



SECTION 2. RISK ASSESSMENT

2.1 Introduction

This section includes a description of the planning process used to conduct the 2023 Fort Bend County Hazard Mitigation Plan (HMP) update, including how it was prepared, who was involved in the process, and how the public was involved. To ensure that the plan meets the requirements of the Disaster Mitigation Act of 2000 (DMA 2000) and that the planning process would have the broad and effective support of the participating jurisdictions, regional and local stakeholders, and the public, an approach to the planning process and plan documentation was developed to achieve the following:

- The HMP is multi-jurisdictional and considers natural and human-caused hazards facing the County, thereby satisfying the natural hazards mitigation planning requirements specified in the DMA 2000.
- Fort Bend County is the plan participant.
- The HMP was developed following the process outlined by the DMA 2000, Federal Emergency Management Agency (FEMA) regulations, and prevailing FEMA and Texas Division of Emergency Management (TDEM) guidance. Following this process ensures all the requirements are met and support HMP review.

The 2023 Fort Bend HMP update was developed using the best available information obtained from a wide variety of sources. Throughout the HMP update process, a concerted effort was made to gather information from local and regional agencies and staff as well as stakeholders, federal and state agencies, and Fort Bend County residents. The HMP Planning Partnership solicited information from local agencies and individuals with specific knowledge of certain hazards and past historical events. The HMP Planning Partnership also considered planning and zoning codes, ordinances, and other recent planning decisions. The hazard mitigation strategies identified in this HMP have been developed through an extensive planning process involving regional, Fort Bend County, and local agencies, stakeholders, and residents.

This section describes the mitigation planning process, including (1) Organization of the Planning Process; (2) Stakeholder Outreach and Involvement; (3) Public Participation; (4) Incorporation of Existing Data, Plans, and Technical Information; (5) Integration with Existing Planning Mechanisms and Programs; and (6) Continued Public Involvement.

2.2 Organization of the Planning Process

Many parties supported the preparation of this HMP update: County officials, municipal officials, the Planning Partnership, stakeholders, and the planning consultant. This planning process does not represent the start of hazard risk management in Fort Bend County; rather, it is part of an ongoing process that various State of Texas, Fort Bend County, and local agencies and individuals have continued to embrace. A summary of the past and ongoing mitigation efforts is provided in Section 6 (Mitigation Strategy), as well as in Volume II Section 9 (Jurisdictional Annexes), to give a historical perspective of the County and local activities implemented to reduce vulnerability to hazards.



This section of the HMP identifies how the planning process was organized with the many planning partners involved and outlines the major activities that were conducted in the development of this HMP update.

2.2.1 Organization of the Planning Partnership

A contract planning consultant (Tetra Tech, Inc., referred to herein as Tetra Tech) was selected to guide Fort Bend County through the HMP update process. A contract between Tetra Tech and Fort Bend County was executed in September 2022. Specifically, Tetra Tech, the contract consultant, was tasked with the following:

- Assistance with the organization of the Core Planning Partnership and Planning Partnership
- Assistance with the development and implementation of a public and stakeholder outreach program.
- Data collection
- Facilitation and attendance at meetings (Core Planning Partnership, Planning Partnership, stakeholder, public, and others)
- Review and update of the hazards of concern, hazard profiling, and risk assessment
- Assistance with the review and update of mitigation planning goals and objectives
- Assistance with the review of past mitigation strategies progress
- Assistance with the screening of mitigation actions and the identification of appropriate actions
- Assistance with the prioritization of mitigation actions
- Authoring of the draft and final plan documents

To facilitate plan development, Fort Bend County developed a Planning Partnership to provide guidance and direction to the HMP update effort and to ensure the resulting document will be embraced both politically and by the constituency within Fort Bend County (Table 2-1). Specifically, the Planning Partnership was charged with the following:

- Attending and participating in Planning Partnership meetings
- Representing their jurisdiction throughout the planning process and ensuring participation expectations are met by their jurisdiction
- Supporting and promoting the public involvement process
- Assisting with the development and completion of certain planning elements, including:
 - Reviewing and updating the hazards of concern
 - Developing a public and stakeholder outreach program
 - Assuring that the data and information used in the plan update process are the best available
 - Reviewing and updating the hazard mitigation goals
 - Reporting on progress of mitigation actions identified in prior or existing HMPs, as applicable
 - Identifying and screening of appropriate mitigation strategies and activities
- Reviewing and commenting on plan documents prior to submission to TDEM and FEMA
- Adopting, implementing, and maintaining the plan update

Table 2-1. Fort Bend County Hazard Mitigation Planning Partnership

Name	Title	Organization	Steering Committee Member	Planning Partnership Member
Greg Babst	County Emergency Management Coordinator	Fort Bend County HS&EM	Yes	Yes
Andrea James	Planning Coordinator	Fort Bend County HS&EM	Yes	Yes





