

# APPENDIX D

## Hazard Mitigation Planning Tools

This section contains the following documents:

1. *Data Acquisition and Categorization Matrix*
2. *Identification of Hazards Unique to Individual Jurisdictions*
3. *H-GAC Local Capability Assessment Questionnaire*
4. *H-GAC Capability Assessment Points System*
5. *H-GAC Mitigation Actions Worksheet*
6. *Public Participation Survey for Hazard Mitigation Planning*
7. *H-GAC Capability Assessment Results*
8. *H-GAC Building and Fire Code Information*
9. *H-GAC Floodplain Management Program Information*

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# Data Acquisition and Categorization Matrix

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## Natural Hazards



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## **PURPOSE**

The purpose of this document is to provide a framework to assist the project team with the collection of data needed to conduct a comprehensive risk assessment supporting mitigation planning efforts as required by the Disaster Mitigation Act of 2000.

## **GIS DATA COLLECTION AND CATEGORIZATION**

In order to facilitate field collection and data analysis, the project team has categorized data into five broad categories consistent with criteria found in FEMA loss estimation models. The five data categories are addressed in separate tables provided below. They are as follows:

- Base Data Requirements
- Inventory Data Requirements
  - Building inventory
  - Critical Facilities
  - Lifelines
- Hazard Data Requirements

In each of the three categories, data are described in a tabular format. Below is a complete list of applicable definitions to help the reader understand the need to collect this data.

- Critical: Data required to obtain risk assessment results using HAZUS-MH and other risk assessment models
- Desirable: Use of this data will improve the quality of risk assessment results or are useful for mitigation planning efforts
- Available: Indicates whether the client has or does not have the data in a form that can be readily used in risk assessment models. (A check mark indicates that data is available)
- Source: Refers to source from which data was collected (such as a database, website, agency, or organization)

## **BASE DATA REQUIREMENTS**

This section contains political, environmental, and base data that are important for general planning purposes. These data provide the project team with vital reference information to assess the baseline data and provide the locally derived geospatial data required for conducting a comprehensive risk assessment. It also contains information that can be used to support hazard modeling and loss estimation.

The Political, Environmental, and Base Data Requirements matrix table (Table 1) contains eight sub-groupings and their data source as follows:

- Political Boundary – political boundaries for the state, city, and outlying areas
- Base Map – planimetric data captured and mapped from aerial photography
- Hydrographic – hydrographic information for streams, creeks, watersheds
- Hypsographic – data that refers to elevations of the earth's surface and relief
- Demographic – U.S. census data on population and housing
- Land Use – datasets such as zoning and land use, which are important for obtaining an understanding of existing building characteristics
- Imagery and Scanned Maps – primarily aerial photography as well as some scanned images utilized by previous flood hazard models
- Administrative – primarily boundary data that outline areas as a unique unit for administrative purposes

Political, Environmental, and Base Data Requirements	Critical	Desirable	Available	Specify Format GIS/Tabular/ non-digital	Data Source	General Comments

<b>Political Boundary</b>						
Administrative Boundaries	✓					
County Boundaries	✓					
City Jurisdiction	✓					
State Counties	✓					
<b>Base Map (Planimetric Data)</b>						
Building Footprints/Points		✓				
Parcel and Lot lines		✓				
Landmarks		✓				
<b>Hydrographic</b>						
Rivers, Creeks, Stream Centerlines	✓					
Lakes, Ponds, and Bodies of Water	✓					
Drainage Basins	✓					
<b>Hypsographic</b>						
Contour Lines	✓					
Digital Elevation Model	✓					
<b>Demographic Data</b>						
Census Blocks	✓					
Census Tracts	✓					
<b>Land Use</b>						
Land Use 90,95,2000	✓					
Zoning	✓					
Parks		✓				
<b>Environmental</b>						
Geology		✓				
Soils		✓				
Wetlands		✓				
<b>Imagery</b>						
BW or Color Orthophotos (mosaics)		✓				

# INVENTORY DATA REQUIREMENTS

## INVENTORY DATA REQUIREMENT #1: BUILDING INVENTORY

The general building stock will be classified into seven general occupancy classes that include residential, commercial, and industrial buildings. National databases from HAZUS-MH will be utilized to understand the distribution of the general building stock in each jurisdiction.

National building inventory databases will be utilized to aggregate the number, type, and value per U.S. Census Block. The building classification system will group buildings with similar damage and loss characteristics into a set of pre-defined building classes. Damage and loss prediction models will be developed for each model building type across each hazard.

## INVENTORY DATA REQUIREMENT #2: CRITICAL FACILITIES

Critical Facilities are those public buildings and operations that provide essential services to the community. This section describes the data required to provide damage and loss estimates for each facility.

Critical facilities must be classified by building structure type and other important characteristics in order to determine the expected economic loss and loss of functionality.

The project team will provide the project leader with a list of the needed attributes for each facility.

Critical Facilities	Critical	Desirable	Available	Specify Format GIS/Tabular/ non-digital	Data Source	General Comments
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Critical Facilities						
Medical Care Facilities (hospitals, clinics, and laboratories)	✓					
Nursing Homes (assisted living facilities)	✓					
Schools (elementary, secondary, and university)	✓					
Police and Fire Stations	✓					
Emergency Operation Centers	✓					

### DATA REQUIREMENT #3: LIFELINES

The inventory classification scheme for lifeline systems is broken into two separate systems: (1) transportation and (2) utility systems. Each lifeline system has different damage and loss characteristics. The Lifelines Data Requirements data matrix table describes the data required to provide damage and loss estimates for each of the following systems:

- Transportation systems addressed include highways, railways, light rail, bus, ports, ferries, and airports.
- Lifeline utility systems include potable water, wastewater, oil, natural gas, electric power, and communication systems.

A list of needed attributes for each lifeline will be provided to the project lead for collection. The project team realizes that the collection of these data might be difficult as many utility companies are not willing to share information due to increased security concerns.

Transportation Facilities	Critical	Desirable	Available	Specify Format GIS/Tabular/ non-digital	Data Source	General Comments
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Transportation Facilities						
Highway Systems (roads, bridges, tunnels)	✓					
Railway Systems (facilities, tracks, bridges, tunnels)	✓					
Ports and Harbor Facilities	✓					
Airport Facilities and Runways	✓					
Public Transportation System Facilities	✓					
Light Rail Systems (facilities, tracks, bridges, tunnels)	✓					



Utility Facilities	Critical	Desirable	Available	Specify Format GIS/Tabular/ non-digital	Data Source	General Comments
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Transportation Facilities						
Wastewater Facilities and Pipelines	✓					
Potable Water Facilities and Pipelines	✓					
Natural Gas Facilities and Pipelines	✓					
Crude and Refined Oil Facilities and Pipelines	✓					
Electric Power Facilities and Transmission Lines	✓					
Communication Facilities and Lines	✓					

## HAZARD DATA REQUIREMENTS

This section describes the hazard data that are required for the development of a comprehensive risk assessment. By gathering data for individual hazards, the project team will systematically address the potential impacts associated with each hazard. To conduct the risk assessment effort, two distinct hazard risk assessment methods will be utilized.

The **HAZUS-MH risk assessment methodology** is parametric, in that distinct hazard *parameters* (for example, wind speed) were modeled. This model will be utilized for *hazards that are known to occur in a definable jurisdiction*. For hazards where a spatial component (geographic area extent) could be defined, the number and types of buildings, infrastructure and critical facilities located in a hazard area will be assessed. This methodology will be utilized to estimate losses due to:

- Riverine Flood
- Coastal Flood
- Earthquake
- Hurricane Winds

In addition, a **statistical risk assessment methodology** will be applied to analyze *hazards that could not be determined geographically* or those in which insufficient data exists to display hazard information spatially (on a map). This methodology uses a statistical approach and expert mathematical modeling of risk to predict a hazard's frequency of occurrence and estimate impacts and intensity based on recorded or historic damage data. The hazards that will be assessed using this methodology include:

- Tornado Winds
- Hailstorm
- Severe Winter Storm
- Thunderstorm
- Wildfire
- Drought

Using this approach, the project team will begin immediately processing data. Where data gaps still exist, the project team will work to collect additional information from the appropriate sources and/or utilize proprietary hazard and weather databases. The Hazard Data Requirements data matrix table contains a description of the required data sets for 10 hazards including:

1. Riverine Flood
2. Coastal Flood
3. Earthquake
4. Hurricane Winds
5. Tornado Winds
6. Hailstorm
7. Severe Winter Storm
8. Thunderstorm
9. Wildfire
10. Drought

Flood	Critical	Desirable	Available	Specify Format GIS/Tabular/ non-digital	Data Source	General Comments
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Flood						
100 Yr. Flood Boundary Map	✓					
500 Yr. Flood Boundary Map	✓					
Base Flood Elevation	✓					
Historical Flood Event Information		✓				
Damage Data from Historical Flood Events of the Area		✓				
Repetitive Losses, per municipality		✓				

**Flood Assessment Output**

**Identifying Hazards**

Sources – describe sources of information used to identify the hazards

Data – limitations and method utilized to assess the hazard

Description of Hazard (characteristics)

**Profiling Hazards**

Profile – qualitative description of how the flood hazard can affect the jurisdiction (i.e. greatest potential of damage is residential homes in eastern part of study region)

History – provide table of previous occurrences/damages of flood hazard event in jurisdiction

Hazard Map – depicting geographic extent of flood area (% of land affected by 100-year and 500-year events)

Hazard frequency – describe hazard frequency based on hazard history with jurisdiction

**Assessing Vulnerability** - Provide description of overall impact of hazard

*Identifying Assets:*

Types and numbers of buildings (Res, Com, Ind, Gov, Rel, Edu, and Ag) in hazard area,

Critical Facilities (Physical and Monetary Damage States)

*Estimating Losses:*

Monetary Losses (Res, Com, Ind, Gov, Rel, Edu, and Ag Monetary Losses)

Losses to Contents

Critical Facilities (Physical Damage States, Functionality %)

Damage Profile (recurrence curve)

*Future Losses:*

Provide a flood map with zoning and land use – describe how future growth will affect flood vulnerability

Coastal Flooding	Critical	Desirable	Available	Specify Format GIS/Tabular/ non-digital	Data Source	General Comments

Flood						
Coastal High Hazard Area-VE Zones	✓					
Base Flood Elevation	✓					
Still water elevation (High water marks)		✓				
High water marks from historical events		✓				
Damage Data from Historical Flood Events	✓					
Coastal Erosion		✓				
SLOSH Models	✓					

### Coastal Flood Assessment Output

#### Identifying Hazards

Sources – describe sources of information used to identify the hazards

Data – limitations and method utilized to assess the hazard

Description of Hazard (characteristics of coastal flooding, velocity)

#### Profiling Hazards

Profile – qualitative description of how the flood hazard can affect the jurisdiction (i.e. greatest potential of damage is residential homes in eastern part of study region)

History – provide table of previous occurrences/damages of flood hazard event in jurisdiction

Hazard Map – depicting geographic extent of flood area (% of land affected by storm surge per 100-year, 500-year return period if possible)

Hazard frequency – describe hazard frequency based on hazard history or return period within jurisdiction

#### Assessing Vulnerability - Provide description of overall impact of hazard

##### Identifying Assets:

Types and numbers of buildings (Res, Com, Ind, Gov, Rel, Edu, and Ag),

Critical Facilities (Physical and Monetary Damage States)

##### Estimating Losses:

Monetary Losses (Res, Com, Ind, Gov, Rel, Edu, and Ag Monetary Losses)

Losses to Contents and Time Element

Critical Facilities (Physical Damage States, Functionality %)

Damage Profile (recurrence curve)

##### Future Losses:

Provide a flood map with zoning and land use – describe how flood will affect future growth

Earthquake	Critical	Desirable	Available	Specify Format GIS/Tabular/ non-digital	Data Source	General Comments
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Earthquake						
2003 USGS Probabalistic Hazard Maps	✓					
Catalog of Historical Earthquakes	✓					
Map of Historical Epicenters	✓					

### Earthquake Assessment Output

#### Identifying Hazards

Sources – describe sources of information used to identify the hazards. This should include key earthquake hazard terms (i.e. what is probabilistic hazard map, differences between PGA and SA, etc.)

