ANNEX P

HAZARD MITIGATION

Confidential per Sec. 488.177 Texas Government Code
APPROVAL & IMPLEMENTATION

Annex P

Hazard Mitigation

John Hall, Vice President
Administration & Campus Operation

Kim A. Lemaux
Chief of Police

Leah V. Hoy
Director Environmental Health & Safety

Bill Poole, Assistant Vice President
Facilities & Campus Operations

Cindy Mohat
Emergency Management Coordinator

Date
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# RECORD OF CHANGES

**Annex P**

**Hazard Mitigation**

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ANNEX P

HAZARD MITIGATION

I. AUTHORITY

See Section I of the Basic Plan for general authorities

The Robert T. Stafford Disaster Relief and Emergency Assistance Act (Public Law 93-288), as amended by the Disaster Mitigation Act of 2000 (Public Law 106-390)

Policy University of Texas System 172, Emergency Management

Tarrant County, Local Mitigation Action Plan, Federal Emergency Management Agency (FEMA) Region VI, June 2015

II. PURPOSE

This annex identifies risks and vulnerabilities and to formulate a plan of actions to reduce damage and loss of life from natural and technological disasters. The University of Texas at Arlington (UTA) will follow the City of Arlington (Arlington) Emergency Management mitigation plan, which Arlington has adopted Tarrant County's Local Mitigation Action Plan that resides with FEMA Region VI.

This annex explains the methodologies and progressive steps as to how UTA plans to identify the hazards that affect UTA and to systematically reduce the identified levels of risk and vulnerability to these hazards. The plan explains UTA's active partnership, participation in campus mitigation planning and implementation activities.

III. EXPLANATION OF TERMS

A. Acronyms
   - Arlington City of Arlington
   - EH&S Environmental Health & Safety
   - EMC Emergency Management Coordinator
   - FEMA Federal Emergency Management Agency
   - HAZUS Hazards United States Software Program
   - HMGP Hazard Mitigation Grant Program
   - HMC Hazard Mitigation Coordinator
   - HMT Hazard Mitigation Team
   - MAP Mitigation Action Plan
   - NFIP National Flood Insurance Program
   - PA Public Assistance
   - PDM Pre-Disaster Mitigation
   - TDEM Texas Division of Emergency Management
B. Definitions

**Appropriate mitigation measures.** Mitigation actions that balance the cost of implementation against the potential cost of continued damages, if such measures are not taken. Mitigation measures should be less costly to implement than the damages they are intended to prevent. Floodplain management, acquisition of flood prone property, enhanced insurance coverage, and the adoption of safe land use regulations and construction standards are considered as highly appropriate mitigation actions. However, UTA does not determine safe land use regulations or construction standards but follows appropriate guidelines and state/federal regulations as they apply.

**Area of responsibility.** The entire area covered by UTA’s comprehensive plan consists of approximately 400 acres. The campus is in the center of Arlington and has satellite campuses in Fort Worth, a data center (Arlington Regional Data Center) and a research facility (UTA Research Institute). UTA has approximately 51,000 students (on campus and online) and 5,000 staff and faculty members.

**Benefit/cost.** The ratio between the cost of implementing a mitigation project versus the benefits (amount of future cost savings) potentially achieved. Projects funded under Hazard Mitigation Grant Program (HMGP) or Pre-Disaster Mitigation (PDM) Act Program must have a benefit/cost of 1 to 1 or greater.

**Disaster.** A hazard caused event that results in widespread or severe damage, injury or loss of life, property or resources, and exceeds the recovery capabilities of a jurisdiction. Disaster assistance provided by the federal or state government is intended to supplement local government or state entities resources and so enhance recovery capabilities to achieve a speedy and efficient return to pre-incident conditions.

**Disaster resistant community.** A community-based initiative that seeks to reduce vulnerability to natural hazards for the entire designated area through mitigation actions. This approach requires cooperation between government agencies, volunteer groups, individuals, and the business sectors of a community to implement effective mitigation strategies.

**Hazard analysis.** A document that provides a risk based quantitative method of determining mitigation and preparedness priorities and consists of a hazard assessment, vulnerability assessment, and risk assessment. A hazard analysis identifies vulnerabilities and risks within each sector of the community and is a living document that is reviewed and updated annually.

**Hazard event.** Any occurrence in which people and/or property are adversely affected by the consequences of a natural or man-made hazard.

**Hazard mitigation.** Sustained actions taken to eliminate or reduce long-term risk to people and property from hazards and their effects. The goal of mitigation is to save lives and reduce damages to property, infrastructure, and the environment and, consequently to minimize the costs of future disaster response and recovery activities.
Hazard mitigation grants. There are three federal mitigation grant programs that provide federal cost-share funds to develop and implement vulnerability and risk reduction actions:

1. Flood Mitigation Assistance Program – Provides pre-disaster grants to state and local governments for both planning and implementation of mitigation strategies. Each state is awarded a minimum level of funding that may be increased depending upon the number of National Flood Insurance Program (NFIP) policies in force and repetitive claims paid. Grant funds are made available from NFIP insurance premiums, and therefore are only available to communities participating in the NFIP.

