

ANNEX P

HAZARD MITIGATION

August 2018

**Brazos County
Interjurisdictional Emergency Management**

APPROVAL & IMPLEMENTATION

Annex P

Hazard Mitigation

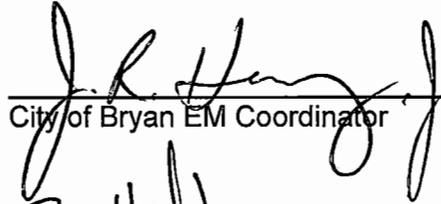
August 2018



Brazos County EM Coordinator

8/22/18

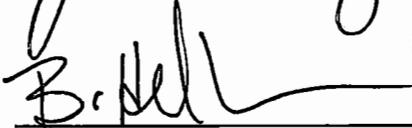
Date



City of Bryan EM Coordinator

8/24/18

Date



City of College Station EM Coordinator

8/22/18

Date



City of Kurten EM Coordinator

8/22/18

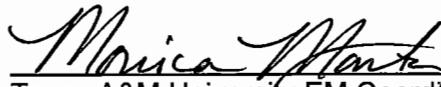
Date



City of Wixon Valley EM Coordinator

8/22/18

Date



Texas A&M University EM Coordinator

8/23/18

Date

ANNEX P

HAZARD MITIGATION

I. AUTHORITY

- A. See Section I of the Basic Plan for general authorities.
- B. The Robert T. Stafford Disaster Relief and Emergency Assistance Act (PL 93-288), as amended by the Disaster Mitigation Act of 2000 (PL 106-390)
- C. Applicable Commissioners Court and/or city resolutions pertaining to emergency management or mitigation plans.
 - 1. City of Bryan Resolution # 3451 adopting the *Mitigation Action Plan*
 - 2. City of College Station Resolution # 09-27-12-2K adopting the *Mitigation Action Plan*
 - 3. City of Wixon Valley Resolution # 28 adopting the *Mitigation Action Plan*
 - 4. City of Kurten Resolution # 07-2012 adopting the *Mitigation Action Plan*
 - 5. Commissioners Court Resolution dated September 25, 2012 adopting the *Mitigation Action Plan*
 - 6. Letter from Texas A&M University Vice President for Administration dated October 5, 2012 accepting the *Mitigation Action Plan* on behalf of the University.
- D. Applicable Commissioners Court orders and/or city ordinances, or countywide or regional plans pertaining to mitigation, floodplain management, zoning regulations, land management, and/or construction standards, etc.

II. PURPOSE

- A. This annex describes the organization of the local HMT, and assigns tasks, and responsibilities for coordinated hazard mitigation planning and implementation activities and actions.
- B. This annex addresses mitigation as a long-term, on-going process, and identifies planning and implementation actions applicable to both pre-incident and post-incident situations.
- C. This annex is applicable to and ensures that mitigation planning and implementation services address and are provided to the entire area of responsibility covered in the Interjurisdictional Emergency Management Plan.
- D. This annex explains the methodologies and progressive steps as to how we plan to identify the hazards that affect us and to systematically reduce the identified levels of risk and vulnerability to these hazards.

- E. This annex explains our active partnership, and participation in county mitigation planning and implementation activities.

III. EXPLANATION OF TERMS

A. Acronyms

AOR	Area of Responsibility
B/C	Benefit/Cost
EMD	Emergency Management Director
EMC	Emergency Management Coordinator
FMA	Flood Mitigation Assistance Program
GIS	Geographical Information System
GPS	Global Positioning System
HAZUS	Hazards of the United States
HMGP	Hazard Mitigation Grant Program
HMC	Hazard Mitigation Coordinator
HMT	Hazard Mitigation Team
MAP	Mitigation Action Plan
NFIP	National Flood Insurance Program
NOI(s)	Notice of Interest
PA	Public Assistance (Program)
PDM	Pre-Disaster Mitigation Program
SOG	Standard Operating Guidelines
TDEM	Texas Division of Emergency Management

B. Definitions

Appropriate Mitigation Measures. Mitigation actions 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 and enforcement of safe land use regulations and construction standards are considered as highly appropriate mitigation actions.

