

# Hazard Mitigation Action Plan

Maintaining a Safe and Secure Community...  
Reducing Risk from All Hazards  
2006 - 2011



H<sub>2</sub>O Partners 

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# Executive Summary

## Contents

Contents ..... 1

Purpose and Process of Development ..... 1

Hazards Facing the City of Plano..... 2

Mitigation Vision..... 2

Goals and Objectives ..... 3

Actions..... 5

Organization of this Plan..... 6

## Purpose and Process of Development

Over the next 30 years, according to the North Central Texas Council of Governments (NCTCOG), the North Central Texas region might be hit by more than 200 tornadoes, more than 2,000 hail events, more than 100 significant wind storms, and countless floods, droughts and other hazards.

This document, “*The City of Plano Hazard Mitigation Action Plan, 2006 – 2011, Maintaining a Safe and Secure Community... Reducing Risks from All Hazards,*” was prepared by the City of Plano Office of Emergency Management/Homeland Security, in partnership with the North Central Texas Council of Governments (NCTCOG) and the City’s contractor, H2O Partners, Inc. of Austin, Texas. It is a five-year blueprint for the future, aimed at making the City of Plano disaster resistant by reducing or eliminating the long-term risk of loss of life and property from the full range of natural and human-caused disasters.

The City of Plano’s Hazard Mitigation Action Plan (HazMAP) was developed as part of a multi-jurisdictional planning process coordinated by the NCTCOG for a sixteen-county area covering an area of 12,800 square miles with a population of 5.7 million people. The region is centered on Dallas and Fort Worth and includes the following counties: Collin, Dallas, Denton, Ellis, Erath, Hood, Hunt, Johnson, Kaufman, Navarro, Palo Pinto, Parker, Rockwall, Somervell, Tarrant and Wise.

This Plan meets the requirements of the Disaster Mitigation Act of 2000 (P.L. 106-390); Section 44 of the Code of Federal Regulations, Part 206; and State of Texas Division of Emergency Management standards. An open public process was established to provide multiple opportunities for all sectors in the City of Plano to become involved in the planning process and make input during its drafting stage.





# Hazards Facing the City of Plano

The Hazard Mitigation Action Plan for the City of Plano identifies and assesses the potential impact of thirteen natural and human-caused hazards that threaten the City. Hazards were identified based on a review of historical records, national data sources, existing plans and reports, and discussions with local, regional, and national experts undertaken by the NCTCOG as part of its Multi-Hazard Risk Assessment. The NCTCOG researched and analyzed the probability and impact of hazards that threaten the North Central Texas region. Of those hazards that threaten the region, the City of Plano's Hazard Mitigation Team (see Appendix C) identified the following thirteen hazards as priorities for mitigation action by the City:

- Tornadoes
- High winds
- Hail
- Severe winter/ice storms
- Poor air quality
- Expansive soils
- Lightning
- Flooding
- Drought
- Summer heat
- Technological accidents/hazardous materials release
- Explosive blast
- Disease outbreak/pandemic influenza

## Mitigation Vision

The **overall goal** of this Hazard Mitigation Plan is to reduce or eliminate the long-term risk of loss of life and property damage from the full range of disasters. The mitigation **vision** for a safe, secure and sustainable community is:

- A city with buildings located outside of hazardous areas and built to withstand the natural and human-caused hazards that threaten them;
- An informed citizenry and active volunteer cadre protecting their families, homes, workplaces, communities and livelihoods from the impact of disasters.



- A city integrating hazard mitigation concerns into decisions on growth and future development;
- A city where increasing resistance to disaster is an integral part of the livability and sustainability of the community;
- City Departments integrating cost-effective mitigation programs into routine planning and budgeting decisions;
- A smart city investing in mitigation while leveraging State, Federal and private resources; and
- A partnership of local, State and Federal governments, voluntary agencies, business and industry and individual citizens focused on preventing or reducing the loss of life and property from the full range of hazards.

## Goals and Objectives

The overall goal is to reduce or eliminate the long-term risk of loss of life and property damage from the full range of disasters. Specific goals and objectives of this plan include:

### **GOAL 1: Increase public understanding, support and demand for hazard mitigation.**

- Objective 1.1 Heighten public awareness of the full range of natural and human-caused hazards they face.
- Objective 1.2 Educate the public on actions they can take to prevent or reduce the loss of life or property damage from all hazards.
- Objective 1.3 Publicize and encourage the adoption of appropriate hazard mitigation measures.

### **GOAL 2: Protect public health and safety.**

- Objective 2.1 Advise the public about health and safety precautions to guard against injury and loss of life from hazards.
- Objective 2.2 Maximize the utilization of the latest technology to provide adequate warning, communication and mitigation of hazard events.
- Objective 2.3 Reduce the danger to, and enhance protection of, dangerous areas during hazard events.



Objective 2.4 Protect critical facilities and services.

**GOAL 3: Protect existing and new properties.**

Objective 3.1 Reduce repetitive losses to the National Flood Insurance Program.

Objective 3.2 Use the most cost-effective approaches to protect existing buildings and public infrastructure from hazards.

