

ARANSAS COUNTY HAZARD MITIGATION ACTION PLAN UPDATE

2025 UPDATE

July 10, 2025 - July 9, 2030

Mitigating Risk for a Safe, Secure, Sustainable Future



H2O
PARTNERS

For more information, visit our website at:

<https://www.aransascountytexas.gov/main/>

Written comments should be forwarded to:

H2O Partners, Inc.

P. O. Box 160130

Austin, Texas 78716

info@h2opartnersusa.com

www.h2opartnersusa.com



FEMA

July 10, 2025

Jennifer Charlton-Faia, Deputy State Hazard Mitigation Officer
Texas Division of Emergency Management
P.O. Box 285
Del Valle, TX 78617-9998

RE: Approval of the Aransas County, Texas Multi-Jurisdiction Hazard Mitigation Plan

Dear Ms. Charlton-Faia:

This office has concluded its review of the referenced plan, and we are pleased to provide our approval of this plan in meeting the criteria set forth by 44 CFR § 201.6. FEMA approval does not include the review or approval of content that exceeds the applicable FEMA mitigation planning requirements. By receiving this approval, eligibility for the Hazard Mitigation Assistance Grants will be ensured for five years from the date of this letter, expiring on July 9, 2030.

This approval does not demonstrate approval of projects contained in the plan. This office has provided the enclosed Local Hazard Mitigation Planning Tool with reviewer's comments, to further assist the community in refining the plan going forward. Please advise the referenced community of this approval.

If you have any questions, please contact David Freeborn, HM Community Planner, at (940) 268-7602.

Sincerely,

Roberto E. Ramirez
Acting Chief, Risk Analysis Branch

Enclosures: Approved Participants
cc: Anne Lehnick

Approved Participants

Attached is the list of approved participating governments included in the July 10, 2025 review of the referenced Hazard Mitigation plan.

Community Name
1) Aransas County
2) Aransas County Navigation District
3) Fulton town
4) Rockport city
5) Rockport - Fulton ISD

SECTION 1 – INTRODUCTION

Background.....	1
Scope and Participation	2
Purpose	2
Authority.....	3
Summary of Sections	3

SECTION 2 – PLANNING PROCESS

Plan Preparation and Development.....	1
Review and Incorporation of Existing Plans	8
Timeline for Implementing Mitigation Actions	12
Public and Stakeholder Involvement	13

SECTION 3 – COUNTY PROFILE

Overview.....	1
Population and Demographics	4
Population Growth	6
Economic Impact	7
Natural, Cultural, and Historic Resources.....	8
Existing Land Use and Development Trends	11
Changes in Vulnerability	12
Future Growth and Development	12

SECTION 4 – RISK OVERVIEW

Hazard Description	1
Disaster Declaration History	4
Natural Hazards and Climate Change	6
Overview of Hazard Analysis	8
Hazard Ranking	10
Risk Assessment Resources and Data Limitations	10

SECTION 5 – COASTAL EROSION

Hazard Description	1
Location	1
Extent	4

Historical Occurrences	5
Probability of Future Events	6
Climate Change Considerations	7
Vulnerability and Impact	7

SECTION 6 – DROUGHT

Hazard Description	1
Location	1
Extent	4
Historical Occurrences	5
Probability of Future Events	7
Climate Change Considerations	7
Vulnerability and Impact	7

SECTION 7 – EARTHQUAKE

Hazard Description	1
Location	2
Extent	4
Historical Occurrences	7
Probability of Future Events	8
Climate Change Considerations	9
Vulnerability and Impact	9

SECTION 8 – EXTREME HEAT

Hazard Description	1
Location	1
Extent	1
Historical Occurrences	4
Probability of Future Events	7
Climate Change Considerations	8
Vulnerability and Impact	8

SECTION 9 – FLOOD

Hazard Description	1
Location	1

Extent	7
Historical Occurrences	9
Probability of Future Events	12
Climate Change Considerations	12
Vulnerability and Impact	13
NFIP Participation	19
NFIP Compliance and Maintenance	20
Repetitive Loss	21

SECTION 10 – HAIL

Hazard Description	1
Location	1
Extent	2
Historical Occurrences	3
Probability of Future Events	6
Climate Change Considerations	6
Vulnerability and Impact	7

SECTION 11 – HURRICANE / TROPICAL STORM

Hazard Description	1
Location	1
Extent	2
Historical Occurrences	2
Probability of Future Events	9
Climate Change Considerations	9
Vulnerability and Impact	9

SECTION 12 – LIGHTNING

Hazard Description	1
Location	1
Extent	1
Historical Occurrences	2
Probability of Future Events	4
Climate Change Considerations	5

Vulnerability and Impact	5
--------------------------------	---

SECTION 13 – THUNDERSTORM WIND

Hazard Description	1
Location	1
Extent	2
Historical Occurrences	3
Probability of Future Events	8
Climate Change Considerations	8
Vulnerability and Impact	8

SECTION 14 – TORNADO

Hazard Description	1
Location	1
Extent	2
Historical Occurrences	4
Probability of Future Events	8
Climate Change Considerations	8
Vulnerability and Impact	8

SECTION 15 – WILDFIRE

Hazard Description	1
Location	2
Extent	7
Historical Occurrences	15
Probability of Future Events	19
Climate Change Considerations	19
Vulnerability and Impact	20

SECTION 16 – WINTER STORM

Hazard Description	1
Location	3
Extent	3
Historical Occurrences	5
Probability of Future Events	7

Climate Change Considerations	7
Vulnerability and Impact	8

SECTION 17 – MITIGATION STRATEGY

Mitigation Goals	1
Goal 1	1
Goal 2	1
Goal 3	2
Goal 4	2
Goal 5	2
Goal 6	2
Goal 7	3

SECTION 18 – PREVIOUS ACTIONS

Summary	1
All Participating Jurisdictions	2
Unincorporated Aransas County	19
Town of Fulton	49
City of Rockport	53

SECTION 19 – MITIGATION ACTIONS

Summary	1
Aransas County	3
Town of Fulton	26
City of Rockport	31
Rockport – Fulton Independent School District (ISD)	49
Aransas County Navigation District (ACND)	53

SECTION 20 – PLAN MAINTENANCE

Plan Maintenance Procedures	1
Incorporation	1
Monitoring and Evaluation	4
Updating	5
Continued Public Involvement	6

APPENDIX A – HUMAN-CAUSED HAZARDS
APPENDIX B – PLANNING TEAM
APPENDIX C – PUBLIC SURVEY RESULTS
APPENDIX D – CRITICAL FACILITIES
APPENDIX E – MEETING DOCUMENTATION
APPENDIX F – CAPABILITY ASSESSMENT
APPENDIX G – STATE AND FEDERAL FUNDING OPPORTUNITIES
ADOPTION – RESOLUTIONS



SECTION 1 INTRODUCTION

SECTION 1: INTRODUCTION

Background.....	1
Scope	2
Purpose	2
Authority.....	3
Summary of Sections.....	3

BACKGROUND

Aransas County is located on the Gulf Coast of Texas, northeast of Corpus Christi. The largest city and county seat, Rockport, is approximately 30 miles northeast of Corpus Christi. Calhoun County borders the northeastern portion of the county, Refugio County is adjacent to the northwest, San Patricio County is to the southwest, Nueces County is adjacent to the south, and the Gulf of Mexico is to the east.

Texas is prone to extremely heavy rains and flooding, with half of the world record rainfall rates (48 hours or less).¹ While flooding is a well-known risk, Aransas County is susceptible to a wide range of natural hazards, including but not limited to tornadoes, extreme heat, wildfire, and drought. These life-threatening hazards can destroy property, disrupt the economy, and lower the overall quality of life for individuals.

While it is impossible to prevent an event from occurring, the impacts to people and property can be minimized through effective mitigation. The Federal Emergency Management Agency (FEMA) defines mitigation as *sustained actions taken to reduce or eliminate long-term risk to people and property from hazards and their effects*.² Communities participate in hazard mitigation by developing hazard mitigation plans. The Texas Division of Emergency Management (TDEM) is required to review the plan, and FEMA has the authority to review and approve hazard mitigation plans through the Disaster Mitigation Act of 2000.

The Disaster Mitigation Act requires that hazard mitigation plans be reviewed and revised every five years to maintain eligibility for Hazard Mitigation Assistance (HMA) grant funding. In 2020, Aransas County developed their previous Hazard Mitigation Action Plan (HMAP) to be specific to Unincorporated Aransas County, the City of Aransas Pass, the Town of Fulton, and the City of Rockport, and the Aransas County Navigation District.

FEMA approved the previous Aransas County Texas Multi-jurisdictional HMAP in 2020, which then was set to expire in 2025. Therefore, the county began the process of developing a Hazard Mitigation Plan Update in order to maintain eligibility for grant funding. The HMAP Update planning process provided an opportunity for Aransas County to evaluate successful mitigation actions and explore opportunities to avoid future disaster loss.

Aransas County selected H2O Partners, Inc. to write and develop the 2025 HMAP Plan Update, hereinafter titled: “Aransas County Hazard Mitigation Action Plan Update 2025: Maintaining a Safe, Secure, and Sustainable Community” (Plan Update). This is a multi-jurisdictional plan; the participating jurisdictions include:

¹ Source: <http://www.floodsafety.com/texas/regional-info/san-antonio-flooding/>

² Source: <http://www.fema.gov/hazard-mitigation-planning-resources>

SECTION 1: INTRODUCTION

- Aransas County
 - Town of Fulton
 - City of Rockport
 - Rockport - Fulton ISD*
 - Aransas County Navigation District
- *Denotes new Plan participant*

The City of Aransas Pass chose to participate in the 2024 San Patricio County Hazard Mitigation Plan and will, therefore, not be a participating jurisdiction in this Plan Update.

Hazard mitigation activities are an investment in a community's safety and sustainability. It is widely accepted that the most effective hazard mitigation measures are implemented at the local government level, where decisions on the regulation and control of development are ultimately made. A comprehensive review of a hazard mitigation plan addresses vulnerabilities to hazards that exist today and in the foreseeable future. Therefore, it is essential that a plan identify projected patterns of how future development will increase or decrease a community's overall hazard vulnerability.

SCOPE

The focus of the Plan Update is to identify activities to mitigate hazards classified as “high” or “moderate” risk, as determined through a detailed hazard risk assessment conducted for Aransas County and the participating jurisdictions. The hazard classification enables the participating jurisdictions to prioritize mitigation actions based on hazards that can present the greatest risk to lives and property in the geographic scope.

PURPOSE

The Plan Update was prepared by Aransas County, participating jurisdictions, and H2O Partners, Inc. The purpose of the Plan Update is to protect people and structures and to minimize the costs of disaster response and recovery. The goal of the Plan Update is to minimize or eliminate long-term risks to human life, property, operations, and the environment from known hazards by identifying risks and implementing cost-effective hazard mitigation actions. The planning process is an opportunity for participating jurisdictions within Aransas County, stakeholders, and the general public to evaluate and develop successful hazard mitigation actions to reduce future risk of loss of life and damage to property resulting from a disaster in Aransas County.

The Mission Statement of the Plan Update is *“Maintaining a secure and sustainable future through the revision and development of targeted hazard mitigation actions to protect life and property.”*

Participating jurisdictions within Aransas County and planning participants identified 12 natural hazards to be addressed by the Plan Update. The specific goals of the Plan Update are to:

- Provide a comprehensive update to the 2020 HMAP;
- Minimize disruption to participating jurisdictions within Aransas County following a disaster;
- Streamline disaster recovery by articulating actions to be taken before a disaster strikes to reduce or eliminate future damage;
- Demonstrate a firm local commitment to hazard mitigation principles;
- Serve as a basis for future funding that may become available through grants and technical assistance programs offered by the State or Federal government. The Plan will enable participating jurisdictions within Aransas County to take advantage of rapidly developing mitigation grant opportunities as they arise; and

SECTION 1: INTRODUCTION

- Ensure that participating jurisdictions within Aransas County maintain eligibility for the full range of future Federal disaster relief.

AUTHORITY



The Plan is tailored specifically for participating jurisdictions within Aransas County and plan participants, including Planning Team members, stakeholders, and the general public who participated in the Plan Update development process. The Plan complies with all requirements promulgated by the Texas Division of Emergency Management (TDEM) and all applicable provisions of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, Section 104 of the Disaster Mitigation Act of 2000 (DMA 2000) (P.L. 106-390), and the Bunning-Bereuter-Blumenauer Flood Insurance Reform Act of 2004 (P.L. 108-264), which amended the National Flood Insurance Act (NFIA) of 1968 (42 U.S.C. 4001, et al). Additionally, the Plan complies with the Interim Final Rules for the Hazard Mitigation Planning and Hazard Mitigation Grant Program (44 CFR, Part 201), which specify the criteria for approval of mitigation plans required in Section 322 of the DMA 2000 and standards found in FEMA’s “Local Mitigation Planning Policy Guide” (April 2023), and the “Local Mitigation Planning Handbook” (May 2023).

SUMMARY OF SECTIONS

Sections 1 and 2 of the Plan Update outline the Plan’s purpose and development, including how Planning Team members, stakeholders, and members of the general public were involved in the planning process. Section 3 profiles Aransas County’s population and economy.

Sections 4 through 16 present a hazard overview and information on individual natural hazards in the planning area. For each hazard, the Plan Update presents a description of the hazard, a list of historical hazard events, and the results of the vulnerability and risk assessment process.

Section 17 presents hazard mitigation goals and objectives. Section 18 gives an analysis for the previous actions and Section 19 presents hazard mitigation actions for Aransas County and the participating jurisdictions. Section 20 identifies Plan maintenance mechanisms.

Human-caused hazards are included in Appendix A. The list of Planning Team members and stakeholders is located in Appendix B. Public survey results are analyzed and presented in Appendix C. Appendix D contains a detailed list of critical facilities for the area. Appendix E contains information regarding workshops and meeting documentation. Capability Assessment results for Aransas County are in Appendix F. Appendix G includes State and Federal Funding Opportunities.³

³ Information contained in some of these appendices is exempt from public release under the Freedom of Information Act (FOIA).



SECTION 2

PLANNING PROCESS

SECTION 2: PLANNING PROCESS

Plan Preparation and Development.....	1
Overview of the Plan	1
Planning Team	2
Planning Process.....	6
Kickoff Workshop.....	6
Hazard Identification.....	6
Risk Assessment	7
Mitigation Review and Development	7
Review and Incorporation of Existing Plans	8
Review	8
Incorporation of Existing Plans into the HMAP Process	8
Incorporation of the HMAP into Other Planning Mechanisms.....	10
Plan Review and Plan Update	12
Timeline for Implementing Mitigation Actions	12
Public and Stakeholder Involvement	13
Underserved Communities / Vulnerable Populations	13
Stakeholder Involvement	14
Public Meetings	18
Public Participation Survey	19

PLAN PREPARATION AND DEVELOPMENT

Hazard mitigation planning involves coordination with various constituents and stakeholders to develop a more disaster-resistant community. Section 2 provides an overview of the planning process, including the identification of key steps and a detailed description of how stakeholders and the public were involved.

OVERVIEW OF THE PLAN

Aransas County hired H2O Partners, Inc. (Consultant Team) to provide technical support and oversee the development of the Aransas County Hazard Mitigation Action Plan Update 2025. The Consultant Team used the FEMA “Local Mitigation Planning Policy Guide” (April 2023) and the “Local Mitigation Planning Handbook” (May 2023) to develop the Plan Update. The overall planning process is shown in Figure 2-1 below.

SECTION 2: PLANNING PROCESS

Figure 2-1. Mitigation Planning Process



Aransas County, the participating jurisdictions, and the Consultant Team met in January 2025 to begin organizing resources, identify Planning Team members, and conduct a Capability Assessment.

PLANNING TEAM

Key members of H2O Partners, Inc. developed the Plan Update in conjunction with the Planning Team. The Planning Team was established using a direct representation model. Some of the responsibilities of the Planning Team included: completing Capability Assessment surveys, providing input regarding the identification of hazards, identifying mitigation goals, and developing mitigation strategies. An Executive Planning Team consisting of key personnel involved in hazard mitigation activities from each of the participating jurisdictions within Aransas County, shown in Table 2-1, was formed to coordinate planning efforts and request input and participation in the planning process.

Table 2-2 reflects the Advisory Planning Team, consisting of additional representatives from area organizations and departments from the participating jurisdictions within Aransas County that participated throughout the planning process. All Executive and Advisory Planning Team members are involved in hazard mitigation activities; those with the authority to regulate development are identified with an asterisk next to their title.

Table 2-1. Executive Planning Team

ORGANIZATION / DEPARTMENT	TITLE
Aransas County – Administration	County Auditor
Aransas County – Administration	Development Services Coordinator
Aransas County – Emergency Management	Emergency Management Coordinator
Fulton, Town of – Development Services	Director of Operations
Rockport, City of – Public Works	GIS Specialist
Rockport-Fulton ISD – Administration	Director of Operations
Aransas County Navigation District – Administration	Harbor Master

SECTION 2: PLANNING PROCESS

Table 2-2. Advisory Planning Team

ORGANIZATION / DEPARTMENT	TITLE
Aransas County – Administration	Assistant Auditor / Grant Administrator
Aransas County – Administration	County Clerk
Aransas County – Administration	Administrative Assistant / Public Information Officer
Aransas County – Emergency Management	Assistant Emergency Management Coordinator
Aransas County – Environmental Health	Code Enforcement – Precinct 1 and 2
Aransas County – Environmental Health	Code Enforcement – Precinct 3 and 4
Aransas County – Environmental Health	Director
Aransas County – Government	County Judge *
Aransas County – Maintenance	Director
Aransas County – Road & Bridge	County Engineer
Aransas County – Sheriff	Sheriff
Aransas County - Administration	GIS Specialist
Fulton, Town of – Administration	City Secretary
Fulton, Town of – Development Services	Building Official *
Fulton, Town of – Finance	Comptroller
Fulton, Town of – Government	Mayor *
Fulton, Town of – Police	Police Chief
Rockport, City of – Administration	City Manager *
Rockport, City of – Administration	City Secretary
Rockport, City of – Administration	Grant Administrator
Rockport, City of – Building & Development	Chief Building Official *
Rockport, City of – Building & Development	Director *
Rockport, City of – Government	Mayor *
Rockport, City of – Parks & Recreation	Director of Operations
Rockport, City of – Police	Police Chief
Rockport, City of – Police	Lieutenant

SECTION 2: PLANNING PROCESS

ORGANIZATION / DEPARTMENT	TITLE
Rockport, City of – Public Works	Director of Operations
Rockport-Fulton ISD – Administration	Superintendent
Rockport-Fulton ISD – Police	District Police Officer
Rockport-Fulton ISD – Police	Lieutenant
Aransas County Navigation District – Administration	Executive Administrator

Additionally, a Stakeholder Group was invited via email to participate in the planning process by attending meetings, commenting on draft versions of the Plan, and/or by providing data to inform the planning process. The Consultant Team, Planning Teams, and Stakeholder Group coordinated to identify mitigation goals and develop mitigation strategies and actions for the Plan. Appendix B provides a complete listing of all participating Planning Team members and stakeholders from participating jurisdictions within Aransas County by organization, title, and stakeholder type. Stakeholder involvement is discussed further below.

Based on the results of completed Capability Assessments, participating jurisdictions within Aransas County described methods for achieving future hazard mitigation measures by expanding existing capabilities. For example, each jurisdiction has an opportunity to identify opportunities for cross-training or increasing the technical expertise of staff by attending free training available through FEMA and the Texas Division of Emergency Management (TDEM) by monitoring classes and availability through TDEM Training Division Learning Management Site (LMS) (<https://tdem.texas.gov/preparedness/training>). In addition, each jurisdiction can identify Planning Team members with the authority to monitor the Plan and identify grant funding opportunities for expanding staff. Other options for improving capabilities for each jurisdiction include the following:

Table 2-3 Opportunities for Improving and Expanding Existing Capabilities by Jurisdiction

JURISDICTION	OPPORTUNITIES
Aransas County	- Integrate risk information from HMAP into future updates to Capital Improvement Plan. - Develop a Comprehensive Plan based on information in the risk assessment and identified mitigation projects within the HMAP. - Develop a Community Wildfire Protection Plan based on information in the risk assessment and identified mitigation projects within the HMAP. - Review current floodplain ordinances for opportunities to increase resiliency such as modifying permitting or building codes. - Review current land use and building ordinances that will require all new developments to conform to the highest mitigation standards.

SECTION 2: PLANNING PROCESS

JURISDICTION	OPPORTUNITIES
Town of Fulton	- Integrate risk information from HMAP into future updates to Capital Improvement Plan. - Integrate risk information from HMAP into future updates to Comprehensive Plan. - Develop a Community Wildfire Protection Plan based on information in the risk assessment and identified mitigation projects within the HMAP. - Review current floodplain ordinances for opportunities to increase resiliency such as modifying permitting or building codes. - Review current land use and building ordinances that will require all new developments to conform to the highest mitigation standards.
City of Rockport	- Integrate risk information from HMAP into future updates to Capital Improvement Plan. - Integrate risk information from HMAP into future updates to Comprehensive Plan. - Develop a Community Wildfire Protection Plan based on information in the risk assessment and identified mitigation projects within the HMAP. - Review current floodplain ordinances for opportunities to increase resiliency such as modifying permitting or building codes. - Review current land use and building ordinances that will require all new developments to conform to the highest mitigation standards.
Rockport – Fulton ISD	- Integrate risk information from HMAP into future updates to Capital Improvement Plan. - Develop an all-hazards outreach program in coordination with Aransas County, cities, and other participating jurisdictions.
Aransas County Navigation District	- Integrate risk information from HMAP into future updates to Capital Improvement Plan. - Develop a Comprehensive Plan based on information in the risk assessment and identified mitigation projects within the HMAP. - Develop a multi-jurisdictional Stormwater Management Plan based on information in the risk assessment and identified mitigation projects within the HMAP.

Sample hazard mitigation actions developed with similar hazard risk were shared at the meetings. These important discussions resulted in the development of multiple mitigation actions that are included in the Plan Update to further mitigate risk from natural hazards in the future.

The Planning Team developed hazard mitigation actions for mitigating risk from all of the hazards including potential flood, tornado, and wildfire events. These actions include, but are not limited to, implementing an education and awareness program to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities and property damage, implementing a process for digitizing vital records and off-site storage, and retrofitting critical facilities to hazard resistant levels.

SECTION 2: PLANNING PROCESS

PLANNING PROCESS

The process used to prepare the Plan Update followed the four major steps included at Figure 2-1. After the Planning Team was organized, a capability assessment was developed and distributed at the Kickoff Workshop. Hazards were identified and assessed, and results associated with each of the hazards were provided at the Risk Assessment Workshop. Based on Aransas County's identified vulnerabilities, specific mitigation strategies were discussed and developed at the Mitigation Strategy Workshop. Finally, Plan maintenance and implementation procedures were developed and are included in Section 20. Participation of Planning Team members, stakeholders, and the public at each of the workshops is documented in Appendix E.

At the Plan development workshops held throughout the planning process described herein, the following factors were taken into consideration:

- The nature and magnitude of risks currently affecting the community;
- Hazard mitigation goals to address current and expected conditions;
- Whether current resources will be sufficient for implementing the Plan Update;
- Implementation problems, such as technical, political, legal, and coordination issues that may hinder development;
- Anticipated outcomes; and
- How participating jurisdictions within Aransas County, agencies, and partners will participate in implementing the Plan Update.

KICKOFF WORKSHOP

The Kickoff Workshop was held on February 11, 2025, at the City of Rockport Service Center. The initial workshop informed participating officials and key department personnel about how the planning process pertained to their distinct roles and responsibilities and engaged stakeholder groups that focus on vulnerable populations and underserved communities including, but not limited to, public libraries, economic development agencies, local colleges, and surrounding communities. In addition to the kickoff presentation, participants received the following information:

- Project overview regarding the planning process;
- Public survey access information;
- Hazard Ranking form; and
- Capability Assessment survey for completion.

A risk ranking exercise was conducted at the Kickoff Workshop to get input from the Planning Team and stakeholders pertaining to various risks from a list of natural hazards affecting the planning area. Each participant at the Kickoff Workshop was provided a risk ranking sheet that asked participants to rank hazards in terms of the probability or frequency of occurrence, extent of spatial impact, and the magnitude of impact. The results of the ranking sheets identified unique perspectives on varied risks throughout the planning area. The assessments were also used to set priorities for hazard mitigation actions based on potential loss of lives and dollar losses.

HAZARD IDENTIFICATION

At the Kickoff Workshop, and through e-mail and phone correspondence, the Planning Team conducted preliminary hazard identification. The Planning Team, in coordination with the Consultant Team, reviewed and considered a full range of natural hazards. Once identified, the teams narrowed the list to significant hazards by reviewing hazards affecting the area, the 2023

SECTION 2: PLANNING PROCESS

State of Texas Hazard Mitigation Plan, and initial study results from reputable sources such as federal and state agencies. Based on this initial analysis, the teams identified a total of 12 natural hazards which pose a significant threat to the planning area.

RISK ASSESSMENT

An initial risk assessment for participating jurisdictions within Aransas County was completed in February 2025 and results were presented to Planning Team members at the Risk Assessment Workshop held on March 6, 2025, in conjunction with the Mitigation Strategy Workshop, at the City of Rockport Service Center. At the workshop, the characteristics and consequences of each hazard were evaluated to determine the extent to which the planning area would be affected in terms of potential danger to property and citizens.

Property and crop damages were estimated by gathering data from the National Centers for Environmental Information (NCEI) and the National Oceanic and Atmospheric Administration (NOAA). The assessment also examined the impact of various hazards on the built environment, including general building stock, critical facilities, lifelines, and infrastructure. The resulting risk assessment profiled hazard events provided information on previous occurrences, estimated probability of future events, and detailed the spatial extent and magnitude of impact on people and property. Following the risk assessment workshop past event data from NCEI is provided to the Planning Team for their review and assistance in identifying significant events. A hazard profile and vulnerability analysis for each of the hazards can be found in Sections 4 through 16.

MITIGATION REVIEW AND DEVELOPMENT

Developing the Mitigation Strategy for the Plan involved identifying mitigation goals and new mitigation actions. A Mitigation Strategy Workshop was held on March 6, 2025, in conjunction with the Risk Assessment Workshop, at the City of Rockport Service Center. In addition to the Planning Team, stakeholder groups were invited to attend the workshop. Regarding hazard mitigation actions, workshop participants emphasized the desire for flood and extreme heat projects. Additionally, the participating jurisdictions were proactive in identifying mitigation actions to lessen the risk of all the identified hazards included in the Plan Update.

An inclusive and structured process was used to develop and prioritize new hazard mitigation actions for the Plan Update. The prioritization method was based on FEMA's STAPLEE criteria and included social, technical, administrative, political, legal, economic, and environmental considerations. As a result, each Planning Team member assigned an overall priority to each hazard mitigation action. The overall priority of each action is reflected in the hazard mitigation actions found in Section 19.

Planning Team members then developed action plans identifying proposed actions, costs and benefits, the responsible organization(s), effects on new and existing buildings, implementation schedules, priorities, and potential funding sources.

Specifically, the process involved:

- Listing optional hazard mitigation actions based on information collected from previous plan reviews, studies, and interviews with federal, state, and local officials. Workshop participants reviewed the optional mitigation actions and selected actions that were most applicable to their area of responsibility, cost-effective in reducing risk, easily implemented, and likely to receive institutional and community support.

SECTION 2: PLANNING PROCESS

- Workshop participants inventoried federal and state funding sources that could assist in implementing the proposed hazard mitigation actions. Information was collected, including the program name, authority, purpose of the program, types of assistance and eligible projects, conditions on funding, types of hazards covered, matching requirements, application deadlines, and a point of contact.
- Planning Team members considered the benefits that would result from implementing the hazard mitigation actions compared to the cost of those projects. Although detailed cost-benefit analyses were beyond the scope of the Plan Update, Planning Team members utilized economic evaluation as a determining factor between hazard mitigation actions.
- Planning Team members then selected and prioritized mitigation actions.

Hazard mitigation actions identified in the process were made available to the Planning Team for review. The draft Plan Update was maintained on file by Aransas County and participating jurisdictions, and was made available to the general public for review.

REVIEW AND INCORPORATION OF EXISTING PLANS

REVIEW

Background information utilized during the planning process included various studies, plans, reports, and technical information from sources such as FEMA, the United States Army Corps of Engineers (USACE), the U.S. Fire Administration, the National Oceanic and Atmospheric Administration (NOAA), the Texas Water Development Board (TWDB), the Texas Commission on Environmental Quality (TCEQ), the Texas State Data Center, the Texas A&M Forest Service, the Texas Division of Emergency Management (TDEM), and local hazard assessments and plans. Section 4 and the hazard-specific sections of the Plan (Sections 5-16) summarize the relevant background information.

Specific background documents, including those from FEMA, provided information on hazard risk, hazard mitigation actions currently being implemented, and potential mitigation actions. Previous hazard events, occurrences, and descriptions were identified through NOAA's National Centers for Environmental Information (NCEI). Results of past hazard events were found through searching the NCEI. The USACE studies were reviewed for their assessment of risk and potential projects in the region. Information from the State Demographer was reviewed for population and other projections and included in Section 3 of the Plan. Data from the Texas A&M Forest Service was used to appropriately rank the wildfire hazard, and to help identify potential grant opportunities. Materials from FEMA and TDEM were reviewed for guidance on Plan Update development requirements.

INCORPORATION OF EXISTING PLANS INTO THE HMAP PROCESS

A Capability Assessment was completed by key departments from the participating jurisdictions within Aransas County which provided information pertaining to existing plans, policies, ordinances, and regulations to be integrated into the goals and objectives of the Plan Update. The relevant information was included in a master Capability Assessment, Appendix F.

Existing projects and studies were utilized as a starting point for discussing hazard mitigation actions among Planning and Consultant Team members. For example, Aransas County retrofitted residences for flooding and wind through mitigation reconstruction, rehabilitated roads throughout the county, such as Loop 1781, and completed various Master Plan drainage improvement

SECTION 2: PLANNING PROCESS

projects. Table 2-4 below identifies additional activities completed and underway within the planning area. For a comprehensive list of mitigation activities and actions from the previous 2020 Aransas County Texas Multi-jurisdictional HMAP, please refer to Section 18.

Table 2-4 Completed Activities within the Planning Area

JURISDICTION (Responsible Entity)	PROJECT TITLE	COST	STATUS
Aransas County	Holiday Beach Streets & Drainage	\$5,247,070.00	Completed
Aransas County	East Linden Streets & Drainage	\$3,520,410.00	Completed
Aransas County	Rattlesnake Point Road Streets & Drainage	\$6,253,867.00	Completed
Aransas County	Ruby Allen Streets & Drainage / Traylor Ditch	\$4,574,159.00	Completed
Aransas County	Community Building / Plaza Parking Lot	\$5,000,000.00	Construction Underway
Aransas County	Rockport-Fulton Volunteer Fire Dept. Radio Tower	\$448,494.00	Completed
Aransas County	Bayshore Drive Shoreline Resiliency Erosion Mitigation	\$2,400,000.00	Completed
Aransas County	Aransas County: Countywide Master Drainage Plan	\$1,875,249.00	Pending Contract Approval
Aransas County	Lamar Streets & Drainage Project:	\$4,683,207.00	Pending Contract Approval
Aransas County	Aransas County Sheriff's Department	\$1,048,860.00	Pending Contract Approval
Town of Fulton	Broadway Street Improvements	\$496,578.00	Pending Contract Approval
Town of Fulton	Cactus Street Improvements	\$513,370.00	Pending Contract Approval
Town of Fulton	Chaparral Street Improvements	\$460,806.00	Pending Contract Approval
Town of Fulton	Mesquite Street Improvements	\$406,461.00	Pending Contract Approval
Town of Fulton	Myrtle Street Improvements	\$328,541.00	Pending Contract Approval
Town of Fulton	Palmetto Street Improvements	\$468,428.00	Pending Contract Approval

The current Flood Insurance Study (FIS) as well as the current effective Flood Insurance Rate Maps (FIRMs), effective date December 20, 2019, were used in the flood hazard risk assessment (Section 9). The FIRM panels (map ID 48007C panels 25-400) show the areas throughout Aransas County at greater risk of flooding. The FIS report contains detailed flood elevation data in flood profiles and data tables and is utilized in determining extent.

Additionally, policies and ordinances were reviewed by several of the participating jurisdictions. Other plans were reviewed, such as Capital Improvement Plans and Emergency Operations

SECTION 2: PLANNING PROCESS

Plans, to identify any additional mitigation actions. Finally, the 2023 State of Texas Hazard Mitigation Plan, developed by TDEM, was discussed in the initial planning meeting in order to develop a specific group of hazards to address in the planning effort. The 2023 State Plan was also used as a guidance document, along with FEMA materials, in the development of the Aransas County Hazard Mitigation Action Plan Update 2025.

INCORPORATION OF THE HMAP INTO OTHER PLANNING MECHANISMS

Planning Team members will integrate implementation of the Plan Update with other planning mechanisms for Aransas County, such as the Emergency Operations Plan. Existing plans for participating jurisdictions will be reviewed and incorporated into the Plan Update, as appropriate. This section discusses how the Plan will be implemented by the participating jurisdictions within Aransas County. It also addresses how the Plan will be evaluated and improved over time, and how the public will continue to be involved in the hazard mitigation planning process.

Participating jurisdictions within Aransas County will be responsible for implementing hazard mitigation actions contained in Section 19. Each hazard mitigation action has been assigned to a specific county, city, town, ISD or district department that is responsible for tracking and implementing the action.

A funding source has been listed for each identified hazard mitigation action and may be utilized to implement the action. An implementation time period has also been assigned to each hazard mitigation action as an incentive and to determine whether actions are implemented on a timely basis.

Participating jurisdictions within Aransas County will integrate hazard mitigation actions contained in the Plan Update with existing planning mechanisms such as ordinances, Emergency Operations or Management Plans, and other local and area planning efforts. Aransas County will work closely with area organizations to coordinate implementation of hazard mitigation actions that benefit the planning area in terms of financial and economic impact.

Upon formal adoption of the Plan Update, Planning Team members from the participating jurisdictions will review existing plans along with building codes to guide development and ensure that hazard mitigation actions are implemented. Each of the jurisdictions will be responsible for coordinating periodic reviews of the Plan Update with members of the Advisory Planning Team to ensure integration of hazard mitigation strategies into these planning mechanisms and codes. The Planning Team will also conduct periodic reviews of various existing planning mechanisms and analyze the need for any revisions or updates in light of the approved Plan Update. Participating jurisdictions within Aransas County will ensure that future long-term planning objectives will contribute to the goals of the Plan to reduce the long-term risk to life and property from moderate and high-risk hazards. Within one year of formal adoption of the Plan, existing planning mechanisms will be reviewed and analyzed as they pertain to the Plan Update.

Planning Team members will review and revise, as necessary, the long-range goals and objectives in its strategic plan and budgets to ensure that they are consistent with the Plan Update.

Furthermore, Aransas County will work with neighboring jurisdictions to advance the goals of the Plan Update as it applies to ongoing, long-range planning goals and actions for mitigating risk to natural hazards throughout the planning area.

SECTION 2: PLANNING PROCESS

Table 2-5 identifies types of planning mechanisms and examples of methods for incorporating the Plan into other planning efforts.

Table 2-5. Examples of Methods of Incorporation

Planning Mechanism	Incorporation of Plan
Annual Budget Review	Various departments and key personnel that participated in the planning process for participating jurisdictions within Aransas County will review the Plan and mitigation actions therein when conducting their annual budget review. Allowances will be made in accordance with grant applications sought, and mitigation actions that will be undertaken, according to the implementation schedule of the specific action.
Capital Improvement Plans	Several participating jurisdictions within Aransas County have a Capital Improvement Plan (CIP) in place or under development. Prior to any revisions to the CIP, county, city, town, ISD and district departments will review the risk assessment and mitigation strategy sections of the HMAP, as limiting public spending in hazardous zones is one of the most effective long-term mitigation actions available to local governments.
Comprehensive Plans	Several participating jurisdictions within Aransas County have a Comprehensive Land Use Plan in place or under development. Since Comprehensive Plans involve developing a unified vision for a community, the mitigation vision and goals of the Plan will be reviewed in the development or revision of a Comprehensive Plan.
Floodplain Management Plans	Floodplain management plans include preventative and corrective actions to address the flood hazard. Therefore, the actions for flooding and information found in Section 9 of this Plan Update discussing the people and property at risk to flood will be reviewed and revised when the county and participating jurisdictions within Aransas County update their management plans or develop new plans.
Grant Applications	The HMAP will be evaluated by participating jurisdictions within Aransas County when grant funding is sought for mitigation projects. If a project is not in the Plan Update, a Plan Revision may be necessary to include the action in the Plan.

SECTION 2: PLANNING PROCESS

Planning Mechanism	Incorporation of Plan
Regulatory Plans	Currently, several participating jurisdictions within Aransas County have regulatory plans in place or under development, such as Emergency Operations Plans, Land Use Plans, and Evacuation Plans. The Plan Update will be consulted when county, city, town, ISD, and district departments review or revise their current regulatory planning mechanisms or in the development of regulatory plans that are not currently in place.

Appendix F Capability Assessment provides an overview of Planning Team members' existing planning and regulatory capabilities. These existing capabilities provide the mechanisms to implement the mitigation strategy objectives. For example, the adoption of building codes and implementation of land use regulations have been demonstrated to help communities avoid losses from natural hazard events. Currently, several participating jurisdictions have building codes, zoning ordinances, and land use ordinances in place. Please refer to Appendix F for a complete inventory of each participating jurisdiction's capabilities.

It should be noted for the purposes of the Plan Update that the HMAP has been used as a reference when reviewing and updating all plans and ordinances for the entire planning area, including all participating jurisdictions. The Emergency Management Action Plans developed for Aransas County, Town of Fulton, City of Rockport, Rockport-Fulton ISD, and Aransas County Navigation District are updated every 5 years and incorporate goals, objectives, and actions identified in the mitigation plan.

PLAN REVIEW AND PLAN UPDATE

As with the development of Plan Update, participating jurisdictions within Aransas County will oversee the review and update process for relevance and, if necessary, make adjustments. At the beginning of each fiscal year, Planning Team members will meet to evaluate the Plan and review other planning mechanisms to ensure consistency with long-range planning efforts. In addition, planning participants will also meet once a year, by conference call or presentation, to re-evaluate prioritization of the hazard mitigation actions. The Plan may be amended to include additional hazard mitigation actions as they are developed.

TIMELINE FOR IMPLEMENTING MITIGATION ACTIONS

Both the Executive Planning Team (Table 2-1) and the Advisory Planning Team (Table 2-2) will engage in discussions regarding a timeframe for how and when to implement each hazard mitigation action. Considerations include when the action will be started, how existing planning mechanisms' timelines affect implementation, and when the action should be fully implemented. Timeframes may be general, and there will be short-, medium-, and long-term goals for implementation based on prioritization of each action, as identified on individual Hazard Mitigation Action tables included in the Plan Update for participating jurisdictions within Aransas County.

Both the Executive and Advisory Planning Team will evaluate and prioritize the most suitable hazard mitigation actions for the community to implement. The timeline for implementation of actions will partially be directed by participating jurisdictions' comprehensive planning process,

SECTION 2: PLANNING PROCESS

budgetary constraints, and community needs. Participating jurisdictions within Aransas County are committed to addressing and implementing hazard mitigation actions that may be aligned with and integrated into the Plan Update.

Overall, the Planning Team is in agreement that goals and actions of the Plan Update shall be aligned with the timeframe for implementation of hazard mitigation actions with respect to annual review and updates of existing plans and policies.

PUBLIC AND STAKEHOLDER INVOLVEMENT

An important component of hazard mitigation planning is public participation and stakeholder involvement. Input from individual citizens and the community as a whole provides the Planning Team with a greater understanding of local concerns and increases the likelihood of successfully implementing hazard mitigation actions. If citizens and stakeholders, such as local businesses, non-profits, hospitals, and schools are involved, they are more likely to gain a greater appreciation of the risks that hazards may present in their community and take steps to reduce or mitigate their impact.

The public was involved in the development of the Aransas County Hazard Mitigation Action Plan Update 2025 at different stages prior to official Plan approval and adoption. Public input was sought using three methods: (1) open public meetings; (2) survey instruments; and (3) making the draft Plan Update available for public review on participating jurisdictions' websites.

The draft Plan Update was made available to the general public for review and comment on participating jurisdictions' websites. The public was notified at the public meetings that the draft Plan Update would be available for review. No feedback was received on the draft Plan Update, although it was given on the public survey, and all relevant information was incorporated into the Plan Update. Public input was utilized to assist in identifying hazards that were of most concern to the citizens of the County and what actions they felt should be included and prioritized.

The Plan Update will be advertised and posted on Aransas County and participating jurisdictions' websites upon approval from FEMA, and a copy will be kept at the Aransas County Courthouse.

UNDERSERVED COMMUNITIES / VULNERABLE POPULATIONS

A goal of the Planning Team was building equity into the planning process. Including organizations that aid underserved communities and socially vulnerable populations to participate in the plan helps ensure equitable access to the planning process and the meaningful participation of all residents. In addition, these groups can make sure that the interests of vulnerable populations are accurately represented and act as a valuable resource to share information with those vulnerable populations.

The Planning Team worked to identify local agencies, organizations, and community leaders that focus on reaching vulnerable populations and underserved communities. These organizations were included in the planning process as stakeholders and were invited to participate in the planning process via email. These agencies were encouraged to post public planning meetings as well as solicit feedback via the public survey.

All stakeholders and Planning Team members were invited to participate in the development of the Plan during this process, including all public meetings, and surveys. All stakeholders are listed in Table 2-6 below. Some stakeholders have been detailed below along with the agency's mission, including:

SECTION 2: PLANNING PROCESS

- Aransas County Area Go Texan – A volunteer organization that aims to make a difference in the world by promoting social justice, peace, and equality. Members are dedicated to creating a better future for all by engaging in community service projects, advocacy work, and educational programs. Aransas County Area Go Texan believes that everyone has the power to make a positive impact, no matter how big or small.
- Mission Aransas Reserve – The mission of the Mission-Aransas Reserve is to develop and facilitate partnerships that enhance coastal decision-making through an integrated program of research, education, and stewardship. This mission allows the organization to achieve its vision of forming a center of excellence that creates and disseminates knowledge necessary to maintain healthy Texas coasts. The Reserve has three primary goals: (1) to improve knowledge of the Texas coastal zone ecosystem's structure and function, (2) to promote understanding of coastal ecosystems by diverse audiences, and (3) to promote public appreciation and support for stewardship of coastal resources.
- Rockport-Fulton Good Samaritans, Inc. – Good Samaritans Rockport-Fulton is dedicated to supporting those in need and uplifting the community. Through Good Samaritan's food pantry, services, and volunteer efforts, the organization strives to make a lasting difference in the lives of local families by providing essential food and supplies to families in need, empowering the community through dedicated volunteer work, offering a compassionate space for support and assistance; and collaborating with local partners to create lasting change.

In addition, public notices were posted on public bulletin boards throughout the planning area, such as in the Town of Fulton and the City of Rockport and posted on the participating jurisdictions' websites and social media platforms. For a sample of these postings, please see Appendix E. In addition to public meetings, the Planning and Consultant Teams developed a public survey designed to solicit public input during the planning process from citizens and stakeholders and to obtain input and feedback on the mitigation plan. For each form of engagement, all efforts were made to reach Aransas County's underserved communities and vulnerable populations throughout the planning process. Additional survey information is provided at the end of this section.

STAKEHOLDER INVOLVEMENT

Stakeholder involvement is essential to hazard mitigation planning since a wide range of stakeholders can provide input on specific topics and from various points of view. Throughout the planning process, members of community groups, local businesses, and neighboring jurisdictions were invited to participate in development of the Plan Update. The Stakeholder Group (Table 2-6) included a broad range of representatives from both the public and private sectors and served as a key component in Aransas County's outreach efforts for development of the Plan Update. Documentation of stakeholder meetings is found in Appendix E. A list of organizations invited to attend via email is found in Table 2-6. Those that participated in the public meetings are identified with a plus symbol (+) next to their stakeholder type.

SECTION 2: PLANNING PROCESS

Table 2-6. Stakeholder Working Group

AGENCY	TITLE	STAKEHOLDER TYPE
American Red Cross Central and South Texas Region	Executive Director, Coastal Bend Texas Chapter	Non-profit / community Organization
Aranas County Commissioners Court	Precinct 3 Commissioner	Local Government +
Aransas Bay Utilities	Board President	Utility Provider
Aransas County Airport	Manager	Community Organization
Aransas County Animal Care	Director	Community Organization
Aransas County Area Go Texas	General Representative	Regional and Local Agencies
Aransas County Commissioners Court	Precinct 1-1A Commissioner	Local Government
Aransas County Commissioners Court	Precinct 2 Commissioner	Local Government
Aransas County Commissioners Court	Precinct 4 Commissioner	Local Government +
Aransas County Council on Aging / Senior Center	Director of Operations	Regional and Local Agencies
Aransas County Medical Services Inc	General Representative	Regional and Local Agencies
Aransas County Municipal Utility District #1	Operations Manager	Utility Provider
Aransas County Public Library	Librarian	Community Organization
Aransas County School (ACISD)	Director of Maintenance and Transportation	Academia
Aransas County School (ACISD)	Superintendent	Academia
Aransas Pass, City of	Interim Police Chief	Neighboring Jurisdiction
Aransas Veteran's Service Office	Veterans Services Officer	Regional and Local Agencies
Calhoun County	Emergency Management Coordinator	Neighboring Jurisdiction
Coastal Bend Council of Governments	Director of Emergency Management	Regional and Local Agencies
Coastal Bend Council of Governments	Director of Planning & Economic Development	Regional and Local Agencies
Coastal Bend Council of Governments	Executive Director	Regional and Local Agencies

SECTION 2: PLANNING PROCESS

AGENCY	TITLE	STAKEHOLDER TYPE
Coastal Bend Council of Governments	Homeland Security Planner	Regional and Local Agencies +
Corpus Christi, City of	City Manager	Neighboring Jurisdiction
Ed & Hazel Richmond Public Library - Aransas Pass	Librarian	Community Organization
Ellis Memorial Library - Port Aransas	Library Director	Community Organization
Environmental Protection Agency (EPA)	Director of Superfund Emergency Management Division	Federal Agency
Environmental Protection Agency (EPA)	Regional Administrator	Federal Agency
Fulton Volunteer Fire Dept.	Fire Chief	Community Organization
Fulton, Town of	Alderman Place 2	Local Government
Fulton, Town of	Alderwoman Place 3	Local Government
Fulton, Town of	Alderwoman Place 4	Local Government
Fulton, Town of	Alderwoman Place 5	Local Government +
Fulton, Town of	Mayor Pro-Tem	Local Government
Goodwill Industries of South Texas (Rockport)	General Representative	Regional and Local Agencies
Habitat for Humanity	General Representative	Regional and Local Agencies
Holiday Beach Water Supply Corporation (WSC)	General Representative	Utility Provider
Humane Society & Adoption Center of Rockport/Fulton	General Representative	Regional and Local Agencies
Keep Aransas County Beautiful	General Representative	Regional and Local Agencies
Lamar Volunteer Fire Dept	Fire Chief	Community Organization
Mission-Aransas Reserve	Manager	Regional and Local Agencies
Nueces County	Emergency Management Coordinator	Neighboring Jurisdiction
NWS - Corpus Christi	Regional Representative	Federal Agency
Pape Dawson	Engineer	Community Organization +
Refugio County	Emergency Management Coordinator	Neighboring Jurisdiction

SECTION 2: PLANNING PROCESS

AGENCY	TITLE	STAKEHOLDER TYPE
Rockport Volunteer Fire Dept	Fire Chief	Community Organization
Rockport, City of	Ward 1 Council Member	Local Government
Rockport, City of	Ward 2 Council Member	Local Government
Rockport, City of	Ward 3 Council Member	Local Government
Rockport, City of	Ward 4 Council Member	Local Government
Rockport-Fulton Chamber of Commerce	President / CEO	Community Organization +
Rockport-Fulton Good Samaritans, Inc	General Representative	Regional and Local Agencies
San Patricio County	Emergency Management Coordinator	Neighboring Jurisdiction
Texas A&M AgriLife Extension	District 11 Office	State Agency
Texas A&M Forest Service	Program Coordinator Mitigation and Prevention	State Agency
Texas Commission on Environmental Quality, Region 14	Dam Safety Program	State Agency
Texas Commission on Environmental Quality, Region 14	Executive Assistant	State Agency
Texas Commission on Environmental Quality, Region 14	Regional Director, Region 14	State Agency
Texas Department of Health and Human Services, Region 11	General Representative	State Agency
Texas Department of Health and Human Services, Region 11	Preparedness Manager	State Agency
Texas Department of Homeland Security	Media Representative	State Agency
Texas Department of Housing and Community Affair	Director of Single-Family and Homeless Program	State Agency
Texas Department of Housing and Community Affair	Manager of Single-Family Program	State Agency
Texas Department of Transportation	Area Engineer, Corpus Christi	State Agency
Texas Department of Transportation	District Engineer, Corpus Christi District	State Agency

SECTION 2: PLANNING PROCESS

AGENCY	TITLE	STAKEHOLDER TYPE
Texas Division of Emergency Management, Region 5	Aransas County Liaison Officer	State Agency +
Texas Division of Emergency Management, Region 5	Assistant Chief	State Agency
Texas Division of Emergency Management, Region 5	District 20 Chief Corpus Christi	State Agency
Texas Division of Emergency Management, Region 5	Section Chief Recovery & Mitigation	State Agency
Texas State Representative	House District 32	State Legislature
Texas State Senate	Senate District 18	State Legislature
Texas State Soil & Water	Program Administrator and Regional Office Coordinator	State Agency
Texas State Soil & Water	Program Supervisor - Wharton Region	State Agency
Texas Water Development Board	Regional Water Planning Group Representative	State Agency
Texas Windstorm Associations	Public Information Officer	State Agency
The Rockport Pilot	South Texas News Inc.	Community Organization
United Ways - Aransas County	Representative	Regional and Local Agencies
US Army Corps of Engineers	Fort Worth & Galveston District	Federal Agency
US Fish & Wildlife	Southwest Regional Representative	Federal Agency

Stakeholders and participants from neighboring communities that attended the Planning Team and public meetings played a key role in the planning process. For example, coastal erosion was a concern to stakeholders, so Aransas County and the City of Rockport included an action to create and implement an Erosion Response Plan.

PUBLIC MEETINGS

A series of public meetings were held throughout the planning area to collect public and stakeholder input. Topics of discussion included the purpose of hazard mitigation, discussion of the planning process, and types of natural hazards. Each participating jurisdiction within Aransas County released information regarding the public meetings in their area to increase public participation in the Plan Update development process, through posting on their website, on social media sources including Facebook, and/or posting the information on bulletin boards in public facilities. A sampling of these notices can be found in Appendix E, along with the documentation on the public meetings.

Public meetings were held in-person on the following dates:

SECTION 2: PLANNING PROCESS

- February 11, 2025, at the City of Rockport Service Center
- March 6, 2025, at the City of Rockport Service Center

PUBLIC PARTICIPATION SURVEY

In addition to public meetings, the Planning and Consultant Teams developed a public survey designed to solicit public input during the planning process from citizens and stakeholders to obtain data regarding the identification of any potential hazard mitigation actions or problem areas. The survey was promoted by local officials and a link to the survey was posted on participating jurisdictions' websites. A total of 40 surveys were completed online. The survey results are analyzed in Appendix C. Participating jurisdictions within Aransas County reviewed the input from the surveys and decided which information to incorporate into the Plan as hazard mitigation actions. For example, results indicate that hurricane / tropical storms and drought are the hazards of highest concern for the public. Constructing, maintaining, and protecting infrastructure, as well as preserving or restoring natural systems to reduce hazard impacts, were the two main actions indicated that the local government should take to mitigate the risk of these hazards. As a result, the Planning Team has included mitigation actions to acquire and install generators with hard-wired quick connections at all critical facilities, including schools, along with the construction of new habitats to provide erosion protection. Additional actions have been included to upgrade underground utilities to critical facilities and to acquire and implement a hazard warning system, including a system that detects and provides warnings during hazard events.



SITE OF THE TOWN OF
LAMAR

NAMED FOR
MIRABEAU B. LAMAR

1798 -- 1859

PRESIDENT OF THE
REPUBLIC OF TEXAS

1838 -- 1841

ESTABLISHED IN 1836
MADE A PORT OF ENTRY IN 1839
SACKED BY UNION TROOPS
FEB. 11, 1864
SURVIVED UNTIL 1914
BUT NEVER FLOURISHED

Erected by the State of Texas
1936

SECTION 3

COUNTY PROFILE

SECTION 3: COUNTY PROFILE

Overview.....	1
Population and Demographics	4
ISD Population	5
Special District Population	6
Population Growth	6
Economic Impact	7
Natural, Cultural, and Historic Resources.....	8
Existing Land Use and Development Trends	11
Changes in Vulnerability	12
Future Growth and Development	12

OVERVIEW

Aransas County is on the Gulf Coast, northeast of Corpus Christi. The county, divided into three parts by Copano, St. Charles, and Aransas bays, is bounded on the north and northwest by Refugio County, on the south by San Patricio and Nueces counties, and on the east by the Gulf of Mexico. The county seat and largest city is Rockport. The Gulf Intracoastal Waterway also serves the county.

The Aransas County area has been the site of human habitation for several thousand years. Archeological artifacts recovered in the region suggest that the earliest human inhabitants arrived around 6,000 to 8,000 years ago. Subsequent inhabitants belonged to a culture known as Aransas. Aransas campsites, some dating back approximately 4,000 years, have been found from Copano Bay in Aransas County to Baffin Bay north of Kenedy County. The Aransas People were a nomadic, hunter-gatherer group that likely left the Gulf Coast around AD 1200 to 1300. The region remained uninhabited for 100 years until the ancestors of the Karankawas moved there around AD 1400. During historic times, the Coastal Bend area was occupied by several groups, including the Karankawas and Coahuiltecan.

The Spanish established a colony in Texas in 1685. After Texas' independence, the area became part of the newly formed Refugio County. A customhouse, a post office, and several stores were established at the settlement, which by April 1840 served as the de facto seat of government for Refugio County. Aransas City was the westernmost port in Texas; its estimated population was several hundred. Around that time, another townsite, Lamar, was being developed across the pass on Lookout Point. In 1840, Refugio became the county seat, and as a result, Aransas City began to decline; by 1846, it had ceased to exist. After the revolution, cattlemen and sailors founded another community, Aransas, on the southern end of St. Joseph's Island, which was a prosperous port in antebellum Texas.

In 1847, the railroad was incorporated by the legislature and more settlers began to move to Lamar. The Aransas Railroad Company changed its name to Central Transit Company a few years later. The railroad was to be developed to run from Lamar to Goliad. In the meantime, another port town was developed, St. Mary's of Aransas, on Copano Bay. The settlement soon became the largest lumber and building materials center in western Texas. Regular wagon trains

SECTION 3: COUNTY PROFILE

hailed goods inland to Refugio, Goliad, Beeville, and San Antonio, and on the eve of the Civil War, St. Mary's was an important shipping point for hides, tallow, cattle, and cotton. By 1860, Lamar had two stores and a post office, but St. Mary's had become the most important port.

During the Civil War, the area that was to become Aransas County was the site of several engagements between Union and Confederate forces. St. Mary's, which had been a prime focus for blockade runners, was attacked, and its wharves and warehouses were destroyed. Many of the town's leading citizens moved elsewhere. Aransas, which had been destroyed during the war, became a ghost town, and Lamar, which had burned during the war, declined, but several new towns were founded, including Fulton in 1866 and Rockport in 1867. During the years of the great cattle boom, the new port towns became important shipping and processing points. The first of several packeries was built.

In March 1871, because the great cattle boom had established it as the most important town in the area, Rockport became the county seat of Refugio County. On September 18 of the same year, the legislature voted to divide the county and designated much of the coastal area as a new county named Aransas. Rockport was made the county seat, and on March 26, 1872, the county commissioners' court met for the first time. In 1888, the San Antonio and Aransas Pass Railroad reached Rockport, ensuring the town's continued importance as a shipping center. The rise of Rockport marked the beginning of the decline of St. Mary's.

Despite the growth of Rockport and Fulton, the county's population remained small; in 1880, it was 996. In 1888, however, all of the unsold land in the Smith and Wood subdivision was acquired by the Aransas Pass Land Company, which instituted a comprehensive plan to develop Rockport and the surrounding region. Lured by the promise of a bright future, numerous settlers from the Old South and Europe were drawn to the county, and by 1890, the population had grown to 1,824.

In 1919, the area was hit by a powerful hurricane, and much of Rockport and the surrounding area was destroyed. The combination of the storm and the loss of shipping to Corpus Christi dealt a serious blow to the county's economy, and for much of the next four decades it showed only modest growth. The population, which reached 2,106 in 1910, declined slightly by 1920 to 2,064, and only topped the 3,000 mark in 1940.

During the first half of the twentieth century, two new industries emerged: fishing and shipbuilding. By the early 1890s, commercial fishing was flourishing in the Rockport area, and over the course of the next several decades, it continued to expand, eventually outstripping agriculture in net receipts. The shrimping industry also began to develop in the 1930s, and by 1950, it produced fifty-one million pounds of shrimp. Oil was discovered in the county in 1936, and thirteen wells were in production in 1946, but it was not until the 1950s that oil was produced in large quantities.¹

Figure 3-1 shows the general location of Aransas County and the cities within the county.

¹ Source: <https://www.tshaonline.org/handbook/entries/aransas-county>

SECTION 3: COUNTY PROFILE

Figure 3-1. Location of Aransas County

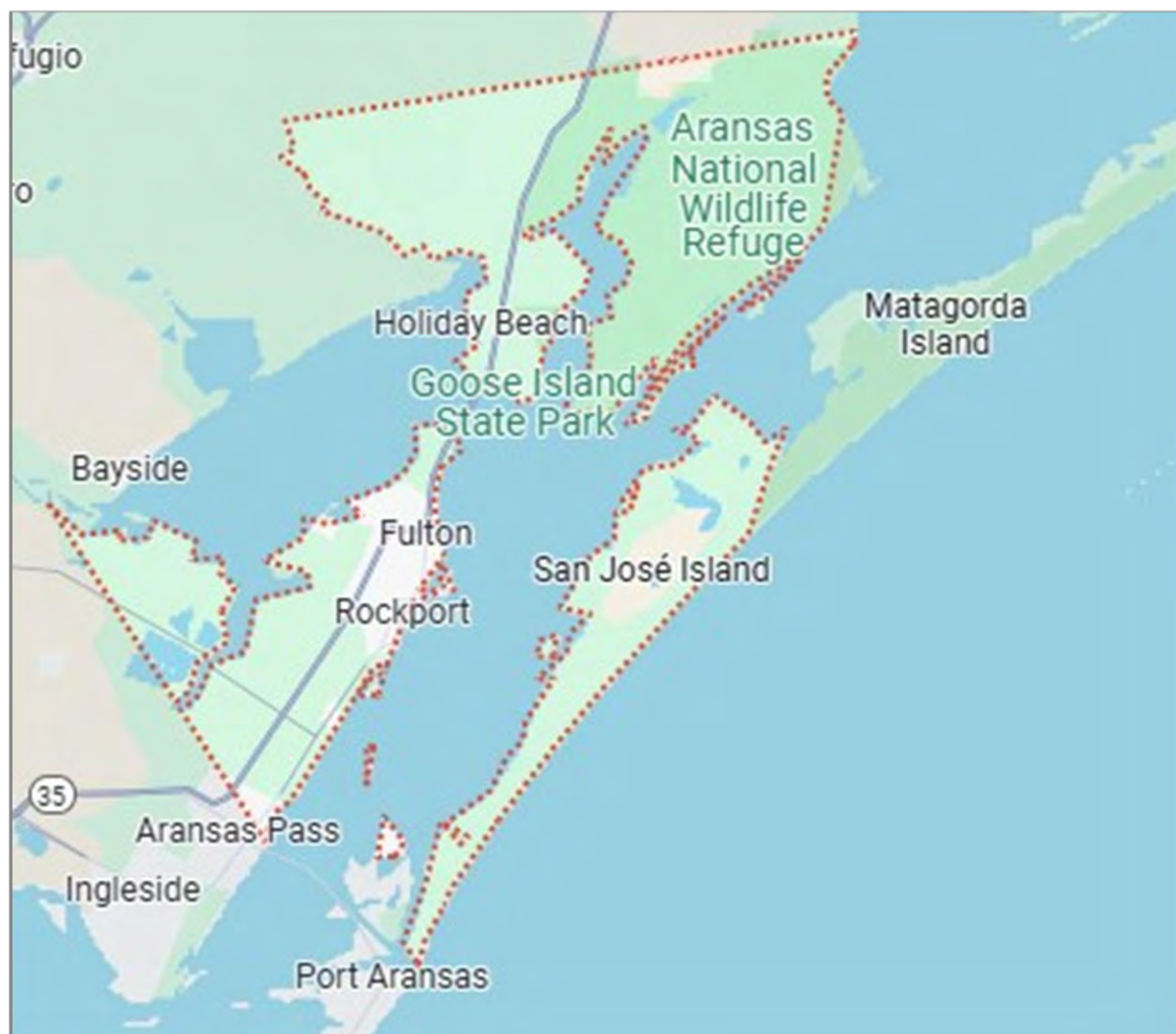


Figure 3-2 shows the participating jurisdictions within Aransas County that are covered in the risk assessment analysis of the Plan Update

SECTION 3: COUNTY PROFILE

Figure 3-2. Aransas County Planning Area

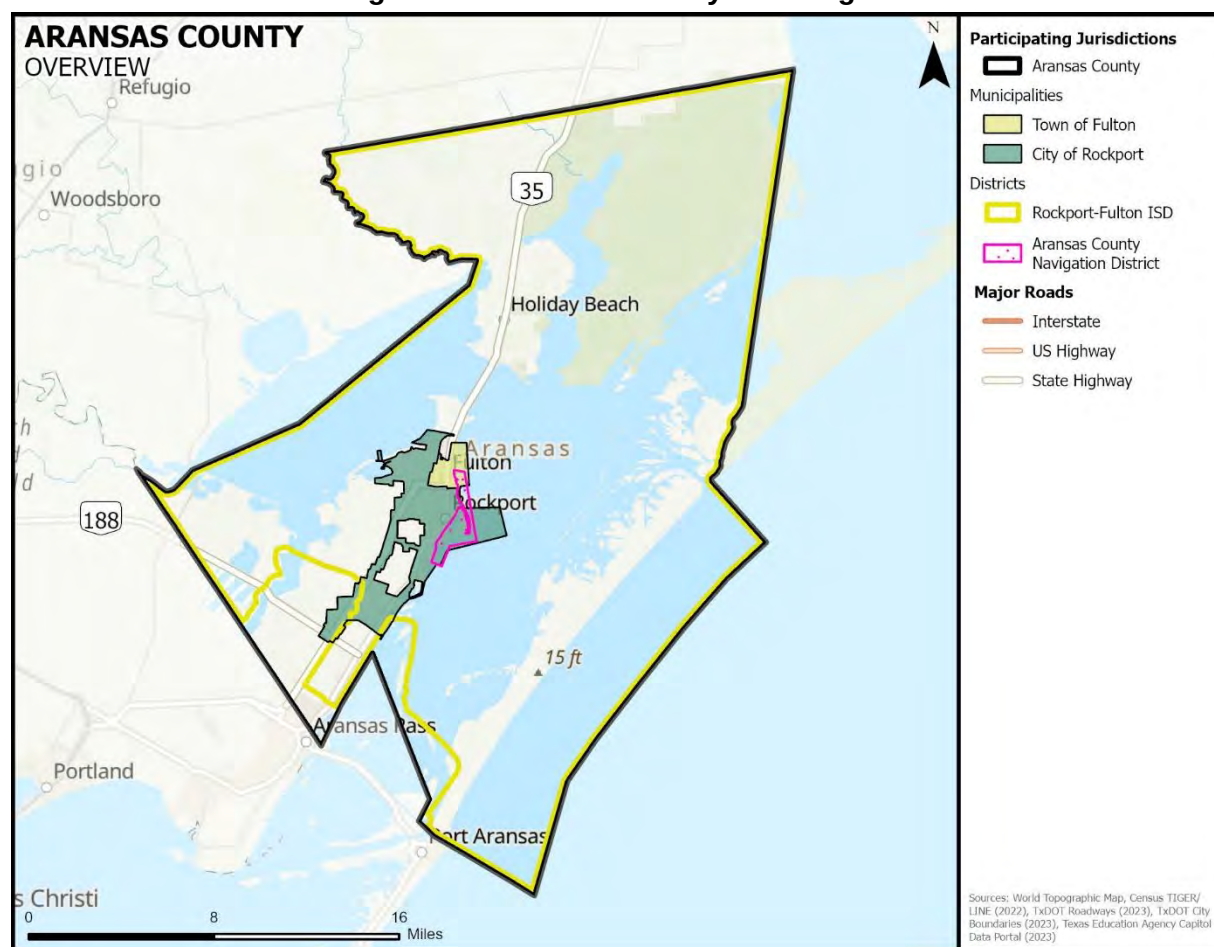


Table 3-1 below lists the jurisdictions in Aransas County that participated in the Aransas County Hazard Mitigation Action Plan Update 2025.

Table 3-1. Participating Jurisdictions

PARTICIPATING JURISDICTIONS	
	Aransas County
	Town of Fulton
	City of Rockport
	Rockport-Fulton ISD
	Aransas County Navigation District

POPULATION AND DEMOGRAPHICS

According to the 2020 Census, Aransas County has an official population of 23,830 residents, a 3 percent increase since the 2010 census. Table 3-2 shows the population distribution in Aransas County and the participating jurisdictions in 2010, 2020 (Census population count), and 2023

SECTION 3: COUNTY PROFILE

(2023 American Community Survey (ACS) five-year estimates). Note that in some cases, the 2023 ACS estimates may differ from the 2020 census counts: the ACS estimates are used throughout this section for consistency.²

Table 3-2. Population Distribution by Jurisdiction

JURISDICTION	TOTAL 2010 POPULATION	TOTAL 2020 POPULATION (Census)	PERCENT CHANGE 2010-2020	TOTAL 2023 POPULATION (ACS Estimates)	PERCENT CHANGE 2010-2023
Aransas County ³	23,158	23,830	3%	24,449	6%
Town of Fulton	1,358	1,523	12%	1,002	-26%
City of Rockport	8,766	10,070	15%	10,449	19%

Table 3-3 summarizes select characteristics of vulnerable or sensitive populations in Aransas County and the participating jurisdictions using data from the U.S. Census Bureau 2023 American Community Survey (ACS) five-year estimates. Between official U.S. Census population counts, the estimate uses a formula based on new residential building permits and household size. It is simply an estimate, and many variables are involved in achieving an accurate estimation of the number of people living in a given area at a given time.

Table 3-3. Populations at Greater Risk by Jurisdiction

JURISDICTION	POPULATION				
	65 AND OLDER	UNDER 5	WITH A DISABILITY	BELOW POVERTY LEVEL	LIMITED ENGLISH SPEAKING
Aransas County ⁴	6,844	1,079	4,402	4,572	513
Town of Fulton	534	0	408	100	0
City of Rockport	3,018	527	1,681	1,630	240

ISD POPULATION

Figure 3-2 above shows the participating Independent School District (ISD) within Aransas County that is covered in the risk assessment analysis of the Plan Update.

Rockport-Fulton ISD “believes that student preparation for a productive, fulfilling life is the obligation and responsibility of the family, student, school, and community.” The district comprises four schools: Live Oak Learning Center (Pre-K to 2nd grade), Fulton Elementary School (grades 3-5), Rockport-Fulton Middle School (grades 6-8), and Rockport-Fulton High School (grades 9-

² Source: <https://demographics.texas.gov/Data/Decennial/2010/>, <https://www.census.gov/en.html> and <https://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/2023/>

³ County totals include the entire population within the county lines, including unincorporated areas and non-participating jurisdictions within the County.

⁴ County totals include the entire population within the county lines, including unincorporated areas and non-participating jurisdictions within the County.

SECTION 3: COUNTY PROFILE

12). The school district provides services for children from prekindergarten (under 5 years old) to 12th grade.

Table 3-4 summarizes the number of people employed, students enrolled, and vulnerable or sensitive populations as provided by the ISD.

Table 3-4. ISD Population

INDEPENDENT SCHOOL DISTRICT	EMPLOYEES	STUDENTS	ESTIMATED VULNERABLE OR SENSITIVE POPULATIONS	
			Children (Under 5)	Staff Works Outdoors
Rockport-Fulton ISD	480	2,882	130	100

SPECIAL DISTRICT POPULATION

Figure 3-2 above shows the participating special district, Aransas County Navigation District, that is covered in the risk assessment analysis of the Aransas County Hazard Mitigation Action Plan Update 2025.

The Aransas County Navigation District (ACND) is a political subdivision of the State of Texas that exists to conserve and develop natural resources. The resources overseen include the navigation of inland and coastal waterways, the surface and submerged land deeded to it by letters of patent and acts of the Texas Legislature, and all other land and water resources acquired for the benefit of the citizens of Aransas County. The ACND oversees more than 1,900 acres of facilities. The Little Bay complex, located in the City of Rockport, has 25 acres of beach and has nesting sites for multiple shorebird species. The ACND facilities include Rockport Harbor, Fulton Harbor, Cove Harbor, Copano Bay Boat Ramp, Rockport Beach, and Veteran's Memorial Park.⁵

Table 3-5 summarizes the number of people employed and population served as provided by the special district.

Table 3-5. Special District Population

SPECIAL DISTRICT	EMPLOYEES	POPULATION SERVED	ESTIMATED VULNERABLE OR SENSITIVE POPULATIONS
			Staff Works Outdoors
Aransas County Navigation District (ACND)	32	25,374	26

POPULATION GROWTH

The official 2020 Aransas County population is 23,830. Overall, Aransas County experienced a population increase of 33 percent between 1990 and 2020, or 5,938 residents. Between 2010 and 2020, the Town of Fulton and the City of Rockport experienced a population increase, while Aransas County experienced only a slight population growth. Table 3-6 provides historical growth rates in Aransas County.

⁵ Source: <https://www.acnd.org/about>

SECTION 3: COUNTY PROFILE

Table 3-6. Population Growth by Jurisdictions 1990-2020⁶

JURISDICTIONS	1990	2000	2010	2020	POP CHANGE 1990- 2020	PERCENT OF CHANGE	POP CHANGE 2010- 2020	PERCENT OF CHANGE
Aransas County ⁷	17,892	22,497	23,158	23,830	5,938	33%	672	3%
Town of Fulton	763	1,553	1,358	1,523	760	100%	165	12%
City of Rockport	4,753	7,385	8,766	10,070	5,317	112%	1,304	15%

ECONOMIC IMPACT

Building and maintaining infrastructure depends on the economy, and therefore, protecting infrastructure from risk due to natural hazards in the planning area is important to the participating jurisdictions within Aransas County. Whether it's expanding culverts under a road that washes out during flash flooding, shuttering a fire station, or flood-proofing a wastewater facility, infrastructure must be mitigated from natural hazards in order to continue providing essential utility and emergency response services in a fast-growing planning area.

Based on the American Community Survey 2023 estimates, 44 percent of the population 16 years and over (20,719) is employed in the labor force. The per capita income is \$41,138 and the median household income countywide is \$61,754. Families with incomes below the poverty level in 2023 made up 14.4 percent of all families. Of families that have children under 18 years old, 32.1 percent are below the poverty level.

Tables 3-7 and 3-8 show the various occupations and industries within Aransas County, according to the 2023 estimates by the American Community Survey.

Table 3-7. Occupations of Employed Population in Aransas County⁸

OCCUPATION	ESTIMATE	PERCENT
Civilian employed population 16 years and over	9,161	
Management, business, science, and arts occupations	3,554	38.8%
Service occupations	1,908	20.8%
Sales and office occupations	1,678	18.3%
Production, transportation, and material moving occupations	1,136	12.4%
Natural resources, construction, and maintenance occupations	885	9.7%

⁶ U.S. Census Bureau

⁷ County totals include the entire population within the county lines, including unincorporated areas and non-participating jurisdictions within the County.

⁸ 2023 American Community Survey 5-Year Estimates Data Profiles.

SECTION 3: COUNTY PROFILE

Table 3-8. Industries of Employed Population in Aransas County⁹

INDUSTRY	ESTIMATE	PERCENT
Civilian employed population 16 years and over	9,161	
Educational services, and health care, and social assistance	2,013	22.0%
Retail trade	1,173	12.8%
Construction	1,108	12.1%
Finance and insurance, and real estate and rental and leasing	861	9.4%
Professional, scientific, and management, and administrative and waste management services	831	9.1%
Arts, entertainment, and recreation, and accommodation and food services	807	8.8%
Public administration	529	5.8%
Transportation and warehousing, and utilities	527	5.8%
Agriculture, forestry, fishing and hunting, and mining	401	4.4%
Other services, except public administration	380	4.1%
Manufacturing	343	3.7%
Information	102	1.1%
Wholesale trade	86	0.9%

NATURAL, CULTURAL, AND HISTORIC RESOURCES

Aransas County has a total area of 528 square miles, of which 252.07 square miles is land and 275.93 square miles is covered by water. The altitude ranges from sea level to fifty feet. The level land, part of the Coastal Prairie, is generally poorly drained. Dark, saline, loamy soils cover much of the inland terrain. Along the coastal areas are sandy beaches. In the northwest are loamy, acidic soils with cracking and clayey subsoils. The Gulf marshes support cordgrasses, sedges, rushes, seashore Saltgrass, march millet, and maiden cane. Further inland, the native flora includes the tall grasses of the Gulf prairie and some hardwoods such as elms and oaks, which are found particularly along streambeds. Much of the northern portion of the county is in the Aransas National Wildlife Refuge. Between 11 and 20 percent of the land in the county is considered prime farmland.

The subtropical-humid climate features mild winters and warm summers. Temperatures range in January from an average low of 46° F to an average high of 63°F, and in July from 76°F to 91°F. The average annual rainfall is 36 inches; the average relative humidity is 95 percent at 6 A.M.

⁹ 2023 American Community Survey 5-Year Estimates Data Profiles.

SECTION 3: COUNTY PROFILE

and 76 percent at 6 P.M. The growing season averages 305 days a year, with the last freeze in early February and the first freeze in mid-December.

Visitors and residents can enjoy Rockport Beach. It was the first beach in Texas to be certified as a Blue Wave Beach.¹⁰ Goose Island State Park has The Big Tree, a tree that is more than 1,000 years old, 44 feet tall, and 90 feet wide from branch to branch. The park also has a 1,620-foot fishing pier and over 100 campsites. The Aransas National Wildlife Refuge is one of the top national wildlife refuges in the country. Fishing, dolphin watching, whooping crane sighting, and nature trails can be enjoyed in the refuge. The three bays offer a variety of fishing, boating, and kayaking.

The area also boasts three golf courses, nature trails, and various parks for birdwatching and hiking. The Fulton Mansion State Historic Site, Fulton Schoolhouse Museum, Historic Center for Aransas County, and Texas Maritime Museum can be explored to learn more about the history of the county and the early settlers.

To further understand natural resources that may be vulnerable to a hazard event and those that need consideration when implementing mitigation activities, it is important to identify at-risk species (i.e., endangered species) in the planning area. A federally endangered species is any species of fish, plant life, or wildlife that is in danger of extinction throughout all or most of its range. A threatened species is a species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. Both endangered and threatened species are protected by federal law, and any future hazard mitigation projects are subject to these laws. Candidate species are plants and animals that have been proposed as endangered or threatened but are not currently listed.

According to the U.S. Fish and Wildlife Service, as of January 2025, there are fifteen federally endangered, threatened, or candidate species in Aransas County, listed in Table 3-9. Additionally, one species is listed as being resolved (Sprague's Pipit), one is listed as a species of concern (Golden Eagle), and two species are listed as in recovery (Bald Eagle and Brown Pelican).

Table 3-9. Endangered Species in Aransas County¹¹

TYPE of SPECIES	COMMON NAME	SCIENTIFIC NAME	SPECIES STATUS
Flowering Plants	Black Lace Cactus	Echinocereus reichenbachii var. albertii	Endangered
Birds	Attwater's Greater Prairie-Chicken	Tympanuchus cupido attwateri	Endangered
Birds	Whooping Crane	Grus americana	Endangered
Reptiles	Kemp's Ridley Sea Turtle	Lepidochelys kempii	Endangered
Birds	Northern Aplomado Falcon	Falco femoralis septentrionalis	Endangered

¹⁰ Source: <https://www.tourtexas.com/destinations/rockport-fulton-things-to-do>

¹¹ Source: <https://ecos.fws.gov/ecp/report/species-listings-by-current-range-county?fips=48007>

SECTION 3: COUNTY PROFILE

TYPE of SPECIES	COMMON NAME	SCIENTIFIC NAME	SPECIES STATUS
Reptiles	Hawksbill Sea Turtle	Eretmochelys imbricata	Endangered
Reptiles	Leatherback Sea Turtle	Dermochelys coriacea	Endangered
Mammals	Tricolored Bat	Perimyotis subflavus	Proposed Endangered
Mammals	West Indian Manatee	Trichechus manatus	Threatened
Birds	Rufa Red Knot	Calidris canutus rufa	Threatened
Birds	Piping Plover	Charadrius melodus	Threatened
Birds	Eastern Black Rail	Laterallus jamaicensis ssp. jamaicensis	Threatened
Reptiles	Green Sea Turtle	Chelonia mydas	Threatened
Reptiles	Loggerhead Sea Turtle	Caretta caretta	Threatened
Insects	Monarch Butterfly	Danaus plexippus	Proposed Threatened

Aransas County's designated historic buildings and sites preserve a rich history. The county has seven buildings and sites on the National Register of Historic Places. Historic buildings are vulnerable to natural hazards as their construction pre-dates modern building codes. There are also historic preservation considerations and requirements for historic structures when they are included in mitigation or recovery projects.