Area of Responsibility. The entire area of Brazos County, Texas is covered by our comprehensive Emergency Management Plan.

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 HMGP or PDM must have a B/C 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 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 (FMA) – 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. Hazard Mitigation Grant Program (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. Pre-Disaster Mitigation Program (PDM) - Authorized by Section 203 of the Stafford Act as amended by the Disaster Mitigation Act (DMA) 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.

Local Hazard Mitigation Team (HMT). A multi-disciplined organization composed of representatives of mutually supporting organizations and agencies from local governments and the private, public and civic sectors. Members of the HMT, also referred to as the local "Team", meet regularly to evaluate hazards, identify strategies, coordinate resources and implement measures that will reduce the vulnerability of people and property to damage from hazards. The HMT is a partnership through which all governmental, public, civic and private sector entities come together to support and participate in activities to determine and implement methods, and commit resources to reduce the community's level of risk. Team

membership is listed in Appendix 1 to this annex. The roles and responsibilities of each team member organization/agency are described in Section VI.B.3.b.

Mitigation Action Plan (MAP). A document that outlines the nature and extent of vulnerability and risk from natural and man-made hazards present in a jurisdiction and describes the actions required to minimize the effects of those hazards. A mitigation action plan 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 city or as a countywide plan. MAPs must be formally adopted by city ordinance or resolution, Commissioners Court order or resolution, and/or joint resolution(s). DMA 2000 (Public Law 106-390) requires jurisdictions to have a FEMA-approved MAP or they will not be eligible for mitigation grant funds for mitigation projects.

Public Assistance 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. PL 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, access and functional 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 jurisdiction 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 community into manageable geographic segments for defining specific types of information concerning what is vulnerable and at risk in each sector. Sectoring facilitates mitigation and preparedness planning as well as response, search and rescue, and damage assessment operations.

Sustainable Development. Managed community growth that meets the needs of the present without jeopardizing the needs of future generations. Sustainable development considers the impact of hazards on the community in the years ahead.

IV. SITUATION & ASSUMPTIONS

A. Situation

1. Our current *Hazard Analysis* indicates we are 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. We have suffered incidents, emergencies, and disasters in the past and are still vulnerable and at risk from future similar occurrences.
2. Our area of responsibility, Brazos County, is considered one (1) sector to facilitate the collection of vulnerability and risk data, and for conducting damage assessment operations.
3. Our local HMT has been selected and is operational under the leadership of our Hazard Mitigation Coordinators (HMCs).
4. Our Mitigation Action Plan (MAP) is currently being updated. When completed and approved our MAP will meet all state planning standards for mitigation, has been formally adopted by resolution, and has been approved by FEMA.

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 process and are an integral and complimentary part of our 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 government 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 all residents.

V. CONCEPT OF OPERATIONS

A. General

1. This annex is not intended to describe in detail all aspects of our mitigation program. The achievement of hazard mitigation objectives is a high governmental priority, and all departments will seek out and implement risk reduction measures.
2. The Hazard Mitigation Coordinators (HMCs) are responsible for the coordination of all mitigation activities of their respective jurisdiction. To achieve mitigation objectives, the HMC(s) will be assisted by a HMT composed of public and private sector partners that represent the local population.
3. The data collection process described in this annex provides a systematic means to identify hazards and assess their impact on this jurisdiction and will facilitate the development and maintenance of our local *Hazard Analysis* by the HMT.
4. The "Notice of Interest and Hazard Mitigation Team Report" (Appendix 3 to this annex) provides a means to develop a multi-disciplined, on-going mitigation planning and implementation process and facilitates the development and maintenance of our *Mitigation Action Plan* by the HMT. It also facilitates the development, and expedited submission of applications for mitigation grants to implement mitigation projects.
5. Consistent with capabilities, the Texas Division of Emergency Management (TDEM) and the State HMT will provide coordination, technical assistance, and guidance to help us achieve effective risk reduction objectives.
6. Our mitigation planning and implementation process is intended to facilitate the identification and implementation of appropriate mitigation actions. This process, in turn, facilitates the development of a joint federal, state, and local government partnership dedicated to the achievement of effective risk reduction objectives.
7. Consistent with capabilities, the HMC(s) and members of the HMT will participate in appropriate training and exercises related to their hazard mitigation responsibilities.
8. Consistent with capabilities, we will utilize the most current information and guidance provided by TDEM to include web-based assistance available.