Name	Title	Organization	Steering Committee Member	Planning Partnership Member
Mark Vogler	Chief Drainage Engineer	Fort Bend County Engineering	Yes	Yes
Charles Brockett	Planning Coordinator	Fort Bend County HS&EM	Yes	Yes
Angela Wierzbick	Grant Manager	Fort Bend County	Yes	Yes
Scott Wiegath	Director	Fort Bend County Road and Bridge	Yes	Yes
Craig Kalkomey	District Engineer	Fort Bend County Special Districts	Yes	Yes
Mary Staff	Deputy Chief/Budget/Personnel/PIO	Fort Bend County	No	Yes
Douglas Barnes	Assistant Chief Fire Marshal	Fort Bend County Fire Marshal	No	Yes
Shayna Van Slyke	Administrative Manager	Fort Bend County HS&EM	No	Yes
Jeffery Janecek	Assistant Engineer	Fort Bend County Drainage District	No	Yes
Rodney Grimmer	Deputy Chief/Planning/OPS	Fort Bend County HS&EM	Yes	Yes
Vladimir Hidrovo	Deputy Chief/Recovery/Mitigation	Fort Bend County HS&EM	No	Yes
Rick Staigle	Assistant County Engineer	Fort Bend County Engineering	Yes	Yes
Amanda Bronsell	Precinct 1 Staff Director	Fort Bend County	Yes	Yes
Ishokee Craven	Administrator	Fort Bend County Sheriff's Office	Yes	Yes
Michael Wagner	Special Projects Coordinator	Fort Bend County	Yes	Yes
Andy Meyers	Precinct 3	Fort Bend County Commissioners Court	Yes	Yes
Grady Prestage	Precinct 2	Fort Bend County Commissioners Court	Yes	Yes
Ken DeMerchant	Precinct 4	Fort Bend County Commissioners Court	Yes	Yes
Vincent Morales	Precinct 1	Fort Bend County Commissioners Court	Yes	Yes
Carol Berrego	Director	Fort Bend County Community Development	Yes	Yes
Shaneka Smith	Chief of Staff	Fort Bend County Judge	Yes	Yes
Stacy Slawinski	County Engineer	Fort Bend County Engineering	Yes	Yes
Christina Honzell	Regional Planner	Fort Bend County HS&EM	Yes	Yes
Frank Garza	Regional Planner	Fort Bend County HS&EM	Yes	Yes
Shenae Theriot-Mericle	Houston UASI	UASI Grants Manager	No	Yes
Russell Piper	Inframark	Manager	No	Yes
Jeff Perry	Levee Management Services	Operator	No	Yes
Hector Acevedo	Quail Valley UD	Utility Operator	No	Yes
Tyler Werlin	Operations Consultant	LID Solutions	No	Yes
Tiffany Malzahn	Environmental and Compliance Manager	Brazos River Authority	No	Yes
Donnie Naylor	EMC	Brazos River Authority	No	Yes
Annette Guajardo	City Administrator	Arcola (C)	No	Yes
Fred Burton	Mayor	Arcola (C)	Yes	Yes
Misty Tiemann	City Secretary	Beasley (C)	No	Yes
Kenneth Reid	Mayor	Beasley (C)	Yes	Yes
Lance Bertolino	Mayor	Fairchilds (V)	Yes	Yes
Felix Vargas	Sergeant	Fulshear (C)	No	Yes
Kenny Seymour	Chief of Police	Fulshear (C)	No	Yes
Aaron Groff	Mayor	Fulshear (C)	Yes	Yes
Milena Rucker	Senior Administrative Assistant	Katy (C)	No	Yes



Name	Title	Organization	Steering Committee Member	Planning Partnership Member
Lindsay Kerr	Executive Assistant	Katy (C)	No	Yes
Byron Hebert	City Administrator	Katy (C)	No	Yes
William "Dusty" Thiele	Mayor	Katy (C)	Yes	Yes
Christina Flores	City Secretary	Kendleton (C)	No	Yes
Darryl Humphrey Sr.	Mayor	Kendleton (C)	Yes	Yes
Gary Stewart	Chief of Police	Meadows Place (C)	No	Yes
Jack Ashton	Assistant Chief of Police	Meadows Place (C)	No	Yes
Rod Hainey	Public Works Director	Meadows Place (C)	No	Yes
Charles Jessup	Mayor	Meadows Place (C)	Yes	Yes
David Jordan	City Manager	Missouri City (C)	No	Yes
Trameka Jewett	EMC	Missouri City (C)	No	Yes
Sashi Kumar	Public Works Director	Missouri City (C)	No	Yes
Robin Elackatt	Mayor	Missouri City (C)	Yes	Yes
Michael Dickerson	Chief of Police	Needville (C)	No	Yes
Sandra Dorr	Mayor	Needville (C)	Yes	Yes
Rodney Pavlock	Mayor	Orchard (C)	Yes	Yes
Tom Reid	Mayor	Pearland (C)	Yes	Yes
Jordan Blegan	Fire Chief	Pleak (V)	No	Yes
Larry Bittner	Mayor	Pleak (V)	Yes	Yes
Robert Oliver	EMC	Richmond (C)	No	Yes
Jim Whitehead	Parks Superintendent	Richmond (C)	No	Yes
Rebecca Haas	Mayor	Richmond (C)	Yes	Yes
Darrell Himly	Fire Chief	Rosenberg (C)	No	Yes
Rigo Calzoncin	Director of Public Services	Rosenberg (C)	No	Yes
Kevin Raines	Mayor	Rosenberg (C)	Yes	Yes
Erica Molina	Secretary/EMC	Simonton (C)	No	Yes
Cecil Willis Jr.	Mayor	Stafford (C)	Yes	Yes
Larry Di Camillo	Fire Chief	Stafford (C)	No	Yes
Gabriel Lavine	EMC	Sugar Land (C)	No	Yes
Joe R. Zimmerman	Mayor	Sugar Land (C)	Yes	Yes
Gina Treadgold	Alderman	Thompsons (T)	No	Yes
Freddie Newsome	Mayor	Thompsons (C)	Yes	Yes
Keelan Spaulding	Fire Department	Thompsons (C)	No	Yes
David Heslep	EM Coordinator	Weston Lakes (C)	No	Yes

Appendix B (Participation Matrix) identifies those individuals who represented the planning partners during this planning effort and indicates how they contributed to the planning process.