Table 3-10. Historic Properties on the National Register¹²

PROPERTY NAME	LOCATION	ADDRESS
George W. Fulton Mansion	Town of Fulton	317 Fulton Beach Road
Kent-Crane Shell Midden	Town of Fulton	Address Restricted
Aranas Pass Light Station (Lydia Ann Lighthouse)	City of Port Aransas	Harbor Island Road
Bracht House	City of Rockport	409 North Magnolia Street
Hoopes-Smith House	City of Rockport	417 North Broadway Street
T.H. Mathis House	City of Rockport	615 South Church Street
Rockport School	City of Rockport	619 North Live Oak Street

¹² National Register of Historic Places

SECTION 3: COUNTY PROFILE

EXISTING LAND USE AND DEVELOPMENT TRENDS

A zoning ordinance sets forth regulations and standards related to the extent of land and structure uses that are allowed in certain areas. A zoning map shows the location of zoning districts and standards within a community, gives an overall picture of the types of developments, and is used as a tool to inform continued growth efforts and initiatives. The Town of Fulton and the City of Rockport have zoning ordinances in place.

A review of building permits can also give a picture of the built environment and the number of buildings being constructed in the county and each jurisdiction. Table 3-11 lists the number of residential buildings and total units authorized through a permit from each jurisdiction, where data was available, between 2019 and 2023. The data includes total buildings and total units permitted. Permits are reported annually in September, and the data includes information from 2019 through 2023 to demonstrate growth. Of the residential building permits issued in this period, approximately 99 percent were single family buildings and 1 percent were multi-family buildings. Housing type can also be an indication of an individual's ability to recover from a disaster.

Table 3-11. Building Permits, by Jurisdiction, 2019-2023¹³

JURISDICTION	2019		2020		2021		2022		2023	
	Total Buildings	Total Units	Total Buildings	Total Units	Total Buildings	Total Units	Total Buildings	Total Units	Total Buildings	Total Units
Aransas County	38	38	42	42	51	51	52	52	49	49
Town of Fulton	0	0	0	0	0	0	21	21	15	15
City of Rockport	203	203	131	131	161	163	124	124	119	119
TOTALS	241	241	173	173	212	214	197	197	183	183

Certain types of housing found in the Aransas County planning area are more vulnerable than typical site-built, newly constructed residential structures. This includes mobile or manufactured homes, of which 2,576 (16 percent of total housing stock) are in the planning area. Additionally, single-family residences (SFR) built before 1980 are typically built to lower or less stringent construction standards than newer construction, making these homes more susceptible to damage during hazard events. These older homes comprise 28 percent (4,467 structures) of housing stock in the planning area. Table 3-12 includes housing inventory data for the participating jurisdictions per the 2023 American Community Survey five-year estimates.

Table 3-12. Housing Inventory and Vulnerable Structures, By Jurisdiction¹⁴

JURISDICTION	TOTAL HOUSING UNITS	BUILT PRIOR TO 1980	MANUFACTURED HOME
Aransas County ¹⁵	15,795	4,467	2,576

¹³ U.S. Census Bureau, Building Permit Survey, 1992-2023, <https://www.census.gov/construction/bps/>

¹⁴ The Housing Inventory and Vulnerable Structures are based off the 2023 American Community Survey 5-Year Estimates Data Profiles. The participating ISD and special district do not have housing units, however they did provide buildings built prior to 1980 and manufactured buildings.

¹⁵ County totals include all housing units within the county lines, including unincorporated areas and non-participating jurisdictions within the County.

SECTION 3: COUNTY PROFILE

JURISDICTION	TOTAL HOUSING UNITS	BUILT PRIOR TO 1980	MANUFACTURED HOME
Town of Fulton	823	235	294
City of Rockport	6,816	2,324	444
Rockport-Fulton ISD	-	30	7
Aransas County Navigation District	-	6	0

CHANGES IN VULNERABILITY

The Aransas County planning area experienced an overall population increase of 3% between 2010 and 2020. The American Community Survey estimates the 2023 total housing units for the planning area to be 15,795. The total building permits issued between 2019 and 2023 represent approximately 6 percent of the total housing units available in the planning area. The overall population increase, combined with the slight increase in housing units, indicates an increase in vulnerability to all hazards in terms of populations and the built environment. Changes in vulnerability vary by jurisdiction based on each jurisdiction's trends in population and development (Table 3-13). Changes in vulnerability for the participating ISD and special district are considered to similarly align with the jurisdiction in which they are located unless specifically noted otherwise.

Table 3-13. Changes in Vulnerability, by Jurisdiction

JURISDICTION	POPULATION TREND	HOUSING TREND	OVERALL VULNERABILITY CHANGES
Town of Fulton	Increasing	Stagnant	Increasing
City of Rockport	Increasing	Increasing	Increasing
Aransas County	Increasing	Increasing	Increasing

Changes in vulnerability are applicable to all natural hazards. While flood and wildfire hazards feature geographical boundaries, increases in population and building inventory can increase overall vulnerability for these hazards even when the trends occur outside of the known hazard boundary. Development decreases permeable surface areas and increases runoff, increasing flood risk. As population density increases, the Wildland Urban Interface (WUI) typically increases. WUI growth often results in more wildfire ignitions, which puts more houses and lives at risk.

FUTURE GROWTH AND DEVELOPMENT

To better understand how future growth and development in Aransas County might affect hazard vulnerability, it is useful to consider population growth, occupied and vacant land, the potential for future development in hazard areas, and current planning and growth management efforts. This section includes an analysis of the projected population change and economic impacts.

Population projections from 2010 to 2050 are listed in Table 3-14, provided by the Office of the State Demographer, Texas State Data Center, and the Institute for Demographic and

SECTION 3: COUNTY PROFILE

Socioeconomic Research. Population projections are based on a 0.5 scenario growth rate, which is 50 percent of the population growth rate from 2000-2010. This information is only available at the county level; however, the population projection shows a decrease in population density, which would mean overall population decline for the county.

Table 3-14. Aransas County Population Projections¹⁶

LAND AREA (SQ MI)	2010		2020		2030		2040		2050	
	POPULATION									
	Total Number	Density (Land Area, SQ MI)	Total Number	Density (Land Area, SQ MI)	Total Number	Density (Land Area, SQ MI)	Total Number	Density (Land Area, SQ MI)	Total Number	Density (Land Area, SQ MI)
252.07	23,158	91.87	23,830	94.54	23,353	92.64	22,330	88.59	21,201	84.11

Comprehensive Plans are guiding documents in a community that set forth a vision, goals, policies, and guidelines to direct future physical, social, and economic development within a jurisdiction. They are part of a continuous process to provide an environment for citizens and consider the general desire of the community to conserve, preserve, and protect the natural environment of their jurisdiction. These plans guide staff, decision-makers, and citizens in making decisions that affect the community with an understanding of the long-term effects.

The Town of Fulton and the City of Rockport have Comprehensive Plans. These plans contain the future vision for each participating jurisdiction and recommendations on areas such as growth and community character, updated infrastructure and critical services, land use and development, economic development, zoning opportunities, mobility, and community facilities and services. Refer to the Capability Assessment in Appendix F for a complete list of the plans, ordinances, and other resources for all participating jurisdictions.

¹⁶ Office of the State Demographer, Texas State Data Center, and the Institute for Demographic and Socioeconomic Research



SECTION 4

RISK OVERVIEW

SECTION 4: RISK OVERVIEW

Hazard Description	1
Disaster Declaration History	4
Natural Hazards and Climate Change	6
Overview of Hazard Analysis	8
Hazard Ranking	10
Risk Assessment Resources and Data Limitations	10
Assumptions	11

HAZARD DESCRIPTION

Section 4 is the first phase of the Risk Assessment, providing background information for the hazard identification process and descriptions of the hazards identified. The Risk Assessment continues with Sections 5 through 16, which include hazard descriptions and vulnerability assessments.

Upon a review of the full range of natural hazards suggested under FEMA planning guidance, participating jurisdictions within Aransas County identified 12 natural hazards that are addressed in the Hazard Mitigation Plan Update, and were identified as significant, as shown in Table 4-1. The hazards were identified through input from Planning Team members and a review of the current 2023 State of Texas Hazard Mitigation Plan (State Plan). Readily available online information from reputable sources such as federal and state agencies was also evaluated and utilized to supplement information as needed.

In general, there are three main categories of natural hazards: atmospheric, hydrologic, and technological. Atmospheric hazards are events or incidents associated with weather-generated phenomena. The following have been identified as significant for the planning area: extreme heat, hail, hurricane / tropical storm, lightning, thunderstorm wind, tornado, and winter storm (Table 4-1).

Hydrologic hazards are events or incidents associated with water-related damage and account for over 75 percent of federal disaster declarations in the United States. Hydrologic hazards identified as significant for the planning area include coastal erosion, drought and flood.

Technological hazards refer to the origins of incidents that can arise from human activities, such as the construction and maintenance of dams. They are distinct from natural hazards primarily because they originate from human activity. Human activity may increase or decrease the risks presented by natural hazards; however, they are not inherently human-induced. No technological hazards have been identified as significant for the Aransas County planning area.

For the Risk Assessment, the earthquake and wildfire hazards are considered “other” since these hazards are not considered atmospheric, hydrologic, or technological.

SECTION 4: RISK OVERVIEW

Table 4-1. Hazard Descriptions

HAZARD	DESCRIPTION
ATMOSPHERIC	
Extreme Heat	Extreme heat is the condition whereby temperatures hover ten degrees or more above the average high temperature in a region for an extended period of time.
Hail	Hailstorms are a potentially damaging outgrowth of severe thunderstorms. Early in the developmental stages of a hailstorm, ice crystals form within a low-pressure front due to the rapid rising of warm air into the upper atmosphere and subsequent cooling of the air mass.
Hurricane/Tropical Storm	A hurricane is an intense tropical weather system of strong thunderstorms with a well-defined surface circulation and maximum sustained winds of 74 mph or higher.
Lightning	Lightning is a sudden electrostatic discharge that occurs during an electrical storm. This discharge occurs between electrically charged regions of a cloud, between two clouds, or between a cloud and the ground.
Thunderstorm Wind	A thunderstorm occurs when an observer hears thunder. Radar observers use the intensity of the radar echo to distinguish between rain showers and thunderstorms. Lightning detection networks routinely track cloud-to-ground flashes, and therefore thunderstorms.
Tornado	A tornado is a violently rotating column of air that has contact with the ground and is often visible as a funnel cloud. Its vortex rotates cyclonically with wind speeds ranging from as low as 40 mph to as high as 300 mph. The destruction caused by tornadoes ranges from light to catastrophic, depending on the location, intensity, size, and duration of the storm.
Winter Storm	Severe winter storms may include snow, sleet, freezing rain, or a mix of these wintry forms of precipitation. Blizzards, the most dangerous of all winter storms, combine low temperatures, heavy snowfall, and winds of at least 35 mph, reducing visibility to only a few yards. Ice storms occur when moisture falls and freezes immediately upon impact on trees, power lines, communication towers, structures, roads, and other hard surfaces. Winter storms and ice storms can down trees, cause widespread power outages, damage property, and cause fatalities and injuries to human life.
HYDROLOGIC	
Coastal Erosion	The process by which the local sea level rise, strong wave action, and coastal flooding wear down or carry away rocks, soils, and/or sands along the coast. All coastlines are affected by storms or other natural events that cause erosion.

SECTION 4: RISK OVERVIEW

HAZARD	DESCRIPTION
Drought	A prolonged period of less than normal precipitation such that the lack of water causes a serious hydrologic imbalance. Common effects of drought include crop failure, water supply shortages, and fish and wildlife mortality.
Flood	The accumulation of water within a body of water, which results in the overflow of excess water onto adjacent lands, usually floodplains. The floodplain is the land adjoining the channel of a river, stream, ocean, lake, or other watercourse or water body that is susceptible to flooding. Most floods fall into the following three categories: riverine flooding, coastal flooding, and shallow flooding.
OTHER	
Earthquake	An earthquake is the sudden, rapid shaking of the earth, caused by the breaking and shifting of subterranean rock as it releases strain that has accumulated over a long time. Initial mild shaking may strengthen and become extremely violent within seconds.
Wildfire	A wildfire is an uncontrolled fire burning in an area of vegetative fuels such as grasslands, brush, or woodlands. Heavier fuels with high continuity, steep slopes, high temperatures, low humidity, low rainfall, and high winds all work to increase the risk for people and property located within wildfire hazard areas or along the urban/wildland interface. Wildfires are part of the natural management of forest ecosystems, but most are caused by human factors.

Hazards that were not considered significant and were not included in the Plan Update are located in Table 4-2, along with the evaluation process used for determining the significance of each of these hazards. Hazards not identified for inclusion at this time may be addressed during future evaluations and updates.

Table 4-2. Other Hazards Deferred

HAZARD CONSIDERED	REASON FOR DETERMINATION
Land Subsidence	The planning area has no historical land subsidence occurrences, and it is in an area where occurrences are considered rare. Land subsidence has not impacted critical structures, systems, populations, or other community assets or vital services in the past, and none is expected in the future.
Dam Failure	The planning area does not have a dam nor are they located in an area where dam failure would impact them. Therefore, dam failure does not pose a risk.
Expansive Soils	The planning area has no historical expansive soil occurrences, and it is in an area where occurrences are considered rare. Expansive soils have not impacted critical structures, systems, populations, or other community assets or vital services in the past, and none is expected in the future.

SECTION 4: RISK OVERVIEW

DISASTER DECLARATION HISTORY

One method of understanding hazards that pose a risk to Aransas County is to identify past hazard events that triggered federal or state disaster declarations. Federal and state declarations may be granted when the severity and magnitude of an event surpass the ability of the local government to respond and recover. Disaster assistance is supplemental and sequential. Table 4-3 lists state and federal disaster declarations received by Aransas County. Many of the disaster events were regional or statewide.

Between 1953 and 2024, Aransas County received 31 federal disaster declarations. The largest share (18) was related to hurricanes, followed by declarations for floods (4), fire (3), biological (2), severe ice storms (2), and severe storms (2). It should be noted that Hurricane Carla is not included in the 31 federal disaster declarations for Aransas County, however a statewide disaster declaration was issued for Hurricane Carla. This disaster, DR-118, was declared statewide due to the catastrophic losses Texas jurisdictions faced, both coastal and inland. Hurricane Carla made impact in Texas as a Category 4 hurricane.¹

In addition to the 31 federally declared disasters there have been 27 U.S. Department of Agriculture (USDA) Secretarial disaster designations between 2012 and 2024. The Secretary of Agriculture is authorized to designate counties as disaster areas to make emergency loans available to producers suffering losses in those counties and in counties that are contiguous to a designated county.² Of the 27 USDA designations for Aransas County, many listed multiple factors as having caused the disaster area designation. The leading cause was drought, which was included in 21 designations. Other factors listed include excessive heat (9 designations), high wind (6), fire / wildfire (6), insects (6), and excessive rain (3).

Table 4-3. Disaster Declaration History of Aransas County, 1953-2024³

YEAR	DECLARATION TITLE	HAZARD	DECLARATION TYPE	DISASTER No.
1961	Hurricane Carla	Hurricane	DR	DR-118 ⁴
1967	Hurricane Beulah	Hurricane	DR	DR-232
1968	Severe Storms, High Winds, and Flooding	Flood	DR	DR-246
1970	Hurricane Celia	Hurricane	DR	DR-292
1971	Heavy Rains, High Winds, and Flooding	Flood	DR	DR-313
1979	Severe Storms and Flooding	Flood	DR	DR-603
1980	Hurricane Allen	Hurricane	DR	DR-627

¹ Source: <https://www.hurricanesience.org/history/storms/1960s/carla/index.html>

² United States Department of Agriculture https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdafiles/FactSheets/emergency_disaster_designation_declaration_process-factsheet.pdf

³ Source: <https://www.fema.gov/openfema-data-page/disaster-declarations-summaries-v2>

⁴ DR-118 was declared statewide. It is listed separately as it is not included in the comprehensive disaster list from the FEMA database for Aransas County. <https://www.fema.gov/data-visualization/disaster-declarations-states-and-counties>.

SECTION 4: RISK OVERVIEW

YEAR	DECLARATION TITLE	HAZARD	DECLARATION TYPE	DISASTER No.
1992	Severe Thunderstorms	Flood	DR	DR-930
1998	Tropical Storm Charley	Severe Storm	DR	DR-1239
1999	Hurricane Bret	Hurricane	DR	DR-1287
2003	Severe Storms, Tornadoes, and Flooding	Severe Storm	DR	DR-1439
2003	Hurricane Claudette	Hurricane	DR	DR-1479
2005	Hurricane Katrina Evacuation	Hurricane	EM	EM-3216
2005	Hurricane Rita	Hurricane	EM	EM-3261
2005	Hurricane Rita	Hurricane	DR	DR-1606
2006	Extreme Wildfire Threat	Fire	DR	DR-1624
2007	Hurricane Dean	Hurricane	EM	EM-3277
2008	Wildfires	Fire	EM	EM-3284
2008	Hurricane Dolly	Hurricane	DR	DR-1780
2008	Hurricane Gustav	Hurricane	EM	EM-3290
2008	Hurricane Ike	Hurricane	EM	EM-3294
2008	Hurricane Ike	Hurricane	DR	DR-1791
2009	Holiday Beach Fire	Fire	FM	FM-2803
2010	Tropical Storm Alex	Hurricane	EM	EM-3313
2017	Hurricane Harvey	Hurricane	DR	DR-4332
2020	COVID-19	Biological	EM	EM-3458
2020	COVID-19 Pandemic	Biological	DR	DR-4485
2020	Hurricane Hana	Hurricane	EM	EM-3530
2020	Tropical Storms Marco and Laura	Hurricane	EM	EM-3540
2021	Severe Winter Storm	Severe Ice Storm	EM	EM-3554
2021	Severe Winter Storms	Severe Ice Storm	DR	DR-4586
2024	Hurricane Beryl	Hurricane	DR	DR-4798

SECTION 4: RISK OVERVIEW

NATURAL HAZARDS AND CLIMATE CHANGE

Climate change is defined as a long-term shift in temperature and weather patterns. These shifts can increase or decrease the risk of natural hazards. Global climate change is expected to exacerbate the risks of certain types of natural hazards impacted by rising sea levels, warmer ocean temperatures, higher humidity, the possibility of stronger storms, and an increase in wind and flood damage due to storm surges. Texas is considered one of the more vulnerable states in the U.S. to both abrupt climate changes and the impact of gradual climate changes on the natural and built environments.

Climate change is expected to lead to an increase in average temperatures as well as an increase in the frequency, duration, and intensity of extreme heat events. With no reductions in emissions worldwide, the state of Texas is projected to experience an additional 30 to 60 days per year above 100°F than what is experienced now.⁵

The State Climatologist's *Assessment of Historic and Future Trends of Extreme Weather in Texas, 1900-2036* identifies ongoing and likely future trends through 2036 based on analysis of historical observations of temperatures, precipitation, and extreme weather. Table 4-4 highlights future trends in extreme weather from the report.

Table 4-4. Future Trends in Extreme Weather in Texas^{6,7}

HAZARDS	EXPECTED TRENDS
Extreme Temperatures	• The average annual surface temperature in 2036 is expected to be 3.0°F warmer than the 1950-1999 average and 1.8°F warmer than the 1991-2020 average. • The number of 100°F days is projected to double by 2036, with urban areas experiencing a higher frequency due to the urban heat island effect. • Fewer cold extremes and warmer minimum temperatures are projected, suggesting a continued decrease in freezing conditions and frost days, as well as a warming trend for the coolest days of summer. • The number of heatwaves per year and number of days per year classified as heatwaves are expected to increase. • Data suggests a recent increase in both the severity and frequency of extreme heat, while extreme cold has decreased in both aspects.

⁵ Kloesel, K., B. Bartush, J. Banner, D. Brown, J. Lemery, X. Lin, C. Loeffler, G. McManus, E. Mullens, J. Nielsen-Gammon, M. Shafer, C. Sorensen, S. Sperry, D. Wildcat, and J. Ziolkowska, 2018: Southern Great Plains. In *Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II* [Reidmiller, D.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, K.L.M. Lewis, T.K. Maycock, and B.C. Stewart (eds.)]. U.S. Global Change Research Program, Washington, DC, USA, pp. 987–1035. doi: 10.7930/NCA4.2018.CH23. <https://nca2018.globalchange.gov/chapter/23/>

⁶ Nielsen-Gammon, John, Holman, Sara, Buley, Austin and Jorgensen, Savannah. *Assessment of Historic and Future Trends of Extreme Weather in Texas, 1900-2036, 2021 Update*. Texas A&M University Office of the Texas State Climatologist. October 7, 2021. <https://climatetexas.tamu.edu/files/ClimateReport-1900to2036-2021Update>

⁷ University of Texas at Austin, February 2023, *Austin Future Climate, Climate Change Predictions for the Aransas County 2022*, Technical Report.

SECTION 4: RISK OVERVIEW

HAZARDS	EXPECTED TRENDS
Precipitation	- Precipitation has increased by 10 percent or more in eastern Texas, but no significant trends are evident in western Texas. - Natural variability will substantially influence precipitation trends through 2036. - Extreme precipitation has already intensified by about 7 percent from 1960 to 2020 and is projected to continue increasing statewide—by 6-10 percent in intensity relative to 1950–1999 (2-3 percent relative to 2001–2020), and by 30-50 percent in frequency compared to 1950–1999 (10-15 percent compared to 2001–2020).
Drought	- Projected increases in temperature, rainfall variability, and other factors—such as improved plant water use efficiency—collectively indicate a decrease in water availability; however, the extent of this impact varies significantly across regions and applications. - Sector-based variance in impact trends is expected, with agricultural areas potentially experiencing less impact than surface water supply.
Flood	- Observational data suggests no long-term trend in river flooding, and this remains consistent for current projections, barring areas with normally high rainfall or for the most extreme flood events. - Urban flooding is projected to increase due to both population growth and rising precipitation intensity, particularly in areas with fast-response drainage systems. - The climate-driven trend in urban flood frequency should be similar to the climate-driven trend in extreme precipitation frequency: 30-50 percent in 2036 relative to 1950-1999 and 10-15 percent relative to 2001-2020. - Areas already experiencing flooding are likely to see an increase in the frequency and magnitude of events.
Winter Weather	- As the climate warms, the likelihood of winter weather decreases. - Widespread snowfall events in Texas, such as the one in February 2021, remain extremely rare and have not shown an increase in frequency. However, with rising air temperatures, a decrease in both the frequency and intensity of such events is expected—reducing the overall snow hazard. - Extreme cold has become less frequent and less severe overall but is subject to more variation than other temperate extremes, thus, massively cold temperatures will continue to be possible.

SECTION 4: RISK OVERVIEW

HAZARDS	EXPECTED TRENDS
Thunderstorms (Wind, Hail, Lightning)	• The evolution of reporting methods and magnitude scales, along with inconsistencies in observational data, has resulted in the absence of reliable, comprehensive records—limiting the ability to project trends and necessitating the use of indirect indicators. • Indirect evidence supports an increase in the number of days capable of producing severe thunderstorms and very large hail; however, a substantial basis to quantify these trends remains lacking.
Wildfire	• Reductions in precipitation, rising temperatures, increased surface dryness, stronger winds, lower humidity, and higher fuel loads are projected to vary in intensity across different regions of Texas, leading to non-uniform increases in wildfire risk. • The geographical boundaries of the area of the state commonly affected may expand.

OVERVIEW OF HAZARD ANALYSIS

The methodologies utilized to develop the Risk Assessment are a historical analysis and a statistical approach. Both methodologies provide an estimate of potential impact by using a common, systematic framework for evaluation.

Records retrieved from the National Centers for Environmental Information (NCEI) and the National Oceanic and Atmospheric Administration (NOAA) were reported for participating jurisdictions within the Aransas County. The remaining records identifying the occurrence of hazard events in the planning area and the maximum recorded magnitude of each event were also evaluated.

Geographic information system (GIS) technology was used to identify and assess risks for Aransas County and evaluate community assets and their vulnerability to hazards.

The four general parameters that are described for each hazard in the Risk Assessment include frequency of return, approximate annualized losses, a description of the general vulnerability, and a statement of the hazard's impact.

The frequency of return was calculated by dividing the number of events in the recorded time period for each hazard by the overall time period that the resource database was recording events. Frequency of return statements are defined in Table 4-5, and impact statements are defined in Table 4-6 below.

Table 4-5. Frequency of Return Statements

PROBABILITY	DESCRIPTION
Highly Likely	Event is probable in the next year.
Likely	Event is probable in the next three years.

SECTION 4: RISK OVERVIEW

PROBABILITY	DESCRIPTION
Occasional	Event is probable in the next five years.
Unlikely	Event is probable in the next ten years.

Table 4-6. Impact Statements

POTENTIAL SEVERITY	DESCRIPTION
Substantial	Multiple deaths. Complete shutdown of facilities for 30 days or more. More than 50 percent of property destroyed or with major damage.
Major	Injuries and illnesses resulting in permanent disability. Complete shutdown of critical facilities between one and four weeks. More than 25 percent of property destroyed or with major damage.
Minor	Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for up to one week. More than 10 percent of property destroyed or with major damage.
Limited	Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

Each of the hazard profiles includes a description of a general Vulnerability Assessment. Vulnerability is the total of assets that are subject to damage from a hazard based on historic recorded damages. Assets in the region were inventoried and defined in hazard zones where appropriate. The total amount of damage, including property and crop damages, for each hazard is divided by the total number of assets (building value totals) in that community to determine the percentage of damage that each hazard can cause to the community. Risk and consequences will be addressed and covered within each hazard profile under the Vulnerability and Impact section as well as under the Assessment of Impact sections, where applicable.

To better understand how future growth and development in the Aransas County region might affect hazard vulnerability, it is useful to consider population growth, occupied and vacant land, the potential for future development in hazard areas, and current planning and growth management efforts. Hazard vulnerability for all participating jurisdictions within the Aransas County was reviewed based on recent development changes that occurred throughout the planning area. The population of Aransas County grew by 3 percent between 2010 and 2020, according to the U.S. Census Bureau. Therefore, the vulnerability to the population, infrastructure, and buildings has increased for hazards that do not have a geographical boundary.

Once loss estimates and vulnerability were known, an impact statement was applied to relate the potential impact of the hazard on the assets within the area of impact.

SECTION 4: RISK OVERVIEW

HAZARD RANKING

During the 2025 planning process, the Planning Team conducted a risk ranking exercise to get input from the Planning Team and stakeholders. Table 4-7 portrays the results of the risk assessment analysis, including the frequency of occurrence and potential severity and the Planning Team's self-assessment for hazard ranking based on local knowledge of past hazard events and impacts for each identified hazard. The definitions for frequency of occurrence and potential severity can be found in Table 4-5 and Table 4-6.

Table 4-7. Hazard Risk Ranking

HAZARD	FREQUENCY OF OCCURRING	POTENTIAL SEVERITY	RANKING
NATURAL HAZARDS			
Coastal Erosion	Highly Likely	Limited	High
Drought	Highly Likely	Limited	High
Extreme Heat	Highly Likely	Substantial	High
Flood	Highly Likely	Major	High
Hurricane / Tropical Storm	Highly Likely	Substantial	High
Lightning	Highly Likely	Limited	High
Thunderstorm Wind	Highly Likely	Limited	High
Wildfire	Highly Likely	Limited	High
Hail	Highly Likely	Limited	Moderate
Tornado	Likely	Major	Moderate
Earthquake	Unlikely	Limited	Low
Winter Storm	Likely	Limited	Low

RISK ASSESSMENT RESOURCES AND DATA LIMITATIONS

The risk and vulnerability assessment relies heavily on the content of the National Oceanic and Atmospheric Administration (NOAA) and the National Center for Environmental Information (NCEI) Storm Events Database. This database covers weather-related hazards that affect the planning area and that are profiled in this plan including winter weather (extreme cold and winter storm), drought, hail, lightning, thunderstorm wind, flood, extreme heat, hurricane wind, and tornado. Other hazards were analyzed using databases containing more comprehensive historical data specific to Texas such as the Texas A&M Forest Service (TFS) for wildfires or the Texas Geological Survey for expansive soil hazards.

The NCEI Storm Events Database is a rich centralized repository of nationwide weather-related hazard events. Among other things, it is the source used by NOAA to populate its monthly storm data publication. The database contains recorded weather events of significance based on a

SECTION 4: RISK OVERVIEW

range of potential criteria including intensity, duration, damages, injuries, or other otherwise notable events. The history of data available in the NCEI database allows the study of impacts of individual hazards over an extended period of time. This data contributes to the framework for understanding relative risks over time.

While the NCEI is considered as one of the most comprehensive national historical event databases it is not without limitations. Records of historical occurrences in the state shows significant variations in the number of events recorded from one county to the next. Further research shows that the variations are more attributable to under-reporting of events than variations in weather occurrences. Only the events that have been reported or recorded in the database are factored into the risk assessment when no other reliable resources are available. It is accurate to assume that additional natural hazard occurrences have gone unreported or have been underreported. The risk assessment in this plan is considered the baseline for estimating potential future losses and frequency of events, which are assumed to be the minimum the planning area can anticipate. Additionally, significant events may be reported by both the county and local jurisdictions. This is due to reports from various locations impacted by a given event.

Finally, damages are not reported for the majority of events recorded in the NCEI, as property damage estimates are not always available. Natural hazard event damages are often covered by private insurance, and statistical insurance data is not readily available in the public domain. The NWS regional forecast coordinators utilize the resources available to them to describe damages or impacts of events. However, local input is key to assigning damages to historical events.

ASSUMPTIONS

Event data is often reported at the county level only. This is primarily due to the nature of most natural hazards impacting areas larger than a single municipality. Winter storms or extreme heat, for example, impact large regions and are not confined to a single location. NWS regional coordinators typically gather event data from countywide or regional reporting and record it accordingly. Some exceptional events are captured by NWS regional coordinators when the impact of the event is severe or catastrophic. However, most events recorded at the municipality level are conveyed by local officials. Event data at the municipality level is often limited as a result. Due to the more robust reporting at the county level and limited reporting at the local level, summary vulnerability statements are formulated using both local and countywide event data. These vulnerability assessments assume that events impacting the county similarly impact the jurisdictions within that county. Therefore, the countywide assessment is considered similar for all participating jurisdictions unless stated otherwise. Future risk and vulnerability assessments at the local, county, and state levels will benefit significantly from increased, detailed event reporting.



SECTION 5

COASTAL EROSION

SECTION 5: COASTAL EROSION

Hazard Description	1
Location	1
Extent	4
Historical Occurrences	5
Significant Events	6
Probability of Future Events	6
Climate Change Considerations	7
Vulnerability and Impact	7
Assessment of Impacts	9

HAZARD DESCRIPTION

Coastal erosion is the slow deterioration of land and loss of beach, shoreline, or dune material because of natural coastal processes or manmade influences. Erosion occurs when storms, flooding, wave action, sea-level rise, and human activities wear away beaches and bluffs. All beaches are affected by storms and other natural events that cause erosion; however, the extent and severity of the problem differs in different parts of the country. The two major erosion mechanisms are wind and water. Wind that blows across sparsely vegetated or disturbed lands can cause erosion by picking up soil, carrying it through the air, and displacing it in another place. Water erosion affects land, streams, and coastal areas, often intensifying during storms due to high winds, heavy surf, and storm surge. Human activities, such as construction and development in coastal and riparian regions, can also exacerbate erosion.

While coastal erosion affects all regions of the United States, erosion rates and potential impacts are highly localized. Texas has one of the longest coastlines in America coupled with some of the highest rates of coastal erosion in the nation. Eighty percent of the Gulf shoreline is eroding at greater than 2 feet per year. Some areas experience erosion exceeding 8 feet per year, including sections of Galveston Island, Matagorda Peninsula, northeast Matagorda Island (Aransas National Wildlife Refuge), North and South Padre Island, and Brazos Island. The overall average rate of erosion along the Texas coast is 4.17 feet per year, and this rate is increasing over time.¹

LOCATION

The Aransas County planning area is located on the Central Texas Gulf Coast. As shown in Figures 5-1 and 5-2, Aransas County's shoreline materials include back-barrier marsh / tidal flat, spit (sand and shell), flood-tidal delta, sandy slope, bay-margin marsh, and low bluff. Common bay shoreline types and their susceptibility to coastal erosion by sea-level rise, storm surges, and waves are provided in Table 5-1.² Due to its location along the Texas Gulf coast and geography, it is vulnerable to impacts related to coastal erosion resulting from sea level rise and extreme

¹ Texas General Land Office. Texas Coastwide Erosion Response Plan. December 2020.
https://www.glo.texas.gov/sites/default/files/resources/glo/coast/coastal-management/forms/files/2020coastwide-erosion-response-plan_2020_final.pdf.

² Tiffany L. Caudle and Jeffery G. Paine. Bureau of Economic Geology. Historical Shoreline Movement in Galveston, Trinity, East and West Bay on the Upper Texas Gulf Coast. March 2024.

SECTION 5: COASTAL EROSION

hazards such as hurricane and tropical storm events. The most common time for such extreme storm events to impact the planning area is from June to November, the official Atlantic U.S. hurricane season.

Figure 5-1. Location of Jurisdiction and Shoreline Materials³



³ Bureau of Economic Geology, Texas General Land Office, U.S. Fish and Wildlife Service. Shoreline Change Map. https://coastal.beg.utexas.edu/shorelinechange_bays/.

SECTION 5: COASTAL EROSION

Figure 5-2. Shore Line Materials Legend

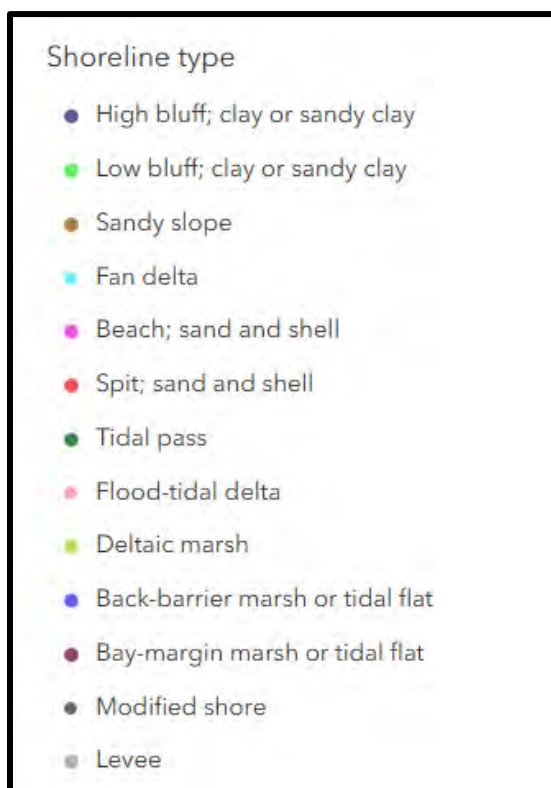


Table 5-1. Shoreline Types and Susceptibility⁴

SHORELINE TYPE	RELATIVE SEA-LEVEL RISE	STORM SURGE AND WAVES	NON-STORM WAVE ACTION
High Bluff	Low	High	Moderate
Low Bluff*	Low	High	Moderate
Sandy Slope*	Low	High	Moderate
Fan Delta	Moderate	Moderate	High
Beach	Moderate	Moderate	High
Spit*	Moderate	Moderate	High
Tidal Pass	High	High	High
Flood-tidal Delta*	High	High	High
Deltaic Marsh	High	Low	High
Bay-margin Marsh or Tidal Flat*	High	Low	High
Back-barrier Marsh or Tidal Flat*	High	Low	High

⁴ The asterisk designates the shoreline types found in Aransas County.

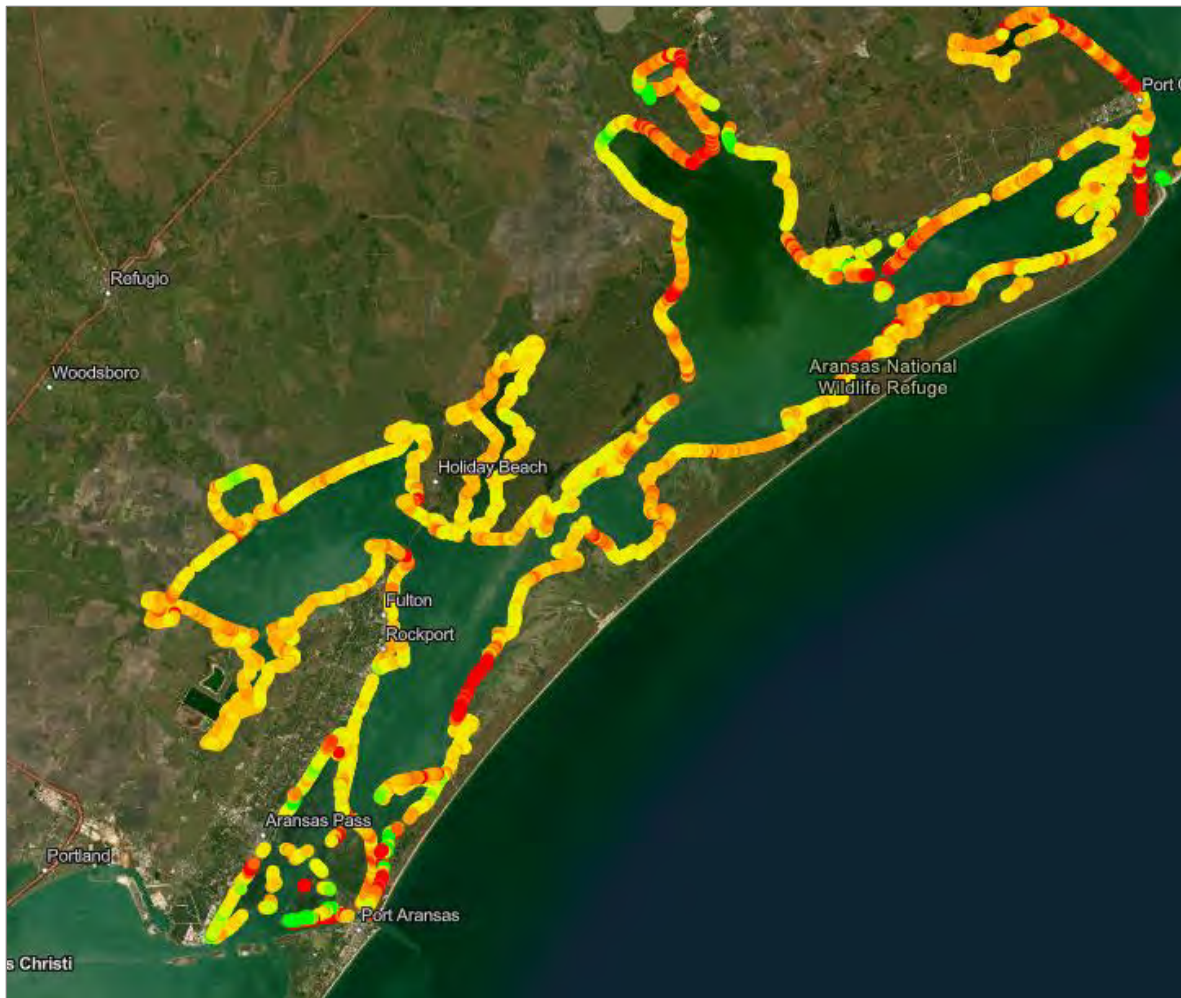
SECTION 5: COASTAL EROSION

EXTENT

Extent of coastal erosion is typically measured by the rate of shoreline change. However, this rate varies by location as some areas are experiencing erosion while other areas are gaining land. The average movement rate in Texas is -4.17 feet per year.

Figures 5-3 and 5-4 present maps from the Bureau of Economic Geology (BEG) and the Texas General Land Office (GLO) depicting Texas Coastwide Shoreline Change between the 1930s and 2010s. This map illustrates shoreline change rates in Aransas County, ranging from erosion (land loss) greater than 6 feet per year to accretion (land gain) exceeding 6 feet per year, depending on exact location.

Figure 5-3. Shoreline Rate of Change Map for Aransas County, 1930s-2010s



SECTION 5: COASTAL EROSION

Figure 5-4. Shoreline Rate of Change Legend⁵



HISTORICAL OCCURRENCES

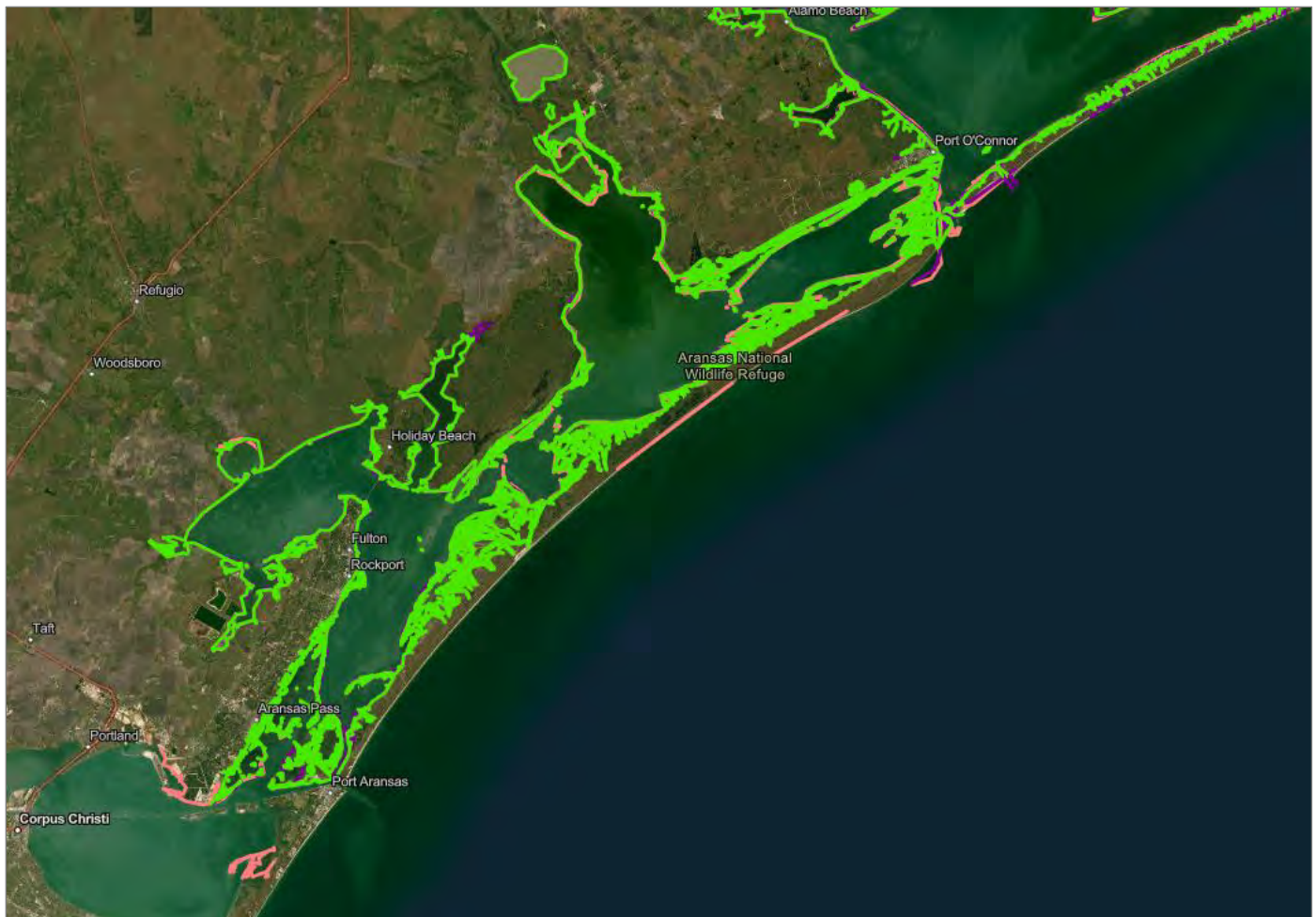
The NCEI does not collect data on coastal erosion. Local governments typically lack the capabilities to monitor or report statistical data for coastal erosion, especially since it is an ongoing, slow-moving hazard. Coastal erosion is typically measured and tracked as an average annual shoreline change rate in linear feet.

Figure 5-5 below shows the Aransas County shoreline position in the 1800s (outlined in pink), the 1950s (outlined in purple), and in 2022 (outlined in red) according to the Shoreline Change Map provided by the BEG and GLO. By comparatively assessing where the shoreline was mapped between the 1800s and 2010s, it is evident that significant land loss has occurred over time, impacting Aransas County's shoreline.

⁵ Green colors indicate where the area is gaining shoreland.

SECTION 5: COASTAL EROSION

Figure 5-5. Aransas County Shoreline Assessment 1800s, 1950s, and 2010s



SIGNIFICANT EVENTS

August 25-29, 2017 – Hurricane Harvey

Coastal erosion is a long-term process, however, severe storm systems that bring an excess of rain, such as hurricanes, can have cascading impacts such as coastal erosion. Hurricane Harvey made landfall on the Texas Gulf coast and brought catastrophic flooding to several coastal communities.

According to the 2020 Texas Coastwide Erosion Response Plan, Hurricane Harvey's flood sedimentation was the equivalent to seven years of normal sedimentation. In 2017, post-storm shoreline impacts were assessed, and bay shorelines were not spared by the storm as several sections of the Texas central and upper coast were damaged by the high water levels and waves. Severe erosion occurred at the Port Aransas Nature Preserve, Dickinson Bayou, and the nearby Shamrock Island.

PROBABILITY OF FUTURE EVENTS

The average movement rate in Texas is -4.17 feet per year. The rate of erosion varies by location; however, average rates seem to be increasing overtime. Certain areas of Aransas County also

SECTION 5: COASTAL EROSION

experience erosion up to or greater than 6 feet per year (Figure 5-3). This rate supports a “Highly Likely” probability of future events, with an event probable in the next year.

CLIMATE CHANGE CONSIDERATIONS

Climate change is expected to intensify coastal erosion. As global temperatures increase, thermal expansion of seawater contributes to rising sea levels, allowing waves to extend further inland. This is especially prevalent during storms, which leads to higher rates of coastal erosion. According to the United States Environmental Protection Agency, the sea level is rising more rapidly along the Texas coast due to groundwater pumping than climate change itself. However, both are contributing factors.

Increasing storm intensity also exacerbates coastal erosion. As discussed in Section 11, Texas anticipates an increase in the intensity of major hurricanes, even as overall hurricane frequency is projected to remain stable or potentially decrease. However, severe flooding and other storm events, as seen with Hurricane Harvey, have demonstrated the capacity to significantly accelerate local rates of coastal erosion. As these events intensify, the risk of erosion events increases.

VULNERABILITY AND IMPACT

Aransas County is continuously subject to coastal erosion. While usually a slow-evolving hazard, coastal erosion presents a serious threat to the County. As a densely populated area, Aransas County faces increased vulnerability to hurricanes, coastal storms, and above-average tidal events with any loss of land. The loss of beach or marshland, which provides valuable protection from coastal storm events, results in greater vulnerability.

Aransas County is prone to erosion as detailed in the sections above. Erosion-related land loss impacts residential neighborhoods, roadways, and critical infrastructure. Shoreline retreat increases the risk of flooding and storm surge, particularly for homes and businesses near the shore. Marinas, fisheries, and tourism-related infrastructure, also face heightened risks of flooding due to ongoing land loss. Additionally, transportation infrastructure like State Highway 35, and other roads closest to the shoreline could be damaged by coastal erosion.

Table 5-2 includes the comprehensive critical facilities identified in Appendix D that were considered the most important to the planning area that are subject to a range of impacts due to coastal erosion. For a comprehensive list of identified critical facilities for each jurisdiction, please see Appendix D.

Table 5-2. Critical Facilities for Coastal Erosion by Participating Jurisdiction

CRITICAL FACILITY TYPES	POTENTIAL IMPACTS
Emergency Response Departments (EOC, Fire, Police, EMS), Hospitals	- Emergency operations and services may be significantly impacted due to damaged facilities and/or loss of communications. - Emergency facilities can be damaged by erosion. - Evacuations routes may be obstructed, eroded, or completely damaged, limiting access for emergency response vehicles. - Damaged roads and bridges can impede emergency response vehicle access to areas. - Increased number of rescues needed as areas become more vulnerable to storm surges or high tides due to erosion.

SECTION 5: COASTAL EROSION

CRITICAL FACILITY TYPES	POTENTIAL IMPACTS
Airport, Academic Institutions, Community Residential Facilities, Day Care Facilities, Evacuation Centers & Shelters, Governmental Facilities	- Coastal erosion can undermine the foundation of buildings, causing damage or destruction to structures. - Backup power sources could be damaged by erosion or inundated, making them inoperable. - Evacuation may be necessary due to infrastructure damage or facility inundation caused by coastal erosion. - The erosion of nearby roads and bridges can delay access for emergency responders and personnel. - Increased vulnerability of shelters and evacuation centers to storm surge and high tides due to coastal erosion. - Damaged or destroyed highway infrastructure may substantially increase the need for airport operations.
Commercial Suppliers (food, gas, etc.)	- Facilities or infrastructure may be damaged, destroyed or otherwise inaccessible. - Essential supplies like medicines, water, food, and equipment deliveries may be inaccessible or significantly delayed due to obstructed or damaged routes. - Facility damage could lead to extended shortages of essential resources, impacting the community.
Utility Services and Infrastructure (electric, water, wastewater, communications)	- Emergency operations and services may be significantly impacted due to damaged facilities, power lines, and/or loss of communication towers. - Erosion can damage water treatment and sewage systems, leading to contamination and health hazards. - The loss of key infrastructure may make it difficult for emergency vehicles to reach critical locations, delaying response times.

As land is lost, property values in susceptible areas may decrease, leading to decreased tax revenue. Rockport Beach, Aransas National Wildlife Refuge, and Goose Island State Park bring tourists and visitors to the community. Tourism and recreational activities along the waterfront may suffer if public access areas and natural attractions deteriorate.

Notably, coastal erosion can have significant environmental implications with cascading impacts. According to the 2020 Texas Coastwide Erosion Response Plan, erosion is threatening the Aransas National Wildlife Refuge. The National Wildlife Refuge System is owned and managed by the U.S. Fish and Wildlife Service and is dedicated to wildlife conservation. The refuge is best known as the wintering home of the last wild flock of endangered whooping cranes. Wildlife has an important role in the community and in local tourism. As the shoreline retreats, vital ecosystems deteriorate, reducing habitat availability for local wildlife.

Other environmental impacts include the loss of natural vegetation and barriers that protect against storm surge and flooding, as well as a diminished natural flood absorption capacity. This increases flood risk, making storm surges and heavy rainfall events more destructive.

Currently, the potential severity of impact from coastal erosion for the Aransas County planning area is classified as “Limited”, meaning injuries and illnesses are treatable with first aid, the shutdown of critical facilities and services for 24 hours or less, and less than 10 percent of property destroyed or with major damage.

SECTION 5: COASTAL EROSION

ASSESSMENT OF IMPACTS

Coastal erosion events have the potential to pose a significant risk to structures, infrastructure and the local economy. Impacts to the planning area can include:

- Structures and infrastructure can be damaged or destroyed. Extreme erosion, typically resulting from a significant storm event, will result in uninhabitable parcels where structures cannot be rebuilt.
- Coastal communities can suffer substantial damage, requiring immediate shelter and long-term displacement assistance.
- Damaged roads and bridges could prevent or delay emergency response, strand or prevent entry of tourists, commuters, supply delivery, or goods and services for extended periods.
- Coastal erosion may dramatically hinder rebuilding and recovery efforts.
- Beaches may be less desirable, reducing tourism and negatively impacting the economy.
- Economic disruption reduces community programs and services due to short- and long-term revenue loss.
- Some businesses not directly damaged by coastal erosion could suffer financial losses while access roads or beachfront properties undergo repairs.
- Some residents will be forced to migrate inland to safer areas or may leave the region entirely due to economic and safety concerns.
- Loss of protective natural barriers, such as wetlands and dunes, increases vulnerability to future flooding and storm surge.
- Critical infrastructure, including water treatment plants, power stations, and stormwater drainage systems, may be damaged by saltwater intrusion and erosion.
- Erosion can disrupt breeding grounds for fish and shellfish, leading to long-term declines in commercial and recreational fishing industries.
- Increased insurance costs and reduced property values may make it difficult for homeowners and businesses to recover financially.
- Cemeteries, historic landmarks, and meaningful community spaces could be lost due to coastal retreat.

The economic and financial impacts of coastal erosion on the area will depend entirely on the scale of the event, what is damaged, and how quickly repairs to critical components of the economy can be implemented. The level of preparedness and pre-event planning done by the community, local businesses and citizens will also reduce the impacts of coastal erosion.



SECTION 6 **DROUGHT**

SECTION 6: DROUGHT

Hazard Description	1
Location	1
Extent	4
Historical Occurrences	5
Significant Events	6
Probability of Future Events	7
Climate Change Considerations	7
Vulnerability and Impact	7
Assessment of Impacts	9

HAZARD DESCRIPTION

Drought is a period of time without substantial rainfall that persists over time. Drought is a normal part of virtually all climatic regions, including areas with high and low average rainfall. Drought is the consequence of anticipated natural precipitation reduction over an extended period of time, usually a season or more in length. Droughts can be classified as meteorological, hydrologic, agricultural, and socioeconomic. Table 6-1 presents definitions for these different types of droughts.

Droughts are one of the most complex of all natural hazards as it is difficult to determine their precise beginning or end. In addition, droughts can lead to other hazards such as extreme heat and wildfires. Their impact on wildlife and area farming is enormous, often killing crops, grazing land, edible plants, and even in severe cases, trees. A secondary hazard to drought is wildfire because dying vegetation serves as a prime ignition source. Therefore, a heat wave combined with a drought is a very dangerous situation.

Table 6-1. Drought Classification Definitions¹

METEOROLOGICAL DROUGHT	The degree of dryness or departure of actual precipitation from an expected average or normal amount based on monthly, seasonal, or annual time scales.
HYDROLOGIC DROUGHT	The effects of precipitation shortfalls on stream flows and reservoir, lake, and groundwater levels.
AGRICULTURAL DROUGHT	Soil moisture deficiencies relative to water demands of plant life, usually crops.
SOCIOECONOMIC DROUGHT	The effect of demands for water exceeding the supply as a result of a weather-related supply shortfall.

LOCATION

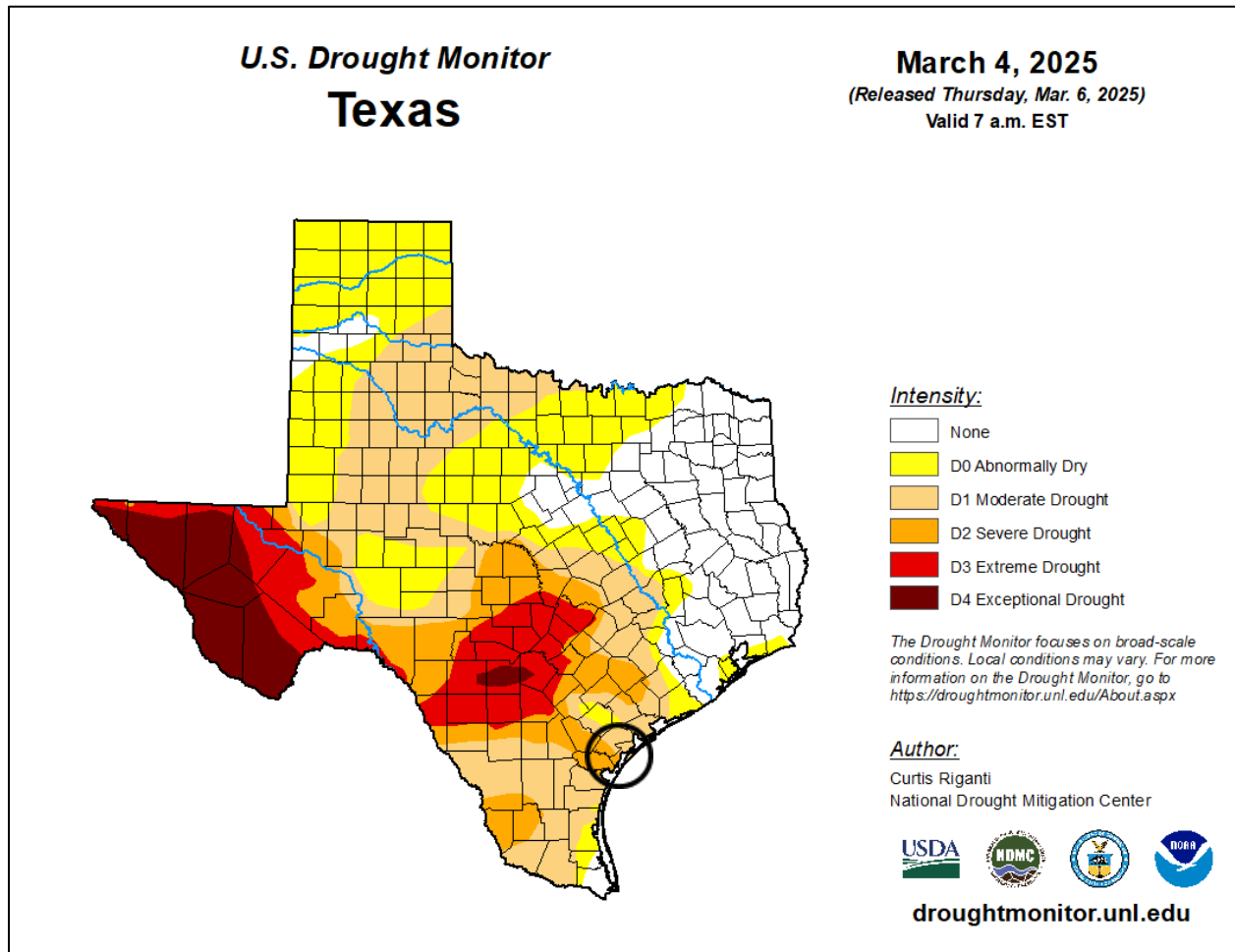
Droughts occur regularly throughout Texas and the Aransas County planning area and are considered a normal condition. However, they can vary greatly in terms of their intensity and duration. The U.S. Drought Monitor, produced through a partnership between the National

¹ Source: Multi-Hazard Identification and Risk Assessment: A Cornerstone of the National Mitigation Strategy, FEMA

SECTION 6: DROUGHT

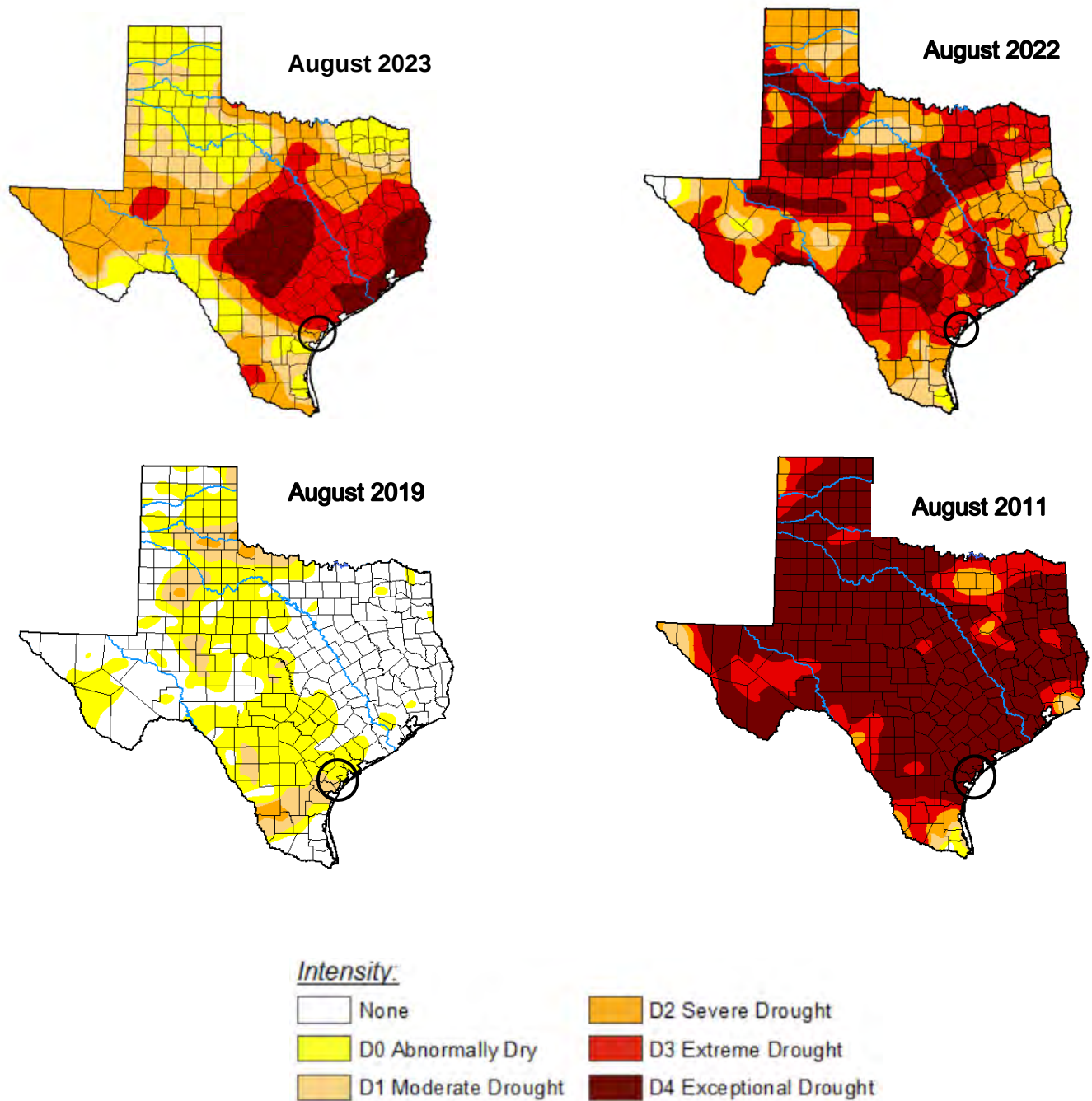
Drought Mitigation Center at the University of Nebraska-Lincoln, U.S. Department of Agriculture and the National Oceanic and Atmospheric Administration, shows the planning area is currently experiencing moderate to severe drought conditions (Figure 6-1) but has experienced a range of conditions from normal (none) to exceptional drought conditions over the last two decades (Figure 6-2). There is no distinct geographic boundary to drought; therefore, it can occur anywhere throughout the Aransas County planning area.

Figure 6-1. U.S. Drought Monitor, March 2025



SECTION 6: DROUGHT

Figure 6-2. U.S. Drought Monitor, August 2011, August 2019, August 2022, August 2023



SECTION 6: DROUGHT

EXTENT

The Palmer Drought Index is used to measure the extent of drought by measuring the duration and intensity of long-term drought-inducing circulation patterns. Long-term drought is cumulative, with the intensity of drought during the current month dependent upon the current weather patterns plus the cumulative patterns of previous months. The hydrological impacts of drought (e.g., reservoir levels, groundwater levels, etc.) take longer to develop. Table 6-2 depicts magnitude of drought, while Table 6-3 describes the classification descriptions.

Table 6-2. Palmer Drought Index

DROUGHT INDEX	DROUGHT CONDITION CLASSIFICATIONS						
	Extreme	Severe	Moderate	Normal	Moderately Moist	Very Moist	Extremely Moist
Z Index	-2.75 and below	-2.00 to -2.74	-1.25 to -1.99	-1.24 to +.99	+1.00 to +2.49	+2.50 to +3.49	n/a
Meteorological	-4.00 and below	-3.00 to -3.99	-2.00 to -2.99	-1.99 to +1.99	+2.00 to +2.99	+3.00 to +3.99	+4.00 and above
Hydrological	-4.00 and below	-3.00 to -3.99	-2.00 to -2.99	-1.99 to +1.99	+2.00 to +2.99	+3.00 to +3.99	+4.00 and above

Table 6-3. Palmer Drought Category Descriptions²

CATEGORY	DESCRIPTION	POSSIBLE IMPACTS	PALMER DROUGHT INDEX
D0	Abnormally Dry	Going into drought: short-term dryness slowing planting, growth of crops or pastures; fire risk above average. Coming out of drought: some lingering water deficits; pastures or crops not fully recovered.	-1.0 to -1.9
D1	Moderate Drought	Some damage to crops, pastures; fire risk high; streams, reservoirs, or wells low, some water shortages developing or imminent, voluntary water use restrictions requested.	-2.0 to -2.9
D2	Severe Drought	Crop or pasture losses likely; fire risk very high; water shortages common; water restrictions imposed.	-3.0 to -3.9
D3	Extreme Drought	Major crop/pasture losses; extreme fire danger; widespread water shortages or restrictions.	-4.0 to -4.9
D4	Exceptional Drought	Exceptional and widespread crop/pasture losses; exceptional fire risk; shortages of water in reservoirs, streams, and wells, creating water emergencies.	-5.0 or less

² Source: National Drought Mitigation Center

SECTION 6: DROUGHT

Drought is monitored nationwide by the National Drought Mitigation Center (NDMC). Indicators are used to describe broad scale drought conditions across the U.S. and correspond to the intensity of drought.

Based on the historical occurrences for drought and the location of the Aransas County planning area, the area can anticipate the full range of drought from abnormally dry to exceptional drought, or D0 to D4, based on the Palmer Drought Category. The entire planning area has experienced exceptional drought conditions. This is the highest level of drought severity and the most extreme drought conditions the planning area can anticipate in the future, including all participating jurisdictions, the ISD and special district.

HISTORICAL OCCURRENCES

The Aransas County planning area may experience an extreme drought in any given year. According to the U.S. Drought Monitor, between 2000 and 2024, the Aransas County planning area spent 716 weeks (55%) in some level of drought as defined as Abnormally Dry (D0) or worse conditions. The longest drought during this period lasted for just over four years. Aransas County has received 21 USDA disaster designations for drought from 2012 through 2024.

Figure 6-3. Aransas County Drought Intensity, 2000-2024³

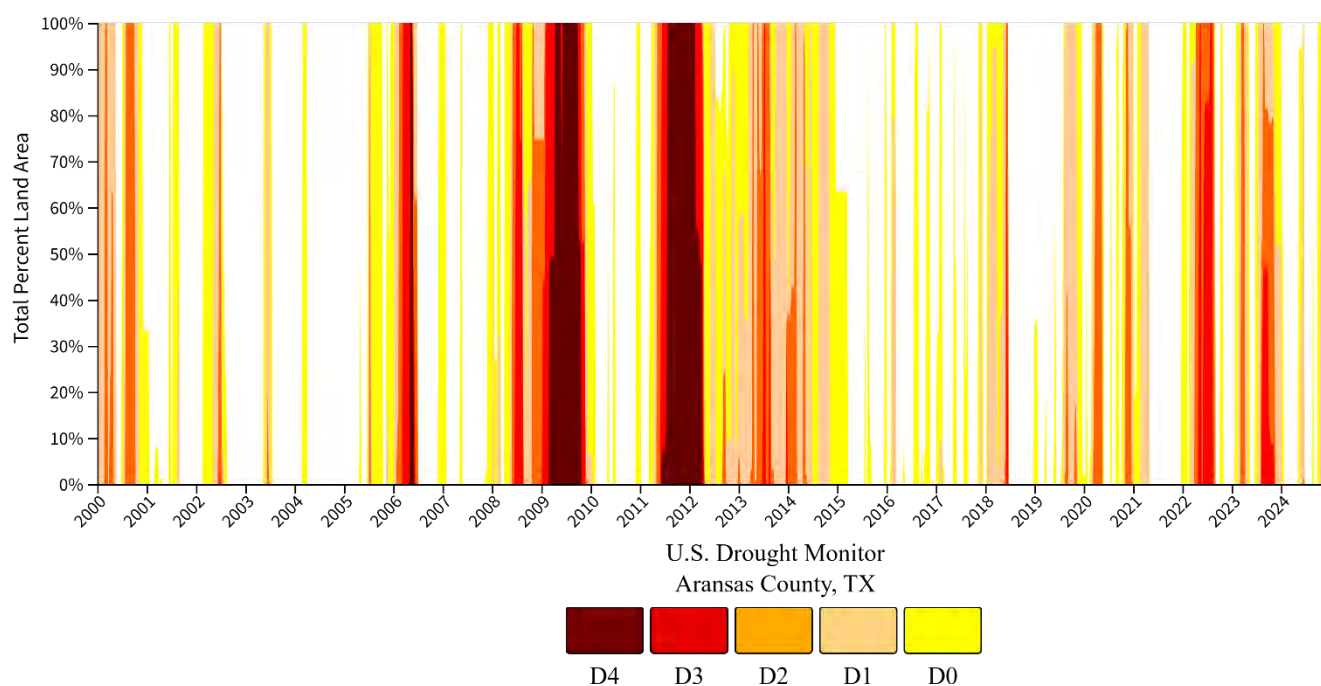


Table 6-4 lists historical events that have occurred in Aransas County as reported in the National Centers for Environmental Information Storm Events Database (NCEI). A total of 88 drought impacts were reported in the NCEI over 29 unique drought periods in Aransas County from 2000 through 2024. Historical drought impacts reported in the NCEI database for the Aransas County

³ U.S. Drought Monitor

SECTION 6: DROUGHT

planning area over the 25-year reporting period have resulted in no reported property or crop damages.

Historical drought information shows drought activity across a multi-county forecast area for each event, the appropriate percentage of the total property and crop damage reported for the entire forecast area has been allocated to each county impacted by the event. Historical drought data is provided on a county-wide basis per the NCEI Storm Events database. A summary of historical drought events is provided in Table 6-4.

Historical drought data for all participating jurisdictions, including the ISD and Navigation District, are provided on a county-wide basis per the NCEI database. Rockport-Fulton ISD and the Aransas County Navigation District did not report any damages for drought separate and apart from the NCEI.

Table 6-4. Historical Drought Events Summary, 2000 – 2024

JURISDICTION	DROUGHT IMPACTS	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Aransas County	88	0	0	\$0	\$0

Based on historical drought events for the Aransas County planning area, 33 drought impacts were reported over 11 unique drought periods since the 2020 Plan.

SIGNIFICANT EVENTS

April 2008 – February 2010

Severe drought conditions developed in early April of 2008, despite widespread rainfall of an estimated 1-3 inches across South Texas. The dry soil quickly absorbed the rain, therefore resulting in very little improvement in the county's drought condition. Over the next few months, rain deficits remained high. Hot, dry, and windy conditions persisted. Due to the planning area being in exceptional drought conditions (Stage D4) at this time, hay and agricultural production was very limited. By the early months of 2010, the county received enough rainfall to bring relief from the drought.

March 2011 - March 2015

The La Nina weather pattern that occurred in early spring of 2011 set new record lows for rainfall throughout the state. During this time, the county experienced exceptional drought conditions (Stage D4). Due to the hot, dry, and windy conditions during this time, fire danger increased and much of the agricultural land was stressed. This caused livestock producers to reduce or dissolve herds completely. Additionally, ponds in the area were either extremely low or had dried up completely. The planning area finally got some much needed relief from the drought by early 2015, when much of the region received above average rainfall amounts.

June 2023 – January 2024

Severe drought conditions in the planning area developed around June of 2023, following a lack of adequate rainfall. This led to extremely dry conditions and overall increased the risk of wildfires. By the end of June, a burn ban was enacted due to the severe drought conditions that the planning area was experiencing. There was a brief period of relief at the end of August, when Tropical Storm Harold moved into the area and brought some much needed rain. Nonetheless, the county

SECTION 6: DROUGHT

was still experiencing severe drought conditions (Stage D2). By November of 2023, the planning area received beneficial rainfall and drought conditions began to improve.

PROBABILITY OF FUTURE EVENTS

Based on available records of historic events, there have been 88 reported drought impacts in the NCEI over 29 unique drought periods (ranging from one month to just over four years) within a 25-year reporting period, which provides a probability of approximately three to four events every year. This frequency supports a “Highly Likely” probability of future events for the Aransas County planning area, including all participating jurisdictions, the ISD and special district.

CLIMATE CHANGE CONSIDERATIONS

With the range of factors influencing drought conditions, it is impossible to make quantitative statewide projections of drought trends; however, many factors point toward increased drought severity. Drought will continue to be driven largely by precipitation variability over multiple decades, with long-term precipitation trends expected to be relatively small. Other factors affecting drought impacts, such as increased temperatures and improved plant water use efficiency, can affect water availability. These impacts could cause drought impact trends to be highly sector-specific, with the impacts possibly smaller for agriculture than for surface water supply.⁴

It is projected that future changes to Aransas County will include increased temperatures, which according to the U.S. Climate Explorer, the planning area may experience a 5°F increase in average extreme heat temperatures. Historically, extreme temperatures averaged 96°F in Aransas County, but between 2035 and 2064 the average will be 101°F, increasing the severity and frequency of drought events. Some projections show an even higher increase; however, the severity will be dependent on overall future emissions and is subject to change.

VULNERABILITY AND IMPACT

Loss estimates were based on 25 years of statistical data from the NCEI and the U.S. Drought Monitor. A drought event frequency-impact was then developed to determine an impact profile on agriculture products and estimated potential losses due to drought in the area. All existing and future buildings, facilities, and populations are exposed to this hazard and could potentially be impacted. However, drought impacts are mostly experienced in water shortages or crop and livestock losses on agricultural lands and typically have minimal impact on buildings.

The Aransas County Planning Team identified the following critical facilities as assets that are considered the most important to the planning area and are susceptible to a range of impacts caused by drought events. For a comprehensive list of critical facilities by participating jurisdiction, please see Appendix D.

⁴ Cleaveland, M. K., T. H. Votteler, D. K. Stahle, R. C. Casteel, and J. L. Banner, 2011: Extended Chronology of Drought in South Central, Southeastern and West Texas. Texas Water Journal, 2, 54-96, as cited in Assessment of Historic and Future Trends of Extreme Weather in Texas, 1900-2036, Texas A&M University Office of the Texas State Climatologist, 2021 update.

SECTION 6: DROUGHT

Table 6-5. Critical Facilities Vulnerable to Drought Events

CRITICAL FACILITIES	POTENTIAL IMPACTS
Emergency Response Services (EOC, Fire, Police, EMS, Hospitals)	- Increased law enforcement activities may be required to enforce water restrictions. - Firefighters may have limited water resources to aid in firefighting and suppression activities, increasing risk to lives and property. - Potential for increased number of emergency calls as drought events can lead to cascading hazard events such as wildfires and flash flooding.
Airport, Academic Institutions, Community Residential Facilities, Day Care Facilities, Evacuation Centers & Shelters, Governmental Facilities	- Strain on staff as drought may cause health problems related to low water flows and poor water quality. - Operations dependent on water supply may be adversely impacted.
Commercial Suppliers (food, gas, etc.)	- Operations dependent on water supply may be adversely impacted. - There may be reduced food availability due to widespread agricultural losses.
Utility Services and Infrastructure (electric, water, wastewater, communications)	- Potential for increased number of emergency calls as drought events can lead to cascading hazard events such as wildfires and flash flooding. - Operations dependent on water supply may be adversely impacted.

Even with the planning area relying on multiple water utility providers as well as local and private service, high demand can still deplete these resources during extreme drought conditions. As resources are depleted, potable water is in short supply and overall water quality can suffer, elevating health concerns for all residents but especially vulnerable populations – typically children, the elderly, and the ill. In addition, potable water is used for drinking, sanitation, patient care, sterilization, equipment, heating and cooling systems, and many other essential functions in medical facilities.

The average person will survive only a few days without potable water, and this timeframe can be drastically shortened for those people with more fragile health – typically children, the elderly, and people with disabilities. During summer drought, or hot and dry conditions, elderly persons, small children, infants, those with disabilities, or who do not have adequate cooling units in their homes may become more vulnerable to injury and/or death. In addition, people who speak a language other than English may face increased vulnerability due to language barriers that limit their access to important information such as weather-related warnings and instructions regarding safety measures.

The population over 65 in the Aransas County planning area is estimated at 28 percent of the total population and children under the age of 5 are estimated at 4 percent. The population with

SECTION 6: DROUGHT

a disability is estimated at 18 percent of the total population. An estimated 19 percent of the planning area population live below the poverty level and 2 percent of the populations speak English 'less than very well' (Table 6-6).

Table 6-6. Populations at Greater Risk by Participating Jurisdiction

JURISDICTION	POPULATION				
	65 AND OLDER	UNDER 5	WITH A DISABILITY	BELOW POVERTY LEVEL	LIMITED ENGLISH SPEAKING
Aransas County	6,844	1,079	4,402	4,572	513
Town of Fulton	534	0	408	100	0
City of Rockport	3,018	527	1,681	1,630	240

Table 6-7. Populations at Greater Risk for Special Districts

JURISDICTION	POPULATION UNDER 5
Rockport-Fulton ISD	130
Aransas County Navigation District	-

The planning area is also vulnerable to food shortages when drought conditions exist, and potable water is in short supply. Potable water is used for drinking, sanitation, patient care, sterilization, equipment, heating and cooling systems, and many other essential functions in medical facilities. All residents in the Aransas County planning area could be adversely affected by drought conditions, which could limit water supplies and present health threats.

The economic impact of droughts can be significant as they produce a complex web of impacts that spans many sectors of the economy and reach well beyond the area experiencing physical drought. This complexity exists because water is integral to our ability to produce goods and provide services. If droughts extend over several years, the direct and indirect economic impact can be significant.