Data – limitations and method utilized to assess the hazard

Description of Hazard (characteristics of earthquake risk of the study area)

#### Profiling Hazards

Profile – qualitative description of how the earthquakes can affect the jurisdiction (i.e. greatest potential of damage is commercial buildings)

History – provide tabular report of historical earthquakes in region, state, and county (previous occurrences/damages).

Hazard Map – depicting geographic extent of earthquake risk (either epicenters or hazard map depicting PGA or SA intensity) – ideally we would need a susceptibility map depicting hazard intensity throughout study region

Hazard frequency – describe hazard frequency based on hazard history and/or hazard map within the jurisdiction

#### Assessing Vulnerability - Provide description of overall impact of hazard

##### *Identifying Assets:*

Types and numbers of buildings (Res, Com, Ind, Gov, Rel, Edu, and Ag),

Losses to Contents and Time Element

Critical Facilities (Physical and Monetary Damage States)

##### *Estimating Losses:*

Monetary Losses (Res, Com, Ind, Gov, Rel, Edu, and Ag Monetary Losses)

Losses to Contents and Time Element

Critical Facilities (Physical Damage States, Functionality %)

Damage Profile (recurrence curve)

##### *Future Losses:*

Provide a hazard susceptibility map with zoning and land use – or describe how earthquake hazard will affect areas that are designated for future growth.

Wind Hurricane	Critical	Desirable	Available	Specify Format GIS/Tabular/ non-digital	Data Source	General Comments
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Wind (Hurricane)						
NOAA Probabilistic Hazard Maps	✓					
Historical Hurricane Events and Tracks for the Area	✓					

### Wind (Hurricane) Assessment Output

#### Identifying Hazards

- Sources – describe sources of information used to identify the hazards
- Data – limitations and method utilized to assess the hazard
- Description of Hazard (characteristics of wind hazard specific to study area)

#### Profiling Hazards

- Profile – qualitative description of how the wind storms/hurricanes can affect the jurisdiction (i.e. greatest potential of damage is commercial buildings)
- History – provide tabular report of historical hurricanes in state and county (previous occurrences/damages).
- Hazard Map – depicting geographic extent of wind storm risk (hazard map depicting 100-year and 500-year wind intensity) – if there are local characteristics that increase or decrease wind speeds – these should be mapped.
- Hazard frequency – describe hazard frequency based on hazard history and/or hazard map within the jurisdiction

#### Assessing Vulnerability - Provide description of overall impact of hazard

##### *Identifying Assets:*

- Types and numbers of buildings (Res, Com, Ind, Gov, Rel, Edu, and Ag),
- Losses to Contents and Time Element
- Critical Facilities (Physical and Monetary Damage States)

##### *Estimating Losses:*

- Monetary Losses (Res, Com, Ind, Gov, Rel, Edu, and Ag Monetary Losses)
- Losses to Contents and Time Element
- Critical Facilities (Physical Damage States, Functionality %)
- Damage Profile (recurrence curve)

##### Future Losses:

<h1>Tornado</h1>	Critical	Desirable	Available	Specify Format GIS/Tabular/ non-digital	Data Source	General Comments

Tornado						
Historical Tornado Events (#, Date of Occurrence, Location, Type, Damages, \$\$)	✓					
Historical Tornado Track Map		✓				
Description of Historical Damage Data	✓					

### Tornado Assessment Output

#### **Identifying Hazards**

Sources – describe sources of information used to identify the hazards

Data – limitations and method utilized to assess the hazard

Description of Hazard (characteristics of tornados specific to study area)

#### **Profiling Hazards**

Profile – qualitative description of how tornados can affect the jurisdiction

History – provide tabular report of historical tornados in state and county (previous occurrences/damages)

Hazard Map – intensity/frequency grid depicting national data, and historical tornado track map

Hazard frequency – describe hazard frequency based on hazard history

#### **Assessing Vulnerability** - Provide description of overall impact of hazard

##### *Identifying Assets:*

Event intensity profile ( i.e., F1 damage potential)

##### *Estimating Losses:*

Aggregated Monetary Losses ( Res, Com, Ind, Gov, Rel, Edu, and Ag Monetary Losses)

Injury and casualties

Damage Profile (recurrence curve)

##### Future Losses:



<h1>Hail Storm</h1>	Critical	Desirable	Available	Specify Format GIS/Tabular/ non-digital	Data Source	General Comments

Hail Storm						
Historical Hail Events (#, Date of Occurrence, Location, Type = Size, Damages)	✓					

**Hail Storm Assessment Output**

**Identifying Hazards**

- Sources – describe sources of information used to identify the hazards
- Data – limitations and method utilized to assess the hazard
- Description of Hazard (characteristics of hail storms specific to study area)

**Profiling Hazards**

- Profile – qualitative description of how hail storms can affect the jurisdiction
- History – provide tabular report of historical hail in state and county (previous occurrences/damages)
- Hazard Map – intensity/frequency grid depicting national data
- Hazard frequency – describe hazard frequency based on hazard history

**Assessing Vulnerability** - Provide description of overall impact of hazard

*Identifying Assets:*

Event intensity profile (Probability Frequency and Intensity of Different Storms: Hail Size, Duration, and Number of Hails per square foot - comparison of regional Hail Hazard data to National Hail Hazard data)

*Estimating Losses:*

- Aggregated Monetary Losses ( Res, Com, Ind, Gov, Rel, Edu, and Ag Monetary Losses)
- Damage Profile (recurrence curve)

*Future Losses:*

<b>Severe Winter Storm</b>	<b>Critical</b>	<b>Desirable</b>	<b>Available</b>	<b>Specify Format GIS/Tabular/ non-digital</b>	<b>Data Source</b>	<b>General Comments</b>

<b>Severe Winter Storm</b>						
Historical Winter Storms Events (#, Date of Occurrence ,Location, Type = Ice & Snow, and Damages	✓					

**Severe Winter Storm Assessment Output**

**Identifying Hazards**

- Sources – describe sources of information used to identify the hazards
- Data – limitations and method utilized to assess the hazard
- Description of Hazard (characteristics of winter storms specific to study area)

**Profiling Hazards**

- Profile – qualitative description of how winter storms can affect the jurisdiction
- History – provide tabular report of historical winter storms in state and county (previous occurrences/damages)
- Hazard Map – no spatial component to hazard
- Hazard frequency – describe hazard frequency based on hazard history

**Assessing Vulnerability - Provide description of overall impact of hazard**

*Identifying Assets:*

Event intensity profile (Probability Frequency and Intensity of Different Storms -comparison of regional winter storm hazard data to national winter storm data to obtain understanding of intensity )

*Estimating Losses:*

- Aggregated Monetary Losses ( Res, Com, Ind, Gov, Rel, Edu, and Ag Monetary Losses)
- Damage Profile (recurrence curve)

*Future Losses:*

Drought	Critical	Desirable	Available	Specify Format GIS/Tabular/ non-digital	Data Source	General Comments
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Drought						
History of Regional Drought Conditions (Date, \$ Loss, Severity, Duration)	✓					
Crop Typology, Acreage, yield per acre (historical record)		✓				
Palmer Drought Severity Index		✓				
Drought Monitor summary map		✓				

### Drought Assessment Output

#### Identifying Hazards

Sources – describe sources of information used to identify the hazards

Data – limitations and method utilized to assess the hazard

Description of Hazard (characteristics of drought specific to study area – water, agricultural, etc. describe type of drought)

#### Profiling Hazards

Profile – qualitative description of how drought can affect the jurisdiction

History – provide tabular report of drought in state and county (previous occurrences/damages)

Hazard Map – Palmer Drought Severity Index. Drought Monitor summary map

Hazard frequency – describe hazard frequency based on hazard history

#### Assessing Vulnerability - Provide description of overall impact of hazard

##### *Identifying Assets:*

Event intensity profile (Palmer Drought Severity Index)

##### *Estimating Losses:*

Aggregated Monetary Losses ( Res, Com, Ind, Gov, Rel, Edu, and Ag Monetary Losses)

Damage Profile (recurrence curve)

##### *Future Losses:*

<b>Thunder storm</b>	<b>Critical</b>	<b>Desirable</b>	<b>Available</b>	<b>Specify Format GIS/Tabular/ non-digital</b>	<b>Data Source</b>	<b>General Comments</b>

<b>Thunderstorm</b>						
Historical thunderstorms Events (#, Date of Occurrence, and Damages)	✓					

### **Thunderstorm Assessment Output**

#### **Identifying Hazards**

Sources – describe sources of information used to identify the hazards

Data – limitations and method utilized to assess the hazard

Description of Hazard (characteristics of thunderstorms specific to study area)

#### **Profiling Hazards**

Profile – qualitative description of how thunderstorms can affect the jurisdiction

History – provide tabular report of historical thunderstorms in state and county (previous occurrences/damages).

Hazard Map – no spatial component to hazard

Hazard frequency – describe hazard frequency based on hazard history

#### **Assessing Vulnerability** - Provide description of overall impact of hazard

*Identifying Assets:*

Event intensity profile (Probability Frequency and Intensity of thunderstorms)

*Estimating Losses:*

Aggregated Monetary Losses ( Res, Com, Ind, Gov, Rel, Edu, and Ag Monetary Losses)

Damage Profile (recurrence curve)

Future Losses:

Wildfire	Critical	Desirable	Available	Specify Format GIS/Tabular/ non-digital	Data Source	General Comments
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Wildfire						
Historical Wildfire Events (#, Date of Occurrence, Location, Acreage, and Damages)	✓					
Map location of wildfires in state		✓				
Land Cover Map (vegetative, forested lands)		✓				
Fire Monitoring Stations		✓				

### Wildfire Assessment Output

#### Identifying Hazards

Sources – describe sources of information used to identify the hazards

Data – limitations and method utilized to assess the hazard

Description of Hazard (characteristics of wildfires specific to study area given fuel types)

#### Profiling Hazards

Profile – qualitative description of how wildfires can affect the jurisdiction

History – provide tabular report of historical wildfires in state and county (previous occurrences/damages)

Hazard Map – map location of wildfires in state (points or polygons), develop wildfire hazard map - overlay exposure

Hazard frequency – describe hazard frequency based on hazard history

#### Assessing Vulnerability - Provide description of overall impact of hazard

##### *Identifying Assets:*

Event intensity profile (Probability Frequency and Intensity of thunderstorms)

##### *Estimating Losses:*

Aggregated Monetary Losses ( Res, Com, Ind, Gov, Rel, Edu, and Ag Monetary Losses) – if spatial component is defined damages and losses could be shown across general occupancy classes

Damage Profile (recurrence curve)

##### Future Losses:



**Houston-Galveston Area Council  
Multi-jurisdictional Hazard Mitigation Plan**

**Identification of Hazards Unique to Individual Jurisdictions**

Jurisdiction: \_\_\_\_\_

Name: \_\_\_\_\_

Phone Number: \_\_\_\_\_

1. Does your jurisdiction have any unique hazards not addressed in the area-wide hazard identification and risk assessment?

Yes \_\_\_\_\_ No \_\_\_\_\_

**If you answered “yes” to the question above, please continue and answer the following questions.**

2. What is the unique hazard your community faces?

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3. Does this unique hazard have a distinct geographic hazard boundary? If yes, please describe the geographic hazard area.

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4. What are the consequences of this unique hazard to the people and property in your community?

a. How many people are at risk?

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b. Are any special populations potentially at risk?

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c. How much property is at risk and what type of property is at risk ?

i. What are the estimated number of residential structures at risk and a gross estimate of the dollar value of those structures?

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ii. What is the estimated number of commercial structures at risk and a gross estimate of the dollar value of those structures?

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iii. What is the estimated number of key and special facilities at risk and a gross estimate of the dollar value of those key and special facilities?

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iv. What infrastructure and lifelines are at risk from this unique hazard?

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**LOCAL CAPABILITY ASSESSMENT QUESTIONNAIRE**

**I. GENERAL COMMUNITY INFORMATION**

**Please provide the following information separately, preferably on not more than three (3) pages.**

- A.** A narrative description of your community, including its history, distinct personality, culture and geography, along with any unique natural or physical features.
- B.** A brief history of hazards in your community, including the type, date of occurrence and any known impacts.
- C.** A brief description of current or projected development trends in your community.
- D.** A general listing of any on-going or completed hazard mitigation projects within your community.