2.2.2 Planning Activities

Members of the Planning Partnership, as well as key stakeholders, convened and/or communicated regularly to share information and participate in workshops to identify hazards, assess risks, review existing inventories of and identify new critical facilities, assist in updating and developing new mitigation goals and strategies, and provide continuity through the process to ensure that natural hazards vulnerability information and appropriate mitigation strategies were incorporated. All members of the Planning Partnership had the opportunity to review the draft plan, support interaction with other stakeholders, and assist with public involvement efforts.

A summary of Planning Partnership meetings held and key milestones met during the development of the HMP update is included in Table 2-2, which also identifies which DMA 2000 requirements the activities satisfy.



Documentation of meetings (e.g., agendas, sign-in sheets, meeting notes) are in Appendix C (Meeting Documentation) which identifies only the formal meetings held during plan development and does not reflect all planning activities conducted by individuals and groups throughout the planning process. In addition to these meetings, there was a great deal of communication between Fort Bend County, committee members and the contract consultant via individual local meetings, email, and phone.

Table 2-2. Summary of Mitigation Planning Activities and Efforts

Date	DMA 2000 Requirement	Description of Activity	Participants
September 26, 2022	2	<u>Pre-Kick Off Meeting with Fort Bend County</u> : Plan timing and administration, data needs and sharing, hazards of concern, dates, and next steps.	Fort Bend HS&EM, Tetra Tech
November 09, 2022	2	<u>Steering Committee Meeting #1</u> : Introduce Steering Committee to the HMP update process, discuss mitigation planning, project organization, roles and responsibilities, data collection, hazards of concern, and schedule of the plan.	City of Beasley, Fort Bend HS&EM, Fort Bend County Utility Authority, City of Fulshear, City of Kandleton, City of Meadows Place PD, City of Meadows Place Public Works, Missouri City OEM, City of Richmond, City of Rosenberg, City of Simonton, City of Sugar Land, Tetra Tech
November 19, 2022	2, 4a	<u>Planning Partnership Meeting #1</u> : Introduce Planning Partnership to the HMP update process, discuss mitigation planning, project organization, roles and responsibilities, data collection, hazards of concern, and schedule of plan.	City of Beasley, Fort Bend HS&EM, Fort Bend County Utility Authority, City of Fulshear, City of Kandleton, City of Meadows Place PD, City of Meadows Place Public Works, Missouri City OEM, City of Richmond, City of Rosenberg, City of Simonton, City of Sugar Land, Brazos River Authority, LID Solutions, City of Arcola, Houston UASI, Inframark, Levee Management Services, Village of Pleak, Quail Valley UD, Tetra Tech
February 9, 2023	2, 3a, 3b,	<u>Steering Committee Meeting #2</u> : Welcome and Introductions, In-Kind Tracking, Project Schedule and Status Review, Hazards of Concern Review and Finalization, Confirmation of Goals and Objectives, Public and Stakeholder Outreach, Next Steps	Fort Bend HS&EM, Fort Bend County Utility Authority, Tetra Tech, Fort Bend Engineering, Fort Bend Roads and Bridges, Fort Bend Community Development
March 29, 2023	2, 3a, 3b, 3c, 3d, 3e, 4a, 4b	<u>Risk Assessment and Mitigation Strategy Meeting</u> : In-Kind Tracking, Project Overview and Status, Public and Stakeholder Outreach Strategy Reminder, Risk Assessment Preliminary Results, Identifying Mitigation Strategies.	Fort Bend HS&EM, Fort Bend Road & Bridge, Fort Bend LID 2 & 14, Beasley, Simonton, Sugar Land, Richmond, Weston Lakes, Tetra Tech
June 20, 2023	2	<u>Draft Plan Review Presentation</u> : Overview of entire plan and sections; confirmed plan maintenance schedule.	Fort Bend HS&EM, Fort Bend Road & Bridge, Fort Bend LID 2 & 14, Fort Bend County Precinct 3, Richmond, Meadows Place, Missouri City, Sugar Land, Rosenberg, Beasley, Fulshear, Simonton, Tetra Tech
July 10, 2023	1b, 2	Draft HMP posted to public project website; all plan participants were notified and asked to assist with the public outreach including social media. Neighboring	Public and Stakeholders



Date	DMA 2000 Requirement	Description of Activity	Participants
		communities and stakeholders were notified of the posting as well.	
TBD	2	HMP submitted to TDEM and FEMA Region VI.	TDEM, FEMA Region VI
Upon plan approval by FEMA	1a	Plan adoption by resolution by the governing bodies of all participating jurisdictions.	All Plan Participants

Note: All activities/efforts were conducted during the National Emergency response to the COVID-19 pandemic.

TBD = to be determined.