Impacts of past droughts experienced in the Aransas County planning area, including all participating jurisdictions, the ISD and special district, have not resulted in injuries, fatalities, property, or crop damages supporting a "Limited" severity of impact, meaning injuries and illnesses are treatable with first aid, the shutdown of critical facilities and services for 24 hours or less, and less than 10 percent of property destroyed or with major damage.

ASSESSMENT OF IMPACTS

The Drought Impact Reporter was developed in 2005 by the University of Nebraska-Lincoln to provide a national database of drought impacts. Droughts can have an impact on agriculture, business and industry; energy; fire; plants and wildlife; relief, response, and restrictions; society and public health; tourism and recreation; and water supply and quality. The reports are submitted by individuals from Federal, State, and local agencies, as well as the general public. Table 6-8

SECTION 6: DROUGHT

lists the drought impacts to Aransas County from 2005 to 2024 based on reports received by the Drought Impact Reporter.

Table 6-8. Drought Impacts, 2005-2024

DROUGHT IMPACTS	
Agriculture	92
Business & Industry	2
Energy	0
Fire	9
Plants & Wildlife	72
Relief, Response & Restrictions	9
Society & Public Health	4
Tourism & Recreation	1
Water Supply & Quality	24

Drought has the potential to impact people in the Aransas County planning area. While it is rare that drought, in and of itself, leads to a direct risk to the health and safety of people in the U.S., severe water shortages could result in inadequate supply for human needs. Based on historical population trends, the Aransas County population is projected to increase. Future growth can cause concern for the current water infrastructure and demand for the planning area. Severe drought conditions can be frequently associated with a variety of impacts, including:

- The number of health-related low-flow issues (e.g., diminished sewage flows, increased pollution concentrations, reduced firefighting capacity, and cross-connection contamination) will increase as the drought intensifies.
- Public safety from forest/range/wildfires will increase as water availability and/or pressure decreases.
- Respiratory ailments may increase as the air quality decreases.
- There may be an increase in disease due to wildlife concentrations (e.g., rabies, Rocky Mountain spotted fever, Lyme disease).
- Residents may disagree with the County, City, and Town over water use / water rights, creating conflict.
- Political conflicts may increase between municipalities, counties, states, and regions.
- Water management conflicts may arise between competing interests.
- Increased law enforcement activities may be required to enforce water restrictions.
- Severe water shortages could result in inadequate supply for human needs as well as lower quality of water for consumption.
- Firefighters may have limited water resources to aid in firefighting and suppression activities, increasing risk to lives and property.
- During drought there is an increased risk for wildfires and dust storms.

SECTION 6: DROUGHT

- The community may need increased operational costs to enforce water restriction or rationing.
- Prolonged drought can lead to increases in illness and disease related to drought.
- Utility providers can see decreases in revenue as water supplies diminish.
- Utilities providers may cut back energy generation and service to their customers to prioritize critical service needs.
- Hydroelectric power generation facilities and infrastructure would have significantly diminished generation capability. Dams simply cannot produce as much electricity from low water levels as they can from high water levels.
- Fish and wildlife food and habitat will be reduced or degraded over time during a drought and disease will increase, especially for aquatic life.
- Wildlife will move to more sustainable locations creating higher concentrations of wildlife in smaller areas, increasing vulnerability, and further depleting limited natural resources.
- There are fifteen federally endangered, threatened or candidate species in Aransas County. Severe and prolonged drought can result in the reduction of a species or cause the extinction of a species altogether.
- Plant life will suffer from long-term drought. Wind and erosion will also pose a threat to plant life as soil quality will decline. The urban tree canopy, including county and city parks, are vulnerable to the impacts of prolonged drought.
- Dry and dead vegetation will increase the risk of wildfire.
- Drought poses a significant risk to annual and perennial crop production and overall crop quality leading to higher food costs.
- Drought-related declines in production may lead to an increase in unemployment.
- Drought may limit livestock grazing resulting in decreased livestock weight, potential increased livestock mortality, and increased cost for feed.
- Negatively impacted water suppliers may face increased costs resulting from the transport water or developing supplemental water resources.
- Long term drought may negatively impact future economic development.

The overall extent of damage caused by periods of drought is dependent on its extent and duration. The level of preparedness and pre-event planning done by the community, local businesses, and citizens will contribute to the overall economic and financial conditions in the aftermath of a drought event.



SECTION 7 **EARTHQUAKE**

SECTION 7: EARTHQUAKE

Hazard Description	1
Location	2
Extent	4
Historical Occurrences	7
Probability of Future Events	8
Climate Change Considerations.....	9
Vulnerability and Impact.....	9

HAZARD DESCRIPTION

An earthquake is the sudden movement of the Earth's surface caused by the release of stress accumulated within or along the edge of the Earth's tectonic plates, volcanic eruption, or by a manmade explosion. The majority of earthquakes occur along faults; however, earthquakes can occur within plate interiors. Over geologic time, plates move and plate boundaries change, pushing weakened boundary regions to the interior part of the plates. These areas of weakness within the continents can cause earthquakes in response to stresses that originate at the edges of the plate or in the deeper crust.

Earthquake locations are described by the focal depth and geographic position of the epicenter. The focal depth of an earthquake is the depth from the Earth's surface to the region where an earthquake's energy originates (the focus or hypocenter). The epicenter is the point on the Earth's surface directly above the hypocenter. Earthquakes usually occur without warning, with their effects impacting great distances away from the epicenter.

According to the U.S. Geological Society (USGS) Earthquake Hazards Program, an earthquake hazard is anything associated with an earthquake that may influence an individual's normal activities. Table 7-1 describes definition of examples.

Table 7-1. Definitions of Earthquake Hazards¹

HAZARD	DESCRIPTION
Surface Faulting	Displacement that reaches the earth's surface during slip along a fault. Commonly occurs with shallow earthquakes, those with an epicenter less than 20 kilometers.
Ground Motion (shaking)	The movement of the earth's surface from earthquakes or explosions. Ground motion or shaking is produced by waves that are generated by sudden slip on a fault or sudden pressure at the explosive source and travel through the earth and along its surface.
Landslide	A movement of surface material down a slope.

¹ Source: USGS, 2012

SECTION 7: EARTHQUAKE

HAZARD	DESCRIPTION
Liquefaction	A process by which water-saturated sediment temporarily loses strength and acts as a fluid, like when you wiggle your toes in the wet sand near the water at the beach. This effect can be caused by earthquake shaking.
Tectonic Deformation	A change in the original shape of a material due to stress and strain.
Tsunami	A sea wave of local or distant origin that results from large-scale seafloor displacements associated with large earthquakes, major submarine slides, or exploding volcanic islands.
Seiche	The sloshing of a closed body of water from earthquake shaking.

LOCATION

Earthquake hazard areas are mapped by the USGS's National Seismic Hazard Model (NSHM). Figure 7-1 shows the most recent 2023 iteration of this USGS model. The NSHM defines the potential for earthquake ground shaking for various probability levels across the United States. The 2023 NSHM is an update to the previous 2018 version, and compiles data and findings from a number of sources including earthquake catalogs, geodetic- and geologic-based fault and deformation models, and ground motion models (GMMs), among others.² The map shows the percent chance that a given area will experience a category VI (or stronger) earthquake in 100 years, as defined by the Modified Mercalli Intensity (MMI) Scale (Table 7-3). The likelihood of a significant earthquake event is signified by the color-coding on the map. Densely populated areas are also highlighted on the map (purple and black dotting) to indicate areas of elevated vulnerability in relation to higher seismic risk. The Aransas County planning area, as identified in Figure 7-1, is located in a low hazard area, with a less than five percent chance of experiencing a strong earthquake every 100 years.

² A comprehensive overview of the modelling process can be found at the USGS website, <https://www.usgs.gov/programs/earthquake-hazards/science/2023-50-state-long-term-national-seismic-hazard-model-0#overview>

SECTION 7: EARTHQUAKE

Figure 7-1. U.S. Map of Peak Ground Acceleration³

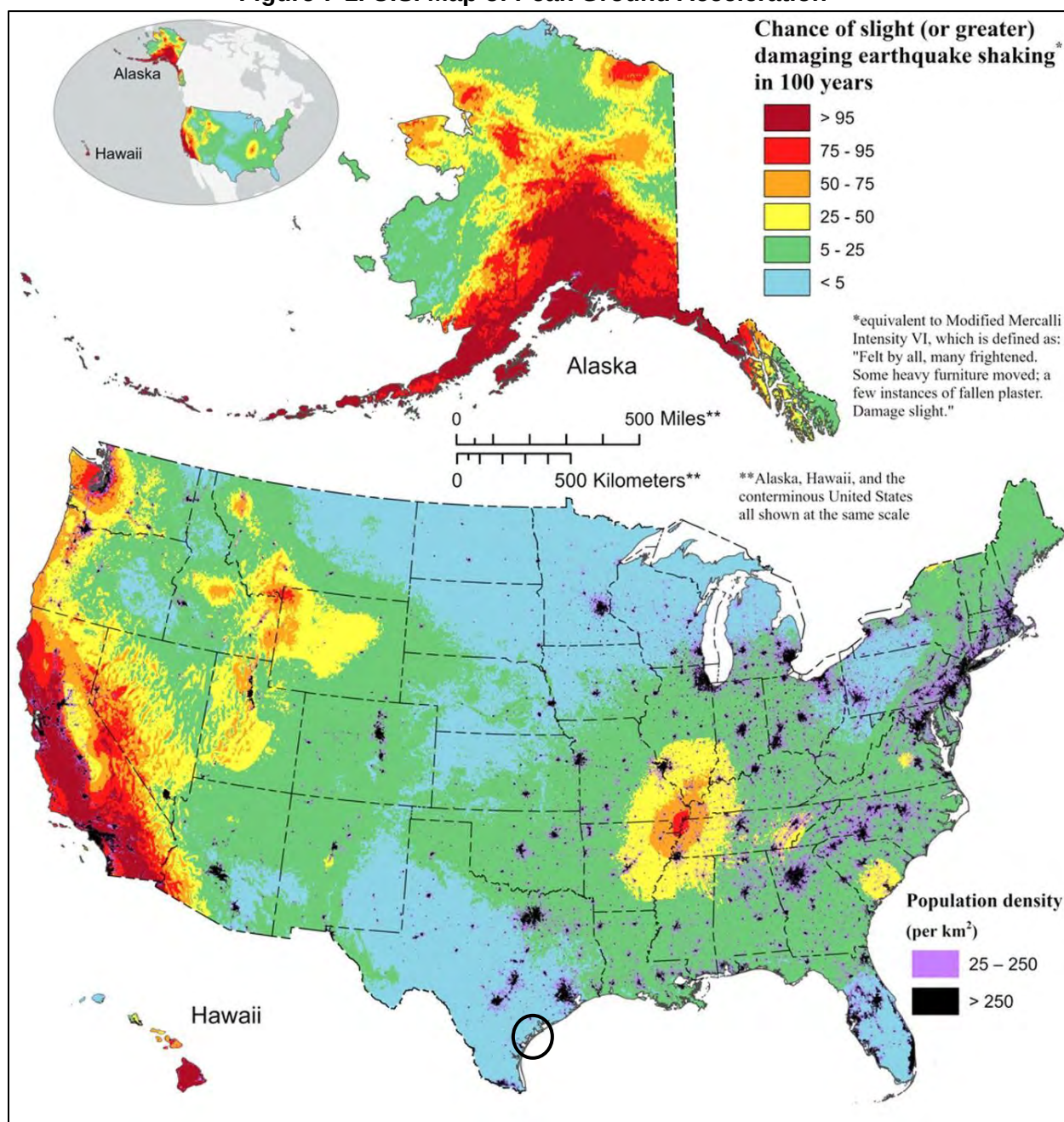
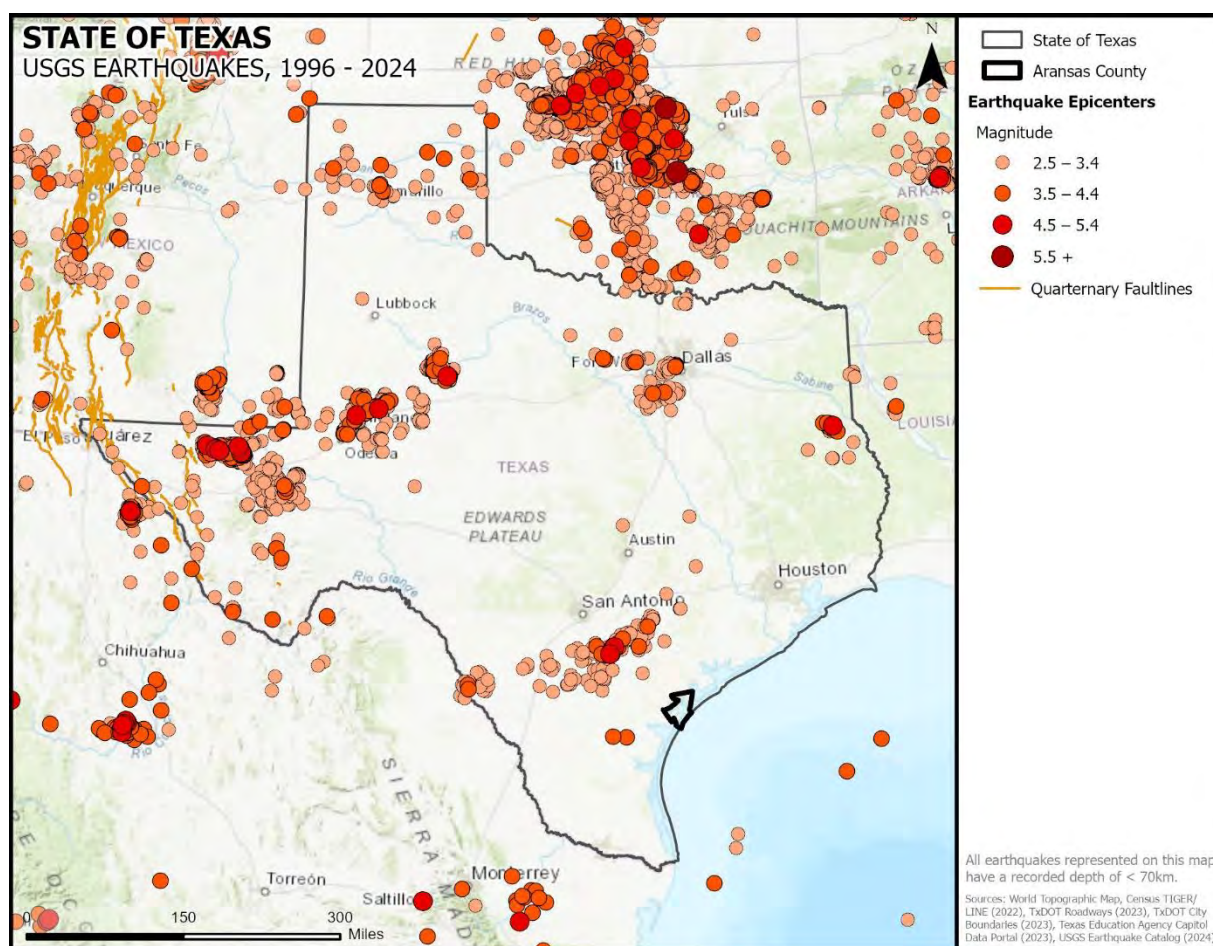


Figure 7-2 maps historic earthquake epicenters across Texas between 1996 and 2024.

³ The Aransas County planning area is indicated by the black circle.

SECTION 7: EARTHQUAKE

Figure 7-2. Historic Earthquake Epicenters in Texas, 1996-2024⁴



EXTENT

Earthquakes are measured in terms of magnitude and intensity. The prevalent magnitude measurement in use today is based on the Moment Magnitude Scale (MMS). MMS measures the movement of rock along the fault. It accurately measures larger earthquakes, which can last for minutes, affect a much larger area, and cause more damage. Magnitudes are based on a logarithmic scale (base 10), meaning that for each whole number you go up on the magnitude scale, the amplitude of the ground motion recorded by a seismograph goes up ten times. Using this scale, a magnitude 5 earthquake would result in ten times the level of ground shaking as a magnitude 4 earthquake (and about 32 times as much energy would be released).⁵ The USGS reports earthquake magnitudes above 4.0 as “moment magnitude,” often described in the press as “Richter” magnitude. Table 7-2 shows the magnitude levels for the current Richter / Moment Magnitude scale.

⁴ Aransas County is indicated by the black polygon.

⁵ (n.d.). How Do We Measure Earthquake Magnitude? Michigan Tech.
<https://www.mtu.edu/geo/community/seismology/learn/earthquake-measure/#:~:text=The%20moment%20magnitude%20scale%20is,the%20earthquake%20at%20multiple%20stations.>

SECTION 7: EARTHQUAKE

Table 7-2. Richter / Moment Magnitude Scale⁶

MAGNITUDE	CATEGORY	DESCRIPTION OF EFFECTS	EVENTS PER YEAR
< 3.0	Micro	Usually not felt, but can be recorded by seismograph	+100,000
3.0 – 3.9	Minor	Often felt, but causes no damage	12,000 - 100,000
4.0 – 4.9	Light	Felt by all, minor breakage of objects	2,000 - 12,000
5.0 – 5.9	Moderate	Some damage to weak structures	200 – 2,000
6.0 – 6.9	Strong	Moderate damage in populated areas	20 – 200
7.0 – 7.9	Major	Serious damage over large areas with loss of life expected	3 – 20
> 7.9	Great	Severe destruction and loss of life over large areas	Less than 3

Earthquake intensity measurement is an on-the-ground description. The measurement qualitatively explains the severity of earthquake shaking and its effects on people and their environment. Intensity measurements will differ depending on each location's proximity to the epicenter or point on the surface of the earth directly above the focus where the earthquake started. The intensity scale consists of a series of certain key responses such as people awakening, movement of furniture, damage to chimneys, and total destruction. There can be multiple intensity measurements associated with an earthquake as opposed to one magnitude measurement.⁷ The Modified Mercalli Intensity value assigned to a specific site after an earthquake has a more meaningful measure of severity to the nonscientist than the magnitude because intensity refers to the effects actually experienced at a specific location. The scale provides the intensity of the earthquake in values ranging from I to X. Table 7-3 describes the typical effects and intensities associated with earthquakes of various magnitudes. The intensity and effects depend on multiple factors (earthquake depth, epicenter location, site geology, population density, to name a few) and can vary widely.

⁶ (n.d.). Earthquakes. Britannica. <https://www.britannica.com/science/earthquake-geology>

⁷ Wood, H. O., and Neumann, Frank (1931). Modified Mercalli Intensity Scale of 1931: Seismological Society of America Bulletin, v. 21, no. 4, p. 277-283.

SECTION 7: EARTHQUAKE

Table 7-3. Magnitude and Modified Mercalli Intensity (MMI) Scale⁸

INTENSITY	CATEGORY	DESCRIPTION OF EFFECTS	CORRESPONDING RICHTER MAGNITUDE
I	Not Felt	Not felt except by a very few under especially favorable conditions	< 2.0
I	Not Felt	Felt only by a few persons at rest, especially on upper floors of buildings.	2.0 – 2.9
II – III	Weak	Felt quite noticeably by persons indoors, with shaking of indoor objects. Rarely causes damages.	3.0 – 3.9
IV – V	Light to Moderate	Noticeable shaking of indoor objects and rattling noises. Felt by most people in the affected area. Generally, no to minimal damage	4.0 – 4.9
VI – VII	Strong to Very Strong	Significant damages to poorly constructed buildings. Limited to moderate damages to well-built structures.	5.0 – 5.9
VIII – IX	Severe to Violent	Damage slight in specially designed structures; considerable damage in ordinary buildings with partial collapse. Damage great in poorly built structures.	6.0 – 6.9
VIII +	Severe to Extreme	Damage considerable in specially designed structures. Damage substantial to most buildings, with partial or complete collapse. Felt across great distances with major damage mostly limited to 250 km from Epicenter.	7.0 – 7.9
VIII – IX	Severe to Violent	Major damage to buildings, structures likely to be destroyed; will cause moderate to heavy damage to sturdy or earthquake-resistant buildings; damaging in large areas; felt in extremely large regions.	8.0 – 8.9
VIII +	Severe to Extreme	At or near total destruction. Severe damage or collapse to all buildings; heavy damage and shaking extends to distant locations and permanent changes in ground topography.	9.0+

⁸ Source: USGS

SECTION 7: EARTHQUAKE

Taking into consideration the possible extent of an earthquake for the area, by reviewing Tables 7-2 and 7-3 in conjunction with no significant previous occurrences, as depicted in Figure 7-2, the Aransas County planning area experiences on average less than 4.0 magnitude or Levels II-III (weak impact) on the Modified Mercalli Intensity scale. This is the greatest extent the entire planning area can anticipate in the future including all participating jurisdictions, the ISD and special district, based on historic records.

HISTORICAL OCCURRENCES

According to USGS, and the National Geophysical Data Center (NGDC), there are no “significant” earthquakes on record for the State of Texas and the entire Aransas County planning area from 2150 B.C. to present. A significant earthquake, as defined by NGDC, is one that has caused at least moderate damage (approximately \$1 million or more), has resulted in 10 or more deaths, has registered as a magnitude 7.5 or greater, has registered as Modified Mercalli Intensity (MMI) Scale X or greater, or generated a tsunami. None of these criteria have been met by any seismic activity known to have impacted the planning area.

The USGS also has a database that tracks all earthquakes with a magnitude 2.5 or greater across the United States. According to the database, there were no earthquakes reported within the planning area between 1996 and 2024 (Table 7-4). During that same period, two earthquakes occurred within a 50-mile radius of the planning area and 254 earthquakes occurred within a 100-mile radius. Many of these occurred to the west of the Aransas County planning area. The maximum magnitude recorded for earthquakes within the 50-mile radius was magnitude 3.9, considered a Level II-III (weak) earthquake. In the 100-mile radius, the greatest recorded magnitude was 4.8, considered a Level IV-V (light to moderate) earthquake.

Another aspect of earthquakes tracked by the USGS is the depth at which they occur. Shallow earthquakes tend to be more damaging and cause more intense shaking than deeper earthquakes, however deep earthquakes are more likely to be felt over a wider area. All recorded earthquakes in or near the Aransas County planning area have originated at depths categorized as shallow (1-70 km) or very shallow (<1 km).

While it is possible for the planning area to feel stronger earthquakes that occur inside county boundaries, or within the 100-mile area around the planning area, at this time, there are no known damages associated with these events for the Aransas County planning area. Table 7-4 summarize historical earthquake events that have occurred inside or near the planning area.

SECTION 7: EARTHQUAKE

Figure 7-3. Historic Earthquake Events in or Near Aransas County, 1996 – 2024

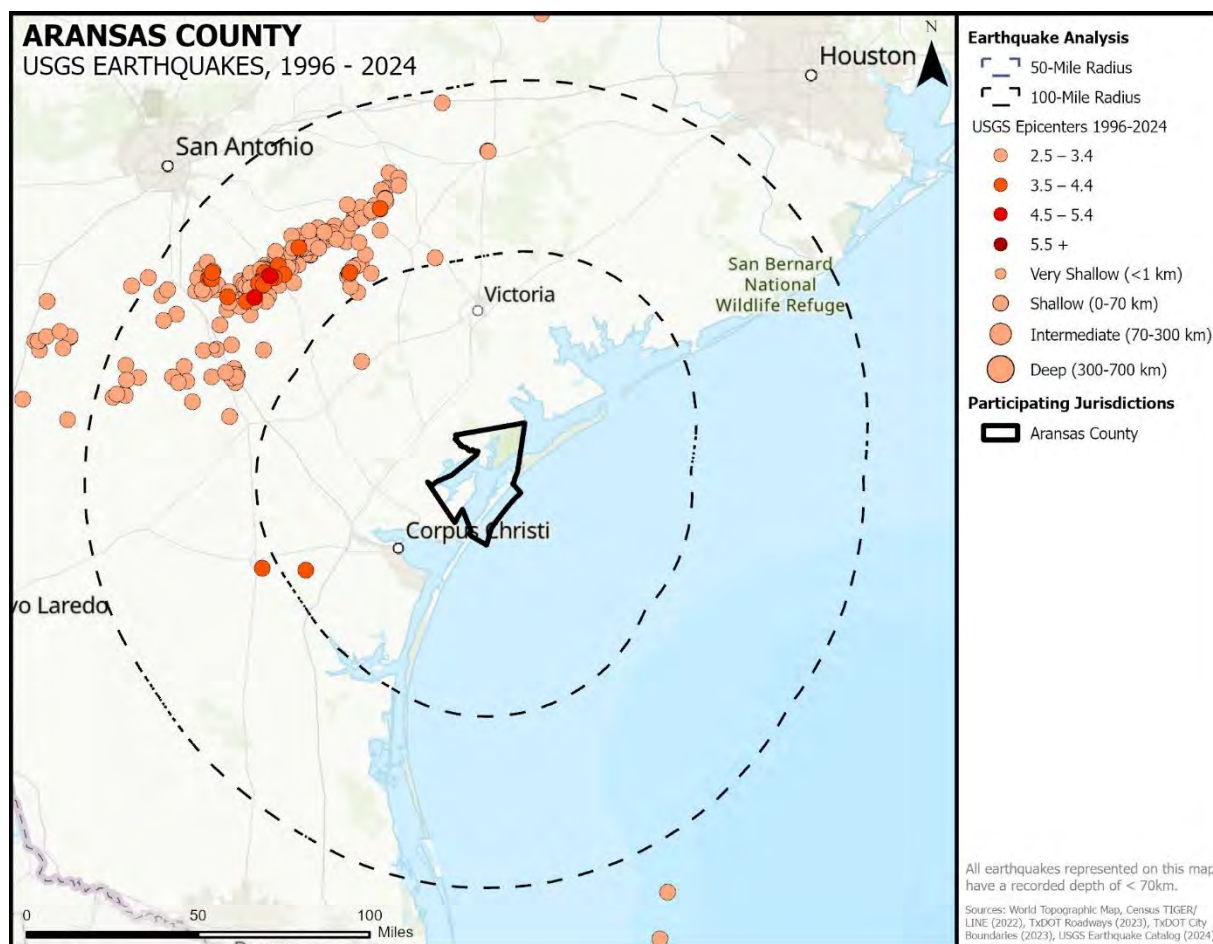


Table 7-4. Historical Earthquake Event Summary, 1996 – 2024⁹

JURISDICTION	NUMBER OF EVENTS	MAXIMUM EXTENT	DEPTH RANGE (km)	DEATH & INJURIES	PROPERTY & CROP DAMAGE
Aransas County	0	-	-	-	-
50-Mile Radius	2	3.5	0.0 – 5	0	\$0
100-Mile Radius	254	4.8	0.0 – 28.4	0	\$0

PROBABILITY OF FUTURE EVENTS

Earthquake Hazard Maps show the distribution of earthquake shaking levels that have a certain probability of occurring over a given period. According to the USGS, the entire Aransas County planning area has less than a five percent chance of a slightly damaging (or greater) earthquake

⁹ Source: USGS

SECTION 7: EARTHQUAKE

within 100 years. Based on historical records, the probability of an earthquake affecting the planning area is “Unlikely,” meaning that an event is probable in the next 10 years.

CLIMATE CHANGE CONSIDERATIONS

Damaging earthquakes are rare within the State of Texas, including the Aransas County planning area. Changing conditions of weather patterns and climate change has not been established as having a direct impact on earthquake intensity or frequency.

According to the USGS, statistically there is an approximately equal distribution of earthquakes in all cold weather, hot weather, rainy weather, etc. Very large low-pressure changes associated with major storm systems, like typhoons and hurricanes, are known to trigger episodes of fault slip or slow earthquakes in the Earth’s crust and may also play a role in triggering some damaging earthquakes. However, the numbers are small and are not statistically significant.¹⁰

The Aransas County planning area is located outside of any known earthquake hazard areas and is not located on or near any active fault lines. Climate change is assumed to have no impact on the probability or intensity of potential earthquakes in the planning area.

VULNERABILITY AND IMPACT

Little warning is usually associated with earthquakes and can impact areas a great distance away from the epicenter. The amount of damage depends on the density of population and buildings, and infrastructure construction in the affected area. Some places may be more vulnerable than others based on soil type, building age, and building codes in the Aransas County planning area.

The Aransas County Planning Team identified the following critical facilities as assets that are considered the most important to the planning area and are susceptible to a range of impacts caused by earthquake events. For a comprehensive list of critical facilities by participating jurisdiction, please see Appendix D.

Table 7-5. Critical Facilities Vulnerable to an Earthquake

CRITICAL FACILITIES	POTENTIAL IMPACTS
Emergency Response Services (EOC, Fire, Police, EMS), Hospitals and Medical Centers	• Emergency operations and services may be significantly impacted due to power outages, damaged facilities, fires and/or loss of communications. Impact can impede emergency response vehicle access to areas. • Power outages could disrupt communications, delaying emergency response times. • Extended power outages may lead to possible looting, destruction of property, and theft, further burdening law enforcement resources.

¹⁰ (n.d.). *Natural Hazards*. United States Geological Survey. <https://www.usgs.gov/faqs/there-earthquake-weather>

SECTION 7: EARTHQUAKE

CRITICAL FACILITIES	POTENTIAL IMPACTS
Airport, Academic Institutions, Animal Shelter, Evacuation Centers & Shelters, Governmental Facilities, Residential/ Assisted Living Facilities	• Power outages could disrupt critical care. • Backup power sources could be damaged. • Evacuations may be necessary due to extended power outages or other associated damages to facilities. • Economic disruption due to power outages negatively impact airport services as well as area businesses reliant on airport operations.
Commercial Supplier (food, fuel, etc.)	• Facilities, infrastructure, or critical equipment including communications may be damaged, destroyed or otherwise inoperable. • Essential supplies like medicines, water, food, and equipment deliveries may be delayed.
Utility Services and Infrastructure (electric, water, wastewater, communications)	• Emergency operations and critical services may be significantly impacted due to power outages, damaged facilities, and/or loss of communications. Impact can impede emergency service vehicle access to areas. • Power outages could disrupt communications, delaying emergency response times further straining the capacity and resources of emergency service personnel.

With no significant historical events recorded, neither annualized loss-estimates or a breakdown of potential dollar losses of critical facilities and infrastructure from earthquakes are available. The potential severity of impact from an earthquake for the entire Aransas County planning area, including all participating jurisdictions, the ISD and special district, is classified as “Limited,” meaning that less than 10 percent of infrastructure would be damaged with critical facilities being shut down for less than 24 hours.



SECTION 8

EXTREME HEAT

SECTION 8: EXTREME HEAT

Hazard Description	1
Location	1
Extent	1
Historical Occurrences	4
Significant Events	7
Probability of Future Events	7
Climate Change Considerations	8
Vulnerability and Impact	8
Assessment of Impacts	10

HAZARD DESCRIPTION

Extreme heat is a prolonged period of excessively high temperatures and exceptionally humid conditions. Extreme heat during the summer months is a common occurrence throughout the State of Texas, and the Aransas County planning area is no exception. The County typically experiences extended heat waves or an extended period of extreme heat and is often accompanied by high humidity.



Although heat can damage buildings and facilities, it presents a more significant threat to the safety and welfare of citizens. The major human risks associated with extreme heat include heat cramps; sunburn; dehydration; fatigue; heat exhaustion; and even heat stroke. The most vulnerable population to heat casualties are children and the elderly or infirmed who frequently live on low fixed incomes and cannot afford to run air-conditioning on a regular basis. This population is sometimes isolated, with no immediate family or friends to look out for their well-being.

Critical infrastructure can also be damaged or impacted by extreme heat. High temperatures may cause a rise in electricity consumption as homes, schools, and businesses try to regulate the temperature. This may lead to energy shortages and possible blackouts.

LOCATION

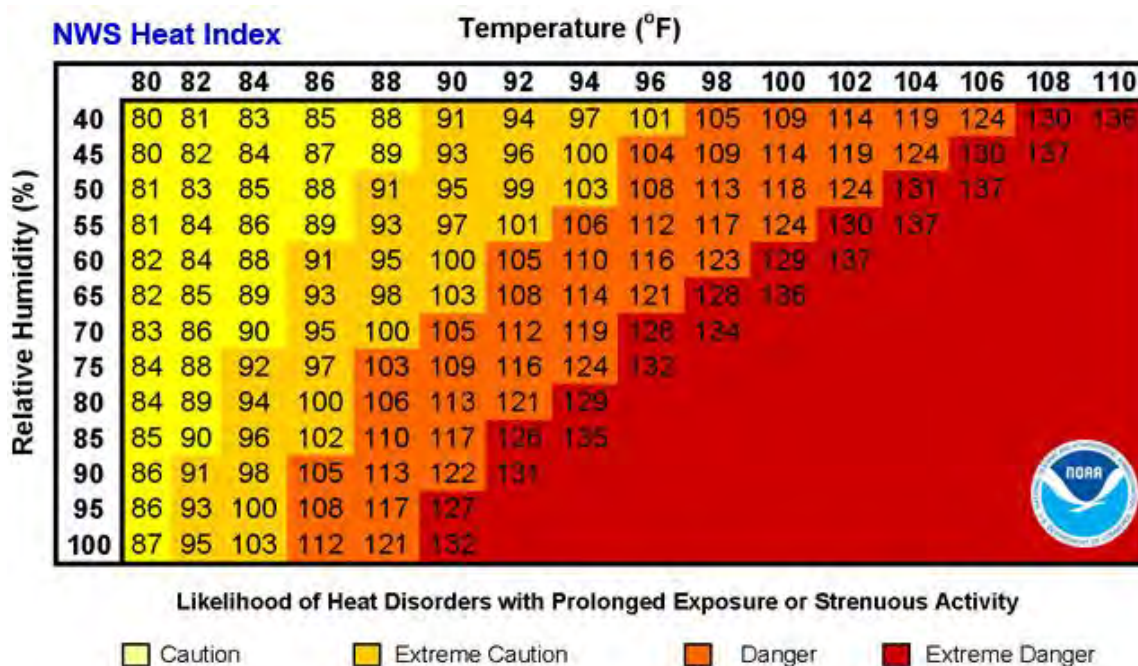
Extreme heat events can occur anywhere throughout the Aransas County planning area, including all participating jurisdictions, the ISD and special district, as there is no specific geographic scope to the extreme heat hazard.

EXTENT

The magnitude or intensity of an extreme heat event is measured according to temperature in relation to the percentage of humidity. According to the National Oceanic Atmospheric Administration (NOAA), this relationship is referred to as the “Heat Index” and is depicted in Figure 8-1. This index measures how hot it feels outside when humidity is combined with high temperatures.

SECTION 8: EXTREME HEAT

Figure 8-1. Extent Scale for Extreme Heat¹



The index in Figure 8-1 displays varying categories of caution depending on the relative humidity combined with the temperature. For example, when the temperature is at 90 degrees Fahrenheit (°F) or lower, caution should be exercised if the humidity level is at or above 40 percent.

The shaded zones on the chart indicate varying symptoms or disorders that could occur depending on the magnitude or intensity of the event. “Caution” is the first category of intensity, and it indicates when fatigue due to heat exposure is possible. “Extreme Caution” indicates that sunstroke, muscle cramps, or heat exhaustion are possible, and a “Danger” level means that these symptoms are likely. “Extreme Danger” indicates that heat stroke is likely. The National Weather Service (NWS) initiates alerts based on the Heat Index as shown in Table 8-1.

Table 8-1. Heat Index and Warnings

CATEGORY	HEAT INDEX	POSSIBLE HEAT DISORDERS	WARNING TYPE
Extreme Danger	125°F and higher	Heat stroke or sun stroke likely.	An Excessive Heat Warning is issued if the Heat Index rises above 105°F at least 3 hours during the day or above 80°F at night.
Danger	103 – 124°F	Sunstroke, muscle cramps, and/or heat exhaustion are likely. Heatstroke possible with prolonged exposure and/or physical activity.	An Excessive Heat Warning is issued if the Heat Index rises above 105°F at least 3 hours during the day or above 80°F at night.

¹ Source: NOAA

SECTION 8: EXTREME HEAT

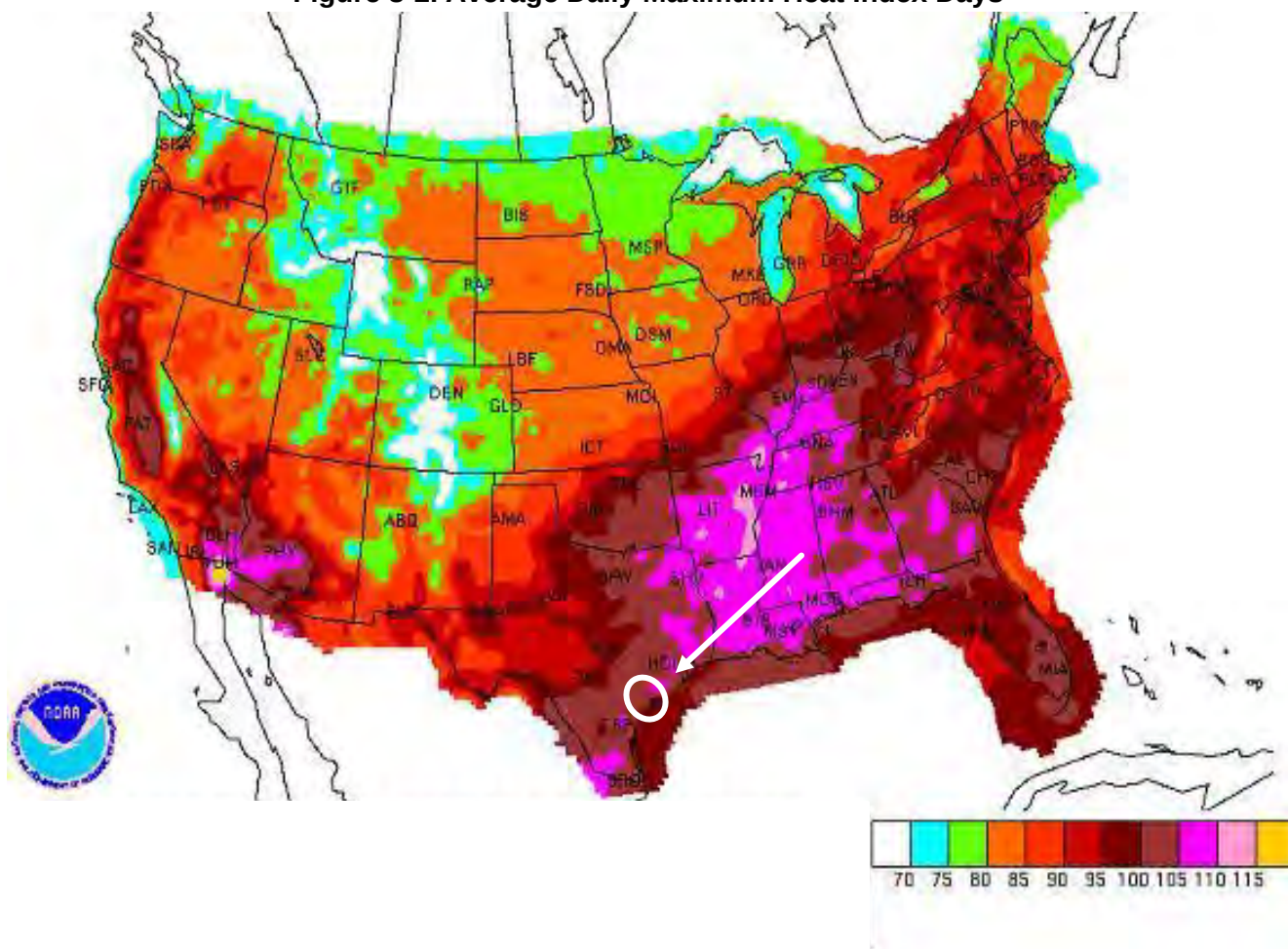
CATEGORY	HEAT INDEX	POSSIBLE HEAT DISORDERS	WARNING TYPE
Extreme Caution	90 – 103°F	Sunstroke, muscle cramps, and/or heat exhaustion possible with prolonged exposure and/or physical activity.	A Heat Advisory will be issued to warn that the Heat Index may exceed 105°F.
Caution	80 – 90°F	Fatigue is possible with prolonged exposure and/or physical activity.	A Heat Advisory will be issued to warn that the Heat Index may exceed 105°F.

Due to its geography and its warm, sunny, and humid subtropical climate, the Aransas County planning area can expect an extreme heat event each summer. Citizens, especially children and the elderly, should exercise caution by staying out of the heat for prolonged periods when a heat advisory or excessive heat warning is issued. In addition, those working or remaining outdoors for extended periods of time are at greater risk.

Figure 8-2 displays the daily maximum heat index as derived from NOAA based on data compiled from 1838 to 2015. The white circle shows the Aransas County planning area. The planning area is represented in a brown color across the County. The brown color indicates an average daily heat index of 100°F to 105°F. Therefore, Aransas County could experience dangerous heat from 100°F to 105°F and should mitigate to the extent of “Extreme Caution” and “Danger,” which can include sunstroke, muscle cramps, heat exhaustion and potential heat stroke. This is the average maximum temperature the planning area can anticipate based on historical events, including all participating jurisdictions, the ISD and special district.

SECTION 8: EXTREME HEAT

Figure 8-2. Average Daily Maximum Heat Index Days²



HISTORICAL OCCURRENCES

The National Centers for Environmental Information (NCEI) Storm Events database is a national data source organized under the National Oceanic and Atmospheric Administration (NOAA). The NCEI is the largest archive available for historic storm events data. Previous occurrences for extreme heat are derived from the NCEI database, which identifies extreme heat events at the county level for each event. According to heat related incidents located within Aransas County, there have been 48 extreme heat events on record for the planning area (Table 8-2). Historical extreme heat information, as provided by the NCEI, shows extreme heat activity across a multi-county forecast area for each event, the appropriate percentage of the total property and crop damage reported for the entire forecast area has been allocated to each county impacted by the event.

² NRDC and the white circle indicates the Aransas County planning area.

SECTION 8: EXTREME HEAT

Historical data for all participating jurisdictions, including the ISD and special district, are provided on a county-wide basis per the NCEI database from 1996 through 2024. Extreme heat events have resulted in one reported fatality within the planning area. No additional injuries or damages were reported to the NCEI.

Only extreme heat events that have been reported have been factored into this Risk Assessment. It is highly likely additional extreme heat occurrences have gone unreported before and during the recording period. Due to the limited number of reported events, average high temperatures have also been analyzed in order to determine the probability of future events.

Table 8-2. Historical Extreme Heat Events, 1996 – 2024³

JURISDICTION	DATE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Aransas County	7/11/2010	1	0	\$0	\$0
Aransas County	7/10/2022	0	0	\$0	\$0
Aransas County	8/2/2022	0	0	\$0	\$0
Aransas County	6/15/2023	0	0	\$0	\$0
Aransas County	6/16/2023	0	0	\$0	\$0
Aransas County	6/17/2023	0	0	\$0	\$0
Aransas County	7/12/2023	0	0	\$0	\$0
Aransas County	7/18/2023	0	0	\$0	\$0
Aransas County	7/19/2023	0	0	\$0	\$0
Aransas County	7/24/2023	0	0	\$0	\$0
Aransas County	8/2/2023	0	0	\$0	\$0
Aransas County	8/6/2023	0	0	\$0	\$0
Aransas County	8/7/2023	0	0	\$0	\$0
Aransas County	8/9/2023	0	0	\$0	\$0
Aransas County	8/11/2023	0	0	\$0	\$0
Aransas County	8/12/2023	0	0	\$0	\$0
Aransas County	8/13/2023	0	0	\$0	\$0
Aransas County	8/14/2023	0	0	\$0	\$0
Aransas County	8/15/2023	0	0	\$0	\$0
Aransas County	8/16/2023	0	0	\$0	\$0

³ NOAA, NCEI Storm Events Database

SECTION 8: EXTREME HEAT

JURISDICTION	DATE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Aransas County	8/20/2023	0	0	\$0	\$0
Aransas County	8/23/2023	0	0	\$0	\$0
Aransas County	9/6/2023	0	0	\$0	\$0
Aransas County	5/26/2024	0	0	\$0	\$0
Aransas County	5/26/2024	0	0	\$0	\$0
Aransas County	5/27/2024	0	0	\$0	\$0
Aransas County	5/28/2024	0	0	\$0	\$0
Aransas County	5/29/2024	0	0	\$0	\$0
Aransas County	5/30/2024	0	0	\$0	\$0
Aransas County	6/4/2024	0	0	\$0	\$0
Aransas County	6/6/2024	0	0	\$0	\$0
Aransas County	6/25/2024	0	0	\$0	\$0
Aransas County	6/26/2024	0	0	\$0	\$0
Aransas County	6/28/2024	0	0	\$0	\$0
Aransas County	6/29/2024	0	0	\$0	\$0
Aransas County	7/19/2024	0	0	\$0	\$0
Aransas County	8/7/2024	0	0	\$0	\$0
Aransas County	8/12/2024	0	0	\$0	\$0
Aransas County	8/14/2024	0	0	\$0	\$0
Aransas County	8/15/2024	0	0	\$0	\$0
Aransas County	8/16/2024	0	0	\$0	\$0
Aransas County	8/17/2024	0	0	\$0	\$0
Aransas County	8/18/2024	0	0	\$0	\$0
Aransas County	8/20/2024	0	0	\$0	\$0
Aransas County	8/21/2024	0	0	\$0	\$0
Aransas County	8/22/2024	0	0	\$0	\$0
Aransas County	9/13/2024	0	0	\$0	\$0
Aransas County	9/19/2024	0	0	\$0	\$0
TOTALS		1	0	\$0	\$0

SECTION 8: EXTREME HEAT

Table 8-3. Historical Extreme Heat Events Summary, 1996 – 2024

JURISDICTION	NUMBER OF EVENTS	DEATH	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Aransas County	48	1	0	\$0	\$0

Based on the list of historical extreme heat events for the Aransas County planning area, 47 events were reported to the NCEI since the 2020 Plan.

SIGNIFICANT EVENTS

July 11, 2010

An extreme heat event on July 11, 2010, resulted in heat index values near 105°F. According to the NCEI, an 18-month-old boy died after he was left inside a parked vehicle in Aransas County, near Aransas Pass.

June 15 – June 17, 2023

An upper-level ridge continued to build over south Texas from June 15th to the 19th. There was above normal humidity and hot temperatures that provided excessive heat conditions across the coastal plains to the Brush Country starting on the 15th. The afternoon heat index ranged from 110°F to 114°F for Aransas County.

August 11 – 16, 2023

A dangerous heat wave continued into the middle parts of August as the upper-level ridge of high pressure remained over south Texas. Excessive heat persisted over the Coastal Bend region from August 11th to the 14th. Aransas County had heat index values ranging from 114°F to 116°F.

May 26 – 30, 2024

A ridge persisted over South Texas, creating record breaking heat and heat index values across the region. There was a brief break from the heat on May 29th. Aransas County had reported heat index values ranging from 110°F to 114°F.

June 25 – 26, 2024 and June 28 – 29, 2024

The summer ridge heat pattern continued through late June, causing heat index values to range from 110°F to 118°F across the Coastal Bend and Brush Country. Coastal Aransas County observed heat index values of 110°F to 114°F.

September 13 and 19, 2024

High pressure set up more hot days in South Texas, with the Rockport Aransas County Airport observing heat indices of 110°F to 111°F for 2 hours on September 13, 2024, and a heat index near 115°F for 2 hours on September 19, 2024. The average temperature was 3.8°F above the national average, making this the second warmest September in the 130-year record.⁴

PROBABILITY OF FUTURE EVENTS

According to historical records, the Aransas County planning area has experienced 48 events in a 29-year reporting period. Although no events were reported between the year 2010 and 2021, historical records in combination with an analysis of maximum average temperatures provide a

⁴ Source: <https://www.ncei.noaa.gov/news/assessing-us-and-global-climate-september-2024>

SECTION 8: EXTREME HEAT

probability of at least one event every year. This frequency supports a “Highly Likely” probability of future events including participating jurisdictions, the ISD and special district.

CLIMATE CHANGE CONSIDERATIONS

Climate change is expected to lead to an increase in average temperatures as well as an increase in frequency, duration, and intensity of extreme heat events. With no reductions in emissions worldwide, the state of Texas is projected to experience an additional 30 to 60 days per year above 100°F than what is experienced now.⁵

In addition, it is projected that future changes to Aransas County will include increased temperatures, which according to the U.S. Climate Explorer, the planning area may experience a 5°F increase in the average extreme heat temperatures. Historically, extreme temperatures averaged 96°F in Aransas County, but between 2035 and 2064 the average will be 101°F, increasing the severity and frequency of extreme heat events. Some projections show an even higher increase; however, the severity will be dependent on overall future emissions and is subject to change.

VULNERABILITY AND IMPACT

While the entirety of the Aransas County planning area is exposed to extreme temperatures, existing buildings, infrastructure, and critical facilities are not likely to sustain significant damage from extreme heat events. Therefore, any estimated property losses associated with the extreme heat hazard are anticipated to be minimal across the area.

Every summer, the hazard of heat-related illness becomes a significant public health issue throughout much of the United States. Mortality rates increase during heat waves, and excessive heat is an important contributing factor to deaths from other causes, particularly among the elderly. Extreme temperatures present a significant threat to life and safety for the population of the County as a whole. Heat casualties, for example, are typically caused by a lack of adequate air conditioning or heat exhaustion. The most vulnerable population to heat casualties are the elderly or infirmed who frequently live on fixed incomes and cannot afford to run air conditioning on a regular basis. This population is sometimes isolated, with no immediate family or friends to look out for their well-being. Children may also be more vulnerable if left unattended in vehicles. Populations living below the poverty level are often unable to run air conditioning on a regular basis and are limited in their ability to seek medical treatment.

Vulnerable and underserved populations are disproportionately impacted by extreme heat events as they may be more susceptible to health risks. The population below the poverty level are less likely to be able to afford air conditioning during the hot summer months as well as less likely to have access to medical care. In addition, people who speak a language other than English may face increased vulnerability due to language barriers that limit their access to important information such as weather-related warnings and instructions regarding safety measures.

The population over 65 in the Aransas County planning area is estimated at 28 percent of the total population and children under the age of 5 are estimated at 4 percent. The population with

⁵ Nielsen-Gammon, John, Holman, Sara, Buley, Austin and Jorgensen, Savannah. Assessment of Historic and Future Trends of Extreme Weather in Texas, 1900-2036, 2021 Update. Texas A&M University Office of the Texas State Climatologist. October 7, 2021. <https://climatexas.tamu.edu/files/ClimateReport-1900to2036-2021Update>

SECTION 8: EXTREME HEAT

a disability is estimated at 18 percent of the total population. An estimated 19 percent of the planning area population live below the poverty level and 2 percent of the populations speak English 'less than very well' (Table 8-4).

Table 8-4. Populations at Greater Risk by Participating Jurisdiction

JURISDICTION	POPULATION				
	65 AND OLDER	UNDER 5	WITH A DISABILITY	BELOW POVERTY LEVEL	LIMITED ENGLISH SPEAKING
Aransas County	6,844	1,079	4,402	4,572	513
Town of Fulton	534	0	408	100	0
City of Rockport	3,018	527	1,681	1,630	240

The participating ISD and special district also have a combined total of 126 staff that work outdoors and may be exposed to extreme heat conditions (Table 8-5).

Table 8-5. Populations at Greater Risk for Special Districts

JURISDICTION	POPULATION UNDER 5	POPULATION THAT WORKS OUTDOORS
Rockport-Fulton ISD	130	100
Aransas County Navigation District (ACND)	-	26

Extremely high temperatures can have significant secondary impacts, leading to droughts, water shortages, increased fire danger, and prompt excessive demands for energy. The possibility of rolling blackouts increases with unseasonably high temperatures in what is a normally mild month with low power demands. Typically, more than 12 hours of warning time would be given before the onset of an extreme heat event.

In terms of vulnerability to structures, the impact from extreme heat is considered negligible. It is possible that critical facilities and infrastructure could be shut down for 24 hours if cooling units are running constantly, leading to a temporary power outage (Table 8-6). Less than ten percent of residential and commercial property could be damaged if extreme heat events lead to structure fires. Based on historical records, annualized property and crop losses for the Aransas County planning area, including all participating jurisdictions, the ISD and special district, are negligible. However, with one reported fatality, the potential impact of excessive summer heat is considered "Substantial," with multiple deaths and injuries possible depending on the extent and duration of the event.

The Aransas County Planning Team identified the following critical facilities as assets that are considered the most important to the planning area and are susceptible to a range of impacts caused by extreme heat events. The following critical facilities would be vulnerable to extreme heat events in the Aransas County planning area. For a comprehensive list of critical facilities by participating jurisdiction, please see Appendix D.

SECTION 8: EXTREME HEAT

Table 8-6. Critical Facilities Vulnerable to Extreme Heat Events

CRITICAL FACILITIES	POTENTIAL IMPACTS
Emergency Response Services (EOC, Fire, Police, EMS, Hospitals)	- Emergency operations, services and response times may be significantly impacted due to power outages, and/or loss of communications. - Exposure to heat can cause heat illnesses in first responders, especially for those in heavy equipment. - Roads may become impassable due to excessive heat causing asphalt roads to soften and concrete roads to shift or buckle impacting response times by emergency services. - Extended power outages due to increased usage may lead to possible looting, destruction of property, and theft, further burdening law enforcement resources.
Airport, Academic Institutions, Community Residential Facilities, Day Care Facilities, Evacuation Centers & Shelters, Governmental Facilities	- Facilities, infrastructure, or critical equipment including communications may be damaged, destroyed or otherwise inoperable. - Power outages due to increased usage could disrupt critical care. - Backup power sources could be damaged. - Evacuations may be necessary due to extended power outages, breaks in water main lines or other associated damage to facilities. - Facilities, infrastructure, or critical equipment including communications may be damaged, destroyed or otherwise inoperable. - Economic disruption due to power outages negatively impact airport services as well as area businesses reliant on airport operations.
Commercial Suppliers (food, gas, etc.)	- Facilities, infrastructure, or critical equipment including communications may be damaged, destroyed or otherwise inoperable. - Essential supplies like medicines, water, food, and equipment deliveries may be delayed.
Utility Services and Infrastructure (electric, water, wastewater, communications)	- Emergency operations, services and response times may be significantly impacted due to power outages, and/or loss of communications. - Roads may become impassable due to excessive heat causing asphalt roads to soften and concrete roads to shift or buckle impacting response times by emergency services. - Breaks in water main lines or other associated damage to facilities.

ASSESSMENT OF IMPACTS

The greatest risk from extreme heat is to public health and safety. Extreme heat conditions can be frequently associated with a variety of impacts, including:

- Vulnerable populations, particularly the elderly (28 percent of total population), children under 5 (4 percent of total population), and those with a disability (18 percent of total

SECTION 8: EXTREME HEAT

population) can face serious or life-threatening health problems from exposure to extreme heat including hyperthermia, heat cramps, heat exhaustion, and heat stroke (or sunstroke).

- Response personnel, including utility workers, public works personnel, and any other professions where individuals are required to work outside, are more subject to extreme heat related illnesses since their exposure would typically be greater.
- High energy demand periods can outpace the supply of energy, potentially creating the need for rolling brownouts which would elevate the risk of illness to vulnerable residents.
- Highways and roads may be damaged by excessive heat causing asphalt roads to soften and concrete roads to shift or buckle.
- Vehicle engines and cooling systems typically run harder during extreme heat events resulting in increases in mechanical failures.
- Extreme heat events during times of drought can exacerbate the environmental impacts associated with drought, decreasing water and air quality and further degrading wildlife habitat.
- Extreme heat increases ground-level ozone (smog), increasing the risk of respiratory illnesses.
- Negatively impacted water suppliers may face increased costs resulting from the transport of water resources or development of supplemental water resources.
- Tourism and recreational activities at places may be negatively impacted during extreme heat events, reducing seasonal revenue.
- Outdoor activities may see an increase in school injury or illness during extreme heat events.

The economic and financial impacts of extreme heat on the community will depend on the duration of the event, demand for energy, drought associated with extreme heat, and many other factors. The level of preparedness and the amount of planning done by the community, local businesses, and citizens will impact the overall economic and financial conditions before, during, and after an extreme heat event.



SECTION 9 **FLOOD**

SECTION 9: FLOOD

Hazard Description	1
Location	1
Extent	7
Historical Occurrences	9
Significant Events	11
Probability of Future Events	12
Climate Change Considerations	12
Vulnerability and Impact	13
Assessment of Impacts	17
National Flood Insurance Program (NFIP) Participation	19
NFIP Compliance and Maintenance	20
Repetitive Loss	21

HAZARD DESCRIPTION

Floods generally result from excessive precipitation. The severity of a flood event is determined by a combination of several major factors, including: stream and river basin topography and physiography; precipitation and weather patterns; recent soil moisture conditions; and the degree of vegetative clearing and impervious surfaces. Typically, floods are long-term events that may last for several days.

The primary types of general flooding are inland and coastal flooding. Inland or riverine flooding is a result of excessive precipitation levels and water runoff volumes within the watershed of a stream or river. Inland or riverine flooding is overbank flooding of rivers and streams, typically resulting from large-scale weather systems that generate prolonged rainfall over a wide geographic area. Therefore, it is a naturally occurring and inevitable event. Some river floods occur seasonally when winter or spring rainfalls fill river basins with too much water, too quickly. Torrential rains from decaying hurricanes or tropical systems can also produce river flooding.

Coastal flooding occurs when normally dry, low-lying land is flooded by seawater. The extent of coastal flooding is a function of the elevation inland flood waters penetrate which is controlled by the topography of the coastal land exposed to flooding. Coastal flooding is largely a natural event; however, human influence on the coastal environment can exacerbate coastal flooding. Extraction of water from groundwater reservoirs in the coastal zone can enhance subsidence of the land increasing the risk of flooding. Engineered protection structures along the coast such as sea walls alter the natural processes of the beach, often leading to erosion on adjacent stretches of the coast which also increases the risk of flooding.

Floods are a natural and recurrent event and take place every year, in all seasons. The Aransas County planning area is subject to both inland and coastal flooding. The planning area experiences extreme rainfall events, often in short durations, leading to dangerous flash flooding events. In addition, coastal flooding and storm surge can occur during hurricane events, which is covered in detail in Section 11.

SECTION 9: FLOOD

LOCATION

The Flood Insurance Rate Maps (FIRMs) prepared by FEMA provide an overview of flood risk but can also be used to identify the areas of the County that are vulnerable to flooding. FIRMs are used to regulate new development and to control the substantial improvement and repair of substantially damaged buildings. Flood Insurance Studies (FIS) are often developed in conjunction with FIRMs. The FIS typically contains a narrative of the flood history of a community and discusses the engineering methods used to develop the FIRMs. The FIS also contains flood profiles for studying flooding sources and can be used to determine Base Flood Elevations (BFEs) for some areas.

The FIS for Aransas County is dated April 4, 2011. This compiles all previous flood information including data collected on numerous waterways. This study indicates the main source of flooding is tidal water from the Gulf of Mexico. The planning area is extremely vulnerable to inundation from hurricane induced storm tide surges. The City of Rockport is located at the end of a coastal peninsula only a few miles from the open gulf. The most serious flooding conditions occur when wind generated high tides combine with large amounts of rainfall.

In Aransas County, stormwater runoff problems stem from upstream drainage rather than local conditions. Intense rainfall causes sheet flow from the southwest and northwest to converge in low-lying coastal areas, leading to flooding even when local precipitation is lower than inland areas. Most drainage in Aransas County relies on shallow open ditches originally built for agriculture. However, poor soil conditions, a high water table, and minimal elevation changes make them ineffective for flood control. Sandy soils cause unstable slopes, leading to erosion and widening channels, especially around Aransas Pass. Several communities have inadequate runoff drainage when intense rainfall occurs.

The seawall, while protecting Aransas Pass from flooding caused by hurricane storm tides, has itself become a cause of flooding problems during localized rainfall events within Aransas County. Outlets to relieve accumulated stormwater runoff from behind the seawall were installed when the structure was built. Continued urban development has rendered these outlets insufficient to drain the land behind the seawall quickly enough to prevent water from rising.

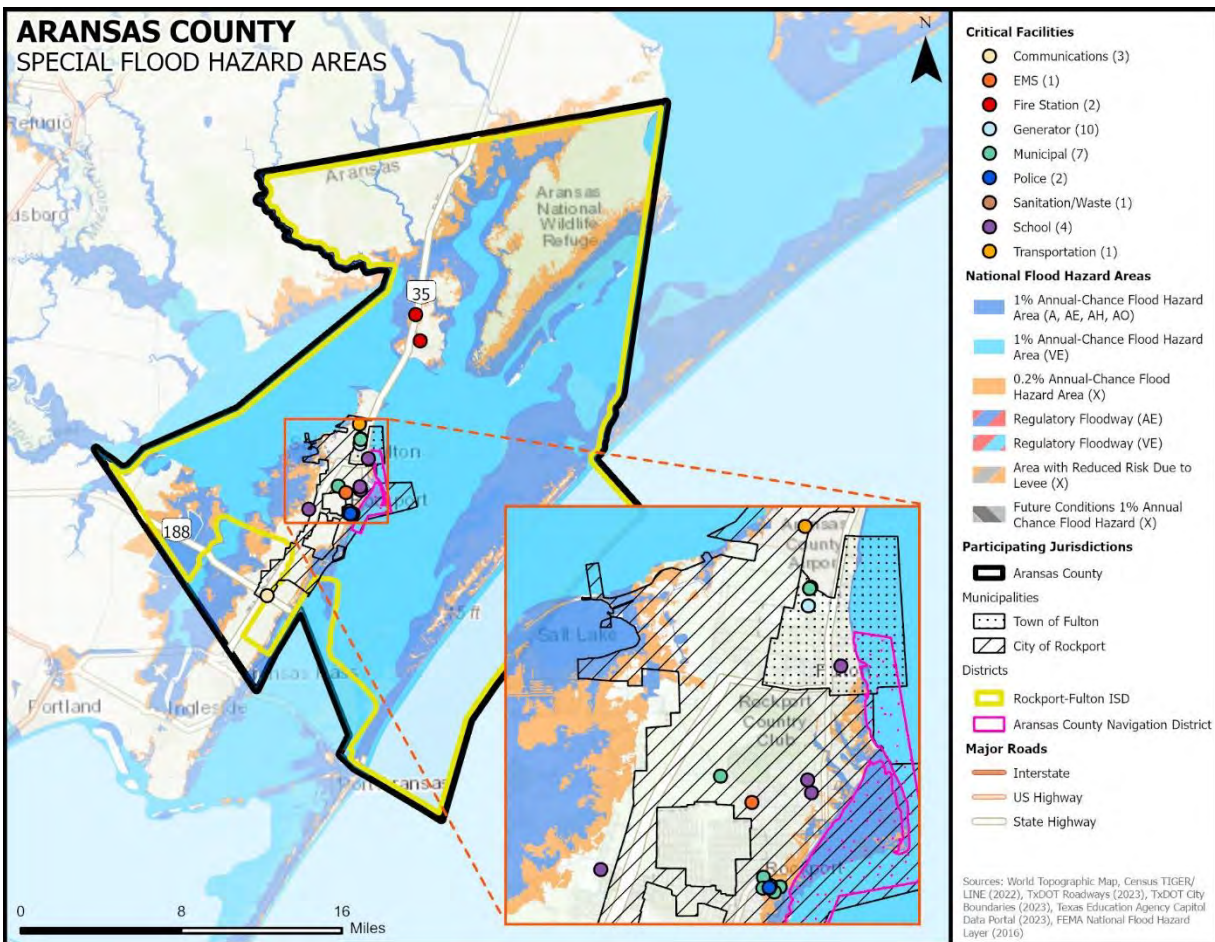
The current effective Digital Flood Insurance Rate Map or DFIRM (map ID 48007C, panels 25-400, dated December 20, 2019) data provided by FEMA for Aransas County shows the following flood hazard areas:

- Zone A: Areas subject to inundation by the 1-percent-annual-chance flood event generally determined using approximate methodologies. Because detailed hydraulic analyses have not been performed, no Base Flood Elevations (BFEs) or flood depths are shown. Mandatory flood insurance requirements and floodplain management standards apply.
- Zone AE: Areas subject to inundation by 1-percent-annual-chance shallow flooding. It is the base floodplain where BFEs are provided. AE zones are now used on new format FIRMs instead of A1-30 zones.
- Zone VE: Coastal areas with a 1-percent-annual-chance of flooding and an additional hazard associated with storm waves. These areas have a 26 percent chance of flooding over the life of a 30-year mortgage. BFEs are provided.

Locations of flood zones in Aransas County based on the Digital Flood Insurance Rate Map (DFIRM) from FEMA are illustrated in Figures 9-1 through 9-5.

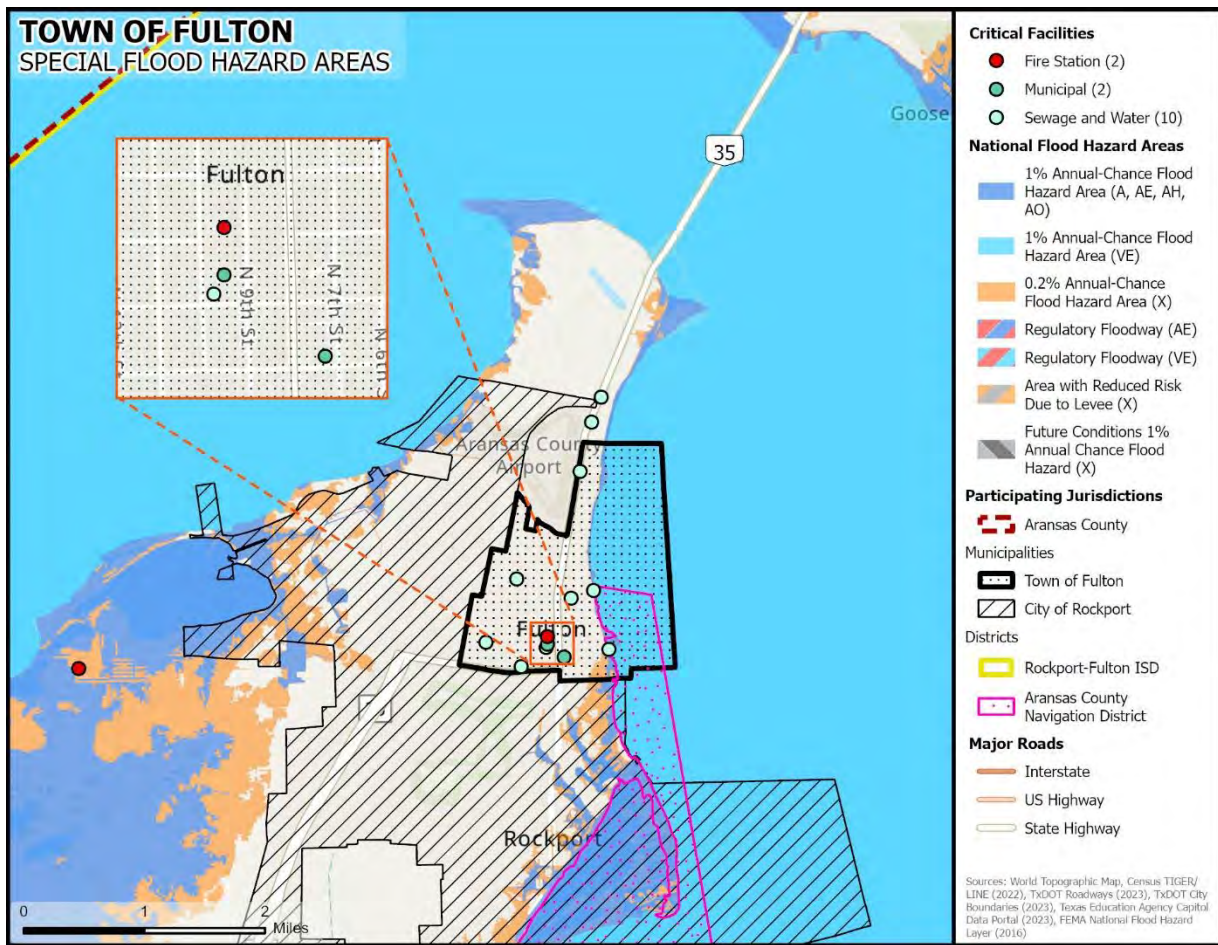
SECTION 9: FLOOD

Figure 9-1. Estimated Flood Zones in Aransas County



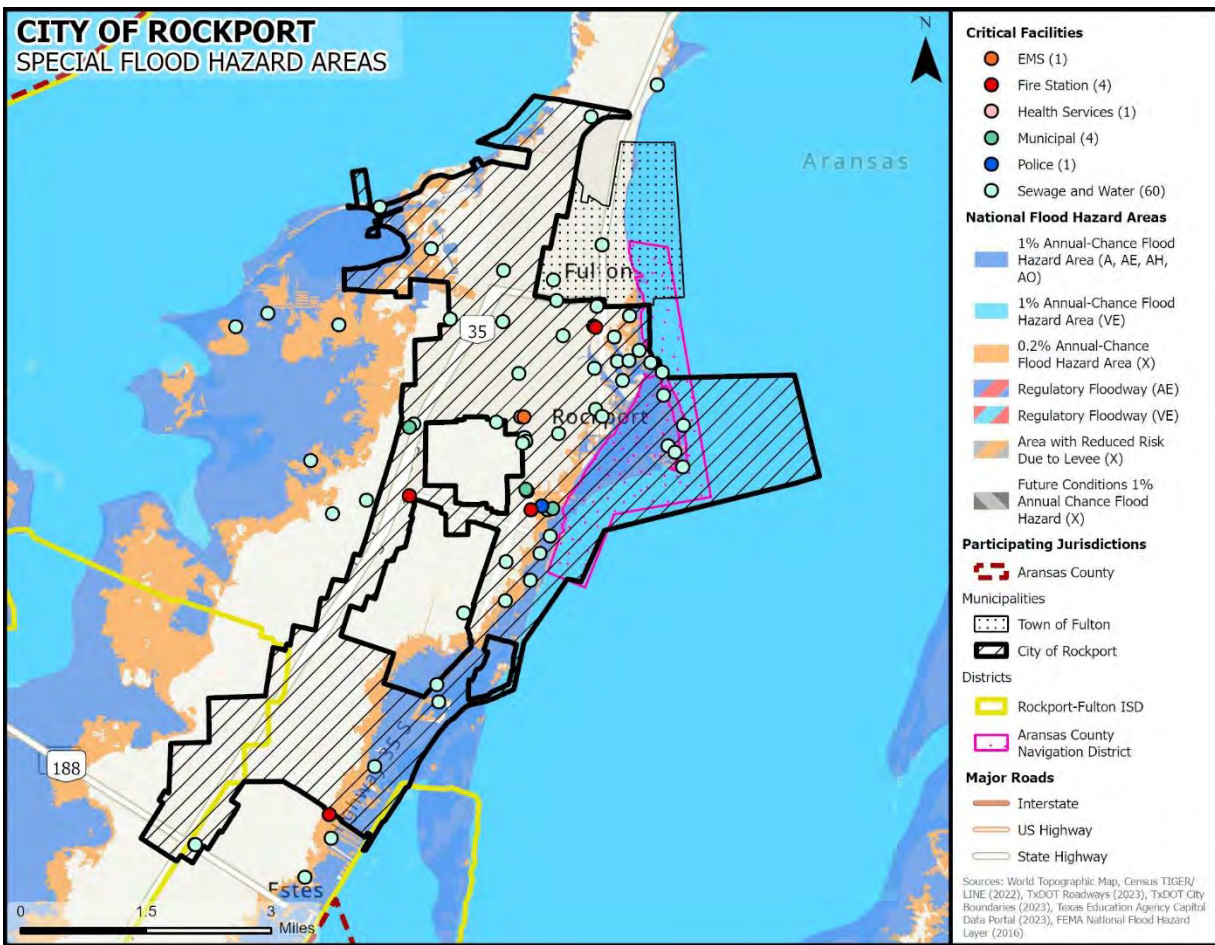
SECTION 9: FLOOD

Figure 9-2. Estimated Flood Zones in the Town of Fulton



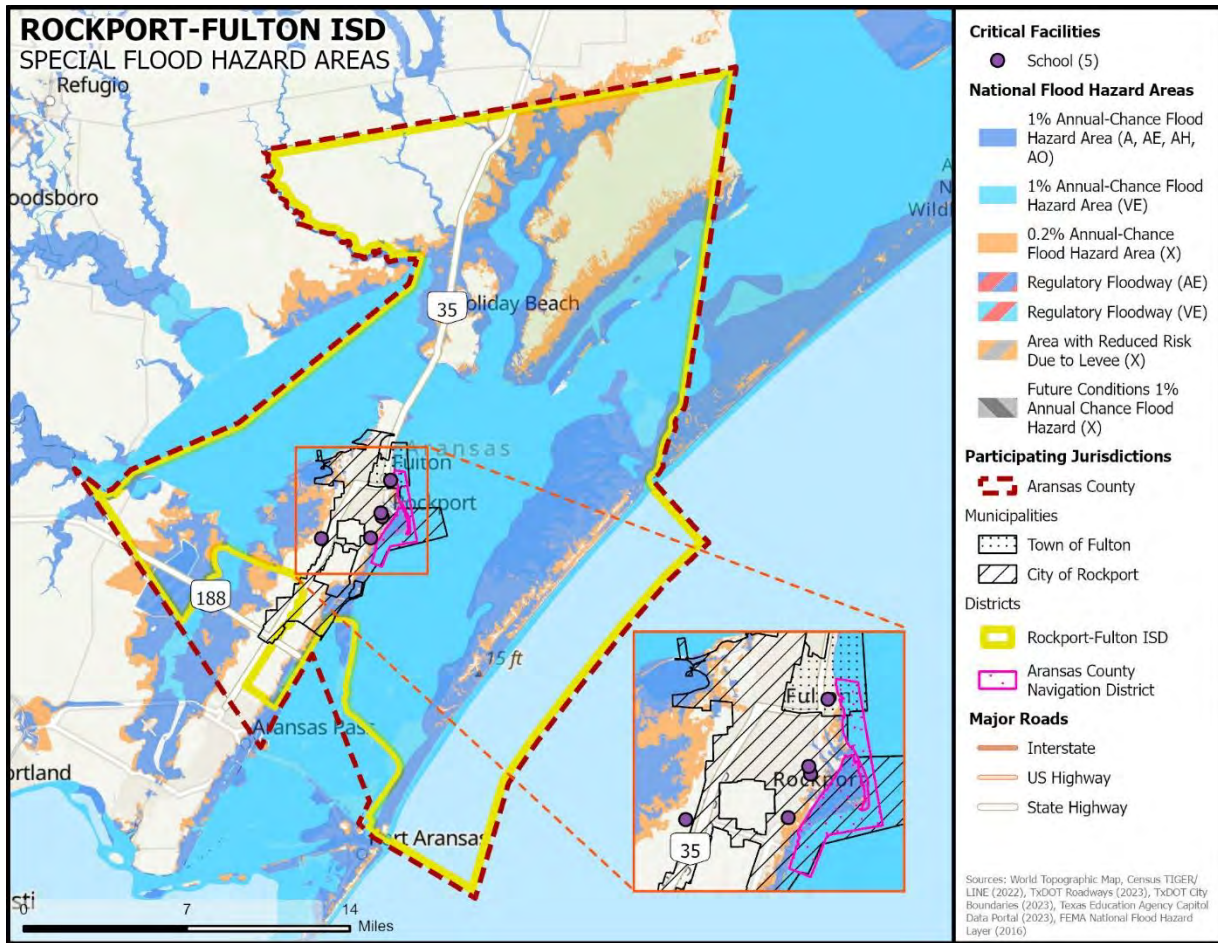
SECTION 9: FLOOD

Figure 9-3. Estimated Flood Zones in the City of Rockport



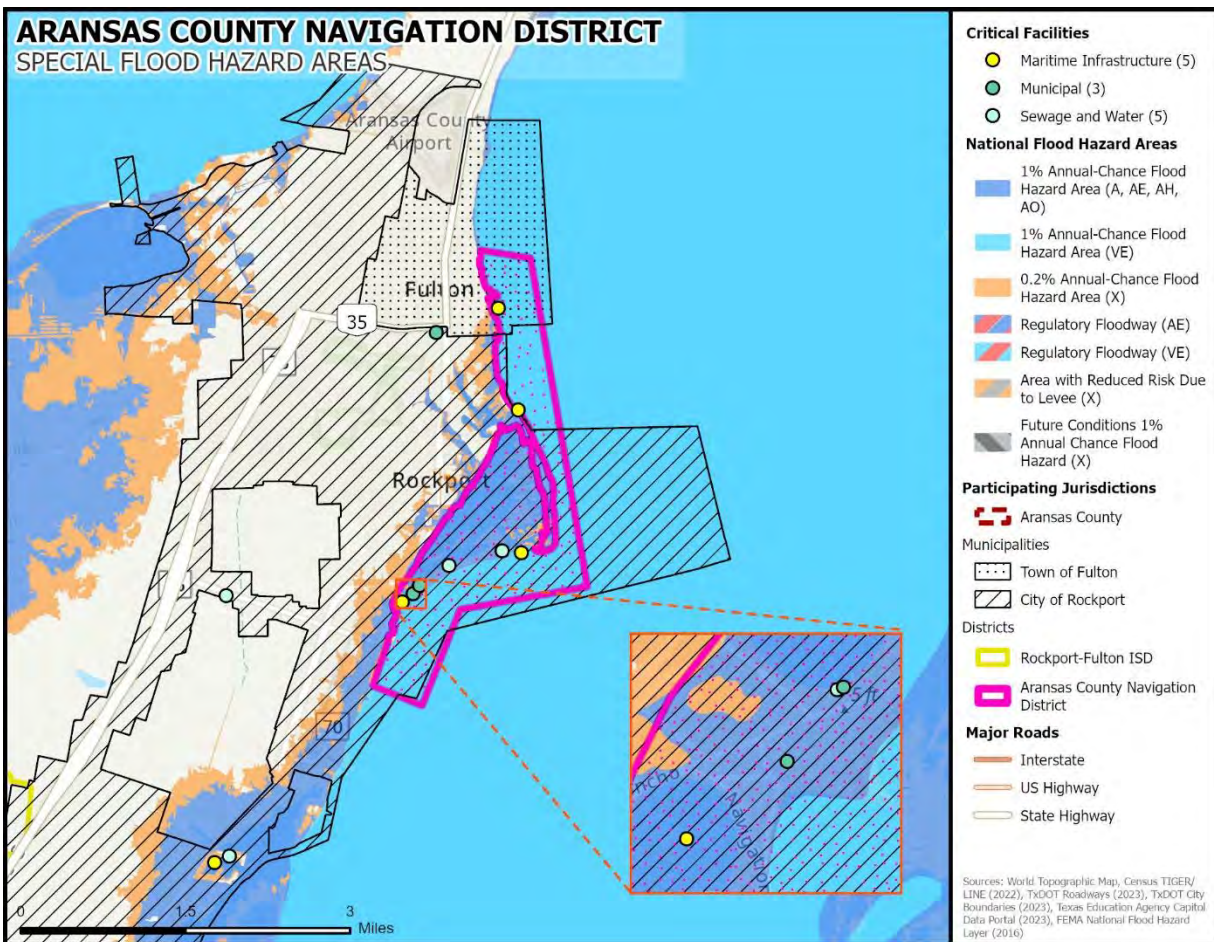
SECTION 9: FLOOD

Figure 9-4. Estimated Flood Zones for the Rockport-Fulton ISD



SECTION 9: FLOOD

Figure 9-5. Estimated Flood Zones for the Aransas County Navigation District



EXTENT

The severity of a flood event is determined by a combination of several major factors, including stream and river basin topography and physiography; precipitation and weather patterns; recent soil moisture conditions; and the degree of vegetative clearing and impervious surfaces. Typically, floods are long-term events that may last for several days.