**II. HAZARD MITIGATION PLANS, POLICIES AND ORDINANCES**

Hazard Mitigation Plan	Yes or No?	Narrative / Explanation
Does your jurisdiction receive Emergency Management Performance Grant Funds?		
Does your community have a Hazard Mitigation Plan? If yes, when was it adopted? When was the plan last amended?		
Does the plan address all natural hazards found in your community, or is it a single-hazard plan? If it addresses a single hazard, what is the hazard?		
Does the plan address human-caused hazards? Human-caused hazards may include technological accidents and acts of terrorism.		



**LOCAL CAPABILITY ASSESSMENT QUESTIONNAIRE**

<p>Do you believe the plan would meet the requirements established by the Disaster Mitigation Act of 2000? If no, what elements do not meet the new standards?</p>		
<p>Has the plan proven to be an effective measure for reducing hazard impacts? Please provide an approximate measure of its effectiveness to date (HIGH, MODERATE or LOW) and briefly explain.</p>		
<p>Does your community have an established Hazard Mitigation Committee? If so, please provide us with a listing specific outcomes, including plans or projects identified and implemented through the committee.</p>		
<p align="center"><b>Disaster Recovery Plan</b></p>	<p align="center"><b>Yes or No?</b></p>	<p align="center"><b>Narrative / Explanation</b></p>
<p>Does your community have a Disaster Recovery Plan? If yes, when was it adopted? When was the plan last amended?</p>		
<p>Does the plan address all natural hazards found in your community, or is it a single-hazard plan? If the plan addresses a single hazard, what is the hazard?</p>		
<p>Does the plan address human-caused hazards?</p>		

**LOCAL CAPABILITY ASSESSMENT QUESTIONNAIRE**

<p>Has the plan proven to be an effective measure for reducing hazard impacts? Please provide an approximate measure of its effectiveness to date (HIGH, MODERATE or LOW) and briefly explain.</p>		
<p align="center"><b>Coastal Zone Management Plan</b></p>	<p align="center"><b>Yes or No?</b></p>	<p align="center"><b>Narrative / Explanation</b></p>
<p>Does your jurisdiction have a Coastal Zone Management Plan? If yes, when was it adopted? When was the plan last amended?</p>		
<p>Does the plan address natural hazards, including ways to reduce their impact?</p>		
<p>Has the plan proven to be an effective measure for reducing hazard impacts? Please provide an approximate measure of its effectiveness to date (HIGH, MODERATE or LOW) and briefly explain.</p>		
<p align="center"><b>Comprehensive Plan</b></p>	<p align="center"><b>Yes or No?</b></p>	<p align="center"><b>Narrative / Explanation</b></p>
<p>Does your community have a comprehensive or master plan? If so, does the plan address natural and human-caused hazards? Please briefly explain.</p>		
<p>Has the plan proven to be an effective measure for reducing hazard impacts? Please provide an approximate measure of its effectiveness to date (HIGH, MODERATE or LOW) and briefly explain.</p>		
<p align="center"><b>Floodplain Management Plan</b></p>	<p align="center"><b>Yes or No?</b></p>	<p align="center"><b>Narrative / Explanation</b></p>

**LOCAL CAPABILITY ASSESSMENT QUESTIONNAIRE**

<p>Does your community have a floodplain management / flood mitigation plan? If yes, when was the plan adopted? When was the plan last amended?</p>		
<p>Does the plan contain provisions for relocating, elevating or acquiring structures currently located in the floodplain?</p>		
<p>Does the plan include structural measures such as rebuilding or retrofitting flood-prone structures?</p>		
<p>Are specific properties identified and targeted for future flood mitigation projects?</p>		
<p>Does the plan include reference to the "No Adverse Impact" strategy developed by the Association of State Floodplain Managers?</p>		
<p>Are there adequate building sites located outside the floodplain to satisfy development pressures?</p>		
<p>Does the plan include measures to preserve the floodplain's natural functions?</p>		

**LOCAL CAPABILITY ASSESSMENT QUESTIONNAIRE**

<p>Are floodplain management activities conducted in conjunction with neighboring communities or through a regional governing body?</p>		
<p>Are developers informed of the floodplain management regulations before they subdivide land in the floodplain?</p>		
<p>Does the plan address the location of mobile home parks in the floodplain?</p>		
<p>Has the plan proven to be an effective measure for reducing hazard impacts? Please provide an approximate measure of its effectiveness to date (HIGH, MODERATE or LOW) and briefly explain.</p>		
<p align="center"><b>Stormwater Management Plan</b></p>	<p align="center"><b>Yes or No?</b></p>	<p align="center"><b>Narrative / Explanation</b></p>
<p>Does your community have a stormwater management plan? If yes, when was the plan adopted? When was the plan last amended?</p>		
<p>Is there a regular maintenance schedule for checking and clearing storm water drains and drainage systems and removing debris from streams and watercourses?</p>		

**LOCAL CAPABILITY ASSESSMENT QUESTIONNAIRE**

<p>Are existing culverts and other drainage devices sized properly for the amount of water they must carry during peak discharges?</p>		
<p>Are future planned systems adequately designed to meet storm water drainage demands of the community, factoring in increased development that may increase storm water runoff?</p>		
<p>Does the plan call for the provision of structural measures such as retention and detention facilities that minimize the increases in runoff caused by impervious surfaces and new development?</p>		
<p>Are there restrictions on the amount of impervious surfaces?</p>		
<p>Does your community have a storm water management fee? If yes, what are the generated funds used for?</p>		
<p>Has the plan proven to be an effective measure for reducing hazard impacts? Please provide an approximate measure of its effectiveness to date (HIGH, MODERATE or LOW) and briefly explain.</p>		
<p align="center"><b>Emergency Operations Plan</b></p>	<p align="center"><b>Yes or No?</b></p>	<p align="center"><b>Narrative / Explanation</b></p>

**LOCAL CAPABILITY ASSESSMENT QUESTIONNAIRE**

<p>Does your community have an Emergency Operations Plan? If yes, when was it adopted? When was the plan last amended?</p>		
<p>Does the plan address natural and human-caused hazards?</p>		
<p align="center"><b>Continuity of Operations Plan</b></p>	<p align="center"><b>Yes or No?</b></p>	<p align="center"><b>Narrative / Explanation</b></p>
<p>Does your community have a Continuity of Operations Plan? If yes, when was it adopted? When was the plan last amended?</p>		
<p>Does the plan address natural and human-caused hazards?</p>		

**LOCAL CAPABILITY ASSESSMENT QUESTIONNAIRE**

<b>Radiological Emergency Plan?</b>	<b>Yes or No?</b>	<b>Narrative / Explanation</b>
Does your community have a Radiological Emergency Plan? If yes, when was it adopted? When was the plan last amended?		
<b>SARA Title III / Hazardous Material Facility Emergency Response Plan</b>	<b>Yes or No?</b>	<b>Narrative / Explanation</b>
Does your community have a Hazardous Material Facility Emergency Response Plan? If yes, when was it adopted? When was the plan last amended?		
Does your community actively participate in a Local Emergency Planning Commission (LEPC)?		
<b>Transportation Plan</b>	<b>Yes or No?</b>	<b>Narrative / Explanation</b>
Does your community have a Transportation Plan? If yes, when was it adopted? When was the plan last amended?		
Does your community consider identified hazards when planning for future roads and bridges?		
Do roads, bridges, or undersized culverts impede water flow regularly in your community?		

**LOCAL CAPABILITY ASSESSMENT QUESTIONNAIRE**

Does your community have a plan for an emergency evacuation?		
Are roads designed for adequate evacuation capacity?		
<b>Capital Improvements Plan</b>	<b>Yes or No?</b>	<b>Narrative / Explanation</b>
Does the Capital Improvements Plan restrict the provision or extension of infrastructure into hazard areas?		
Are there site standards requiring the location of critical public facilities outside of hazard areas?		
Are there construction requirements for critical facilities located in hazard areas to ensure they remain operational during and after a hazard event?		



**LOCAL CAPABILITY ASSESSMENT QUESTIONNAIRE**

<b>Regional Planning</b>	<b>Yes or No?</b>	<b>Narrative / Explanation</b>
Does your community participate in regional planning decisions? If yes, please explain.		
<b>Historic Preservation Plan</b>	<b>Yes or No?</b>	<b>Narrative / Explanation</b>
Does your community have a Historic Preservation Plan? If yes, when was it adopted? When was the plan last amended?		
Does the plan address the protection of historic buildings and sites from natural hazards?		
<b>Zoning Ordinance</b>	<b>Yes or No?</b>	<b>Narrative / Explanation</b>
Does your community have a Zoning Ordinance? If yes, when was it adopted?		
Does the ordinance restrict the type/density of development in identified hazard areas? If so, please briefly explain.		
Do non-conforming use provisions of the zoning ordinance take into account structures that are damaged by hazards?		

**LOCAL CAPABILITY ASSESSMENT QUESTIONNAIRE**

<p>Are any non-conforming use or substantial damage provisions strictly enforced following a disaster?</p>		
<p>Does your community maintain adequate technical and field inspection staff for proper administration and enforcement of the zoning ordinance?</p>		
<p>Has the ordinance proven to be an effective measure for reducing hazard impacts? Please provide an approximate measure of its effectiveness to date (HIGH, MODERATE or LOW) and briefly explain.</p>		
<p align="center"><b>Subdivision Ordinance</b></p>	<p align="center"><b>Yes or No?</b></p>	<p align="center"><b>Narrative / Explanation</b></p>
<p>Does your community have a Subdivision Ordinance? If yes, when was it adopted?</p>		
<p>Does the ordinance place restrictions on the subdivision of land in known hazard areas?</p>		
<p>Must all lots have a buildable site that is outside of delineated hazard zones?</p>		

**LOCAL CAPABILITY ASSESSMENT QUESTIONNAIRE**

Does the ordinance establish setback requirements from delineated hazard zones?		
Are there provisions for the protection or creation of natural areas, such as wetlands, dunes or natural vegetation as a condition of subdivision approval?		
Has the ordinance proven to be an effective measure for reducing hazard impacts? Please provide an approximate measure of its effectiveness to date (HIGH, MODERATE or LOW) and briefly explain.		
<b>Flood Damage/Management Ordinance</b>	<b>Yes or No?</b>	<b>Narrative / Explanation</b>
Does your community have a Flood Damage Prevention Ordinance? If yes, when was it adopted?		
Please provide a description of the current inspection and permitting processes for floodplain management?		
Does your Floodplain management team have an administrator?, If so, How many staff members?		

**LOCAL CAPABILITY ASSESSMENT QUESTIONNAIRE**

<p>How many flood inspections have been provided in the past twelve months?</p>		
<p>How many variances have been provided in the last twelve months?. Could you please provide list that includes date, address of property, and reasons for allowing the variance?</p>		
<p>Does your ordinance include a freeboard requirement for all new construction in the floodplain? If so, what is the freeboard requirement?</p>		
<p>Does the ordinance include a cumulative substantial damage provision?</p>		
<p>Does the ordinance incorporate any other regulations that exceed National Flood Insurance Program (NFIP) standards? If so, how?</p>		
<p>Has the ordinance proven to be an effective measure for reducing hazard impacts? Please provide an approximate measure of its effectiveness to date (HIGH, MODERATE or LOW) and briefly explain.</p>		
<p align="center"><b>Building Codes, Permitting and Inspections</b></p>	<p align="center"><b>Yes or No?</b></p>	<p align="center"><b>Narrative / Explanation</b></p>

**LOCAL CAPABILITY ASSESSMENT QUESTIONNAIRE**

<p>Has your community adopted a building code? If so, when was it adopted?</p>		
<p>What type of building code was adopted by your jurisdiction? Is it based on: the Uniform Building Code promulgated by the International Conference of Building Officials (ICBO)? or on the National Building Code promulgated by the Building Officials and Code Administrators International (BOCA)? or on the Standard Building Code promulgated by the Southern Building Code Congress, International (SBCCI)? or on the International Building Codes promulgated by the International Code Council (ICC)? Please specify.</p>		
<p>Does your community diligently enforce the building code, both at the plan approval stage and the site-inspection stage?</p>		
<p>Has your building code been amended? If so, what types?</p>		
<p>Please provide a description of the inspection and permitting processes.</p>		
<p>How many inspectors are used in your jurisdiction ? Please specify in terms of the number of full-time equivalent personnel.</p>		

**LOCAL CAPABILITY ASSESSMENT QUESTIONNAIRE**

<p>How many building inspectors are Certified by the ICC/CABO or other certification programs?</p>		
<p>On average, how many years of experience in construction and inspection do your building inspectors have?</p>		
<p>Is your inspections department adequately staffed and trained to enforce the building code?</p>		
<p>Are the same rules and practices applied during routine permitting procedures and following a disaster? If they are different, how do they differ?</p>		
<p>How many building starts were there in your jurisdiction in the last twelve months?</p>		
<p>How many building inspections have been conducted in your jurisdiction in the last twelve months.</p>		
<p>Does your community have a temporary building moratorium to put in place following a disaster to stop or slow reconstruction pending a damage assessment?</p>		

**LOCAL CAPABILITY ASSESSMENT QUESTIONNAIRE**

<b>Building Codes, Permitting and Inspections</b>	<b>Yes or No?</b>	<b>Narrative / Explanation</b>
Does your jurisdiction have a current fire code?		
If yes, when did the fire code go into effect?		
What is the name of your jurisdictions's fire code?		
What is the type of fire code adopted by your jurisdiction? Is it based on the Uniform Fire Code published by the International Fire Code Institute? Or the International Fire Code published by the International Code Council? Or the Standard Fire Code published by the SBCC? or another code? Please specify the code on which it was based.		
Please describe the fire inspection and permitting process.		
How many fire inspectors does your jurisdiction use? Please specify in terms of the number of full-time equivalent inspectors.		