Each number in column 2 identifies specific DMA 2000 requirements, as follows:

1a – Prerequisite – Adoption by the Local Governing Body

1b – Public Participation

2 – Planning Process – Documentation of the Planning Process

3a – Risk Assessment – Identifying Hazards

3b – Risk Assessment – Profiling Hazard Events

3c – Risk Assessment – Assessing Vulnerability: Identifying Assets

3d – Risk Assessment – Assessing Vulnerability: Estimating Potential Losses

3e – Risk Assessment – Assessing Vulnerability: Analyzing Development Trends

4a – Mitigation Strategy – Local Hazard Mitigation Goals

4b – Mitigation Strategy – Identification and Analysis of Mitigation Measures

4c – Mitigation Strategy – Implementation of Mitigation Measures

5a – Plan Maintenance Procedures – Monitoring, Evaluating, and Updating the Plan

5b – Plan Maintenance Procedures – Implementation through Existing Programs

5c – Plan Maintenance Procedures – Continued Public Involvement

2.3 Stakeholder Outreach and Involvement

Stakeholders are the individuals, agencies, and jurisdictions that have a vested interest in the recommendations of the HMP, including all planning partners. Diligent efforts were made to ensure broad regional, Fort Bend County, and local representation in this planning process. To that end, a comprehensive list of stakeholders was developed with the support of the Planning Partnership. Stakeholder outreach was performed early on and continually throughout the planning process. This HMP update includes information and input provided by these stakeholders where appropriate, as identified in the references.

This subsection discusses the various stakeholders that were invited to participate in the development of this HMP update and how these stakeholders participated and contributed. This summary listing cannot possibly represent the total of stakeholders that were aware of and/or contributed to this HMP update, as outreach efforts were being made, both formally and informally, throughout the process by the many planning partners involved in the effort, and documentation of all such efforts is impossible. Instead, this summary is intended to demonstrate the scope and breadth of the stakeholder outreach efforts made during the plan update process:

- Opened all Planning Partnership meetings to the public and advertised via the County’s HMP website (<https://www.fortbendcountytXHMP.com/>).
- Provided outreach materials to the Planning Partnership to post on their websites and social media platforms and to distribute as printed materials.
- Distributed a stakeholder survey and neighbor survey to provide input regarding vulnerabilities, capabilities, and mitigation projects.
- Posted draft plan on the Fort Bend County HMP website and advertised using social media platforms.
- Email correspondence to regional stakeholders and neighboring communities to review the draft HMP and provide input.



2.3.1 Federal, State, and County Agencies

The following describes the various departments and agencies that were involved during the planning process.

Federal Agencies

Please see Appendix B (Participation Documentation) for further details regarding federal agency participation. All responses to the stakeholder surveys may be found in Appendix D (Outreach).

FEMA Region VI: Provided updated planning guidance and conducted plan review.

Information regarding hazard identification and the risk assessment for this plan update were requested and received or incorporated by reference from the following agencies and organizations:

- National Climatic Data Center (NCDC)
- National Hurricane Center (NHC)
- National Oceanic and Atmospheric Administration (NOAA)
- National Weather Service (NWS)
- Storm Prediction Center (SPC)
- U.S. Army Corps of Engineers (USACE)
- U.S. Census Bureau
- U.S. Department of Agriculture (USDA)
- U.S. Department of Health and Human Services
- U.S. Environmental Protection Agency (USEPA)
- U.S. Geological Survey (USGS)

State Agencies

Please see Appendix B (Participation Documentation) for further details regarding state agency participation. All responses to the surveys may be found in Appendix D (Outreach).

- Texas Division of Emergency Management (TDEM): Administered the planning grant, provided updated planning guidance, and provided review of the draft HMP update.

County Agencies and Departments

Several County agencies and departments were represented on the Planning Partnership and involved in the HMP update planning process. Appendix B (Participation Matrix) provides further details regarding regional and local stakeholder agencies. All responses to the stakeholder surveys are in Appendix D (Outreach). Refer to Section 5 (Capability Assessment) for details on each department and their roles during the HMP update and their overall responsibilities in Fort Bend County.

- Fort Bend County Homeland Security & Emergency Management – Led the planning process on behalf of Fort Bend County, served on the Steering Committee, provided input throughout the planning process, and completed the stakeholder survey.
- Fort Bend County Drainage District – Served on the Steering Committee, provided input throughout the planning process, and completed the stakeholder survey.
- Fort Bend County Parks Department – Completed the stakeholder survey.



2.3.2 Regional and Local Stakeholders

All Planning Partnership meetings were announced on the Fort Bend HMP project website and posted on social media to invite residents and stakeholders. In addition, Planning Partnership representatives emailed regional and local stakeholders requesting their participation in stakeholder sector-specific surveys to provide input on vulnerable assets, capabilities, and current/potential future mitigation projects and invited them to provide input on the draft HMP. Refer to Appendix C (Participation Documentation) for further details regarding regional and local stakeholder agency attendance at meetings and Appendix D for additional details on the public and stakeholder outreach, including responses received to the surveys.