Determining the intensity and magnitude of a flood event is dependent upon the flood zone and location of the flood hazard area in addition to the depths of flood waters. The extent of flood damages can be expected to be more damaging in the areas that will convey a base flood. FEMA categorizes areas on the terrain according to how the area will convey flood water. Flood zones are the categories that are mapped on FIRMs. Table 9-1 provides a description of FEMA flood zones and the flood impact in terms of severity or potential harm. Flood Zones A, AE, and VE are the hazard areas mapped in the region. Figures 9-1 through 9-5 should be read in conjunction with the extent for flooding in Tables 9-1 and 9-2 to determine the intensity of a potential flood event.

SECTION 9: FLOOD

Table 9-1. Flood Zones

INTENSITY	ZONE	DESCRIPTION
HIGH	ZONE A	Areas with a 1-percent-annual-chance of flooding and a 26 percent chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas, no depths or base flood elevations are shown within these zones.
	ZONE A1-30	These are known as numbered A Zones (e.g., A7 or A14). This is the base floodplain where the FIRM shows a Base Flood Elevation (BFE) (old format).
	ZONE AE	The base floodplain where BFEs are provided. AE Zones are now used on the new format FIRMs instead of A1-A30 Zones.
	ZONE AO	River or stream flood hazard areas and areas with a 1-percent-annual-chance or greater of shallow flooding each year, usually in the form of sheet flow, with an average depth ranging from 1 to 3 feet. These areas have a 26 percent chance of flooding over the life of a 30-year mortgage. Average flood depths derived from detailed analyses are shown within these zones.
	ZONE AH	Areas with a 1-percent-annual-chance of shallow flooding, usually in the form of a pond, with an average depth ranging from 1 to 3 feet. These areas have a 26 percent chance of flooding over the life of a 30-year mortgage. BFEs derived from detailed analyses are shown at selected intervals within these zones.
	ZONE A99	Areas with a 1-percent-annual-chance of flooding that will be protected by a federal flood control system where construction has reached specified legal requirements. No depths or BFEs are shown within these zones.
MODERATE to LOW	ZONE AR	Areas with a temporarily increased flood risk due to the building or restoration of a flood control system (such as a levee or a dam). Mandatory flood insurance purchase requirements will apply, but rates will not exceed the rates for unnumbered A zones if the structure is built or restored in compliance with Zone AR floodplain management regulations.
	ZONE X 500	An area inundated by 500-year flooding; an area inundated by 100-year flooding with average depths of less than 1 foot or with drainage areas less than 1 square mile; or an area protected by levees from 100-year flooding.

Zone A is interchangeably referred to as the 100-year flood, the 1-percent-annual-chance flood, the Special Flood Hazard Area (SFHA), or more commonly, the base flood. This is the area that will convey the base flood and constitutes a threat to the planning area. The impact from a flood event can be more damaging in areas that will convey a base flood.

SECTION 9: FLOOD

Structures built in the SFHA are subject to damage by rising waters and floating debris. Moving flood water exerts pressure on everything in its path and causes erosion of soil and solid objects. If not elevated above Base Flood Elevation, utility systems, such as heating, ventilation, air conditioning, fuel, electrical systems, sewage maintenance systems and water systems, may also be damaged.

The intensity and magnitude of a flood event is also determined by the depth of flood water. Table 9-2 describes the stream gauge data provided by the United States Geological Survey (USGS). Peak flood data at the locations available near the planning area indicate a peak flood depth range of 0 to 16 feet above average peak flows. In addition, the FIS notes that Aransas County has experienced peak coastal storm surges and flood depths of up to 11 feet, indicating a coastal flood depth range of 0-11 feet.

Table 9-2. Extent for Aransas County¹

LOCATION ²	PEAK FLOOD EVENT
Refugio County	Mission River near Refugio, Texas (15 miles upstream of Aransas County) reached an overflow elevation of 38 feet in July of 1971. The average peak flow for the Mission River is 22 feet at this site. This indicates a maximum flood depth of 16 feet above the average peak flow at this site.
Refugio County	Copano Creek near Refugio, Texas (25 miles upstream of Aransas County) reached an overflow elevation of 19 feet in July of 2021. The average peak flow for the Copano Creek is 12 feet at this site. This indicates a maximum flood depth of 7 feet above the average peak flow at this site.

The range of flood intensity that the planning area can experience is high, or Zone A. Based on historical occurrences, the planning area could expect to experience an average of 6 inches of rain within a 2-hour period, resulting in flash flooding. The data described in Tables 9-1 and 9-2, together with Figures 9-1 through 9-5, and historical occurrences for the area, provides an estimated potential magnitude and severity for the Aransas County planning area.

HISTORICAL OCCURRENCES

Historical evidence indicates that areas within the planning area are susceptible to flooding, especially in the form of flash flooding. It is important to note that only flood events that have been reported have been factored into this risk assessment, therefore it is likely that additional flood occurrences have gone unreported before and during the recording period. Table 9-3 identifies historical flood events that resulted in damages, injuries, or fatalities within the Aransas County

¹ Severity estimated by averaging floods at certain stage level over the history of flood events. Severity and peak events are based on USGS data.

² Severity is provided where peak data was available for streams, creeks and rivers throughout the planning area.

SECTION 9: FLOOD

planning area. Table 9-4 provides the historical flood event summary by jurisdiction for all events. Historical Data is provided by the Storm Prediction Center (NOAA), National Centers for Environmental Information (NCEI) database for Aransas County, including all participating jurisdictions, the ISD and special district. There have been 64 recorded flood events in Aransas County.

Historical flood data events for the ISD and special district are primarily provided in the NCEI database within the county or city in which they are located. No events, injuries, fatalities, or damages were reported by Rockport-Fulton ISD nor the Aransas County Navigation District apart and separate from the NCEI database.

Table 9-3. Historical Flood Events, 1996 – 2024³

JURISDICTION	DATE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Aransas County	5/8/2004	0	0	\$213,400	\$0
City of Rockport	7/5/2006	0	0	\$2,341,600	\$0
City of Rockport	6/17/2015	0	0	\$133,200	\$0
City of Rockport	5/16/2016	0	0	\$330,600	\$0
City of Rockport	5/10/2019	0	0	\$6,300	\$0
Town of Fulton	6/1/2020	0	0	\$6,200	\$0
City of Rockport	5/1/2021	0	0	\$59,100	\$0
City of Rockport	7/7/2021	0	0	\$581,900	\$0
TOTALS		0	0	\$3,672,300	\$0

Table 9-4. Summary of Historical Flood Events, 1996 – 2024⁴

JURISDICTION	NUMBER OF EVENTS	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Aransas County	24	0	0	\$213,400	\$0
Town of Fulton	2	0	0	\$6,200	\$0
City of Rockport	38	0	0	\$3,452,700	\$0
Rockport-Fulton ISD	0	-	-	-	-

³ Table only includes historical flood events that resulted in damages, injuries, or fatalities between January of 1996 and December of 2024 in the NCEI database. Reported events include flood, flash flood, and coastal flood. Values are in 2025 dollars.

⁴ Participating jurisdictions with no reported events show a “-” in table columns where damages, deaths or injuries would be otherwise reported.

SECTION 9: FLOOD

JURISDICTION	NUMBER OF EVENTS	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Aransas County Navigation District	0	-	-	-	-
TOTALS	64	0	0	\$3,672,300	

Based on the list of historical flood events for the Aransas County planning area, 13 events have occurred since the 2020 Plan.

SIGNIFICANT EVENTS

Flash Flood on July 5, 2006 – City of Rockport

Widespread flooding impacted the City of Rockport, with 5 to 8 inches of rainfall accumulating over a two-hour period. Nearly all city streets were inundated, including Market Street and Austin Street, where numerous businesses experienced water intrusion. Several homes across the city also sustained flood damage. Additionally, two nursing homes reported water entering their buildings. City officials noted that over 100 vehicles stalled in high water. Emergency responders rescued an 11-year-old boy after he slipped into a storm drain while playing near high water. This event caused \$2,341,600 (2025 dollars) in property damages.

Flash Flood on May 16, 2016 – City of Rockport

The Coastal Bend experienced a significant heavy rain event from the morning of May 15 to the morning of May 16, 2016, resulting in widespread flooding. Rainfall totals reached 10 to 15 inches across the south side of Corpus Christi, Flour Bluff, Ingleside, and Aransas Pass. This excessive rainfall led to severe flooding in these areas. Numerous roads and highways were impassable due to high water, prompting multiple water rescues in San Patricio and Nueces counties. Many schools and businesses either delayed opening or remained closed.

In northern Aransas Pass, extensive flooding impacted several roads, including North Commercial Avenue, North Houston, and North Avenue A, which were submerged. Numerous homes in the area also sustained flood damage. This event caused \$330,600 (2025 dollars) in property damages within the City of Rockport.

Flash Flood on July 7, 2021 – City of Rockport

A slow-moving surface to mid-level low-pressure system developed over the Coastal Bend of South Texas on July 6, 2021, initiating a multi-day heavy rain event. The system remained nearly stationary through July 8th, producing bands of heavy showers and thunderstorms that triggered flash flooding from Alice to Rockport and Refugio on July 7th.

Widespread flooding led to numerous water rescues as vehicles became stranded on inundated streets. Some residents were evacuated after floodwaters entered buildings, with water reaching one foot deep at the Presbyterian Church. In the City of Rockport and the Town of Fulton, multiple roads were closed, including Market Street, Champions Drive at Royal Oaks Drive, and FM 2165 from Business 35 to Linden. This event caused \$581,900 (2025 dollars) in damages.

SECTION 9: FLOOD

Figure 9-6. Flooding in the City of Rockport on July 7, 2021⁵



PROBABILITY OF FUTURE EVENTS

Based on 64 recorded historical occurrences within a 29-year reporting period within the Aransas County planning area, including all participating jurisdictions, the ISD and special district, flooding is considered “Highly Likely,” meaning an event is probable within the next year.

CLIMATE CHANGE CONSIDERATIONS

River flooding in Texas is projected to have no substantial change through 2036. This is in large part due to the construction of dams and reservoirs for flood management in the 20th century. There is a mixture of historical trends categorized by season, with no one clear trend to project. In addition, meteorological drivers of river flooding (increased rainfall intensity, decreased soil moisture) are projected to have competing influences. On balance, if an increasing trend is present in river flooding, it will be at the most extreme flood events or in the wettest parts of the state where there is so much rainfall that a decrease in soil moisture would have little mitigating impact.⁶

According to the United States Environmental Protection Agency, the sea level rise may contribute to increased coastal flooding and flood related impacts. The sea level is rising more rapidly along the Texas coast due to ground water pumping, than climate change itself, however,

⁵ KSAT 12. *This is what Rockport looks like after recent flooding and heavy rains.* July 8, 2021.

<https://www.ksat.com/news/local/2021/07/08/this-is-what-rockport-looks-like-after-recent-flooding-and-heavy-rains/>

⁶ Assessment of Historic and Future Trends of Extreme Weather in Texas, 1900-2036, Texas A&M University Office of the Texas State Climatologist, 2021 update.

SECTION 9: FLOOD

both are contributing factors. A rising sea level submerges wetlands and dry land, erodes beaches, and exacerbates coastal flooding.

In addition, tropical storms and hurricanes have become more intense over the past two decades. Although warming oceans provide these storms with more potential energy, scientists are not sure whether the recent intensification reflects a long-term trend. Nevertheless, hurricane wind speeds and rainfall rates are likely to increase as the climate continues to warm. Whether or not storms become more intense, coastal homes and infrastructure will flood more often as the sea level rises, because storm surges will become higher as well.⁷

VULNERABILITY AND IMPACT

A property's vulnerability to a flood depends on its location and proximity to the floodplain. Structures that lie along banks of a waterway are the most vulnerable and are often repetitive loss structures. Aransas County promotes development outside of the floodplain. Based on reported historical events, and taking into account future changing conditions, the potential severity of impacts for flood events is considered "Major", with injuries and illnesses potentially resulting in permanent disability, the complete shutdown of critical facilities between one and four weeks, and more than 25 percent of property destroyed or with major damage.

Table 9-5 includes the comprehensive critical facilities identified in Appendix D that were considered the most important to the planning area that are subject to a range of impacts due to flood and are located in the regulatory floodplain. For a comprehensive list of identified critical facilities by participating jurisdiction, the ISD and special district, please see Appendix D.

Table 9-5. Critical Facilities in the Floodplain by Participating Jurisdiction

CRITICAL FACILITY TYPES	CRITICAL FACILITIES AT RISK	POTENTIAL IMPACTS
Emergency Response Departments (EOC, Fire, Police, EMS), Hospitals	Aransas County: 2 Police Stations Town of Fulton: 1 Fire Station City of Rockport: 1 Fire Station, 1 Police Station	- Emergency operations and services may be significantly impacted due to damaged facilities and/or loss of communications. - Emergency vehicles can be damaged by rising flood waters. - Flood-related rescues may be necessary at swift and low water crossings or in flooded neighborhoods where roads have become impassable, placing first responders in harm's way. - Evacuations may be required for entire neighborhoods because of rising floodwaters, further taxing limited response capabilities and increasing sheltering needs for displaced residents. - Power outages could disrupt communications, delaying emergency response times. - Critical staff may be injured or otherwise unable to report for duty, limiting response capabilities.

⁷ What Climate Change Means for Texas. United States Environmental Protection Agency. August 2016.

SECTION 9: FLOOD

CRITICAL FACILITY TYPES	CRITICAL FACILITIES AT RISK	POTENTIAL IMPACTS
		- Washed out roads and bridges can impede emergency response vehicle access to areas. - Increased number of structure fires due to gas line ruptures and downed power lines, further straining the capacity and resources of emergency personnel. - First responders are exposed to downed power lines, contaminated and unusual debris, hazardous materials, and generally unsafe conditions. - Extended power outages and evacuations may lead to possible looting, destruction of property, and theft, further burdening law enforcement resources.
Airport, Academic Institutions, Community Residential Facilities, Day Care Facilities, Evacuation Centers & Shelters, Governmental Facilities	Aransas County: 5 Municipal Facilities City of Rockport: 2 Municipal Facilities Rockport-Fulton ISD: 1 School Facility Aransas County Navigation District: 2 Municipal Facilities, 5 Maritime Infrastructure Facilities	- Structures can be damaged by rising flood waters. - Power outages could disrupt critical care. - Backup power sources could be damaged, inundated or otherwise inoperable. - Critical staff may be impacted and unable to report for duty, limiting response capabilities. - Evacuations may be necessary due to extended power outages, gas line ruptures, or inundation of facilities. - Additional emergency responders and critical aid workers may not be able to reach the area for days. - Power outages and infrastructure damage may prevent larger airports from acting as temporary command centers for logistics, communications, and emergency operations. - Temporary break in operations may significantly inhibit post event evacuations. - Damaged or destroyed highway infrastructure may substantially increase the need for airport operations.
Commercial Suppliers (food, gas, etc.)	N/A	- Facilities or infrastructure may be damaged, destroyed or otherwise inaccessible. - Essential supplies like medicines, water, food, and equipment deliveries may be significantly delayed.
Utility Services and Infrastructure (electric, water, wastewater, communications)	Aransas County: 1 Communication Facility, 4 Energy Utility Facilities Town of Fulton: 2 Sewage and Water Facilities City of Rockport: 27 Sewage and Water Facilities	- Emergency operations and services may be significantly impacted due to damaged facilities and/or loss of communications. - Emergency service vehicles can be damaged by rising flood waters. - Flood-related rescues may be necessary at swift and low water crossings or in flooded neighborhoods where roads have become impassable, placing emergency service workers in harm's way. - Increased number of structure fires due to gas line ruptures and downed power lines, further straining the capacity and resources of emergency personnel.

SECTION 9: FLOOD

CRITICAL FACILITY TYPES	CRITICAL FACILITIES AT RISK	POTENTIAL IMPACTS
	Aransas County Navigation District: 4 Sewage and Water Facilities	- Service responders are exposed to downed power lines, contaminated and unusual debris, hazardous materials, and generally unsafe conditions. - Extended power outages and evacuations may lead to possible looting, destruction of property, and theft, further burdening law enforcement resources.

Historic loss estimates due to flood are presented in Table 9-6 below. Considering 64 flood events over a 29-year period, frequency is approximately two events every year.

Table 9-6. Average Annualized Losses by Jurisdiction, 1996 – 2024

JURISDICTION	TOTAL PROPERTY & CROP LOSS	AVERAGE ANNUAL LOSS ESTIMATES
Aransas County	\$213,400	\$7,400
Town of Fulton	\$6,200	\$200
City of Rockport	\$3,452,700	\$119,000
Rockport-Fulton ISD	\$0	\$0
Aransas County Navigation District	\$0	\$0
TOTALS	\$3,672,300	\$126,600

While all citizens are at risk of the impacts of a flood, forced relocation and disaster recovery disproportionately impacts low-income residents who lack the financial means to travel, afford a long-term stay away from home, and to rebuild or repair their homes. In addition, due to factors like limited mobility, communication difficulties, medical needs, reliance on support services, transportation challenges, housing accessibility issues, and possible shortages in emergency shelter accommodations, the elderly, children, and people with disabilities are also disproportionately affected by flooding events. People who speak a language other than English may face increased vulnerability due to language barriers that limit their access to important information such as weather-related warnings and instructions regarding safety measures.

The population over 65 in the Aransas County planning area is estimated at 28 percent of the total population and children under the age of 5 are estimated at 4 percent. The population with a disability is estimated at 18 percent of the total population. An estimated 19 percent of the planning area population live below the poverty level and 2 percent of the populations speak English 'less than very well'.

SECTION 9: FLOOD

Table 9-7. Populations at Greater Risk by Jurisdiction⁸

JURISDICTION	POPULATION				
	65 AND OLDER	UNDER 5	WITH A DISABILITY	BELOW POVERTY LEVEL	LIMITED ENGLISH SPEAKING
Aransas County	6,844	1,079	4,402	4,572	513
Town of Fulton	534	0	408	100	0
City of Rockport	3,018	527	1,681	1,630	240

Table 10-8. Populations at Risk for Special Districts

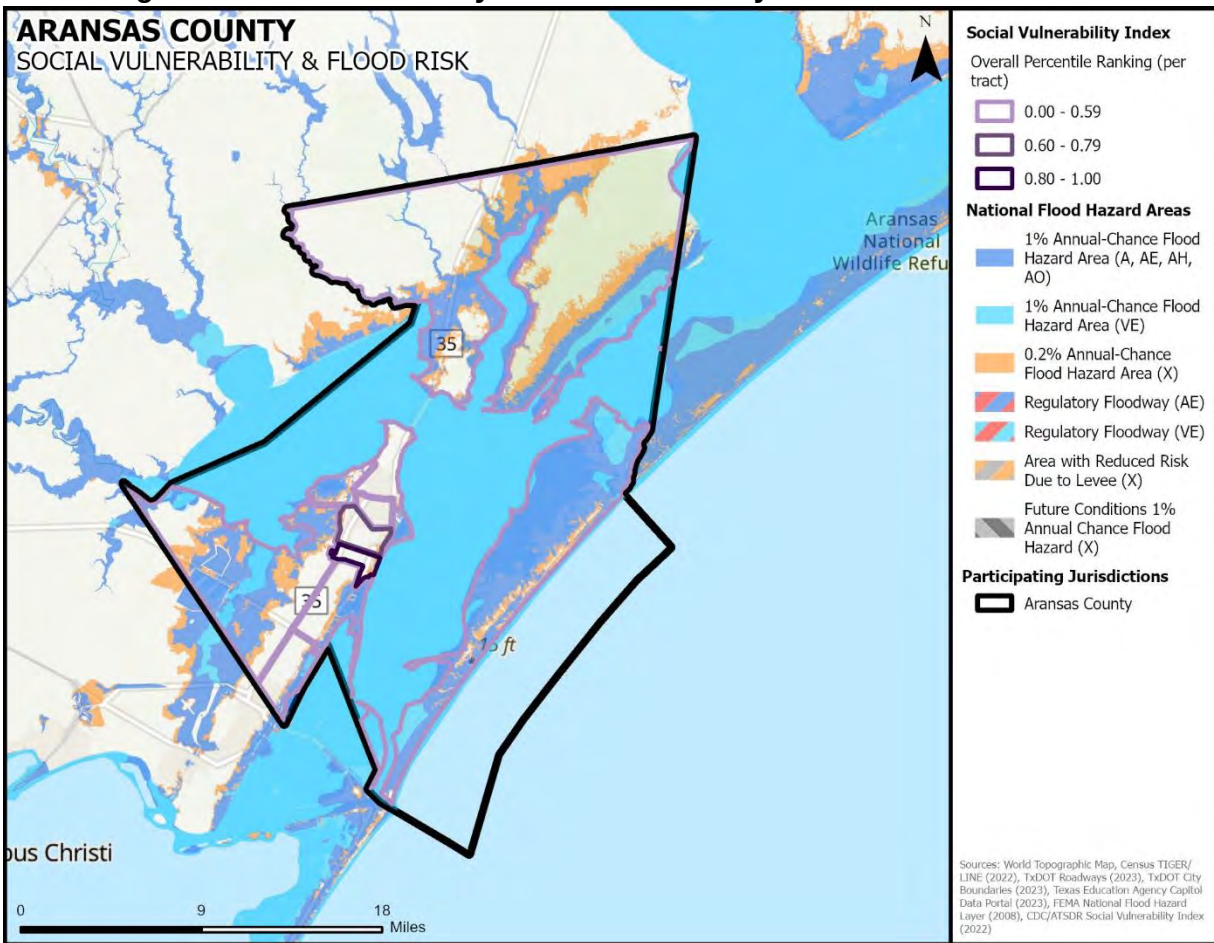
JURISDICTION	POPULATION UNDER 5
Rockport-Fulton ISD	130
Aransas County Navigation District	-

The Center for Disease Control (CDC) created a Social Vulnerability Index (SVI) which includes a database and mapping application that identifies and quantifies communities experiencing social vulnerability. The current CDC SVI uses 16 U.S. census variables from the 5-year American Community Survey (ACS) to identify communities that may need support before, during, or after disasters. All 16 variables fall under four broad categories including socioeconomic status (population in poverty, unemployment, etc.), household characteristics (age, disability status, etc.), racial and ethnic minority status, and housing type and transportation (mobile homes, no vehicles, etc.). Populations experiencing social vulnerability may be adversely impacted by natural hazards, disasters, and other community-level stressors. Figure 9-7 identifies areas of social vulnerability using the CDC's SVI and where these areas overlap with the Aransas County flood hazard areas.

⁸ U.S. Census Bureau Five-Year estimates

SECTION 9: FLOOD

Figure 9-7. Aransas County Social Vulnerability and Flood Hazard Areas



ASSESSMENT OF IMPACTS

Flooding is the deadliest natural disaster that occurs in the U.S. each year, and it poses a constant and significant threat to the health and safety of the people in the Aransas County planning area. Impacts to the planning area can include:

- Flood-related rescues may be necessary at swift water and low water crossings or in flooded neighborhoods where roads have become impassable, placing first responders in harm's way.
- Evacuations may be required for entire neighborhoods because of rising floodwaters, further taxing limited response capabilities and increasing sheltering needs for displaced residents.
- Health risks and threats to residents are elevated after the flood waters have receded due to contaminated flood waters (untreated sewage and hazardous chemicals) and mold growth typical in flooded buildings and homes.
- Significant flood events often result in widespread power outages, increasing the risk to more vulnerable portions of the population who rely on power for health and/or life safety.

SECTION 9: FLOOD

- Extended power outages can result in an increase in structure fires and/or carbon monoxide poisoning, as individuals attempt to cook or heat their home with alternate, unsafe cooking or heating devices, such as grills.
- Floods can destroy or make residential structures uninhabitable, requiring shelter or relocation of residents in the aftermath of the event.
- First responders are exposed to downed power lines, contaminated and potentially unstable debris, hazardous materials, and generally unsafe conditions, elevating the risk of injury to first responders and potentially diminishing emergency response capabilities.
- Emergency operations and services may be significantly impacted due to damaged facilities.
- Significant flooding can result in the inability of emergency response vehicles to access areas of the community.
- Critical staff may suffer personal losses or otherwise be impacted by a flood event and be unable to report for duty, limiting response capabilities.
- City, Town, or County departments may be flooded, delaying response and recovery efforts for the entire community.
- Private sector entities that the planning area and its residents rely on, such as utility providers, financial institutions, and medical care providers, may not be fully operational and may require assistance from neighboring communities until full services can be restored.
- Damage to infrastructure may slow economic recovery since repairs may be extensive and lengthy.
- Some businesses not directly damaged by the flood may be negatively impacted while utilities are being restored or water recedes, further slowing economic recovery.
- When the community is affected by significant property damage it is anticipated that funding would be required for infrastructure repair and restoration, temporary services and facilities, overtime pay for responders, as well as normal day-to-day operating expenses.
- Displaced residents may not be able to immediately return to work, further slowing economic recovery.
- Residential structures substantially damaged by a flood may not be rebuilt for years and uninsured or underinsured residential structures may never be rebuilt, reducing the tax base for the community.
- Large floods may result in a dramatic population fluctuation, as people are unable to return to their homes or jobs and must seek shelter and/or work outside of the affected area.
- Businesses that are uninsured or underinsured may have difficulty reopening, which results in a net loss of jobs for the community and a potential increase in the unemployment rate.
- Recreation activities may be unavailable, and tourism can be unappealing for years following a large flood event, devastating directly related local businesses and negatively impacting economic recovery.
- Flooding may cause significant disruptions of clean water and sewer services, elevating health risks and delaying recovery efforts.

SECTION 9: FLOOD

- The psychosocial effects on flood victims and their families can traumatize them for long periods of time, creating long term increases in medical treatment and services.
- Extensive or repetitive flooding can lead to decreases in property value for the affected community.
- Flood poses a potential catastrophic risk to annual and perennial crop production and overall crop quality, leading to higher food costs.
- Flood related declines in production may lead to an increase in unemployment.
- Large floods may result in loss of livestock, potential increased livestock mortality due to stress and water borne disease, and increased cost for feed.

The overall extent of damage caused by floods is dependent on the extent, depth, and duration of flooding, in addition to the velocities of flows in the flooded areas. The level of preparedness and pre-event planning done by the community, local businesses, and citizens will contribute to the overall economic and financial conditions in the aftermath of a flood event.

NATIONAL FLOOD INSURANCE PROGRAM (NFIP) PARTICIPATION

Flood insurance offered through the National Flood Insurance Program (NFIP) is the best way for home and business owners to protect themselves financially against the flood hazard. Aransas County, the Town of Fulton, and the City of Rockport all participate in the NFIP and are in good standing. It is noted that entities, such as the Rockport-Fulton ISD and the Aransas County Navigation District, are not eligible participants in the NFIP.

As an additional indicator of floodplain management responsibility, communities may choose to participate in FEMA's Community Rating System (CRS). This is an incentive-based program that allows communities to undertake flood mitigation activities that go beyond NFIP requirements. The City of Rockport has been a participant in the CRS since October 1, 2019, and currently holds a Class 8 rating. The City remains committed to enhancing its participation in the program and is actively working to improve its CRS classification. Currently, neither Aransas County nor the Town of Fulton participate in the CRS. Aransas County and the Town of Fulton may evaluate their capacity for CRS participation in the next planning cycle.

As part of its participation in the CRS Program, the City of Rockport has implemented higher regulatory standards to enhance flood protection. Aransas County has also adopted higher standards, such as requiring new construction to have a minimum of eighteen inches of freeboard above the Base Flood Elevation. The Town of Fulton currently has in place minimum NFIP standards for new construction and substantial improvements of structures. All jurisdictions are considering adopting additional higher regulatory NFIP standards to limit floodplain development.

The flood hazard areas throughout Aransas County are subject to periodic inundation, which may adversely affect public safety, resulting in loss of life and property, health and safety hazards, disruption of commerce and governmental services, and extraordinary public expenditures for flood protection and relief. Flood losses are created by the cumulative effect of obstructions in floodplains which cause an increase in flood heights and velocities. In addition, occupancy in flood hazard areas creates an increase in vulnerabilities to flood hazards as they typically are inadequately elevated, flood-proofed, or otherwise protected from flood damage. Mitigation actions are included to address flood maintenance issues as well, including routinely clearing

SECTION 9: FLOOD

debris from roadside ditches and bridges, and expanding drainage culverts and storm water structures to convey flood water more adequately.

It is the purpose of Aransas County and participating jurisdictions to continue to promote public health, safety, and general welfare by minimizing public and private losses due to flood conditions in specific areas. All of the NFIP participating jurisdictions in the Plan Update are guided by their local Flood Damage Prevention Ordinance. These communities will continue to comply with NFIP requirements through their local permitting, inspection, and record-keeping requirements for new and substantially developed construction. Further, the NFIP program promotes sound development in floodplain areas and includes provisions designed to:

- Protect human life and health;
- Minimize expenditure of public money for costly flood control projects;
- Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- Minimize prolonged business interruptions;
- Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, and bridges located in floodplains;
- Help maintain a stable tax base by providing for the sound use and development of flood-prone areas in such a manner as to minimize future flood blight areas; and
- Ensure that potential buyers are notified that property is in a flood area.

In order to accomplish these tasks, Aransas County and participating jurisdictions seek to observe the following guidelines in order to achieve flood mitigation:

- Restrict or prohibit uses that are dangerous to health, safety, or property in times of flood, such as filling or dumping, that may cause excessive increases in flood heights or velocities;
- Require that uses vulnerable to floods, including facilities, which serve such uses, be protected against flood damage at the time of initial construction, as a method of reducing flood losses;
- Control the alteration of natural floodplains, stream channels, and natural protective barriers, which are involved in the accommodation of floodwaters;
- Control filling, grading, dredging, and other development, which may increase flood damage; and
- Prevent or regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands.

NFIP COMPLIANCE AND MAINTENANCE

All NFIP participating jurisdictions have developed mitigation actions that relate to either NFIP maintenance or compliance. Compliance and maintenance actions can be found in Section 19.

Flooding was identified as a significant risk hazard during hazard ranking activities at the Risk Assessment Workshop by the majority of the planning team. As such, many of the mitigation actions were developed with flood mitigation in mind. A majority of these flood actions address compliance with the NFIP and implementing flood awareness programs. All participating jurisdictions recognize the need and are working towards adopting higher NFIP regulatory

SECTION 9: FLOOD

standards to further minimize flood risk in their community. In addition, each jurisdiction focuses on public flood awareness activities. This includes promoting the availability of flood insurance by placing NFIP brochures and flyers in public libraries or public meeting places in participating jurisdictions.

Each NFIP participating jurisdiction in this planning process has a designated floodplain administrator. All floodplain administrators in the planning area will continue to maintain compliance with the NFIP, including continued floodplain administration, zoning ordinances, and development regulation. The floodplain ordinance adopted by each participating jurisdiction outlines the minimum requirements for development in Special Flood Hazard Areas.

All jurisdictions have a permitting process in place and each local floodplain administrator is responsible for coordinating inspections of damaged homes located in the floodplain. Following a flood event, local officials inspect damaged homes to make a substantial damage determination. Substantially damaged homes must be brought into compliance. Similarly, proposed improvements to homes located in the floodplain are reviewed by local building officials to determine if a substantial improvement is proposed. The floodplain administrator oversees permitted repairs and improvements to ensure compliance during the rebuilding or improvement process.

REPETITIVE LOSS

The Flood Mitigation Assistance (FMA) Grant Program under FEMA provides federal funding to assist states and communities in implementing mitigation measures to reduce or eliminate the long-term risk of flood damage to buildings that are insured under the National Flood Insurance Program. The Texas Water Development Board (TWDB) administers the FMA grant program for the State of Texas. One of the goals of the FMA program is to reduce the burden of repetitive loss and severe repetitive loss properties on the NFIP through mitigation activities that significantly reduce or eliminate the threat of future flood damages.

Repetitive Loss properties are defined as structures that are:

- Any insurable building for which 2 or more claims of more than \$1,000 each, paid by the National Flood Insurance Program (NFIP) within any 9-year period, since 1978;
- May or may not be currently insured under the NFIP.

Severe Repetitive Loss properties are defined as structures that are:

- Covered under the NFIP and have at least 4 flood related damage claim payments (building and contents) over \$5,000.00 each, and the cumulative amount of such claims payments exceed \$20,000; or
- At least 2 separate claim payments (building payments only) have been made, with the cumulative amount of the building portion of such claims exceeding the market value of the building.

SECTION 9: FLOOD

In either scenario, at least 2 of the referenced claims must have occurred within any 9-year period and must be greater than 10 days apart.⁹ Table 9-8 shows repetitive loss and severe repetitive loss properties for Aransas County, the Town of Fulton, and the City of Rockport.

Table 9-8. Repetitive Loss and Severe Repetitive Loss Properties¹⁰

JURISDICTION	NUMBER OF STRUCTURES	NUMBER OF LOSSES	STRUCTURE TYPE
Aransas County	33	95	Single Family
	1	2	2-4 Family
	6	19	Condominium
	19	87	Non-Residential
	4	11	Other Residential
Town of Fulton	1	2	Non-Residential
City of Rockport	28	87	Single Family
	5	14	Condominium
	10	25	Non-Residential

⁹ Source: Texas Water Development Board.

¹⁰ Some properties assumed single family type.



SECTION 10

HAIL

SECTION 10: HAIL

Hazard Description	1
Location	1
Extent	2
Historical Occurrences	3
Significant Events	6
Probability of Future Events	6
Climate Change Considerations	6
Vulnerability and Impact	7
Assessment of Impacts	10

HAZARD DESCRIPTION



Hailstorm events are a potentially damaging outgrowth of severe thunderstorms. During the developmental stages of a hailstorm, ice crystals form within a low-pressure front due to the rapid rising of warm air into the upper atmosphere, and the subsequent cooling of the air mass. Frozen droplets gradually accumulate into ice crystals until they fall as precipitation that is round or irregularly shaped masses of ice typically greater than 0.75 inches in diameter. The size of hailstones is a direct result of the size and severity of the storm. High velocity updraft winds are required to keep hail in suspension in thunderclouds. The strength of the updraft is a by-product of heating on the Earth's surface. Higher temperature gradients above Earth's surface result in increased suspension time and hailstone size.

According to the National Insurance Crime Bureau (NICB), between 2018 and 2020 the State of Texas had the greatest number of hail loss claims in the U.S. with 605,866 loss claims (23 percent of total hail claims in the U.S.) due to hail events. In this two-year period Texas experienced a total of 584 severe hail days. Five of the top ten cities for hail loss claims between 2017 and 2019 were in Texas, three of which were in the Dallas-Fort Worth metropolitan area.¹

In 2021, 6.8 million properties in the U.S. experienced one or more damaging hail events, resulting in a total of \$16.5 billion in insured losses. Texas had the highest number of properties affected by hail with over 1.5 million properties or 17 percent of total properties in the state affected; an increase of 80,000 properties affected between 2020 and 2021. Texas hailstorms accounted for almost a quarter of total U.S. properties affected by hail in 2021.

LOCATION

Hailstorms are an extension of severe thunderstorms that could potentially cause severe damage. As a result, they are not confined to any specific geographic location and can vary greatly in size, location, intensity, and duration. Therefore, the entire Aransas County planning area, including all

¹ Manasek, Thomas, "2018-2020 United States Hail Loss Claims and Questionable Claims" (National Insurance Crime Bureau, March 15, 2021). <http://www.rmiiia.org/downloads/PUBLIC%202018%20-%202020%20Hail%20foreCAST-%20TJM.pdf>

SECTION 10: HAIL

jurisdictions, the ISD and special district, is equally at risk to the hazard of hail. Refer to Figure 10-1 for the location of past hail events in the planning area.

EXTENT

The National Weather Service (NWS) classifies a storm as “severe” if there is hail three-quarters of an inch in diameter (approximately the size of a penny) or greater, based on radar intensity or as seen by observers. The intensity category of a hailstorm depends on hail size and the potential damage it could cause, as depicted in the National Centers for Environmental Information (NCEI) Intensity Scale in Table 10-1.

Table 10-1. Hail Intensity and Magnitude²

SIZE CODE	INTENSITY CATEGORY	SIZE (diameter inches)	DESCRIPTIVE TERM	TYPICAL DAMAGE
H0	Hard Hail	Up to 0.33	Pea	No damage
H1	Potentially Damaging	0.33 – 0.60	Marble	Slight damage to plants and crops
H2	Potentially Damaging	0.60 – 0.80	Dime	Significant damage to plants and crops
H3	Severe	0.80 – 1.20	Nickel	Severe damage to plants and crops
H4	Severe	1.2 – 1.6	Quarter	Widespread glass and auto damage
H5	Destructive	1.6 – 2.0	Half Dollar	Widespread destruction of glass, roofs, and risk of injuries
H6	Destructive	2.0 – 2.4	Ping Pong Ball	Aircraft bodywork dented and brick walls pitted
H7	Very Destructive	2.4 – 3.0	Golf Ball	Severe roof damage and risk of serious injuries
H8	Very Destructive	3.0 – 3.5	Hen Egg	Severe damage to all structures
H9	Super Hailstorms	3.5 – 4.0	Tennis Ball	Extensive structural damage, could cause fatal injuries
H10	Super Hailstorms	4.0 +	Baseball	Extensive structural damage, could cause fatal injuries

The intensity scale in Table 10-1 ranges from H0 to H10, with increments of intensity or damage potential in relation to hail size (distribution and maximum), texture, fall speed, speed of storm translation, and strength of the accompanying wind. Based on the best available data regarding the previous occurrences for the area, the Aransas County planning area may experience

² NCEI Intensity Scale, based on the TORRO Hailstorm Intensity Scale.

SECTION 10: HAIL

hailstorms ranging from an H0 (pea size) to an H7 (golf size). The largest hail to be reported was 2.5 inches in diameter, or an H7, which is considered a very destructive hailstorm that can cause severe infrastructure damage. An event of this magnitude occurred on June 5, 2017, and resulted in \$324,300 (in 2025 dollars). This is likely the greatest extent the planning area can anticipate in the future, based on historical events.

HISTORICAL OCCURRENCES

Historical evidence shown in Figure 10-1 demonstrates that the planning area is vulnerable to hail events overall. Historical events for the Aransas County planning area are shown in Table 10-2. A total of 29 reported historical hail events impacted the Aransas County planning area between 1968 and 2024; these events were reported to NCEI and NOAA databases and may not represent all hail events to have occurred during the past 56 years. Only those events for the Aransas County planning area with latitude and longitude available were plotted (Figure 10-1).

Historical hail event data for Rockport-Fulton ISD and the Aransas County Navigation District are provided within the Aransas County events or the participating jurisdictions in which the ISD or District resides. In the NCEI database, these entities do not have events reported separate and apart from the reported county and jurisdiction events. The Aransas County Navigation District reported their primary impacts from hail to be damage to structures with composition shingle roofs and automobiles. Exact figures for these previous damages are unavailable. District staff issues pre-event warnings to customers and property lessors so that they may take pre-storm precautions. Rockport-Fulton ISD did not report any additional hail events or damages that were not captured in the NCEI data.

SECTION 10: HAIL

Figure 10-1. Spatial Historical Hail Events, 1968 –2024

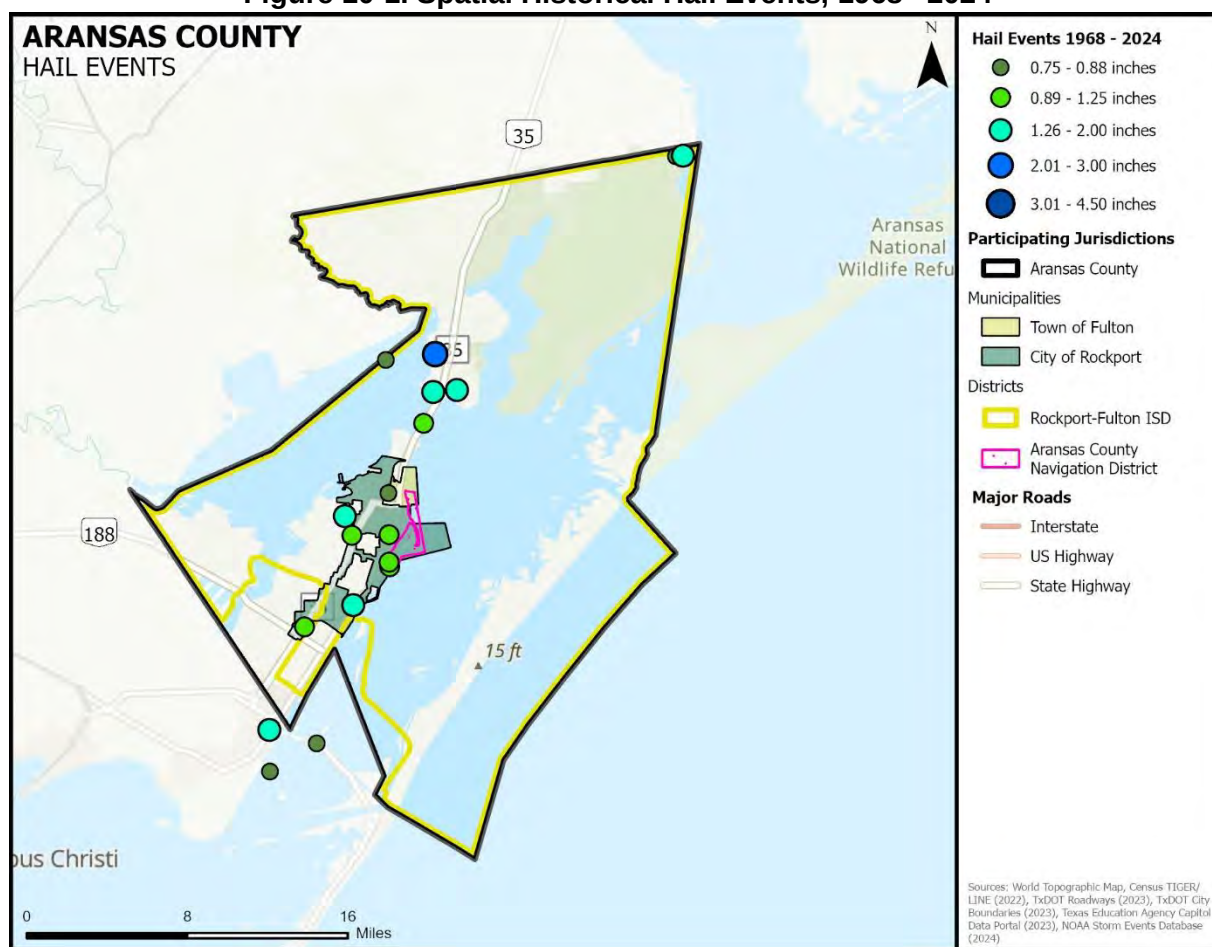


Table 10-2. Historical Hail Events, 1968 – 2024³

JURISDICTION	DATE	MAGNITUDE (inches)	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Aransas County	5/17/1968	1.5	0	0	\$0	\$0
Aransas County	11/26/1969	1.75	0	0	\$0	\$0
Aransas County	4/7/1976	0.75	0	0	\$0	\$0
Aransas County	3/13/1986	1	0	0	\$0	\$0
City of Rockport	5/17/1986	1	0	0	\$0	\$0
City of Rockport	4/11/1995	0.75	0	0	\$0	\$0
Aransas County	4/5/1996	1	0	0	\$0	\$0
City of Rockport	1/31/1998	0.75	0	0	\$0	\$0

³ No reports of injuries or fatalities were recorded in the NCEI database. Monetary damages have been inflated to their 2025 value.

SECTION 10: HAIL

JURISDICTION	DATE	MAGNITUDE (inches)	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
City of Rockport	1/31/1998	0.75	0	0	\$0	\$0
City of Rockport	3/7/1998	1	0	0	\$0	\$0
City of Rockport	3/18/2000	1	0	0	\$0	\$0
City of Rockport	3/18/2000	0.75	0	0	\$0	\$0
Aransas County	3/26/2003	0.75	0	0	\$0	\$0
City of Rockport	3/26/2003	1	0	0	\$0	\$0
Aransas County	2/24/2004	0.88	0	0	\$0	\$0
City of Rockport	5/8/2005	0.75	0	0	\$0	\$0
City of Rockport	5/8/2005	0.75	0	0	\$0	\$0
City of Rockport	3/13/2007	1	0	0	\$0	\$0
Aransas County	6/3/2009	1.75	0	0	\$0	\$0
Aransas County	1/9/2011	1.5	0	0	\$0	\$0
City of Rockport	5/15/2012	1.75	0	0	\$13,900	\$0
Aransas County	5/15/2012	0.75	0	0	0	0
City of Rockport	5/15/2012	1	0	0	\$7,000	\$0
Aransas County	12/4/2012	0.88	0	0	\$0	\$0
City of Rockport	5/23/2017	1.5	0	0	\$0	\$0
Aransas County	6/5/2017	2.5	0	0	\$324,300	\$0
Aransas County	6/5/2017	1.5	0	0	\$32,500	\$0
Aransas County	6/5/2017	1.75	0	0	\$0	\$0
City of Rockport	5/9/2019	1	0	0	\$6,300	\$0
TOTALS		(Max Extent)	0	0	\$384,000	\$0

Table 10-3. Historical Hail Events Summary, 1968 – 2024⁴

JURISDICTION	NUMBER of EVENTS	MAX MAGNITUDE (inches)	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Aransas County	14	2.5	0	0	\$356,800	\$0

⁴ Participating jurisdictions with no reported events show a “-” in table columns where damages, deaths or injuries would be otherwise reported.

SECTION 10: HAIL

JURISDICTION	NUMBER of EVENTS	MAX MAGNITUDE (inches)	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Town of Fulton	0	-	-	-	-	-
City of Rockport	15	1.75	0	0	\$27,200	\$0
Rockport-Fulton ISD	0	-	-	-	-	-
Aransas County Navigation District	0	-	-	-	-	-
TOTALS	29	(Max Extent)	0	0	\$384,000	

Based on the list of historical hail events for the Aransas County planning area (listed above), five of the events have occurred since 2020 Plan according to reports in the NCEI database.

SIGNIFICANT EVENTS

May 15, 2012 – City of Rockport

Scattered thunderstorms developed over the Coastal Bend ahead of an upper-level disturbance that moved out of northern Mexico. Isolated severe thunderstorms produced large hail over the Coastal Bend, including golf ball sized hail southwest of the City of Rockport. This hail caused an estimated total of \$20,900 (2025 dollars) in property damage.

June 5, 2017 – Aransas County

Scattered thunderstorms moved across the Coastal Bend during the afternoon of June 5th as an upper-level low moved across southeast Texas. These storms produced tennis ball sized hail in Holiday Beach and half dollar sized hail in Goose Island State Park within the planning area. Across several event reports made for this hail event, the total property damage in Aransas County was estimated at \$356,800 (2025 dollars).

May 9, 2019 – City of Rockport

Severe thunderstorms formed along a frontal boundary over south central Texas and along the Rio Grande during the afternoon, leading to damaging winds and quarter sized hail near the City of Rockport. Property damage was estimated at \$6,300 (2025 dollars).

PROBABILITY OF FUTURE EVENTS

Based on available records of historic events, 29 events in a 56-year reporting period for Aransas County provides an average annual occurrence of an event every one to two years. This frequency supports a “Highly Likely” probability of future events for the Aransas County planning area, meaning an event is probable within the next year.

CLIMATE CHANGE CONSIDERATIONS

Although the impact of climate change on the frequency and severity of hail events is uncertain, some climate studies attempt to give insight on the future conditions of hailstorms. As ocean temperatures rise due to climate change, more moisture is evaporating into the atmosphere. The warm and moist air masses that fuel severe weather may become more unstable on average, which could favor the increased development of thunderstorms and hail. However, it is also suggested that in a warming climate, the average melting level will rise in thunderstorms, meaning

SECTION 10: HAIL

small hailstones will have more of a chance to melt as they fall to the ground. Therefore, hail may become less frequent, but large hail can be expected when it does occur, leading to the possibility of increased damages.⁵

VULNERABILITY AND IMPACT

Crops are typically the most vulnerable to the impacts of hail. Even relatively small hail can shred plants to ribbons in a matter of minutes. Vehicles, roofs of buildings and homes, and landscaping are most damaged by hail. Utility systems on roofs of buildings and critical facilities would be vulnerable and could be damaged. Hail could cause a significant threat to people, as they could be struck by hail and falling trees and branches. Outdoor activities and events may elevate the risk to residents and visitors when a hailstorm strikes with little warning. Portable buildings typically utilized by schools and commercial sites such as construction areas would be more vulnerable to hail events than the typical site-built structures.

The Aransas County planning area features mobile or manufactured home parks throughout the planning area. These parks are typically more vulnerable to hail events than typical site-built structures. In addition, manufactured homes are located sporadically throughout the planning area. The U.S. Census data indicates a total of 2,576 (16 percent of total housing stock) manufactured homes located in the Aransas County planning area. In addition, 28 percent (4,467 structures) of the housing structures in the Aransas County planning area were built before 1980. These structures would typically be built to lower or less stringent construction standards than newer construction and may be more susceptible to damage during significant wind events.

Table 10-4. Structures at Greater Risk by Participating Jurisdiction

JURISDICTION	SFR STRUCTURES BUILT BEFORE 1980	MANUFACTURED HOMES
Aransas County	4,467	2,576
Town of Fulton	235	294
City of Rockport	2,324	444
Rockport-Fulton ISD	30	7
Aransas County Navigation District	6	0

While all citizens are at risk of the impacts of hail, forced relocation and disaster recovery disproportionately impacts low-income residents who lack the financial means to travel, afford a long-term stay away from home, and to rebuild or repair their homes. An estimated 19 percent of the planning area population live below the poverty level (Table 10-5). While warning times for this type of hazard events should be substantial enough for these individuals to seek shelter, the elderly, children, and people with a disability may have trouble taking shelter due to mobility issues or a lack of awareness, making them more susceptible to injury or harm. In addition, people who speak a language other than English may face increased vulnerability due to language barriers

⁵ Yale Climate Connections, Hailstorms and Climate Change, March 17, 2022.

SECTION 10: HAIL

that limit their access to important information such as weather-related warnings and instructions regarding safety measures.

Table 10-5. Populations at Greater Risk by Jurisdiction⁶

JURISDICTION	POPULATION				
	65 AND OLDER	UNDER 5	WITH A DISABILITY	BELOW POVERTY LEVEL	LIMITED ENGLISH SPEAKING
Aransas County	6,844	1,079	4,402	4,572	513
Town of Fulton	534	0	408	100	0
City of Rockport	3,018	527	1,681	1,630	240

The Rockport-Fulton ISD and the Aransas County Navigation District also have vulnerable populations based on age or work location, such as employees that work outdoors and may be subject to severe weather conditions, or children under 5 who attend school at the participating ISD (Table 10-6).

Table 10-6. Populations at Greater Risk by Participating Special District

SPECIAL DISTRICT	YOUTH (under 5)	EMPLOYEES OPERATING OUTDOORS
Rockport-Fulton ISD	130	100
Aransas County Navigation District	-	26

The Aransas County Planning Team identified the following critical facilities (Table 10-7) as assets that are considered the most important to the planning area and are susceptible to a range of impacts caused by hail events. For a comprehensive list of critical facilities by participating jurisdiction, please see Appendix D.

Table 10-7. Critical Facilities Vulnerable to Hail

CRITICAL FACILITY TYPE	POTENTIAL IMPACTS
Emergency Response Services (EOC, Fire, Police, EMS), Hospitals and Medical Centers	- Emergency operations and services may be significantly impacted due to damaged facilities and/or loss of communications. - Emergency vehicles can be damaged by hailstones. - Power outages could disrupt communications, delaying emergency response times. - Accumulated hail on the streets may impede emergency response vehicle access to areas. - Extended power outages and evacuations may lead to possible looting, destruction of property, and theft, further burdening law enforcement resources.

⁶ U.S. Census Bureau 2023 data for Aransas County

SECTION 10: HAIL

CRITICAL FACILITY TYPE	POTENTIAL IMPACTS
Airport, Academic Institutions, Animal Shelter, Evacuation Centers & Shelters, Governmental Facilities, Residential/ Assisted Living Facilities	- Structures can be damaged by hailstones. - Power outages could disrupt critical care. - Backup power sources could be damaged. - Evacuations may be necessary due to extended power outages, gas line ruptures, or structural damage to facilities. - Power outages and infrastructure damage may prevent larger airports from acting as temporary command centers for logistics, communications, and emergency operations. - Temporary break in operations may significantly inhibit post event evacuations. - Damaged or destroyed highway infrastructure may substantially increase the need for airport operations.
Commercial Supplier (Food, fuel, etc.)	- Facilities or infrastructure may be damaged, destroyed or otherwise inaccessible. - Essential supplies like medicines, water, food, and equipment deliveries may be significantly delayed.
Utility Services and Infrastructure (electric, water, wastewater, communications)	- Emergency operations and services may be significantly impacted due to damaged facilities and/or loss of communications. - Power outages could disrupt communications, delaying emergency response times. - Accumulated hail on the streets may impede service response vehicle access to areas. - Extended power outages and evacuations may lead to possible looting, destruction of property, and theft, further burdening law enforcement resources.

Hail has been known to cause injury to humans and occasionally has been fatal, though no injuries or fatalities due to hail have been reported in the planning area. Overall, the total loss estimate of property and crops in the planning area is \$384,000 (2025 dollars) with an average annualized loss of \$6,900. Based on historic loss and damages, the impact of hail damages on the Aransas County planning area can be considered “Limited” severity of impact, meaning minor quality of life lost, critical facilities and services shut down for 24 hours or less, and less than 10 percent of property destroyed or with major damage.

Table 10-8. Estimated Annualized Losses by Jurisdiction

JURISDICTION	TOTAL PROPERTY & CROP LOSS	AVERAGE ANNUAL LOSS ESTIMATES
Aransas County	\$356,800	\$6,400
Town of Fulton	\$0	\$0
City of Rockport	\$27,200	\$500
Rockport-Fulton ISD	\$0	\$0
Aransas County Navigation District	\$0	\$0
TOTALS	\$384,000	\$6,900

SECTION 10: HAIL

ASSESSMENT OF IMPACTS

Hail events have the potential to pose a significant risk to people and can create dangerous situations. Hail conditions can be frequently associated with a variety of impacts, including:

- Hail may create hazardous road conditions during and immediately following an event, potentially delaying critical staff from reporting for duty as well as delaying first responders from providing for or preserving public health and safety.
- Individuals and first responders who are exposed to the storm may be struck by hail, falling branches, or downed trees resulting in injuries or possible fatalities.
- Large hail events will likely cause extensive roof damage to residential structures along with siding damage and broken windows, creating a spike in insurance claims and a rise in premiums, and potentially result in physical harm to occupants.
- Automobile damage may be extensive depending on the size of the hail and length of the storm.
- Hail events can result in power outages over widespread areas increasing the risk to more vulnerable portions of the population who rely on power for health and/or life safety.
- Extended power outage can result in an increase in structure fires and/or carbon monoxide poisoning, as individuals attempt to cook or heat their home with alternate, unsafe cooking or heating devices, such as grills.
- First responders are exposed to downed power lines, damaged structures, hazardous spills, and debris that often accompany hail events, elevating the risk of injury to first responders and potentially diminishing emergency response capabilities.
- Some businesses not directly damaged by the hail event may be negatively impacted while roads are cleared and utilities are being restored, further slowing economic recovery.
- Businesses that are more reliant on utility infrastructure than others may suffer greater damage without a backup power source.
- Depending on the severity and scale of damage caused by large hail events, damage to power transmission and distribution infrastructure can require days or weeks to repair.
- A significant hail event could significantly damage agricultural crops, resulting in extensive economic losses for the community and surrounding area.
- Hail events may injure or kill livestock and wildlife or destroy wildlife habitat.
- A large hail event could impact the accessibility of recreational areas and parks due to extended power outages or debris clogged access roads.
- Historical sites and properties are placed at a higher risk of impact due to materials used and the inability to change properties due to their historic status. There are seven historical sites listed on the National Register of Historic Places for Aransas County.

The economic and financial impacts of hail will depend entirely on the scale of the event, what is damaged, and how quickly repairs to critical components of the economy can be implemented. The level of preparedness and pre-event planning conducted by the community, local businesses, and citizens will contribute to the overall economic and financial conditions in the aftermath of any hail event.



SECTION 11

HURRICANE/ TROPICAL STORM

SECTION 11: HURRICANE / TROPICAL STORM

Hazard Description	1
Location	1
Extent	2
Historical Occurrences	2
Significant Events	6
Probability of Future Events	9
Climate Change Considerations	9
Vulnerability and Impact	9
Assessment of Impacts	12

HAZARD DESCRIPTION

According to the National Oceanic and Atmospheric Administration (NOAA), a hurricane is an intense tropical weather system of strong thunderstorms with well-defined surface circulation and maximum sustained winds of 74 mph or higher. In the Northern Hemisphere, circulation of winds near the Earth's surface is counterclockwise.

Hurricanes often begin as tropical depressions that intensify into tropical storms when maximum sustained winds increase to between 35–64 knots (39–73 mph). At these wind speeds, the storm becomes more organized and circular in shape and begins to resemble a hurricane. Tropical storms can be equally problematic without ever becoming a hurricane. Tropical storms resulting in high winds and heavy rainfall can be dangerous to people and property, as Tropical Storm Frances was for southeast Texas in September 1998. Once



sustained winds reach or exceed 74 mph, the storm becomes a hurricane. The intensity of a landfalling hurricane is expressed in categories relating wind speeds to potential damage. Tropical storm-force winds are strong enough to be dangerous to those caught in them. In addition, excessive precipitation and storm surge produced by hurricanes and tropical storms can result in coastal flooding and storm surge. For this reason, emergency managers plan to have evacuations completed and personnel sheltered before winds of tropical storm-force arrive, which precedes the arrival of hurricane-force winds.

LOCATION

The Aransas County planning area is located along the Gulf Coast, making the planning area vulnerable to threats directly and indirectly related to a hurricane event, such as high-force winds and flooding. Hurricanes and tropical storms can impact Aransas County from June to November, the official Atlantic U.S. hurricane season. The Aransas County planning area is in a high-risk area for hurricane wind speeds up to 200 miles per hour (mph).

SECTION 11: HURRICANE / TROPICAL STORM

EXTENT

As a hurricane develops, the barometric pressure (measured in millibars or inches) at its center falls and winds increase. If the atmospheric and oceanic conditions are favorable, it can intensify into a tropical depression. When maximum sustained winds reach or exceed 39 miles per hour, the system is designated a tropical storm, given a name, and closely monitored by the National Hurricane Center in Miami, Florida. When sustained winds reach or exceed 74 miles per hour, the storm is deemed a hurricane.

Hurricanes are categorized according to the strength and intensity of their winds using the Saffir-Simpson Hurricane Scale (Table 11-1). A Category 1 storm has the lowest wind speeds, while a Category 5 hurricane has the highest. However, a lower category storm can inflict greater damage than higher category storms depending on where they strike, the amount of storm surge, other weather they interact with, and how slow they move.

Table 11-1. Extent Scale for Hurricanes¹

CATEGORY	MAXIMUM SUSTAINED WIND SPEED (mph)	MINIMUM SURFACE PRESSURE (millibars)	STORM SURGE (feet)
1	74 – 95	Greater than 980	3 – 5
2	96 – 110	979 – 965	6 – 8
3	111 – 130	964 – 945	9 – 12
4	131 – 155	944 – 920	13 – 18
5	155+	Less than 920	19+

Based on the historical storm tracks, the majority of tropical cyclones in or near the planning area are tropical storms at landfall. While the average extent to be mitigated for Aransas County is a Category 2 storm, the maximum extent to be mitigated is a Category 5 hurricane.

Table 11-2 provides a summary of the return interval of tropical cyclones based on the history of storm tracks available in or near the planning area. Records of historical hurricane tracks are available on the NOAA website starting in 1851. For the purposes of this analysis, all storms within a 100-mile radius of the planning area were analyzed to estimate the annual recurrence rate. Although high-intensity hurricanes are less frequent, they have the potential to cause catastrophic damage, as seen with Hurricane Harvey.

Table 11-2. Historical Tropical Cyclone Occurrence Rate, 1851-2024

CATEGORY	NUMBER OF STORMS	ANNUAL RECURRENCE RATE
Tropical Storm	35	0.20%
Category 1	22	0.13%
Category 2	12	0.07%

¹ Source: National Hurricane Center, https://www.nhc.noaa.gov/HAW2/english/basics/saffir_simpson.shtml

SECTION 11: HURRICANE / TROPICAL STORM

CATEGORY	NUMBER OF STORMS	ANNUAL RECURRENCE RATE
Category 3	5	0.03%
Category 4	8	0.05%
Category 5	9	0.05%

HISTORICAL OCCURRENCES

The last known system to track across Aransas County was Hurricane Beryl in 2024. Historical systems that have tracked or in close proximity to the planning area between 1996 and 2024, bringing storm systems, excessive precipitation and potentially damaging wind to Aransas County planning area, are listed in Table 11-3 below.

Table 11-3. Historical Hurricane / Tropical Storm Events, 1996 – 2024²

DATE	STORM NAME	CATEGORY (max)
08/21/1998 – 08/24/1998	Charley	Tropical Storm
09/08/1998 – 09/13/1998	Frances	Tropical Storm
08/18/1999 – 08/25/1999	Bret	Category 4
06/05/2001 – 06/19/2001	Allison	Tropical Storm
08/04/2002 – 08/09/2002	Bertha	Tropical Storm
09/05/2002 – 09/11/2002	Fay	Tropical Storm
07/07/2003 – 07/17/2003	Claudette	Category 1
09/18/2005 – 09/26/2005	Rita	Category 5
08/13/2007 – 08/23/2007	Dean	Category 5
08/15/2007 – 08/19/2007	Erin	Tropical Storm
09/12/2007 – 09/14/2007	Humberto	Category 1
07/20/2008 – 07/27/2008	Dolly	Category 2
08/25/2008 – 09/05/2008	Gustav	Category 4
09/01/2008 – 09/15/2008	Ike	Category 4
06/24/2010 – 07/02/2010	Alex	Category 2
09/04/2010 – 09/10/2010	Hermine	Tropical Storm
07/27/2011 – 07/30/2011	Don	Tropical Storm

² Source: NOAA Historical Hurricane Tracks, <https://coast.noaa.gov/hurricanes/#map=4/32/-80>.

SECTION 11: HURRICANE / TROPICAL STORM

DATE	STORM NAME	CATEGORY (max)
06/16/2015 – 06/21/2015	Bill	Tropical Storm
08/16/2017 – 09/02/2017	Harvey	Category 4
09/17/2019 – 09/19/2019	Imelda	Tropical Storm
07/23/2020 – 07/26/2020	Hanna	Category 1
08/20/2020 – 08/25/2020	Marco	Category 1
08/20/2020 – 08/29/2020	Laura	Category 4
09/17/2020 – 09/25/2020	Beta	Tropical Storm
09/12/2021 – 09/17/2021	Nicholas	Category 1
08/21/2023 – 08/23/2023	Harold	Tropical Storm
07/05/2024 – 07/09/2024	Beryl	Category 5

According to the historical hurricane tracks from NOAA's National Hurricane Center, there have been 27 storms known to have come within 100 miles of the Aransas County planning area from 1996 through 2024. Table 11-3 lists the storms that have impacted the Aransas County planning area from 1996 through 2024 as reported in the NCEI. Both data sets are utilized to provide the most comprehensive risk assessment for the planning area. These events are related to several different Hurricanes and Tropical Storms, including the devastating Hurricane Harvey and recent Tropical Storm Harold. To create the most comprehensive dataset possible, this analysis includes all NCEI events related to tropical cyclones including hurricanes, tropical storms, storm surge, and coastal flooding. Not all events reported by the NOAA National Hurricane Center are reported by the NCEI, so some damages and events may be underreported. Historical hurricane data for Aransas County is provided on a countywide basis by the NCEI and NOAA databases.³

Historical Hurricane impacts for Rockport-Fulton ISD and the Aransas County Navigation District are recorded under the county in which they are located, as they do not have events reported separately and apart from the events reported to the NCEI database. Rockport-Fulton ISD reported damages associated with Hurricane Harvey, estimated at \$97,630,300 (2025 dollars). The Aransas County Navigation District also reported damages associated with Hurricane Harvey, estimated at \$26,390,500 (2025 dollars). These damages have been included in the total damages reported at the county-wide level in Table 11-4.

³ Some of these events were reported under flooding, coastal flooding or storm surge in the NCEI database, and an analysis was performed to cross reference applicable hurricane and tropical storm events to create the most comprehensive dataset possible.

SECTION 11: HURRICANE / TROPICAL STORM

Table 11-4. Historical Hurricane Events, 1996 – 2024⁴

JURISDICTION	STORM NAME	DATE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Aransas County	Josephine	10/05/1996	0	0	\$0	\$0
Aransas County	Claudette	7/15/2003	0	0	\$0	\$0
Aransas County	Erin	8/15/2007	0	0	\$0	\$0
Aransas County	Ike	9/12/2008	0	0	\$0	\$0
Aransas County	Alex	6/30/2010	0	0	\$0	\$0
Aransas County	Alex	7/01/2010	0	0	\$0	\$0
Aransas County	Tropical Depression Two	7/08/2010	0	0	\$0	\$0
Aransas County	Bill	6/16/2015	0	0	\$0	\$0
Aransas County	Bill	6/16/2015	0	0	\$133,200	\$0
Aransas County	Unnamed	10/22/2015	0	0	\$0	\$0
Aransas County	Harvey	8/25/2017	0	14	\$3,417,410,900	\$0
Aransas County	Harvey	8/25/2017	0	0	\$0	\$0
Aransas County	Unnamed	10/6/2017	0	0	\$0	\$0
Aransas County	Hanna	7/25/2020	0	0	\$12,300	\$0
Aransas County	Hanna	7/25/2020	0	0	\$18,400	\$0
Aransas County	Hanna	7/25/2020	0	0	\$0	\$0
Aransas County	Hanna	7/25/2020	0	0	\$0	\$0
Aransas County	Beta	9/19/2020	0	0	\$0	\$0
Aransas County	Beta	9/19/2020	0	0	\$0	\$0
Aransas County	Delta	10/08/2020	0	0	\$0	\$0
Aransas County	Delta	10/08/2020	0	0	\$0	\$0
Aransas County	Nicholas	9/13/2021	0	0	\$0	\$0
Aransas County	Nicholas	9/13/2021	0	0	\$0	\$0
Aransas County	Nicholas	9/13/2021	0	0	\$0	\$0

⁴ Values are in 2025 dollars.

SECTION 11: HURRICANE / TROPICAL STORM

JURISDICTION	STORM NAME	DATE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Aransas County	Nicholas	9/13/2021	0	0	\$0	\$0
Aransas County	Harold	8/22/2023	0	0	\$25,900	\$0
Aransas County	Harold	8/22/2023	0	0	\$25,900	\$0
TOTALS			0	14	\$3,417,626,600	\$0

Based on the list of historical hurricane events for Aransas County planning area, 14 events have occurred since the 2020 Plan.

SIGNIFICANT EVENTS

There have been 15 declared disasters and emergency declarations between 1996 and 2024 (Table 11-5) related to hurricane or tropical storm events.

Table 11-5. Disaster Declarations for Hurricane/Tropical Storm, 1996-2024

YEAR	DECLARATION TITLE	DECLARATION TYPE	DISASTER NO.
1999	Hurricane Bret	DR	1287
2003	Hurricane Claudette	DR	1479
2005	Hurricane Katrina Evacuations	EM	3216
2005	Hurricane Rita	EM	3261
2005	Hurricane Rita	DR	1606
2007	Hurricane Dean	EM	3277
2008	Hurricane Dolly	DR	1780
2008	Hurricane Gustav	EM	3290
2008	Hurricane Ike	EM	3294
2008	Hurricane Ike	DR	1791
2010	Tropical Storm Alex	EM	3313
2017	Hurricane Harvey	DR	4332
2020	Hurricane Hanna	EM	3530
2020	Tropical Storms Marco and Laura	EM	3540
2024	Hurricane Beryl	DR	4798

SECTION 11: HURRICANE / TROPICAL STORM

Hurricane Harvey on August 16 - September 2, 2017 (DR-4332)

Major Hurricane Harvey impacted the Middle Texas Coast on August 25 and 26 of 2017. Hurricane Harvey was the first Category 4 hurricane to strike Texas since Hurricane Carla in 1961. Harvey severely affected the Aransas County planning area, including the City of Rockport and the Town of Fulton. Hurricane Harvey moved inland towards Aransas County on San Jose Island around 8:30 PM on August 25, 2017. Aransas County was ground zero for the eyewall impact of the hurricane. Harvey produced a maximum storm surge of 12.5 feet, specifically in the Aransas National Wildlife Refuge area. According to NCEI records, the storm surge alone caused major damage to 356 homes and minor damage to 1,126 homes in Aransas County. Storm tide levels in the interior bays were generally from 5 to 8 feet with higher amounts near 10 feet on the south end of Copano Bay, the north end of Aransas Bay, and the north end of Lavaca Bay.

Maximum sustained winds were estimated at 130 mph (115 knots) with gusts to 160 mph (140 knots). Due to the direct impact from the eyewall, the City of Rockport and the Lamar Peninsula experienced mesovortices and microbursts. These weather phenomena produce intense localized winds and can cause significant structural damage. From the ground perspective, their effects are often indistinguishable from those of a tornado. There were no direct fatalities from Hurricane Harvey on the Middle Texas Coast. However, the powerful winds did result in 14 reported injuries.

In Aransas County, widespread major damage occurred, with some areas experiencing catastrophic levels of damage. The most severe impacts were concentrated in Copano Village, Holiday Beach, and Lamar, where many homes, including elevated structures, suffered complete second-story collapses. Nearly every structure sustained significant damage, with some brick homes near Copano Village completely destroyed. Homes in the Copano Ridge area also experienced catastrophic damage. Some of the structures that Aransas County lost include the Courthouse, the Aquarium at Rockport Harbor, the Road and Bridge Office, and extensive damage to roofs and other County buildings. Additionally, the Sheriff's Office also lost an entire fleet of vehicles due to water damage, along with communication towers. Other infrastructure that was also damaged includes St. Charles Bay Breakwater. The purpose of Breakwaters is to mitigate the wave action and assist in slowing down erosion of the shore.

Vegetation was severely affected, with nearly all trees in Holiday Beach, Lamar, and Goose Island State Park stripped of leaves, many snapped or uprooted. The City of Rockport and the Town of Fulton suffered extensive structural damage, including the collapse of several homes in the Key Allegro subdivision. The high school gymnasium, multiple churches, and several newly constructed hotels lost exterior walls. Upper floors of multiple apartment buildings were destroyed, while mobile homes and recreational vehicles were demolished. Billboards and numerous powerlines were either blown down or snapped. Other vegetation that was also affected was Cedar Bayou, a natural pass between the Gulf of Mexico and Aransas Bay. This damage threatened the fish and crabs that move between those bodies of water. Additionally, this impacted a major source of food for the endangered Whooping Crane that spends its winters in coastal areas.

At the Aransas County Airport, six hangars were demolished, along with many airplanes. The planning area remained without power for two to three weeks. Nearly 1,500 homes were destroyed, almost 3,800 homes sustained major damage, and approximately 5,350 homes

SECTION 11: HURRICANE / TROPICAL STORM

suffered minor damage. Additionally, 175 businesses in Aransas County experienced major damage.

Storm surge significantly impacted Holiday Beach and Copano Village, breaching walls and garage doors on the lower levels of most homes. Vehicles and boats were carried inland by the surge. Floodwaters crossed Egery Island Road and Farm to Market 136 at several locations south of Bayside in extreme western Aransas County. North of Holiday Beach, numerous cattle were lost. Rattlesnake Point Road sustained severe erosion and was partially washed away near Redfish Lodge on Copano Bay, where the pier south of the lodge was completely destroyed.

Hurricane Harvey's impact on the Middle Texas Coast, particularly in Aransas County, was catastrophic. NCEI reports, combined with damages reported locally, provide an estimate of \$3,417,410,900 (2025 dollars) in damages for all participating jurisdictions and special districts. Communities like Rockport, Fulton, and the surrounding areas experienced near-total structural damage, with thousands of homes and businesses severely affected.

During the recovery of Hurricane Harvey, Aransas County received funding from FEMA, Texas Division of Emergency Management (TDEM) and the General Land Office (GLO) in the form of Disaster Recovery grants. This funding provided numerous Street and Drainage projects throughout the county, Radio Tower and Communication Infrastructure projects, Multiple Site Generator locations and Economic Development projects during the aftermath of the widespread destruction that Hurricane Harvey caused. Additional federal funding was also received from the U.S. Treasury through Texas Commission on Environmental Quality (TCEQ), which provided a grant to allow for a new bulkheading / seawall protection along Bayshore Drive in Key Allegro. With this funding that allowed these recovery projects, this will further mitigate future events.

Figure 11-1. Aerial Footage of Harvey Damage in the City of Rockport⁵



⁵ Caller-Times. 2017. Aransas County after Harvey: An aerial look at the aftermath. <https://www.caller.com/picture-gallery/weather/hurricanes/2017/08/27/aransas-county-after-harvey-an-aerial-look-at-the-aftermath/105029436/>

SECTION 11: HURRICANE / TROPICAL STORM

PROBABILITY OF FUTURE EVENTS

Based on historical occurrences of significant hurricane events, the probability of future events is “Highly Likely”, with an event probable in the next year for Aransas County planning area.

CLIMATE CHANGE CONSIDERATIONS

Hurricane and tropical storm events have the potential to pose a significant risk to people and property. Such events can create dangerous situations for public health and safety officials and cause catastrophic damages. The impact of climate change could produce larger, more severe hurricane events, exacerbating the current hurricane impacts. The economic and financial impacts of hurricanes and tropical storms will depend entirely on the scale of the events, what is damaged, and how quickly repairs to critical components of the economy can be implemented.

The current climate assessment report for Texas indicates an expected increase in the intensity of very strong hurricanes, despite an expected lack of increase, or even a decrease, in hurricane frequency overall. Different research studies have produced some conflicting results. While some recent research has pointed to an apparent trend for U.S. tropical cyclones to move more slowly at landfall, much like Hurricane Harvey, other research suggests that Texas may be spared from such a slowdown. At this point, the enhanced risk is difficult to quantify, but substantial scientific progress on this topic is likely as climate models become better able to simulate the observed spatial distribution, frequency, and intensity of hurricanes.⁶

According to the Fifth National Climate Assessment, coastal communities, like Aransas County, will have an added risk due to sea-level rise. By the year 2100, under a projected 3.3 feet of sea level rise along the Texas Gulf Coast, a Category 2 hurricane is estimated to cause nearly 3 to 10 times more damage to infrastructure and be \$10.4 billion more costly than a similar storm today.⁷

VULNERABILITY AND IMPACT

Hurricane and tropical storm events can cause major damage to large areas; hence, all existing buildings, facilities, and populations are equally exposed and vulnerable to this hazard and could potentially be impacted. The Aransas County planning area features multiple mobile or manufactured home parks throughout the planning area. These mobile home parks are typically more vulnerable to hurricane events than typical site-built structures. The U.S. Census data indicates a total of 2,576 (16 percent of total housing stock) manufactured homes located in Aransas County planning area (Table 11-6). In addition, 28 percent of the single family residential (SFR) structures in Aransas County were built before 1980.⁸ These structures would typically be built to lower or less stringent construction standards than newer construction and may be more susceptible to damage during significant events.

⁶ Assessment of Historic and Future Trends of Extreme Weather in Texas, 1900-2036, Texas A&M University Office of the Texas State Climatologist, 2021 update.

⁷ Fifth National Climate Assessment, 2023, <https://nca2023.globalchange.gov/chapter/26/>

⁸ U.S. Census Bureau American Community Survey Five-Year Estimates 2019-2023 data for Aransas County.