**LOCAL CAPABILITY ASSESSMENT QUESTIONNAIRE**

How many of your fire inspectors are certified?		
How many of your fire inspectors have completed the State Certification course for fire inspectors?		
On average, how many years of experience in fire service or fire inspection do your jurisdiction's fire inspectors have?		
How many fire inspections have been conducted in your jurisdiction in the last twelve months.		

**III. ENVIRONMENTAL PROTECTION MEASURES**

<b>Conservation and Natural Resource Protection</b>	<b>Yes or No?</b>	<b>Narrative / Explanation</b>
Does your community have a riparian or wetlands preservation program? If yes, does the program provide funding for the acquisition and restoration of sensitive habitat areas?		
Do you maintain provisions for protecting natural riparian cover located within a specific distance of a stream or river?		



**LOCAL CAPABILITY ASSESSMENT QUESTIONNAIRE**

<b>Park, Greenways and Open Space</b>	<b>Yes or No?</b>	<b>Narrative / Explanation</b>
Does your community have a program to acquire available land for public recreational use?		
Does your community form partnerships with non-governmental organizations to acquire or otherwise protect hazardous areas? If so, please explain.		
Does your community have an open space or forestry management plan? If so, does the plan address natural hazards (i.e., fire breaks, clearing brush, staging controlled burns, etc.)?		

**IV. BUSINESS AND INDUSTRY MEASURES**

<b>Private Sector Mitigation</b>	<b>Yes or No?</b>	<b>Narrative / Explanation</b>
Has the community established any public-private partnership initiatives to address disaster-related issues? If so, please briefly explain.		
Does the community provide training or outreach efforts aimed at educating businesses to prepare for disaster (i.e., structural mitigation measures, insurance coverage, etc.)?		
Does the community provide training for local businesses to develop continuity plans to prepare for disaster?		

**LOCAL CAPABILITY ASSESSMENT QUESTIONNAIRE**

**V. TECHNICAL, FISCAL, ADMINISTRATIVE AND POLITICAL CAPABILITIES**

Technical Capability	Yes or No?	Narrative / Explanation
Does your community maintain or have access to detailed historical information related to past disasters?		
Does your community maintain or have access to detailed documentation of actions taken to reduce future hazard impacts?		
Does your community maintain a Geographic Information System (GIS)?		
Does your community possess GIS data layers on identified hazards? If so, what type of hazards?		
Does your community use GIS to analyze hazard vulnerability? Please provide the name and contact information for your GIS point of contact.		
Does your community use FEMA's Hazards US (HAZUS) software? If yes, how is it used?		

**LOCAL CAPABILITY ASSESSMENT QUESTIONNAIRE**

Does your community maintain adequately trained staff to manage the GIS?		
How would you classify your community's overall technical capability to implement hazard mitigation strategies (HIGH, MODERATE or LOW).		
<b>Fiscal Capability</b>	<b>Yes or No?</b>	<b>Narrative / Explanation</b>
Does your community dedicate any local funds to address mitigation-related activities? If yes, please describe.		
How would you classify your community's overall fiscal capability to implement hazard mitigation strategies (HIGH, MODERATE or LOW).		
<b>Administrative Capability</b>	<b>Yes or No?</b>	<b>Narrative / Explanation</b>
Are mitigation-related activities assigned to a local department's)? If so, which one(s)?		
Is there a high level of intergovernmental cooperation among local departments? Please describe the potential level of cooperation in the context of mitigation-related programs.		

**LOCAL CAPABILITY ASSESSMENT QUESTIONNAIRE**

<p>Does your jurisdiction participate in a local emergency management mutual aid program? If yes, has the mutual aid program been used to address mitigation or disaster recovery related issues? Please explain.</p>		
<p>How would you classify your community's overall administrative capability to implement hazard mitigation strategies (HIGH, MODERATE or LOW).</p>		
<b>Political Capability</b>	<b>Yes or No?</b>	<b>Narrative / Explanation</b>
<p>Please identify the land area in square miles within your jurisdiction that is to be covered by this Hazard Mitigation Plan. For counties, this will include the unincorporated areas of the county only for which the county has jurisdiction.</p>		<p>_____ square miles</p>
<p>For cities, is your city a "home rule" or "general law" city under the Texas Government Code?</p>		
<p>For cities, what type of governing body do you have? An Alderman, City Manager, Commissioner or other form of Governing Body? If other, please describe.</p>		
<p>Political capability can be generally measured by the degree to which political leadership is willing to enact policies and programs that reduce hazard vulnerabilities in your community, even if met with opposition. Examples may include guiding development away from identified hazard areas or participating in FEMA's <i>Project Impact</i> initiative. Please identify specific examples of these efforts and reference where more documentation can be found.</p>		

**LOCAL CAPABILITY ASSESSMENT QUESTIONNAIRE**

**VI. PARTICIPATION IN GRANT PROGRAMS AND PROJECTS**

<b>Hazard Mitigation Grant Program Funds</b>	<b>Yes or No?</b>	<b>Narrative / Explanation</b>
Has your community received Hazard Mitigation Grant Funds?		
If so, what is the date of the grant?		
Please describe the projects implemented utilizing these funds.		
How would you classify the overall effectiveness of the Hazard Mitigation Grant Program project in your community in terms of its effectiveness in reducing risk? Please provide an approximate measure of its effectiveness to date (HIGH, MODERATE or LOW) and briefly explain.		
<b>Flood Protection Program Planning Funds</b>	<b>Yes or No?</b>	<b>Narrative / Explanation</b>
Has your community received Flood Protection Program Planning Grant Funds?		
If so, what is the date of the grant?		
Please describe the projects implemented utilizing these funds.		
How would you classify the overall effectiveness of the Flood Protection Program Planning funds in your community in terms of its effectiveness in reducing risk? Please provide an approximate measure of its effectiveness to date (HIGH, MODERATE or LOW) and briefly explain.		
<b>U.S. Army Corp of Engineers Projects</b>	<b>Yes or No?</b>	<b>Narrative / Explanation</b>
Has your community received assistance in the form of any U.S. Army Corps of Engineers Projects?		
If so, what is the date and name of the project ?		

**LOCAL CAPABILITY ASSESSMENT QUESTIONNAIRE**

<p>Please provide a brief narrative description of the project.</p>		
<p>How would you classify the overall effectiveness of the U.S. Army Corps of Engineers project in your community in terms of its effectiveness in reducing risk? Please provide an approximate measure of its effectiveness to date (HIGH, MODERATE or LOW) and briefly explain.</p>		

**H-GAC Regional Mitigation Plan – Capability Assessment  
Points System**

**55 points max:**

- 0-14 points = Limited overall capability**
- 15-29 points = Moderate overall capability**
- 30-55 points = High overall capability**

**Yes=3 points No=0 points**

Hazard Mitigation Plan  
Radiological Emergency Plan  
SARA Title III/Hazardous Material Facility Emergency Response Plan  
Participate in CRS Program  
BCEGS Grade of 1 to 5

**Yes=2 points No=0 points**

Emergency Operations Plan  
Comprehensive Plan (that addresses natural hazards)  
Disaster Recovery Plan  
Continuity of Operations Plan  
Regional Planning  
Riparian or Wetlands Preservation Plan  
Stormwater Management Plan  
Participate in NFIP  
Floodplain Management Plan  
BCEGS Grade of 6 to 9

**Yes=1 point No=0 points**

Any of the above plans/programs under County Jurisdiction

**Yes=1 point No=0 points**

Comprehensive Plan (but does not address natural hazards)  
Coastal Zone Management Plan  
Transportation Plan  
Capital Improvements Plan  
Historic Preservation Plan  
Zoning Ordinance  
Subdivision Ordinance  
Adopted building code  
Adopted fire code  
Riparian buffers  
Program to acquire land for public recreational use  
Partnerships with NGOs for acquisition/protection of hazard areas  
Open space or forestry management plan  
Public-Private Partnership Initiatives

**High=2 points Moderate=1 points Low=0 points (Self-ranked by jurisdiction)**

Technical Capability  
Fiscal Capability  
Administrative Capability  
Political Capability

**No points**

Flood Damage Prevention Ordinance (required if participate in NFIP)

***\*\*\*This methodology is based on best available information. If a jurisdiction does not provide information on any of the above items, a point value of zero (0) will be assigned for that item.***



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## Mitigation Actions Worksheets

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### **Disaster Mitigation Act Required Elements**

**201.6(c)(3)(ii):** *The mitigation strategy shall include a section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with particular emphasis on new and existing buildings and infrastructure.*

**201.6(c)(3)(iii):** *The mitigation strategy shall include an action plan describing how the actions identified in paragraph (c)(2)(ii) of this section will be prioritized, implemented, and administered by the local jurisdiction. Prioritization shall include a special emphasis on the extent to which benefits are maximized according to a cost benefit review of the proposed projects and their associated costs.*

**201.6(c)(3)(iv):** *For multi-jurisdictional plans, there must be identifiable action items specific to the jurisdiction requesting FEMA approval or credit of the plan.*

This Mitigation Actions Worksheet should be used to identify potential Hazard Mitigation Actions that your community will consider to reduce the effect of natural hazards. This tool provides a simple way of organizing potential actions so that they are reader friendly and easily incorporated into the Mitigation Action Plan.

The worksheets are part of a strategic planning process and are designed to either

- a.) be filled out and returned at the meeting; or
- b.) be taken back to your community for consideration (for review before local Hazard Mitigation Advisory Groups, City Boards, etc) and then returned.

If you choose to take the worksheet home, **please return them no later than [date]**. Please return your community's mitigation work elements to:

Address to be determined:

Each action should be considered to be a separate project/program. By identifying project/policy requirements, the Mitigation Action Plan will help lay the framework for participating communities to engage in distinct actions that will reduce their vulnerability and risk. Below find an example of the Mitigation Action matrix followed by a brief explanation of its components.



Mitigation Action	
Community Name:	
Action Item (describe):	
Category:	
Hazard(s):	
Lead Agency/Department Responsible:	
Estimated Cost:	
Funding Method:	
Implementation Schedule:	
Priority:	

- a. Community Name: Be sure to identify your community's name.
- b. Action Item: Identify specific actions that, if accomplished, will reduce vulnerability and risk in the impact area. Actions should match mitigation goals and objectives.
- c. Category: Please indicate the most appropriate category for the proposed action (Prevention; Property Protection; Natural Resource Protection; Structural Projects; Emergency Services; or Public Education and Awareness).
- d. Hazard(s): The hazard(s) the action attempts to mitigate against.
- e. Lead Agency/ Department Responsible: Identify the local agency, department or organization that is best suited to accomplish this action.
- f. Estimated Cost: If applicable, 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.
- g. Funding Method: If applicable, 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, or a cost sharing Federal or State grant, etc.
- h. Implementation Schedule: Indicate when the action will begin, and when the 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 effort.
- i. Priority: Indicate whether the action is a 1) High priority – short term immediate; 2) Moderate priority – an action that should be implemented in the near future; 3) Low priority – an action that should be implemented over the long term. Prioritization should be based on the following:
  1. Effect on overall risk to life and property.
  2. Ease of implementation.
  3. Political and community support.
  4. Funding availability.