Academia

Schools, universities, and other academic institutions were invited to attend planning process meetings and asked to complete the stakeholder survey. The following academic stakeholders were invited to participate in the planning process:

- Brazos ISD
- Fort Bend CISD
- Houston Community College
- Houston IISD
- Katy Independent School District
- Lamar Consolidated Independent School District
- Needville ISD
- Stafford Municipal School District
- Texas State Technical College
- University of Houston at Sugar Land

Business, Commercial, and Nonprofit Interests

Business and commercial industries in Fort Bend County were invited to take the stakeholder survey and provide input to the planning process. The following businesses, commercial, and nonprofit stakeholders were invited to participate in the planning process:

- American Red Cross Texas Gulf Coast Region
- Arc of Fort Bend
- Arcola/Fresno Club
- Calpine
- East Fort Bend Human Needs Ministry
- Fort Bend Chamber of Commerce
- Fort Bend County EDC
- Fort Bend Herald
- Fort Bend Hope
- Fort Bend Women's Center
- Needville American Legion
- Pinnacle Senior Center Staff
- Rosenberg Housing Authority
- Second Mile



Emergency Services

Local emergency service providers (police, fire, and emergency medical services [EMS]) were invited to take the stakeholder survey and provide input to the planning process, including the following:

- All municipal police, fire, and EMS providers
- Fort Bend County EMS

Healthcare

Healthcare facilities and providers located in Fort Bend County were invited to take the stakeholder survey and provide input to the planning process. The following healthcare stakeholders were invited to take the stakeholder survey and provide input to the planning process:

- Houston Methodist Sugar Land Hospital
- Memorial Hermann Sugar Land Hospital
- OakBend Medical Center

Transportation

County and local highway and public works departments were notified of the stakeholder survey and invited to provide input on the draft HMP. The following transportation stakeholders were invited to take the stakeholder survey and provide input to the planning process:

- Houston Southwest Airport
- Fort Bend County Public Transportation

Utilities

Utility providers in Fort Bend County were invited to take the stakeholder survey and provide input to the planning process, including the following:

- Brazoria County Municipal Utility District No. 22
- Brazoria-Fort Bend Counties Municipal Utility District No. 1
- Brazos River Authority
- Brazos River Authority
- Cinco MUD #7
- Cinco MUD #9
- First Colony LID
- First Colony LID 2
- Fort Bend County LID 10
- Fort Bend County LID 11
- Fort Bend County LID 15
- Fort Bend County LID 17
- Fort Bend County LID 19
- Fort Bend County LID 2
- Fort Bend County LID 6
- Fort Bend County LID 7
- Fort Bend County LID 20



- Fort Bend County MUD # 46
- Fort Bend County MUD #115
- Fort Bend County MUD #128
- Fort Bend County MUD #146
- Fort Bend County MUD #162 – completed the stakeholder survey
- Fort Bend County MUD #195
- Fort Bend County MUD #198
- Fort Bend County MUD #200 – completed the stakeholder survey
- Fort Bend County MUD #207
- Fort Bend County MUD #218
- Fort Bend County MUD #22
- Fort Bend County MUD #42
- Fort Bend-Waller Counties Municipal Utility District No. 3
- Fulshear Water
- Grand Lakes Municipal Utility District No. 1
- Harris-Fort Bend Counties Municipal Utility District No. 1
- Levee Management Services
- Needville Water
- North Mission Glen Municipal Utility District
- Pecan Grove MUD
- Quail Valley Utility District
- Renn Road Municipal Utility District – completed the stakeholder survey
- Si Environmental, LLC – completed the stakeholder survey
- Williams Ranch Municipal Utility District No. 1
- Willow Fork Drainage District

County and Adjacent Municipalities

Fort Bend County has made efforts to keep the counties and surrounding municipalities apprised of the project, invited to take the stakeholder survey, and allowed the opportunity to provide input to this planning process, including the following:

- Houston-Galveston Area Council – completed the stakeholder survey
- Brazos ISD – completed the stakeholder survey
- Harris County Office of Homeland Security and Emergency Management - completed the stakeholder survey
- Waller County Office of Emergency Management – completed the stakeholder survey
- Austin County
- Brazoria County
- Wharton County

2.3.3 Stakeholder Survey Summary

The following provides a summary of the results and feedback received by stakeholders who completed the survey. Feedback was reviewed by the Planning Partnership and integrated where appropriate in the plan.



Stakeholder Survey

The stakeholder survey was designed to help identify general needs for hazard mitigation and resiliency within Fort Bend County from their perspective and identify specific projects that may be included in the mitigation plan. It was distributed to identified stakeholders, including the various County and municipal departments and agencies in the County. As of April 3, 2023, nine stakeholders completed the survey, representing the following sectors: academic/research, emergency services, health and human services public works, and utilities.

Roughly 56% of respondents stated the buildings/facilities/structures they have worked in and/or are responsible for have not been impacted by a hazard. The 33% that experienced damage stated that the structure damage was primarily due to heavy rains and flooding from Hurricane Harvey and Tax Day floods. When asked what areas are most vulnerable to hazards in Fort Bend County, answers included low-lying areas located in floodplains, wastewater/drainage infrastructure, academic institutions, and County utilities and structures.

The respondents stated that they have the following plans in place: Emergency Operations Plan (56%), Continuity of Government Plan (11%), and Continuity of Operations Plan (33%). Approximately 22% selected that they were unsure if there are any plans in place. Two respondents included Emergency Preparedness Plan (EPP) and Drought Contingency Plan in their responses.

Neighbor Survey

The neighbor survey was sent to the surrounding municipalities and counties of Fort Bend County due to their proximity to and because effects of hazard events that impact the County would be similar to that of their neighbors. As of March 28, 2023, two responses have been received from the five neighboring counties (Austin County, Brazoria County, Harris County, Waller County, and Wharton County) identified in the survey: Harris County OEM and Waller County OEM.