SECTION 11: HURRICANE / TROPICAL STORM

Table 11-6. Structures at Greater Risk⁹

JURISDICTION	SFR STRUCTURES BUILT BEFORE 1980	MANUFACTURED HOMES
Aransas County	4,467	2,576
Town of Fulton	235	294
City of Rockport	2,324	444

Table 11-7. Structures at Greater Risk by Special Districts

JURISDICTION	SFR STRUCTURES BUILT BEFORE 1980	MANUFACTURED HOMES
Rockport-Fulton ISD	30	7
Aransas County Navigation District	6	0

Aransas County identified the following critical facilities as assets that are considered the most important to the planning area and are susceptible to a range of impacts caused by hurricane and tropical storm events. For a comprehensive list of critical facilities by participating jurisdiction, please see Appendix D.

Table 11-8. Critical Facilities Vulnerable to Hurricane and Tropical Storm Events

CRITICAL FACILITIES	POTENTIAL IMPACTS
Emergency Response Services (EOC, Fire, Police, EMS), Hospitals and Medical Centers	- Emergency operations and services may be significantly impacted due to damaged facilities and/or loss of communications. - Emergency vehicles can be damaged by falling trees or flying debris. - Power outages could disrupt communications, delaying emergency response times. - Critical staff may be injured or otherwise unable to report for duty, limiting response capabilities. - Debris/downed trees can impede emergency response vehicle access to areas. - Increased number of structure fires due to gas line ruptures and downed power lines, further straining the capacity and resources of emergency personnel. - First responders are exposed to downed power lines, unstable and unusual debris, hazardous materials, and generally unsafe conditions. - Extended power outages and evacuations may lead to possible looting, destruction of property, and theft, further burdening law enforcement resources.

⁹ U.S. Census Bureau American Community Survey Five-Year Estimates 2019-2023 data for Aransas County.

SECTION 11: HURRICANE / TROPICAL STORM

CRITICAL FACILITIES	POTENTIAL IMPACTS
Academic Institutions, Animal Shelter, Evacuation Centers & Shelters, Governmental Facilities, Residential/ Assisted Living Facilities	- Structures can be damaged by falling trees or flying debris. - Power outages could disrupt critical care. - Backup power sources could be damaged. - Critical staff may be injured or otherwise unable to report for duty, limiting response capabilities. - Evacuations may be necessary due to extended power outages, gas line ruptures, or structural damages to facilities.
Commercial Supplier (Food, fuel, etc.)	- Facilities or infrastructure may be damaged, destroyed or otherwise inaccessible. - Essential supplies like medicines, water, food, and equipment deliveries may be significantly delayed. - Additional emergency responders and critical aid workers may not be able to reach the area for days.
Utility Services and Infrastructure (electric, water, wastewater, communications)	- Emergency operations and services may be significantly impacted due to damaged facilities and/or loss of communications. - Emergency vehicles can be damaged by falling trees or flying debris. - Power outages could disrupt communications, delaying emergency response times. - Critical staff may be injured or otherwise unable to report for duty, limiting response capabilities. - Debris/downed trees can impede emergency response vehicle access to areas. - Increased number of structure fires due to gas line ruptures and downed power lines, further straining the capacity and resources of emergency personnel. - First responders are exposed to downed power lines, unstable and unusual debris, hazardous materials, and generally unsafe conditions.

Storm track data was available for the past 174 years; however, property and crop loss data records in the NCEI are only available since 1996. Losses during this period were only reported for six hurricane and tropical storm events so some damages and events may be unreported or underreported.

Table 11-9 shows impact or loss estimation for storms impacting Aransas County. Damages within the NCEI database are reported on a countywide basis and there are no losses reported separately for the Town of Fulton or City of Rockport. Annual loss estimates were based on the 29-year reporting period for such damages. The average annual loss estimate for the Aransas County planning area is approximately \$117,849,200 (2025 dollars).

SECTION 11: HURRICANE / TROPICAL STORM

Table 11-9. Summary of Annualized Losses, 1996 – 2024

JURISDICTION	TOTAL PROPERTY & CROP LOSS	AVERAGE ANNUAL LOSS ESTIMATES
Aransas County	\$3,417,626,600	\$117,849,200

With major reported damages and multiple reported injuries, the potential severity of impact from a hurricane event for the Aransas County planning area, including all participating jurisdictions, the ISD and special district, is considered to be “Substantial”, meaning multiple deaths possible, complete shutdown of facilities for 30 days or more, and more than 50 percent of property destroyed or with major damage.

ASSESSMENT OF IMPACTS

Hurricane and tropical storm events have the potential to pose a significant risk to people and can create dangerous and difficult situations for public health and safety officials. The impact of climate change could produce larger, more severe hurricane events, exacerbating the current hurricane impacts. Impacts to the planning area can include:

- Individuals exposed to the storm can be struck by flying debris, falling limbs, or downed trees causing serious injury or death.
- Structures can be damaged or crushed by falling trees, which can result in physical harm to the occupants.
- Driving conditions in the planning area may be dangerous during a hurricane event, especially over elevated bridges, elevating the risk of injury and accidents during evacuations if not timed properly.
- Emergency evacuations may be necessary prior to a hurricane landfall, requiring emergency responders, evacuation routing, and temporary shelters.
- Significant debris and downed trees can result in emergency response vehicles being unable to access areas of the community.
- Downed power lines may result in roadways being unsafe for use, which may prevent first responders from answering calls for assistance or rescue.
- During hurricane landfall, first responders may be prevented from responding to calls as the winds may reach a speed in which their vehicles and equipment are unsafe to operate.
- Hurricane events often result in widespread power outages increasing the risk to more vulnerable portions of the population who rely on power for health and/or life safety.
- Extended power outage often results in an increase in structure fires and carbon monoxide poisoning as individuals attempt to cook or heat their homes with alternate, unsafe cooking or heating devices, such as grills.
- Extended power outages can also be deadly for individuals reliant on electricity to live independently in their homes.
- Extreme hurricane events may rupture gas lines and down trees and power lines, increasing the risk of structure fires during and after a storm event.
- Extreme hurricane events may lead to prolonged evacuations during search and rescue, and immediate recovery efforts requiring additional emergency personnel and resources to prevent entry, protect residents, and protect property.

SECTION 11: HURRICANE / TROPICAL STORM

- First responders are exposed to downed power lines, unstable and unusual debris, hazardous materials, and generally unsafe conditions.
- Emergency operations and services may be significantly impacted due to damaged facilities and/or loss of communications.
- Critical staff may be unable to report for duty, limiting response capabilities.
- County, City and Town departments may be damaged, delaying response and recovery efforts for the entire community.
- Private sector entities that the County, Cities, Towns and residents rely on, such as utility providers, financial institutions, and medical care providers may not be fully operational and may require assistance from neighboring communities until full services can be restored.
- Economic disruption negatively impacts the programs and services provided by the community due to short- and long-term loss in revenue.
- Some businesses not directly damaged by the hurricane may be negatively impacted while roads are cleared and utilities are being restored, further slowing economic recovery.
- Older structures built to less stringent building codes may suffer greater damage as they are typically more vulnerable to hurricane damage. In Aransas County, 28 percent of homes were built before 1980, and seven buildings and sites in the County are on the National Register of Historic Places, many of which pre-date modern building codes.
- Vegetation in urban parks may become flattened or oversaturated from high winds and heavy rains.
- Large scale hurricanes can have significant economic impact on the affected area, as the county must fund expenses such as infrastructure repair and restoration, temporary services and facilities, overtime pay for responders, as well as normal day-to-day operating expenses.
- Businesses that are more reliant on utility infrastructure than others may suffer greater damage without a backup power source.
- As the Aransas County planning area continues to increase in population, the number of people and housing developments exposed to the hazard increases. Continued public education on the planning area's risks to hurricane and tropical storm events will continue to be key to the Planning Team's overall mitigation strategy.

The economic and financial impacts of hurricane events on the area will depend on the scale of the event, what is damaged, and how quickly repairs to critical components of the economy can be implemented. The level of preparedness and pre-event planning done by the community, local businesses, and citizens will also contribute to the overall economic and financial conditions in the aftermath of any hurricane event.



SECTION 12 **LIGHTNING**

SECTION 12: LIGHTNING

Hazard Description	1
Location	1
Extent	1
Historical Occurrences	2
Significant Events	4
Probability of Future Events	4
Climate Change Considerations	5
Vulnerability and Impact	5
Assessment of Impacts	7

HAZARD DESCRIPTION

Lightning is a discharge of electrical energy resulting from the buildup of positive and negative charges within a thunderstorm, creating a “bolt” when the buildup of charges becomes strong enough. This flash of light usually occurs within the clouds or between the clouds and the ground. A bolt of lightning can reach temperatures approaching 50,000 degrees Fahrenheit. Lightning rapidly heats the sky as it flashes but the surrounding air cools following the bolt. This rapid heating and cooling of the surrounding air causes the thunder which often accompanies lightning strikes. While most often affiliated with severe thunderstorms, lightning often strikes outside of heavy rain and might occur as far as 10 miles away from any rainfall.

According to the National Weather Service (NWS), the 10-year (2012–2021) average for fatalities is 23 people with an average of 300 injuries in the United States each year by lightning. Lightning can occur as cloud to ground flashes or as intra-cloud lightning flashes. Direct lightning strikes can cause significant damage to buildings, critical facilities, infrastructure, and communication equipment affecting emergency response. Lightning is also responsible for igniting wildfires that can result in widespread damages to property before firefighters have the ability to contain and suppress the resultant fire.

LOCATION

Lightning can strike in any geographic location and is considered a common occurrence in Texas. The Aransas County planning area is in a region of the country that is moderately susceptible to lightning strikes. Therefore, lightning could occur at any location within the entire planning area. It is assumed that the entire Aransas County planning area is uniformly exposed to the threat of lightning.

EXTENT

According to the 2024 Annual Lightning Report by Vaisala, the State of Texas ranks fifth in the U.S. for lightning strike density with an average of 150.2 flashes per square mile.¹ Vaisala’s U.S. National Lightning Detection Network lightning flash density map shows an average of 80 lightning events per square mile per year for the Aransas County planning area. This rate equates to

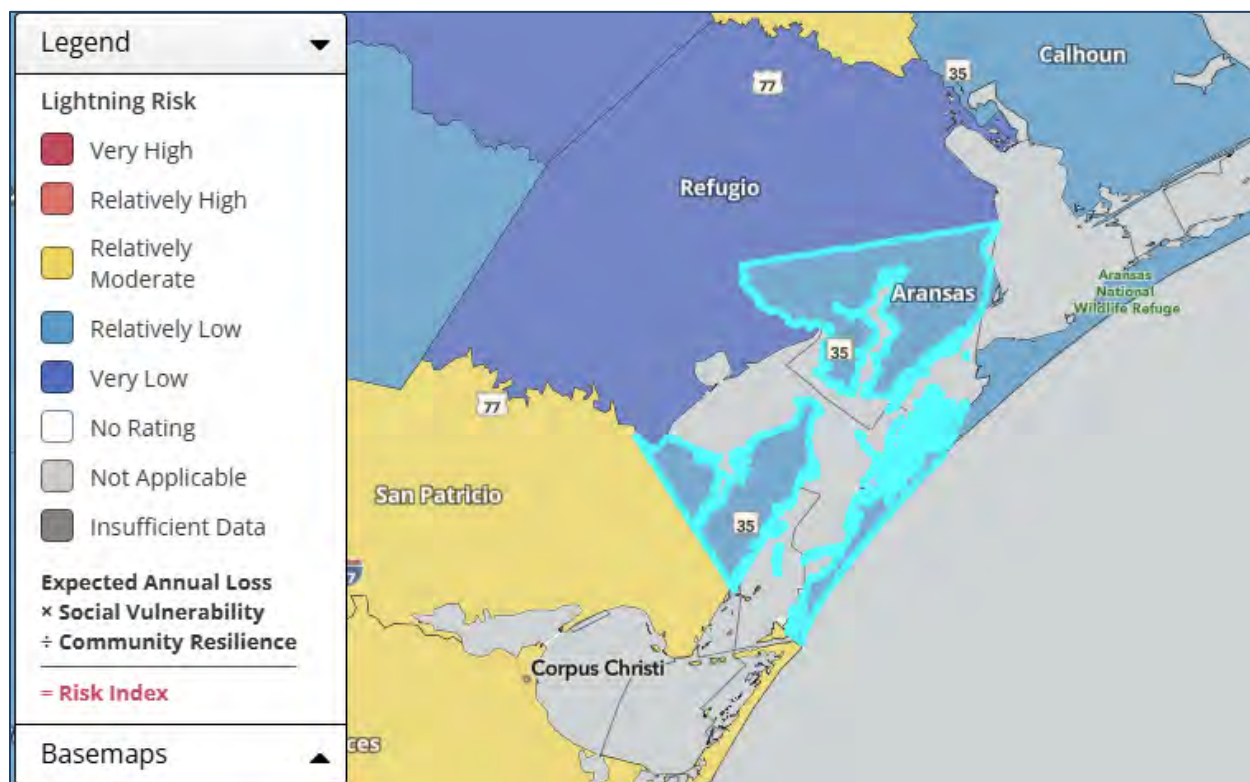
¹ Source: <https://www.xweather.com/annual-lightning-report>

SECTION 12: LIGHTNING

approximately 20,200 flashes per year, or approximately one flash per 15-minute interval during storm events for the entire planning area including all participating jurisdictions, the ISD and special district.

FEMA's National Risk Index includes an analysis of the planning area's expected annual loss and the community's risk factor which incorporates social vulnerability as well as community resilience to determine the lightning risk for the area, compared to the rest of the United States. Aransas County is located in an area where the extent is classified as relatively low (Figure 12-1).

Figure 12-1. Aransas County Lightning Risk, National Risk Index, March 2025²



HISTORICAL OCCURRENCES

The National Centers for Environmental Information (NCEI) database indicates two recorded lightning events for the Aransas County planning area. It is highly likely multiple lightning occurrences have gone unreported before and during the recording period. The NCEI is a national data source organized under the National Oceanic and Atmospheric Administration and considered a reliable resource for hazards. However, the flash density for the planning area along with input from local team members indicates regular lightning occurrences that simply have not been reported.

The Texas A&M Forest Service (TFS) records wildfire data for the Aransas County planning area, including wildfires which were sparked by lightning.³ Six lightning-started wildfire events from the TFS database have been included in this lightning analysis to create the most comprehensive

² Source: Map | National Risk Index, <https://hazards.fema.gov/nri/map>

³ Wildfires can be ignited by lightning directly or by sparking wires in high wind scenarios.

SECTION 12: LIGHTNING

dataset possible. In addition to the events reported in TFS records, the Planning Team reported that, in the past five years, approximately four fires per year are caused by lightning or thunderstorm winds.

Historical lightning event data for Rockport-Fulton ISD and the Aransas County Navigation District are provided within the Aransas County events or the participating jurisdictions in which the ISD or Navigation District resides. In the NCEI database, these entities do not have events reported separate and apart from the reported county and jurisdiction events.

The Aransas County Navigation District reported that lightning has made an impact on electrical services that supply power to buildings and power poles and power lines have also been affected. Additionally, harbor boats, including masts / rigging, have been subject to lightning strikes, along with tall palm trees in the Navigation District. Damage estimates for these impacts were not provided.

Rockport-Fulton ISD did not report any additional lightning events or damages that were not captured in the NCEI data.

Table 12-1. Historical Lightning Events, 1996 – 2024⁴

JURISDICTION	DATE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Aransas County	5/23/2009	0	0	\$0	\$0
Aransas County	5/24/2009	0	0	\$0	\$0
City of Rockport	7/18/2009	0	0	\$0	\$0
City of Rockport	7/18/2012	0	0	\$13,900	\$0
Aransas County	9/13/2012	0	0	\$0	\$0
Aransas County	11/20/2012	0	0	\$0	\$0
City of Rockport	4/25/2013	0	0	\$13,700	\$0
Town of Fulton	6/9/2013	0	0	\$0	\$0
Aransas County ⁵	2015	0	0	\$0	\$0
TOTALS		0	0	\$27,600	

⁴ Values are in 2025 dollars. Database was searched for events between 1996 and 2024.

⁵ This event, which occurred at the Aransas National Wildlife Refuge, was provided by the Planning Team. Specific figures regarding damages were unavailable; further information on this event is provided in narrative form in the Significant Events section below.

SECTION 12: LIGHTNING

Table 12-2. Historical Lightning Events Summary, 1996 – 2024⁶

JURISDICTION	NUMBER OF EVENTS	DEATHS	INJURIES	PROPERTY DAMAGES	CROP DAMAGES
Aransas County	5	0	0	\$0	\$0
Town of Fulton	1	0	0	\$0	\$0
City of Rockport	3	0	0	\$27,600	\$0
Rockport-Fulton ISD	0	-	-	-	-
Aransas County Navigation District	0	-	-	-	-
TOTALS	9	0	0	\$27,600	\$0

Based on the list of historical lightning events for the Aransas County planning area, there have been no reported events since the 2020 Plan.

SIGNIFICANT EVENTS

July 18, 2012 – City of Rockport

During the afternoon hours, thunderstorms developed along the sea breeze boundary. During the scattered thunderstorms, lightning struck an oil tank battery near the Aransas County Airport and Farm to Market Road 1781. When lightning ignited the two tank batteries, they were destroyed. Damages from this incident were estimated at \$13,900 (2025 dollars).

April 25, 2013 – City of Rockport

During a thunderstorm, a lightning strike struck an oil tank near the Aransas County Airport causing a fire. When the lightning strike struck the tank full of salt water and crude oil mixture, this sparked a major fire. Damages from this incident were estimated at \$13,700 (2025 dollars).

2015 – Aransas County

Lightning struck the chimney of a structure in the Aransas National Wildlife Refuge within the planning area. This event was provided by the Planning Team and monetary damage estimates are unavailable. However, it was noted that this lightning strike damaged the structure and led to debris being strewn around the area.

PROBABILITY OF FUTURE EVENTS

Based on historical records and input from the planning team the probability of occurrence for future lightning events in the Aransas County planning area, including all participating jurisdictions, the ISD and special district, is considered “Highly Likely”, or an event probable in the next year. The planning team stated that lightning occurs regularly in the area. According to the 2024 Annual Lightning Report by Vaisala, the Aransas County planning area is located in an area of the country that experiences approximately 80 lightning flashes per square mile per year (approximately 20,200 flashes per year). Given this estimated probability of events, it can be

⁶ Participating jurisdictions with no reported events show a “-” in table columns where damages, deaths or injuries would be otherwise reported.

SECTION 12: LIGHTNING

expected that future lightning events will continue to threaten life and cause minor property damage throughout the planning area.

CLIMATE CHANGE CONSIDERATIONS

As CO₂ increases and the land surface warms, stronger updrafts are more likely to produce lightning. In a climate with double the amount of CO₂, we may see fewer lightning storms overall, but 25 percent stronger storms, with a 5 percent increase in lightning. Lightning damage is also likely to increase because of its role in igniting forest fires, where dry vegetation, also caused by rising temperatures, creates more ‘fuel’ for fires, so even a small climate change may have huge consequences. While the impact climate change will have on our weather still remains uncertain, researchers agree that implementing simple measures like lightning detection systems and installing grounding systems in buildings could go a long way in avoiding deaths and injuries.⁷

Lightning events have the potential to pose a significant risk to people and property throughout the Aransas County planning area. The economic and financial impacts of lightning on the area will depend entirely on the scale of the event, what is damaged, and how quickly repairs to critical components of the economy can be implemented. While no increase in the number of hazard events is anticipated, the impact of the hazard may see an increase in losses. As populations grow and urban development continues to rise, the overall vulnerability and impact are expected to increase in the next five years.

VULNERABILITY AND IMPACT

Vulnerability is difficult to evaluate since lightning events can occur at different strength levels, in random locations, and can create a broad range of damage depending on the strike location. Due to the randomness of these events, all existing and future structures and facilities in the Aransas County planning area could potentially be impacted and remain vulnerable to possible injury and property loss from lightning strikes.

The direct and indirect losses associated with these events include injury and loss of life, damage to structures and infrastructure, agricultural losses, utility failure (power outages), and stress on community resources. The entire population of the Aransas County planning area are considered exposed to the lightning hazard. The peak lightning season in the State of Texas is from June to August; however, the most fatalities occur in July. Fatalities occur most often when people are outdoors and/or participating in some form of recreation. The population located outdoors during a lightning event is considered at risk and more vulnerable to a lightning strike compared to those inside a structure. Moving to a lower risk location will decrease a person’s vulnerability.

The entire general building stock and all infrastructure of the Aransas County planning area are considered exposed to the lightning hazard. Lightning can be responsible for damages to buildings, cause electrical, forest and/or wildfires, and damage infrastructure such as power transmission lines and communication towers.

While all citizens are at risk to the impacts of lightning, forced relocation and disaster recovery drastically impacts low-income residents who lack the financial means to travel, afford a long-term stay away from home, and to rebuild or repair their homes. An estimated 19 percent of the

⁷ Environmental Journal, Nathan Neal, January 11, 2021.

SECTION 12: LIGHTNING

planning area population live below the poverty level. In addition, people who speak a language other than English may face increased vulnerability due to language barriers that limit their access to important information such as weather-related warnings and instructions regarding safety measures. Table 12-3 lists these vulnerable populations and several others for Aransas County and the participating jurisdictions.

Table 12-3. Populations at Greater Risk by Jurisdiction⁸

JURISDICTION	POPULATION				
	65 AND OLDER	UNDER 5	WITH A DISABILITY	BELOW POVERTY LEVEL	LIMITED ENGLISH SPEAKING
Aransas County	6,844	1,079	4,402	4,572	513
Town of Fulton	534	527	408	100	0
City of Rockport	3,018	527	1,681	1,630	240

Rockport-Fulton ISD and the Aransas County Navigation District also have vulnerable populations based on work location, as those working outdoors would be subject to greater lightning risk if working outdoors during periods of lightning activity (Table 12-4).

Table 12-4. Populations at Greater Risk by Participating Special District

SPECIAL DISTRICT	EMPLOYEES OPERATING OUTDOORS
Rockport-Fulton ISD	100
Aransas County Navigation District	26

The Aransas County Planning Team identified the following critical facilities (Table 12-5) as assets that are considered the most important to the planning area and are susceptible to a range of impacts caused by lightning events. For a comprehensive list of critical facilities by participating jurisdiction, please see Appendix D.

Table 12-5. Critical Facilities Vulnerable to Lightning Events

CRITICAL FACILITIES	POTENTIAL IMPACTS
Emergency Response Services (EOC, Fire, Police, EMS), Hospitals and Medical Centers	- Emergency operations and services may be significantly impacted due to power outages, damaged facilities, fires and/or loss of communications as a result of lightning strikes. - Emergency vehicles, including critical equipment, can be damaged by lightning strikes or by falling trees damaged by lightning. - Power outages could disrupt communications, delaying emergency response times.

⁸ US Census Bureau, American Community Survey Five-Year Estimates, 2023

SECTION 12: LIGHTNING

CRITICAL FACILITIES	POTENTIAL IMPACTS
	- Downed trees due to lightning strikes can impede emergency response vehicle access to areas. - Lightning strikes can be associated with structure fires and wildfires, further straining the capacity and resources of emergency personnel. - Extended power outages may lead to possible looting, destruction of property, and theft, further burdening law enforcement resources.
Airport, Academic Institutions, Animal Shelter, Evacuation Centers & Shelters, Governmental Facilities, Residential/ Assisted Living Facilities	- Structures can be damaged by falling trees damaged by lightning. - Power outages could disrupt critical care. - Backup power sources could be damaged. - Evacuations may be necessary due to extended power outages, fires, or other associated damages to facilities.
Commercial Supplier (food, fuel, etc.)	- Facilities, infrastructure, or critical equipment including communications may be damaged, destroyed or otherwise inoperable. - Essential supplies like medicines, water, food, and equipment deliveries may be delayed. - Economic disruption due to power outages and fires negatively impact airport services as well as area businesses reliant on airport operations.
Utility Services and Infrastructure (electric, water, wastewater, communications)	- Emergency operations and critical services may be significantly impacted due to power outages, damaged facilities, fires and/or loss of communications as a result of lightning strikes. - Emergency vehicles, including critical equipment, can be damaged by lightning strikes or by falling trees damaged by lightning. - Power outages could disrupt communications, delaying emergency response times. - Downed trees due to lightning strikes can impede emergency response vehicle access to areas. - Lightning strikes can be associated with structure fires and wildfires, further straining the capacity and resources of emergency personnel. - Extended power outages may lead to possible looting, destruction of property, and theft, further burdening law enforcement resources.

There are no recorded fatalities or injuries within the Aransas County planning area due to lightning events. Overall, the total loss estimate of property and crops in the planning area is \$27,600 (2025 dollars) with an average annualized loss of \$1,000. Based on recorded impacts and best available data for the Aransas County planning area, including all participating jurisdictions, the ISD and special district, the potential impact of lightning is considered “Limited”

SECTION 12: LIGHTNING

severity of impact, meaning minimal quality of life lost, critical facilities and services shut down for 24 hours or less, and less than 10 percent of property destroyed.

Table 12-6. Estimated Annualized Losses by Jurisdiction

JURISDICTION	TOTAL PROPERTY & CROP LOSS	AVERAGE ANNUAL LOSS ESTIMATES
Aransas County	\$0	\$0
Town of Fulton	\$0	\$0
City of Rockport	\$27,600	\$1,000
TOTALS	\$27,600	\$1,000

ASSESSMENT OF IMPACTS

Lightning events have the potential to pose a significant risk to people and can create dangerous and difficult situations for public health and safety officials. Additional impacts to the planning area can include:

- The Aransas County planning area features developed parks and green spaces. Lightning events could impact recreational activities, placing residents and visitors in imminent danger, potentially requiring emergency services or park evacuation.
- Older structures built to less stringent building codes may suffer greater damage from a lightning strike as they are typically built with less fire-resistant materials and often lack any fire mitigation measures such as sprinkler systems. 28 percent of homes in Aransas County were built before 1980. Similarly, historic buildings may lack fire mitigation materials or measures due to their historic status. Seven historic sites in the Aransas County planning area are listed on the National Register of Historic Places.
- Vegetation in urban parks may be destroyed by lightning caused brush fires and result in poor air quality impacting public health.
- Individuals exposed to the storm can be directly struck, posing significant health risks and potential death.
- Structures can be damaged or crushed by falling trees damaged by lightning, which can result in physical harm to the occupants.
- Lightning strikes can result in widespread power outages increasing the risk to more vulnerable portions of the population who rely on power for health and/or life safety.
- Extended power outage often results in an increase in structure fires and carbon monoxide poisoning as individuals attempt to cook or heat their homes with alternate, unsafe cooking or heating devices, such as grills.
- Lightning strikes can be associated with structure fires and wildfires, creating additional risk to residents and first responders.
- Emergency operations and services may be significantly impacted due to power outages and/or loss of communications.
- County, City, and Town departments may be damaged, delaying response and recovery efforts for the entire community.
- Economic disruption due to power outages and fires negatively impacts the programs and services provided by the community due to short- and long-term loss in revenue.

SECTION 12: LIGHTNING

- Some businesses not directly damaged by lightning events may be negatively impacted while utilities are being restored, further slowing economic recovery.
- Businesses that are more reliant on utility infrastructure than others may suffer greater damage without a backup power source.

The economic and financial impacts of lightning on the area will depend entirely on the scale of the event, what is damaged, and how quickly repairs to critical components of the economy can be implemented. The level of preparedness and pre-event planning done by the community, local businesses, and citizens will also contribute to the overall economic and financial conditions in the aftermath of any significant lightning event.



SECTION 13

THUNDERSTORM

WIND

SECTION 13: THUNDERSTORM WIND

Hazard Description	1
Location	1
Extent	2
Historical Occurrences	3
Significant Events	7
Probability of Future Events	8
Climate Change Considerations	8
Vulnerability and Impact	8
Assessment of Impacts	12

HAZARD DESCRIPTION

Thunderstorms create extreme wind events which includes straight line winds. Wind is the horizontal motion of the air past a given point, beginning with differences in air pressures. Pressure that is higher at one place than another sets up a force pushing from high toward low pressure; the greater the difference in pressures, the stronger the force. The distance between the area of high pressure and the area of low pressure also determines how fast the moving air accelerates.

Thunderstorms are created when heat and moisture near the Earth's surface are transported to the upper levels of the atmosphere. By-products of this process are the clouds, precipitation, and wind that become the thunderstorm.

According to the National Weather Service (NWS), a thunderstorm occurs when thunder accompanies rainfall. Radar observers use the intensity of radar echoes to distinguish between rain showers and thunderstorms.



Straight-line winds are responsible for most thunderstorm wind damages. One type of straight-line wind, the downburst, is a small area of rapidly descending air beneath a thunderstorm. A downburst can cause damage equivalent to a strong tornado and make air travel extremely hazardous.

LOCATION

Thunderstorm wind events can develop in any geographic location and are considered a common occurrence in Texas. Therefore, a thunderstorm wind event could occur at any location within the Aransas County planning area. These storms develop randomly and are not confined to any geographic area within the planning area. It is assumed that the entire Aransas County planning area, including all participating jurisdictions, the ISD and special district, is uniformly exposed to the threat of thunderstorm winds.

SECTION 13: THUNDERSTORM WIND

EXTENT

The extent or magnitude of a thunderstorm wind event is measured by the Beaufort Wind Scale. Table 13-1 describes the different intensities of wind in terms of speed and effects, from calm to violent and destructive.

Table 13-1. Beaufort Wind Scale¹

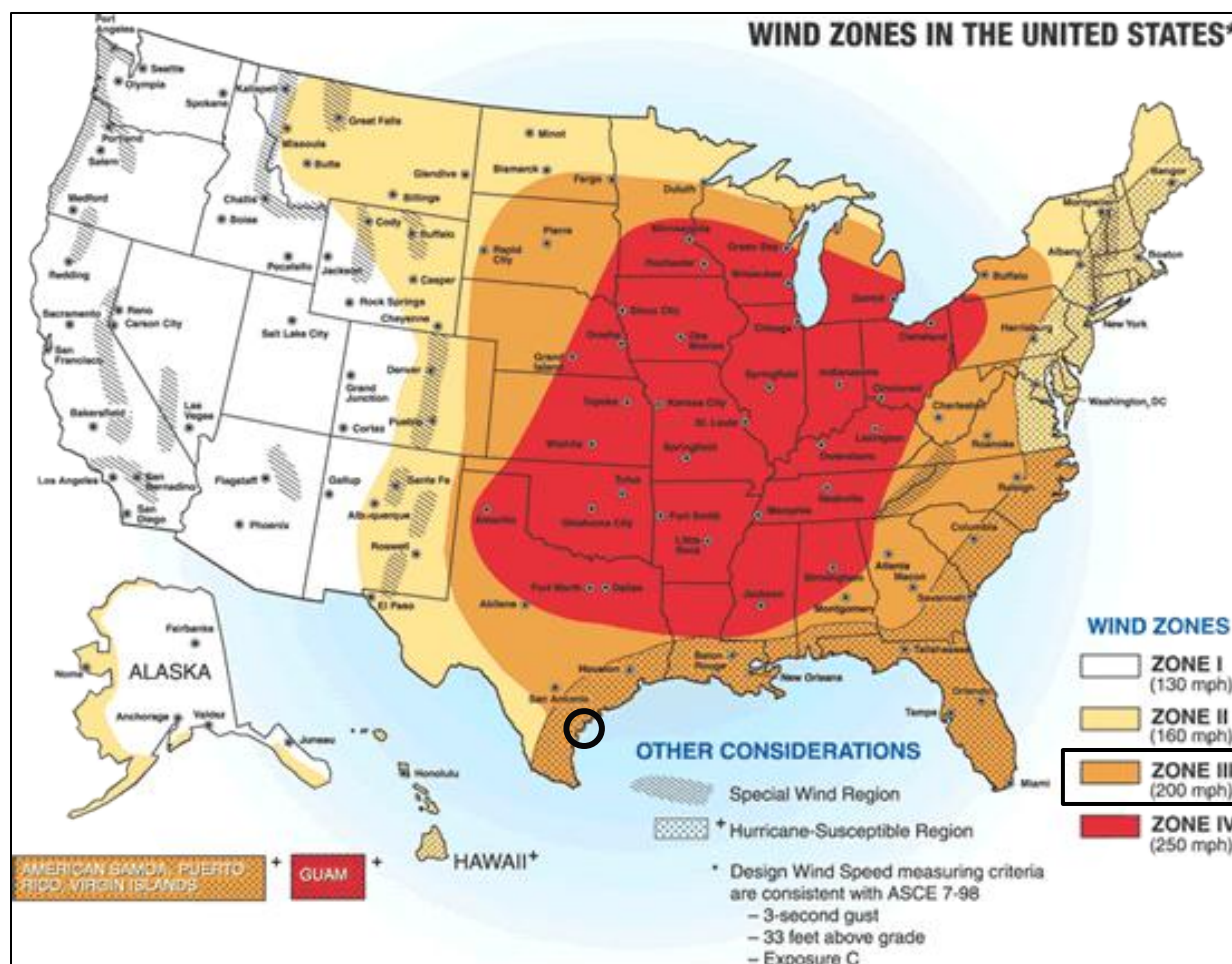
FORCE	WIND		WMO CLASSIFICATION	APPEARANCE OF WIND EFFECTS
	(mph)	(knots)		
0	Less than 1	Less than 1	Calm	Calm, smoke rises vertically
1	1-3	1-3	Light Air	Smoke drift indicates wind direction, still wind vanes
2	4-7	4-6	Light Breeze	Wind felt on face, leaves rustle, vanes begin to move
3	8-12	7-10	Gentle Breeze	Leaves and small twigs constantly moving, light flags extended
4	13-18	11-16	Moderate Breeze	Dust, leaves and loose paper lifted, small tree branches move
5	19-24	17-21	Fresh Breeze	Small trees in leaf begin to sway
6	25-31	22-27	Strong Breeze	Larger tree branches moving, whistling in wires
7	32-38	28-33	Near Gale	Whole trees moving, resistance felt walking against wind
8	39-46	34-40	Gale	Whole trees in motion, resistance felt walking against wind
9	47-54	41-47	Strong Gale	Slight structural damage occurs, slate blows off roofs
10	55-63	48-55	Storm	Seldom experienced on land, trees broken or uprooted, "considerable structural damage"
11	64-72	56-63	Violent Storm	If experienced on land, widespread damage
12	72-83	64-71	Hurricane	Violence and destruction

Figure 13-1 displays the wind zones as derived from NOAA.

¹ Source: World Meteorological Organization

SECTION 13: THUNDERSTORM WIND

Figure 13-1. Wind Zones in the United States²



On average, the planning area experiences one thunderstorm wind event every year. The Aransas County planning area is located within Wind Zone III. This means the planning area can experience winds up to 200 mph. The Aransas County planning area has experienced a significant wind event, or an event with winds in the range of “Force 12” on the Beaufort Wind Scale with winds above 72 mph. This is the worst to be anticipated for the entire planning area based on historic events.

Based on a search of past events between 1956 through 2024, the greatest magnitude wind event that Aransas County planning area experienced was 95 knots, or 110 mph, during an event occurring on August 10, 1980. In total, 10 reported wind events in the Aransas County planning area have met or exceeded “Force 12” windspeeds on the Beaufort Wind Scale.

HISTORICAL OCCURRENCES

The National Centers for Environmental Information (NCEI) Storm Events database is a national data source organized under the National Oceanic and Atmospheric Administration. The NCEI is the largest archive available for historic storm events data; however, it is important to note that

² The Aransas County planning area is indicated by the black circle.

SECTION 13: THUNDERSTORM WIND

only incidents recorded in the NCEI have been factored into this risk assessment unless otherwise noted. It is likely that a high number of occurrences have gone unreported over the past 68 years. Tables 13-2, 13-3, and 13-4 depict historical occurrences of thunderstorm wind events for the Aransas County planning area according to the NCEI database.

Since 1956, 57 thunderstorm wind events are known to have occurred in the Aransas County planning area. Table 13-3 presents information on known historical events impacting the Aransas County planning area, including any reported damages, injuries, or fatalities. The strongest event reported in the planning area occurred on August 10, 1980, with reported wind speeds of 95 knots, or 110 mph.

The Planning Team reported that a common impact of thunderstorm wind events in the planning area is grass fires resulting from arching electrical wires being blown by strong winds and sparking. In the City of Rockport, the Planning Team estimated four fires per year which result in property loss are caused by thunderstorm winds as well as lightning.

Historical thunderstorm wind event data for Rockport-Fulton ISD and the Aransas County Navigation District are provided within the Aransas County events or the participating jurisdictions in which the ISD or Navigation District resides. In the NCEI database, these entities do not have events reported separate and apart from the reported county and jurisdiction events. The Aransas County Navigation District reported previous impacts from thunderstorm winds such as water vessels breaking away from docks or mooring; danger to tenants; and damages to equipment in the harbors. District staff patrol harbor facilities during thunderstorm wind events, potentially exposing them to increased risk during these events.³ Rockport-Fulton ISD did not report any additional thunderstorm wind events or damages that were not captured in the NCEI data.

It is important to note that high wind events associated with other hazards, such as tornadoes, are not accounted for in this section. Property damage estimates are not always available. Where an estimate has been provided in a table for losses, the dollar amounts have been modified for inflation to indicate the damage in 2025 dollars.

Table 13-2. Historical Thunderstorm Wind Speeds, 1956 – 2024

MAXIMUM WIND SPEED RECORDED (knots)	NUMBER OF REPORTED EVENTS
0-30	0
31-40	2
41-50	2
51-60	33
61-70	13
71-80	1
81-90	0
91-100+	1
Unknown	5

³ Estimated damages for these events were not available.

SECTION 13: THUNDERSTORM WIND

Table 13-3. Historical Thunderstorm Wind Events, 1956 – 2024⁴

JURISDICTION	DATE	MAGNITUDE (knots)	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Aransas County	8/20/1956	70	0	0	\$0	\$0
Aransas County	5/31/1964	-	0	0	\$0	\$0
Aransas County	5/10/1968	60	0	0	\$0	\$0
Aransas County	5/11/1968	61	0	0	\$0	\$0
Aransas County	11/26/1969	67	0	0	\$0	\$0
Aransas County	9/1/1970	57	0	0	\$0	\$0
Aransas County	3/15/1974	57	0	0	\$0	\$0
Aransas County	12/24/1975	56	0	0	\$0	\$0
Aransas County	5/13/1980	-	0	0	\$0	\$0
Aransas County	8/10/1980	95	0	0	\$0	\$0
Aransas County	10/31/1981	60	0	0	\$0	\$0
Aransas County	3/23/1983	57	0	0	\$0	\$0
City of Rockport	5/20/1985	61	0	0	\$0	\$0
City of Rockport	5/20/1985	-	0	0	\$0	\$0
City of Rockport	5/17/1986	-	0	0	\$0	\$0
City of Rockport	8/21/1986	56	0	0	\$0	\$0
City of Rockport	8/21/1986	56	0	0	\$0	\$0
Aransas County	6/29/1991	57	0	0	\$11,700	\$0
Aransas County	11/24/1996	60	0	0	\$0	\$0
City of Rockport	1/31/1998	60	0	0	\$0	\$0
City of Rockport	10/6/1998	60	0	0	\$0	\$0
Aransas County	5/12/1999	50	0	0	\$0	\$0
City of Rockport	5/18/1999	65	0	0	\$0	\$0
City of Rockport	5/18/1999	55	0	0	\$0	\$0
Aransas County	3/14/2000	65	0	0	\$9,300	\$0

⁴ Magnitude is listed when available. Damage values are in 2025 dollars.

SECTION 13: THUNDERSTORM WIND

JURISDICTION	DATE	MAGNITUDE (knots)	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
City of Rockport	3/14/2000	57	0	0	\$0	\$0
Aransas County	9/19/2002	51	0	0	\$0	\$0
City of Rockport	10/28/2002	-	0	0	\$0	\$0
Aransas County	3/26/2003	66	0	0	\$0	\$0
City of Rockport	6/13/2003	52	0	0	\$0	\$0
Aransas County	4/5/2004	40	0	0	\$0	\$0
City of Rockport	5/8/2005	52	0	0	\$0	\$0
Aransas County	5/30/2006	53	0	0	\$78,500	\$0
City of Rockport	3/13/2007	52	0	0	\$15,500	\$0
City of Rockport	10/25/2009	61	0	0	\$29,400	\$0
City of Rockport	6/2/2010	61	0	0	\$29,200	\$0
Aransas County	6/2/2010	65	0	0	\$36,400	\$0
City of Rockport	1/9/2011	78	0	0	\$577,000	\$0
Aransas County	5/10/2012	70	0	0	\$345,600	\$0
Town of Fulton	5/10/2012	70	0	0	\$138,300	\$0
City of Rockport	5/10/2012	70	0	0	\$0	\$0
Aransas County	12/4/2012	58	0	0	\$0	\$0
City of Rockport	4/17/2015	56	0	0	\$134,300	\$0
Aransas County	4/17/2015	56	0	0	\$0	\$0
City of Rockport	5/24/2015	52	0	0	\$6,700	\$0
Aransas County	5/24/2015	52	0	0	\$0	\$0
City of Rockport	3/9/2016	52	0	0	\$6,700	\$0
Aransas County	3/19/2016	52	0	0	\$0	\$0
City of Rockport	6/2/2016	56	0	0	\$19,800	\$0
City of Rockport	2/14/2017	48	0	0	\$9,200	\$0
City of Rockport	5/23/2017	51	0	0	\$0	\$0
Town of Fulton	6/4/2017	56	0	0	\$6,500	\$0
City of Rockport	4/14/2018	54	0	0	\$0	\$0

SECTION 13: THUNDERSTORM WIND

JURISDICTION	DATE	MAGNITUDE (knots)	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Aransas County	4/29/2020	51	0	0	\$0	\$0
City of Rockport	11/3/2021	56	0	0	\$0	\$0
Aransas County	5/25/2022	51	0	0	\$0	\$0
Aransas County	11/1/2022	40	0	0	\$5,400	\$0
TOTALS		(MAX EXTENT)	0	0	\$1,459,500	\$0

Table 13-4. Summary of Historical Events by Jurisdiction, 1956 – 2024⁵

JURISDICTION	NUMBER OF EVENTS	MAGNITUDE (knots)	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Aransas County	29	95	0	0	\$486,900	\$0
Town of Fulton	2	70	0	0	\$144,800	\$0
City of Rockport	26	78	0	0	\$827,800	\$0
Rockport-Fulton ISD	0	-	-	-	-	-
Aransas County Navigation District	0	-	-	-	-	-
TOTALS	57	(MAX EXTENT)	0	0	\$1,459,500	

Based on the list of historical thunderstorm wind events for the Aransas County planning area, 8 events have occurred since the 2020 Plan.

SIGNIFICANT EVENTS

January 9, 2011 – City of Rockport

A line of severe thunderstorms with damaging straight-line winds moved over the Coastal Bend region in the afternoon, including the Aransas County planning area. Windspeeds during this storm were estimated between 70 and 90 mph. Across the region, approximately 30,000 customers lost power as a result of these storms. Within the City of Rockport, numerous homes reported roof damage including a wooden roof and awning being completely blown off one home. One snapped tree limb was blown through the wall of a house. Widespread tree and roof damage was observed along a two-mile path from Live Oak Elementary School to the intersection of Nopal and Austin Streets. In the Aransas County planning area, property damages from this storm were estimated at \$577,000 (2025 dollars).

May 10, 2012 – Aransas County and Town of Fulton

A strongly unstable air mass developed over South Texas in advance of a stalled frontal boundary over south-central Texas on May 10th. As a strong upper-level low pressure system over northern

⁵ Participating jurisdictions with no reported events show a “-” in table columns where damages, deaths or injuries would be otherwise reported.

SECTION 13: THUNDERSTORM WIND

Mexico approached the region providing strong shear in the atmosphere, an outbreak of supercell thunderstorms occurred across South Texas. These storms moved into the Coastal Bend region late in the evening, bringing wind gusts estimated up to 80 mph to Aransas County. In the Town of Fulton, straight-line winds impacted a narrow corridor between Farm to Market Road 3036 and West Mesquite Street. These winds caused one mobile home's roof to be blown off, a metal storage building partially collapsing, and widespread tree damage. On Belaire Drive in Holiday Beach, straight-line winds caused extensive damage to several homes. Across the planning area, property damages were estimated at \$483,900 (2025 dollars).

April 17, 2015 – City of Rockport

Scattered thunderstorms across the region developed into several supercell thunderstorms, bringing damaging winds up to approximately 65 mph to Aransas County late in the evening. Southwest of the City of Rockport, these winds blew down multiple power poles causing an estimated \$134,300 (2025 dollars) in damages.

PROBABILITY OF FUTURE EVENTS

Most thunderstorm winds occur during the spring and fall seasons and during the months of March, April, May, and September. Based on available records of historic events, there have been a total of 57 events in a 68-year reporting period, which provides an estimated annual frequency of approximately one event every year. Even though the intensity of thunderstorm wind events is not always damaging for the Aransas County planning area, the frequency of occurrence for a thunderstorm wind event is “Highly Likely”. This means that an event is probable within the next year for the Aransas County planning area, including all participating jurisdictions, the ISD and special district.

CLIMATE CHANGE CONSIDERATIONS

The impacts on the frequency and severity of severe thunderstorm wind events due to climate change are unclear. According to the Texas A&M 2021 Climate Report Update, changes in severe thunderstorm reports over time have been more closely linked to changes in population than changes in the hazard event. Currently there is low confidence of an ongoing trend in the overall frequency and severity of thunderstorm events, due to the lack of climate data records for severe thunderstorms. Based on climate models that are available, the environmental conditions needed for severe thunderstorms are estimated to become more likely, resulting in an overall increase in the number of days capable of producing a severe thunderstorm event.⁶

VULNERABILITY AND IMPACT

Vulnerability is difficult to evaluate since thunderstorm wind events can occur at different strength levels, in random locations, and can create relatively narrow paths of destruction. Due to the randomness of these events, all existing and future structures, and facilities within the Aransas County planning area, could potentially be impacted and remain vulnerable to possible injury and property loss from strong winds.

⁶ Assessment of Historic and Future Trends of Extreme Weather in Texas, 1900-2036, Texas A&M University Office of the Texas State Climatologist, 2021 Update.

SECTION 13: THUNDERSTORM WIND

Trees, power lines and poles, signage, manufactured housing, radio towers, concrete block walls, storage barns, windows, garbage receptacles, brick facades, and vehicles, unless reinforced, are vulnerable to thunderstorm wind events. More severe damage involves windborne debris; in some instances, patio furniture and other lawn items have been reported to have been blown around by wind and, very commonly, debris from damaged structures in turn have caused damage to other buildings not directly impacted by the event. In more severe instances, roofs have been reported as having been torn off of buildings. The portable buildings typically used at schools and construction sites would be more vulnerable to thunderstorm wind events than typical site-built structures and could potentially pose a greater risk for wind-blown debris.

According to the American Community Survey (ACS) five-year estimates for 2023, a total of 2,576 manufactured homes are located in the Aransas County planning area (16 percent of total housing stock). In addition, 28 percent (4,467 structures) of the housing units were built before 1980. These structures would typically be built to lower or less stringent construction standards than newer construction and may be more susceptible to damage during significant wind events.

Table 13-5. Structures at Greater Risk by Participating Jurisdiction

JURISDICTION	SFR STRUCTURES BUILT BEFORE 1980	MANUFACTURED HOMES
Aransas County	4,467	2,576
Town of Fulton	235	294
City of Rockport	2,324	444
Rockport-Fulton ISD	30	7
Aransas County Navigation District	6	0

While all citizens are vulnerable to the impacts of thunderstorm wind, forced relocation and disaster recovery disproportionately impacts low-income residents who lack the financial means to travel, afford a long-term stay away from home, and to rebuild or repair their homes. An estimated 19 percent of the planning area population live below the poverty level (Table 13-6). While warning times for these types of hazard events should be substantial enough for these individuals to seek shelter, the elderly, children, and people with a disability may have trouble taking shelter due to mobility issues or a lack of awareness, making them more susceptible to injury or harm. In addition, people who speak a language other than English may face increased vulnerability due to language barriers that limit their access to important information such as weather-related warnings and instructions regarding safety measures.

SECTION 13: THUNDERSTORM WIND

Table 13-6. Populations at Greatest Risk by Jurisdiction⁷

JURISDICTION	POPULATION				
	65 AND OLDER	UNDER 5	WITH A DISABILITY	BELOW POVERTY LEVEL	LIMITED ENGLISH SPEAKING
Aransas County	6,844	1,079	4,402	4,572	513
Town of Fulton	534	0	408	100	0
City of Rockport	3,018	527	1,681	1,630	240

The Rockport-Fulton ISD and the Aransas County Navigation District also have vulnerable populations based on age or work location, such as employees that work outdoors and may be subject to severe weather conditions, or children under 5 who attend school at the participating ISD (Table 13-7).

Table 13-7. Populations at Greater Risk by Participating Special District

SPECIAL DISTRICT	YOUTH (under 5)	EMPLOYEES OPERATING OUTDOORS
Rockport-Fulton ISD	130	100
Aransas County Navigation District	-	26

The Aransas County Planning Team identified the following critical facilities (Table 13-8) as assets that are considered the most important to the planning area and are susceptible to a range of impacts caused by thunderstorm wind events. The critical infrastructure with the greatest vulnerability to thunderstorms are power and communications facilities. Failures of these facilities can result in a loss of service and cascading impacts such as posing enormous risk to individuals dependent on electricity as a medical necessity. For a comprehensive list of critical facilities by participating jurisdiction, please see Appendix D.

Table 13-8. Critical Facilities Vulnerable to Thunderstorm Wind Event

CRITICAL FACILITY TYPE	POTENTIAL IMPACTS
Emergency Response Services (EOC, Fire, Police, EMS), Hospitals and Medical Centers	- Emergency operations and services may be significantly impacted due to damaged facilities and/or loss of communications. - Emergency vehicles can be damaged by falling trees or flying debris. - Power outages could disrupt communications, delaying emergency response times. - Critical staff may be injured or otherwise unable to report for duty, limiting response capabilities. - Debris/downed trees can impede emergency response vehicle access to areas.

⁷ US Census Bureau 2023 data for Aransas County.

SECTION 13: THUNDERSTORM WIND

CRITICAL FACILITY TYPE	POTENTIAL IMPACTS
	- Increased number of structure fires due to gas line ruptures and downed power lines, further straining the capacity and resources of emergency personnel. - First responders are exposed to downed power lines, unstable and unusual debris, hazardous materials, and generally unsafe conditions.
Airport, Academic Institutions, Animal Shelter, Evacuation Centers & Shelters, Governmental Facilities, Residential/ Assisted Living Facilities	- Structures can be damaged by falling trees or flying debris. - Power outages could disrupt critical care. - Backup power sources could be damaged. - Critical staff may be injured or otherwise unable to report for duty, limiting response capabilities. - Evacuations may be necessary due to extended power outages, gas line ruptures, or structural damage to facilities. - Power outages and infrastructure damage may prevent larger airports from acting as temporary command centers for logistics, communications, and emergency operations. - Temporary break in operations may significantly inhibit post event evacuations. - Damaged or destroyed highway infrastructure may substantially increase the need for airport operations.
Commercial Supplier (food, fuel, etc.)	- Facilities, infrastructure, or critical equipment including communications may be damaged, destroyed or otherwise inoperable. - Essential supplies like medicines, water, food, and equipment deliveries may be delayed. - Economic disruption due to power outages and fires negatively impact airport services as well as area businesses reliant on airport operations.
Utility Services and Infrastructure (electric, water, wastewater, communications)	- Emergency operations and services may be significantly impacted due to damaged facilities and/or loss of communications. - Emergency vehicles can be damaged by falling trees or flying debris. - Power outages could disrupt communications, delaying emergency response times. - Critical staff may be injured or otherwise unable to report for duty, limiting response capabilities. - Debris/downed trees can impede emergency response vehicle access to areas. - Increased number of structure fires due to gas line ruptures and downed power lines, further straining the capacity and resources of emergency personnel.

A thunderstorm wind event can also result in traffic disruptions, injuries and in rare cases, fatalities. The impact of thunderstorm winds experienced in the Aransas County planning area have not resulted in any reported injuries or fatalities. Overall, in the past 68 years there has been an estimated total of \$1,459,500 in damages (2025 dollars) in the Aransas County planning area due to thunderstorm wind events. The estimated average annual loss from thunderstorm wind

SECTION 13: THUNDERSTORM WIND

events is \$21,500. Based on historic loss and damages, the impact of thunderstorm winds on the Aransas County planning area, including all participating jurisdictions, the ISD and special district, can be considered “Limited” severity of impact, meaning minor quality of life lost, critical facilities and services shut down for 24 hours or less, and less than 10 percent of property destroyed or with major damage.

Table 13-9. Estimated Annualized Losses by Participating Jurisdiction

JURISDICTION	TOTAL PROPERTY & CROP LOSS	AVERAGE ANNUAL LOSS ESTIMATES
Aransas County	\$486,900	\$7,200
Town of Fulton	\$144,800	\$2,100
City of Rockport	\$827,800	\$12,200
Rockport-Fulton ISD	\$0	\$0
Aransas County Navigation District	\$0	\$0
TOTALS	\$1,459,500	\$21,500

ASSESSMENT OF IMPACTS

Thunderstorm wind events have the potential to pose a significant risk to people and can create dangerous and difficult situations for public health and safety officials. Thunderstorm wind conditions can be frequently associated with a variety of impacts, including:

- Individuals exposed to the storm can be struck by flying debris, falling limbs, or downed trees causing serious injury or death.
- Structures can be damaged or crushed by falling trees, which can result in physical harm to the occupants.
- Significant debris and downed trees can result in emergency response vehicles being unable to access areas of the community.
- Downed power lines may result in roadways being unsafe for use, which may prevent first responders from answering calls for assistance or rescue.
- Small craft warnings may be issued by the U.S. Coast Guard, warning mariners of unsafe sea conditions and advising them to moor their vessels and stay in port.
- Thunderstorm wind events often result in widespread power outages increasing the risk to more vulnerable portions of the population who rely on power for health and/or life safety.
- Extended power outage often results in an increase in structure fires and carbon monoxide poisoning, as individuals attempt to cook or heat their homes with alternate, unsafe cooking or heating devices, such as grills.
- Critical staff may be unable to report for duty, limiting response capabilities.
- Private sector entities that residents rely on, such as utility providers, financial institutions, and medical care providers may not be fully operational and may require assistance from neighboring communities until full services can be restored.

SECTION 13: THUNDERSTORM WIND

- Economic disruption negatively impacts the programs and services provided by the community due to short- and long-term loss in revenue.
- Some businesses not directly damaged by thunderstorm wind events may be negatively impacted while roads are cleared and utilities are being restored, further slowing economic recovery.
- Older structures, specifically those built before 1980 (28 percent of the planning area), were built to less stringent building codes may suffer greater damage as they are typically more vulnerable to thunderstorm winds.
- Recreational areas such as community parks and green spaces may be damaged or inaccessible due to downed trees or debris, causing temporary impacts to associated businesses in the area.
- Historical sites and properties are placed at a higher risk of impact due to materials used and the inability to change properties due to their historic status. Seven historical sites are listed on the National Register of Historic Places for Aransas County.

The economic and financial impacts of thunderstorm winds on the area will depend entirely on the scale of the event, what is damaged, and how quickly repairs to critical components of the economy can be implemented. The level of preparedness and pre-event planning done by the community, local businesses, and citizens will also contribute to the overall economic and financial conditions in the aftermath of any thunderstorm wind event.



SECTION 14

TORNADO

SECTION 14: TORNADO

Hazard Description	1
Location	1
Extent	2
Historical Occurrences	4
Significant Events	7
Probability of Future Events	8
Climate Change Considerations	8
Vulnerability and Impact	8
Assessment of Impacts	12

HAZARD DESCRIPTION



Tornadoes are among the most violent storms on the planet. A tornado is a rapidly rotating column of air extending between, and in contact with, a cloud and the surface of the earth. The most violent tornadoes are capable of tremendous destruction and have wind speeds of 250 miles per hour (mph) or more. In extreme cases, winds may approach 300 mph. Damage paths can be in excess of one mile wide and 50 miles long.

The most powerful tornadoes are produced by “Supercell Thunderstorms.” These thunderstorms are created when horizontal wind shears (winds moving in different directions at different altitudes) begin to rotate the storm. This horizontal rotation can be tilted vertically by violent updrafts, and the rotation radius can shrink, forming a vertical column of very quickly swirling air. This rotating air can eventually reach the ground, forming a tornado.

Table 14-1. Variations among Tornadoes

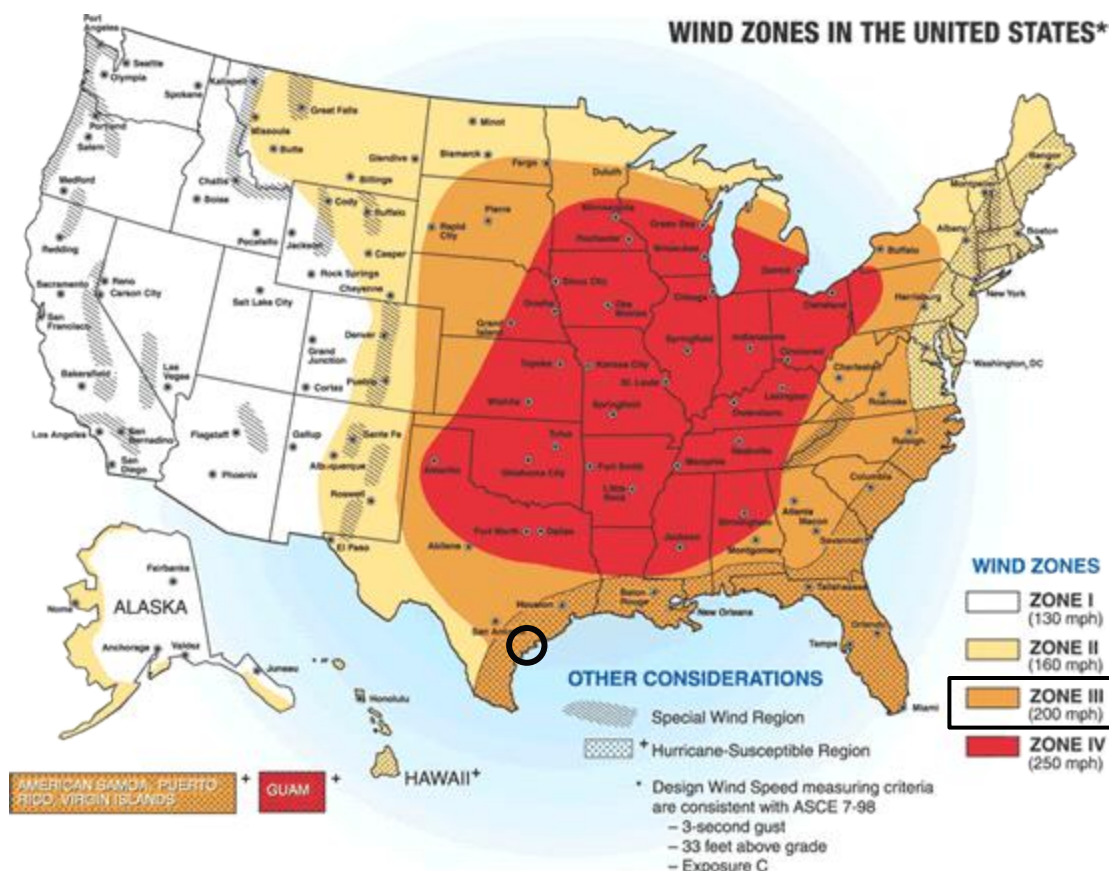
WEAK TORNADOES	STRONG TORNADOES	VIOLENT TORNADOES
69% of all tornadoes - Less than 5% of tornado deaths - Lifetime 1-10+ minutes - Winds less than 110 mph	29% of all tornadoes - Nearly 30% of all tornado deaths - May last 20 minutes or longer - Winds 110–205 mph	2% of all tornadoes 70% of all tornado deaths - Lifetime can exceed one hour - Winds greater than 205 mph

LOCATION

Tornadoes do not have any specific geographic boundary and can occur throughout the county uniformly. It is assumed that the entire Aransas County planning area is uniformly exposed to tornado activity. The entire Aransas County planning area is in Wind Zone III (Figure 14-1), where tornado winds can be as high as 200 mph.

SECTION 14: TORNADO

Figure 14-1. FEMA Wind Zones in the United States¹



EXTENT

The destruction caused by tornadoes ranges from light to inconceivable, depending on the intensity, size, and duration of the storm. Typically, tornadoes cause the greatest damage to structures of light construction, such as residential homes (particularly mobile homes).

Tornado magnitudes prior to 2007 were determined using the traditional version of the Fujita Scale, which estimated tornado wind speeds based on the damage caused by an event. Since February 2007, the Enhanced Fujita Scale has been utilized to classify tornadoes, which included improvements to the original scale. The original Fujita scale had limitations, such as a lack of damage indicators, no account for construction quality and variability, and no definitive correlation between damage and wind speed. These limitations led to some tornadoes being rated in an inconsistent manner and, in some cases, an overestimate of tornado wind speeds. The Enhanced Fujita scale retains the same basic design and six strength categories as the previous scale. The newer scale reflects more refined assessments of tornado damage surveys, standardization, and damage consideration to a wider range of structures. Table 14-2 includes both scales for reference when analyzing historical tornadoes since tornado events prior to 2007 will follow the original Fujita Scale.

¹ The Aransas County planning area is indicated by the circle.

SECTION 14: TORNADO

Table 14-2. The Fujita and Enhanced Fujita Tornado Scale²

Enhanced Fujita Scale				Fujita Scale			
Category	Wind Speed	Damage Level	Damage	Category	Wind Speed	Intensity	Damage
EF0	65-85 MPH	Gale	The environment sustained minor damage: tree branches are broken, some shallow-rooted trees are uprooted, and some chimneys are damaged.	F0	45-78 MPH	Gale	Some damage to chimneys; branches broken off trees; shallow-rooted trees pushed over; sign boards damaged.
EF1	86-110 MPH	Weak	The environment sustained moderate damage: mobile homes are tipped over, windows are broken, roof tiles may be blown off, and some tree trunks have snapped.	F1	79-117 MPH	Moderate	Peels surface off roofs; mobile homes pushed off foundations or overturned; moving autos blown off roads.
EF2	111-135 MPH	Strong	The environment sustained considerable damage: mobile homes are destroyed, roofs are damaged, debris flies in the air, and large trees are snapped or uprooted.	F2	118-161 MPH	Significant	Roofs torn off frame houses; mobile homes demolished; boxcars overturned; large trees snapped or uprooted; light-object missiles generated; cars lifted off ground.
EF3	136-165 MPH	Severe	The environment sustained severe damage: roofs and walls are ripped off buildings, small buildings are destroyed, and most trees are uprooted.	F3	162-209 MPH	Severe	Roofs and some walls torn off well-constructed houses; trains overturned; most trees in forest uprooted; heavy cars lifted off the ground and thrown.
EF4	166-200 MPH	Devastating	The environment sustained devastating damage: well-built homes are destroyed, buildings are lifted off their foundations, cars are blown away, and large debris flies in the air.	F4	210-261 MPH	Devastating	Well-constructed houses leveled; structures with weak foundations blown away some distance; cars thrown, and large missiles generated.
EF5	200+ MPH	Incredible	The environment sustained incredible damage: well-built homes are lifted from their foundations, reinforced concrete buildings are damaged, the bark is stripped from trees, and car-sized debris flies through the air.	F5	262-317 MPH	Incredible	Strong frame houses leveled off foundations and swept away; automobile-sized missiles fly through the air in excess of 100 meters (109 yds); trees debarked; incredible phenomena will occur.

² Source: <http://www.tornadoproject.com/fscale/fscale.htm>

SECTION 14: TORNADO

Both the Fujita Scale and Enhanced Fujita Scale should be referenced in reviewing previous occurrences since tornado events that occurred before 2007 will follow the original Fujita Scale. The greatest magnitude reported within the planning area is F3, a severe tornado in the original Fujita Scale. When converted to the Enhanced Fujita Scale, an F3 could equate to a high-end EF3, EF4 (devastating), or low-end EF5 (incredible) depending on exact windspeed.

Based on the planning area's location in Wind Zone III, the planning area, including all participating jurisdictions, the ISD and special district, has the potential to experience anywhere from an EF0 to an EF5 depending on the wind speed. Previous tornado events in the Aransas County planning area (converted from the Fujita Scale) have been between EF0 and EF5 (Figure 14-2).

HISTORICAL OCCURRENCES

The National Centers for Environmental Information (NCEI) Storm Events database is a national data source organized under the National Oceanic and Atmospheric Administration (NOAA). The NCEI is the largest archive available for historic storm events data; however, it is important to note that only incidents recorded in the NCEI have been factored into this risk assessment unless otherwise noted. It is likely that a number of occurrences have gone unreported over time.

Figure 14-2 identifies the locations of previous occurrences in the Aransas County planning area from 1953 through 2024. A total of 22 events have been recorded by NOAA's Storm Prediction Center and the NCEI Storm Events databases for the Aransas County planning area. The strongest event reported in the planning area was an F3 tornado on September 20, 1967, which caused 3 injuries and an estimated \$2,363,700 (2025 dollars) in property damage.

Historical tornado event data for Rockport-Fulton ISD and the Aransas County Navigation District are provided within the Aransas County events or the participating jurisdictions in which the ISD or Navigation District resides. In the NCEI database, these entities do not have events reported separate and apart from the reported county and jurisdiction events. The Aransas County Navigation District reported some damages during Hurricane Harvey were suspected to have been caused by a tornado in that storm system, but damages were ultimately attributed to the hurricane. Rockport-Fulton ISD did not report any additional tornado events or damages that were not captured in the NCEI data.

SECTION 14: TORNADO

Figure 14-2. Spatial Historical Tornado Events, 1953 – 2024³

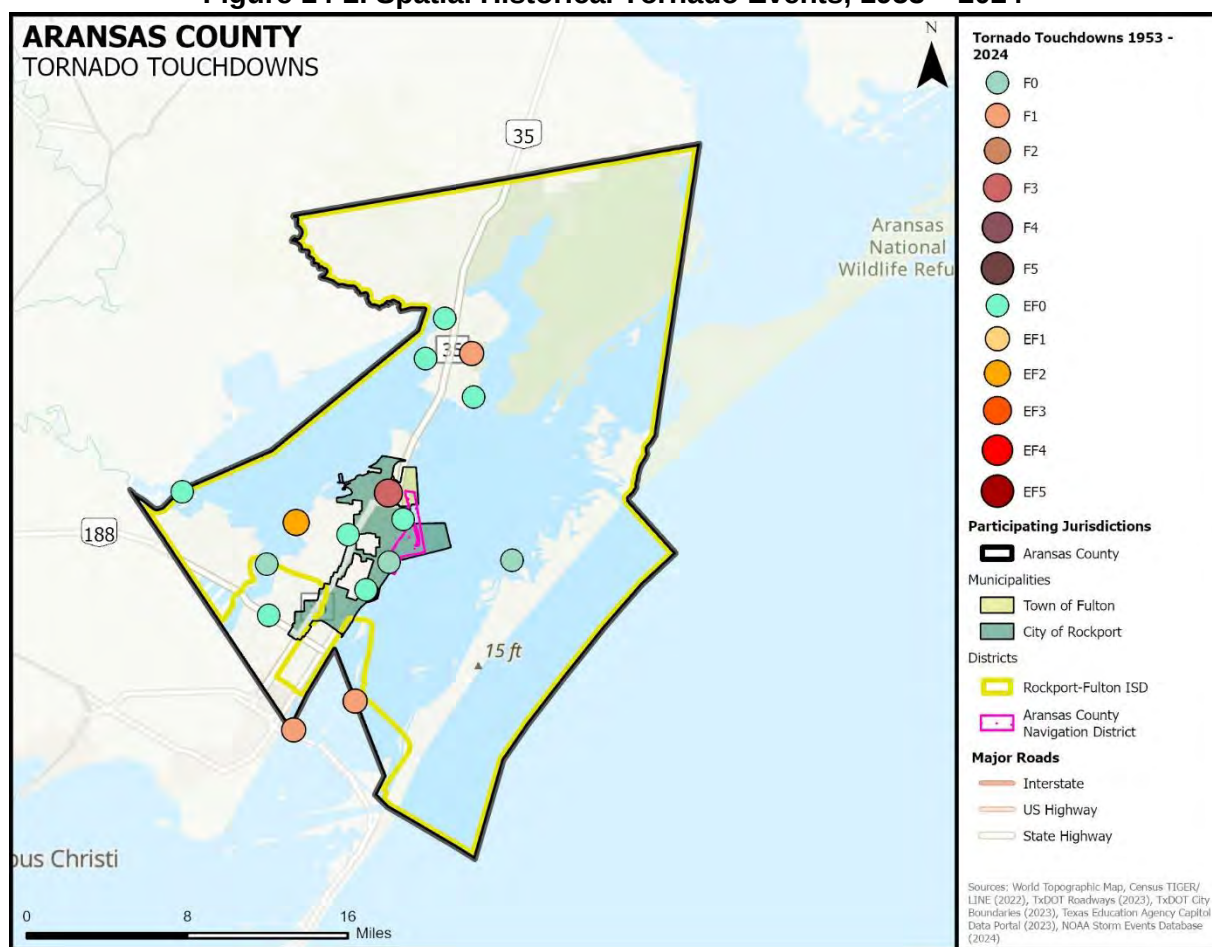


Table 14-3. Historical Tornado Events, 1953 – 2024⁴

JURISDICTION	DATE	MAGNITUDE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Aransas County	10/23/1953	F2	0	0	\$294,100	\$0
Town of Fulton	9/20/1967	F3	0	3	\$2,363,700	\$0
Aransas County	5/11/1968	F1	0	0	\$23,100	\$0
Aransas County	5/11/1968	F1	0	0	\$46,000	\$0
Aransas County	4/15/1973	F0	0	0	\$0	\$0
Aransas County	6/13/1973	F1	0	0	\$18,000	\$0
Aransas County	9/11/1978	F0	0	0	\$0	\$0
Aransas County	8/29/1981	F1	0	0	\$86,000	\$0

³ Source: NOAA Storm Prediction Center

⁴ Magnitude is listed when available. Damage values are in 2025 dollars.

SECTION 14: TORNADO

JURISDICTION	DATE	MAGNITUDE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
City of Rockport	6/11/1993	F0	0	0	\$110,000	\$0
City of Rockport	8/22/1999	F0	0	0	\$0	\$0
City of Rockport	9/11/2007	EF0	0	0	\$0	\$0
Aransas County	9/29/2007	EF1	0	1	\$380,900	\$0
Aransas County	7/23/2008	EF0	0	0	\$14,400	\$0
Aransas County	8/30/2009	EF0	0	0	\$0	\$0
City of Rockport	8/30/2009	EF0	0	0	\$14,800	\$0
City of Rockport	6/2/2010	EF2	0	0	\$364,400	\$0
Aransas County	6/30/2010	EF0	0	0	\$0	\$0
City of Rockport	7/1/2010	EF0	0	0	\$7,300	\$0
Aransas County	5/10/2012	EF0	0	0	\$2,800	\$0
Aransas County	3/29/2018	EF0	0	0	\$63,700	\$0
City of Rockport	6/19/2024	EF0	0	0	\$5,100	\$5,100
Town of Fulton	6/19/2024	EF0	0	0	\$25,300	\$3,100
TOTALS		(MAX EXTENT)	0	4	\$3,819,600	\$8,200

Table 14-4. Summary of Historical Tornado Events, 1953 – 2024⁵

JURISDICTION	NUMBER OF EVENTS	MAX MAGNITUDE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Aransas County	13	F2	0	1	\$929,000	\$0
Town of Fulton	2	F3	0	3	\$2,389,000	\$3,100
City of Rockport	7	EF2	0	0	\$501,600	\$5,100
Rockport-Fulton ISD	0	-	-	-	-	-
Aransas County Navigation District	0	-	-	-	-	-
TOTALS	22	(MAX EXTENT)	0	3	\$3,827,800	

⁵ Participating jurisdictions with no reported events show a “-” in table columns where damages, deaths or injuries would be otherwise reported.

SECTION 14: TORNADO

Based on the list of historical tornado events for the Aransas County planning area, there have been three recorded events since the 2020 Plan.

SIGNIFICANT EVENTS

September 20, 1967 – Town of Fulton

When Hurricane Beulah made landfall on September 20, one of the primary hazards associated with the storm system was the unprecedented number of tornadoes. At the time, Beulah set the record for the number of tornadoes associated with a tropical storm, with an estimated 115 tornadoes spawned from the hurricane. One of these occurred was an F3 tornado, the strongest reported tornado event in the planning area, which impacted the Town of Fulton. The tornado was estimated at 100 yards wide and left a damage path approximately 1.5 miles in length. Reports state the tornado caused three injuries and \$2,363,700 (2025 dollars) in property damage.

September 29, 2007 – Aransas County

Hurricane Lorenzo made landfall across the east-central coast of Mexico early on September 28 and dissipated rapidly that day. However, a surface trough was left behind that extended northeast across the northwest Gulf of Mexico, eventually leading to numerous showers and thunderstorms across the Coastal Bend on September 29th. These bands of storms generated several waterspouts, one of which moved inland as an EF1 tornado at the edge of the planning area near the City of Aransas Pass. Damage included several uprooted trees, large tree limbs snapped, terracotta roofing being blown off one home, roof damage to numerous homes, numerous damaged vehicles, and extensive damage to a brick façade at the Dollar General Store. The roof and steel awning at the Fresenius Medical Care Center was also damaged. No fatalities were reported, though one injury was reported from flying glass. Property damage was estimated at \$380,900 (2025 dollars).

August 25 to September 1, 2017 – Hurricane Harvey

Hurricane Harvey, one of the costliest and most catastrophic tropical storms in United States history, spawned 52 tornadoes across six states over the course of the storm. Of these, 22 tornadoes were in Texas, occurring between August 25th, the day Harvey made landfall in the Aransas County planning area, and August 27th. All tornadoes occurring in Texas ranged from EF0 to EF1 magnitude, though several EF2s occurred in Alabama and Louisiana.

The closest reported tornado to the planning area during Hurricane Harvey occurred in neighboring Calhoun County, this being an EF0 which destroyed a shed and carport and resulted in \$13,000 (2025 dollars). In the NCEI database, no tornadoes were reported in Aransas County during Hurricane Harvey. However, the eyewall of the storm, a ring of intense thunderstorms and powerful winds which encircle the eye of the hurricane, caused devastating wind impacts in the planning area which resemble tornadic activity when observed from the ground. These impacts included mesovortices, small-scale rotational storm features which bring immensely powerful winds, and microbursts, localized, intense downdrafts of air that spread outward and cause significant wind damage.

The large number of tornadoes spawned from Hurricane Harvey, as well as Aransas County's coastal location which was impacted by Harvey at the storm's strongest point, indicate that the planning area is at significant risk from future tornadoes resulting from tropical storms and hurricanes.

SECTION 14: TORNADO

June 19, 2024 – City of Rockport and Town of Fulton

Two brief EF0 tornadoes were produced from one parent circulation when a waterspout, part of the Tropical Storm Alberto system, came ashore near the City of Rockport. The initial damage was confined to some minor tree and roof damage, before the tornado lifted and eventually reformed near FM 1781. Along its second damage path, the tornado destroyed multiple carports and two sheds, as well as causing additional tree damage. Across these two damage paths, total property damage was estimated at \$30,400 (2025 dollars), with an additional \$8,200 (2025 dollars) in damages to trees and crops.

PROBABILITY OF FUTURE EVENTS

Tornadoes can occur at any time of year and at any time of day, but they are typically more common in the spring months during the late afternoon and evening hours. A smaller, high frequency period can emerge in the fall during the brief transition between the warm and cold seasons. With 22 historical events over a 71-year reporting period, the Aransas County planning area, including all participating jurisdictions, the ISD and special district, can anticipate a tornado touchdown approximately once every three to four years. This frequency supports a “Likely” probability of future events for the Aransas County planning area, meaning an event is probable within the next three years.

CLIMATE CHANGE CONSIDERATIONS

The impacts on the frequency and severity of tornado events due to climate change are unclear. According to the Texas A&M 2021 Climate Report Update, the most robust trend in tornado activity in Texas is a likelihood for a greater number of tornadoes in large outbreaks, although the factors contributing to this trend are not expected to continue. Tornadoes spawn from less than 10 percent of thunderstorms, usually supercell thunderstorms that are in a wind shear environment that promotes rotation.⁶ Based on climate models that are available, the environmental conditions needed for severe thunderstorm events are estimated to become more likely, resulting in an overall increase in the number of days capable of producing a severe thunderstorm event and potential tornadoes to develop from these storms.⁷

VULNERABILITY AND IMPACT

Because tornadoes often cross jurisdictional boundaries, all existing and future buildings, facilities, and populations in the entire Aransas County planning area is considered to be exposed to this hazard and could potentially be impacted. The damage caused by a tornado is typically a result of high wind velocity, wind-blown debris, lightning, and large hail.

The average tornado moves from southwest to northeast, but tornadoes have been known to move in any direction. Consequently, vulnerability of humans and property is difficult to evaluate since tornadoes form at different strengths, in random locations, and create relatively narrow

⁶ Treisman, Rachel. *The exact link between tornadoes and climate change is hard to draw. Here's why*. NPR. December 13, 2021. <https://www.npr.org/2021/12/13/1063676832/the-exact-link-between-tornadoes-and-climate-change-is-hard-to-draw-heres-why>

⁷ Assessment of Historic and Future Trends of Extreme Weather in Texas, 1900-2036, Texas A&M University Office of the Texas State Climatologist, 2021 update.

SECTION 14: TORNADO

paths of destruction. Although tornadoes strike at random, making all buildings vulnerable, three types of structures are more likely to suffer damage:

- Manufactured Homes;
- Homes built of peer and beam construction (more susceptible to lift); and
- Buildings with large spans, such as shopping malls, gymnasiums, and factories.