2. HMGP – Authorized under Section 404 of the Stafford Act; provides funding for cost-effective post-disaster hazard mitigation projects that reduce the future potential of loss of life and property damage.

3. PDM Program - Authorized by Section 203 of the Stafford Act as amended by the Disaster Mitigation Act of 2000 (Public Law 106-390). The PDM Program provides a means to fund pre-disaster hazard mitigation actions specifically designed to eliminate or reduce the consequences of future disasters. The PDM’s focus is: (1) to prevent future losses of lives and property due to hazards and (2) to implement state or local hazard mitigation plans.

Hazards United States Software program (HAZUS). A nationally applicable standardized methodology that contains models for estimating potential losses from earthquakes, floods, and hurricanes. HAZUS uses geographic information systems technology to estimate physical, economic, and social impacts of disasters.

Mitigation action plan (MAP). A document that outlines the nature and extent of vulnerability and risk from natural and man-made hazards present at the campus and describes the actions required to minimize the effects of those hazards. A MAP also describes how prioritized mitigation measures will be funded and when they will be implemented. The area of coverage for a MAP is based on commonly shared hazards, needs, and capabilities; plans may be prepared for a single campus or include satellite campuses.

Public assistance (PA) program. For the purposes of this annex, this refers to disaster recovery grants authorized under Section 406 of the Stafford Act to repair the damages to public facilities following a major disaster declaration. Public Law 106-390 requires mitigation components be added to repair projects to reduce repetitive damages.

Risk factors. A group of identifiable facts and assumptions concerning the impact of specific or associated hazards. An analysis of interrelated risk factors provides a means to determine the degree (magnitude) of risk produced by a particular hazard or an incident and, consequently, provides a means to determine the priority of mitigation planning and implementation activities. A sample listing of risk factors are as follows:

1. Number of previous events involving this hazard.

2. Probability of future events occurring that involves this hazard.
3. Number of people killed or injured during previous events and number of people potentially at risk from future events involving this hazard.

4. Damages to homes, businesses, public facilities, special-needs facilities, and unique historic or cultural resources, crops, livestock that have been caused by previous events or are potentially at risk from future events involving this hazard.

5. Capabilities and shortfalls of emergency management organization to effectively respond to emergency situations involving this hazard.

6. Recovery activities needed to return the campus to pre-event status. The recovery process involves not only time requirements, but also the associated costs to repair damages, restore services, and return economic stability after occurrence of the event.

**Sectoring**: Dividing the campus into manageable geographic segments for defining specific types of information concerning what is vulnerable and at risk in each sector. Sectioning facilitates mitigation and preparedness planning as well as response, search and rescue, and damage assessment operations.

### IV. SITUATION & ASSUMPTIONS

#### A. Situation

1. UTA’s current hazard analysis indicates UTA is vulnerable and at risk from hazards that have caused, or have the potential for causing, loss of lives, personal injuries, and/or extensive property damage. UTA has suffered incidents, emergencies, and disasters in the past and is still vulnerable and at risk from future similar occurrences.

2. UTA’s area of responsibility has been divided into 22 sectors to facilitate the collection of vulnerability and risk data, and for conducting damage assessment operations (see Support Document 6, Campus Sector Map).


#### B. Assumptions

1. Exposure to risk from hazards exists whether or not an incident actually occurs.

2. The adverse impact of hazards can be directly affected by hazard mitigation actions accomplished prior to occurrence of an emergency situation. Effective post-event mitigation actions can also reduce the risk of repeat disasters.
3. Hazard mitigation planning and implementation activities are an on-going program/process and are an integral and complimentary part of UTA's comprehensive emergency management program.

4. Mitigation actions to save lives and reduce damages can be achieved through properly coordinated group efforts. These efforts will require the cooperation of various levels of campus departments and will be enhanced by the involvement and partnership of talented individuals with expertise in varying disciplines from both the public and private sectors.

5. The effective, long-term reduction of risks is a goal and responsibility shared by campus departments.

V. CONCEPT OF OPERATIONS

A. General

1. The achievement of hazard mitigation objectives is a high campus priority, and all departments will seek out and implement risk reduction measures.

2. The “Notice of Interest/HMT report” provides a means to develop a multi-disciplined, on-going mitigation planning and implementation process. It facilitates the development, and expedited submission of applications for mitigation grants to implement mitigation projects as appropriate (see Support Document 2, Notice of Intent/HMT Report).

3. Consistent with capabilities, Arlington, Texas Division of Emergency Management (TDEM) and Tarrant County HMT will provide coordination, technical assistance, and guidance to help the campus achieve effective risk reduction objectives.

4. Our mitigation planning and implementation process is intended to facilitate the identification and implementation of appropriate mitigation actions.

5. Consistent with capabilities, UTA will utilize the most current information and guidance provided by Tarrant County Office of Emergency Management to include web-based assistance available via the internet.