Only one response stated that Fort Bend County was involved in their community's comprehensive emergency operations planning (50%) and that they were also involved with the County's comprehensive emergency operation planning (50%). One response highlighted that their community had an Interlocal Agreement for Mutual Aid Assistance with the County. Both neighboring municipalities stated that they were not involved, or were unsure of involvement, in Fort Bend County's Continuity of Operations planning.

Only one response stated that they shared risk and vulnerability assessment mapping with the County (50%) as well as having access to a contact for the County's emergency operation center (50%). The main hazards of concern highlighted for both the neighboring municipalities and the County were flooding, especially of the Brazos River floodplain area; severe storm events, such as tornadoes and hurricanes; and hazardous material spills along major transportation routes, such as Interstate Highway 10.

2.4 Public Participation – Public Involvement

To facilitate better coordination and communication between the Planning Partnership and citizens and to involve the public in the planning process, it was determined that meeting dates/locations will be made available to the public via the Fort Bend HMP website (<https://www.fortbendcountytXHMP.com/>) and social media, and the draft HMP available on the Fort Bend HMP website. The participating partners also feel that



community input on the HMP will increase the likelihood of hazard mitigation becoming one of the standard considerations in the evolution and growth of the County.

The Planning Partnership has made the following efforts toward public participation in the development and review of the HMP:

- A dedicated website was created for this project (<https://www.fortbendcountytXHMP.com/>). The website went live in February 2023 and was continuously updated throughout the planning process. The public website contains a project overview, meeting announcements, draft documents for review and comment, and a link to the public and stakeholder surveys.
- All hazard mitigation Planning Partnership meetings that were open to the public were advertised on the Fort Bend HMP website and various social media accounts. Additional examples of municipal outreach are presented in Appendix D.
- An online natural hazards preparedness public survey was developed to gauge household preparedness that may impact the County and to assess the level of knowledge of tools and techniques to assist in reducing risk and loss of those hazards. The questionnaire asked quantifiable questions about citizen perception of risk, knowledge of mitigation, and support of community programs. The questionnaire also asked several demographic questions to help analyze trends. The questionnaire was available on the public website from November 2022 to May 2023, and further advertised on additional Planning Partnership websites and on printed materials. Responses were collected and provided back to plan participants for consideration in the mitigation action development (153 responses in total). Appendix D summarizes public input received through the website, the online survey, and other sources.
 - Results from the natural hazards preparedness survey were used to inform the action plans of the planning partners. To address the most requested types of projects that residents wanted local and County agencies to be doing, many planning partners included actions to improve and strengthen infrastructure, improve the damage resistance of utilities, buy out flood-prone properties, improve protective structures, and provide greater control over development in high hazard areas.
- All plan participants were encouraged to post links to the project webpage and citizen survey. In addition, all participants were requested to advertise the availability of the project website, citizen survey and stakeholder surveys via local homepage links, and other available public announcement methods (e.g., Facebook, Twitter, email blasts). Refer to Appendix D, which highlights these local efforts.
- Local and County organizations assisted in the distribution of hazard mitigation surveys and outreach efforts to vulnerable populations. The County of Fort Bend regularly collaborates with various organizations to provide ongoing information regarding activities and projects going on in the County, including this Hazard Mitigation Plan. Examples of these local organizations that serve at-risk and socially vulnerable communities include school districts (Brazos, Fort Bend, Houston, Katy, Lamar, Needville, Stafford), the Arc of Fort Bend (assists those with developmental disabilities), Second Mile, East Fort Bend Human Needs Ministry, Fort Bend Hope (assists low to moderate income families, at-risk families, and seniors), and Pinnacle Senior Center (works to assist seniors and promote healthy living for seniors).
- Residents within Fort Bend County were provided opportunity to comment on the draft HMP before submittal to FEMA. The HMP was posted on the HMP public website on July 10, 2023 for review. All Planning Partnership participants were requested to assist with advertising the plan via their websites



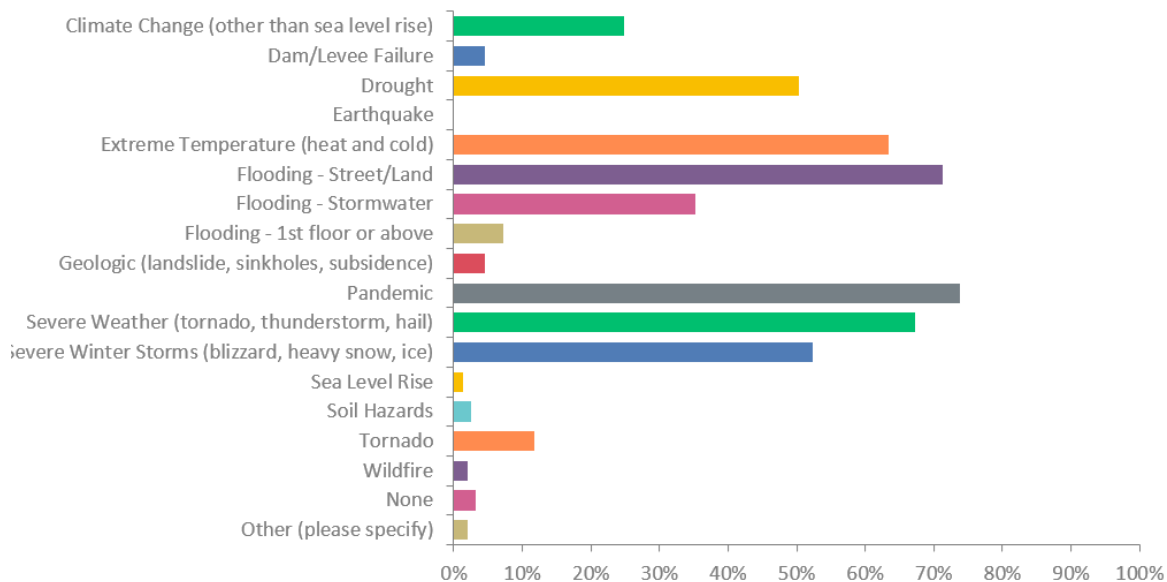
and social media. Public comments received through July 24, 2023 were distributed to Planning Partnership for their consideration.