B. Overview of Mitigation Process

Hazard mitigation is an on-going process that begins with the establishment of a local based planning group referred to as the local 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 our *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 third step is to implement the measures identified in the *Mitigation Action Plan* 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 implemented mitigation measures 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.

C. Pre-Event 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 already adversely affected this jurisdiction. 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. The following is a sequenced set of actions that should be taken by the HMT during each time frame:

1. Pre-Event Period

- a. Develop and maintain *Hazard Analysis*.
- b. Develop and maintain hazard *Mitigation Action Plan*.
- c. Apply for grants and loans to conduct studies and implement mitigation projects.
- d. Conduct studies and implement mitigation projects.

- e. Provide vulnerability and risk data for use in community development planning, exercise design, emergency preparedness planning, and floodplain management.

2. Incident Response Period

- a. Assist decision makers and emergency responders to better understand potential impact consequences and emergency response needs by providing detailed vulnerability and risk data for all areas impacted or likely to be impacted by the incident.
- b. Assist decision makers and emergency responders to answer "what if" questions through use of appropriate real-time and model based damage assessment tools such as HAZUS and other programs.

3. Post-Incident Period

- 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. Evaluate accuracy of floodplain maps and studies and identify any mapping needs.
- b. Complete Hazard Mitigation Team Reports based on observations and findings from site inspections. Begin development of potential mitigation project application(s) based on team reports.
- c. Provide assistance to decision makers 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 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.
- f. Review Hazard Mitigation Team Reports and update hazard analysis and the mitigation action plan.
- g. Assist designated Local Project Officer(s) in implementing projects and administer HMGP and other mitigation grant programs.

E. Local Hazard Mitigation Team

1. Members of the HMT provide a multi-disciplined, local capability to identify mitigation opportunities and implement mitigation measures in both a pre-event and post-event situation. Our HMT has primary responsibility for mitigation activities for our jurisdiction and provides representatives to and actively participates in county mitigation action planning.
2. The HMT is not viewed as an organization with rigid membership and regular duties, but rather one of flexible membership whose makeup and duties are dependent upon the particular mitigation activity under consideration. This flexibility allows the HMC(s) to tailor the group to meet the situation while insuring the involvement of appropriate individuals from the community.
3. The HMT are the local experts that understand local concerns, issues, and capabilities to achieve local mitigation goals and objectives. The HMT, under the leadership and coordination of the HMC(s), is collectively responsible for development, distribution, and maintenance of the local *Hazard Analysis, Mitigation Action Plan* and this annex.
4. In the event of a major Presidential or State Disaster Declaration for this jurisdiction, the HMC(s) and Team will provide assistance to the federal and state HMT(s) and will assist in conducting damage and effectiveness assessments, and the identification and implementation of appropriate hazard mitigation measures for the jurisdiction(s).
5. The HMC(s) and the Team will also be responsible for providing assistance necessary for submission and administration of HMGP and PDM grants.