Tornadoes can cause a significant threat to people as they could be struck by flying debris, falling trees or branches, utility lines, and poles. Blocked roads could prevent first responders from responding to calls. Tornadoes commonly cause power outages which could cause health and safety risks to residents and visitors, as well as to patients in hospitals.

The Aransas County planning area features mobile or manufactured home parks throughout the planning area. These parks are typically more vulnerable to tornado events than typical site-built structures. In addition, manufactured homes are located sporadically throughout the planning area, which would also be more vulnerable. The U.S. Census data indicates a total of 2,576 (16 percent of total housing stock) manufactured homes located in the Aransas County planning area. In addition, 28 percent (4,467 structures) of the housing structures in the Aransas County planning area were built before 1980. These structures would typically be built to lower or less stringent construction standards than newer construction and may be more susceptible to damage during significant tornado events (Table 14-5).

Table 14-5. Structures at Greater Risk by Participating Jurisdiction

JURISDICTION	SFR STRUCTURES BUILT BEFORE 1980	MANUFACTURED HOMES
Aransas County	4,467	2,576
Town of Fulton	235	294
City of Rockport	2,324	444
Rockport-Fulton ISD	30	7
Aransas County Navigation District	6	0

While all citizens are at risk to the impacts of a tornado, forced relocation and disaster recovery disproportionately impacts low-income residents who lack the financial means to travel, afford a long-term stay away from home, and to rebuild or repair their homes. The elderly, children, and people with a disability may have trouble taking shelter due to mobility issues or a lack of awareness, making them more susceptible to injury or harm. In addition, people who speak a language other than English may face increased vulnerability due to language barriers that limit their access to important information such as weather-related warnings and instructions regarding safety measures.

The population over 65 in the Aransas County planning area is estimated at 28 percent of the total population and children under the age of 5 are estimated at 4 percent. The population with a disability is estimated at 18 percent of the total population. An estimated 19 percent of the

SECTION 14: TORNADO

planning area population live below the poverty level and 2 percent of the populations speak English 'less than very well' (Table 14-6).

Table 14-6. Populations at Greater Risk by Participating Jurisdiction⁸

JURISDICTION	POPULATION				
	65 AND OLDER	UNDER 5	WITH A DISABILITY	BELOW POVERTY LEVEL	LIMITED ENGLISH SPEAKING
Aransas County	6,844	1,079	4,402	4,572	513
Town of Fulton	534	0	408	100	0
City of Rockport	3,018	527	1,681	1,630	240

The Rockport-Fulton ISD and the Aransas County Navigation District also have vulnerable populations based on age or work location, such as employees that work outdoors and may be subject to severe weather conditions, or children under 5 who attend school at the participating ISD (Table 14-7).

Table 14-7. Populations at Greater Risk by Participating Special District

SPECIAL DISTRICT	YOUTH (under 5)	EMPLOYEES OPERATING OUTDOORS
Rockport-Fulton ISD	130	100
Aransas County Navigation District	-	26

The Aransas County Planning Team identified the following critical facilities as assets that are considered the most important to the planning area and are susceptible to a range of impacts caused by tornado events (Table 14-8). The critical infrastructure with the greatest vulnerability to tornadoes are power and communications facilities. Failures of these facilities can result in a loss of service and cascading impacts such as posing enormous risk to individuals dependent on electricity as a medical necessity. For a comprehensive list of critical facilities by participating jurisdiction, please see Appendix D.

Table 14-8. Critical Facilities Vulnerable to Tornado Event

CRITICAL FACILITIES	POTENTIAL IMPACTS
Emergency Response Services (EOC, Fire, Police, EMS), Hospitals and Medical Centers	- Emergency operations and services may be significantly impacted due to damaged facilities and/or loss of communications. - Emergency vehicles can be damaged by falling trees or flying debris. - Power outages could disrupt communications, delaying emergency response times.

⁸ U.S. Census Bureau 2023 data for Aransas County

SECTION 14: TORNADO

CRITICAL FACILITIES	POTENTIAL IMPACTS
	• Critical staff may be injured or otherwise unable to report for duty, limiting response capabilities. • Debris/downed trees can impede emergency response vehicle access to areas. • Increased number of structure fires due to gas line ruptures and downed power lines, further straining the capacity and resources of emergency personnel. • First responders are exposed to downed power lines, unstable and unusual debris, hazardous materials, and generally unsafe conditions. • Extended power outages and evacuations may lead to possible looting, destruction of property, and theft, further burdening law enforcement resources.
Airport, Academic Institutions, Animal Shelter, Evacuation Centers & Shelters, Governmental Facilities, Residential/ Assisted Living Facilities	• Structures can be damaged by falling trees damaged by lightning. • Power outages could disrupt critical care. • Backup power sources could be damaged. • Evacuations may be necessary due to extended power outages, fires, or other associated damage to facilities. • Power outages and infrastructure damage may prevent larger airports from acting as temporary command centers for logistics, communications, and emergency operations. • Temporary break in operations may significantly inhibit post event evacuations. • Damaged or destroyed highway infrastructure may substantially increase the need for airport operations.
Commercial Supplier (Food, fuel, etc.)	• Facilities or infrastructure may be damaged, destroyed or otherwise inaccessible. • Essential supplies like medicines, water, food, and equipment deliveries may be significantly delayed. • Additional emergency responders and critical aid workers may not be able to reach the area for days.
Utility Services and Infrastructure (electric, water, wastewater, communications)	• Emergency operations and services may be significantly impacted due to damaged facilities and/or loss of communications. • Emergency vehicles can be damaged by falling trees or flying debris. • Power outages could disrupt communications, delaying emergency response times. • Critical staff may be injured or otherwise unable to report for duty, limiting response capabilities. • Debris/downed trees can impede emergency response vehicle access to areas. • Increased number of structure fires due to gas line ruptures and downed power lines, further straining the capacity and resources of emergency personnel. • First responders are exposed to downed power lines, unstable and unusual debris, hazardous materials, and generally unsafe conditions.

SECTION 14: TORNADO

CRITICAL FACILITIES	POTENTIAL IMPACTS
	Extended power outages and evacuations may lead to possible looting, destruction of property, and theft, further burdening law enforcement resources.

The total loss estimate due to tornado events in Aransas County is \$3,827,800 (2025 dollars), having an approximate average annual loss estimate of \$53,900. Additionally, tornadoes have caused four injuries within the planning area. In terms of structural damages, the impact of tornadoes in the planning area would be considered Limited with critical facilities shut down for 24 hours or less, and less than ten percent of property destroyed or with major damage. However, with several reported injuries, the impact of a tornado event on the Aransas County planning area is considered “Major”, with multiple injuries resulting in permanent disability possible depending on the size and extent of the event.

Table 14-9. Estimated Average Annual Losses by Jurisdiction

JURISDICTION	TOTAL PROPERTY & CROP LOSS	AVERAGE ANNUAL LOSS ESTIMATES
Aransas County	\$929,000	\$13,100
Town of Fulton	\$2,392,100	\$33,700
City of Rockport	\$506,700	\$7,100
Rockport-Fulton ISD	\$0	\$0
Aransas County Navigation District	\$0	\$0
TOTALS	\$3,827,800	\$53,900

ASSESSMENT OF IMPACTS

Tornadoes have the potential to pose a significant risk to the population and can create dangerous situations. Often, providing and preserving public health and safety is difficult. The impact of climate change could produce larger, more severe tornado events, exacerbating the current tornado impacts. More destructive tornado conditions can be frequently associated with a variety of impacts, including:

- Individuals exposed to the storm can be struck by flying debris, falling limbs, or downed trees causing serious injury or death.
- Structures can be damaged or crushed by falling trees, which can result in physical harm to the occupants.
- Manufactured homes (16 percent of total housing stock) may suffer substantial damage as they would be more vulnerable than typical site-built structures.
- Portable classrooms may also suffer substantial damage as they would be more vulnerable than other classroom structures.
- Significant debris and downed trees can result in emergency response vehicles being unable to access areas of the community.

SECTION 14: TORNADO

- Downed power lines may result in roadways being unsafe for use, which may prevent first responders from answering calls for assistance or rescue.
- Tornadoes often result in widespread power outages increasing the risk to more vulnerable portions of the population who rely on power for health and/or life safety.
- Extended power outages can result in an increase in structure fires and/or carbon monoxide poisoning as individuals attempt to cook or heat their home with alternate, unsafe cooking or heating devices, such as grills.
- Tornadoes can destroy or make residential structures uninhabitable, requiring shelter or relocation of residents in the aftermath of the event.
- First responders must enter the damage area shortly after the tornado passes to begin rescue operations and to organize cleanup and assessments efforts, therefore they are exposed to downed power lines, unstable and unusual debris, hazardous materials, and generally unsafe conditions, elevating the risk of injury to first responders and potentially diminishing emergency response capabilities.
- Emergency operations and services may be significantly impacted due to damaged facilities, loss of communications, and damaged emergency vehicles and equipment.
- Private sector entities such as utility providers, financial institutions, and medical care providers may not be fully operational and may require assistance from neighboring communities until full services can be restored.
- Economic disruption negatively impacts the programs and services provided by the community due to short- and long-term loss in revenue, especially if damage is sustained to major employers within the planning area.
- Damage to infrastructure may slow economic recovery since repairs may be extensive and lengthy.
- When the community is affected by significant property damage it is anticipated that funding would be required for infrastructure repair and restoration, temporary services and facilities, overtime pay for responders, and normal day-to-day operating expenses.
- Displaced residents may not be able to immediately return to work, further slowing economic recovery.
- Residential structures destroyed by a tornado may not be rebuilt for years, reducing the tax base for the community.
- Large or intense tornadoes may result in a dramatic population fluctuation, as people are unable to return to their homes or jobs and must seek shelter and/or work outside of the affected area.
- Businesses that are uninsured or underinsured may have difficulty reopening, which results in a net loss of jobs for the community and a potential increase in the unemployment rate.
- Recreation activities may be unavailable, and tourism can be unappealing for years following a large tornado, devastating directly related local businesses.
- Tornadoes may destroy or degrade endangered species habitat; currently, there are four federally endangered, threatened, or candidate species in the planning area.
- Historical sites and properties are placed at a higher risk of impact due to materials used and the inability to change properties due to their historic status. The Aransas County planning area has seven sites listed on the National Register of Historic Places.

SECTION 14: TORNADO

The economic and financial impacts of a tornado event on the community will depend on the scale of the event, what is damaged, costs of repair or replacement, lost business days in impacted areas, and how quickly repairs to critical components of the economy can be implemented. The level of preparedness and pre-event planning done by the community, local businesses, and citizens will contribute to the overall economic and financial conditions in the aftermath of a tornado event.



SECTION 15 **WILDFIRE**

SECTION 15: WILDFIRE

Hazard Description	1
Location	2
Extent	7
Historical Occurrences	15
Significant Events	17
Probability of Future Events	19
Climate Change Considerations	19
Vulnerability and Impact	20
Assessment of Impacts	30

HAZARD DESCRIPTION

Wildfire is an unplanned fire burning in natural or wildland areas such as forests, shrub lands, grasslands, or prairies.¹ Texas is one of the fastest growing states in the nation, with much of this growth occurring adjacent to metropolitan areas. This increase in population across the state will impact counties and communities that are located within the Wildland Urban Interface (WUI). The WUI is described as the area where structures and other human improvements meet and intermingle with undeveloped wildland or vegetative fuels. Population growth within the WUI substantially increases the risk of wildfire. In Texas nearly 85 percent of wildfires occur within two miles of a community. The Aransas County planning area has an estimated 63 percent of the total planning area population that lives within the WUI.²

Wildfires have the potential to spread quickly given the right environmental conditions, particularly within the wildland urban interface and intermix. Most ignition sources for wildfires are a result of human activities, such as an electrical line sparking dry grasses, an improperly discarded cigarette, burning debris, or arson.

Development has increased in south Texas, resulting in more populated areas within the wildland interface / intermix. Additionally, the area is experiencing hotter, drier climatic conditions. These factors combine to make south Texas at risk from wildfires. While the planning area is continually at some risk for wildfires, that risk is elevated during two periods each year: the winter wildfire season (February through April) and the summer wildfire season (August through October).³

The Aransas County population is expected to increase over time following population trends over the last few decades. Continued housing development in the WUI will put more people at a greater risk of catastrophic wildfire and put more pressure on land managers and fire department personnel to mitigate fire risk.

Wildfires spread based on the type and quantity of fuel that surrounds it. Fuel can include everything from trees, underbrush and dry grassy fields to homes. The amount of flammable

¹ FEMA: <https://hazards.fema.gov/nri/wildfire>

² Texas A&M Forest Service, Texas Wildfire Risk Assessment Summary Report, Aransas County: <https://texaswildfirerisk.com/>

³ Austin American Statesman, "Winter wildfire risk is rising in Central Texas. Here's what you should know." January 2023: <https://www.statesman.com/story/news/environment/2023/01/30/wildfire-risk-is-rising-in-central-texas-what-you-should-know/69845234007/>

SECTION 15: WILDFIRE

material that surrounds a fire is referred to as the fuel load. Conditions in the weather and environment, such as drought, winds and extreme heat, can cause a fire to spread more quickly.⁴ A wildfire event often begins unnoticed and spreads quickly, lighting brush, trees, and homes on fire. For example, a wildfire may be started by a campfire that was not doused properly, a tossed cigarette, burning debris, or arson. Additionally, the Aransas County planning team reports that wildfires are often caused by lightning and thunderstorm wind events.

Texas has seen a significant increase in the number of wildfires in the past 30 years, including wildland, urban interface, or intermix fires. Wildland fires are fueled almost exclusively by natural vegetation, while interface or intermix fires are urban / wildland fires in which vegetation and the built environment provide the fuel.

LOCATION

A wildfire incident can have devastating consequences due to human activities, drought conditions, lightning, or wind events, if the conditions allow. Wildfires can vary greatly in terms of size, location, intensity, and duration. While wildfires are not confined to any specific geographic location, they are most likely to occur in open grasslands.

The Texas A&M Forest Service Wildfire Risk Assessment Portal (TxWRAP) provides historical wildfire data for Texas counties along with mapping resources that include data layers on the WUI, ignition density, and fire damage potential for communities throughout the Aransas County planning area, along with multiple tips, recommendations and mitigation solutions for communities and residents. The TxWRAP portal was utilized to produce the maps found in this profile.

The threat to people and property from a wildfire event is greater in the fringe areas where developed areas meet open grass lands, such as the Functional Wildland Urban Interface (WUI) (Figures 15-1 through 15-5). The Functional WUI is based on a comprehensive building footprint dataset, fire intensity modeling, and a simulation of ember production and transport. The Zones used in the Functional WUI are described below. Critical facilities are only mapped within the Direct Exposure Zone of the WUI, as these structures face the greatest risk from wildfire due to their proximity to flammable vegetation and potential fire pathways.

The **Direct Exposure Zone** is burnable land cover within 75 meters of a structure. Reducing fire intensity and ember production in this zone would reduce the exposure of nearby buildings to heat and embers. Buildings in this zone also require hardening of the structure to resist ignition.

The **Indirect Exposure Zone** is non-burnable land cover within 1,500 meters of burnable land cover that is within 75 meters of a structure, meaning that embers and home-to-home spread could reach within this zone. Indirectly exposed structures would benefit from the hardening of the structure to resist ignition from embers and nearby structures, but defensible space is usually not required due to the heavily developed nature of the zone.

The **Critical Fireshed** is the unpopulated land within about 2.4 kilometers of a group of structures. Fires that originate within or spread to the Critical Fireshed have an immediate threat of reaching the nearby structures; fuel treatments that slow fire spread in this zone can reduce risk to these structures.

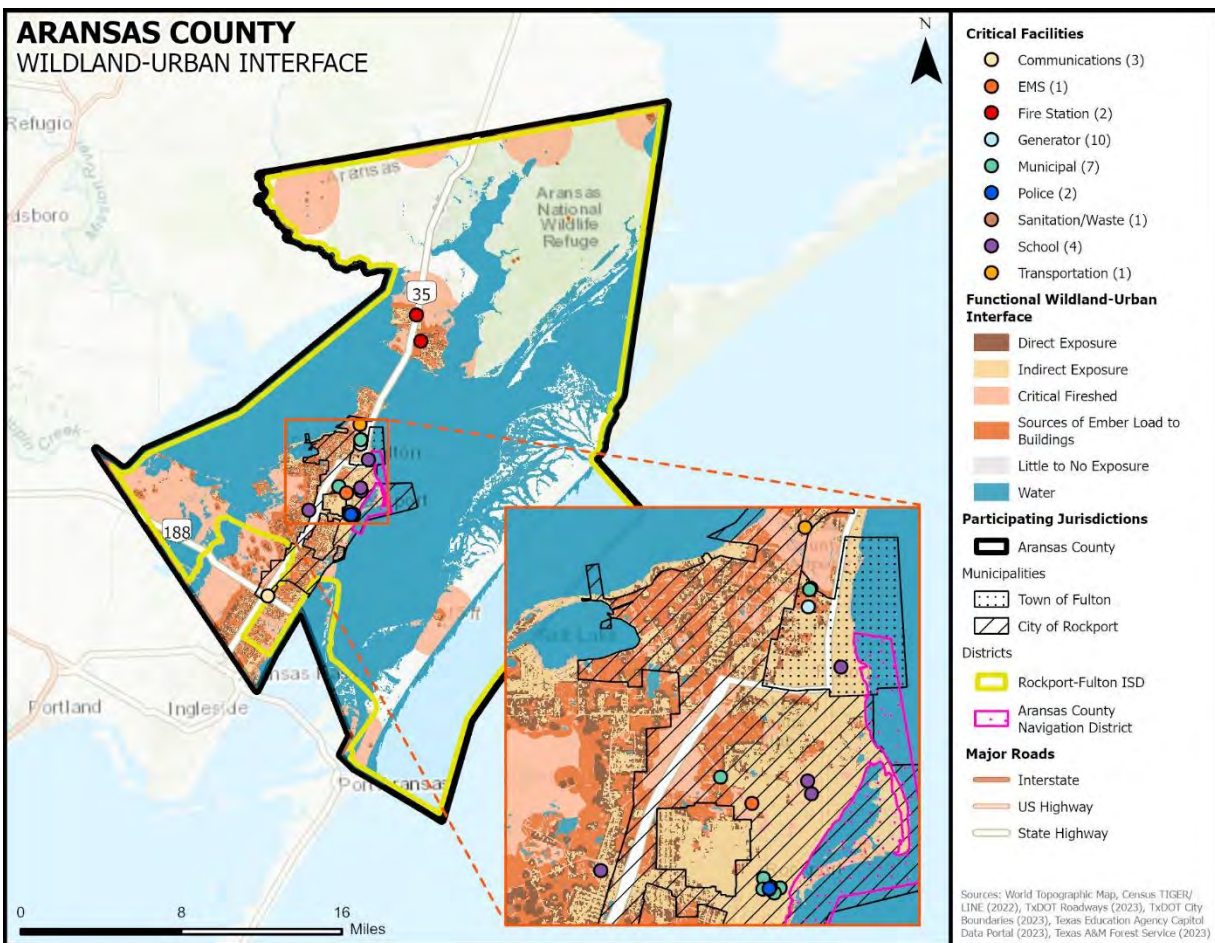
⁴ NOAA Weather Forecasting: <https://scijinks.gov/wildfires/>

SECTION 15: WILDFIRE

The **Sources of Ember Load to Buildings (SELB) Zone** is a critical area or burnable land cover that produces embers capable of reaching nearby buildings. Ember production is a function of fire type and intensity, and ember travel is a function of wind speed and direction. Fuel treatment in this zone is a priority for reducing ember load to the nearby buildings.

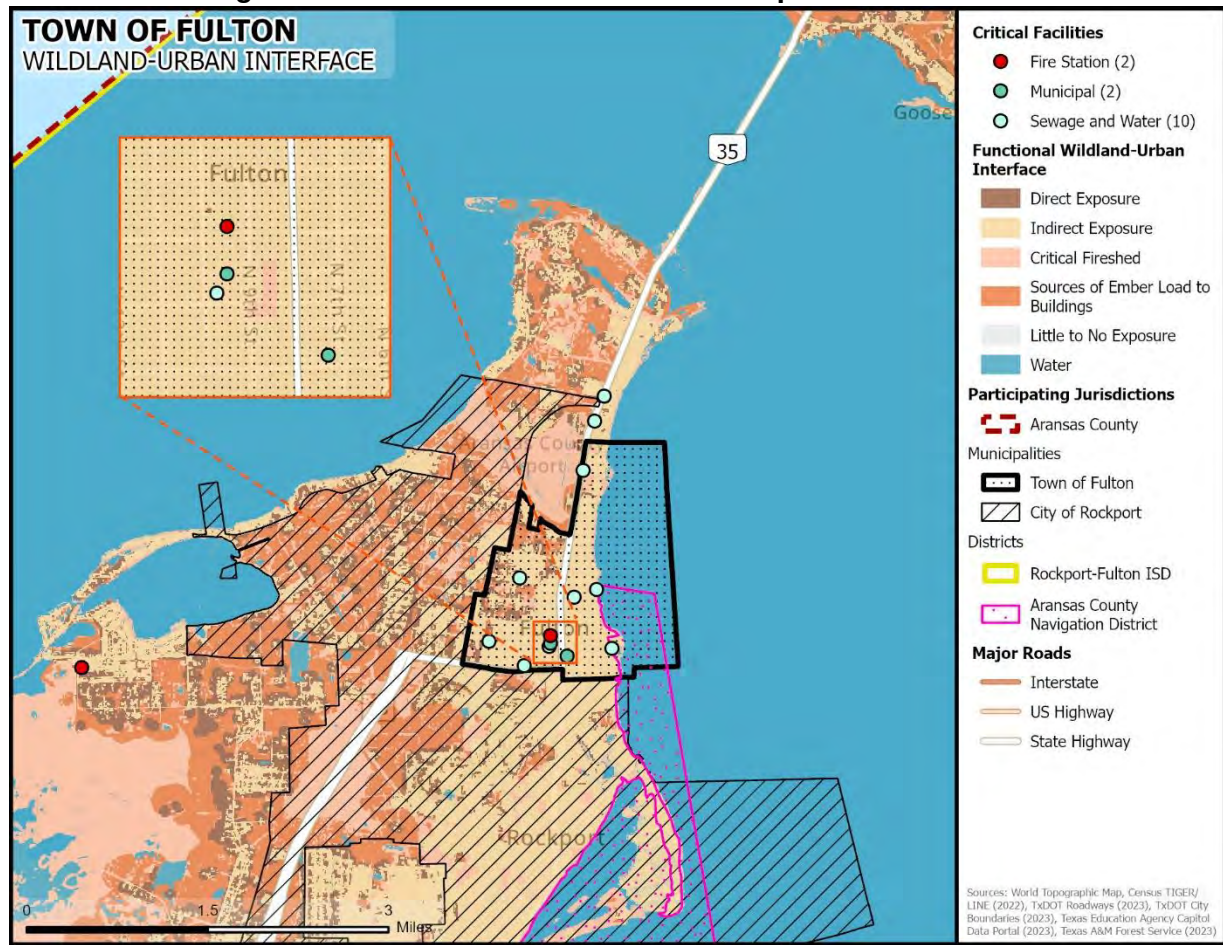
The **Little-to-No Exposure Zone** is non-burnable land that is within 75 meters of a structure but greater than 1,500 meters from a large contiguous block of burnable land cover. Flames, even from home-to-home spread, and embers are unlikely to reach the Little-to-No Exposure Zone. However, smoke and evacuations could still impact this area. Support should be given to those most vulnerable in the community. The need for a wildfire evacuation in this zone is unlikely.

Figure 15-1. Wildland Urban Interface Map – Aransas County



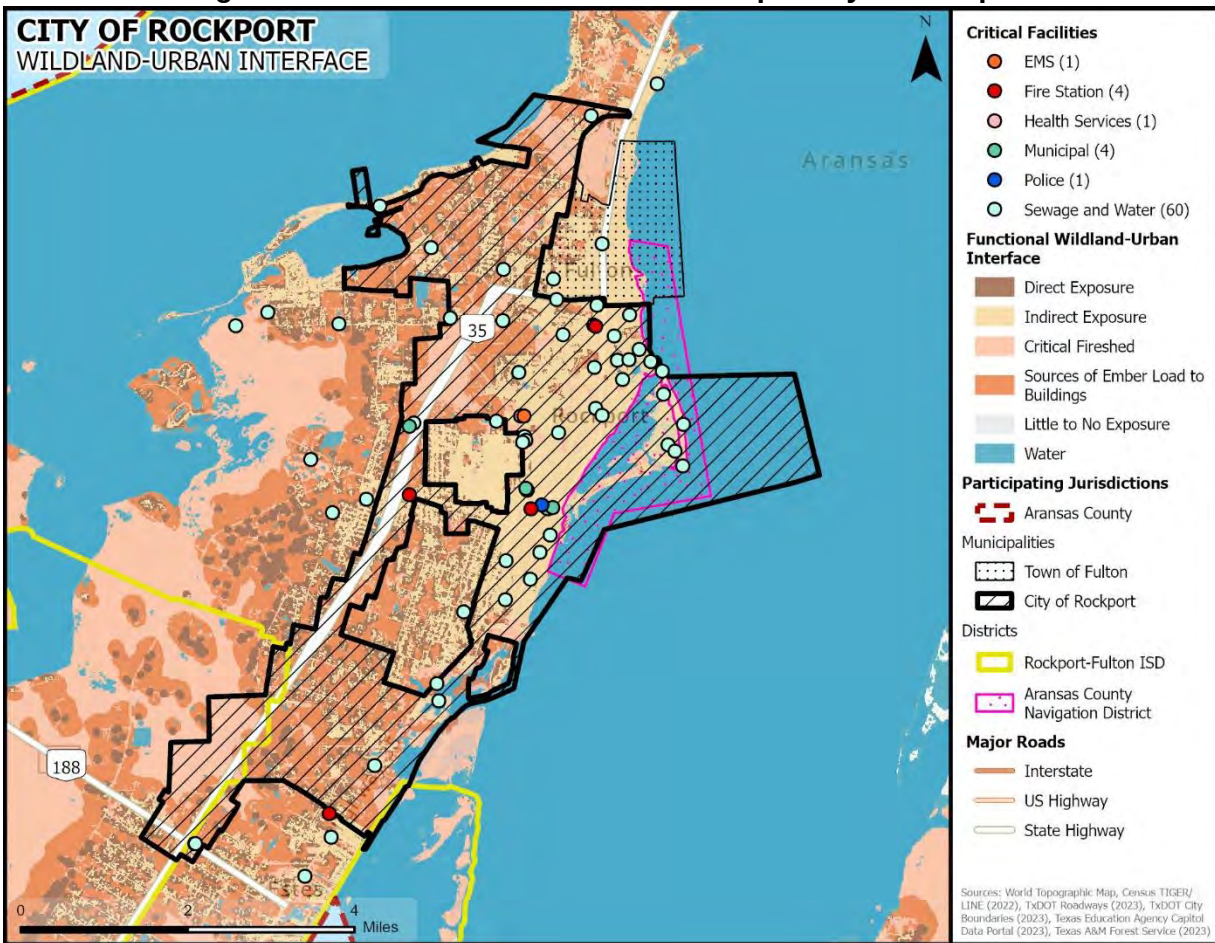
SECTION 15: WILDFIRE

Figure 15-2. Wildland Urban Interface Map – Town of Fulton



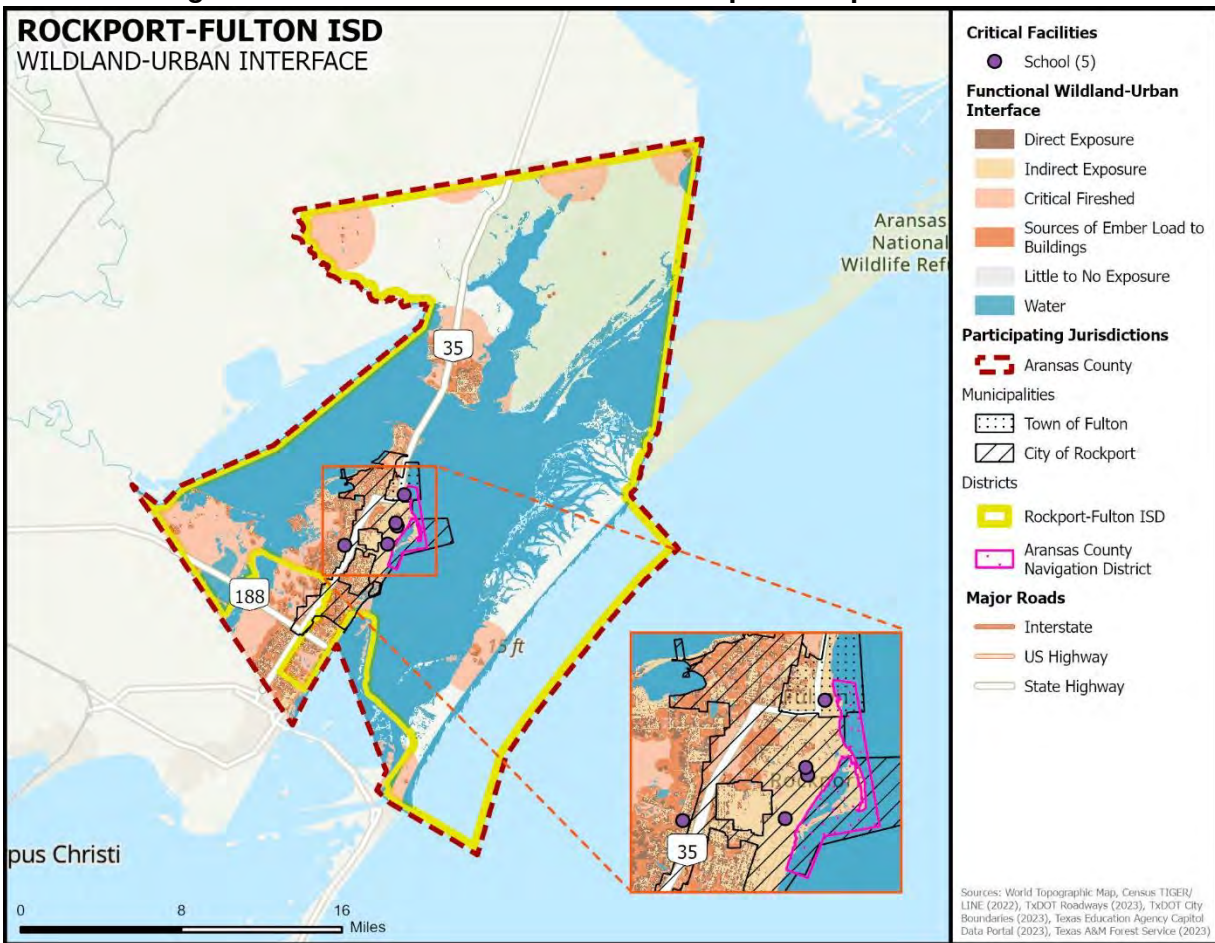
SECTION 15: WILDFIRE

Figure 15-3. Wildland Urban Interface Map – City of Rockport



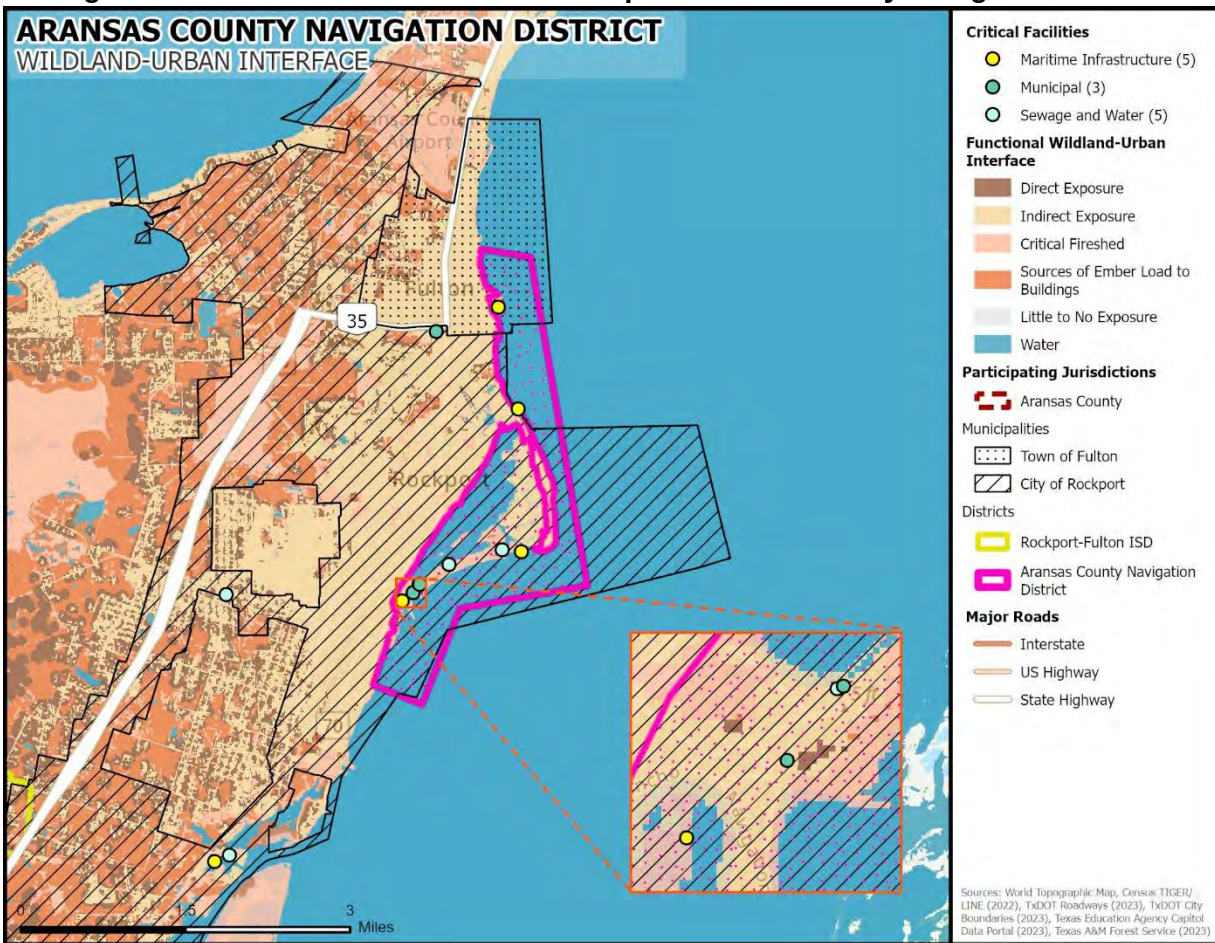
SECTION 15: WILDFIRE

Figure 15-4. Wildland Urban Interface Map – Rockport-Fulton ISD



SECTION 15: WILDFIRE

Figure 15-5. Wildland Urban Interface Map – Aransas County Navigation District



EXTENT

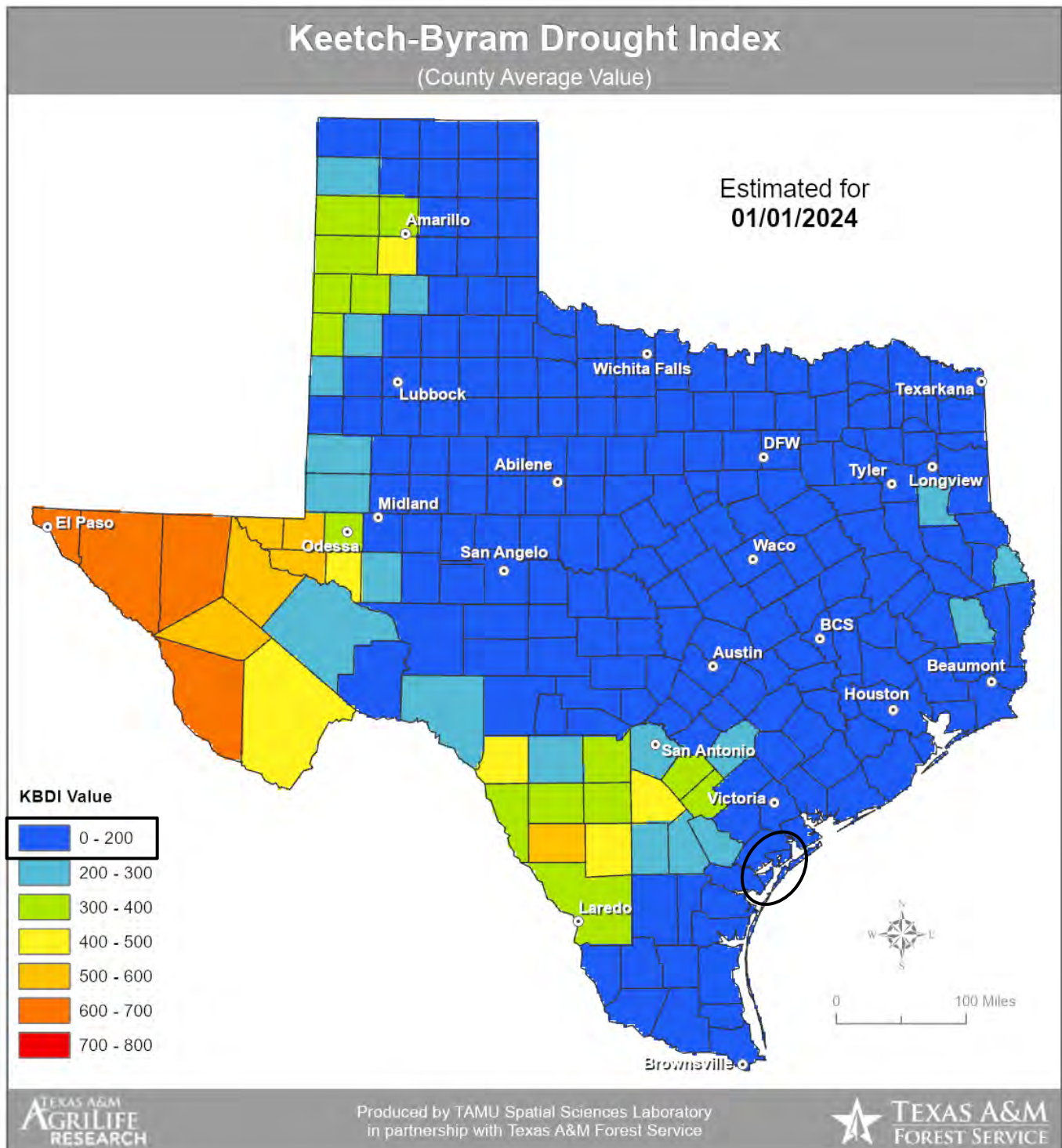


Risk for a wildfire event is measured in terms of magnitude and intensity using the Keetch Byram Drought Index (KBDI), a mathematical system for relating current and recent weather conditions to potential or expected fire behavior. The KBDI determines forest fire potential based on a daily water balance, derived by balancing a drought factor with precipitation and soil moisture (assumed to have a maximum storage capacity of eight inches), and is expressed in hundredths of an inch of soil moisture depletion.

Each color in Figure 15-6 and 15-7 represents the drought index at that location, by date and shows recent conditions as well as extreme historical conditions. The drought index ranges from 0 to 800. A drought index of 0 represents no moisture depletion, and a drought index of 800 represents absolutely dry conditions.

SECTION 15: WILDFIRE

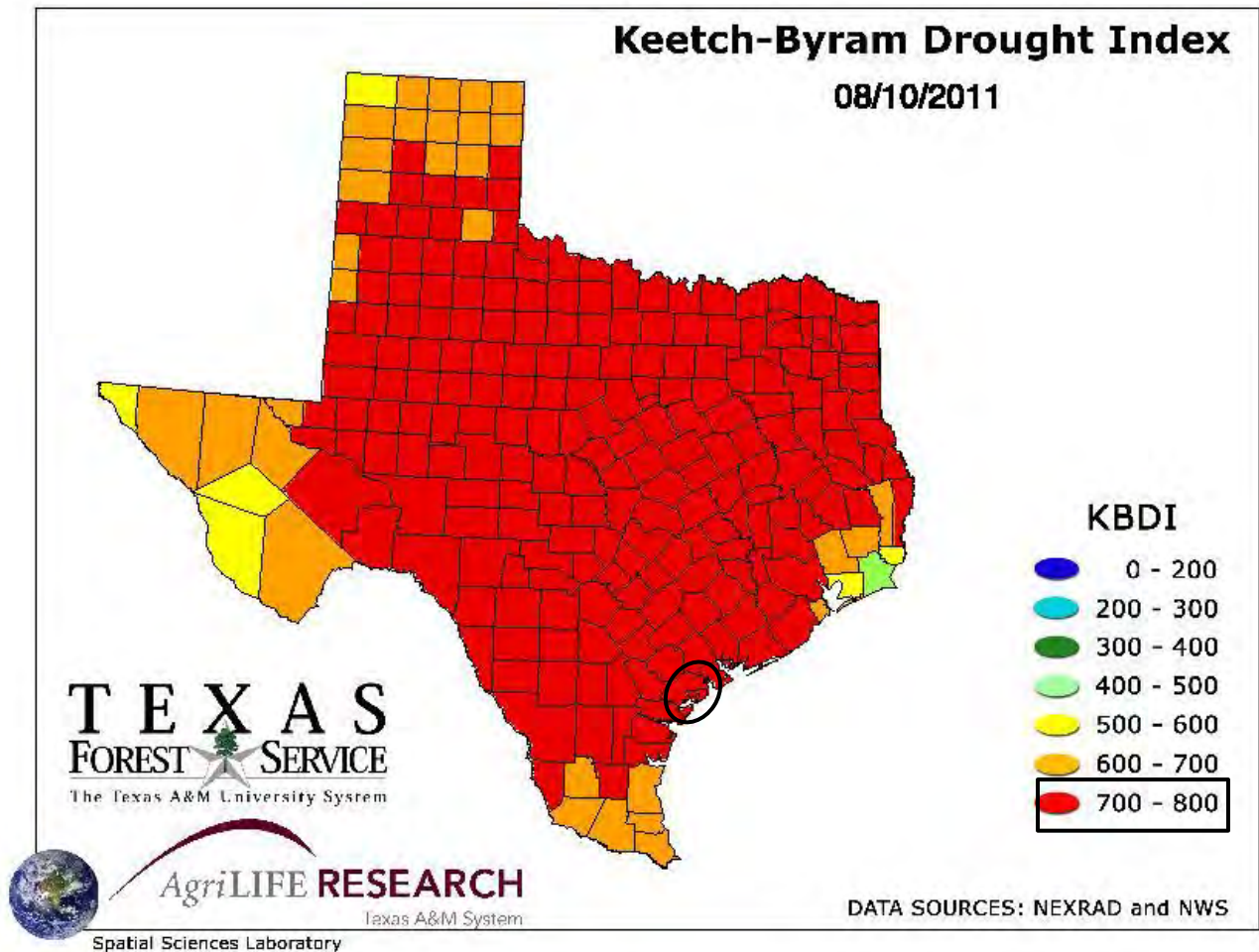
Figure 15-6. Keetch-Byram Drought Index (KBDI) for the State of Texas, 1/01/2024⁵



⁵ Aransas County planning area is located within the black circle.

SECTION 15: WILDFIRE

Figure 15-7. Keetch-Byram Drought Index (KBDI) for the State of Texas, 08/10/2011



Fire behavior can be categorized at four distinct levels on the KBDI:

- **0 -200:** Soil and fuel moisture are high. Most fuels will not readily ignite or burn. However, with sufficient sunlight and wind, cured grasses and some light surface fuels will burn in spots and patches.
- **200 -400:** Fires more readily burn and will carry across an area with no gaps. Heavier fuels will not readily ignite and burn. Expect smoldering and the resulting smoke to carry into and possibly through the night.
- **400 -600:** Fires intensity begins to significantly increase. Fires will readily burn in all directions exposing mineral soils in some locations. Larger fuels may burn or smolder for several days, creating possible smoke and control problems.
- **600 -800:** Fires will burn down to mineral soil. Stumps will burn to the end of underground roots and spotting will be a major problem. Fires will burn through the night and heavier fuels will actively burn and contribute to fire intensity.

SECTION 15: WILDFIRE

The KBDI is a good measure of the readiness of fuels for a wildfire event. It should be referenced as the area experiences changes in precipitation and soil moisture, while caution should be exercised in dryer, hotter conditions.

The range of intensity for the Aransas County planning area, in a wildfire event, is within 150 to 765. The average extent to be mitigated for the planning area is a KBDI of 490. Based on historical occurrences and readily available fuel, the planning area can anticipate a KBDI range from 0 to 800. At the high end of this range fires will burn to mineral soil. Stumps will burn to the end of underground roots and spotting will be a major problem. Fires will burn through the night and heavier fuels will actively burn and contribute to fire intensity.

The Texas Forest Service's Fire Intensity Scale (FIS) identifies areas with high fuel hazards and dangerous fire behavior potential. This scale considers fuel conditions along with a range of wind and weather scenarios. These estimates include the contribution of crown fuel and crowning fire intensity. Crown fuels (the branches, leaves, and needles of tall trees) are the primary fuel layer in crown fires, and the intensity of a crown fire is determined by factors like fuel load, moisture content, and wind conditions, leading to rapid fire spread and high temperatures.

The FIS provides a standard scale to measure potential wildfire intensity. The FIS consists of 5 classes where the order of magnitude between classes is ten-fold. The minimum class, Class 1, represents very low wildfire intensities and the maximum class, Class 5, represents very high wildfire intensities. Refer to descriptions below.

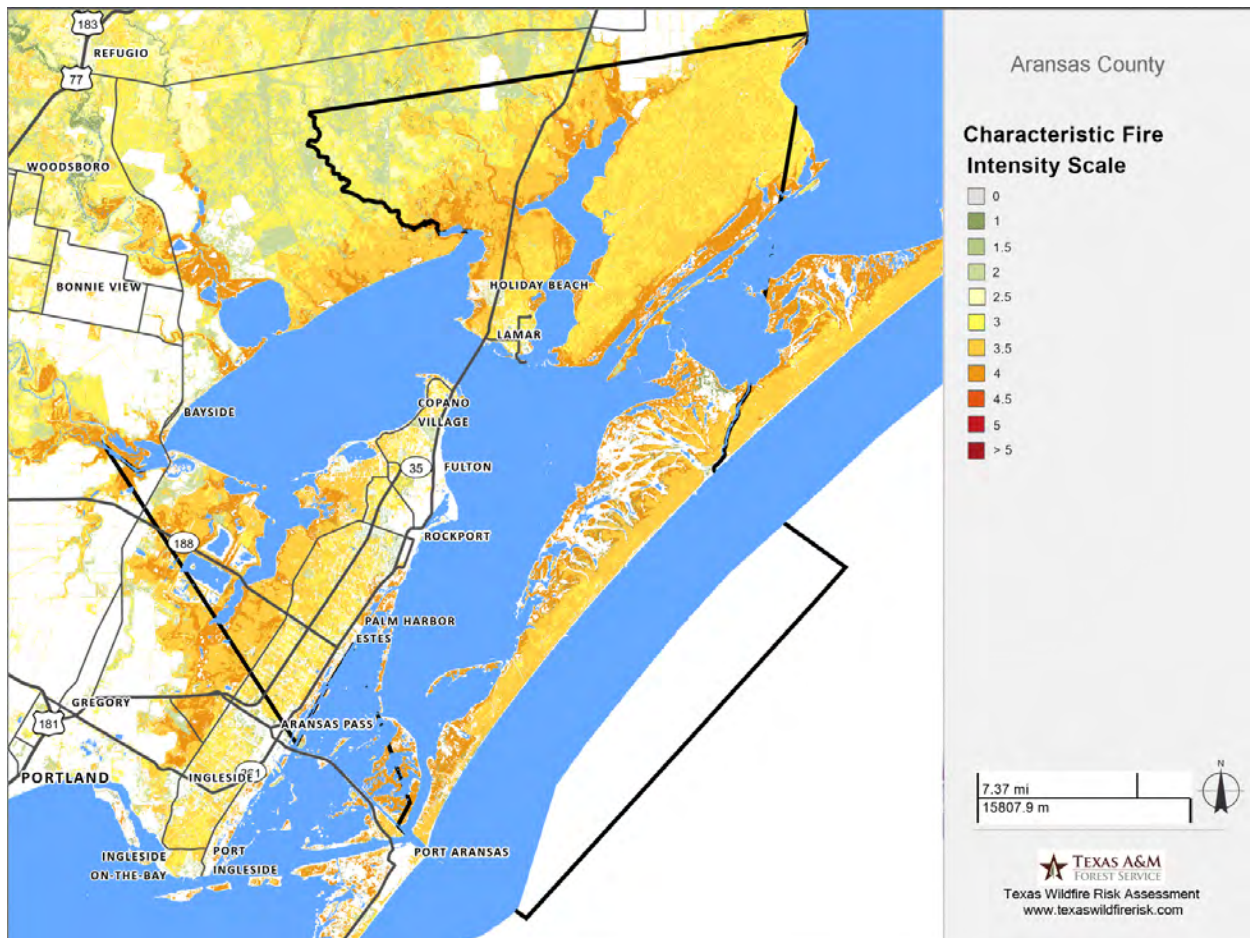
Table 15-1. Characteristic Fire Intensity Scale (FIS)

FIS CLASS	CLASS DESCRIPTION
Class 1 (Very Low)	Very small, discontinuous flames, usually less than 1 foot in length; very low rate of spread; no spotting. Fires are typically easy to suppress by firefighters with basic training and non-specialized equipment.
Class 2 (Low)	Small flames, usually less than 2 feet long; small amount of very short range spotting possible. Fires are easy to suppress by trained firefighters with protective equipment and specialized tools.
Class 3 (Moderate)	Flames up to 9 feet in length; short-range spotting is possible. Trained firefighters will find these fires difficult to suppress without support from aircraft or engines, but dozer and plows are generally effective. Increasing potential for harm or damage to life and property.
Class 4 (High)	Large Flames, up to 40 feet in length; short-range spotting common; medium range spotting possible. Direct attack by trained firefighters, engines, and dozers is generally ineffective, indirect attack may be effective. Significant potential for harm or damage to life and property.
Class 5 (Very High)	Flames exceed 200 feet in length; expect extreme fire behavior.

The Aransas County planning area, including all participating jurisdictions the ISD and special district, is susceptible to wildfires of varying intensities. Figures 15-8 through 15-12 identifies the wildfire intensity for the planning area.

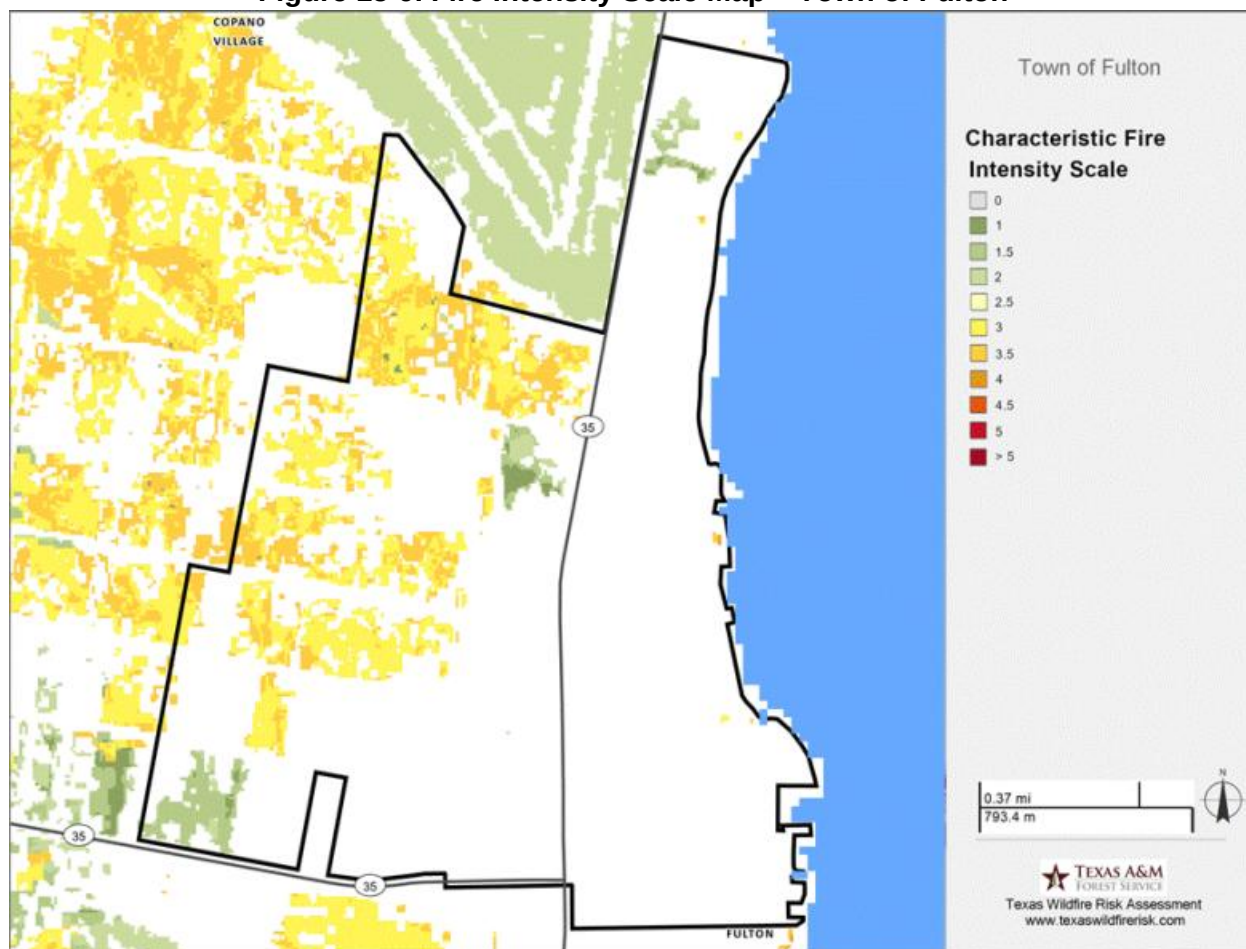
SECTION 15: WILDFIRE

Figure 15-8. Fire Intensity Scale Map – Aransas County



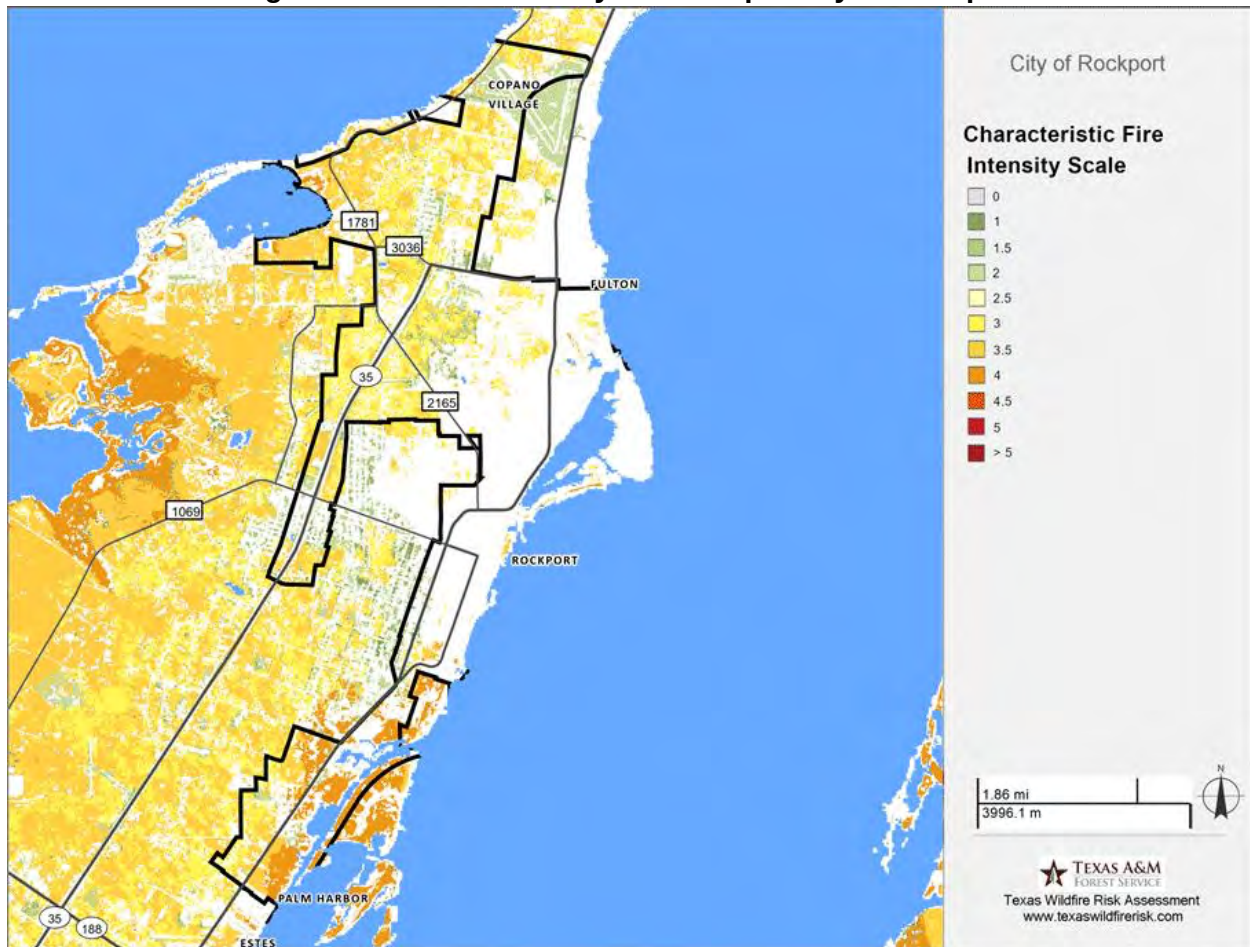
SECTION 15: WILDFIRE

Figure 15-9. Fire Intensity Scale Map – Town of Fulton



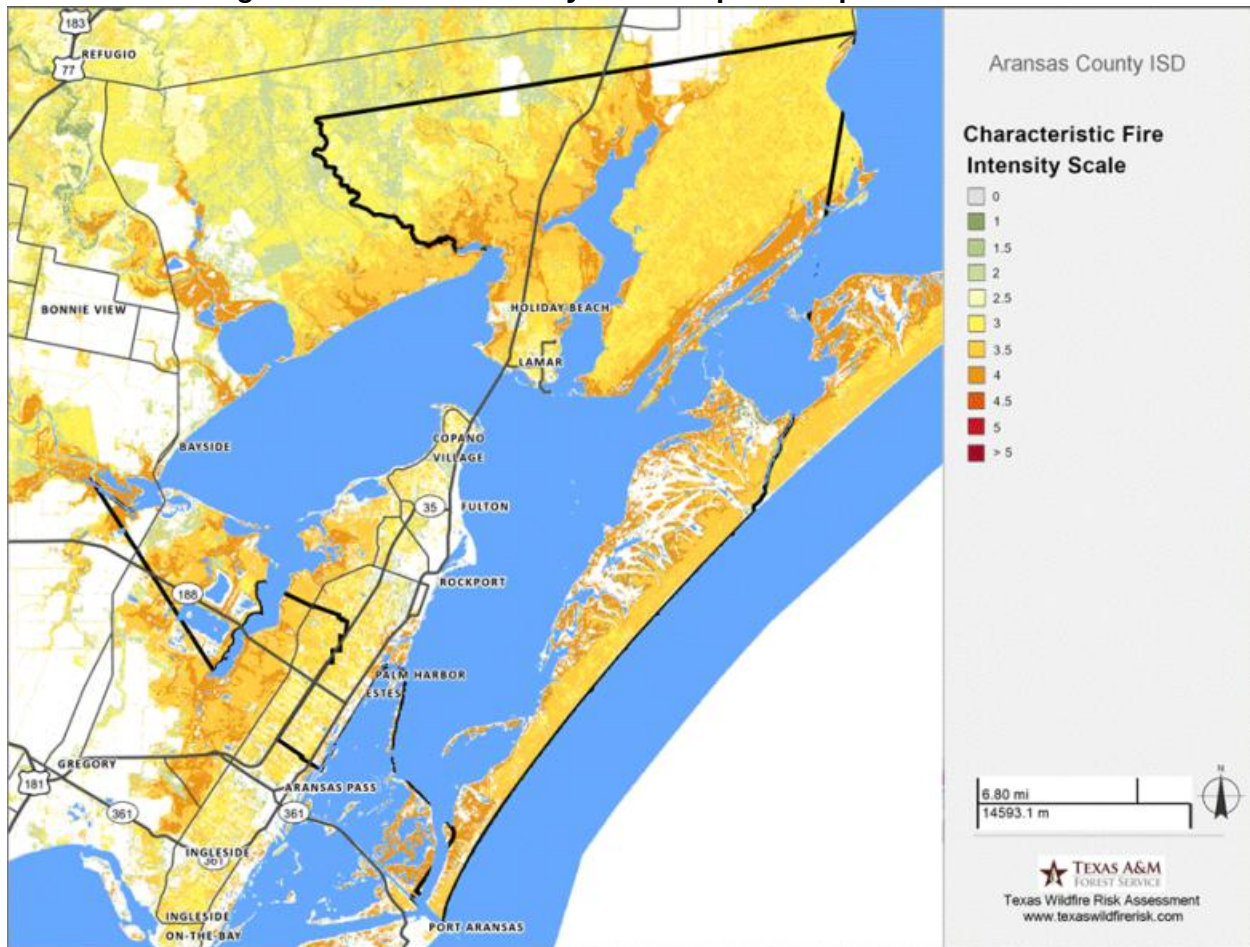
SECTION 15: WILDFIRE

Figure 15-10. Fire Intensity Scale Map – City of Rockport



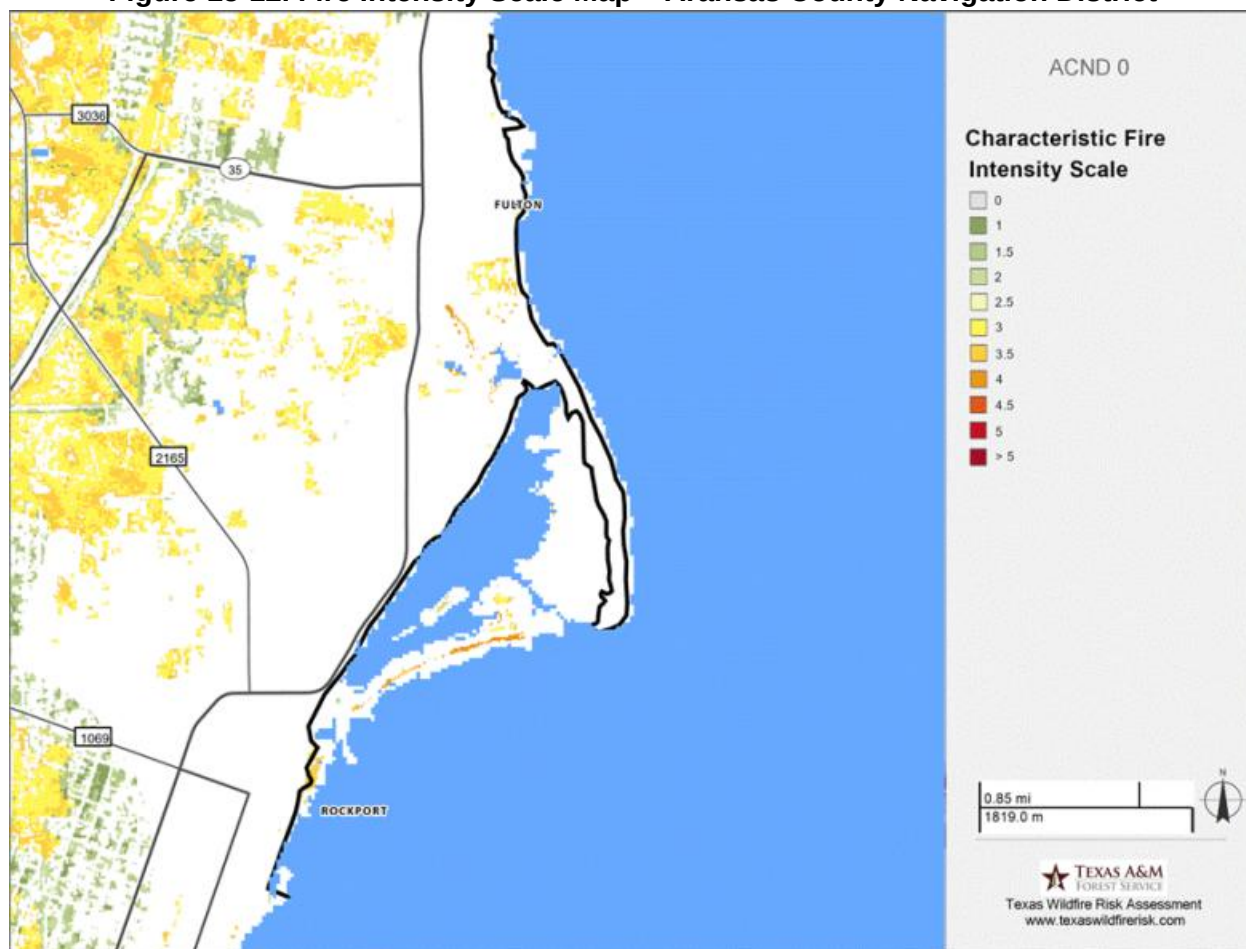
SECTION 15: WILDFIRE

Figure 15-11. Fire Intensity Scale Map – Rockport-Fulton ISD



SECTION 15: WILDFIRE

Figure 15-12. Fire Intensity Scale Map – Aransas County Navigation District



HISTORICAL OCCURRENCES

The NCEI Storm Events Database includes six records of wildfire events from 1996 through 2024. One event took place in 2008 and is known as the Tatton Aide Fire. The remaining events occurred in 2009 and were related to the Salt Lake Wildfire, Lee Road Wildfire, Holiday Beach Wildfire, and the Sammy Fire. There are no reported injuries or deaths for the events reported in the NCEI.

The Texas Forest Service reported 647 wildfire events for the Aransas County planning area between 2005 and 2021. The Texas A&M Forest Service (TFS) started collecting wildfire reported by volunteer fire departments in 2005. Due to a lack of recorded data for wildfire events prior to 2005 and after 2021, frequency calculations are based on a 17-year reporting period, using only data from recorded years. Tables 15-2 through 15-4 identify the number of wildfires and total acreage burned each year within the county boundaries.

Wildfire data for the ISD and special district is provided within the reported jurisdiction in which they are located as they do not have events reported separately and apart from the events reported to the TFS. There have been no reported losses as a result of wildfire events for the Rockport-Fulton ISD or the Aransas County Navigation District.

SECTION 15: WILDFIRE

Table 15-2. Historical Wildfire Events Summary, 2005 - 2021⁶

JURISDICTION	NUMBER OF EVENTS	ACRES BURNED
Aransas County	486	8,090
Town of Fulton	30	341
City of Rockport	131	305
Rockport-Fulton ISD	0	-
Aransas County Navigation District	0	-

Table 15-3. Historical Wildfire Events by Year

YEAR	ARANSAS COUNTY	TOWN OF FULTON	CITY OF ROCKPORT	ROCKPORT-FULTON ISD	ARANSAS COUNTY NAVIGATION DISTRICT
2005	2	0	1	-	-
2006	21	1	5	-	-
2007	2	0	0	-	-
2008	5	0	0	-	-
2009	40	0	6	-	-
2010	12	0	1	-	-
2011	88	1	49	-	-
2012	26	3	9	-	-
2013	13	6	3	-	-
2014	58	10	13	-	-
2015	6	2	4	-	-
2016	52	3	10	-	-
2017	24	3	3	-	-
2018	31	1	6	-	-
2019	23	0	9	-	-
2020	63	0	8	-	-
2021	20	0	4	-	-
TOTALS	468	30	131	0	0

⁶ Source: Texas A&M Forest Service

SECTION 15: WILDFIRE

Based on the list of historical wildfire events for the Aransas County planning area (listed above), 95 events have occurred since the 2020 plan.

Table 15-4. Acreage of Suppressed Wildfire by Year

YEAR	ARANSAS COUNTY	TOWN OF FULTON	CITY OF ROCKPORT	ROCKPORT-FULTON ISD	ARANSAS COUNTY NAVIGATION DISTRICT
2005	1	0	1	-	-
2006	291	1	2	-	-
2007	2	0	0	-	-
2008	326	0	0	-	-
2009	5117	0	123	-	-
2010	9	0	0	-	-
2011	279	1	33	-	-
2012	41	1	10	-	-
2013	32	25	6	-	-
2014	172	90	12	-	-
2015	58	4	54	-	-
2016	672	4	4	-	-
2017	321	215	2	-	-
2018	302	0	1	-	-
2019	165	0	3	-	-
2020	236	0	3	-	-
2021	66	0	51	-	-
TOTALS	8,090	341	305	0	0

SIGNIFICANT EVENTS

There have been three declared disasters related to wildfire in Aransas County between 1996 and 2024 (Table 15-5). Additional details on certain wildfire events are described below.

SECTION 15: WILDFIRE

Table 15-5. Disaster Declarations for Wildfire, 1996-2024

YEAR	DECLARATION TITLE	DECLARATION TYPE	DISASTER NO.
2006	Extreme Wildfire Threat in Texas	DR	DR-1624-TX
2008	Wildfires in Texas	EM	EM-3284-TX
2009	Texas Holiday Beach Fire	FM	FM-2803-TX

April 5, 2009 – Aransas County (FM-2803-TX)

The Holiday Beach Wildfire burned 70 acres in the unincorporated community of Holiday Beach. One commercial building, one unoccupied mobile home, one barn, one garage, five goose neck trailers, and seven vehicles were destroyed in the fire. More than 100 additional homes were threatened and saved. The wildfire also closed State Highway 35 for a brief time. Low relative humidity and gusty winds behind a cold front contributed to the critical fire behavior. Several local, state and federal resources responded. According to the NCEI, this event caused \$298,000 (2025 dollars) in reported property damages.

April 8-14th, 2025

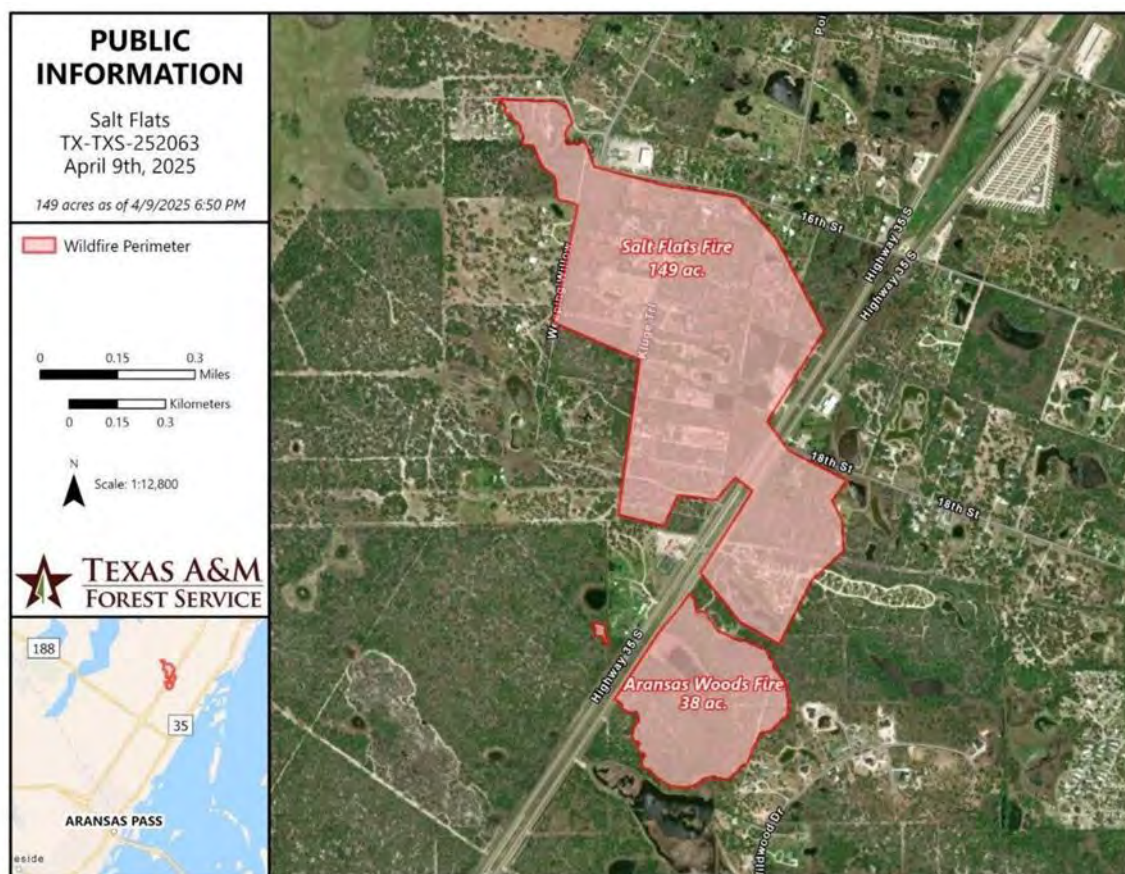
It is important to note that the Aransas County planning area experienced two significant wildfires, the Salt Flats Fire and the Aransas Woods Fire, at the time of drafting this plan. Both fires ignited along Bypass 35 in the City of Rockport, prompting a large-scale emergency response. The Aransas Woods Fire began on April 8th, and the Salt Woods Fire began on April 9th. Both fires spread rapidly, burning nearly 200 acres as of April 9th (Figure 15-13).

RV parks were evacuated, and drivers were asked to avoid the area. A temporary shelter was set up in the Town of Fulton. An emergency burn ban was issued for the county. According to local reports, 42 agencies responded to the event including volunteers, local, and state partners both on the ground and from the air. The Texas Fire Service assisted in the response with two air tankers. Preliminary damage assessments show that at least 18 homes were lost, with 18 destroyed or damaged outbuildings, and 3 destroyed commercial buildings. Damage estimates are subject to change as more data is collected from the event.⁷

⁷ This event occurred outside of the reporting period and is not included in the event or damage totals provided.

SECTION 15: WILDFIRE

Figure 15-13. Salt Flats and Aransas Woods Fire, April 9, 2025



PROBABILITY OF FUTURE EVENTS

Wildfires can occur at any time of the year. As Aransas County communities move into wildland, the potential area of occurrence of wildfire increases. With 647 events in a 17-year period, an event within the Aransas County planning area, including all participating jurisdictions, the ISD and special district, is “Highly Likely”, meaning an event is probable within the next year.

CLIMATE CHANGE CONSIDERATIONS

Wildfires require the alignment of a number of factors, including temperature, humidity, and the lack of moisture in fuels, such as trees, shrubs, grasses, and forest debris. All these factors have strong direct or indirect ties to climate variability and climate change. Research shows that changes in climate create warmer, drier conditions, leading to longer and more active fire seasons. Increases in temperatures and the thirst of the atmosphere due to human-caused climate change have increased aridity of forest fuels during the fire season.⁸

Vapor pressure deficit, an indicator of the ability of moisture to evaporate, is projected to increase as temperatures rise and carbon dioxide fertilization reduces transpiration, leading to both lower humidity and increased surface dryness. Overall, increased dryness should extend the wildfire

⁸ NOAA Wildfire Climate Connection, August 2022: wildfire-climate-connection.

SECTION 15: WILDFIRE

season in places where the fire season is presently constrained by low levels of aridity, such as eastern Texas.⁹

Additionally, it is projected that future changes to Aransas County will include increased temperatures, which according to the U.S. Climate Explorer, the planning area may experience a 5°F increase in the average extreme heat temperatures. Historically, extreme temperatures averaged 96°F in Aransas County, but between 2035 and 2064 the average will be 101°F, increasing the severity and frequency of extreme heat events, contributing to favorable wildfire conditions.

Extreme heat and extended periods of drought contribute to wildfire risk in the planning area. Extreme temperatures and periods of drought destroy vegetation in the area, contributing to available fuels that spread wildfires. Additional climate change impacts from drought and extreme heat are discussed in Sections 6 and 8 of this Plan. The projected rise of severity in drought and extreme heat events suggest a growing likelihood of conditions that favor wildfires. Additional information and studies are needed to determine the degree and rate of any increased wildfire risk.

VULNERABILITY AND IMPACT

Periods of drought, dry conditions, high temperatures, and low humidity are factors that contribute to the occurrence of a wildfire event. Less developed areas, such as along interstates or in more remote areas where fuels are more prevalent have an increased risk of being affected by wildfire.

The more heavily populated areas of the planning area are not highly likely to experience large, sweeping fires. Unoccupied buildings and open spaces that have not been maintained have the greatest vulnerability to wildfire. The overall level of concern for wildfires is located across the county where wildland and urban areas interface. Figures 15-14 through 15-18¹⁰ illustrate the areas that are the most vulnerable to wildfire throughout the Aransas County planning area.

The Aransas County Planning Team identified the following critical facilities (Table 15-6) as assets that are considered the most important to the planning area and are susceptible to a range of impacts caused by wildfire events. Critical facilities within the Direct Exposure Zone of the WUI are at the greatest risk from wildfire. For a comprehensive list of critical facilities by participating jurisdiction, please see Appendix D.

Table 15-6. Critical Facilities / Critical Services Vulnerable to Wildfire Events

CRITICAL FACILITIES	CRITICAL FACILITIES AT RISK	POTENTIAL IMPACTS
Emergency Response Services (EOC, Fire, Police, EMS), Hospitals and Medical Centers	Aransas County: 2 Fire Stations	Emergency services may be disrupted during a wildfire if facilities are impacted, roadways are inaccessible, or personnel are unable to report for duty.

