

Section 2. The Planning Process

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Preparation of the Plan

This document was prepared by the City of Plano, in partnership with the NCTCOG and with the technical support of H2O Partners, Inc. of Austin, Texas (www.h2opartnersusa.com). It was developed in accordance with the provisions of the Urban Area Security Initiative (UASI) Grant Program of the U. S. Department of Homeland Security (DHS), the Disaster Mitigation Act of 2000 (Public Law 106-390), Federal Regulations (44 CFR 206), and the planning standards adopted by the Texas Division of Emergency Management. The hazard mitigation planning process is shown in Figure 2-1.

A regional hazard mitigation planning process in which the City of Plano participated was started by the NCTCOG in January 2003. The City of Plano started an independent hazard mitigation planning process on July 2, 2005. A draft of the City of Plano Hazard Mitigation Action Plan was completed for submission to the state on December 15, 2005. Development of the NCTCOG planning process was funded by the Federal Emergency Management Agency (FEMA) under a grant awarded in January 2003. On August 9, 2004, the City of Plano was awarded a grant under the DHS Urban Area Security Initiative Grant Program which helped support this planning effort.

Figure 2-1. The Hazard Mitigation Planning Process





The hazard mitigation planning process was organized into four major components:

1. Planning Process – establishment of an open public planning process
2. Hazard Identification and Risk Assessment
3. Mitigation Strategies
4. Plan Adoption & Maintenance

Open Public Process

An open public process was established to give all sectors of the community in the City of Plano and throughout the entire North Central Texas region an opportunity to become involved in the planning process and make their views known.

The City of Plano established a City-wide planning process and also participated in a regional planning process through the NCTCOG that involved cities and counties in a 16-county region centered on Dallas and Fort Worth. The counties included: Collin, Dallas, Denton, Ellis, Erath, Hood, Hunt, Johnson, Kaufman, Navarro, Palo Pinto, Parker, Rockwall, Somervell, Tarrant and Wise. Through this regional planning process, neighboring jurisdictions, Federal and State agencies, businesses, universities, non-profit organizations and the public participated in the process.

The City established a Hazard Mitigation Team composed of representatives of City departments and organizations relating to City Management, Health, Fire Department, Homeland Security, Public Information, Police, Building Inspection, Public Safety, Purchasing, Geographic Information Systems, Engineering and Facilities, Utility Operations and Public Works. A list of team members is provided at Appendix C. The Hazard Mitigation Team members participated actively throughout the planning process. They attended four major events:

- Kick-Off Workshop held on August 3, 2005 at the Plano Municipal Center;
- Training Session on All Hazards Risk Assessment and Emerging Building Protection Standards, held August 30, 2005 at the Plano Police Department;
- Table-Top Exercise highlighting the impact of chemical (chlorine), biological (pandemic flu) and explosive blast scenarios at four Plano sites, held August 30, 2005 at the Plano Police Department; and
- Mitigation Workshop, held August 31, 2005 at the Plano Police Department, to develop mitigation actions and action plans and to devise a way to keep the plan up to date. Their specific activities are described below.

Representatives of the NCTCOG and DHS's Federal Emergency Management Agency (FEMA) were also invited to attend.



At the Kickoff Workshop, held August 3, 2005, representatives of H2O Partners, Inc. provided a briefing on the new FEMA hazard mitigation planning requirements and the respective roles and responsibilities of the City, the NCTCOG, and H2O Partners, Inc. An opportunity was provided for City officials to discuss how they would like to approach the planning process. Presentation materials outlining the proposed approach and detailing respective roles and responsibilities of all parties were provided at the meeting, along with a project timeline.

**Table 2-1.
City of Plano Planning Meetings**

Event	Date
Kick-Off Workshop	August 3, 2005
Training Session on All Hazards Risk Assessment and Emerging Building Protection Standards	August 30, 2005
Table-Top Exercise	August 30, 2005
Public Meeting	August 30, 2005
Mitigation Workshop	August 31, 2005

A public meeting was held on August 30, 2005 from 5:30 p.m. – 6:30 p.m. at the Plano Municipal Center to inform the public about the planning process and solicit their ideas and recommendations. The purpose of the meeting was to help identify natural and man-caused hazards that might affect residents of Plano and develop recommendations for action to reduce the impact of those hazards. An opportunity was provided for the public to present recommendations on hazards of concern and ways to reduce risks.