F. Local Hazard Analysis

Our *Hazard Analysis* was developed through a joint effort of our HMT and our regional mitigation action planning partners. It is a stand alone product consisting of maps, databases, charts, and other supporting documentation that is reviewed and updated by the HMC(s) with assistance from the HMT. The analysis provides a risk-based quantitative method to prioritize mitigation and preparedness needs for the jurisdiction as a whole. Our analysis 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, and additional copies are available from the HMC(s). The data in our *Hazard Analysis* has been incorporated into our county mitigation plan.

G. Mitigation Action Plan

Our *Mitigation Action Plan* was developed through joint efforts of our HMT and our mitigation action planning partners. It is reviewed annually and updated at least every five years by the HMC(s) with assistance from members of the HMT. Our mitigation action plan outlines our mitigation goals, our risk reduction strategy for each of the significant hazards that threaten our area of responsibility, and a discussion of on-going risk reduction activities. Our plan also details what is to be done, how much it will cost, who will be responsible for the action, how it will be funded, and provides an implementation schedule.

It is an action plan for accomplishment of vulnerability and risk reduction measures for our areas of responsibility. Our plan supplements, and is in concert with the *State of Texas Hazard Mitigation Plan*, and focuses on mitigation actions that affect our areas of responsibility. Our plan is being reviewed to meet state planning standards for mitigation (Planning Standards Checklist P), Section 201 CFR 44 requirements, is pending approval by FEMA, and adopted by resolution. Copies will be distributed to appropriate agencies and organizations, and additional copies are available from the HMC(s). The MAP will be available on the Brazos County Emergency Management Department website at www.bcdem.org

VI. ORGANIZATION & ASSIGNMENT OF RESPONSIBILITIES

A. Organization

1. Hazard mitigation is a function that requires the coordination of a variety of multi-disciplined on-going activities. The County Judge and/or Mayor(s), as the Emergency Management Director(s), are responsible for the overall emergency management program, and have designated the emergency management coordinator(s) as the agency/department with primary responsibility for hazard mitigation. The EMC(s) have been designated as the HMC(s) and serve as the single manager/coordinator for this function for these jurisdictions.
2. HMT consists primarily of representatives of local government, but also includes partners that represent industry and the private sector. Individual team members and functional areas of expertise are listed in Appendix 1 of this Annex. The HMT provides a pool of local people with skills in the wide variety of disciplines that may be required to achieve effective hazard mitigation objectives. The HMC(s) serves as team leader and functional manager.
3. The HMT organization provides the flexibility to involve all team members in the problem solving process, or to involve only those team members who possess the specific skills needed to mitigate a hazard specific condition.
4. The County Judge and Mayor(s) will designate individuals to serve as local applicant's project officer to administer Hazard Mitigation Grant Program (HMGP) applications and projects. The local project officer(s) will serve as the single point of contact for the jurisdiction and coordinate with designated state mitigation project officers.

B. Task Assignments

1. The County Judge and/or Mayor(s) will:
 - a. Designate the EMCs to exercise primary responsibility to coordinate hazard mitigation activities and an individual to serve as HMC.
 - b. Can designate support agencies and organizations to provide representation to the HMT.

- c. Appoint local Project Officer(s) to administer HMGP and other mitigation applications and projects.

2. The Hazard Mitigation Coordinators will:

- a. Coordinate all hazard mitigation related activities of this jurisdiction, to include development, distribution, and maintenance of the local *Hazard Analysis, Mitigation Action Plan*, and this annex.
- b. Assist in selecting supporting agencies and individual members of the HMT, assign tasks, and manage the various activities of the team so as to accomplish mitigation functional responsibilities for the jurisdiction.
- c. Insure development, distribution and retention of mitigation reports, records and associated correspondence, and manage implementation of appropriate mitigation measures.
- d. Serve as point of contact and provide local assistance for federal, state, regional and county-wide level mitigation program and planning activities.
- e. Develop Standard Operating Guidelines (SOGs) for compiling information, determining priority of efforts, preparing reports, and monitoring implementation and effectiveness of mitigation measures.
- f. Maintain this annex and insure that all component parts are updated and contain current data.
- g. Serve as or provide assistance to the designated local Project Officer(s) responsible for administering mitigation program grants such as HMGP and PDM, and for reviewing PA projects for inclusion of appropriate mitigation measures.
- h. Conduct or assist in annual reviews and scheduled updates of the mitigation action plan (MAP).
- i. Periodically review, download, and utilize the most current guidance material from the TDEM website:

<http://www.dps.texas.gov/dem/downloadableforms.htm#mitigation>

3. Hazard Mitigation Team members will:

a. General

- (1) Assist in the accomplishment of team objectives as assigned by the HMC(s).
- (2) Provide technical assistance and functional expertise in disciplines as assigned in Appendix I of this Annex.
- (3) Assist the HMC(s) to develop, distribute, and maintain the local *Hazard Analysis* and this annex, and help local Project Officer(s) administer mitigation program grants.

- (4) Conduct or assist in annual reviews and scheduled updates of the county mitigation action plan.
 - (5) Provide assistance to the designated local Project Officer(s) responsible for administering mitigation program grants such as HMGP and PDM.
- b. Organizations that are a part of the HMT and their roles are listed in Appendix P-1.
4. Local Project Officer(s) will:
- a. Serve as single point of contact and administer HMGP, PDM, and other mitigation program applications and projects.
 - b. Coordinate with designated state mitigation project officer(s).

VII. DIRECTION & CONTROL

- A.** The HMC(s) will manage the activities of the HMT and coordinate all hazard mitigation related activities of this jurisdiction.
- B.** Lines of Succession
 - 1. Lines of succession for the HMC(s) will be EMD, EMC, or their Designee.
 - 2. Lines of succession for HMT members will be in accordance with their parent organization's established SOGs.

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 Emergency Management Coordinator 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 initiation of a Hazard Mitigation Team Report.

2. A listing of mitigation-related documents on file pertaining to this jurisdiction is provided in Appendix 2 of this Annex. This is a listing of plans, programs, grants, regulations, studies, maps, etc., which address hazards or mitigation activities unique to this jurisdiction. Items listed may include flood control studies, levee improvement agreements, dam safety plans/guidance, local ordinances, flood mitigation plans, flood hazard boundary maps, flood insurance rate maps, drainage studies, Corps of Engineer Section 22 or feasibility studies, master drainage studies/plans, flood mitigation plans, etc. This record provides a listing of reference documents to be maintained and utilized as an aid to identify vulnerability and risks impacts and accomplish mitigation objectives.
3. The "Notice of Interest and Hazard Mitigation Team Report" provides a means to identify, record, and coordinate ongoing 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* or land use, development, flood control, or other special comprehensive studies. This report system also provides a means to increase inter-governmental participation in the mitigation process through exchange of ideas, technical assistance and guidance. This report is a component of our *Mitigation Action Plan*, and is also used to notify the state of our interest in applying for a mitigation program grant. This form may be found in Appendix 3 to this annex.
4. The instructions for completing the "Notice of Interest and Hazard Mitigation Team Report" are located in Tab A to Appendix 3 to this annex. The most current version of these instructions is available as "Mitigation Job Aid #1" on the TDEM website at <http://www.txdps.state.tx.us/dem> under "documents".
5. 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

1. Completed Hazard Mitigation Team Reports, the *Hazard Analysis*, and the *Mitigation Action Plan* will be presented to the chief elected official(s), City Council(s), Commissioners' Court, and the TAMU Associate Vice President for Safety and Security for review, approval, adoption, and implementation.
2. 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 jurisdiction.

