducing risks and potential damages.

2.4.2 Post-Event Mitigation

Post-event mitigation involves activities that take place after an emergency situation has occurred and already had an impact. These activities are a response and are too late to prevent or reduce impacts already suffered. Heightened hazard awareness and a desire for speedy recovery provide an emphasis for conducting mitigation activities during this time frame. Mitigation opportunities can be identified and implemented which can be very effective in reducing potential damages from future events.

3.0 Section 3 – Concept of Operations

In addition to Federal guidelines and State laws, all four City of Austin public safety agencies have established standard operating procedures (SOP's) and/or general orders that outline the organization, management, and delivery of services. These agencies also maintain up-to-date inventories of equipment and materials which are available at public safety dispatch or material management facilities. This information is available for use by dispatch personnel for each agency.

3.1 *Actions by Phases of Emergency Management*

Hazard mitigation actions are an on-going process and are more appropriately classified and associated with the time frames before, during, and after occurrence of an emergency situation caused by a hazard. The following is a sequenced set of actions that should be taken by the HMT during each time frame:

3.1.1 Mitigation & Preparedness

- Develop and maintain Hazard Analysis
- Develop and maintain the Hazard Mitigation Action Plan
- Coordinate actions as appropriate with State Hazard Mitigation Team efforts
- Apply for grants and loans to conduct studies and implement mitigation projects
- Conduct studies and implement mitigation projects
- Provide vulnerability and risk data for use in community development planning, exercise design, emergency preparedness planning, and floodplain management

3.1.2 Response

- Assist decision makers and emergency responders in better understanding the potential impact and consequences of the emergency response
- Provide a detailed vulnerability and risk analysis for all sectors impacted or likely to be impacted by the incident
- Assist decision makers and emergency responders by answering “What if” questions through the use of appropriate real-time and model-based damage assessment tools such as HAZUS, a nationally recognized software used to estimate the physical, economic, and social impacts of disasters, and other programs

3.1.3 Recovery

- Conduct site surveys to record damage “footprints” and record and map high-water marks and other benchmarks to verify inputs and results of damage assessment tools
- Inspect and evaluate effectiveness of previously implemented mitigation measures
- Evaluate accuracy of floodplain maps and studies and identify any mapping needs.
- Complete Hazard Mitigation Team Reports based on observations and findings from site inspections
- Begin the development of potential mitigation project application(s) based on team reports

- Provide assistance to decision makers for prioritization of damage assessment operations, compile substantial damage reports, and prepare requests for a state and/or federal disaster declaration by providing detailed incident impact data
- Provide assistance to state and federal mitigation team once a disaster is declared
- Assist designated Local Project Officer(s) to prepare and submit Hazard Mitigation Grant Program (HMGP) Notice of Interest(s) (NOIs), and application(s), and monitor Public Assistance (PA) projects for inclusion of mitigation components once a state or federal disaster is declared
- Review Hazard Mitigation Team Reports and update the Hazard Mitigation Action Plan
- Assist designated Local Project Officer(s) in implementing projects and administer HMGP and other mitigation grant programs

3.2 City of Austin Hazard Mitigation Action Plan

The City of Austin Hazard Mitigation Action Plan, originally published in August 2003, was developed through a joint effort of the City of Austin HSEM and a number of public and private stakeholder organizations. The Plan was updated in 2009 and submitted to the appropriate State and Federal agencies for approval in 2010. The Hazard Mitigation Action Plan includes both hazard analysis and mitigation actions and is intended as a blueprint for the future. It is aimed at making the City of Austin more disaster resistant by reducing or eliminating the long-term risk of loss of life and property damage from a full range of disasters. Ultimately, this Plan and its update is designed to help build a sustainable community that, when confronted by natural or technological disasters, will sustain fewer losses and will be able to recovery more quickly. It is also intended to:

- Minimize disruption to the community following a disaster;
- Streamline the disaster recovery process by having in place pre-identified actions that can be taken to reduce or eliminate future damage;
- Provide the basis for the Small Business Administration to make low interest, fixed-rate loans to small businesses for the purpose of implementing mitigation measures to protect their commercial real property (buildings) or leasehold improvements or contents from disaster related damage;
- Capitalize on federal funding that may become available after disaster strikes; and
- Ensure that the City maintains its eligibility for the full range of future Federal disaster relief. After November 1, 2004, FEMA conditioned certain forms of future Federal mitigation funding to cities and counties on both local governments and the State having a FEMA-approved Hazard Mitigation Plan in place.

The City of Austin Hazard Mitigation Action Plan serves as a basis for future funding that may become available from State or Federal grant and technical assistance programs. It enables the City to take advantage of rapidly developing mitigation grant opportunities as they arise. The Plan, in concert with the State of Texas Hazard Mitigation Plan, supplements and focuses on mitigation actions that affect the City of Austin. It meets state planning standards for mitigation Planning Standards Checklist P, and Section 201 CFR 44 requirements, and has been approved by the Federal Emergency Management Agency (FEMA). Copies are distributed to all appropriate agencies/organizations, and additional copies are available online at the City of Austin website.