A Hazard Survey was developed to solicit opinions from the public about hazards of concern. The Hazards Surveys were posted on the City of Plano's website at: http://www.planotx.org/hazmit_survey.html. The survey provided a mechanism to gain input from the public, neighboring communities, agencies, businesses, academia, non-profit organizations, and other interested parties. A total of 178 responses were received by October 15, 2005. The responses are summarized in Appendix B. These responses provided a significant base of information to assist the City of Plano in formulating mitigation actions.



Identify Hazards and Assess Risks

In January 2004, NCTCOG developed a document entitled “Multi-Hazard Risk Assessment: Forewarnings of Natural Hazards to the Year 2030” that:

- Screened a full range of natural hazards that can affect North Central Texas;
- Profiled hazard events, providing information such as previous occurrences and probability of future hazard events;
- Described the general vulnerability of the region to the hazard events; and
- Identified sixteen multi-jurisdictional hydrologic, climatic, geologic and severe weather hazards which merit mitigation consideration in the region.

The NCTCOG’s draft Multi-Hazard Risk Assessment was completed and made available for public comment in December 2003. In January 2004, the NCTCOG Executive Board approved the Multi-Hazard Risk Assessment.

The City of Plano used the NCTCOG risk assessment as a starting point for its assessment of risk. It reviewed the wealth of data provided by the NCTCOG and identified sixteen natural hazards that threaten the City of Plano. The City of Plano’s Geographic Information System staff developed Plano-only maps using the NCTCOG’s data on hazards.



The characteristics and potential consequences of both natural and man-caused hazards were assessed to determine how much of the City of Plano could be affected and the potential effects on local assets. The hazards were ranked according to their likelihood, spatial extent and potential impact. The results of this risk ranking are contained in Appendix D, Level 1 Risk Analysis: Results of City-wide Risk Ranking for Natural and Human-caused Hazards.



The City-wide Hazard Identification and Risk Assessment was completed on August 30, 2005. Sixteen natural hazards that have the potential or probability to affect the City of Plano were identified based on a review of historical records, national data sources, existing plans and reports, and discussions with local, regional, state, federal and national experts. Mitigation actions were developed for ten of the sixteen natural hazards – those for which the City was determined to be at high or medium risk.

The City of Plano also examined eleven man-caused hazards that threaten the City. A four-hour training session was held on August 30, 2005 to familiarize participants with the new National Preparedness Goal issued by the U.S. Department of Homeland Security (DHS) on March 31, 2005 and National Response Plan and Catastrophic Incident Supplement. Participants were shown the DHS All Hazards Risk Assessment Process and provided with information on human-caused chemical, biological, radiological, nuclear and cyber threats and how to mitigate against terrorist attacks.

A four-hour table-top exercise was conducted on August 30, 2005 to examine the impact of three scenarios at four critical infrastructure sites in Plano. The scenarios included a hazardous materials release involving chlorine, a biological event involving a pandemic flu and a range of explosive blasts. The results of analyses conducted using the HAZUS model and ALOHA plume model were presented for each scenario for four sites, including the impacts on buildings, critical functions, and the population. The three man-caused hazards addressed during the table-top exercise are presented in the risk assessment contained in this plan.

Participants were then provided several tools with which to analyze risk of human-caused hazards down to the site and building level. These included:

- Level 2 Risk Analysis: Site Risk Ranking Questionnaire for Human-caused Hazards (Appendix E)
- Level 3 Risk Analysis: Building Risk Ranking Questionnaire for Man-Caused Hazards (Appendix F)
- Level 3 Risk Analysis: Building Vulnerability Checklist (Appendix G)
- Electronic Risk Ranking Spreadsheet to summarize the results of the Level 1, 2 and 3 analyses (Appendix H).

Develop Mitigation Strategies

At the Mitigation Workshop, a vision statement for mitigation in the City of Plano was formulated, along with mitigation goals and objectives to reduce or eliminate the long-term risk to life and property from hazards. 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 necessary to attain the identified goals. The vision statement, goals and objectives are presented in Section 3 of this plan.