⁹ Assessment of Historic and Future Trends of Extreme Weather in Texas, 1900-2036, Texas A&M University Office of the Texas State Climatologist, 2021 update.

¹⁰ TxWRAP portal at the following site: <https://texaswildfirerisk.com/>

SECTION 15: WILDFIRE

CRITICAL FACILITIES	CRITICAL FACILITIES AT RISK	POTENTIAL IMPACTS
		- First responders are at greater risk of injury when in close proximity to the hazard while extinguishing flames, protecting property, or evacuating residents in the area. - Critical city departments may not be able to function and provide necessary services depending on the location of the fire and the structures or personnel impacted. - Roadways in or near the WUI could be damaged or closed due to smoke and limited visibility, slowing or preventing access for emergency response vehicles. - Fire suppression costs can be substantial, exhausting the financial resources of the community. - First responders can experience heart disease, respiratory problems, and other long-term related illnesses from prolonged exposure to smoke, chemicals, and heat. - Emergency operations and services may be significantly impacted due to damaged facilities and/or loss of communications. - Power outages could disrupt communications, delaying emergency response times. - Structures can be damaged or destroyed in the path of the wildfire. - Power outages could disrupt critical care. - Backup power sources could be damaged or destroyed. - Critical staff may be injured or otherwise unable to report for duty, limiting response capabilities.
Airport, Academic Institutions, Animal Shelter, Evacuation Centers & Shelters, Governmental Facilities, Residential/ Assisted Living Facilities	Aransas County: 1 Municipal Facility, 1 Transportation Facility, 1 School Facility Rockport-Fulton ISD: 1 School Facility	- Facilities or infrastructure may be damaged, destroyed or otherwise inaccessible. - Essential supplies like medicines, water, food, and equipment deliveries may be significantly delayed. - Additional emergency responders and critical aid workers may not be able to reach the area for days. - Power outages and infrastructure damage may prevent larger airports from acting as temporary command centers for logistics, communications, and emergency operations.
Commercial Supplier (food, fuel, etc.)	N/A	- Facilities, infrastructure, or critical equipment including communications may be damaged, destroyed or otherwise inoperable. - Essential supplies like medicines, water, food, and equipment deliveries may be delayed.

SECTION 15: WILDFIRE

CRITICAL FACILITIES	CRITICAL FACILITIES AT RISK	POTENTIAL IMPACTS
		Economic disruption due to power outages and fires negatively impact services as well as area businesses reliant on commercial suppliers.
Utility Services and Infrastructure (electric, water, wastewater, communications)	Aransas County: 2 Communication Facilities, 5 Energy Utility Facilities, 1 Sanitation/Waste Facility City of Rockport: 6 Sewage and Water Facilities	- Wastewater and drinking water facilities and infrastructure may be damaged or destroyed resulting in service disruption or outage for multiple days or weeks. - Disruptions and outages impact public welfare as safe drinking water is critical. - A break in essential and effective wastewater collection and treatment is a health concern, potentially spreading disease. - Exposure to untreated wastewater is harmful to people and the environment. - Any service disruptions can negatively impact or delay emergency management operations.

Within the Aransas County planning area, a total of 647 fire events were reported from 2005 through 2021 by Texas A&M Forest Service. All events were suspected wildfires. Historic loss and annualized estimates of acres burned due to wildfires are presented in Table 15-7 below. The average frequency is approximately 38 events every year.

Table 15-7. Average Annualized Acreage Losses¹¹

JURISDICTION	TOTAL ACRES BURNED	AVERAGE ANNUAL ACRE LOSSES
Aransas County	8,090	476
Town of Fulton	341	20
City of Rockport	305	18
TOTALS	8,736	514

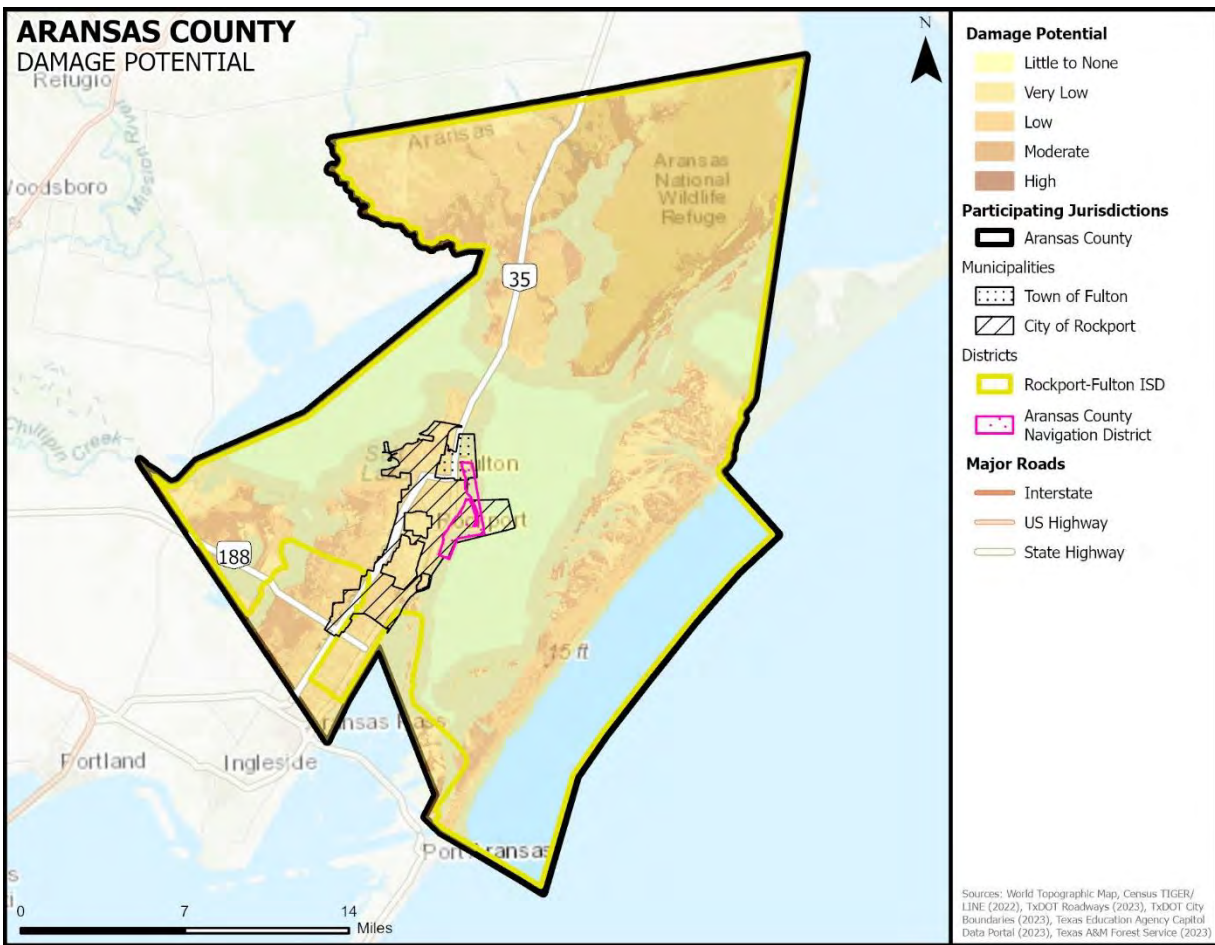
Damage Potential provides an index of potential damage to homes from wildfire. It considers factors like flame length and embers lofted from nearby fuel. Damage Potential is a relative index (from low to high), that provides a broad measure of the possible damage from wildfire, based generally on the landscape, rather than specific characteristics of a home or parcel. For planning uses and broad applications, the index is calculated for all areas regardless of whether a structure currently exists at that location. This index does not incorporate a measure of wildfire likelihood.¹² Figures 15-14 through 15-18 show the level of potential damage of wildfires in the Aransas County planning area.

¹¹ Events divided by 17 years of data.

¹² TxWRAP portal at the following site: <https://texaswildfirerisk.com/>

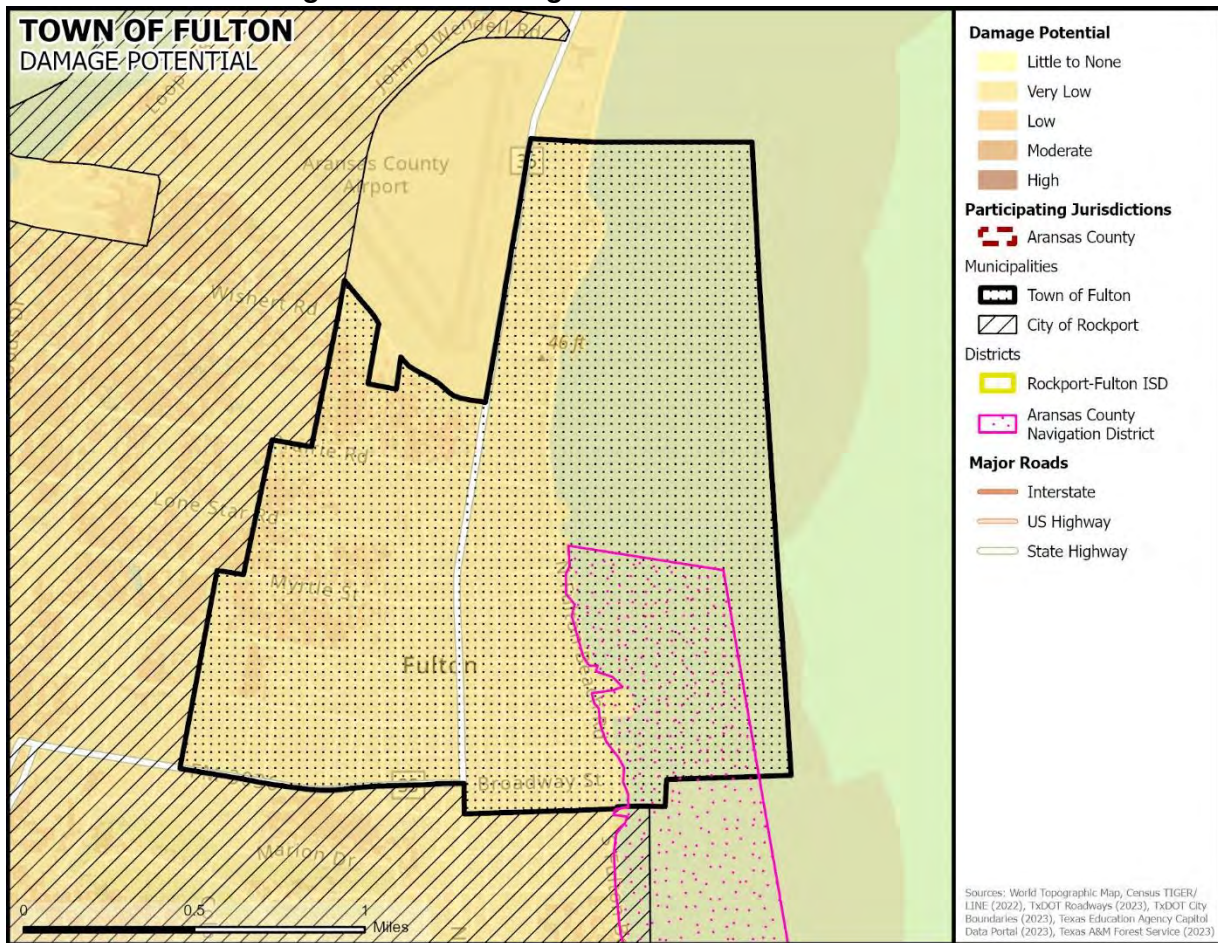
SECTION 15: WILDFIRE

Figure 15-14. Damage Potential – Aransas County



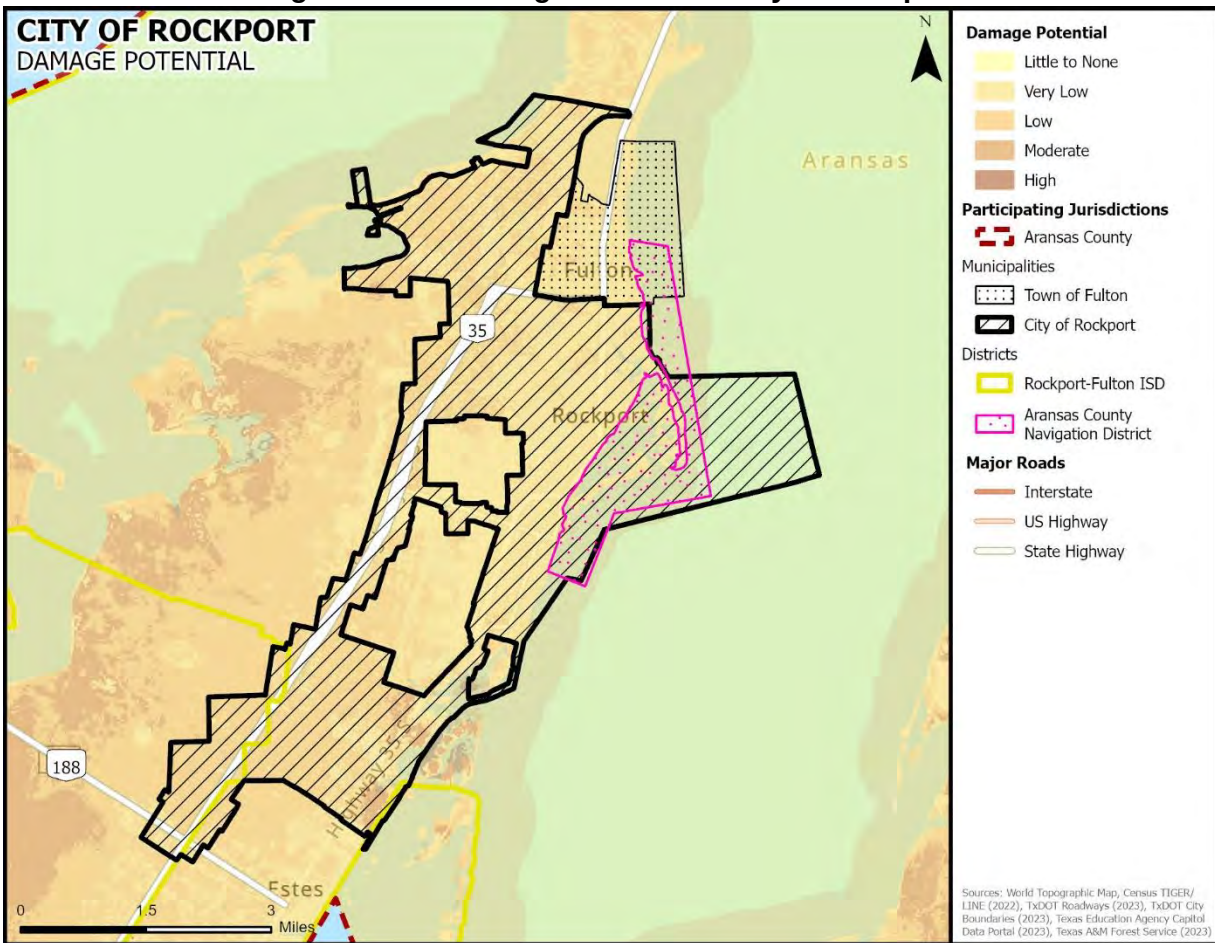
SECTION 15: WILDFIRE

Figure 15-15. Damage Potential – Town of Fulton



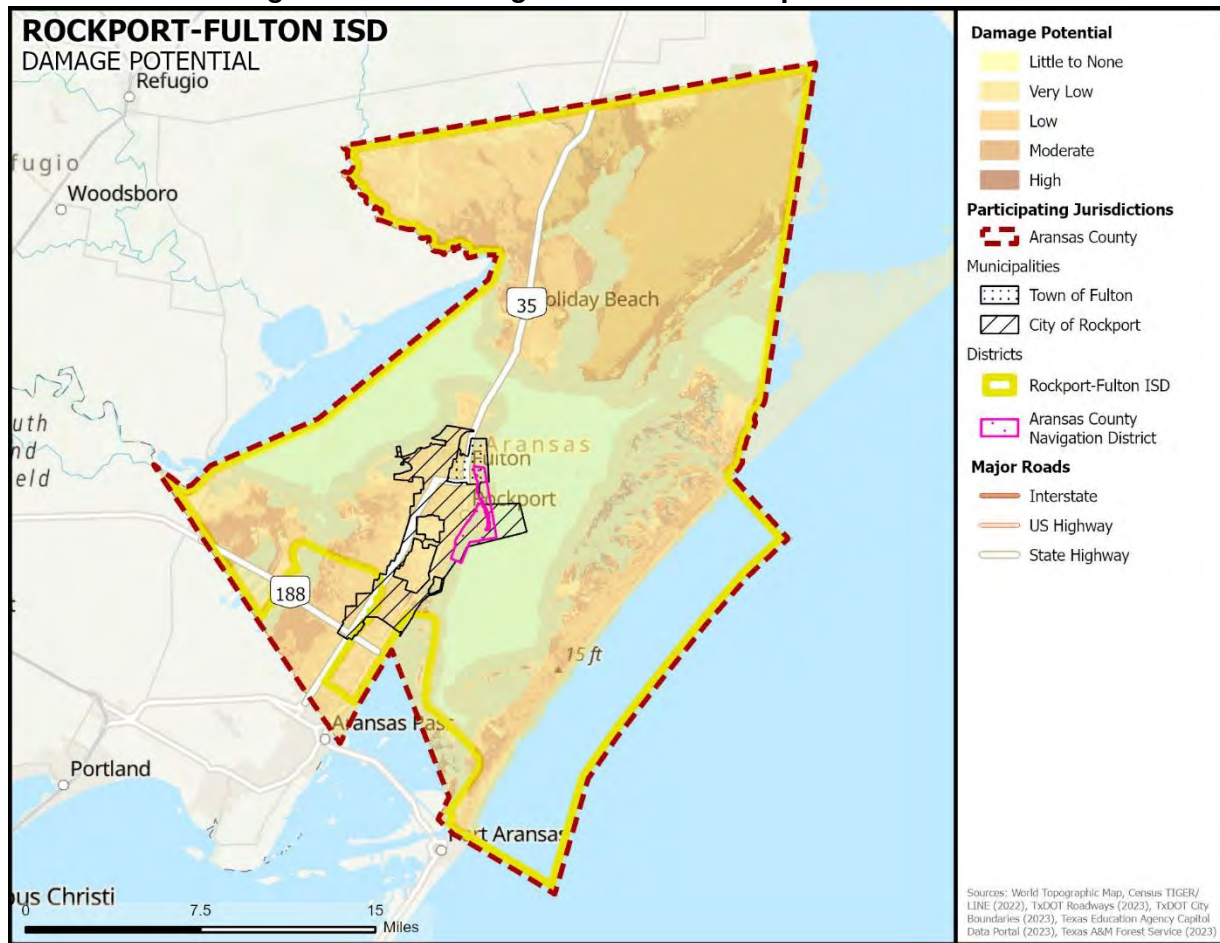
SECTION 15: WILDFIRE

Figure 15-16. Damage Potential – City of Rockport



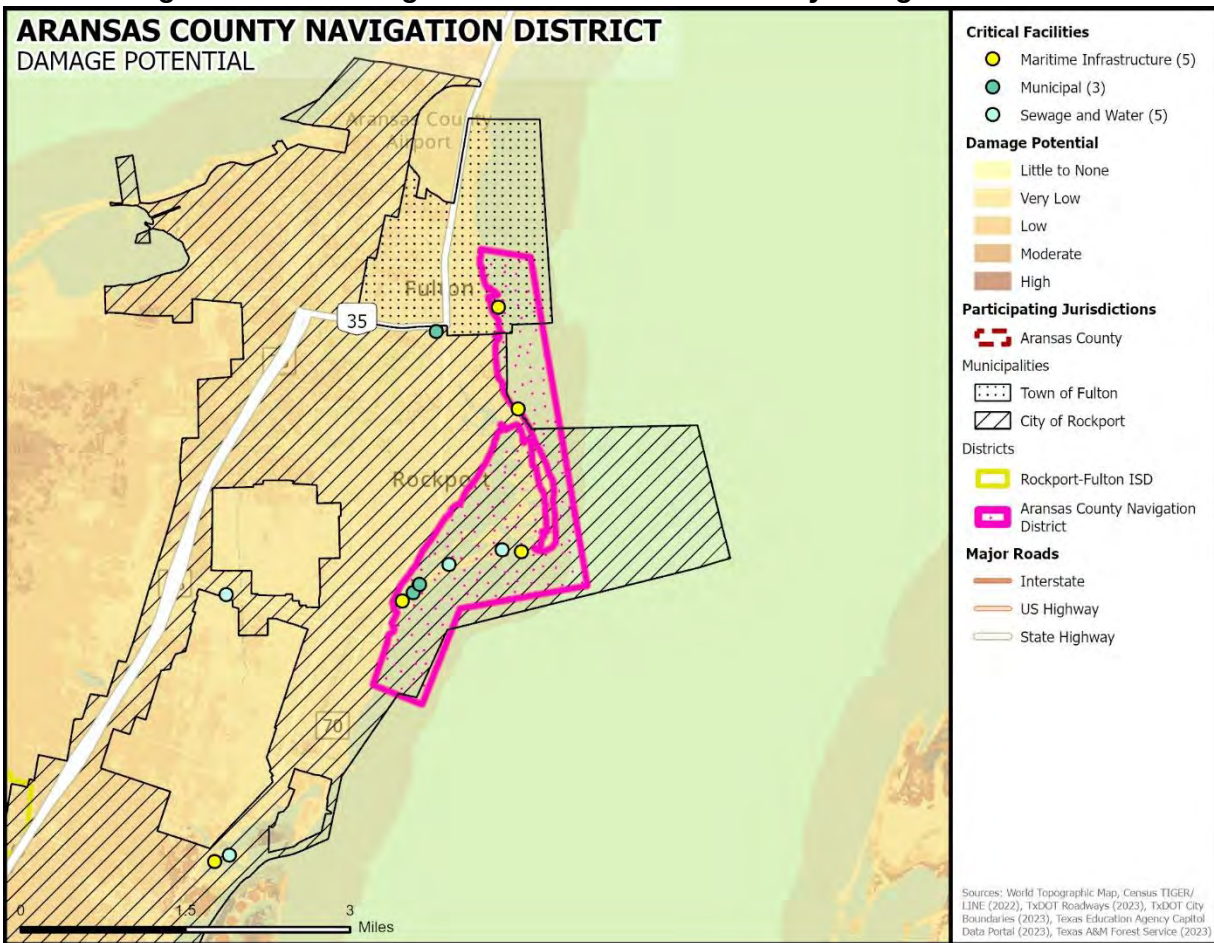
SECTION 15: WILDFIRE

Figure 15-17. Damage Potential – Rockport-Fulton ISD



SECTION 15: WILDFIRE

Figure 15-18. Damage Potential – Aransas County Navigation District

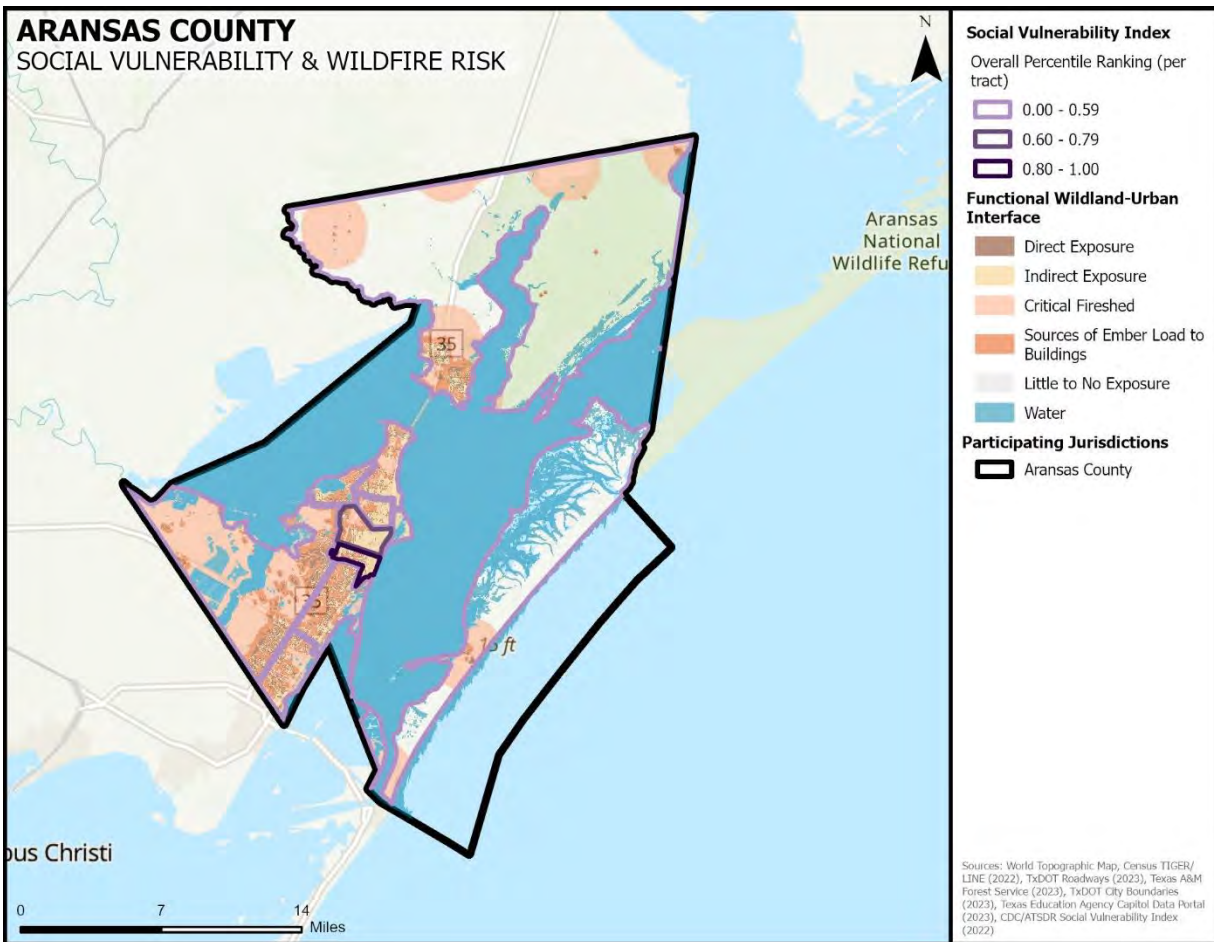


Diminished air quality is an environmental impact that can result from a wildfire event and pose a potential health risk. Wildfire smoke plumes may contain carcinogenic particles that can be inhaled. Fine particles of invisible soot and ash that are too small for the respiratory system to filter can cause immediate and possibly long-term health effects. The elderly or those individuals with compromised respiratory systems may be more vulnerable to the effects of diminished air quality after a wildfire event.

The Center for Disease Control (CDC) created a Social Vulnerability Index (SVI) which includes a database and mapping application that identifies and quantifies communities experiencing social vulnerability. The current CDC SVI uses 16 U.S. census variables from the 5-year American Community Survey (ACS) to identify communities that may need support before, during, or after disasters. All 16 variables fall under four broad categories including socioeconomic status (population in poverty, unemployment, etc.), household characteristics (age, disability status, etc.), racial and ethnic minority status, and housing type and transportation (mobile homes, no vehicles, etc.). Populations experiencing social vulnerability may be adversely impacted by natural hazards, disasters, and other community-level stressors. Figure 15-19 identifies areas of social vulnerability using the CDC's SVI and where these areas overlap with the Aransas County WUI areas, where wildfire risk is considered the highest.

SECTION 15: WILDFIRE

Figure 15-19. Aransas County's Social Vulnerability and WUI



Climatic conditions such as severe freezes and drought can significantly increase the intensity of wildfires since these conditions kill vegetation, creating a prime fuel source for wildfires. The intensity and rate at which wildfires spread are directly related to wind speed, temperature, and relative humidity.

The severity of impact from major wildfire events can be substantial. Such events can cause multiple deaths, shut down facilities for 30 days or more, and cause more than 50 percent of affected properties to be destroyed or suffer major damage.

For the Aransas County planning area, including all participating jurisdictions, the ISD and special district, the impact from a wildfire event can be considered "Limited," meaning injuries and/or illnesses are typically treatable with first-aid, complete shutdown of facilities and services for 24 hours or less and less than 10 percent of property is destroyed or with major damage. The severity of impact is gauged by acreage burned, homes and structures lost, injuries and fatalities.

SECTION 15: WILDFIRE

Table 15-8. Impact for Aransas County

JURISDICTION	IMPACT	DESCRIPTION
Aransas County	Limited	A majority of the county (37 percent) is in the “very low” damage potential category. In addition, 19 percent is in the “little to none” category, 33 percent is in the “low” category, 11 percent is in the “Moderate” category, 0 percent is in the “High” category, and 0 percent is in the “Very High” category. County residents may suffer injuries that do not result in permanent disability. Critical facilities could be shut down for more than one week, and more than 10 percent of total property could be damaged.
Town of Fulton	Limited	A majority of the town (88 percent) is in the “very low” damage potential category. In addition, 0 percent is in the “little to none” category, 12 percent is in the “low” category, 0 percent is in the “Moderate” category, 0 percent is in the “High” category, and 0 percent is in the “Very High” category. Town residents may suffer injuries that do not result in permanent disability. Critical facilities could be shut down for more than one week, and more than 10 percent of total property could be damaged.
City of Rockport	Limited	A majority of the city (68 percent) is in the “very low” damage potential category. In addition, 9 percent is in the “little to none” category, 22 percent is in the “low” category, 2 percent is in the “Moderate” category, 0 percent is in the “High” category, and 0 percent is in the “Very High” category. City residents may suffer injuries that do not result in permanent disability. Critical facilities could be shut down for more than one week, and more than 10 percent of total property could be damaged.
Rockport-Fulton ISD	Limited	The Rockport-Fulton ISD has three facilities located within the WUI and has a moderate risk of wildfire. Students and staff could be injured or suffer illnesses, but not permanent disability. Critical facilities could be shut down for up to one week, and more than 10 percent of total property could be damaged.
Aransas County Navigation District	Limited	The Aransas County Navigation District has one facility located within the WUI and has a moderate risk of wildfire. Personnel could be injured or suffer illnesses, but not permanent disability. Critical facilities and community services could be shut down for up to one week, and more than 10 percent of total property could be damaged.

SECTION 15: WILDFIRE

ASSESSMENT OF IMPACTS

A wildfire event poses a potentially significant risk to public health and safety, particularly if the wildfire is initially unnoticed and spreads quickly. The impacts associated with wildfire are not limited to direct damage. Significant wildfire events can be frequently associated with a variety of impacts, including:

- The Aransas County planning area contains numerous open space areas. Wildfire may adversely affect or destroy endangered species' habitat, reduce air quality, increase erosion and risk of flash flooding, contribute to increased local temperatures, and disrupt other ecological functions.
- Recreation activities throughout the county and city parks may be unavailable and tourism can be unappealing for years following a large wildfire event, devastating directly related local businesses and negatively impacting economic recovery.
- Persons, pets, and wildlife in the area at the time of the fire are at risk for injury or death from burns and/or smoke inhalation. First responders are at greater risk of physical injury when in close proximity to the hazard while extinguishing flames, protecting property, or evacuating residents in the area.
- First responders can experience heart disease, respiratory problems, and other long-term related illnesses from prolonged exposure to smoke, chemicals, and heat.
- Emergency services may be disrupted during a wildfire if facilities are impacted, roadways are inaccessible, or personnel are unable to report for duty.
- Critical county and city departments may not be able to function and provide necessary services depending on the location of the fire and the structures or personnel impacted.
- Non-critical businesses may be directly damaged, suffer loss of utility services, or be otherwise inaccessible, delaying normal operations and slowing the recovery process.
- Displaced residents may not be able to immediately return to work, slowing economic recovery.
- Roadways in or near the WUI could be damaged or closed due to smoke and limited visibility.
- Older homes are generally exempt from modern building code requirements, which may require fire suppression equipment in the structure. An estimated 28 percent (4,467 structures) of homes in the planning area were built before 1980. Similarly, historic buildings may lack fire mitigation materials or measures due to their historic status. There are seven historical sites listed on the National Register of Historic Places for Aransas County.
- Some high-density neighborhoods feature small lots with structures close together, increasing the potential for fire to spread rapidly.
- Air pollution from smoke may exacerbate respiratory problems of vulnerable residents.
- Charred ground after a wildfire cannot easily absorb rainwater, increasing the risk of flooding and potential mudflows.
- Wildlife may be displaced or destroyed.
- Historical or cultural resources may be damaged or destroyed.
- Tourism can be significantly disrupted, further delaying economic recovery for the area.
- Economic disruption negatively impacts the programs and services provided by the community due to short- and long-term loss in revenue.

SECTION 15: WILDFIRE

- Fire suppression costs can be substantial, exhausting the financial resources of the community.
- Residential structures lost in wildfire may not be rebuilt for years, reducing the tax base for the community.
- Direct impacts to municipal water supply may occur through contamination of ash and debris during the fire, destruction of aboveground delivery lines, and soil erosion or debris deposits into waterways after the fire.

The economic and financial impacts of a wildfire event on local government will depend on the scale of the event, what is damaged, costs of repair or replacement, lost business days in impacted areas, and how quickly repairs to critical components of the economy can be implemented. The level of preparedness and pre-event planning done by the community, local businesses, and citizens will contribute to the overall economic and financial conditions in the aftermath of a wildfire event.



SECTION 16 **WINTER STORM**

SECTION 16: WINTER STORM

Hazard Description	1
Location	3
Extent	3
Historical Occurrences	5
Significant Events	6
Probability of Future Events	7
Climate Change Considerations	7
Vulnerability and Impact	8
Assessment of Impacts	11

HAZARD DESCRIPTION



A severe winter storm event is identified as a storm with snow, ice, or freezing rain. This type of storm can cause significant problems for area residents. Winter storms are associated with freezing or frozen precipitation such as freezing rain, sleet, snow, and the combined effects of winter precipitation and strong winds. Wind chill is a function of temperature and wind. Low wind chill is a product of high winds and freezing temperatures.

Winter storms that threaten the Aransas County planning area usually begin as powerful cold fronts that push south from central Canada. Although the county is at risk of ice hazards, extremely cold temperatures, and snow, the effects and frequencies of winter storm events are generally mild and short-lived.

As indicated in Figure 16-1, the Aransas County planning area is located in USDA Hardiness Zone 9b and 10a, indicating annual minimum temperatures between 25°F and 35°F. During times of ice and snow accumulation, response times will increase until public works road crews are able to make major roads passable. Table 16-1 describes the types of winter weather possible to occur in the Aransas County planning area.

SECTION 16: WINTER STORM

Figure 16-1. Annual Minimum Temperature¹

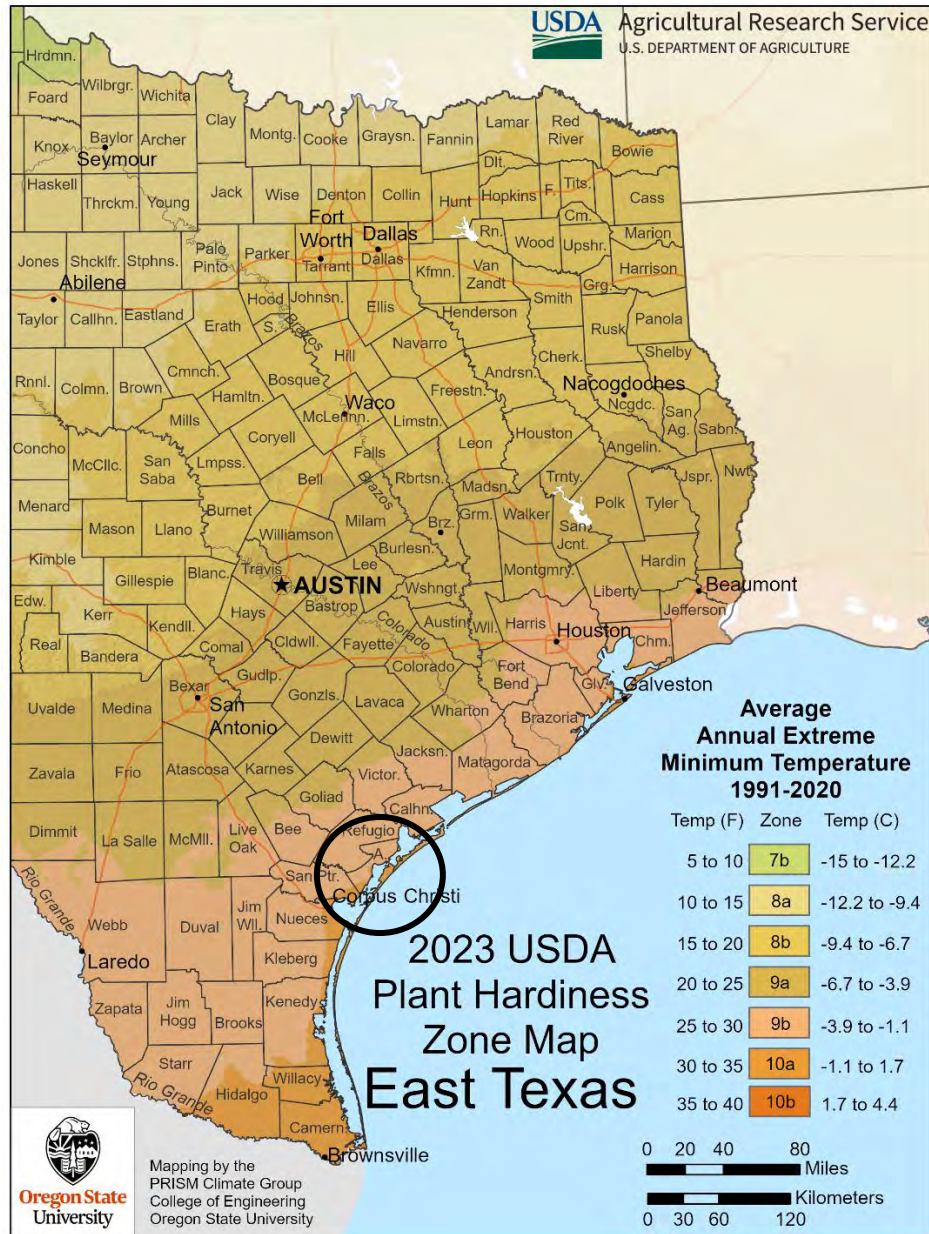


Table 16-1. Types of Winter Weather

TYPE OF WINTER WEATHER	DESCRIPTION
Freezing Rain or Freezing Drizzle	Rain or drizzle is likely to freeze upon impact, resulting in a coating of ice glaze on roads and all other exposed objects.

¹ USDA

SECTION 16: WINTER STORM

TYPE OF WINTER WEATHER	DESCRIPTION
Sleet	Small particles of ice usually mixed with rain. If enough sleet accumulates on the ground, it makes travel hazardous.
Blizzard	Sustained wind speeds of at least 35 mph are accompanied by considerable falling or blowing snow. This alert is the most perilous winter storm with visibility dangerously restricted.
Frost/Freeze	Below freezing temperatures are expected and may cause significant damage to plants, crops, and fruit trees.
Wind Chill	A strong wind combined with a temperature slightly below freezing can have the same chilling effect as a temperature nearly 50 degrees lower in a calm atmosphere. The combined cooling power of the wind and temperature on exposed flesh is called the wind-chill factor.

LOCATION

Winter storm events are not confined to specific geographic boundaries. Therefore, all existing and future buildings, facilities, and populations in the Aransas County planning area are vulnerable to a winter storm hazard and could potentially be impacted.

EXTENT

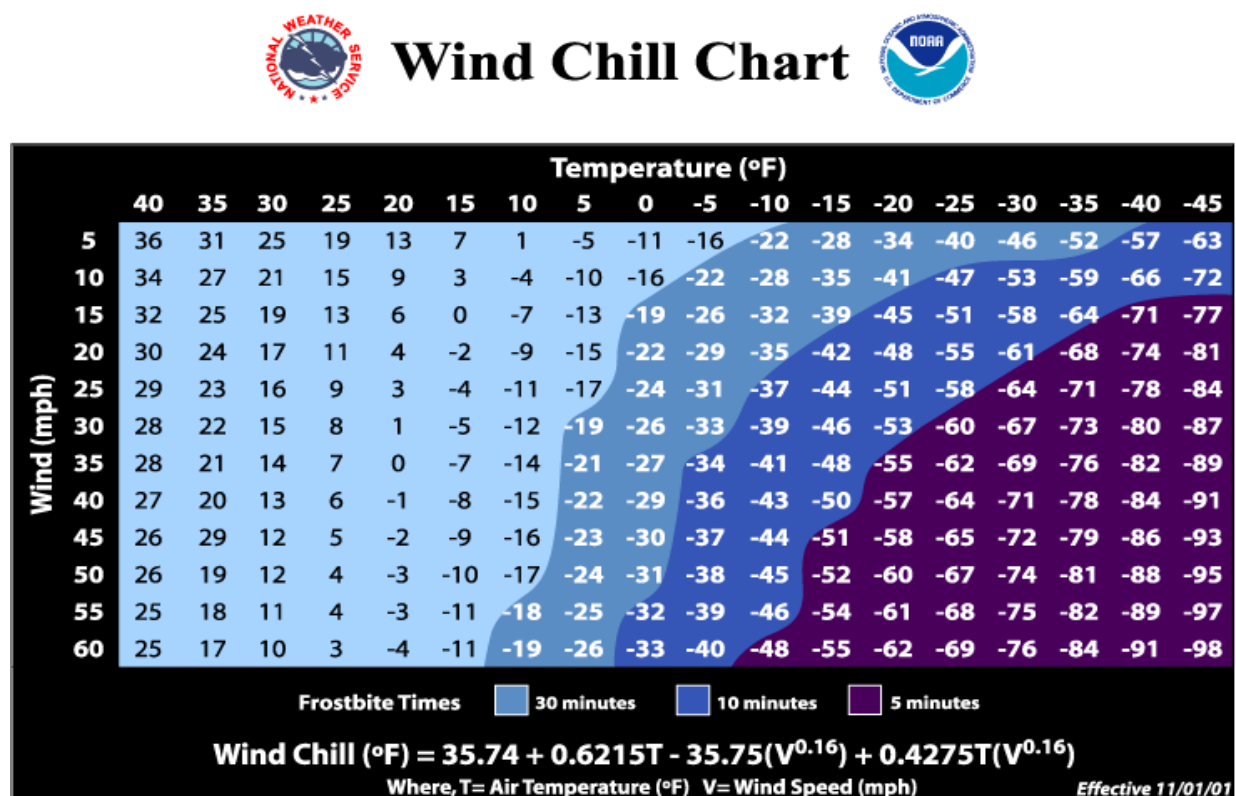
The extent or magnitude of a severe winter storm is measured in intensity based on the temperature and level of accumulations as shown in Table 16-2. Table 16-2 should be read in conjunction with the wind-chill factor described in Figure 16-2 to determine the intensity of a winter storm. The chart is not applicable when temperatures are over 50°F or winds are calm. This is an index developed by the National Weather Service.

Table 16-2. Magnitude of Severe Winter Storms

INTENSITY	TEMPERATURE RANGE (Fahrenheit)	EXTENT DESCRIPTION
Mild	40° – 50°	Winds less than 10 mph and freezing rain or light snow falling for short durations with little or no accumulations
Moderate	30° – 40°	Winds 10 – 15 mph and sleet and/or snow up to 4 inches
Significant	25° – 30°	Intense snow showers accompanied with strong gusty winds between 15 and 20 mph with significant accumulation
Extreme	20° – 25°	Wind driven snow that reduces visibility, heavy winds (between 20 to 30 mph), and sleet or ice up to 5 millimeters in diameter
Severe	Below 20°	Winds of 35 mph or more and snow and sleet greater than 4 inches

SECTION 16: WINTER STORM

Figure 16-2. Wind Chill Chart



Wind chill temperature is a measure of how cold the wind makes real air temperature feel to the human body. Since wind can dramatically accelerate heat loss from the body, a blustery 30°F day would feel just as cold as a calm day with 10°F temperatures. The Aransas County planning area has 11 previous occurrences recorded from 1996 through 2024 in the National Centers for Environmental Information (NCEI) Storm Events Database. The planning area has never experienced a blizzard, but it has been subject to heavy snow, frost / freeze, ice storm, cold / wind chill, and winter weather.

The average number of cold days is similar for the entire planning area, with the average low for winter months being above 50°F². The intensity or extent of a winter storm event to be mitigated for the area ranges from moderate to severe according to the definitions in Table 16-2. The Aransas County planning area can expect anywhere between 0.1 to 0.2 inches of ice and 0.1 to 6.0 inches of snow during a winter storm event, and temperatures between 25°F and 35°F with winds ranging from 0 to over 50 mph. During a heavy snow event in December 2004, the City of Rockport reported heavy snow up to 6.0 inches. During Winter Storm Uri in February 2021, several days of persistent below-freezing temperatures and ice accumulations averaging 0.1 to 0.2 inches were reported in Aransas County. These are likely the greatest extent the planning area can anticipate in the future, based on historical events.

The National Weather Service issues a winter storm watch, advisory or warning in advance of an event in order to give people enough time to prepare for an event. Aransas County could be under

² National Weather Service

SECTION 16: WINTER STORM

any of these warning types in advance of a winter storm event. Table 16-3 describes when each warning type would be issued.

Table 16-3. Winter Storm Watch, Advisory, Warning Descriptions

TYPE OF WINTER WEATHER	DESCRIPTION
Winter Weather Advisory	This alert may be issued for a variety of severe conditions. Weather advisories may be announced for snow, blowing or drifting snow, freezing drizzle, freezing rain, or a combination of weather events.
Winter Storm Watch	Severe winter weather conditions may affect your area (freezing rain, sleet, or heavy snow may occur separately or in combination).
Winter Storm Warning	Severe winter weather conditions are imminent.
Freezing Rain or Freezing Drizzle	Rain or drizzle is likely to freeze upon impact, resulting in a coating of ice glaze on roads and all other exposed objects.
Sleet	Small particles of ice usually mixed with rain. If enough sleet accumulates on the ground, it makes travel hazardous.
Blizzard	Sustained wind speeds of at least 35 mph are accompanied by considerable falling or blowing snow. This alert is the most perilous winter storm with visibility dangerously restricted.
Frost/Freeze	Below freezing temperatures are expected and may cause significant damage to plants, crops, and fruit trees.
Wind Chill	A strong wind combined with a temperature slightly below freezing can have the same chilling effect as a temperature nearly 50 degrees lower in a calm atmosphere. The combined cooling power of the wind and temperature on exposed flesh is called the wind-chill factor.

HISTORICAL OCCURRENCES

According to historical records and the best available data there have been eleven recorded winter storm events in the Aransas County planning area. Historical winter storm information, as provided by the NCEI, identifies winter storm activity across a multi-county forecast area for each event. The appropriate percentage of the total property and crop damage reported for the entire forecast area has been allocated to each county impacted by the event, when appropriate. Historical winter storm data for the planning area is provided on a County-wide basis per the NCEI database. Table 16-4 shows historical incident information for the planning area.

Historical winter storm event data for Rockport-Fulton ISD and the Aransas County Navigation District are provided within the Aransas County events. In the NCEI database, these entities do not have events reported separate and apart from the reported county and jurisdiction events. Rockport-Fulton ISD did not report any additional winter storm events or damages that were not captured in the NCEI data. The Aransas County Navigation District stated that they have sustained damage from winter storms in the past when below freezing temperatures last over 6 hours. This includes damages to exposed piping systems on the docks and piers, landscaping, and nature sites, though specific monetary damages and details are unavailable.

SECTION 16: WINTER STORM

Table 16-4. Historical Winter Storm Events, 1996 – 2024³

JURISDICTION	DATE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Aransas County	12/24/2004	0	0	\$0	\$0
Aransas County	01/08/2010	0	0	\$0	\$0
Aransas County	02/03/2011	0	0	\$0	\$0
Aransas County	12/07/2017	0	0	\$0	\$0
Aransas County	02/14/2021	0	0	\$120,800	\$0
Aransas County	02/16/2021	0	0	\$0	\$0
Aransas County	02/03/2022	0	0	\$0	\$0
Aransas County	02/04/2022	0	0	\$0	\$0
Aransas County	02/04/2022	0	0	\$0	\$0
Aransas County	12/22/2022	0	0	\$0	\$0
Aransas County	12/22/2022	0	0	\$0	\$0
TOTALS	11	0	0	\$120,800	

Table 16-5. Historical Winter Storm Events Summary, 1996 –2024

JURISDICTION	NUMBER OF EVENTS	DEATHS	INJURIES	PROPERTY DAMAGES	CROP DAMAGES
Aransas County	11	0	0	\$120,800	\$0

Based on the list of historical winter storm events for the Aransas County planning area, eight of the events have occurred since the 2020 Plan.

SIGNIFICANT EVENTS

February 13, 2021 – Winter Storm Uri (Dr-4586)

Winter Storm Uri was one of the most impactful winter events in the state's history. The winter storm event lasted a week and brought snow, sleet, and freezing rain to much of the State of Texas. The presence of the storm began on February 10, 2021, when a cold front brought a surge of cold air to the Area. On February 13th, the winter storm hit the region, including Aransas County, and many areas were placed under a Winter Storm Warning.

Fatalities across the state were attributed to hypothermia, vehicle accidents, carbon monoxide poisoning, and chronic medical conditions complicated by a lack of electricity over several days. Statewide, more than 69 percent of households lost power at some point during the event, with

³ No reports of injuries or fatalities were recorded in the NCEI database. Monetary damages have been inflated to their 2025 value.

SECTION 16: WINTER STORM

average disruptions lasting 42 hours. Water service was also disrupted, with 49 percent of households losing running water with an average disruption of 52 hours.⁴

In Aransas County, freezing temperatures affected the area from the 14th until the 18th. Long duration cold spell led to power outages and issues with water pressure. Damages to homes occurred when frozen pipes burst. Total property damages in Aransas County were estimated at \$120,800 (2025 dollars).

January 19, 2025 – January 24, 2025⁵

Arctic air combined with a coastal low and cold front led to freezing temperatures, wind gusts ranging from 40-50 mph, sleet, freezing rain and snow for the area. Temperatures were near freezing the entire week with the City of Rockport seeing temperatures as low as 20°F on January 22nd. Snow in the coastal area ranged from a dusting to 0.1 inches, with a layer of ice 0.1 inches thick below it. Traveling conditions were hazardous with bridges and overpasses coated with ice. Residents were left without power due to the wind and ice.⁶ Per reports from the Planning Team, this winter storm also led to several automobile accidents, including one car rollover.

PROBABILITY OF FUTURE EVENTS

According to historical records, the Aransas County planning area is expected to experience approximately one winter storm event every two to three years. The probability of a future winter storm event affecting the Aransas County planning area is considered “Likely,” with a winter storm probable within the next three years.

CLIMATE CHANGE CONSIDERATIONS

Climate change is expected to reduce the number of extreme cold events statewide but increase in the variability of events.⁷ Extreme cold events will continue to be possible but overall winters are becoming milder, and the frequency of extreme winter weather events are decreasing due to the warming of the Arctic and less extreme cold air coming from that region.⁸ A trend that is expected to continue with winter extremes estimated to be milder by 2036 compared to extremes in the historic record.⁹

⁴ Donald, Jess. “Winter Storm Uri. The Economic Impact of the Storm.” October 2021. Fiscal Notes. Texas Comptroller of Public Accounts. <https://comptroller.texas.gov/economy/fiscal-notes/2021/oct/winter-storm-impact.php>

⁵ This event falls outside of the 1996-2024 reporting period for this risk assessment, and event data is not yet available in the NCEI database. It has been included here in narrative form to create the most current and comprehensive profile possible.

⁶ Source: <https://www.kiiitv.com/article/weather/weather-impact/2025-arctic-blast-in-south-texas/503-235bc202-2c6c-4ce5-b1ff-e8d608a8e877#:~:text=Next%20up%20in%205,hot%20spot%20in%20Port%20Aransas.>

⁷ Fourth National Climate Assessment. Chapter 23 Southern Great Plains. U.S. Global Change Program. 2018.

⁸ Assessment of Historic and Future Trends of Extreme Weather in Texas, 1900-2036, Texas A&M University Office of the Texas State Climatologist, 2021 update.

⁹ Assessment of Historic and Future Trends of Extreme Weather in Texas, 1900-2036, Texas A&M University Office of the Texas State Climatologist, 2021 update.

SECTION 16: WINTER STORM

VULNERABILITY AND IMPACT

During periods of extreme cold and freezing temperatures, water pipes can freeze and crack, and ice can build up on power lines, causing them to break under the weight or causing tree limbs to fall on the lines. These events can disrupt electric service for long periods.

An economic impact may occur due to increased consumption of heating fuel, which can lead to energy shortages and higher prices. House fires and resulting deaths tend to occur more frequently from increased and improper use of alternate heating sources. Fires during winter storms also present a greater danger because water supplies may freeze and impede firefighting efforts.

The Aransas County Planning Team identified the following critical facilities (Table 16-6) as assets that are considered the most important to the planning area and are susceptible to a range of impacts caused by winter storm events. For a comprehensive list of critical facilities by participating jurisdiction, please see Appendix D.

Table 16-6. Critical Facilities Vulnerable to Winter Storm Events

CRITICAL FACILITIES	POTENTIAL IMPACTS
Emergency Response Services (EOC, Fire, Police, EMS), Hospitals and Medical Centers	• Emergency operations, services and response times may be significantly impacted due to power outages, and/or loss of communications. • Exposure to extreme cold can cause illnesses in first responders if exposed for a period of time. • Roads may become impassable due to snow and/or ice impacting response times by emergency services. • Extended power outages due to increased usage may lead to possible looting, destruction of property, and theft, further burdening law enforcement resources.
Airport, Academic Institutions, Animal Shelter, Evacuation Centers & Shelters, Governmental Facilities, Residential/ Assisted Living Facilities	• Power outages due to increased usage could disrupt critical care. • Backup power sources could be damaged. • Increased number of patients due to exposure to cold temperatures could lead to a strain on staff. • Water pipes can freeze and burst leading to flooding within facilities. • Facilities, infrastructure, or critical equipment including communications may be damaged, destroyed or otherwise inoperable. • Essential supplies like medicines, water, food, and equipment deliveries may be delayed. • Economic disruption due to power outages negatively impact airport services as well as area businesses reliant on airport operations. • Exposure risks to outdoor workers.

SECTION 16: WINTER STORM

CRITICAL FACILITIES	POTENTIAL IMPACTS
Commercial Supplier (food, fuel, etc.)	- Facilities, infrastructure, or critical equipment including communications may be damaged, destroyed or otherwise inoperable. - Essential supplies like medicines, water, food, and equipment deliveries may be delayed.
Utility Services and Infrastructure (electric, water, wastewater, communications)	- Emergency operations, services and response times may be significantly impacted due to power outages, and/or loss of communications. - Roads may become impassable due to snow and/or ice impacting response times by emergency services. - Power outages due to increased usage could disrupt critical care. - Backup power sources could be damaged. - Water pipes can freeze and burst leading to flooding within facilities.

People and animals are subject to health risks from extended exposure to cold air (Table 16-7). Elderly people are at greater risk of death from hypothermia during these events, especially in the neighborhoods with older housing stock. According to the U.S. Center for Disease Control, every year hypothermia kills about 600 Americans, half of whom are 65 years of age or older.

Due to factors like limited mobility, communication difficulties, medical needs, sensitivity to cold temperatures, reliance on support services, transportation challenges, housing accessibility issues, and possible shortages in emergency shelter accommodations, people with disabilities are particularly vulnerable to winter storms. Inclusive measures are crucial to address these vulnerabilities and ensure their safety during severe weather events.

Populations living below the poverty level may not be able to afford to run heat on a regular basis or an extended period of time. In addition, people who speak a language other than English may face increased vulnerability due to language barriers that limit their access to important information such as weather-related warnings and instructions regarding safety measures.

The population over 65 in the Aransas County planning area is estimated at 28 percent of the total population and children under the age of 5 are estimated at 4 percent. The population with a disability is estimated at 18 percent of the total population. An estimated 19 percent of the planning area population live below the poverty level and 2 percent of the populations speaks English less than 'very well' (Table 16-7).

Table 16-7. Populations at Greater Risk of Winter Storm Events¹⁰

JURISDICTION	POPULATION				
	65 AND OLDER	UNDER 5	WITH A DISABILITY	BELOW POVERTY LEVEL	NON-ENGLISH SPEAKING
Aransas County	6,844	1,079	4,402	4,572	513
Town of Fulton	534	0	408	100	0

¹⁰ U.S. Census Bureau 2023 data for Aransas County

SECTION 16: WINTER STORM

JURISDICTION	POPULATION				
	65 AND OLDER	UNDER 5	WITH A DISABILITY	BELOW POVERTY LEVEL	NON-ENGLISH SPEAKING
City of Rockport	3,018	527	1,681	1,630	240

Rockport-Fulton ISD and the Aransas County Navigation District (ACND) also have vulnerable populations based on age or work location, such as employees that work outdoors and may be subject to severe weather conditions, or children under 5 who attend school at the participating ISD (Table 16-8).

Table 16-8. Populations at Greater Risk by Participating Special District

SPECIAL DISTRICT	YOUTH (under 5)	EMPLOYEES OPERATING OUTDOORS
Fulton-Rockport ISD	130	100
Aransas County Navigation District (ACND)	-	26

Older homes tend to be more vulnerable to the impacts of winter storm events. Approximately, 28 percent (4,467 structures) of the housing units in the planning area were built before 1980 (Table 16-9).

Table 16-9. Structures at Greater Risk of Winter Storm Events

JURISDICTION	SFR STRUCTURES BUILT BEFORE 1980
Aransas County	4,467
Town of Fulton	235
City of Rockport	2,324
Fulton-Rockport ISD	30
Aransas County Navigation District	6

Winter Storms have been known to cause injury to humans and occasionally have been fatal; there have been no reports of injuries or fatalities as a result of winter storms in Aransas County historically. Overall, the total loss estimate of property and crops in the planning area is \$120,800 (in 2025 dollars) with an average annualized loss of \$4,300. Based on historic loss and damages, the impact of winter storm damages on the Aransas County planning area, including all participating jurisdictions, the ISD and special district, can be considered “Limited” severity of impact, meaning minor quality of life lost, critical facilities and services shut down for 24 hours or less, and less than 10 percent of property destroyed or with major damage.

SECTION 16: WINTER STORM

Table 16-10. Winter Storm Event Damage Totals, 1996 - 2024

JURISDICTION	PROPERTY & CROP LOSS	AVERAGE ANNUAL LOSS ESTIMATES
Aransas County	\$120,800	\$4,300

ASSESSMENT OF IMPACTS

The greatest risk from a winter storm hazard is to public health and safety. The impact of climate change could produce longer, more intense winter storm events, exacerbating the current winter storm impacts. Worsening winter storm conditions can be frequently associated with a variety of impacts, including:

- Vulnerable populations, particularly the elderly (28 percent of total population), children under 5 (4 percent of total population), and those with a disability (18 percent of total population), can face serious or life-threatening health problems from exposure to extreme cold including hypothermia and frostbite.
- Loss of electric power or other heat source can result in increased potential for fire injuries or hazardous gas inhalation because residents burn candles for light or use fires or generators to stay warm.
- Response personnel, including utility workers, public works personnel, debris removal staff, tow truck operators, and other first responders, are subject to injury or illness resulting from exposure to extreme cold temperatures.
- Response personnel would be required to travel in potentially hazardous conditions, elevating the life safety risk due to accidents and potential contact with downed power lines.
- The Aransas County planning area features multiple bridges which may become dangerous or impassable during treacherous driving conditions caused by winter storms and ice accumulation.
- Operations or service delivery may experience impacts from electricity blackouts due to winter storms.
- Power outages are possible throughout the planning area due to downed trees and power lines and/or rolling blackouts.
- Critical facilities without emergency backup power may not be operational during power outages.
- Emergency response and service operations may be impacted by limitations on access and mobility if roadways are closed, unsafe, or obstructed.
- Hazardous road conditions will likely lead to increases in automobile accidents, further straining emergency response capabilities.
- Depending on the severity and scale of damage caused by ice and snow events, damage to power transmission and distribution infrastructure can require days or weeks to repair.
- Winter storms can reduce the efficacy of shaded fuel breaks for wildfire mitigation as treated areas were more likely to have downed trees and limbs than untreated areas.
- Winter storms can result in damage to endangered species habitat and increased fuel loads within forested habitats.

SECTION 16: WINTER STORM

- Older structures built to less stringent building codes may suffer greater damage as they are typically more vulnerable to impacts of winter storm events. Approximately 28 percent of homes in the County were built before 1980. Similarly, historic buildings and sites are placed at a higher risk of impact due to materials used and the inability to change properties due to their historic status. There are seven historical sites listed on the National Register of Historic Places for Aransas County.
- Schools may be forced to shut early due to treacherous driving conditions.
- Exposed water pipes may be damaged by severe or late season winter storms at both residential and commercial structures, causing significant damages.

The economic and financial impacts of winter weather on the community will depend on the scale of the event, what is damaged, and how quickly repairs to critical components of the economy can be implemented. The level of preparedness and pre-event planning done by the community, local businesses, and citizens will also contribute to the overall economic and financial conditions in the aftermath of a winter storm event.



SECTION 17 **MITIGATION STRATEGY**

SECTION 17: MITIGATION STRATEGY

Mitigation Goals	1
Goal 1.....	1
Goal 2.....	1
Goal 3.....	2
Goal 4.....	2
Goal 5.....	2
Goal 6.....	2
Goal 7.....	3

MITIGATION GOALS

Based on the results of the risk and capability assessments, the Planning Team developed and prioritized the mitigation strategy. This involved utilizing the results of both assessments and reviewing the goals and objectives that were included in the previous 2020 Plan. At the Mitigation Workshop in March 2025, Planning Team members reviewed the mitigation strategy from the previous Plan. The consensus among all members present was that the strategy developed for the 2020 Plan required some changes including expanding on existing goals and the addition of a goal around equity and vulnerable populations.

GOAL 1

Protect public health and safety.

OBJECTIVE 1.1

Advise the public about health and safety precautions to guard against injury and loss of life from hazards.

OBJECTIVE 1.2

Maximize utilization of the latest technology to provide adequate warning, communication, and mitigation of hazard events.

OBJECTIVE 1.3

Reduce the danger to and enhance protection of high-risk areas during hazard events.

OBJECTIVE 1.4

Protect critical facilities and services.

GOAL 2

Build and support local capacity and commitment to continuously become less vulnerable to hazards.

OBJECTIVE 2.1

Foster ongoing local partnerships and collaborations to improve long-term vulnerability to hazards.

OBJECTIVE 2.2

Establish a cadre of committed volunteers to safeguard the community before, during, and after a disaster.

SECTION 17: MITIGATION STRATEGY

OBJECTIVE 2.3

Incorporate hazard mitigation concerns into county, city, town, ISD, and special district planning and budgeting processes.

GOAL 3

Increase public understanding, support, and demand for hazard mitigation.

OBJECTIVE 3.1

Heighten public awareness regarding the full range of natural hazards the public may face.

OBJECTIVE 3.2

Educate the public on actions they can take to prevent or reduce the loss of life or property from all hazards and increase individual efforts to respond to potential hazards.

OBJECTIVE 3.3

Publicize and encourage the adoption of appropriate hazard mitigation measures.

GOAL 4

Protect new and existing properties.

OBJECTIVE 4.1

Reduce National Flood Insurance Program (NFIP) repetitive loss occurrences through increased mitigative intervention to structures that have been identified to have sustained repeated damage from hazards.

OBJECTIVE 4.2

Use the most cost-effective approach to protect existing buildings and public infrastructure from hazards.

OBJECTIVE 4.3

Enact and enforce regulatory measures to ensure that future development will not endanger or increase threats to people and existing properties.

GOAL 5

Maximize the resources for investment in hazard mitigation.

OBJECTIVE 5.1

Maximize the use of outside sources of funding.

OBJECTIVE 5.2

Maximize participation of property owners in protecting their properties.

OBJECTIVE 5.3

Maximize insurance coverage to provide financial protection against hazard events.

OBJECTIVE 5.4

Prioritize mitigation projects, based on cost-effectiveness and sites facing the greatest threat to life, health, and property.

GOAL 6

Promote growth in a sustainable manner.

OBJECTIVE 6.1

Incorporate hazard mitigation activities into long-range planning and development activities.

SECTION 17: MITIGATION STRATEGY

OBJECTIVE 6.2

Promote beneficial uses of hazardous areas while expanding open space and recreational opportunities.

OBJECTIVE 6.3

Utilize regulatory approaches to prevent the creation of future hazards to life and property.

GOAL 7

Promote equity and protect vulnerable populations and underserved communities through hazard mitigation activities.

OBJECTIVE 7.1

Allocate resources and funding to implement hazard mitigation activities that directly benefit vulnerable and underserved communities.

OBJECTIVE 7.2

Build and support local partnerships to leverage resources and expertise in addressing hazard-related equity concerns.

OBJECTIVE 7.3

Establish internal decision-making processes that integrate equity into project selection.

OBJECTIVE 7.4

Monitor and evaluate the effectiveness of mitigation activities to ensure equitable outcomes and protection of vulnerable populations.



SECTION 18 **PREVIOUS ACTIONS**

SECTION 18: PREVIOUS ACTIONS

Summary	1
All Participating Jurisdictions.....	2
Unincorporated Aransas County	19
Town of Fulton	49
City of Rockport	53

SUMMARY

This section includes an analysis of the 2020 Aransas County Texas Multi-Jurisdictional Hazard Mitigation Action Plan. Planning Team members were given copies of the previous mitigation actions submitted in the 2020 Aransas County Plan at the Mitigation Strategy Workshop. The Aransas County Navigation District (ACND) was annexed into the Aransas County Texas Multi-Jurisdictional Hazard Mitigation Action Plan on March 26, 2018. ACND formally adopted the Plan on May 4, 2020. The previous HMAP was updated on May 15, 2020. Each participating entity reviewed the previous actions and provided an analysis as to whether the action had been completed, should be deferred for future implementation, or be deleted from the Plan Update. Rockport-Fulton ISD did not participate in the previous plan, therefore they have no previous actions.

SECTION 18: PREVIOUS ACTIONS

ALL PARTICIPATING JURISDICTIONS

All Jurisdictions – Previous Action #1		
	Mitigation Action: Project Title & Description	Design and implement a program for public education. The program will educate citizens on methods of hazard mitigation and risk reduction
	BACKGROUND INFORMATION	
	Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hurricanes & Tropical Storms, Flood, Drought, Windstorm, Extreme Heat, Lightning, Tornadoes, Hailstorms, Wildfire, Winter Storms, Earthquakes, Coastal Erosion
Effect on New/Existing Buildings:	New and existing buildings will benefit from a citizenry that is well-versed in the ways of natural hazard mitigation.
Priority (High, Medium, Low):	High
Cost:	Less than \$2,500
Potential Funding Sources:	County and Municipal Budget
Responsible Agency:	County Office of Emergency Management, Local Emergency Management Offices
Timeline:	1 year to design and implement; outreach messages are reviewed and updated annually.
Incorporation into Existing Plans and Procedures:	Currently included in Capital Improvements Project (CIP) List

2025 ANALYSIS:
Defer action to Plan Update. Amend action verbiage to state, “Implement education and awareness program utilizing media, social media, bulletins, flyers, etc. to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. Include links to weather alerts and departmental phone listings with contact personnel for residents.” Amend action to include all applicable hazards and update cost.

SECTION 18: PREVIOUS ACTIONS

All Jurisdictions – Previous Action #2	
Mitigation Action: Project Title & Description	Hurricane Dome
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hurricanes & Tropical Storms, Flood, Windstorm, Tornadoes
Effect on New/Existing Buildings:	Will address unmet need for staff and first responders to shelter during disaster and will facilitate a more efficient and timely response to residents' needs after a disaster.
Priority (High, Medium, Low):	-
Cost:	\$7,500,000
Potential Funding Sources:	CDBG-MIT
Responsible Agency:	Aransas County Emergency Management
Timeline:	3.5 years; grant application submission anticipated summer of 2020
Incorporation into Existing Plans and Procedures:	To be incorporated into hazard mitigation planning and incident response planning; to be incorporated into Capital Improvement Projects (CIP) list

2025 ANALYSIS:
Defer action to Plan Update for City of Rockport.
Delete action for Aransas County, Town of Fulton, and Aransas County Navigation District; they no longer consider this project a priority.

SECTION 18: PREVIOUS ACTIONS

All Jurisdictions – Previous Action #3	
Mitigation Action: Project Title & Description	Retrofit residences for flooding and wind through mitigation reconstruction
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hurricanes & Tropical Storms, Flood, Windstorm, Tornadoes
Effect on New/Existing Buildings:	Existing buildings will be retrofitted to withstand future hazard events
Priority (High, Medium, Low):	High
Cost:	\$26.7 million
Potential Funding Sources:	County and Municipal Budgets' Pre-Disaster Mitigation (PDM), Hazard Mitigation Grant Program (HMGP)
Responsible Agency:	County and City Floodplain Management Offices
Timeline:	1-3 years to complete reconstruction
Incorporation into Existing Plans and Procedures:	To be incorporated into hazard planning and protection mechanisms, Countywide floodplain management plan

2025 ANALYSIS:
Defer action to Plan Update for Aransas County and City of Rockport. Amend action to include a cost update and verbiage to state "Develop and implement a program to assist residents in applying for residential flood-damage mitigation grants."
Delete action for Town of Fulton and Aransas County Navigation District; they no longer consider this project a priority.

SECTION 18: PREVIOUS ACTIONS

All Jurisdictions – Previous Action #4	
Mitigation Action: Project Title & Description	Digitizing vital records and off-site storage
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Infrastructure, Local Planning and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hurricanes & Tropical Storms, Flood, Windstorm, Tornadoes
Effect on New/Existing Buildings:	Digitizing records enable local government to maintain continuity of operations and protect irreplaceable community records for the benefit of the public welfare
Priority (High, Medium, Low):	High
Cost:	\$1,500,000
Potential Funding Sources:	CDBG-MIT (Application with COG or Regional Partners)
Responsible Agency:	Aransas County Clerk's office in coordination with city secretaries
Timeline:	3 years with CDBG-MIT Hurricane Harvey MIT Competition
Incorporation into Existing Plans and Procedures:	To be incorporated into hazard mitigation planning and long-term planning mechanisms

2025 ANALYSIS:
Defer action to Plan Update. Aransas County used American Rescue Plan Act funds to digitize a large number of County Clerk and District Clerk files. Currently working additional funding avenues to complete. Amend action to include all applicable hazards and verbiage to state, "Implement a process for digitizing..."

SECTION 18: PREVIOUS ACTIONS

All Jurisdictions – Previous Action #5	
Mitigation Action: Project Title & Description	Retrofit commercial properties through floodproofing or drainage infrastructure improvements
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hurricanes & Tropical Storms, Flood
Effect on New/Existing Buildings:	Existing buildings will be retrofitted to withstand future hazard events and improved drainage will prevent future flood damage to structures and infrastructure
Priority (High, Medium, Low):	High
Cost:	\$5 million
Potential Funding Sources:	County and Municipal Budgets; Pre-Disaster Mitigation (PDM), Hazard Mitigation Grant Program (HMGP) , CDBG-MIT Hurricane Harvey
Responsible Agency:	County and City Floodplain Management Offices
Timeline:	1-3 years to complete reconstruction
Incorporation into Existing Plans and Procedures:	To be incorporated into hazard planning and protection mechanism, Countywide floodplain management plan

2025 ANALYSIS:
Defer action to Plan Update for Aransas County and City of Rockport. For Aransas County amend action to include a cost update and verbiage to state “Develop and implement a program to assist local property owners in applying for non-residential flood-damage mitigation grants.”
Complete for Town of Fulton.

SECTION 18: PREVIOUS ACTIONS

All Jurisdictions – Previous Action #6	
Mitigation Action: Project Title & Description	Install hurricane shutters on all critical facilities
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hurricane & Tropical Storms
Effect on New/Existing Buildings:	New and existing buildings and infrastructure will benefit from uninterrupted service from less-hazard- vulnerable critical facilities
Priority (High, Medium, Low):	High
Cost:	\$500,000
Potential Funding Sources:	County and Municipal Budgets, Pre-Disaster Mitigation (PDM), HMGP
Responsible Agency:	County Office of Emergency Management, Local Emergency Management Offices
Timeline:	2 years to design program; shutters inspected annual once installed
Incorporation into Existing Plans and Procedures:	Currently included in CIP List

2025 ANALYSIS:
Defer action to Plan Update for Aransas County.
Delete action for City of Rockport, Town of Fulton and Aransas County Navigation District; they no longer consider this project a priority.

SECTION 18: PREVIOUS ACTIONS

All Jurisdictions – Previous Action #7	
Mitigation Action: Project Title & Description	Create heat exhaustion policies for employees
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Extreme Heat
Effect on New/Existing Buildings:	New and existing building and infrastructure will benefit from uninterrupted service from heat-exhaustion- savvy public employees
Priority (High, Medium, Low):	High
Cost:	Less than \$2,500
Potential Funding Sources:	County and Municipal Budgets
Responsible Agency:	County Office of Emergency Management, Local Emergency Management Offices
Timeline:	1 year to design and implement; education performed annually once the program is implemented.
Incorporation into Existing Plans and Procedures:	To be incorporated into annual public outreach and public education programs

2025 ANALYSIS:
Defer action to Plan Update for Aransas County and City of Rockport. Amend action verbiage to state, "Create and implement..."
Delete action for Town of Fulton and Aransas County Navigation District; they no longer consider this project a priority.

SECTION 18: PREVIOUS ACTIONS

All Jurisdictions – Previous Action #8	
Mitigation Action: Project Title & Description	Create a county-wide wetlands preservation plan
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Local Plan and Regulations, Natural System Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Coastal Erosion, Flood, Hurricanes & Tropical storms
Effect on New/Existing Buildings:	New and existing buildings will benefit from the protection from flooding, storm surge, and coastal erosion that wetlands confer
Priority (High, Medium, Low):	High
Cost:	Less than \$2,500
Potential Funding Sources:	County and Municipal Budgets, CMP
Responsible Agency:	County Office of Emergency Management, Local Emergency Management Offices
Timeline:	1 year to design and implement; plan is reviewed annually for improvement
Incorporation into Existing Plans and Procedures:	To be incorporated into existing natural systems protection plans and mechanisms and coastal preservation plan

2025 ANALYSIS:
Defer action to Plan Update for Aransas County and City of Rockport. Amend action to include a cost update and verbiage to state "Create, adopt, and implement..."
Delete action for Town of Fulton and Aransas County Navigation District; they no longer consider this project a priority.

SECTION 18: PREVIOUS ACTIONS

All Jurisdictions – Previous Action #9	
Mitigation Action: Project Title & Description	Buyouts of RL properties
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood, Hurricanes & Tropical Storms
Effect on New/Existing Buildings:	New and existing structure and infrastructure will not be harmed by the removal of RL properties
Priority (High, Medium, Low):	High
Cost:	\$500,000
Potential Funding Sources:	HMGP, Flood Mitigation Assistance (FMA), CDBG DR
Responsible Agency:	County Office of Emergency Management, Local Emergency Management Offices
Timeline:	Length to buyout existing properties; opportunities for additional buyouts examined annually.
Incorporation into Existing Plans and Procedures:	To be incorporated into existing hazard planning and protection mechanisms, incorporate into real estate disclosure requirements

2025 ANALYSIS:
Defer action to Plan Update for Aransas County. Amend action verbiage to include, “Create, adopt, and implement a process to address properties identified as Repetitive Loss and Severe Repetitive Loss (RL & SRL).” Per Aransas County, revisions should specify residential properties and update to specify steps planning participants that are also NFIP-participating communities can take in order to make Increased Cost of Compliance available outside 1 percent federal floodplain through the adoption of BFE data. Delete action for City of Rockport, Town of Fulton and Aransas County Navigation District; they no longer consider this project a priority.

SECTION 18: PREVIOUS ACTIONS

All Jurisdictions – Previous Action #10	
Mitigation Action: Project Title & Description	Achieve StormReady community certification
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hurricane & Tropical Storms
Effect on New/Existing Buildings:	New and existing structures and infrastructure will benefit from having StormReady community certifications
Priority (High, Medium, Low):	High
Cost:	\$0
Potential Funding Sources:	County and Municipal Budgets; Emergency Management Performance Grant (EMPG)
Responsible Agency:	County Office of Emergency Management, Local Emergency Management Offices
Timeline:	1 year to implement program; annual maintenance and review of program
Incorporation into Existing Plans and Procedures:	To be incorporated into smart growth/growth management plan

2025 ANALYSIS:
Defer action to Plan Update for Aransas County and City of Rockport. Amend action verbiage to state, "Obtain certification in the National Weather Service StormReady Program," update cost, and include all applicable hazards.
Delete action for Town of Fulton and Aransas County Navigation District; they no longer consider this project a priority.

SECTION 18: PREVIOUS ACTIONS

All Jurisdictions – Previous Action #11	
Mitigation Action: Project Title & Description	Design and implement a debris removal program in local drainage systems
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	New and existing buildings and infrastructure will benefit from improved stormwater conveyance
Priority (High, Medium, Low):	High
Cost:	Less than \$2,500
Potential Funding Sources:	Regular County and Municipal Department Budgets
Responsible Agency:	Public Works
Timeline:	1 year to design and implement program; drainage system inspection and maintenance to take place annually
Incorporation into Existing Plans and Procedures:	To be incorporated into floodplain & stormwater management ordinance

2025 ANALYSIS:
Defer action to Plan Update for Aransas County and City of Rockport. Amend Aransas County action verbiage to include, "...including the location of vulnerable drainage systems. This updated plan will list locations in order of priority."
Delete action for Aransas County Navigation District; they no longer consider this project a priority.
Complete for Town of Fulton.