X. ANNEX DEVELOPMENT & MAINTENANCE

- A. The HMC(s) have overall responsibility for the development and maintenance of all components of this annex, to include reports, records, SOGs, and associated correspondence files.
- B. The HMC(s), with assistance from the HMT, and in conjunction with the other Emergency Management Coordinator(s), will ensure that copies of this annex are distributed to all HMT members, all jurisdictions within our area of responsibility, the Texas Division of Emergency Management and other agencies/organizations as appropriate.

XI. REFERENCES

- A. Texas Division of Emergency Management (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. Local Hazard Analysis, (11/2012).
- F. Local Hazard Mitigation Action Plan, (11/2012).

APPENDICES:

- 1 Hazard Mitigation Team
- 2 Mitigation Reference Records
- 3 Notice of Interest and Hazard Mitigation Team Report
 Tab A - Mitigation Job Aid #1: Instructions for Completing the NOI/Hazard Mitigation Team Report

HAZARD MITIGATION TEAM

The implementation of effective hazard mitigation measures requires utilization of all resources available to this jurisdiction. Multi-disciplined, long-range mitigation planning requires a coordinated team of personnel with administrative, financial, and technical knowledge, and expertise in a variety of functional areas that may be needed to achieve mitigation objectives. HMT supporting member agencies, departments, and organizations along with their functional areas of responsibility are listed in this appendix. Team members will provide assistance for hazard mitigation activities as required by the HMC(s). Team members have been selected for all functional areas that are applicable to this jurisdiction and which may require local expertise. Primary responsibility for Team members is to provide mitigation program services for all jurisdictions covered in our emergency management plan, but Team members are also responsible for coordinating and providing assistance to our partners for development, adoption, implementation, and maintenance of our mitigation action plan.

Hazard Mitigation Coordinator(s)	EMC(s) - all
Functional Responsibilities	Title/Agency
Public Awareness/Education	Public Information Officer(s) - all
Emergency Preparedness and Response	EMC(s) - all
Disaster Recovery	EMC(s) - all
Floodplain Management	Floodplain Administrator(s) – Brazos County; College Station; Bryan
Engineering Services	PW Director(s) & County Engineer - all
Damage Assessment	American Red Cross; Public Works - all
Volunteer Services	Volunteer Coordinator - BV COG
Water Treatment	PW Director(s) – Bryan; College Station
Wastewater Treatment	PW Director(s) – Bryan; College Station
Drainage/Flood Control	PW Director(s) & County Engineer - all
Public Health	Brazos County Health Department
Legislative Representation/Liaison	Position will be filled as needed with local office representatives
Building Codes and Permits	Code Enforcement – Bryan; College Station
Zoning Regulations	Code Enforcement - Bryan; College Station
Legal Services	County and City Attorney representatives - all
Development Planning	Community Development – Bryan; College Station
Subdivision Regulations	PW Director(s) and County Engineer - all
Fiscal/Funding Resources	County Budget Officer and City Finance Department - all
Tax Assessment	County Tax Assessor/Collector
Septic Tank/Sanitation Standards	Brazos County Health Department
Environmental Protection	Brazos County Health Department
Land Use Planning	County Extension Office
Property Condemnation	PW Director(s) and County Engineer - all
Land Acquisition	PW Director(s) and County Engineer - all

Historical Preservation	Brazos County Historical Commission
Parks and Wildlife	Texas Parks and Wildlife
River Authority	Brazos River Authority representative
Levee/Seawall Management	N/A
Dam Safety/Reservoir Management	TCEQ
Coastal Zone Management	N/A
Agricultural Recovery Programs	County Extension Office
Fire and Casualty Insurance	County and Cities Risk Management Dept's
Flood Insurance	County and Cities Floodplain Administrators
Wind Insurance	County and Cities Risk Management Dept's
Drainage District	N/A
Citizen Group(s)	N/A
Business/Industry	Bryan/College Station Chamber of Commerce
Council of Government	Brazos Valley COG- County and Cities
Data Processing Services	County and Cities IT Department(s) - all
Mapping Services	PW Director(s) and County Engineer - all
GIS Services	County Engineer and City GIS Dept's - all
Grant Writing/Management	Brazos Valley COG
Urban/Regional Planning	Community Development – Bryan; College Station; TTI
Professional Group(s)	N/A
Neighborhood Association(s)	N/A
Chamber of Commerce	Bryan/College Station Chamber of Commerce
Realtors	N/A
Bankers/Lenders	N/A