A variety of existing studies, plans, reports and technical information were reviewed as part of the planning process. Sources of the information included the Federal Emergency Management Agency, the U.S. Army Corps of Engineers, the Insurance Services Office, the U.S. Fire Administration, the National Oceanic and Atmospheric Administration, the Texas Water Development Board, the Texas Commission on Environmental Quality, the State Comptroller, the Texas State Data Center, and the State Division of Emergency Management. Section 20 and the hazard-specific sections of the Plan (Sections 6 – 19) summarize the findings from the studies, plans, reports and technical information. Some of these documents, including those from FEMA and the NCTCOG, provided samples of mitigation actions used in the plan. Other documents, including those from the National Oceanic and Atmospheric Administration, provided histories of disasters in the Plano area. The U.S. Army Corps of Engineers studies were reviewed for potential projects in the City of Plano and their potential applicability to the plan. The Water Development Board studies were reviewed for population and other projections and for flood-related grant funding. The State Comptroller materials were reviewed for economic projections for the future of the City of Plano. The State Data Center documents were used to obtain population projections. The Insurance Services Office documents were used for information on building code effectiveness. Materials from FEMA and the Governor’s Division of Emergency Management were reviewed for guidance on plan development requirements.

A very inclusive and structured process was used to develop and prioritize mitigation actions for this Hazard Mitigation Plan. It included the following steps:

- A vision statement, mitigation goals and objectives were formulated to reduce or eliminate the long-term risk to human life and property from each hazard.
- NCTCOG documents were reviewed to assist in the development of mitigation actions. They included “Mitigation Strategies for Hydrologic Hazards: Top Ten Priority Actions to the year 2010.” This document identifies the types of hydrological hazards facing North Central Texas, sets goals for mitigating hydrologic hazards, and lays out an action plan (“10 by 2010”) detailing cooperative actions to be undertaken by the Council of Governments and jurisdictions within their 16-county planning region. Also reviewed were “Mitigation Strategies for Geologic, Severe Weather and Climatic Hazards: A Compilation from Multi-Jurisdictional Agencies.” It identifies geologic, severe weather and climatic hazards threatening North Central Texas, sets out goals to reduce risks, and proposes possible mitigation measures for each type of hazard.
- A “menu” of approximately 300 optional mitigation actions was presented to the hazard mitigation team members during the Mitigation Workshops. The menu is available from H2O Partners, Inc. Participants also reviewed a report on optional mitigation actions developed by a FEMA Regional Office. The participants reviewed the optional mitigation



actions and narrowed the list down to those that were most applicable to their area of responsibility and were most cost-effective in reducing risk, could be implemented easily, and would be likely to obtain community support. The process of analysis for selecting mitigation action and projects is detailed in the bullets below.

- Potential Federal and State funding sources to help implement the proposed actions were inventoried. Information was collected on over 40 Federal and State funding sources, including the name of the program, the authority, funding source, purpose of the program, types of assistance and eligible projects, conditions on the funding, types of hazards covered, matching requirements, application deadlines and a point of contact. The information appears in the Funding Guide at Appendix F.
- Mitigation team members considered the benefits that would result from the mitigation actions versus the cost of those projects. For those actions in which the benefits could be quantified, an economic evaluation was one factor that helped team members select one mitigation action from among many competing ones. Cost-effectiveness of actions was considered as each team member developed a final list of mitigation actions. Economic considerations were part of the community's analysis of the comprehensive range of specific mitigation actions and projects being considered.
- Hazard mitigation team members then selected mitigation actions and prioritized them. Each team member prioritized their own jurisdiction's mitigation actions. The prioritization method was based on the following criteria: 1) benefits in terms of effect on overall risk to life and property, including the effects on both new and existing buildings and infrastructure; 2) ease of implementation; 3) political and community support; and 4) cost and funding availability. As a result of this exercise, an overall priority was assigned to each mitigation action by each team member. The overall priority is reflected in each action in Section 20.
- Team members developed action plans identifying proposed actions, estimated costs and benefits, the responsible organization(s), implementation schedule, related objective(s) to which the actions relate, priority, and potential funding sources.