- Additional examples of public outreach efforts, and results of surveys distributed, are presented in Appendix D (Public and Stakeholder Outreach Documentation).

2.4.1 Public Survey Responses

Demographically, survey respondents were from the City of Richmond, City of Rosenberg, City of Meadows Place, City of Missouri City, City of Simontown, City of Sugar Land, among others. The respondents ages ranged from 18 to over 61 years. The highest percentage being over 61 years of age (35%). The majority of respondents owned their single-family homes and have lived there for over 20 years (44%). In the past five years, the majority of respondents experienced the following hazards within Fort Bend County: pandemic (74%), street/land flooding (71%), severe weather (67%), extreme temperatures (63%), severe winter storms (52%), and drought (50%). Figure 2-1 lists the hazard events that respondents have experienced within Fort Bend County in the last five years. Earthquake received zero responses. Residents were asked about the ways in which they receive their information concerning a natural disaster, such as the hazard events listed in Figure 2-1. The majority of respondents rely on TV news (75%) and social media (71%) to receive information concerning these natural disasters. Over half of the respondents (67%) receive information through the internet and through the Mass Notification System (58%).

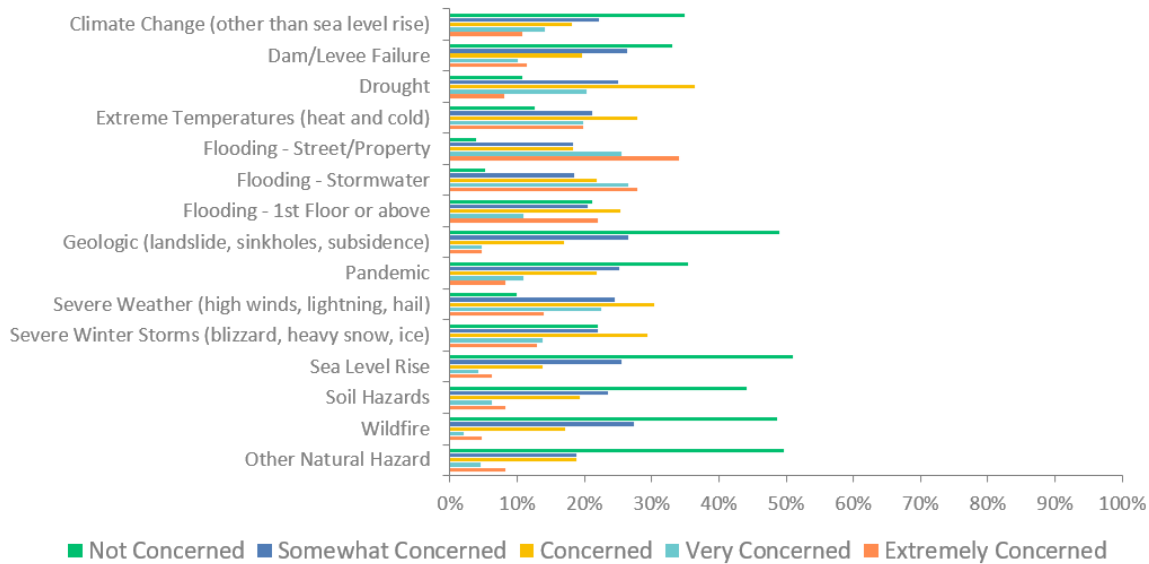
Figure 2-1. Hazards experienced in the last 5 years by respondents



Survey respondents were asked how concerned they were about 17 different hazards, on a scale of “not concerned” to “extremely concerned”. Respondents were most concerned (reporting “concerned”, “very concerned”, or “extremely concerned”) about street/property/stormwater flooding, extreme temperatures (hot/cold), drought, severe weather, and severe winter storms. Figure 2-2 illustrates the remaining hazards with their associated level of concern. Sea level rise had the highest percentage of respondents not concerned (51%).



Figure 2-2. Level of concern for hazards in Fort Bend County



About 72% of respondents’ properties are not located in the floodplain, with 28% within a floodplain. Of the respondents in the floodplain, 10% do not have flood insurance, 34% do have flood insurance, and 57% were unsure. Of the residents whose properties are located outside of the floodplain, 28% do not have flood insurance, 42% have flood insurance, and 30% were unsure. Residents were then asked what types of planning projects are the most important to them within their community in terms of reducing damage and disruption of disasters in Fort Bend County. The scale to evaluate the responses are “not very important” to “very important.” Results for “very important” are listed below:

- (76%) Protecting private property
- (89%) Protecting critical facilities and community lifelines
- (69%) Preventing development in hazard areas(e.g., restrict building in the floodplain)
- (70%) Enhance the functions of natural features (e.g., streams, wetlands)
- (40%) Protecting historical and cultural landmarks
- (85%) Protecting and reducing damage to utilities
- (75%) Strengthening emergency services (e.g., police, fire, EMS)
- (72%) Disclosing natural hazard risks during real estate transactions
- (66%) Promoting cooperation among public agencies, residents, nonprofit organizations, and local businesses

2.5 Incorporation of Existing Plans, Studies, Reports, and Technical Information

The Fort Bend County HMP strives to use the best available technical information, plans, studies, and reports throughout the plan process to support hazard profiling; risk and vulnerability assessment; review and evaluation of mitigation capabilities; and the identification, development, and prioritization of County and local mitigation strategies.