MITIGATION REFERENCE RECORDS

	Title/Subject	Date	Prepared By	File Location
1.	Brazos County MAP	11/2012	TEEX	Brazos County CEOC
2.	Guidelines for Developing EAPs for Dams in Texas	3/2012	TCEQ	Brazos County CEOC
3.	Brazos County Flood Hazard Areas	2012	FEMA	Brazos County R&B
4.	Brazos County Oil Pipelines	2012	Texas Railroad Commission	Brazos County R&B
5.	Brazos County Oil and Gas Wells	2012	Texas Railroad Commission	Brazos County R&B
6.	Brazos County Critical Facilities List	2010	DHS/ Local Jurisdiction	Brazos County CEOC
7.	Brazos County MAP	4/2005	H2O Partners	Brazos County CEOC
8.	Hazardous Materials Flow Study	12/2002	Brazos County LEPC	Brazos County CEOC
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NOTICE OF INTEREST AND HAZARD MITIGATION TEAM REPORT

Jurisdiction: _____ County: _____ Date: _____

<p>1. Hazard Mitigation Coordinator/Project Officer: Address:</p>
<p>Phone#: _____ Fax#: _____ E-mail: _____</p>
<p>2. Impact Area:</p>
<p>3. Hazard Identification:</p>
<p>4. Incident Period:</p>
<p>5. Number of Previous Events Involving this Hazard:</p>
<p>6. Number of Residents at Risk from this Hazard:</p>
<p>7. Background and Discussion:</p>
<p>8. Hazard Mitigation Team Recommendations:</p>
<p>Work Element # 1</p>
<p>Mitigation Action:</p>
<p>Lead Agency:</p>
<p>Estimated Cost:</p>
<p>Funding Method:</p>
<p>Schedule:</p>

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:

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MITIGATION JOB AID #1: INSTRUCTIONS FOR COMPLETING NOI/ MITIGATION TEAM REPORT

A. General

The "Notice of Interest and Hazard Mitigation Team Report" discussed in Annex P is concerned with one basic goal: to assist in the identification and implementation of mitigation actions that will eliminate, or at least reduce, the potential for future losses.

The report is designed for use to conduct and record an initial survey of an impacted disaster area and facilitate the identification of causes and mitigation opportunities. The report provides the basis for development of a coordinated Mitigation Action Plan (MAP) and a Notice of Interest (NOI) to apply for federal and state funds to implement hazard mitigation actions.

The mitigation report is primarily a response action following a disaster or significant event, however, the process will also be used to document mitigation opportunities identified in findings or recommendations of special comprehensive studies, and for review and update of the *Hazard Analysis* and *Mitigation Action Plan*.

This report identifies mitigation opportunities and addresses them as work elements to be accomplished. The various work elements contained in the report constitute the actions necessary to reduce risk within the designated impact area. It is recommended that the report be prepared no later than 15 working days following a significant event. The report will also be prepared any time an analysis of risk factors indicates a significant level of risk, or opportunities for mitigation actions are identified. A separate report should be completed for each individual proposed mitigation project.

B. Following is an explanation of the components of the report:

Item

1. Hazard Mitigation Coordinator/Project Officer:

Identify the person responsible for completing the report and serving as the single point of contact concerning the project. This person represents our jurisdiction and works directly with the state project officer to manage and administer this project.

2. Impact Area:

Identify area or areas impacted by incident/disaster- focus on affected area such as a specific sub division, a section of property along a creek or drainage ditch, or a specific structure such as a building or bridge or culvert etc. This could also identify a vulnerable area potentially at risk such as a designated hurricane risk area, floodway, floodplain, dam failure inundation zone, high erosion or subsidence area, vulnerability zone, etc.