Implement the Plan and Monitor Progress

A formal process was established at the workshops to ensure that the Plan is implemented and remains an active and relevant document. Plan maintenance is addressed in Section 22.





Public Involvement

Because public involvement is critical to the success of hazard-mitigation planning, public input was sought in several ways. Public input was solicited during the drafting stage, upon development of the draft, and prior to adoption of the plan. A public meeting was held on August 30, 2005 to give the public an opportunity to learn about the hazards they face and ways to protect themselves and their families. The public also was given the opportunity to come to this meeting to provide comments, input into the planning process, and discuss other issues of concern to City of Plano residents. Announcements of the public meetings were distributed on the City of Plano's website, to the media and civic organizations, and were displayed in public places. Members of the general public, residents, local businesses, community leaders, educators, representatives of neighboring jurisdictions and private and non-profit groups were invited to attend and participate.

The August 30, 2005 public meetings provided an opportunity for the public to make input to the planning process during the drafting stage. The public was also provided an opportunity to comment on the draft plan prior to its submission to the Texas Division of Emergency Management and FEMA. The public will also be consulted prior to plan adoption by the Plano City Council ([forthcoming](#)). The public will be notified that the City of Plano is considering the plan and will be given the location where the public can inspect the plan and submit comments. During the City Council meeting, a formal opportunity to comment on the plan will be provided in advance of Council action passing a resolution adopting the plan.

A Hazard Survey was made available to the public on the City of Plano's website. The survey sought information from citizens about hazards that have affected them and recommendations for action to reduce future risks. A total of 178 responses were received. The survey results provided an important source of information for use in formulating mitigation actions. Survey results appear in Appendix B.

The City of Plano used a set of web-based Partner Outreach Tools such as posters, brochures, and a presentation library developed by the NCTCOG to assist local governments in conducting public education and involvement outreach activities. These included three posters designed to convey the complex message of hazard mitigation in a simplified and familiar way using a fairy tale or nursery rhyme theme.

The City of Plano also participated in public meetings and hearings sponsored by the NCTCOG in order to provide the public with necessary information and gain valuable feedback. Plano also participated in a NCTCOG survey conducted in August 2003 as part of the risk assessment process. The survey was intended to gauge whether NCTCOG's risk assessment effort was closely following the region's hazard risk perceptions as a whole.



Finally, the draft of this Plan was made available on (date -- forthcoming prior to adoption) on the City of Plano website for public review and comment. A copy of the Plan was available for public inspection and review and comments were formally solicited prior to the City Council's adoption of the Plan. A copy of the resolution adopting the Plan is at Appendix L (forthcoming upon adoption).

Partners in Planning

The City of Plano hazard mitigation planning team played a central role throughout the planning process. The teams laid the groundwork for the plan, reviewed the President's new National Preparedness Goal and materials provided by the NCTCOG, examined risk in the City, sought the participation of stakeholders and the public, and articulated the mitigation actions and action plans presented in the document. The team, in short, served as the primary vehicle through which to share information, invite active participation and coordinate the Plan's development, implementation, and maintenance.

Federal and State agencies were also involved in the planning process. Federal and State agencies provided input which assisted the team in developing the Plan. These included the Federal Emergency Management Agency, the Department of Homeland Security, the U.S. Army Corps of Engineers, the State Division of Emergency Management, the Texas Water Development Board, the Texas Department of Transportation, the Texas Council on Environmental Quality and the Texas Forest Service. Weather event data were provided by the National Weather Service, NOAA.

Under the overall coordination of the Emergency Management Coordinator/Fire Chief, hazard mitigation team members assessed their capabilities, examined previous mitigation efforts and developed mitigation actions. Throughout the process, they reached out to police and fire departments, emergency medical services, code enforcement entities, floodplain managers, neighboring jurisdictions, local businesses, community leaders, educators and other private and non-profit organizations to inform them of the planning process and seek their views.

The Team met as the plan was being developed and maintained regular communication through face-to-face meetings, telephone calls and electronic mail. Team members are listed in Appendix C.