B. Overview of mitigation process

The Tarrant County Local Mitigation Action Plan (LMAP) as written fulfills the requirements of the Disaster Mitigation Act of 2000, which is administered by FEMA. The Disaster Mitigation Act provides federal assistance to state and local emergency management to mitigate the effects of disasters. The LMAP also encourages cooperation among various organizations and crosses political subdivisions.

C. Pre and post-event relationships

1. General
Hazard mitigation activities are not only a response to an event and a known hazard, but are also 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 will be merged into a coordinated, continuous mitigation process.

2. Pre-event mitigation

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.

3. Post-event mitigation

Activities that take place after an emergency situation has occurred and have adversely affected the campus. 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.

D. Activities 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.

1. Preparedness

a. Develop and maintain hazard analysis.
b. Conduct studies and implement mitigation projects.
c. Provide vulnerability and risk data for use in community development planning, exercise design, emergency preparedness planning, and floodplain management.

2. Response

a. Assist the Executive Policy Group and emergency responders to better understand potential impact consequences and emergency response needs by providing detailed vulnerability and risk data for all sectors impacted or likely to be impacted by the incident.
b. Assist Executive Policy Group and emergency responders to answer “What if?” questions through use of appropriate real-time and model based damage assessment tools e.g., damage estimates, ranges and casualties, and HAZUS.

3. Recovery
a. Conduct site surveys to record damage “footprint” 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. If appropriate, evaluate accuracy of floodplain maps and studies and identify any mapping needs.

b. The University of Texas System, Office of Risk Management, along with UTA’s insurer will assist with the damage assessment.

c. Provide assistance to the Executive Policy Group for prioritization of damage assessment operations, conducting substantial damage determinations, and preparation of request for a state and/or federal disaster declaration by providing detailed incident impact data.

d. Provide assistance to state and federal mitigation team activities once a disaster is declared.

e. Assist designated campus project officer(s), prepare and submit HMGP Notice of Interest(s), and monitor PA projects for inclusion of mitigation components once a state or federal disaster is declared.

f. Assist designated local project officer(s) in implementing projects and administer HMGP and other mitigation grant programs.

VI. ORGANIZATION & ASSIGNMENT OF RESPONSIBILITIES

A. Organization

Hazard mitigation is a function that requires the coordination of a variety of multi-disciplined on-going activities. UTA Office of Emergency Management will work with Arlington to mitigate the effects of a disaster. UTA encourages cooperation among various organizations with the campus community.

B. Task assignments


VII. DIRECTION & CONTROL

The vice president of administration and campus operations, along with uta police department, environmental health & safety, facilities management, institutional construction, office of emergency management, and other departments as needed will work with Arlington and the Tarrant County Office of Emergency Management.

VIII. INCREASED READINESS ACTIONS

Hazard Mitigation activities are ongoing and standard increased readiness actions are not applicable.
IX. ADMINISTRATION & SUPPORT

A. Records and Reports

1. The EMC maintains records of previous hazard events and disaster declarations. These records contain data pertinent to risk factor analysis and, consequently, aid in determination of mitigation requirements. Risk factor analysis provides a means to determine significant levels of risk or significant hazard events that require identification in a HMT report.

2. The “Notice of Interest/HMT report” provides a means to identify, record, and coordinate on-going mitigation planning and implementation activities. The report is a management tool to facilitate the identification of mitigation opportunities and the development of an action plan and implementation schedule. The report is used to document mitigation opportunities discovered during the damage assessment process following occurrence of emergency situations, and also to document and facilitate the implementation of findings and recommendations identified in the hazard analysis, development, or other special comprehensive studies. This report system also provides a means to increase intergovernmental participation in the mitigation process through exchange of ideas, technical assistance and guidance. This report is a component of the MAP, and is also used to notify the state of UTA’s interest in assisting with a mitigation program grant as Arlington directs. This form may be found in Support Document 2 Notice of Intent/HMT report.

3. The instructions for completing the “Notice of Interest/HMT report” are located in Support Document 2, Notice of Intent/HMT Report. The most current version of these instructions are also available on the TDEM website http://www.txdps.state.tx.us/dem/pages/downloadableforms.htm under “Mitigation Forms and Worksheets”.

4. Additional reports to evaluate effectiveness and monitor long-term implementation measures will be prepared as needed. Records pertaining to loans and grant programs will be maintained in accordance with applicable program rules and regulations.

B. Release and distribution of information

Completed reports, historical records and associated correspondence will be maintained and utilized as a management tool for the continued development of a mitigation strategy for this campus.

X. DEVELOPMENT & MAINTENANCE

UTA Office of Emergency Management has the overall responsibility for the development and maintenance of all components of this annex, to include reports, records, best practice guidelines, and associated correspondence files.

XI. REFERENCES
A. TDEM, State of Texas Emergency Management Plan
B. TDEM, State of Texas Hazard Analysis
C. TDEM, State of Texas Hazard Mitigation Plan
D. TDEM-21, Mitigation Handbook
E. Tarrant County, Local Mitigation Action Plan, June 2015

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