**The following page is to be used to identify Mitigation Actions for your community. Please make copies of the Mitigation Actions Worksheet and fill out a separate worksheet per action.**

# MITIGATION ACTION WORKSHEET

Mitigation Action	
<b>Community Name:</b>	
<b>Action Item (describe):</b>	
<b>Category:</b>	
<b>Hazard(s):</b>	
<b>Lead Agency/Department Responsible:</b>	
<b>Estimated Cost:</b>	
<b>Funding Method:</b>	
<b>Implementation Schedule:</b>	
<b>Priority:</b>	

**PUBLIC PARTICIPATION SURVEY  
FOR  
HAZARD MITIGATION PLANNING**

We need your help!

The Houston-Galveston Area Council (H-GAC) is currently engaged in a regional planning process to become less vulnerable to disasters, and your participation is important to us!

More than 75 local governments in an eight-county area (including Austin, Brazoria, Chambers, Galveston, Liberty, Montgomery, Walker and Waller counties) are working together with H-GAC to prepare a *Regional Hazard Mitigation Plan*. The purpose of this Plan is to identify and assess our region's disaster risks and determine how to best minimize or manage those risks. Upon completion, the Plan will be presented to each local governing body for adoption and then submitted to the Texas Division of Emergency Management and the Federal Emergency Management Agency for review and approval.

This survey questionnaire provides an opportunity for you to share your opinions and participate in the mitigation planning process. The information you provide will help us better understand your hazard concerns and can lead to activities that should help lessen the impact of future hazard events.

Please help us by completing this survey and returning it to:

**Christy Durham, Senior Environmental Planner  
Houston-Galveston Area Council  
P.O. Box 22777  
Houston, TX 77227-2777**

**Surveys can also be faxed to: (713) 993-4503**

If you have any questions regarding this survey please contact Christy Durham at (713) 993-4589 or by e-mail at [cdurham@h-gac.com](mailto:cdurham@h-gac.com). If you would like to learn more about the development of the Regional Hazard Mitigation Plan please visit our website at [www.h-gac.com](http://www.h-gac.com).

**1. What city/county do you live in?** \_\_\_\_\_

**2. Have you ever experienced or been impacted by a disaster?**

- Yes (please explain): \_\_\_\_\_  
 No

**3. How concerned are you about the possibility of our community being impacted by a disaster?**

- Extremely concerned  
 Somewhat concerned  
 Not concerned

**4. Please select the hazard you think is the *highest threat* to your neighborhood:**

- Dam Failure
- Drought
- Earthquake
- Erosion
- Extreme Heat
- Flood
- Hail
- Hazardous Materials
- Hurricane
- Land Subsidence
- Landslide
- Lightning
- Major Urban Fire
- Pipeline Failure
- Severe Winter Storm
- Terrorism
- Tornado / Wind Storm
- Wildland Fire
- Other (please explain): \_\_\_\_\_

**5. Please select the hazard you think is the *second highest threat* to your neighborhood:**

- Dam Failure
- Drought
- Earthquake
- Erosion
- Extreme Heat
- Flood
- Hail
- Hazardous Materials
- Hurricane
- Land Subsidence
- Landslide
- Lightning
- Major Urban Fire
- Pipeline Failure
- Severe Winter Storm
- Terrorism
- Tornado / Wind Storm
- Wildland Fire
- Other (please explain): \_\_\_\_\_

**6. Is there another hazard not listed in this survey that you think is a wide-scale threat to your neighborhood?**

- Yes (please explain): \_\_\_\_\_
- No

**7. Is your home located in a floodplain?**

- Yes
- No
- I don't know

**8. Do you have flood insurance?**

- Yes
- No
- I don't know

**a. If "No", why not?**

- Not located in floodplain
- Too expensive
- Not necessary because it never floods
- Not necessary because I'm elevated or otherwise protected
- Never really considered it
- Other (please explain): \_\_\_\_\_

**9. Have you taken any actions to make your home or neighborhood more resistant to hazards?**

- Yes
- No

**a. If "Yes", please explain:**

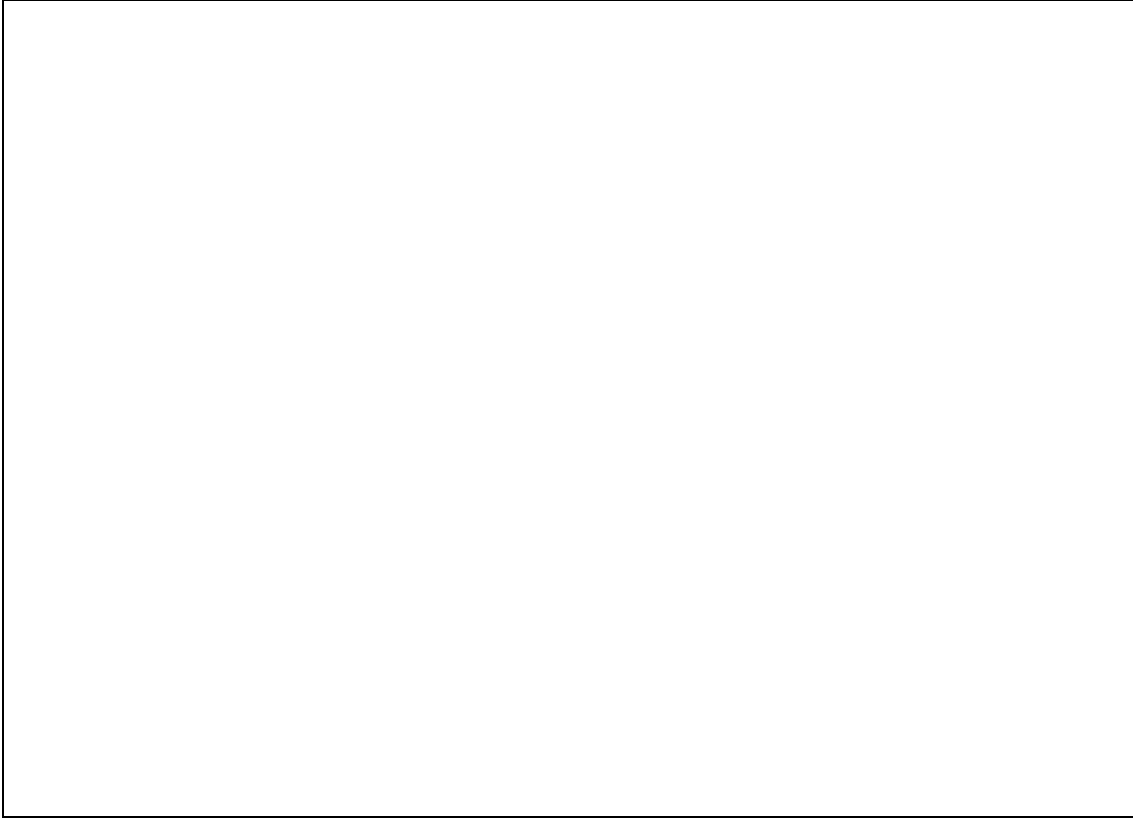
**10. Are you interested in making your home or neighborhood more resistant to hazards?**

- Yes
- No

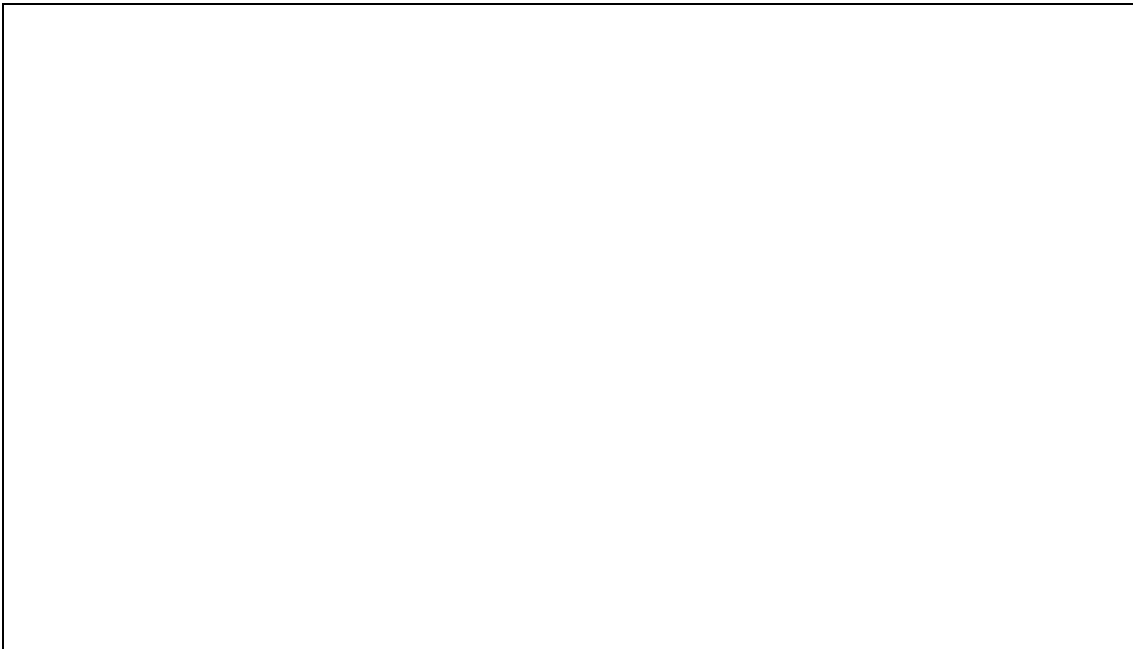
**11. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?**

- Newspaper
- Television
- Radio
- Internet
- Mail
- Public workshops/meetings
- Other (please explain): \_\_\_\_\_

**12. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?**



**13. Are there any other issues regarding the reduction of risk and loss associated with hazards or disasters in the community that you think are important?**



**14. A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. Please tell us how important you think each one is for your community to consider pursuing.**

Category	Very Important	Somewhat Important	Not Important
<p><b><u>1. Prevention</u></b>            Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p><b><u>2. Property Protection</u></b>            Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area. Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p><b><u>3. Natural Resource Protection</u></b>            Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p><b><u>4. Structural Projects</u></b>            Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard. Examples include dams, levees, seawalls, detention/retention basins, channel modification, retaining walls and storm sewers.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p><b><u>5. Emergency Services</u></b>            Actions that protect people and property during and immediately after a hazard event. Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p><b><u>6. Public Education and Awareness</u></b>            Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property. Examples include outreach projects, school education programs, library materials and demonstration events.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**THANK YOU FOR YOUR PARTICIPATION!**



## H-GAC Public Participation Survey 93 respondents as of October 9, 2003

### 1. What city/county do you live in?

*County percentages are sometimes greater than the total for the cities in those counties, as some respondents only listed their county.*

**Austin County:** 19.4%  
Cities: Bellville: 9.7%  
Bleiblerville: 1.1%  
Sealy: 3.2%

**Brazoria County:** 1.1%  
Cities: Brazoria: 1.1%

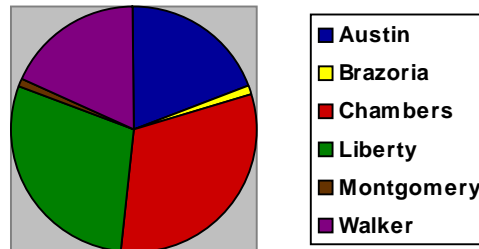
**Chambers County:** 31.2%  
Cities: Anahuac: 11.8%  
Baytown (Cove): 2.2%  
Hankamer: 4.3%  
Stowell: 2.2%  
Winnie: 5.4%

**Liberty County:** 29%  
Cities: Cleveland: 2.2%  
Cypress Lakes: 1.1%  
Daisetta: 1.1%  
Dayton: 6.5%  
Hardin: 1.1%  
Romayor: 1.1%  
Rye: 2.2%

**Montgomery County:** 1.1%  
Cities: Willis: 1.1%

**Walker County:** 18.3%  
Cities: Huntsville: 7.5%  
New Waverly: 4.3%  
Richards: 1.1%

Participating Counties





**2. Have you ever experienced or been impacted by a disaster?**

Yes: 50.5%

No: 49.5%

**2a. If “yes”, please explain?**

*Exact explanations are located on the Excel spreadsheet, “hgac.” The following are grouped by subject. Percentages equal more than 100% as most respondents listed more than one hazard occurrence.*

Drought: 2.1%

Earthquake: 2.1%

Fire: 8.5%

Flood: 38.3%

Hazardous Materials: 6.4%

Hurricane: 46.8%

Lightning: 2.1%

Major Highway Accident: 2.1%

Pipeline: 6.4%

Tornado/Wind Storm: 25.5%

Thunderstorm: 8.5%

**3. How concerned are you about the possibility of our community being impacted by a disaster?**

Extremely concerned: 31.2%

Somewhat concerned: 60.2%

Not concerned: 8.6%

**4. Please select the hazard you think is the *highest threat* to your neighborhood:**

Dam Failure: 1.1%

Drought: 6.5%

Erosion: 1.1%

Extreme Heat: 7.5%

Flood: 20.4%

Hazardous Materials: 9.7%

Hurricane: 33.3%

Land Subsidence: 1.1%

Lightning: 1.1%

Major Urban Fire: 3.2%

Terrorism: 1.1%

Tornado/Wind Storm: 10.8%

Other: 1.1%

**4a. If “other”, please explain:**

- The inability of city, county, & state law officers within Austin County to move traffic.