Objective 3.3 Enact and enforce regulatory measures to ensure that development will not put people in harm's way or increase threats to existing properties.

**GOAL 4: Build and support local capacity and commitment to become continuously less vulnerable to hazards.**

Objective 4.1 Build and support local partnerships to become continuously less vulnerable to hazards.

Objective 4.2 Build a cadre of committed volunteers to safeguard the community before, during, and after a disaster.

Objective 4.3 Build hazard mitigation concerns into City planning and budgeting processes.

**GOAL 5: Promote growth in a sustainable manner.**

Objective 5.1 Incorporate hazard mitigation into the long-range planning and development activities.

Objective 5.2 Promote beneficial uses of hazardous areas while expanding open space and recreational opportunities.

Objective 5.3 Utilize regulatory approaches to prevent creation of future hazards to life and property.



## **GOAL 6: Maximize the resources for investment in hazard mitigation.**

- Objective 6.1 Maximize the use of outside sources of funding.
- Objective 6.2 Maximize participation of property owners in protecting their properties.
- Objective 6.3 Maximize insurance coverage to provide financial protection against hazard events.
- Objective 6.4 Prioritize mitigation projects, based on cost-effectiveness and starting with those sites facing the greatest threat to life, health and property.

## **Actions**

This Plan sets forth a total of fourteen mitigation actions and action plans to be carried out by the City of Plano to achieve these goals and reduce the risks from the hazards facing the City (Section 21).

These actions are designed to reduce the risks from the hazards facing the City. The actions include:

- Modify community recreational centers to serve as shelters with tornado safe rooms.
- Undertake a preparedness campaign for severe weather events. This will include a website and other activities.
- Encourage severe weather drills each semester in all Plano schools.
- Continue distribution of the Plano Residential Emergency Disaster Initiative (REDI) guide to businesses and citizens in Plano.
- Develop and implement, as necessary, a Debris Management Plan. Send additional personnel to obtain their certification in Debris Management.
- Explore the possible installation in Plano of sensors to detect freezing potential on overpasses and bridges. This would provide for additional advance warning and more accurate warning capabilities for winter storms.
- Continue to purchase City vehicles and equipment that are rated LEV or better, or run on an alternative fuel, to help improve air quality.
- Work with Federal, State and Regional entities such as Dallas Area Rapid Transit (DART), the North Central Texas Council of Governments (NCTCOG) and the North Texas Clean Air Coalition to improve air quality. Implement the Texas Commission on Environmental Quality (TCEQ) and U.S. Environmental Protection Agency (EPA) approved State Implementation Plan to achieve air quality attainment standards.



- Continue requirements by the Building Inspections Department of an engineering design for each foundation permitted. The design must be based on the specific soil conditions for the site.
- Promote the use of NOAA “All Hazards” radios for early warning and post event information.
- Evaluate and improve capabilities for back-up power generation at sanitary sewer lift stations. Back-up power is needed to protect water quality in flooding situations and ensure public health safety.
- Undertake a 5-year Capital Improvement Program for localized flooding
- Continue to mitigate repetitive loss properties. Mitigate Pittman Creek up to 100 year flood plain criteria.
- Update the City’s Drought Contingency Plan.
- Initiate an extreme summer heat public awareness and educational campaign and continue outreach through fan drive.

Each action statement includes a description of the action, estimated costs, benefits, the organization responsible for implementing the action, an implementation schedule, goal to which it relates, priority, and potential funding sources.

## Organization of this Plan

Section 2 of this Plan addresses how it was prepared and who was involved in planning. Section 3 articulates the vision, mitigation goals, and objectives that guided the development of the plan. The goals are general guidelines that articulate a desired end state. They are expressed as policy statements of global visions. Objectives are specific and measurable, and define the strategies or implementation steps to attain the identified goals. Section 4 profiles the City of Plano’s geography, population, economy, land use and development trends, government, and disaster declaration history. Section 5 identifies and prioritizes the major natural and human-caused hazards that have affected and may again affect the City of Plano and describes the people and property at risk from these hazards.

Sections 6 through 19 discuss each of the high-priority natural and human-caused hazards that could potentially affect the City of Plano. The plan addresses why each hazard is a threat and profiles each hazard in terms of its frequency of occurrence, spatial extent and potential impact. If the hazard has a geographic boundary, it is identified and mapped if possible. Data on the history of hazard events is provided, as available.

Section 20 discusses previously implemented mitigation actions. These include Federal projects such as the Federal Emergency Management Agency’s Public Assistance Projects, Hazard Mitigation



Grant Program Projects, and other Federal mitigation projects; and the U.S. Army Corps of Engineers' studies, plans, and projects. It also includes plans, studies and projects of the Texas Water Development Board, and local plans, ordinances, and inspection and permitting processes. Section 21 contains actions to be undertaken by the City of Plano to mitigate the hazards identified in Sections 6 to 19. Mitigation action plans in Section 21 describe each mitigation action, the hazard addressed, the estimated costs, benefits, organization within the City responsible for overseeing implementation, implementation schedule, objectives the action is designed to achieve, priority, and potential funding sources.