The asset and inventory data used for the risk and vulnerability assessments is presented in Fort Bend County Profile (Section 3). Details of the source of this data, along with technical information on how the data was used to develop the risk and vulnerability assessment, is presented in the Risk Assessment, specifically in Section 4.1 Methodology and Tools, as well as throughout the hazard profiles in Section 4.3 (Hazard Profiles). Further, the source of technical data and information used may be found within the References section.

Plans, reports, and other technical information were identified and provided directly by the Planning Partnership and numerous stakeholders involved in the planning effort as well as through independent research by the planning consultant. The Planning Partnership was tasked with updating the inventory of their planning and regulatory capabilities in Section 9 (Annexes) and providing relevant planning and regulatory documents, as applicable. Relevant documents, including plans, reports, and ordinances were reviewed to identify the following:

- Existing local and regional capabilities
- Needs and opportunities to develop or enhance capabilities, which may be identified within the mitigation strategies
- Mitigation-related goals or objectives considered in the review and update of the overall Goals and Objectives in Section 6 (Mitigation Strategy)
- Proposed, in-progress, or potential mitigation projects, actions, and initiatives to be incorporated into the updated County and local mitigation strategies

The following local regulations, codes, ordinances, and plans were reviewed during this process to develop mitigation planning goals, objectives, and strategies that are consistent across local and regional planning and regulatory mechanisms to accomplish complementary and mutually supportive strategies:

- Master/Comprehensive Plans
- Building Codes
- Zoning and Subdivision Ordinances
- National Flood Insurance Program (NFIP) Flood Damage Prevention Ordinances
- Site Plan Requirements
- Stormwater Management Plans
- Emergency Management and Response Plans
- Land Use and Open Space Plans
- Capital Plans
- State of Texas Hazard Mitigation Plan (2018)
- Fort Bend County Hazard Mitigation Plan Update (2018)

2.6 Integration With Existing Planning Mechanisms and Programs

Effective mitigation is achieved when hazard awareness and risk management approaches and strategies become an integral part of public activities and decision-making. Within Fort Bend County there are many existing plans and programs that support hazard risk management, and thus, it is critical that this HMP integrate and coordinate with and complement those mechanisms.

Section 5 (Capability Assessment) provides a summary and description of the existing plans, programs, and regulatory mechanisms at all levels of government (federal, state, county, and local) that support hazard mitigation within Fort Bend County. Within each annex in Section 9, the counties, cities, and entities identified



how they integrate hazard risk management into their existing planning, regulatory, and operational/administrative framework (integration capabilities) and how they intend to promote this integration (integration actions). In addition, as noted above, a summary of the plan reviews indicating relevant goals and mitigation actions is provided in Appendix E. This information provided input to identify integration of mitigation concepts into the operations of the County.

A further summary of these continued efforts to develop and promote a comprehensive and holistic approach to hazard risk management and mitigation is presented in Section 7 (Plan Maintenance).

2.7 Continued Public Involvement

Fort Bend County is committed to the continued involvement of the public in the hazard mitigation process. This HMP update will be made available for review on the HMP public website. Each jurisdiction's elected official shall be responsible for receiving, tracking, and filing public comments regarding this HMP update. Further details regarding continued public involvement are provided in Section 7 (Plan Maintenance).

A notice regarding annual updates of the plan and the location of plan copies will be publicized annually after the annual plan evaluation meeting (refer to Section 7 – Plan Maintenance) and posted on the public website at <https://www.fortbendcountytXHMP.com/>.

The public will have an opportunity to comment on the HMP update as a part of the annual mitigation planning evaluation process and the next five-year mitigation plan update. The HMP Coordinator (currently Greg Babst, Fort Bend County Deputy Emergency Management Coordinator) is responsible for coordinating the plan evaluation portion of the meeting, soliciting feedback, collecting, and reviewing the comments, and ensuring their incorporation in the 5-year plan update as appropriate; however, members of the Planning Partnership will assist the HMP Coordinator. Additional meetings may also be held as deemed necessary. The purpose of these meetings would be to provide the public an opportunity to express concerns, opinions, and ideas about the HMP.

After completion of this HMP update, implementation and ongoing maintenance will continue to be a function of the Planning Partnership. The Planning Partnership will review the plan and accept public comment as part of an annual review and as part of five-year mitigation plan updates.

A notice regarding annual updates of the plan will be publicized annually after the HMP Committee's annual evaluation and posted on the public website.

Greg Babst has been identified as the ongoing HMP Coordinator (see Section 7) and is responsible for receiving, tracking, and filing public comments regarding this HMP update. Contact information is:

Mailing Address: Fort Bend County Homeland Security and Emergency Management
307 Fort St., Richmond, TX 77469

Contact Name: Greg Babst

Email Address: Gregory.Babst@fortbendcountytX.gov

Phone Number: (281) 238-3428