**5. Please select the hazard you think is the *second highest threat* to your neighborhood:**

Drought: 10.8%  
Extreme Heat: 5.4%  
Flood: 19.4%  
Hail: 4.3%  
Hazardous Materials: 5.4%  
Hurricane: 16.1%  
Lightning: 2.2%  
Pipeline Failure: 5.4%  
Sever Winter Storm: 1.1%  
Terrorism: 2.2%  
Tornado/Wind Storm: 18.3%  
Wildland Fire: 4.3%  
Other: 1.1%

**5a. If “other”, please explain:**

- Flooding due to poor drainage following heavy rain.
- None

**6. Is there another hazard not listed in this survey that you think is a wide-scale threat to your neighborhood?**

Yes: 16.9%  
No: 83.1%

**6a. If “yes”, please explain:**

*As in question 2a, comments are broadly categorized. Exact responses are found in “hgac.xls”*

Environmental Degradation: 7.1%  
Hazardous Materials: 14.2%  
Pests/Disease: 21.4%  
Propane Storage: 7.1%  
Transportation: 28.6%  
Water funnel off Bay: 7.1%  
Wildland Fire: 7.1%

**7. Is your home located on a floodplain?**

Yes: 14%  
No: 67.7%  
I don't know: 17.2%

**8. Do you have flood insurance?**

Yes: 24.7%

No: 65.6%

I don't know: 8.6%

**8a. If "no", why not?**

Not located in floodplain: 36.1%

Too expensive: 8.2%

Not necessary because it never floods: 4.9%

Not necessary because I'm elevated or otherwise protected: 31.1%

Never really considered it: 0%

Other: 4.9%

**8b. If "other", please explain:**

- Live on very very high hill
- Rent the house
- Windstorm Insurance

**9. Have you taken any actions to make your home or neighborhood more resistant to hazards?**

Yes: 27%

No: 73%

**9a. If "yes", please explain:**

*As in questions 2a and 6a, comments are broadly categorized. Exact responses are found in "hgac.xls"*

Elevated home/structure: 16.7%

Filled with dirt: 12.5%

Cleared/cleaned home, neighborhood: 16.7%

Removed fire hazards: 12.5%

Joined organization or involved community: 16.7%

Strengthened home/structure: 20.8%

**10. Are you interested in making your home or neighborhood more resistant to hazards?**

Yes: 87.8%

No: 12.2%

**11. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?**

*Percentages equal more than 100% as most respondents selected more than one medium.*

Newspaper: 45.7%  
Television: 44.6%  
Radio: 21.7%  
Internet: 10.9%  
Mail: 37%  
Public workshops/meetings: 15.2%  
Other: 4.3%

**11a. If “other”, please explain.**

- County officials to do their job and stop lying
- Hwy 321 V.F.D.
- Liberty – Thicket Magazine – monthly publication
- Not applicable

**12. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?**

*Exact responses located in “hgac.xls” The following were categorized based on those responses, unless marked by a bulleted point. May add to over 100% as some respondents listed many suggestions.*

Enforce laws/establish policies: 4.5%  
Public education and awareness: 34.8%  
Traffic/Evacuation procedures: 9.1%  
Better drainage/drainage structures/clean ditches more often: 33.3%  
Hazardous Material, truck routes more closely monitored: 7.6%  
Better training for police, fire, EMS personnel: 4.5%  
Insurance Rates: 3%

- Build a levee
- Fund emergency services! Sensible burn bans.
- Hire more deputies
- Good road improvement
- Water wells in event of drought
- Promote land and home ownership
- Provide facilities open to victims of disaster
- Restrict development in flood plain

**13. Are there any other issues regarding the reduction of risk and loss associated with hazards or disasters in the community that you think are important?**

*Exact responses located in "hgac.xls" The following were categorized based on those responses, unless marked by a bulleted point.*

Public education and awareness: 15.8%

Increased EMS: 15.8%

Better funding/money: 15.8%

Better training for police, fire, EMS personnel: 15.8%

- Safe evacuation route during a disaster
- Need more protective walkways in and around city.
- Keep slow burning the forest.
- Have the prisoners clean the ditches, let them pay for their keep

**14. A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. Please tell us how important each one is for your community to consider pursuing.**

**14.1 Prevention**

Very Important: 71.4%

Somewhat Important: 25.3%

Not Important: 3.3%

**14.2 Property Protection**

Very Important: 42.2%

Somewhat Important: 51.1%

Not Important: 6.7%

**14.3 Natural Resource Protection**

Very Important: 58.6%

Somewhat Important: 35.6%

Not Important: 5.7%

**14.4 Structural Projects**

Very Important: 51.8%

Somewhat Important: 36.5%

Not Important: 11.8%

**14.5 Emergency Services**

Very Important: 86.7%

Somewhat Important: 12.2%

Not Important: 1.1%

**14.6 Public Education and Awareness**

Very Important: 82.2%

Somewhat Important: 16.7%

Not Important: 1.1

**CAPABILITY ASSESSMENT FINDINGS**  
**H-GAC Regional Mitigation Plan**

	Survey	GCI	NFIP	CRS	BCEGS	HMP	DRP	CZMP	CLUP	FMP	SMP	EOP	COOP	REP	SARA	TRANS	CIP	REG-PL	HPP	ZO	SO	FDPO	BC	FC	RIP/WET	BUFF	ACQUIS	NGOs	OS/FOR	PUB/PRI	RAW SCORE	TECH	FISC	ADMIN	POLI	FINAL SCORE	2000 Population	
1	<b>Austin County</b>	1	1	2	0	0	3	2	0	0	2	0	2	2	3	3	1	0	2	0	0	1	Y	0	0	0	0	0	1	0	1	25	0	0	0	2	27	23,590
2	City of Bellville	1	1	2	0	2	1	0	0	0	1	2	1	1	1	1	1	0	2	0	0	1	Y	1	1	0	0	1	0	0	19	1	2	2	1	25	3,794	
3	City of Brazos Country	1	1	2	0	0	3	1	0	0	2	0	1	1	1	1	1	0	2	0	0	0	Y	0	0	0	0	0	0	1	16	0	0	0	1	17	442	
4	City of Industry	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	304
5	Town of San Felipe	1	1	2	0	0	1	2	0	0	1	0	1	1	1	1	1	0	2	0	0	0	N	1	0	2	0	0	0	1	17	0	0	0	1	18	868	
6	City of Sealy	1		2	0	3	3	1	0	1	2	2	1	1	1	1	1	2	0	0	1	Y	1	1	0	0	0	0	0	1	26	0	0	0	0	26	5,248	
7	City of Wallis	1	1	2	0	0	1	1	0	0	2	0	1	1	1	1	1	0	2	0	0	1	Y	1	0	0	0	0	1	0	1	17	0	0	0	0	17	1,172
8	<b>Brazoria County</b>	1	1	2	0	0	0	2	1	0	2	0	2	2	3	3	1	0	0	0	0	1	Y	0	1	2	0	1	0	0	1	24	1	1	1	0	27	241,767
4	City of Alvin	1	1	2	0	0	0	2	0	2	2	0	2	2	3	3	1	0	2	0	0	1	Y	1	1	0	0	0	0	0	26	1	1	2	0	30		
9	City of Angleton			2	0	3																								5					5	18,130		
10	City of Bailey's Prairie			2	0	0																								2					2	694		
11	City of Bonney			2	0	0																								2					2	384		
12	City of Brazoria	1	1	2	0	2	0	0	0	1	2	0	0	0	0	0	0	2	0	0	1	Y	1	0	0	0	0	1	0	0	12	0	0	1	1	14	2,787	
13	City of Brookside Village	1		2	0	0	0	2	1	2	2	2	2	0	0	0	0	1	2	0	1	1	Y	1	1	0	0	0	0	0	20	0	1	1	1	23	1,960	
14	City of Clute			2	0	3																								5					5	10,424		
15	City of Danbury			2	0	0																								2					2	1,611		
16	City of Freeport	1	1	2	0	2	0	1	0	0	2	0	1	1	3	3	0	0	2	0	1	1	Y	1	1	0	0	0	1	0	1	23	1	2	2	1	29	12,708
17	City of Hillcrest Village			2	0	0																								2					2	722		
18	City of Holiday Lakes	1	1	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	N	0	0	0	0	0	0	0	5	0	0	0	0	5	1,095		
19	City of Iowa Colony	1		2	0	0	0	0	0	1	2	0	2	0	1	0	0	1	0	0	1	N	1	0	0	0	0	0	0	12	0	0	0	0	12	804		
20	City of Jones Creek			2	0	0																								2					2	2,130		
21	City of Lake Jackson	1		2	0	2	0	1	1	2	2	2	1	1	1	1	1	1	1	0	1	1	N	1	1	0	0	1	1	0	1	26	2	1	1	1	31	26,386
22	City of Liverpool			2	0	0																								2					2	404		
23	City of Manvel	1	1	2	0	0	0	2		2		2	2				1	2		1	1	N	1	1	2	1	1	1	1	24	0	0	2	2	28	3,046		
24	City of Oyster Creek	1	1	2	0	0	1	0	0	0	0	0	1	1	0	1	0	0	2	0	1	1	Y	1	0	0	0	0	0	0	11	0	0	0	0	11	1,192	
25	City of Quintana	1		2	0	0	0	2	1	0	1	0	1	0	0	1	0	0	0	0	1	1	Y	1	1	2	0	0	0	0	14	2	0	0	1	17	38	
26	City of Richwood	1		2	0	0	0	0	0	2	2	0	1	0	1	1	0	0	0	0	1	1	Y	1	0	0	0	0	0	0	12	2	2	2	0	18	3,012	
27	Vilage of Surfside Beach	1		2	0	0	0	2	1	2	2	0	1	0	1	1	0	1	0	0	1	1	Y	1	0	0	1	1	1	0	1	20	0	0	0	0	20	763
28	City of Sweeny	1		2	0	0	0	2	0	0	2	0	2	0	3	3	0	0	0	0	0	1	Y	1	0	0	0	0	0	0	16	0	1	2	2	21	3,624	
29	<b>Chambers County</b>	1		2	0	0	0	0	1	0	2	0	2	2	3	3	0	0	2	0	0	1	Y	0	0	0	0	0	0	0	18	0	0	0	0	18	26,031	
30	City of Anahuac	1		2	0	0	0	0	1	0	2	0	2	2	3	3	0	0	2	0	0	1	Y	0	0	0	0	0	0	0	18	0	0	0	0	18	2,210	
31	City of Beach City	1		2	0	0	0	0	1	0	2	0	2	2	3	3	0	0	2	0	0	1	Y	0	0	0	0	0	0	0	18	0	0	0	0	18	1,645	
32	City of Cove	1		0	0	0	0	0	1	0	2	0	2	2	3	3	0	0	2	0	0	1	Y	0	0	0	0	0	0	0	16	0	0	0	0	16	323	
33	City of Old River-Winfree	1		2	0	0	0	0	1	0	2	0	2	2	3	3	0	0	2	0	0	1	Y	0	0	0	0	0	0	0	18	0	0	0	0	18	1,364	
34	City of Mont Belvieu	1		2	0	2	0	0	1	0	2	0	2	2	3	3	0	0	2	0	0	1	Y	0	1	0	0	0	0	0	21	0	0	0	0	21	2,324	
35	<b>Liberty County</b>	1	1	2	0	0	0	0	0	2	2	2	2	0	3	1	1	2	0	0	1	Y	0	1	0	0	0	0	1	1	21	1	1	1	0	24	70,154	
36	City of Ames	1	1	0	0	0	0	0	0	0	0	2	0	2	0	0	0	2	0	0	1	N	1	1	0	0	0	0	0	7	0	0	0	0	7	1,079		
37	City of Cleveland	1	1	2	0	2	3	0	0	0	2	0	2	2	3	0	1	0	0	0	0	1	Y	1	1	0	0	1	0	0	21	0	0	1	0	22	7,605	
38	City of Daisetta	1		2	0	0	3	0	0	0	2	0	2	0	0	3	0	0	2	0	0	0	N	0	0	0	0	0	0	1	15	0	0	0	0	15	1,034	

