

ANNEX P

HAZARD MITIGATION

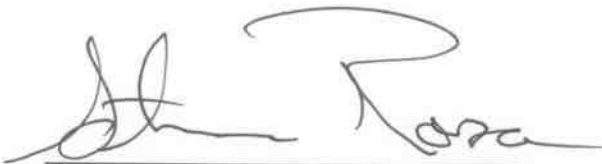
Revision One

Brazoria County
And
Joint Resolution Cities

APPROVAL & IMPLEMENTATION

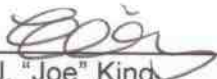
Annex P

Hazard Mitigation Revision One



Steve Rosa
Emergency Management Coordinator
Brazoria County

7-31-2014
Date

| 
E. J. "Joe" King
Brazoria County Judge

7-31-14
Date

RECORD OF CHANGES

Annex P

Hazard Mitigation Revision One

Change #	Date of Change	Entered By	Date Entered

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. Commissioners Court order VI.B.4.c on September 25, 2012, adopting the Houston-Galveston Area Council Regional Hazard Mitigation Plan - 2011 Update.
- D. Applicable Commissioners Court orders, 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 Brazoria County 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 regional mitigation planning and implementation activities.

III. EXPLANATION OF TERMS

A. Acronyms

AOR	Area of Responsibility
B/C	Benefit/Cost
TDEM	Texas Division of Emergency Management
FMAP	Flood Mitigation Assistance Program
GIS	Geographical Information System
GPS	Global Positioning System
HGAC	Houston – Galveston Area Council
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 (Program)
PDM	Pre-Disaster Mitigation Program
SOP	Standard Operating Procedures
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 and enforcement of safe land use regulations and construction standards are considered as highly appropriate mitigation actions.

Area of Responsibility. The entire area covered by our comprehensive Emergency Management Plan that is: The unincorporated areas of Brazoria County, and the Joint Resolution Cities within the County.

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, as a countywide plan, or on a regional basis (prepared by a Council of Governments, a River Authority, or a coalition of several counties). MAPs must be formally adopted by city ordinance, Commissioners Court order, and/or joint resolution. DMA 2000 (Public Law 106-390) requires jurisdictions to have a FEMA-approved MAP or be signatories to a regional plan not later than November 1, 2004, 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, 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 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. Sectioning 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 that Brazoria County 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. We have suffered incidents, emergencies, and disasters in the past and are still vulnerable and at risk from future similar occurrences.
2. Brazoria County's area of responsibility has been divided into four sectors to facilitate the collection of vulnerability and risk data, and for conducting damage assessment operations.
3. Brazoria County's HMT has been appointed and is operational under the leadership of our Hazard Mitigation Coordinator (HMC).
4. The County's Mitigation Action Plan (MAP) is a regional plan. Our MAP meets state planning standards for mitigation and has been formally adopted by court order, 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 program/ 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 Coordinator (HMC) is responsible for the coordination of all mitigation activities of this jurisdiction. To achieve mitigation objectives, the HMC 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 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. Brazoria County's 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 and members of the HMT will participate in appropriate training and exercises related to their hazard mitigation responsibilities.
8. Consistent with capabilities, the County will utilize the most current information and guidance provided by TDEM to include web-based assistance available via the Internet.

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 next 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. The