The analysis contained in the plan supplements the State of Texas Hazard Analysis and focuses on hazards and their impact to our area of responsibility. Our analysis has been distributed to all appropriate agencies/organizations. Data and information contained in the plan has been incorporated into other plans such as the City of Austin Emergency Operations Basic Plan (Section 1.5 - 1.6).

3.3 Department Devised Hazard Mitigation Strategies

The hazard mitigation programs and strategies currently assigned to the various City Departments listed in this Annex are contained in Section 9 of the City of Austin Hazard Mitigation Plan Update, September 2010.

3.4 Record Keeping

Individual City Departments are responsible for maintaining appropriate records for the mitigation projects they are coordinating. For example, the City of Austin Watershed Protection Department maintains files on actions related to flood control, including flood mitigation plans, flood hazard boundary maps, flood insurance rate maps, and drainage studies.

Hazard Mitigation projects and/or programs which have been funded by City Departments or other agencies are provided to HSEM upon request. Requested information may include listing of plans, programs, grants, regulations, studies, maps, etc., which address hazards or mitigation activities conducted or impacting the City of Austin.

Completed reports, historical records and associated correspondence will be maintained and utilized by each Department as a management tool for the continued development of a mitigation strategy for the City of Austin.

Appendix 1 – Sample Hazard Mitigation Team Report Format

	<p>City of Austin Hazard Mitigation Team Report</p> <p>Date _____</p>		
Project Officer _____ E-Mail _____ Address _____ City <u> Austin </u> State <u> Texas </u> Zip _____ Phone _____ Fax _____			
Impact Area:			
Hazard Identification:			
Incident Period: From		To	
Number of Previous Events:		Number of Residents at Risk:	
Background & Discussion:			
Mitigation Action:			
Lead Department:		Estimated Cost:	
Schedule: (Timeframe)		Funding Method:	
HMT Recommendations:			

CONTINUATION SHEET

(Use this and additional pages as needed to detail multiple work elements)

Work Element # __
Mitigation Action:
Lead Agency:
Estimated Cost:
Funding Method:
Schedule:

Work Element # __
Mitigation Action:
Lead Agency:
Estimated Cost:
Funding Method:
Schedule:

Instructions for Completing Mitigation Team Report**HAZARD MITIGATION TEAM REPORT INSTRUCTIONS**

Part 1 (DATE) – Fill in the current date.

Part 2 (Project Officer Information):

- Project Officer: Name of the Project Officer.
- E-Mail: Project Officers E-Mail Address.
- Address: Project Officer Business Address.
- Zip: Project Officer Mailing Zip Code.
- Phone: Project Officers phone number.
- Fax: Project Officers Fax number.

Part 3 (Impact Area) – Define the impact area to include Lat/Long.

Part 4 (Hazard Identification) – Define the type of hazard that occurred.

Part 5 (Incident Period) – From: the date the incident began
To: the date the incident ended

Part 6 (# of Previous Events) – How many incidents of this type have occurred in this location.

Part 7 (# of Residents at Risk) – How many individuals reside in the affected area.

Part 8 (Background & Discussion) – Provide a narrative to support recommended Mitigation Action (Part 9).

Part 9 (Mitigation Action) – Project Officers Recommended Mitigation Action.

Part 10 (Lead Department) – COA Department responsible for implementing recommended Mitigation Action.

Part 11 (Estimated Cost) – Estimated cost to implement recommended Mitigation Action.

Part 12 (Schedule/Timeframe) – Estimated duration from initiation to completion of recommended Mitigation Action.

Part 13 (Funding Method) – How will funding be appropriated for recommended Mitigation Action.

Part 14 (HMT Recommendations) – HMT will concur with Project Officers recommendation or will suggest alternative recommendations in this section.

Appendix 2 – Acronym List

AE	Austin Energy
AFD	Austin Fire Department
APD	Austin Police Department
AWU	Austin Water Utility
COA	City of Austin
EMS	Austin/Travis County Emergency Medical Services
FEMA	Federal Emergency Management Agency
HHSD	Austin/Travis County Health and Human Services
HMGP	Hazard Mitigation Grant Program
HMT	Hazard Mitigation Team
HSEM	Austin Office of Homeland Security and Emergency Management
NOI	Notice of Interest
PA	Public Assistance
PARD	Austin Parks and Recreation Department
PDM	Pre-Disaster Mitigation Grant Program
TDEM	Texas Division of Emergency Management
SOP	Standard Operating Procedures
SWS	Austin Solid Waste Services