**CAPABILITY ASSESSMENT FINDINGS**  
**H-GAC Regional Mitigation Plan**

	Survey	GCI	NFIP	CRS	BCEGS	HMP	DRP	CZMP	CLUP	FMP	SMP	EOP	COOP	REP	SARA	TRANS	CIP	REG-PL	HPP	ZO	SO	FDPO	BC	FC	RIP/WET	BUFF	ACQUIS	NGOs	OS/FOR	PUB/PRI	RAW SCORE	TECH	FISC	ADMIN	POLI	FINAL SCORE	2000 Population																							
39	City of Dayton	1	1	2	0	3	0	0	1	2	2	1	0	0	0	1	1	2	0	0	1	Y	1	1	0	0	0	0	1	0	19	0	1	1	1	22	5,709																							
40	City of Dayton Lakes			2	0	0																								2					2	101																								
41	City of Devers	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	416																							
42	City of Hardin	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	N	0	0	0	0	0	0	0	2	0	0	0	0	2	755																								
43	Town of Kenefick			0	0	0																							0					0	667																									
44	City of Liberty	1	1	2	0	2	3	2	0	0	0	2	0	3	3	0	0	2	0	0	1	N	1	1	0	0	0	0	0	22	0	0	0	0	22	8,033																								
45	City of North Cleveland			0	0	0																							0					0	263																									
46	City of Plum Grove			2	0	0																							2					2	930																									
47	Town of Cut and Shoot	1		2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1	N	1	0	0	0	0	0	0	6	0	0	0	0	6	1,158																								
48	City of Magnolia			2	0	0																							2					2	1,111																									
49	City of Montgomery	1	1	2	0	0	1	1	0	1	1	2	1	0	0	0	0	2	0	1	1	Y	1	1	0	0	0	0	0	15	0	0	0	2	17	489																								
50	City of Oak Ridge North	1		2	0	0	3	2	0	2	2	2	0	0	0	0	0	2	0	1	1	Y	1	1	0	0	1	0	1	23	1	0	0	0	24	2,991																								
53	Town of Roman Forest	1	1	2	0	0	3	0	0	0	0	2	0	0	0	0	0	0	0	0	1	N	1	0	0	0	1	0	0	10	0	0	0	1	11	1,279																								
54	City of Shenandoah	1		2	0	0	3	0	0	2	2	2	0	0	0	0	1	0	1	1	1	N	1	1	0	0	0	0	0	19	0	1	1	0	21	1,503																								
55	City of Splendora	1		2	0	0	3	0	0	0	0	2	0	0	0	0	1	0	0	0	1	Y	1	0	0	0	0	0	0	10	0	0	0	0	10	1,275																								
56	The Woodlands			0	0	0																																																						
57	City of Willis	1		2	0	0	0	0	2	0	2	2	0	1	1	0	0	0	0	0	1	Y	1	1	0	0	1	0	0	14	0	0	2	0	16	3,985																								
58	<b>Walker County</b>			2	0	0																							2					2	61,758																									
59	City of Huntsville	1	1	2	0	2	0	0	1	2	2	0	0	0	0	1	0	2	0	1	1	Y	1	1	0	0	1	0	0	17	0	0	2	0	19	35,078																								
60	City of New Waverly			2	0	0																							2					2	950																									
61	City of Riverside			2	0	0																							2					2	425																									
62	<b>Waller County</b>	1	1	2	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	1	N	0	0	0	0	0	0	0	7	0	0	0	0	7	32,663																								
63	City of Brookshire	1		2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	N	1	1	0	0	0	0	0	8	0	0	0	0	8	3,450																								
64	City of Hempstead	1	1	2	0	0	0	0	0	0	0	2	0	0	0	0	1	2	0	1	1	Y	1	0	0	0	0	0	0	10	0	0	0	1	11	4,691																								
65	City of Pattison	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	N	1	0	0	0	0	0	0	2	0	0	0	0	2	447																								
66	City of Pine Island	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	849																							
67	City of Prairie View	1		2	0	0	0	0	0	2	0	2	0	3	3	0	0	0	0	1	1	N	1	1	0	0	1	1	0	19	0	0	1	1	21	4,410																								
68	City of Waller	1	1	2	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	1	Y	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2,092																						
<b>TOTAL</b>		<b>51</b>	<b>29</b>																																																									

**POINTS SYSTEM:**    Up to 3 points    Up to 2 points    Up to 1 point    No points

H-GAC Building and Fire Code Information by Jurisdiction

Jurisdiction	County	Adopted Building Codes	Current Building Code (Date and Type)	Describe Inspection/Permit Process	Number and Qualifications of Inspectors	Number of Building Starts During Past 12 Months	Number of Inspections Conducted During Past 12 Months	Jurisdiction	County	Adopted Fire Codes	Current Fire Code (Date and Type)	Describe Inspection/Permit Process	Number and Qualifications of Inspectors	Number of Fire Inspections Conducted During Past 12 Months
Austin County	Austin	No	NA	NA	NA	NA	NA	Austin County	Austin	No	NA	NA	NA	NA
Belville	Austin	Yes	International Building Code - adopted 04/18/2000		1 - certified	38	152	Belville	Austin	Yes	International Fire Code - 1991		NA	1
Brazos County	Austin	No	NA	NA	NA	8	NA	Brazos County	Austin	No	NA	NA	NA	NA
Industry	Austin	No	NA	NA	NA	NA	NA	Industry	Austin	No	NA	NA	NA	NA
San Felipe	Austin	Yes	Southern Building Code - adopted 05/04/1999 - Ordinance No. 199-3	Application is given to council. Site plan(s) inspected and approved at the next council session.		1	5	5	San Felipe	Austin	No	NA	NA	NA
Sealy	Austin	Yes	IBC - 10/16/02	Plan review - permit issued, site inspection, stake-out inspection, foundation, rough-in electrical, plumbing, taps, framing, top-out plumbing, intermediate electrical, final plumbing, electrical mechanical and building.		2	33	1151	Sealy	Austin	Yes	International Fire Code - 2000 edition		2
Wallis	Austin	Yes	SBCCI - adopted 06/01/1975	Inform them of the set-back lines from property line and then inspect from there.		2	4	4	Wallis	Austin	No	NA	Use Fort Bend County Fire Marshall. Also use the Fireman and Fire Marshall office.	4
Brazoria County	Brazoria	No	NA	NA	NA	NA	NA	Brazoria County	Brazoria	Yes	International Fire Code	Currently EMC is in charge of fire code.	0 - in training	0
Alvin	Brazoria	Yes	No answer	No answer	2.5	A lot		Alvin	Brazoria	Yes	SBCCI Inspected annually on request	No answer	1	1200
Angleton	Brazoria	Yes	2003 International building code					Angleton	Brazoria	Yes	2006 Fire Code Nov. 10, 2009			
Bailey's Prairie	Brazoria							Bailey's Prairie	Brazoria					
Bonney	Brazoria							Bonney	Brazoria					
Brazoria	Brazoria	Yes	International Standard Building Code - adopted 2000	Submit plans, inspection based on plans, inspections are foundation, framing, etrical and plumbing prior to cover-up, pre-final walk though and final for CO		7	6	85	Brazoria	Brazoria	No		2 - volunteers	16
Brookside Village	Brazoria	Yes	Southern Building Code - adopted 1968	On site inspections during all stages after plan review	1 - part-time - certified	3	20-24	Brookside Village	Brazoria	Yes	SBCC - Adopted 11/14/2000		1 - part-time - certified	2
Clute	Brazoria							Clute	Brazoria					
Danbury	Brazoria	Yes	2003 Edition International Building Code in 2006 & 2011 National Electrical Code in 2010					Danbury	Brazoria	Yes	1979 Standard Fire Prevention Code in 1983			
Freeport	Brazoria	Yes	SBCCI - adopted in the 1960s	Permits are issued prior to construction, inspections ongoing	1 - certified	25	25	Freeport	Brazoria	Yes	Southern Building Code (1997 Edition) - adopted in 2000	Fire inspections are conducted on new construction or projects that require permits through the Building Official's office. Proactive inspections as time permits.	1 - certified	25
Hillcrest Village	Brazoria							Hillcrest Village	Brazoria					
Holiday Lakes	Brazoria	No	Building Ordinance			0	0	0	Holiday Lakes	Brazoria	No	NA	NA	NA
Iowa Colony	Brazoria	Yes	IRC - adopted 2000		1 - certified	4	25	Iowa Colony	Brazoria	No	NA	NA	NA	NA
Jones Creek	Brazoria							Jones Creek	Brazoria					
Lake Jackson	Brazoria	Yes	International Building Code - adopted 2000	Building permits are not issued until all plans have been approved by the Building Official. Once building permits are issued, construction is inspected at various stages.	3 - certified	366	4250	Lake Jackson	Brazoria	Yes	Adopted in 1958 - upgraded to International Fire Code in 2000		1 - certified	310
Liverpool	Brazoria		In Process of doing inter-local w/Brazoria County					Liverpool	Brazoria					
Marvel	Brazoria	Yes	SBCCI and ICBO	No answer	6 - all certified by the state	48	118	Marvel	Brazoria	Yes	2000 International Fire Code 08/11/00	No answer	1 - Fire Marshall	90
Oyster Creek	Brazoria	Yes	Standard Building Code - originally adopted codes in 1987		1	8	8	Oyster Creek	Brazoria	No	NA	NA	NA	NA
Quintana	Brazoria	Yes	SBCCI - originally adopted codes in 1976	Obtain permit, on site inspections during work, final inspection		1	0	0	Quintana	Brazoria	Yes	Fire Prevention Code - adopted 1980	No answer	1
Richwood	Brazoria	Yes	International Building Code		1 - certified	16	17	17	Richwood	Brazoria	Yes	International Fire Code		0
Surfside Beach	Brazoria	Yes	SBCCI - originally adopted codes in 1994	No answer		1	30	30	Surfside Beach	Brazoria	No	NA	NA	NA
Sweeny	Brazoria	Yes	International Building Code - 2000	Inspected at all phases (electrical, plumbing, mechanical, etc.)		2	12	50	Sweeny	Brazoria	No	NFPA	2 - certified	No answer
Chambers County	Chambers	No	NA	NA	NA	NA	NA	Chambers County	Chambers	No	NA	NA	NA	NA
Cove	Chambers							Cove	Chambers					
Anahuac	Chambers							Anahuac	Chambers					
Beach City	Chambers	No						Beach City	Chambers					
Old River-Winfree	Chambers/Liberty	Yes	Adopted State Building Codes May 2007					Old River-Winfree	Chambers/Liberty					
Mont Belvieu	Chambers/Liberty	Yes	2006 IBC for Building Codes 2008 NEC for Electric					Mont Belvieu	Chambers/Liberty	Yes	2009 IFC			
Liberty County	Liberty	No	NA	Inspect elevation only	NA	22	NA	Liberty County	Liberty	Yes	Life Safety Code		1 - certified	45
Ames	Liberty	Yes	SBCCI			1	5	0	Ames	Liberty	No	NA	NA	NA
Cleveland	Liberty	Yes	IBC (2000) - originally adopted codes in 1976	Builder applies for permit, must have plans as required in IBC code. Aminum of four building inspections are made.	3 - all certified	3	55	55	Cleveland	Liberty	Yes	2000 International Fire Code - originally adopted fire codes in 1976	1 - certified	60+