3. Hazard Identification:

Identify specific hazard(s) addressed in this report. For example – severe thunderstorms with flooding, wind damage from a tornado, dam failure and downstream flooding, etc.

4. Incident Periods:

Identify time(s) and date(s) of incident/disaster. If report is prepared prior to an incident/disaster, use "Pre-Incident Report" for this entry.

5. Number of Previous Events Involving This Hazard:

Identify the number of events caused by this hazard in the time frame for which records are available. For example, two (2) events in 1986, five (5) events from 1983 to present, etc.

6. Number of Residents at Risk from this Hazard:

Identify the number of people at risk in the above identified impact area, or the specific facility. Focus on information pertaining to the proposed problem and recommended actions -- include information such as number of families, housing units, and special needs population affected by incident, or at risk from a potential incident.

7. Background and Discussion:

Explain the problem and what benefits will be derived once problem is corrected.

Briefly describe what happened, or what could possibly happen, and the real cause of the problem. A flood is a hazard, but what really caused it to flood this sub-division or this part of town, and why was it so bad this time? Perhaps drainage ditches overflowed because excessive vegetation impeded water flow, or flood control gates were rusty and inoperable, or increased run-off from new development has increased the area vulnerable to floods, etc. If possible, identify specific conditions that directly contributed to impact of incident/disaster.

If this is a pre-event situation explain how the problem was identified and why it is important to resolve-explain the problem and how the recommended actions will correct it. If actions are to implement recommendations or findings in a hazard analysis, atlas, or other comprehensive study, identify and discuss the source documents-this will strengthen and reinforce the need to implement your recommend mitigation actions.

8. Hazard Mitigation Team Recommendation:

Work Elements:

This section of the report is a listing of specific step by step actions to be accomplished that will eliminate, or at least reduce the impact of this hazard. This section is essentially an implementation strategy of mitigation actions that will reduce risk and vulnerability levels within this impact area. Each "Work Element" is a numbered separate task that identifies a specific mitigation action along with a discussion of the means to be employed to accomplish the action. The number of work elements (i.e., mitigation

actions) developed for each report will be determined by the HMC and will be based on the nature of the hazard, and the complexity of the recommended solution. Each work element is a proposed task to be accomplished to complete a single project. Each proposed project may have multiple work elements and each proposed project requires a separate team report.

a. Mitigation Action:

Identify specific actions that, if accomplished, will reduce vulnerability and risk in the impact area. Actions should be listed in implementation sequence so they constitute a step by step action plan to achieve mitigation objectives. As an example, you may want to identify the number and value of structures at risk in a particular subdivision; and then apply for environmental and historical preservation clearances; and then develop a land use plan; and then determine availability of grants; and then invite property owners to participate; and then apply for a grant; etc. All of the actions are needed and collectively will provide a way to reduce vulnerabilities and risks. Most mitigation projects consist of a number of interrelated and coordinated mitigation actions accomplished through a step by step process.

b. Lead Agency:

Identify the local agency or organization that is best suited to accomplish this action. In most cases the organizations represented on the HMT will be ideally suited to accomplish specific mitigation actions.

c. Cost of Action:

Indicate what the cost will be to accomplish this action. This amount will, of course, have to be estimated until actual final dollar amounts can be determined.

d. Funding Method:

Indicate how the cost to complete the action will be funded. For example – funds may be provided from existing operating budgets, or from a previously established contingency fund, by voter endorsed bond action, or a cost sharing Federal or State grant, etc. Remember that various funding methods are available and that creative funding techniques may be necessary.

e. Schedule:

Indicate when action will begin, and when action is expected to be completed. Remember that some actions will require only a minimum amount of time, while others may require a long-term continuing effort.