H-GAC Building and Fire Code Information by Jurisdiction

Daisetta	Liberty	No	NA	NA	NA	NA	NA	NA	Daisetta	Liberty	No	NA	NA	Process is the same as the subdivision and building -- the Fire Marshall and Building Official are in charge of fire code compliance.	1 - Fire Marshall	2	
		Yes	IBC (2000) - originally adopted codes in 1991	IBC is required for construction plans and compliance during inspections	1 - Building Official	159	1431				Yes	International Fire Code (2000) - originally adopted codes in 1991					
Dayton	Liberty							Dayton	Liberty						2 - state certification	No answer	
Dayton Lakes	Liberty							Dayton Lakes	Liberty								
Devers	Liberty	No	NA	NA	NA	NA	NA	Devers	Liberty	No	NA	NA	NA	NA	NA	NA	
Hardin	Liberty	No	NA	NA	NA	NA	NA	Hardin	Liberty	No	NA	NA	NA	NA	NA	NA	
Kenefick	Liberty							Kenefick	Liberty								
Liberty	Liberty	Yes	ICC - 2002		1	10	30	Liberty	Liberty	Yes	IFC				11 - 1 certified	80	
North Cleveland	Liberty							North Cleveland	Liberty								
Plum Grove	Liberty							Plum Grove	Liberty								
Montgomery County	Montgomery	No	NFIP and septic only	NA	NA	NA	NA	Montgomery County	Montgomery	No	NA	NA	NA	Occupant must request a fire inspection and receive approval prior to applying for a building occupancy permit.	NA	NA	
		Yes	ICC - adopted 2002	Building plans must be approved prior to start of construction. Site inspections required throughout the process and prior to issue of an Occupancy Permit.	5 - 1 certified	519	7504				Yes	International Fire Code - 2000 edition			3 - all certified	2500	
Conroe	Montgomery							Conroe	Montgomery								
		Yes	International Residential Code and National Electrical Code - adopted Dec 01 to comply with Chapter 214 LGC Subchapter G							No	Fire related matters are handled by ESD 12						
Cut and Shoot	Montgomery							Cut and Shoot	Montgomery					Unknown	Unknown	Unknown	
Magnolia	Montgomery							Magnolia	Montgomery								
		Yes	International Residential Code - 2001	The permit process starts with a plot plan and two sets of plans. The plans are turned over to the inspections office for the approval. When the approval is done, one set of plans are returned to the person with any corrections on them. The inspections are called in as work progresses. When an inspection is completed, it is recorded.	Contracted service to certified inspectors.	4	56				Yes	Standard Fire Prevention Code - adopted 1998			Fire service provided through the County.	No answer	No answer
Montgomery	Montgomery							Montgomery	Montgomery								
Oak Ridge North	Montgomery	Yes	International Building Code		1 part-time and 1 full-time - 1 is certified	12	90+	Oak Ridge North	Montgomery	Yes	International Code Council - adopted 1982				2 part-time, certified	120	
		Yes	SBCCI - adopted in 1972		3 - all volunteers (Planning and Zoning Board)	15-20	15-20					1998			Volunteer Fire Department	No answer	
Panorama Village	Montgomery							Panorama Village	Montgomery								
Patton Village	Montgomery							Patton Village	Montgomery								
Roman Forest	Montgomery	Yes	Standard Building Code - adopted 1975		1 - certified	25	228	Roman Forest	Montgomery	No	NA	NA	NA	NA	NA	NA	
Shenandoah	Montgomery	Yes	ICC	No answer	1	No answer	No answer	Shenandoah	Montgomery	Yes	International Fire Code				1 - certified	No answer	
		Yes	SBCCI - unsure of adoption date	No answer	Unknown - building permits are not issued by the city	0	0			No	NA			Fire protection is provided by Montgomery County Emergency Service #11	NA	NA	
Splendor	Montgomery							Splendor	Montgomery								
The Woodlands	Montgomery							The Woodlands	Montgomery								
		Yes	SBCCI (1997) - adopted 04/21/98	An application for a building permit is submitted along with plans and specifications for the building. The plans are reviewed for compliance with all applicable codes and other requirements. If the plans are specifications meet all code and other requirements, a building permit is issued.		2	11	55			Yes	Standard Fire Code (1997) - adopted 04/21/1998		Fire inspections are performed on request of the property owner or building tenant.	0	3	
Willis	Montgomery							Willis	Montgomery								
Walker County	Walker	No						Walker County	Walker	No							
		Yes	International Building Code (2000) - adopted February 2002	Plan review, permitting, inspecting (site inspection, drainage, setbacks, foundation, plumbing, electrical, HVAC, structural, fire)	4 - 2 certified	295	3955			Yes	Adopted International Fire Code 2000			Fire Department inspects buildings for compliance of the fire code annually.	3	270	
Huntsville	Walker							Huntsville	Walker								
Riverside	Walker	No						Riverside	Walker	No							
New Waverly	Walker	No						New Waverly	Walker	No							
Waller County	Waller	No	NA	NA	NA	NA	NA	Waller County	Waller	No	NA	NA	NA	NA	NA	NA	
Brookshire	Waller	Yes	ICC		1	40	30	Brookshire	Waller	Yes	SBCC				1	5	
		Yes	Southern Building Code 09/22/1998	Plans submittal, approval, permits issued and inspection according to permits - building/electrical, plumbing and mechanical		1	12	20			Yes	International Fire Code				1	20
Hempstead	Waller							Hempstead	Waller								
Pattison	Waller	Yes	Southern Building Code (99) 10/10/2002			1	7	7	Pattison	Waller	No	NA	NA	NA	NA	NA	
Pine Island	Waller	No	NA	NA	NA	NA	NA	Pine Island	Waller	No	NA	NA	NA	NA	NA	NA	
		Yes	SBCCI - adopted 2000		1.5 - 1 Full-time Fire Marshall and one contract inspector	5	8			Yes	NFPA			Upon request or when applying for a permit	2.5	9	
Prairie View	Waller							Prairie View	Waller								
Waller	Waller/Harris	Yes	Ordinance 280 - 11/11/2002 and ordinance 281 - 11/11/2002 - ICC		1 - ICC certified	7	12	Waller	Waller/Harris	Yes	2003 ICC Fire Code				1	15	

H-GAC Community Floodplain Program Information

Jurisdiction	County	NFIP Participant	Current Floodplain Management Ordinance/Court Orders	Date Adopted	Explanation of inspection/permit process	Number of Floodplain Administrator(s) and Staff	Qualifications of Floodplain Administrator(s) and Staff	Number of inspections and permits approved	Number of variances allowed	Explanation of Variances
<b>Austin County</b>	Austin	Y	Flood Damage Prevention Ordinance	11/13/89 amended 5/24/99	Written development applications reviewed by staff for compliance	1 - Administrator	No answer	14 permits, 216 exemption certificates	0	NA
Bellville	Austin	Y	See Austin County Ordinance 2001-09	Apr-98	Interlocal agreement with Austin County	See Austin County	See Austin County	See Austin County	0	NA
Brazos Country Industry	Austin	Y N	NA	8/15/2001 NA	No answer NA	1 - Administrator NA	No answer NA	No answer NA	No answer NA	No answer NA
San Felipe	Austin	Y	See Austin County	No answer	No answer	No answer	No answer	0	0	NA
Sealy	Austin	Y	Flood Damage Prevention Ordinance	6/9/1999	Administrator is required to sign off on all building permit applications and verify if the permit request is indie or outside of the floodplain. If located inside the floodplain, construction is subject to all requirements found in the ordinance	1 Floodplain Administrator	Director of Public Works	0	0	NA
Wallis	Austin	Y	See Austin County	No answer	City Hall issues permit and then inspector inspects the work	1 - staff member	No answer	NA	NA	NA
<b>Brazoria County</b>	Brazoria	Y	Flood Damage Prevention Ordinance	Adopted Dec 1971	A detailed description of the inspection process can be obtained through the County	1 administrator and 2 office staff		Total 2002-582, Jan-May 2003 - 160	0	NA
Alvin	Brazoria	Y	No answer	No answer	No answer	3 certified floodplain managers	all certified	0	0	NA
Angleton	Brazoria	Y								
Bailey's Prairie	Brazoria	Y								
Bonney	Brazoria	Y								
Brazoria	Brazoria	Y	Flood Damage Prevention Ordinance	No answer	Application is received and reviewed, the site is inspected several times before receiving final approval	2	No answer	0	0	NA
Brookside Village	Brazoria	Y	Flood Damage Prevention Ordinance	No answer	elevation certificate required for development in the floodplain	1		15	0	NA
Clute	Brazoria	Y								
Danbury	Brazoria	Y								
Freeport	Brazoria	Y	Flood Damage Prevention Ordinance	Apr-89	Integrated with routine building permitting and inspection process	1	No answer	4	0	NA



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Cleveland	Liberty	Y			Anyone requesting to build within the floodway must request for a permit and has to provide an elevation certificate	2		2	0	NA
Daisetta	Liberty	Y	No ordinance							
Dayton	Liberty	Y	Flood Damage Prevention Ordinance	1988	The permitting process starts with preliminary plans with the development review committee; plans must show the required contents; final plans will be submitted with corrections for final approval, a master copy is submitted along with permitting fees for building permit. Inspections are made during construction and a Certificate of Occupancy is given after as-builts are submitted.	Administrator - City Manager		0	0	NA
Dayton Lakes	Liberty	Y								
Devers	Liberty	Y	NA	NA	NA	NA	NA	NA	NA	NA
Hardin	Liberty	Y	Answered no to all							
Kenefick	Liberty	N								
Liberty	Liberty	Y	No ordinance	No answer	No answer	No answer	No answer	1	0	NA
North Cleveland	Liberty	N								
Plum Grove	Liberty	Y								
Montgomery County	Montgomery	Y	No ordinance	Joined the program in 1978-79	No answer	1 - Floodplain Administrator	No answer	0	0	NA
Conroe	Montgomery	Y	Flood Damage Prevention Ordinance	1995 - currently being amended	Certificates are required for any new construction within the existing floodplain	1 - Floodplain Administrator	No answer	67	0	NA
Cut and Shoot	Montgomery	Y	No ordinance	Adopted June 1987, amended November 1996		NA	NA	NA	NA	NA
Magnolia	Montgomery	Y								
Montgomery	Montgomery	Y	Flood Damage Prevention Ordinance	1996	Plans for single family homes reviewed by City engineer. Subdivision plans reviewed by Planning and Zoning Commission for compliance before submitting to City Council for approval	No administrator	NA	NA	0	NA



H-GAC Community Floodplain Program Information

Jurisdiction	County	NFIP Participant	Current Floodplain Management Ordinance/Court Orders	Date Adopted	Explanation of inspection/permit process	Number of Floodplain Administrator(s) and Staff	Qualifications of Floodplain Administrator(s) and Staff	Number of inspections and permits approved	Number of variances allowed	Explanation of Variances
Waller County	Waller	Y	Flood Damage Prevention Ordinance	Joined the program in the 1980's	No	No	No	No	No	No
Brookshire	Waller	Y	Answered no to all							
Hempstead	Waller	Y	Flood Damage Prevention Ordinance	8-Jan-88	All new construction is inspected	2 members	No answer	0	0	NA
Pattison	Waller	Y	Answered no to all							
Pine Island	Waller	N	NA	NA	NA	NA	NA	NA	NA	NA
Prairie View	Waller	Y	No ordinance	Joined the program in 1987	NA	NA	NA	0	3	No explanation
Waller	Waller/Harris	Y	Floodplain Ordinance	No answer	Floodplain permits are issued to homeowners in the floodplain. Elevation certificates from surveyors are required	1- administrator and 1 inspector	No answer	0	0	NA