SECTION 18: PREVIOUS ACTIONS

All Jurisdictions – Previous Action #12	
Mitigation Action: Project Title & Description	Get generators and quick connects for all schools and critical facilities - design and implement an emergency generator program for critical facilities and schools
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hurricanes & Tropical Storms, Flood, Drought, Windstorm, Extreme Heat, Lightning, Tornadoes, Hailstorms, Wildfire, Winter Storms, Earthquakes
Effect on New/Existing Buildings:	New and existing critical facilities will benefit by having generators in place before being impacted by a natural hazard. Other new and existing buildings will benefit by having uninterrupted service from critical facilities
Priority (High, Medium, Low):	Medium
Cost:	\$1,500,000
Potential Funding Sources:	Jurisdictional Budget, Planned Renovations, Hazard Mitigation Grant Program (HMGP)
Responsible Agency:	County Office of Emergency Management, Local Emergency Management Offices
Timeline:	4 years to make improvements; annual upkeep and inspection
Incorporation into Existing Plans and Procedures:	To be incorporated into annual maintenance plan for public buildings

2025 ANALYSIS:
Defer action to Plan Update. Generators were part of a TDEM 404 Mitigation Grant. There are three in the process of being installed. Award letters and associated costs for the additional four generators are pending. Amend action verbiage to state, "Acquire and install generators with hard-wired quick connections at all critical facilities, including schools," and include all applicable hazards.

SECTION 18: PREVIOUS ACTIONS

All Jurisdictions – Previous Action #13	
Mitigation Action: Project Title & Description	Create an erosion response plan
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Local Plans and Regulations, Natural Systems Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Coastal Erosion
Effect on New/Existing Buildings:	New and existing buildings and infrastructure will benefit from coastal erosion protection
Priority (High, Medium, Low):	Medium
Cost:	Less than \$2,500
Potential Funding Sources:	County and Municipal Budgets, Coastal Management Program (CMP) grant
Responsible Agency:	County Office of Emergency Management, Local Emergency Management Offices
Timeline:	1 year to design and implement plan; plan reviewed annually once implemented
Incorporation into Existing Plans and Procedures:	To be incorporated into existing hazard planning mechanisms and coastal preservation plan

2025 ANALYSIS:
Defer action to Plan Update for Aransas County and City of Rockport. Amend action verbiage to state, "Create and implement..."
Delete action for Aransas County Navigation District; they no longer consider this project a priority.
Complete for Town of Fulton.

SECTION 18: PREVIOUS ACTIONS

All Jurisdictions – Previous Action #14	
Mitigation Action: Project Title & Description	Install lightning sirens in public spaces of congregation
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Lightning
Effect on New/Existing Buildings:	New and existing buildings will not be negatively impacted by the presence of lightning sirens
Priority (High, Medium, Low):	Medium
Cost:	\$55,000
Potential Funding Sources:	Emergency Management Program Grant (EMPG), HMGP, County and Municipal Budgets
Responsible Agency:	County Office of Emergency Management, Local Emergency Management Offices
Timeline:	1 year to design and install; maintained annually
Incorporation into Existing Plans and Procedures:	To be incorporated into existing hazard planning mechanisms

2025 ANALYSIS:
Defer action to Plan Update. Amend action verbiage to state, “Acquire and implement a hazard warning system. Install early warning sirens throughout the county in public spaces.” Include all applicable hazards and update cost.
Delete action for Aransas County Navigation District; they no longer consider this project a priority.

SECTION 18: PREVIOUS ACTIONS

All Jurisdictions – Previous Action #15	
Mitigation Action: Project Title & Description	Upgrade underground utilities to critical facilities
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hurricanes & Tropical Storms, Windstorms, Hailstorms, Lightning, Tornadoes, Wildfire, Winter Storms, Earthquakes
Effect on New/Existing Buildings:	New and existing buildings and infrastructure will benefit from uninterrupted service from less-hazard- vulnerable critical facilities
Priority (High, Medium, Low):	Medium
Cost:	\$100,000
Potential Funding Sources:	County and Municipal Budgets, Future Bond, CWSRF, DWSRF, HMGP
Responsible Agency:	County Office of Emergency Management, Local Emergency Management Offices
Timeline:	4 years to design and install; services reviewed annually
Incorporation into Existing Plans and Procedures:	To be incorporated into Capital Improvement Project Lists

2025 ANALYSIS:
Defer action to Plan Update for Aransas County and City of Rockport. Amend action to include all applicable hazards and update cost.
Delete action for Aransas County Navigation District; they no longer consider this project a priority.
Complete for Town of Fulton.

SECTION 18: PREVIOUS ACTIONS

All Jurisdictions – Previous Action #16	
Mitigation Action: Project Title & Description	Purchase NOAA All-Hazard radios for all critical facilities
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hurricanes & Tropical Storms, Flood, Drought, Windstorm, Extreme Heat, Lightning, Tornadoes, Hailstorms, Wildfire, Winter Storms, Earthquakes
Effect on New/Existing Buildings:	New and existing structures and infrastructure will benefit by having well- informed critical facility operators
Priority (High, Medium, Low):	Medium
Cost:	\$150
Potential Funding Sources:	County and Municipal Budgets; Pre-Disaster Mitigation (PDM), HMGP
Responsible Agency:	County Office of Emergency Management, Local Emergency Management Offices
Timeline:	1 year to acquire new radios; radios tested annually
Incorporation into Existing Plans and Procedures:	To be incorporated into hazard planning and protection

2025 ANALYSIS:
Defer action to Plan Update. Amend action verbiage to state, “Acquire and distribute NOAA weather radios for all critical facilities.” Include all applicable hazards and update cost.

SECTION 18: PREVIOUS ACTIONS

All Jurisdictions – Previous Action #17	
Mitigation Action: Project Title & Description	Fiber Optic Network
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hurricanes & Tropical Storms, Flood, Windstorm, Tornadoes
Effect on New/Existing Buildings:	New and existing buildings will benefit from uninterrupted services from less-hazard-vulnerable communications infrastructure and facilitate continuity of operations for critical facilities during a disaster
Priority (High, Medium, Low):	High
Cost:	\$15,000,000
Potential Funding Sources:	CDBG-DR & CDBG-MIT Hurricane Harvey Competition (application with COG or Regional Partners)
Responsible Agency:	Aransas County Information Technology Department
Timeline:	3.5 years; application to CDBG-MIT in Summer 2020
Incorporation into Existing Plans and Procedures:	To be incorporated into hazard planning and protection measures. To be incorporated into Capital Improvement Project List.

2025 ANALYSIS:
Defer action to Plan Update for Aransas County and City of Rockport. Aransas County has received GLO funding for a feasibility study. Amend action verbiage to state, "Create and implement a plan for fiber optic network installation in crucial facilities." Include all applicable hazards. Delete action for Town of Fulton and Aransas County Navigation District; they no longer consider this project a priority.

SECTION 18: PREVIOUS ACTIONS

UNINCORPORATED ARANSAS COUNTY

Unincorporated Aransas County – Previous Action #1	
Mitigation Action: Project Title & Description	St. Charles Bay Shoreline/Lamar Beach Road - the creation of new habitat will provide erosion protection improvements
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Coastal Erosion
Effect on New/Existing Buildings:	Reduce threat of coastal erosion to new and existing buildings and infrastructure
Priority (High, Medium, Low):	High
Cost:	\$3,426,000
Potential Funding Sources:	Regular department budget, Future Bond, USACE Emergency Funding
Responsible Agency:	City Public Works
Timeline:	2 years to make improvements; annual upkeep and inspection
Incorporation into Existing Plans and Procedures:	Currently included in CIP List

2025 ANALYSIS:
Defer action to Plan Update. Aransas County received a TDEM 404 Mitigation Grant. Currently working additional funding sources. Amend action verbiage to state, "Lamar Beach Road Protection – The installation of breakwaters along St. Charles Bay Shoreline and the creation of a living shoreline will provide erosion protection improvements for Lamar Beach Road." Update Existing Plans to Texas Coastal Resiliency Master Plan and include all applicable hazards.

SECTION 18: PREVIOUS ACTIONS

Unincorporated Aransas County – Previous Action #2	
Mitigation Action: Project Title & Description	Precinct 1/1A - Poinciana/Weeping Willow - Projects 1, 2: Surface stormwater conveyance improvements from Weeping Willow Rd to FM1069
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	Reduce the threat of flooding to new and existing buildings and infrastructure by making improvements to the County drainage system
Priority (High, Medium, Low):	High
Cost:	\$605,880
Potential Funding Sources:	Regular Department Budget, Future Bond, Clean Water State Revolving Fund (CWSRF), HMGP
Responsible Agency:	Stormwater Management
Timeline:	5 years to make improvements; annual upkeep and inspection once implemented
Incorporation into Existing Plans and Procedures:	Currently included in CIP List

2025 ANALYSIS:
Complete.

SECTION 18: PREVIOUS ACTIONS

Unincorporated Aransas County – Previous Action #3	
Mitigation Action: Project Title & Description	Precinct 4 - Tule Creek - Mesquite Bypass - Project 1: Subsurface drainage system from 12th St (Fulton) to Aransas Bay
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	Reduce the threat of flooding to new and existing buildings and infrastructure by making improvements to the County drainage system
Priority (High, Medium, Low):	High
Cost:	\$1,769,900
Potential Funding Sources:	Regular Department Budget, Future Bond, CWSRF, HMGP
Responsible Agency:	Stormwater Management
Timeline:	5 years to make improvements; annual upkeep and inspection once implemented
Incorporation into Existing Plans and Procedures:	Currently included in CIP List

2025 ANALYSIS:
Complete.

SECTION 18: PREVIOUS ACTIONS

Unincorporated Aransas County – Previous Action #4	
Mitigation Action: Project Title & Description	Precinct 4 - South Central Lamar - Project 1: Surface stormwater conveyance system from Bee Tree Circle (Lamar) to Copano Bay with 6-ac stormwater management pond west of SH35
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Coastal Erosion, Flood, Hurricanes & Tropical storms
Effect on New/Existing Buildings:	Reduce the threat of flooding to new and existing buildings and infrastructure by making improvements to the County drainage system
Priority (High, Medium, Low):	High
Cost:	\$160,380
Potential Funding Sources:	Regular Department Budget, Future Bond, CWSRF, HMGP
Responsible Agency:	Stormwater Management
Timeline:	5 years to make improvements; annual upkeep and inspection once implemented
Incorporation into Existing Plans and Procedures:	Currently included in CIP List

2025 ANALYSIS:
Complete.

SECTION 18: PREVIOUS ACTIONS

Unincorporated Aransas County – Previous Action #5	
Mitigation Action: Project Title & Description	Precinct 1/2 - Griffith St. Projects 1, 2, 3: Surface stormwater conveyance system improvements. The projects have two routes, one begins at Griffith Street and the other begins at Ivy Lane. The two routes converge at existing Cape Valero drainage channel. Drainage structure will be placed under FM 1069 at two locations.
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	Reduce the threat of flooding to new and existing buildings and infrastructure by making improvements to the County drainage system
Priority (High, Medium, Low):	High
Cost:	\$591,030
Potential Funding Sources:	Regular Department Budget, Future Bond, CWSRF, HMGP
Responsible Agency:	Stormwater Management
Timeline:	5 years to make improvements; annual upkeep and inspection once implemented
Incorporation into Existing Plans and Procedures:	Currently included in CIP List

2025 ANALYSIS:
Complete.

SECTION 18: PREVIOUS ACTIONS

Unincorporated Aransas County – Previous Action #6	
Mitigation Action: Project Title & Description	Precinct 1/1A - Palm Harbor - Project 1: Create outfall to Aransas Bay, improvements to surface and subsurface conveyance system, drainage structures under SH 35 Business
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	Reduce the threat of flooding to new and existing buildings and infrastructure by making improvements to the County drainage system
Priority (High, Medium, Low):	High
Cost:	\$400,895
Potential Funding Sources:	Regular Department Budget, Future Bond, CWSRF, HMGP
Responsible Agency:	Stormwater Management
Timeline:	5 years to make improvements; annual upkeep and inspection once implemented
Incorporation into Existing Plans and Procedures:	Currently included in CIP List

2025 ANALYSIS:
Complete.

SECTION 18: PREVIOUS ACTIONS

Unincorporated Aransas County – Previous Action #7	
Mitigation Action: Project Title & Description	Precinct 3 - West FM 3036 - Projects 1, 2, 3, 4, 5: Installation of drainage structure under FM 1781, surface stormwater conveyance system improvements and 50ac property acquisition for regional stormwater management pond
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	Reduce the threat of flooding to new and existing buildings and infrastructure by making improvements to the County drainage system
Priority (High, Medium, Low):	High
Cost:	\$955,990
Potential Funding Sources:	Regular Department Budget
Responsible Agency:	Stormwater Management
Timeline:	5 years to make improvements; annual upkeep and inspection once implemented
Incorporation into Existing Plans and Procedures:	Currently included in CIP List

2025 ANALYSIS:
Defer action to Plan Update. Amend action to include all applicable hazards and cost update.

SECTION 18: PREVIOUS ACTIONS

Unincorporated Aransas County – Previous Action #8	
Mitigation Action: Project Title & Description	Precinct 1/1A - Estes Flats - Projects 1, 2, 3: Surface stormwater conveyance system and drainage structure under SH 35 Business
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	Reduce the threat of flooding to new and existing buildings and infrastructure by making improvements to the County drainage system
Priority (High, Medium, Low):	High
Cost:	\$445,060
Potential Funding Sources:	Regular Department Budget
Responsible Agency:	Stormwater Management
Timeline:	5 years to make improvements; annual upkeep and inspection once implemented
Incorporation into Existing Plans and Procedures:	Currently included in CIP List

2025 ANALYSIS:
Complete.

SECTION 18: PREVIOUS ACTIONS

Unincorporated Aransas County – Previous Action #9	
Mitigation Action: Project Title & Description	Precinct 4 - Southeast Lamar - Projects 1, 2, 3: Subsurface conveyance system
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	Reduce the threat of flooding to new and existing buildings and infrastructure by making improvements to the County drainage system
Priority (High, Medium, Low):	High
Cost:	\$239,030
Potential Funding Sources:	Regular Department Budget, Future Bond, CWSRF, HMGP
Responsible Agency:	Stormwater Management
Timeline:	5 years to make improvements; annual upkeep and inspection once implemented
Incorporation into Existing Plans and Procedures:	Currently included in CIP List

2025 ANALYSIS:
Complete.

SECTION 18: PREVIOUS ACTIONS

Unincorporated Aransas County – Previous Action #10	
Mitigation Action: Project Title & Description	Precinct 1/1A - Club Lake - Project 2: Surface stormwater conveyance improvements from Club Lake to FM1069
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	Reduce the threat of flooding to new and existing buildings and infrastructure by making improvements to the County drainage system
Priority (High, Medium, Low):	High
Cost:	\$417,560
Potential Funding Sources:	Regular Department Budget
Responsible Agency:	Stormwater Management
Timeline:	5 years to make improvements; annual upkeep and inspection once implemented
Incorporation into Existing Plans and Procedures:	Currently included in CIP List

2025 ANALYSIS:
Defer action to Plan Update. Amend action to include all applicable hazards and cost update.

SECTION 18: PREVIOUS ACTIONS

Unincorporated Aransas County – Previous Action #11	
Mitigation Action: Project Title & Description	Precinct 2 - Copano Heights - Projects 1, 2, 3: Surface stormwater conveyance system improvements from Copano Heights through Bailey Ranch with drainage structures under FM 1781 at two locations
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	Reduce the threat of flooding to new and existing buildings and infrastructure by making improvements to the County drainage system
Priority (High, Medium, Low):	High
Cost:	\$2,090,550
Potential Funding Sources:	Regular Department Budget, Future Bond, CWSRF, HMGP
Responsible Agency:	Stormwater Management
Timeline:	5 years to make improvements; annual upkeep and inspection once implemented
Incorporation into Existing Plans and Procedures:	Currently included in CIP List

2025 ANALYSIS:
Complete.

SECTION 18: PREVIOUS ACTIONS

Unincorporated Aransas County – Previous Action #12	
Mitigation Action: Project Title & Description	Precinct 4 - Spanish woods - Projects 1, 2, 3: Surface conveyance system and drainage structures under Sanctuary Drive and Spanish Woods Drive
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	Reduce the threat of flooding to new and existing buildings and infrastructure by making improvements to the County drainage system
Priority (High, Medium, Low):	High
Cost:	\$692,120
Potential Funding Sources:	Regular Department Budget, Future Bond, CWSRF, HMGP
Responsible Agency:	Stormwater Management
Timeline:	5 years to make improvements; annual upkeep and inspection once implemented
Incorporation into Existing Plans and Procedures:	Currently included in CIP List

2025 ANALYSIS:
Complete.

SECTION 18: PREVIOUS ACTIONS

Unincorporated Aransas County – Previous Action #13	
Mitigation Action: Project Title & Description	Precinct 1/1A - Southwest 1069 - Projects 2, 3: Improve upon inadequate right-of-way width on County roads in this watershed, improve upon undersized structures under FM1069, create an outfall channel from FM1069 to Port Bay
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	Reduce the threat of flooding to new and existing buildings and infrastructure by making improvements to the County drainage system
Priority (High, Medium, Low):	High
Cost:	\$1,323,476
Potential Funding Sources:	Regular Department Budget, Future Bond, CWSRF, HMGP
Responsible Agency:	Stormwater Management
Timeline:	5 years to make improvements; annual upkeep and inspection once implemented
Incorporation into Existing Plans and Procedures:	Currently included in CIP List

2025 ANALYSIS:
Complete.

SECTION 18: PREVIOUS ACTIONS

Unincorporated Aransas County – Previous Action #14	
Mitigation Action: Project Title & Description	Precinct 1/1A - Northeast AP - Project 1
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	Reduce the threat of flooding to new and existing buildings and infrastructure by making improvements to the County drainage system
Priority (High, Medium, Low):	High
Cost:	\$2,125,200
Potential Funding Sources:	Regular Department Budget, Future Bond, CWSRF, HMGP
Responsible Agency:	Stormwater Management
Timeline:	5 years to make improvements; annual upkeep and inspection once implemented
Incorporation into Existing Plans and Procedures:	Currently included in CIP List

2025 ANALYSIS:
Complete.

SECTION 18: PREVIOUS ACTIONS

Unincorporated Aransas County – Previous Action #15	
Mitigation Action: Project Title & Description	Precinct 4 - Lowering of Picton/Sorenson
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	Reduce the threat of flooding to new and existing buildings and infrastructure by making improvements to the County drainage system
Priority (High, Medium, Low):	High
Cost:	\$114,400
Potential Funding Sources:	Regular Department Budget, Future Bond, CWSRF, HMGP
Responsible Agency:	Stormwater Management
Timeline:	5 years to make improvements; annual upkeep and inspection once implemented
Incorporation into Existing Plans and Procedures:	Currently included in CIP List

2025 ANALYSIS:
Complete.

SECTION 18: PREVIOUS ACTIONS

Unincorporated Aransas County – Previous Action #16	
Mitigation Action: Project Title & Description	Precinct 1/1A - Southeast 35 - Project 2
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	Reduce the threat of flooding to new and existing buildings and infrastructure by making improvements to the County drainage system
Priority (High, Medium, Low):	High
Cost:	\$167,200
Potential Funding Sources:	Regular Department Budget, Future Bond, CWSRF, HMGP
Responsible Agency:	Stormwater Management
Timeline:	5 years to make improvements; annual upkeep and inspection once implemented
Incorporation into Existing Plans and Procedures:	Currently included in CIP List

2025 ANALYSIS:
Complete.

SECTION 18: PREVIOUS ACTIONS

Unincorporated Aransas County – Previous Action #17	
Mitigation Action: Project Title & Description	Precinct 1/1A - Southeast 35 - Project 1
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	Reduce the threat of flooding to new and existing buildings and infrastructure by making improvements to the County drainage system
Priority (High, Medium, Low):	High
Cost:	\$246,510
Potential Funding Sources:	Regular Department Budget, Future Bond, CWSRF, HMGP
Responsible Agency:	Stormwater Management
Timeline:	5 years to make improvements; annual upkeep and inspection once implemented
Incorporation into Existing Plans and Procedures:	Currently included in CIP List

2025 ANALYSIS:
Complete.

SECTION 18: PREVIOUS ACTIONS

Unincorporated Aransas County – Previous Action #18	
Mitigation Action: Project Title & Description	Precinct 3 - West Tule - Pond/Channel Widening - Projects 2, 3
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	Reduce the threat of flooding to new and existing buildings and infrastructure by making improvements to the County drainage system
Priority (High, Medium, Low):	High
Cost:	\$979,000
Potential Funding Sources:	Regular Department Budget, Future Bond, CWSRF, HMGP
Responsible Agency:	Stormwater Management
Timeline:	5 years to make improvements; annual upkeep and inspection once implemented
Incorporation into Existing Plans and Procedures:	Currently included in CIP List

2025 ANALYSIS:
Complete.

SECTION 18: PREVIOUS ACTIONS

Unincorporated Aransas County – Previous Action #19	
Mitigation Action: Project Title & Description	Precinct 3 – Henderson Street Property - Project 4
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	Reduce the threat of flooding to new and existing buildings and infrastructure by making improvements to the County drainage system
Priority (High, Medium, Low):	High
Cost:	\$1,074,150
Potential Funding Sources:	Grant Funding and Regular Department Budget
Responsible Agency:	Stormwater Management
Timeline:	5 years to make improvements; annual upkeep and inspection once implemented
Incorporation into Existing Plans and Procedures:	Currently included in CIP List

2025 ANALYSIS:
Defer action to Plan Update.

SECTION 18: PREVIOUS ACTIONS

Unincorporated Aransas County – Previous Action #20	
Mitigation Action: Project Title & Description	County Courthouse - Repair flood damage and flood proof structure to withstand future flood events
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	New and existing buildings and infrastructure will benefit from improved flood proofing
Priority (High, Medium, Low):	High
Cost:	\$1,500,000
Potential Funding Sources:	Regular Department Budget; FEMA Public Assistance (PA); HMGP
Responsible Agency:	Public Works
Timeline:	2 year to design and implement improvements; inspections to take place annually
Incorporation into Existing Plans and Procedures:	To be included in Harvey recovery initiatives

2025 ANALYSIS:
Delete action. The previous County Courthouse was destroyed due to Hurricane Harvey. A new County Courthouse is currently under construction.

SECTION 18: PREVIOUS ACTIONS

Unincorporated Aransas County – Previous Action #21	
Mitigation Action: Project Title & Description	Get generators and quick connects for all schools and critical facilities - design and implement an emergency generator program for critical facilities and schools
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hurricanes & Tropical Storms, Flood, Drought, Windstorm, Extreme Heat, Lightning, Tornadoes, Hailstorms, Wildfire, Winter Storms, Earthquakes
Effect on New/Existing Buildings:	Reduce threat of coastal erosion to new and existing buildings and infrastructure
Priority (High, Medium, Low):	Medium
Cost:	\$3,125,000
Potential Funding Sources:	Regular department budget, Hazard Mitigation Grant Program (HMGP)
Responsible Agency:	City Public Works
Timeline:	6 months to make improvements; annual upkeep and inspection
Incorporation into Existing Plans and Procedures:	To be incorporated into annual maintenance plan for public lands and right-of-way

2025 ANALYSIS:
Delete action. Aransas County has a TDEM 404 Mitigation Grant for seven generators. Combine action with its duplicate – All Jurisdictions Previous Action #12.

SECTION 18: PREVIOUS ACTIONS

Unincorporated Aransas County – Previous Action #22	
Mitigation Action: Project Title & Description	Shell Ridge Road - the construction of new habitat will provide erosion protection improvements
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Coastal Erosion
Effect on New/Existing Buildings:	Reduce threat of coastal erosion to new and existing buildings and infrastructure
Priority (High, Medium, Low):	Low
Cost:	\$2,375,700
Potential Funding Sources:	Regular department budget, Future Bond, USACE Emergency Funding
Responsible Agency:	City Public Works
Timeline:	2 years to make improvements; annual upkeep and inspection
Incorporation into Existing Plans and Procedures:	Currently included in Capital Improvements Project (CIP) List

2025 ANALYSIS:
Defer action to Plan Update. Aransas County has a TDEM 404 Mitigation Grant for the project. Amend Lead (Responsible) Agency as Aransas County, update cost to \$4,072,923, and add Texas Coastal Resiliency Master Plan.

SECTION 18: PREVIOUS ACTIONS

Unincorporated Aransas County – Previous Action #23	
Mitigation Action: Project Title & Description	Oak Terrace & Peninsula Oaks Subdivisions drainage improvements and retrofitting drainage structures
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hurricanes & Tropical Storms, Flood
Effect on New/Existing Buildings:	Reduce the threat of flooding to new and existing buildings and infrastructure by making improvements to the County drainage system
Priority (High, Medium, Low):	High
Cost:	\$1,500,000
Potential Funding Sources:	CDBG-MIT Hurricane Harvey MIT Competition, regular department budget
Responsible Agency:	Stormwater Management / Road & Bridge
Timeline:	1 year to make improvements; annual upkeep and inspection
Incorporation into Existing Plans and Procedures:	Currently included in Capital Improvements Project (CIP) List

2025 ANALYSIS:
Defer to Plan Update. Amend action to include all applicable hazards.

SECTION 18: PREVIOUS ACTIONS

Unincorporated Aransas County – Previous Action #24	
Mitigation Action: Project Title & Description	Airport mitigation improvements: Airport fuel farm hardening/ berms - \$316,680; helicopter instrument approach - \$750,000; runway end identifier lights (REIL's) for Runway 18 & Runway 36 - \$110,438; T-Hangar parking pavement rehab/repave -\$1,190,000; rehab/repave approach & concrete pad - \$379,358; retrofit approach lights - \$16,596
BACKGROUND INFORMATION	
Type of Action: <i>(Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness)</i>	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hurricanes & Tropical Storms, Flood, Windstorm, Tornadoes
Effect on New/Existing Buildings:	Mitigation improvements will make existing structures more resilient and will help prevent interruption of service from this critical facility as well as facilitate continuity of emergency operations
Priority (High, Medium, Low):	High
Cost:	\$3,900,000
Potential Funding Sources:	CDBG-MIT Regional MOD
Responsible Agency:	Aransas County Airport & Emergency Management
Timeline:	3 years – CDBG-MIT application to be submitted summer 2020
Incorporation into Existing Plans and Procedures:	To be incorporated into hazard planning and protection mechanisms, Airport Master Plan, and CIP list

2025 ANALYSIS:
Defer action to Plan Update. Working on documents and DBE Plan to qualify from grants for these projects. A generator for Airport Lighting was installed with a TDEM 404 Mitigation Grant.

SECTION 18: PREVIOUS ACTIONS

Unincorporated Aransas County – Previous Action #25	
Mitigation Action: Project Title & Description	Hardening and structural retrofitting of school buildings
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hurricanes & Tropical Storms, Flood, Drought, Windstorm, Extreme Heat, Lightning, Tornadoes, Hailstorms, Wildfire, Winter Storms
Effect on New/Existing Buildings:	Reduce risk of hazards and possible loss of life through improved construction; structural retrofitting will enable school operations to resume more quickly after a disaster
Priority (High, Medium, Low):	High
Cost:	\$1,500,000
Potential Funding Sources:	CDBG-MIT Regional MOD
Responsible Agency:	Aransas County ISD & Emergency Management
Timeline:	2.5 years – CDBG-MIT application to be submitted summer 2020
Incorporation into Existing Plans and Procedures:	To be incorporated into hazard mitigation planning and protection mechanisms

2025 ANALYSIS:
Defer action to Plan Update. Combine action with All Jurisdictions Previous Action #5.

SECTION 18: PREVIOUS ACTIONS

Unincorporated Aransas County – Previous Action #26	
Mitigation Action: Project Title & Description	Bishop Road roadway & ditch improvements, install subsurface stormwater pipe under SH 35-BUS, and install/upgrade outfall in Bahia Bay
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hurricanes & Tropical Storms, Flood
Effect on New/Existing Buildings:	Reduce the threat of flooding to new and existing buildings and infrastructure by making improvements to the County drainage system
Priority (High, Medium, Low):	High
Cost:	\$1,000,000
Potential Funding Sources:	CDBG-MIT Hurricane Harvey MIT Competition, regular department budget
Responsible Agency:	Stormwater Management / Road & Bridge
Timeline:	2 years to make improvements; annual upkeep and inspection
Incorporation into Existing Plans and Procedures:	Currently included in Capital Improvements Project (CIP) List

2025 ANALYSIS:
Complete.

SECTION 18: PREVIOUS ACTIONS

Unincorporated Aransas County – Previous Action #27	
Mitigation Action: Project Title & Description	Corpus Christi St. drainage improvements - replace/upgrade stormwater pipe
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hurricanes & Tropical Storms, Flood
Effect on New/Existing Buildings:	Reduce the threat of flooding to new and existing buildings and infrastructure by making improvements to the County drainage system
Priority (High, Medium, Low):	High
Cost:	\$750,000
Potential Funding Sources:	CDBG-MIT Hurricane Harvey MIT Competition, regular department budget
Responsible Agency:	Stormwater Management / Road & Bridge
Timeline:	1 year to make improvements; annual upkeep and inspection
Incorporation into Existing Plans and Procedures:	Currently included in Capital Improvements Project (CIP) List

2025 ANALYSIS:
Defer action to Plan Update.

SECTION 18: PREVIOUS ACTIONS

Unincorporated Aransas County – Previous Action #28	
Mitigation Action: Project Title & Description	Newcomb's Point - the construction of new habitat will provide erosion protection improvements
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Coastal Erosion
Effect on New/Existing Buildings:	Reduce threat of coastal erosion to new and existing buildings and infrastructure
Priority (High, Medium, Low):	Low
Cost:	\$3,028,500
Potential Funding Sources:	Regular department budget, Future Bond, USACE Emergency Funding
Responsible Agency:	City Public Works
Timeline:	2 years to make improvements; annual upkeep and inspection
Incorporation into Existing Plans and Procedures:	Currently included in CIP List

2025 ANALYSIS:
Complete.

SECTION 18: PREVIOUS ACTIONS

Unincorporated Aransas County – Previous Action #29	
Mitigation Action: Project Title & Description	Fulton Beach Road extension
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hurricanes & Tropical Storms, Flood, coastal erosion
Effect on New/Existing Buildings:	Will improve shoreline resiliency and reduce threat of coastal erosion and flood damage to new and existing buildings and infrastructure
Priority (High, Medium, Low):	High
Cost:	\$6,000,000
Potential Funding Sources:	CDBG-MIT Regional MOD
Responsible Agency:	Aransas County Road & Bridge, Town of Fulton Public Works, Stormwater
Timeline:	3.5 years; application for CDBG-MIT to be submitted summer 2020
Incorporation into Existing Plans and Procedures:	To be incorporated into multi-jurisdictional floodplain management and hazard mitigation planning; coastal preservation planning

2025 ANALYSIS:
Defer action to Plan Update. Update Lead (Responsible) Agency to Aransas County, Town of Fulton, City of Rockport and ACND. Amend action verbiage to state “Fulton Beach Road Protection – construct breakwaters and living shoreline.”

SECTION 18: PREVIOUS ACTIONS

Unincorporated Aransas County – Previous Action #30	
Mitigation Action: Project Title & Description	Loop 1781 Road Repairs
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hurricanes & Tropical Storms, Flood, coastal erosion
Effect on New/Existing Buildings:	Will improve shoreline resiliency and reduce threat of coastal erosion and flood damage to new and existing buildings and infrastructure
Priority (High, Medium, Low):	High
Cost:	\$10,000,000
Potential Funding Sources:	CDBG-MIT Regional MOD
Responsible Agency:	Road & Bridge Stormwater
Timeline:	3.5 years; application for CDBG-MIT to be submitted summer 2020
Incorporation into Existing Plans and Procedures:	To be incorporated into multi-jurisdictional floodplain management and hazard mitigation planning against flood and sea-level rise through low-impact design according to best management practices

2025 ANALYSIS:
Complete.

SECTION 18: PREVIOUS ACTIONS

TOWN OF FULTON

Town of Fulton – Previous Action #1	
Mitigation Action: Project Title & Description	Design and implement a debris removal program in local drainage systems
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	New and existing buildings and infrastructure will benefit from improved stormwater conveyance
Priority (High, Medium, Low):	High
Cost:	\$5,000
Potential Funding Sources:	Regular Department Budget
Responsible Agency:	Public Works
Timeline:	1 year to design and implement program; system inspection and maintenance to take place annually
Incorporation into Existing Plans and Procedures:	Currently included in CIP List

2025 ANALYSIS:
Complete.

SECTION 18: PREVIOUS ACTIONS

Town of Fulton – Previous Action #2	
Mitigation Action: Project Title & Description	Update Stormwater master plan
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	New and existing buildings and infrastructure will benefit from improved stormwater management
Priority (High, Medium, Low):	High
Cost:	Less than \$2,500
Potential Funding Sources:	Regular Department Budget; HMGP; CMP
Responsible Agency:	Street Department
Timeline:	1 year to design and conduct zoning improvements; reviewed annually
Incorporation into Existing Plans and Procedures:	To be incorporated into existing hazard plan

2025 ANALYSIS:
Defer action to Plan Update. The Town of Fulton is currently working with Aransas County on this project. Amend action to include all applicable hazards.

SECTION 18: PREVIOUS ACTIONS

Town of Fulton – Previous Action #3	
Mitigation Action: Project Title & Description	Get generators and quick connects for all schools and critical facilities - design and implement an emergency generator program for critical facilities and schools
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hurricanes & Tropical Storms, Flood, Drought, Windstorm, Extreme Heat, Lightning, Tornadoes, Hailstorms, Wildfire, Winter Storms, Earthquakes
Effect on New/Existing Buildings:	Reduce threat of coastal erosion to new and existing buildings and infrastructure
Priority (High, Medium, Low):	Medium
Cost:	\$2,005,000
Potential Funding Sources:	Regular department budget, Hazard Mitigation Grant Program (HMGP)
Responsible Agency:	Fulton Public Works
Timeline:	2 years to make improvements; annual upkeep and inspection
Incorporation into Existing Plans and Procedures:	To be incorporated into annual maintenance plan for public lands and right-of-way

2025 ANALYSIS:
Defer action to Plan Update. Amend action verbiage to state, “Acquire and install generators with hard-wired quick connections at all critical facilities, including schools” and to include all applicable hazards.

SECTION 18: PREVIOUS ACTIONS

Town of Fulton – Previous Action #4	
Mitigation Action: Project Title & Description	Design and conduct an lightning vulnerability study
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Lightning
Effect on New/Existing Buildings:	New and existing building and infrastructure will benefit from a better understanding of lightning vulnerability in the community
Priority (High, Medium, Low):	Medium
Cost:	Less than \$2,500
Potential Funding Sources:	Regular Department Budget
Responsible Agency:	Public Works
Timeline:	1 year to design and conduct study; study revisited when new construction or improvements takes place
Incorporation into Existing Plans and Procedures:	Currently included in Capital Improvements Project (CIP) List

2025 ANALYSIS:
Delete action. The Town of Fulton no longer considers this project a priority.

SECTION 18: PREVIOUS ACTIONS

CITY OF ROCKPORT

City of Rockport – Previous Action #1	
Mitigation Action: Project Title & Description	Cove Harbor Bulkheads - bulkhead construction will provide erosion protection improvements
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Coastal Erosion
Effect on New/Existing Buildings:	Reduce threat of coastal erosion to new and existing buildings and infrastructure
Priority (High, Medium, Low):	High
Cost:	\$1,000,000
Potential Funding Sources:	Regular department budget; Future Bond; USACE Continuing Authorities
Responsible Agency:	Public Works
Timeline:	2 years to make improvements; annual upkeep and inspection
Incorporation into Existing Plans and Procedures:	Currently included in CIP List

2025 ANALYSIS:
Delete action. The City of Rockport no longer considers this project a priority as it would fall under jurisdiction of the Aransas County Navigation District.

SECTION 18: PREVIOUS ACTIONS

City of Rockport – Previous Action #2	
Mitigation Action: Project Title & Description	Stormwater Crossing at FM 1781 - Upgrade/replacement of box culverts to accommodate growth
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	Reduce the threat of flooding to new and existing buildings and infrastructure
Priority (High, Medium, Low):	High
Cost:	\$171,248
Potential Funding Sources:	Future Bond; CWSRF
Responsible Agency:	Street Department
Timeline:	3 years to make improvements; annual upkeep and inspection
Incorporation into Existing Plans and Procedures:	To be incorporated into CIP List

2025 ANALYSIS:
Delete action. The City of Rockport no longer considers this project a priority. This project would fall under the jurisdiction of Aransas County.

SECTION 18: PREVIOUS ACTIONS

City of Rockport – Previous Action #3	
Mitigation Action: Project Title & Description	Master Plan - Drainage Improvements - Project 1 - SH 35 BUS - Traylor Ave & Tule Park Dr.
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	Reduce the threat of flooding to new and existing buildings and infrastructure
Priority (High, Medium, Low):	High
Cost:	\$996,175
Potential Funding Sources:	Future Bond; CWSRF
Responsible Agency:	Street Department
Timeline:	2 years to make improvements; annual upkeep and inspection
Incorporation into Existing Plans and Procedures:	To be incorporated into CIP List

2025 ANALYSIS:
Defer action to Plan Update. This was part of a GLO grant, project is 15 percent complete. Amend action to include all applicable hazards.

SECTION 18: PREVIOUS ACTIONS

City of Rockport – Previous Action #4	
Mitigation Action: Project Title & Description	Master Plan - Drainage Improvements - Project 2 - SH 35 BUS - Enterprise & Maple
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	Reduce the threat of flooding to new and existing buildings and infrastructure
Priority (High, Medium, Low):	High
Cost:	\$540,798
Potential Funding Sources:	Future Bond; CWSRF
Responsible Agency:	Street Department
Timeline:	2 years to make improvements; annual upkeep and inspection
Incorporation into Existing Plans and Procedures:	To be incorporated into CIP List

2025 ANALYSIS:
Defer action to Plan Update. HMPG Grant in progress currently pending RFI's, in FEMA Review. Amend action to include all applicable hazards.

SECTION 18: PREVIOUS ACTIONS

City of Rockport – Previous Action #5	
Mitigation Action: Project Title & Description	Master Plan - Drainage Improvements - Project 6 - Enterprise from Pearl St (FM2165) to Omohundro & Live Oak at Maple
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	Reduce the threat of flooding to new and existing buildings and infrastructure
Priority (High, Medium, Low):	High
Cost:	\$1,079,118
Potential Funding Sources:	Future Bond; CWSRF
Responsible Agency:	Street Department
Timeline:	2 years to make improvements; annual upkeep and inspection
Incorporation into Existing Plans and Procedures:	To be incorporated into CIP List

2025 ANALYSIS:
Defer action to Plan Update. Currently in FEMA review. Amend action to include all applicable hazards.

SECTION 18: PREVIOUS ACTIONS

City of Rockport – Previous Action #6	
Mitigation Action: Project Title & Description	Master Plan - Drainage Improvements - Project 3 - Market St (FM1069) at SH 35 Bypass, Hickory & Steart
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	Reduce the threat of flooding to new and existing buildings and infrastructure
Priority (High, Medium, Low):	High
Cost:	\$1,411,411
Potential Funding Sources:	Future Bond; CWSRF
Responsible Agency:	Street Department
Timeline:	3 years to make improvements; annual upkeep and inspection
Incorporation into Existing Plans and Procedures:	To be incorporated into CIP List

2025 ANALYSIS:
Delete action. The City of Rockport no longer considers this project a priority. This project would fall under the jurisdiction of Aransas County.

SECTION 18: PREVIOUS ACTIONS

City of Rockport – Previous Action #7	
Mitigation Action: Project Title & Description	Master Plan - Drainage Improvements - Project 4 - Market St (FM1069) at SH 35 BUS
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	Reduce the threat of flooding to new and existing buildings and infrastructure
Priority (High, Medium, Low):	High
Cost:	\$791,725
Potential Funding Sources:	Future Bond; CWSRF
Responsible Agency:	Street Department
Timeline:	3 years to make improvements; annual upkeep and inspection
Incorporation into Existing Plans and Procedures:	To be incorporated into CIP List

2025 ANALYSIS:
Complete.

SECTION 18: PREVIOUS ACTIONS

City of Rockport – Previous Action #8	
Mitigation Action: Project Title & Description	Master Plan - Drainage Improvements - Project 5 - Market St (FM1069) at Burton & Kossuth
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	Reduce the threat of flooding to new and existing buildings and infrastructure
Priority (High, Medium, Low):	High
Cost:	\$3,135,881
Potential Funding Sources:	Future Bond; CWSRF
Responsible Agency:	Street Department
Timeline:	3 years to make improvements; annual upkeep and inspection
Incorporation into Existing Plans and Procedures:	To be incorporated into CIP List

2025 ANALYSIS:
Delete action. The City of Rockport no longer considers this project a priority. This project would fall under the jurisdiction of Aransas County.

SECTION 18: PREVIOUS ACTIONS

City of Rockport – Previous Action #9	
Mitigation Action: Project Title & Description	Master Plan - Drainage Improvements - Project 7 - Market St (FM1069) at Church St (Loop 70)
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	Reduce the threat of flooding to new and existing buildings and infrastructure
Priority (High, Medium, Low):	High
Cost:	\$349,414
Potential Funding Sources:	Future Bond; CWSRF
Responsible Agency:	Street Department
Timeline:	Over 4 years once implemented; upkeep and inspection will occur annually
Incorporation into Existing Plans and Procedures:	To be incorporated into CIP List

2025 ANALYSIS:
Complete.

SECTION 18: PREVIOUS ACTIONS

City of Rockport – Previous Action #10	
Mitigation Action: Project Title & Description	Master Plan - Drainage Improvements - Project 8 - Pearl St (FM2165) at Orleans & Laurel
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	Reduce the threat of flooding to new and existing buildings and infrastructure
Priority (High, Medium, Low):	High
Cost:	\$2,813,827
Potential Funding Sources:	Future Bond; CWSRF
Responsible Agency:	Street Department
Timeline:	Over 4 years once implemented; upkeep and inspection will occur annually
Incorporation into Existing Plans and Procedures:	To be incorporated into CIP List

2025 ANALYSIS:
Defer action to Plan Update. Currently the project is 75 percent complete. Amend action to include all applicable hazards.

SECTION 18: PREVIOUS ACTIONS

City of Rockport – Previous Action #11	
Mitigation Action: Project Title & Description	Construction and Upgrades to substandard roadways - Construction of approx. 2 miles/year due to annexation and development
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	Reduce the threat of flooding to new and existing buildings and infrastructure
Priority (High, Medium, Low):	High
Cost:	\$1,348,301
Potential Funding Sources:	Future Bond; CWSRF
Responsible Agency:	Street Department
Timeline:	Over 4 years once implemented; upkeep and inspection will occur annually
Incorporation into Existing Plans and Procedures:	To be incorporated into annual maintenance plan for public lands and right-of-way

2025 ANALYSIS:
Defer action to Plan Update. The design has been completed, currently waiting on bids. Amend action to include applicable hazards.

SECTION 18: PREVIOUS ACTIONS

City of Rockport – Previous Action #12	
Mitigation Action: Project Title & Description	RCC Lakes – removal of sediment for drainage improvements
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	Reduce the threat of flooding to new and existing buildings and infrastructure
Priority (High, Medium, Low):	High
Cost:	\$376,800
Potential Funding Sources:	Future Bond; CWSRF
Responsible Agency:	Street Department
Timeline:	Over 4 years once implemented; upkeep and inspection will occur annually
Incorporation into Existing Plans and Procedures:	To be incorporated into annual maintenance plan for public lands and right-of-way

2025 ANALYSIS:
Defer action to Plan Update. This is a continuous project done with GF and tax notes. Amend action to include all applicable hazards.

SECTION 18: PREVIOUS ACTIONS

City of Rockport – Previous Action #13	
Mitigation Action: Project Title & Description	Concho Street Drainage - Construction of drainage pipe down Concho starting at low west Hwy 35 to Harbor
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	Reduce the threat of flooding to new and existing buildings and infrastructure
Priority (High, Medium, Low):	High
Cost:	\$2,192,971
Potential Funding Sources:	Future Bond; CWSRF
Responsible Agency:	Street Department
Timeline:	Over 4 years once implemented; upkeep and inspection will occur annually
Incorporation into Existing Plans and Procedures:	To be incorporated into CIP List

2025 ANALYSIS:
Defer action to Plan Update. The project is 90 percent complete. Amend action to include all applicable hazards.

SECTION 18: PREVIOUS ACTIONS

City of Rockport – Previous Action #14	
Mitigation Action: Project Title & Description	Design and conduct an engineering study to address flooding in downtown Rockport
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	New and existing buildings and infrastructure will benefit from a better understanding of the community's vulnerability to flooding.
Priority (High, Medium, Low):	High
Cost:	\$1,000,000
Potential Funding Sources:	HMGP funding, departmental budget
Responsible Agency:	Street Department
Timeline:	2 years to design and conduct study; reviewed on an annual basis
Incorporation into Existing Plans and Procedures:	To be incorporated into existing hazard plan

2025 ANALYSIS:
Defer action to Plan Update. Funding is secured but study has not been started.

SECTION 18: PREVIOUS ACTIONS

City of Rockport – Previous Action #15	
Mitigation Action: Project Title & Description	Update Stormwater master plan
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	New and existing buildings and infrastructure will benefit from improved stormwater management
Priority (High, Medium, Low):	High
Cost:	\$200,000
Potential Funding Sources:	Regular Department Budget; HMGP; CMP
Responsible Agency:	Street Department
Timeline:	1 year to design and conduct zoning improvements; reviewed annually
Incorporation into Existing Plans and Procedures:	To be incorporated into City Plan

2025 ANALYSIS:
Defer action to Plan Update. The City of Rockport is actively coordinating with Aransas County on project implementation. Amend action to include all applicable hazards.

SECTION 18: PREVIOUS ACTIONS

City of Rockport – Previous Action #16	
Mitigation Action: Project Title & Description	Purchase Gordon Stanley Pond
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Natural Systems Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	New buildings and infrastructure will benefit by not being located in hazard vulnerable areas. Existing buildings and infrastructure will not be harmed from the purchase of the pond
Priority (High, Medium, Low):	High
Cost:	\$100,000
Potential Funding Sources:	Regular Department Budget; HMGP; CMP
Responsible Agency:	Planning Department
Timeline:	1 year to purchase pond
Incorporation into Existing Plans and Procedures:	To be incorporated into City Plan

2025 ANALYSIS:
Delete action. The City of Rockport no longer considers this project a priority. This project would fall under the jurisdiction of Aransas County.

SECTION 18: PREVIOUS ACTIONS

City of Rockport – Previous Action #17	
Mitigation Action: Project Title & Description	Repair outfalls of pump station that pump into Aransas Bay
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	New and existing buildings and infrastructure will benefit from improved stormwater management
Priority (High, Medium, Low):	High
Cost:	\$2,000,000
Potential Funding Sources:	CIP project funding; Regular Department Budget; CWSRF
Responsible Agency:	Public Works
Timeline:	1 year to design and implement improvements; inspections to take place annually
Incorporation into Existing Plans and Procedures:	To be included in facility operations and maintenance schedule

2025 ANALYSIS:
Defer action to Plan Update. Amend action to include all applicable hazards.

SECTION 18: PREVIOUS ACTIONS

City of Rockport – Previous Action #18	
Mitigation Action: Project Title & Description	Do an assessment of pump stations and improve existing pump stations or install new pump stations as needed
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	New and existing buildings and infrastructure will benefit from improved stormwater management
Priority (High, Medium, Low):	High
Cost:	\$2,000,000
Potential Funding Sources:	Certificates of Obligation; Regular Department Budget; HMGP; CWSRF
Responsible Agency:	Public Works
Timeline:	2 year to design and implement improvements; inspections to take place annually
Incorporation into Existing Plans and Procedures:	To be included in facility operations and maintenance schedule

2025 ANALYSIS:
Defer action to Plan Update. Several upgrades have been completed but not all of them. Amend action to include all applicable hazards and update verbiage to state “Perform an assessment of pump stations to determine if stormwater mitigation is efficient or needs to be improved. Based on assessment results there will be improvements or upgrades made to existing pump stations or installation of new pump stations.”

SECTION 18: PREVIOUS ACTIONS

City of Rockport – Previous Action #19	
Mitigation Action: Project Title & Description	City Hall - Repair flood damage and flood proof structure to withstand future flood events
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	New and existing buildings and infrastructure will benefit from improved flood proofing
Priority (High, Medium, Low):	High
Cost:	\$1,500,000
Potential Funding Sources:	Regular Department Budget; FEMA Public Assistance (PA); HMGP
Responsible Agency:	Public Works
Timeline:	2 year to design and implement improvements; inspections to take place annually
Incorporation into Existing Plans and Procedures:	To be included in Harvey recovery initiatives

2025 ANALYSIS:
Delete action. New City Hall is currently under construction through other funding.

SECTION 18: PREVIOUS ACTIONS

City of Rockport – Previous Action #20	
Mitigation Action: Project Title & Description	Get generators and quick connects for all schools and critical facilities - design and implement an emergency generator program for critical facilities and schools
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hurricanes & Tropical Storms, Flood, Drought, Windstorm, Extreme Heat, Lightning, Tornadoes, Hailstorms, Wildfire, Winter Storms, Earthquakes
Effect on New/Existing Buildings:	Reduce threat of coastal erosion to new and existing buildings and infrastructure
Priority (High, Medium, Low):	Medium
Cost:	\$2,300,000
Potential Funding Sources:	RESTORE Act funding, Regular department budget, Hazard Mitigation Grant Program (HMGP)
Responsible Agency:	Public Works
Timeline:	4 years to make improvements; annual upkeep and inspection
Incorporation into Existing Plans and Procedures:	To be incorporated into annual maintenance plan for public lands and right-of-way

2025 ANALYSIS:
Defer action to Plan Update. In progress, under the HMGP grant, 4 of 6 have been approved, and the final 2 are pending approval. Amend action verbiage to state, “Acquire and install generators with hard-wired quick connections at all critical facilities,” remove “including schools” verbiage, and include all applicable hazards.

SECTION 18: PREVIOUS ACTIONS

City of Rockport – Previous Action #21	
Mitigation Action: Project Title & Description	Little Bay - Hydraulic Restoration - remove sediment from the bay and use it for nourishment and habitat restoration projects. The project will protect habitat from coastal erosion and improve the eco-tourism economy
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Coastal Erosion
Effect on New/Existing Buildings:	Reduce threat of coastal erosion to new and existing buildings and infrastructure
Priority (High, Medium, Low):	Medium
Cost:	\$7,266,070
Potential Funding Sources:	Regular department budget; Future Bond; Coastal Management Program (CMP) grant
Responsible Agency:	Public Works
Timeline:	18 months to make improvements; annual upkeep and inspection
Incorporation into Existing Plans and Procedures:	Currently included in Capital Improvements Project (CIP) List Project ID R3-21 in Texas Coastal Resiliency Master Plan

2025 ANALYSIS:
Delete action. The City of Rockport no longer considers this project a priority. This project would fall under the jurisdiction of Aransas County Navigation District.

SECTION 18: PREVIOUS ACTIONS

City of Rockport – Previous Action #22	
Mitigation Action: Project Title & Description	Design and conduct a lightning vulnerability assessment study
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Lightning
Effect on New/Existing Buildings:	New and existing buildings and infrastructure will benefit from a better understanding of the community's vulnerability to lightning
Priority (High, Medium, Low):	Medium
Cost:	Less than \$2,500
Potential Funding Sources:	HMGP funding, departmental budget
Responsible Agency:	Office of Emergency Management
Timeline:	1 year to design and conduct study; reviewed on an annual basis
Incorporation into Existing Plans and Procedures:	To be incorporated into existing hazard plan

2025 ANALYSIS:
Delete action. The City of Rockport no longer considers this project a priority. This project would fall under the jurisdiction of Aransas County.

SECTION 18: PREVIOUS ACTIONS

City of Rockport – Previous Action #23	
Mitigation Action: Project Title & Description	Review and update zoning regulations to reduce population density in areas vulnerable to hazards
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hurricanes & Tropical Storms, Flood, Lightning, Wildfire, Coastal Erosion
Effect on New/Existing Buildings:	New buildings and infrastructure will benefit by not being located in hazard- vulnerable areas. Existing buildings and infrastructure will not be harmed from improved zoning regulations.
Priority (High, Medium, Low):	Medium
Cost:	Less than \$2,500
Potential Funding Sources:	Regular Department Budget
Responsible Agency:	Planning Department
Timeline:	1 year to design and conduct zoning improvements; reviewed annually
Incorporation into Existing Plans and Procedures:	To be incorporated into floodplain management ordinance and zoning ordinance

2025 ANALYSIS:
Complete.

SECTION 18: PREVIOUS ACTIONS

City of Rockport – Previous Action #24	
Mitigation Action: Project Title & Description	Maintain the adoption of the most current I- Codes and BCEGS rating
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hurricanes & Tropical Storms, Flood, Windstorm, Lightning, Tornadoes, Hailstorms, Wildfire, Earthquakes
Effect on New/Existing Buildings:	New and existing buildings and infrastructure will benefit from updated I-Codes and BCEGS ratings. New existing construction will receive the greatest benefit
Priority (High, Medium, Low):	Medium
Cost:	Less than \$2,500
Potential Funding Sources:	Regular Department Budget
Responsible Agency:	Building Department
Timeline:	1 year to adopt the most recent codes and improve BCEGS rating; reviewed annually
Incorporation into Existing Plans and Procedures:	To be incorporated into existing hazard plans and processes

2025 ANALYSIS:
Defer action to Plan Update.

SECTION 18: PREVIOUS ACTIONS

City of Rockport – Previous Action #25	
Mitigation Action: Project Title & Description	Design and implement outreach projects for special needs populations
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hurricanes & Tropical Storms, Flood, Drought, Windstorm, Extreme Heat, Lightning, Tornadoes, Hailstorms, Wildfire, Winter Storms, Earthquakes, Coastal Erosion
Effect on New/Existing Buildings:	New and existing buildings, infrastructure, and populations will benefit from a more educated citizenry
Priority (High, Medium, Low):	Medium
Cost:	Less than \$2,500
Potential Funding Sources:	Regular Department Budget
Responsible Agency:	Planning Department, Emergency Operations Department
Timeline:	1 year to design and implement outreach program, outreach items reviewed annually
Incorporation into Existing Plans and Procedures:	To be incorporated into City Plan

2025 ANALYSIS:
Defer action to Plan Update. The City of Rockport continues to identify special needs communities and how best to help.

SECTION 18: PREVIOUS ACTIONS

City of Rockport – Previous Action #26	
Mitigation Action: Project Title & Description	Retrofit commercial properties through floodproofing
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hurricanes & Tropical Storms, Flood
Effect on New/Existing Buildings:	Existing buildings will be retrofitted to withstand future hazard events
Priority (High, Medium, Low):	High
Cost:	\$15 Million
Potential Funding Sources:	County and Municipal Budgets; Pre-Disaster Mitigation (PDM), Hazard Mitigation Grant Program (HMGP)
Responsible Agency:	County and City Floodplain Management Offices
Timeline:	1-3 years to complete reconstruction
Incorporation into Existing Plans and Procedures:	To be incorporated into hazard planning and protection mechanism, Countywide floodplain management plan

2025 ANALYSIS:
Defer action to Plan Update. Amend action verbiage to state, “Harden/retrofit commercial properties designated as critical facilities to hazard-resistant levels.” Include all applicable hazards.

SECTION 18: PREVIOUS ACTIONS

City of Rockport – Previous Action #27	
Mitigation Action: Project Title & Description	Design and implement outreach projects for tourist populations
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hurricanes & Tropical Storms, Flood, Drought, Windstorm, Extreme Heat, Lightning, Tornadoes, Hailstorms, Wildfire, Winter Storms, Earthquakes, Coastal Erosion
Effect on New/Existing Buildings:	New and existing buildings, infrastructure, and tourist populations will benefit from a more educated citizenry
Priority (High, Medium, Low):	Medium
Cost:	Less than \$2,500
Potential Funding Sources:	Regular Department Budget; CMP
Responsible Agency:	Planning Department, Emergency Operations Department
Timeline:	1 year to design and implement outreach program, outreach items reviewed annually
Incorporation into Existing Plans and Procedures:	To be incorporated into City Plan

2025 ANALYSIS:
Defer action to Plan Update. The City of Rockport introduced the Convention and Visitor Bureau (CVB) this year.

SECTION 18: PREVIOUS ACTIONS

City of Rockport – Previous Action #28	
Mitigation Action: Project Title & Description	Design and implement an open space plan, adopt regulations that prohibit development in identified areas
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hurricanes & Tropical Storms, Flood, Heat, Hailstorms, Wildfire, Coastal Erosion
Effect on New/Existing Buildings:	New buildings and infrastructure will benefit by not being located in hazard- vulnerable areas. Existing buildings and infrastructure will not be harmed from improved regulations.
Priority (High, Medium, Low):	Medium
Cost:	Less than \$2,500
Potential Funding Sources:	Regular Department Budget; CMP
Responsible Agency:	Planning Department
Timeline:	1 year to design and adopt plans and regulations efficacy reassessed annually
Incorporation into Existing Plans and Procedures:	To be incorporated into floodplain management ordinance and zoning ordinance

2025 ANALYSIS:
Defer action to Plan Update. The City of Rockport currently enforces Chapter 90 Subdivision Regulations. Amend action to include all applicable hazards.

SECTION 18: PREVIOUS ACTIONS

City of Rockport – Previous Action #29	
Mitigation Action: Project Title & Description	Roadway and drainage infrastructure improvements on Water Street and Austin Street (from Market St. to southern end of streets)
BACKGROUND INFORMATION	
Type of Action: (<i>Local Plans and Regulations, Structure and Infrastructure Projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Hurricanes & Tropical Storms, Flood, Coastal Erosion
Effect on New/Existing Buildings:	Infrastructure improvements will improve shoreline resiliency, reduce threat of coastal erosion, and prevent future flood damage to new and existing buildings and infrastructure
Priority (High, Medium, Low):	High
Cost:	\$4,000,000
Potential Funding Sources:	CDBG-MIT Regional MOD
Responsible Agency:	Public Works & County and City Floodplain Management Offices
Timeline:	3 years – application for CDBG-MIT Regional MOD to be submitted summer 2020
Incorporation into Existing Plans and Procedures:	To be incorporated into hazard mitigation planning and protection mechanisms and floodplain management planning; coastal preservation planning

2025 ANALYSIS:
Defer action to Plan Update. CDBG-MIT Regional MOD to be submitted summer of 2020



SECTION 19 MITIGATION ACTIONS

SECTION 19: MITIGATION ACTIONS

Summary	1
Aransas County	3
Town of Fulton	26
City of Rockport	31
Rockport-Fulton Independent School District (ISD)	49
Aransas County Navigation District (ACND).....	53

SUMMARY

The 44 CFR § 201.6(c)(3)(ii) states that the plan must 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.” The mitigation planning process is designed to help communities identify feasible and cost-effective mitigation strategies, but implementation of actions is dependent on factors such as funding, staff time, and evolving community priorities and there is no penalty for jurisdictions unable to implement projects throughout the plan's life.¹

As discussed in Section 2, at the Mitigation Strategy Workshop the planning team and stakeholders met to develop mitigation actions for each of the natural hazards included in the Plan Update. Each of the actions in this section were prioritized based on FEMA’s Social, Technical, Administrative, Political, Legal, Economic, and Environmental (STAPLEE) criteria necessary for the implementation of each action.

As part of the economic evaluation of the STAPLEE analysis, jurisdictions analyzed each action in terms of the overall costs, measuring whether the potential benefit to be gained from the action outweighed costs associated with it. As a result of this exercise, priority was assigned to each mitigation action by marking them as High (H), Moderate (M), or Low (L). An action that is ranked as “High” indicates that the action will be implemented as soon as funding is received. A “Moderate” action is one that may not be implemented right away depending on the cost and number of citizens served by the action. Actions ranked as “Low” indicate that they will not be implemented without first seeking grant funding and after “High” and “Moderate” actions have been completed.

Within each mitigation action worksheet, the Planning Team considered all potential funding sources that could be utilized to implement the proposed project. To ensure all potential funding resources are considered and are not limited to those sources identified within the action worksheet, please see Appendix G for a list of all available State and Federal grant programs as of 2024. The Planning Team will continue to seek out other available funding sources during the 5-year cycle as notices of funding opportunity (NOFO) are released.

All mitigation actions created by Planning Team members are presented in this section in the form of a Mitigation Action Table. More than one hazard is sometimes listed for an action, if appropriate. Actions presented in this section represent a comprehensive range of mitigation actions per

¹ Cost, funding sources, and implementation schedules are subject to change upon full scoping of project and grant availability.

SECTION 19: MITIGATION ACTIONS

current State and FEMA Guidelines, including one action, per hazard, and at least two different types for each participating jurisdiction.

Aransas County, the Town of Fulton, and the City of Rockport are participants in the National Flood Insurance Program (NFIP). Flooding was identified as a significant risk for these communities therefore many of the mitigation actions were developed with flood mitigation in mind. Actions related to NFIP compliance include additional narrative when deemed appropriate.

Table 19-1. Aransas County Mitigation Action Matrix

TYPE OF ACTION	
Action #1 – Plans/Regulations (Blue)	Action #4 – Structural (Orange)
Action #2 – Education/Awareness (Red)	Action #5 – Preparedness/Response (Black)
Action #3 – Natural Systems Protections (Green)	

Jurisdiction	Coastal Erosion	Drought	Earthquake	Extreme Heat	Flood	Hail	Hurricane / Tropical Storm	Lightning	Thunderstorm Wind	Tornado	Wildfire	Winter Storm
Aransas County	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
Town of Fulton	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
City of Rockport	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
Rockport-Fulton ISD	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
Aransas County Navigation District	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●

SECTION 19: MITIGATION ACTIONS

ARANSAS COUNTY

ARANSAS COUNTY MITIGATION ACTIONS														
*Reduces risk to new and/or existing buildings and infrastructure														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
1	Develop a water conservation program, including public education and outreach to warn citizens about the risks to public health caused by drought. Promote xeriscaping to conserve water.	County-wide	Reduce water use and conserve water resources.	Education and Awareness Preparedness /Response	Drought	Communication	N/A	M	\$5,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Aransas County Office of Emergency Management	36 Months	Drought Contingency Plan	N/A
2	Design and conduct a lightning vulnerability assessment study.	County-wide	Reduce the threat of flooding to new and existing buildings and infrastructure.	Structure and Infrastructure	Lightning	Safety/Security	Y	M	\$2,500	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants: (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Aransas County Office of Emergency Management, Local Emergency Management Offices	12 Months	Capital Improvement Plan	N/A

SECTION 19: MITIGATION ACTIONS

ARANSAS COUNTY MITIGATION ACTIONS														
<i>*Reduces risk to new and/or existing buildings and infrastructure</i>														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
3	Harden/retrofit critical facilities to hazard-resistant levels.	County-wide	Reduce damages at critical facilities; Ensure continuity of critical services during and after event.	Structure and Infrastructure	Coastal Erosion, Drought, Earthquake, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm, Human-caused Hazards	Safety/Security	Y	H	\$500,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants: (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Aransas County Office of Emergency Management	36-48 Months	Capital Improvement Plan	Protects infrastructure, reduces cost of repair, and prevents injury to residents.
4	Implement education and awareness program utilizing media, social media, bulletins, flyers, etc. to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. Include links to weather alerts and departmental phone listings with contact personnel for residents.	County-wide	Promote hazard awareness and protect citizens from potential injuries and damages.	Education and Awareness	Coastal Erosion, Drought, Earthquake, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm, Human-caused Hazards	Communication	N/A	H	\$5,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants: (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Aransas County Office of Emergency Management, Local Emergency Management Offices	24 Months	Emergency Management Action Plan	Promotes public safety.

SECTION 19: MITIGATION ACTIONS

ARANSAS COUNTY MITIGATION ACTIONS														
*Reduces risk to new and/or existing buildings and infrastructure														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
5	Develop and implement a program to assist residents in applying for residential flood-damage mitigation grants.	County-wide	Reduce damages at critical facilities; Ensure continuity of critical services during and after event.	Structure and Infrastructure	Flood, Hurricane/Tropical Storm	Safety/Security	N/A	H	\$50,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants: (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Emergency Operations Department	36-48 Months	Comprehensive Master Plan	Protects infrastructure, reduces cost of repair, and prevents injury to residents.
6	Implement a process for digitizing vital records and off-site storage.	County-wide	Digitizing records enable local government to maintain continuity of operations and protect irreplaceable community records for the benefit of the public welfare	Local Plans and Regulations Structure and Infrastructure	Coastal Erosion, Drought, Earthquake, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm, Human-caused Hazards	Safety/Security	Y	H	\$1,500,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants: (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Aransas County Clerk's Office in coordination with City Secretaries	48 Months	Emergency Management Action Plan	Protects communities and reduces risk of flooding.

SECTION 19: MITIGATION ACTIONS

ARANSAS COUNTY MITIGATION ACTIONS														
<i>*Reduces risk to new and/or existing buildings and infrastructure</i>														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
7	Develop and implement a program to assist local property owners in applying for non-residential flood-damage mitigation grants.	County-wide	Reduce damages at critical facilities; Ensure continuity of critical services during and after event.	Structure and Infrastructure	Flood, Hurricane/Tropical Storm	Safety/Security	Y	H	\$50,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants: (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Aransas County Office of Emergency Management, County and City Floodplain Management Offices	36-48 Months	Emergency Management Action Plan	Protects infrastructure, reduces cost of repair, and prevents injury to residents.
8	Install hurricane shutters on all critical facilities.	County-wide	Reduce damages at critical facilities.	Structure and Infrastructure	Hurricane/Tropical Storm, Thunderstorm Wind, Tornado	Safety/Security	Y	H	\$500,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants: (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Aransas County Office of Emergency Management, Local Emergency Management Offices	24-36 Months	Emergency Management Action Plan	N/A

SECTION 19: MITIGATION ACTIONS

ARANSAS COUNTY MITIGATION ACTIONS														
<i>*Reduces risk to new and/or existing buildings and infrastructure</i>														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
9	Create and implement heat exhaustion policies for employees.	County-wide	Reduce risks to employees from extreme heat hazards.	Education and Awareness	Extreme Heat	Safety/Security, Communication	N/A	H	\$2,500	Local Budget	Aransas County Office of Emergency Management, Local Emergency Management Offices	12 Months	Emergency Management Action Plan	N/A
10	Create, adopt, and implement a county-wide wetlands preservation plan.	County-wide	Reduce risks of loss of life and property.	Local Plans and Regulations Natural Systems Protection	Coastal Erosion, Flood, Hurricane/Tropical Storm	Safety/Security	N/A	H	\$50,000	Local Budget; CMP	Aransas County Office of Emergency Management, Local Emergency Management Offices	12 Months	N/A	Protects communities and reduces risk of flooding.

SECTION 19: MITIGATION ACTIONS

ARANSAS COUNTY MITIGATION ACTIONS														
*Reduces risk to new and/or existing buildings and infrastructure														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
11	Create, adopt, and implement a process or plan to address properties identified as Repetitive Loss (RL) and Severe Repetitive Loss (SRL) in residential areas within communities participating in the National Flood Insurance Program (NFIP). In order to provide enhanced flood risk protection and reduce future losses, planning participants who are also NFIP-participating communities will adopt the Base Flood Elevation (BFE) data and integrate it into local floodplain management practices. This will ensure Increased Cost of Compliance (ICC) coverage is accessible to eligible properties, even those located outside the 1 percent annual chance floodplain (100-year floodplain), to promote broader flood risk mitigation and compliance with FEMA guidelines.	County-wide	Reduce repetitive and severe repetitive losses related to flooding.	Local Plans and Regulations	Flood, Hurricane/Tropical Storm	Safety/Security	Y	H	\$500,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants: (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Aransas County Office of Emergency Management, Local Emergency Management Offices	48 Months	Floodplain Ordinance	Protects communities and reduces risk of flooding.

SECTION 19: MITIGATION ACTIONS

ARANSAS COUNTY MITIGATION ACTIONS														
<i>*Reduces risk to new and/or existing buildings and infrastructure</i>														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
12	Obtain certification in the National Weather Service StormReady Program.	County-wide	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Education and Awareness Local Plans and Regulations	Flood, Hail, Hurricane/Tropical Storm, Lightning, Thunderstorm Wind, Tornado, Winter Storm	Communication	N/A	H	\$10,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants: (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Aransas County Office of Emergency Management, Local Emergency Management Offices	12 Months	Emergency Management Action Plan	Promotes public safety.
13	Design and implement a debris removal program in local drainage systems, including the location of vulnerable drainage systems. This updated plan will list locations in order of priority.	County-wide	Reduce damages caused by flooding by maintaining or restoring drainage capacity.	Structure and Infrastructure	Flood	Safety/Security	N/A	H	\$2,500	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants: (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Public Works	12 Months	Stormwater Management Plan	Protects communities and reduces risk of flooding.

SECTION 19: MITIGATION ACTIONS

ARANSAS COUNTY MITIGATION ACTIONS														
*Reduces risk to new and/or existing buildings and infrastructure														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
14	Acquire and install generators with hard wired quick connections at all critical facilities including schools.	County-wide	Provide power for critical facilities during power outages and ensure continuity of critical services.	Structure and Infrastructure	Earthquake, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm, Human-caused Hazards	Energy (Power/Fuel)	Y	M	\$1,500,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Aransas County Office of Emergency Management, Local Emergency Management Offices	48 Months	Emergency Management Action Plan	Helps ensure critical facilities continue to provide services during a power outage caused by unforeseen events.
15	Create and implement an erosion response plan.	County-wide	Reduce loss of property due to coastal erosion.	Local Plans and Regulations Natural Systems Protection	Coastal Erosion	Safety/Security	N/A	M	\$2,500	Local Budget; CMP	Aransas County Office of Emergency Management, Local Emergency Management Offices	12 Months	N/A	N/A

SECTION 19: MITIGATION ACTIONS

ARANSAS COUNTY MITIGATION ACTIONS														
*Reduces risk to new and/or existing buildings and infrastructure														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
16	Acquire and implement a hazard warning system: Install early warning sirens throughout the County in public spaces.	County-wide	Reduce risk to citizens through improved communication and early warning.	Education and Awareness Preparedness/Response Structure and Infrastructure	Earthquake, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm, Human-caused Hazards	Communication	Y	M	\$100,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Aransas County Office of Emergency Management, Local Emergency Management Offices	12 Months	Emergency Management Action Plan	Promotes public safety.
17	Upgrade underground utilities to critical facilities.	County-wide	Reduce damages to infrastructure.	Structure and Infrastructure	Coastal Erosion, Drought, Earthquake, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm, Human-caused Hazards	Safety/Security, Energy (Power/Fuel)	Y	M	\$3,000,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Aransas County Office of Emergency Management, Local Emergency Management Offices	48 Months	Emergency Management Action Plan	Protects infrastructure, reduces cost of reparation, and prevents injury to residents.

SECTION 19: MITIGATION ACTIONS

ARANSAS COUNTY MITIGATION ACTIONS														
*Reduces risk to new and/or existing buildings and infrastructure														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
18	Acquire and distribute NOAA weather radios for all critical facilities.	County-wide	Reduce risk to citizens through improved education.	Education and Awareness	Earthquake, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Lightning, Thunderstorm, Wind, Tornado, Wildfire, Winter Storm, Human-caused Hazards	Communication	Y	M	\$50,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Aransas County Office of Emergency Management, Local Emergency Management Offices	12 Months	Emergency Management Action Plan	Promotes public safety.
19	Create and implement a plan for fiber optic network installation in critical facilities.	County-wide	Reduce interrupted services in communication infrastructure and ensure continuity of operations during hazard events.	Structure and Infrastructure	Earthquake, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Lightning, Thunderstorm, Wind, Tornado, Wildfire, Winter Storm, Human-caused Hazards	Communication	Y	H	\$15,000,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Aransas County Information Technology Department	48 Months	Emergency Management Action Plan	Protects infrastructure, reduces cost of repair, and prevents injury to residents.

SECTION 19: MITIGATION ACTIONS

ARANSAS COUNTY MITIGATION ACTIONS														
*Reduces risk to new and/or existing buildings and infrastructure														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
20	Lamar Beach Road Protection – The installation of breakwaters along St. Charles Bay Shoreline and the creation of a living shoreline will provide erosion protection improvements for Lamar Beach Road.	County-wide	Reduce threat of coastal erosion using nature based solutions.	Natural Systems Protection Structure and Infrastructure	Coastal Erosion	Safety/Security	Y	H	\$3,426,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Aransas County Public Works, ACND	24 Months	Texas Coastal Resiliency Master Plan	N/A
21	Precinct 3 - West FM 3036 - Projects 1, 2, 3, 4, 5: Installation of drainage structure under FM 1781, surface stormwater conveyance system improvements and 50ac property acquisition for regional stormwater management pond.	County-wide	Reduce the threat of flooding to new and existing buildings and infrastructure.	Structure and Infrastructure	Flood, Hurricane/Tropical Storm	Safety/Security	Y	H	\$1,200,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Stormwater Management	60 Months	Stormwater Management Plan	Protects infrastructure, reduces cost of repair, and prevents injury to residents.

SECTION 19: MITIGATION ACTIONS

ARANSAS COUNTY MITIGATION ACTIONS														
<i>*Reduces risk to new and/or existing buildings and infrastructure</i>														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
22	Precinct 1/1A - Club Lake - Project 2: Surface stormwater conveyance improvements from Club Lake to FM1069.	County-wide	Reduce the threat of flooding to new and existing buildings and infrastructure.	Structure and Infrastructure	Flood, Hurricane/Tropical Storm	Safety/Security	Y	H	\$1,500,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Stormwater Management	60 Months	Stormwater Management Plan	Protects infrastructure, reduces cost of repair, and prevents injury to residents.
23	Precinct 3 – Henderson Street Property- Project 4.	County-wide	Reduce the threat of flooding to new and existing buildings and infrastructure.	Structure and Infrastructure	Flood, Hurricane/Tropical Storm	Safety/Security	Y	H	\$1,500,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Stormwater Management	60 Months	Stormwater Management Plan	Protects infrastructure, reduces cost of repair, and prevents injury to residents.

SECTION 19: MITIGATION ACTIONS

ARANSAS COUNTY MITIGATION ACTIONS														
<i>*Reduces risk to new and/or existing buildings and infrastructure</i>														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
24	Shell Ridge Road - the construction of new habitat will provide erosion protection improvements.	County-wide	Reduce the threat of coastal erosion to new and existing buildings and infrastructure.	Structure and Infrastructure	Coastal Erosion	Safety/Security	Y	L	\$4,072,923	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Aransas County Public Works	24 Months	Texas Coastal Resiliency Master Plan	N/A
25	Oak Terrace & Peninsula Oaks Subdivisions drainage improvements and retrofitting drainage structures.	County-wide	Reduce the threat of flooding to new and existing buildings and infrastructure.	Structure and Infrastructure	Flood, Hurricane/Tropical Storm	Safety/Security	Y	H	\$1,500,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Stormwater Management, Road and Bridge	12 Months	Stormwater Management Plan	Protects infrastructure, reduces cost of repair, and prevents injury to residents.

SECTION 19: MITIGATION ACTIONS

ARANSAS COUNTY MITIGATION ACTIONS														
*Reduces risk to new and/or existing buildings and infrastructure														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
26	Airport mitigation improvements: Airport fuel farm hardening/berms - \$316,680; helicopter instrument approach - \$750,000; runway end identifier lights (REIL's) for Runway 18 & Runway 36 - \$110,438; T-Hangar parking pavement rehab/repave - \$1,190,000; rehab/repave approach & concrete pad - \$379,358; retrofit approach lights - \$16,596.	County-wide	Reduce the threat of flooding to new and existing buildings and infrastructure.	Structure and Infrastructure	Flood, Hurricane/Tropical Storm, Thunderstorm Wind, Tornado	Safety/Security	Y	H	\$3,900,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Aransas County Airport, Office of Emergency Management	36 Months	N/A	Protects infrastructure, reduces cost of reparation, and prevents injury to residents.
27	Corpus Christi St. drainage improvements - replace/upgrade stormwater pipe.	County-wide	Reduce the threat of flooding to new and existing buildings and infrastructure.	Structure and Infrastructure	Flood, Hurricane/Tropical Storm	Safety/Security	Y	H	\$750,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants: (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Stormwater Management, Road and Bridge	12 Months	Stormwater Management Plan	Protects infrastructure, reduces cost of reparation, and prevents injury to residents.

SECTION 19: MITIGATION ACTIONS

ARANSAS COUNTY MITIGATION ACTIONS														
*Reduces risk to new and/or existing buildings and infrastructure														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
28	Fulton Beach Road Protection – construct breakwaters and living shoreline.	County-wide	Reduce the threat of flooding to new and existing buildings and infrastructure.	Structure and Infrastructure	Coastal Erosion, Flood, Hurricane/Tropical Storm	Safety/Security	Y	H	\$6,000,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants: (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Public Works for Aransas County, Town of Fulton, City of Rockport, ACND	48 Months	Resiliency Master Plan	Protects infrastructure, reduces cost of repair, and prevents injury to residents.
29	Master Plan - Drainage Improvements - Project 5 - Market St (FM1069) at Burton & Kossuth.	County-wide	Reduce the threat of flooding to new and existing buildings and infrastructure.	Structure and Infrastructure	Flood	Safety/Security	Y	H	\$3,135,881	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants: (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Street Department	36 Months	Stormwater Management Plan	Protects infrastructure, reduces cost of repair, and prevents injury to residents.

SECTION 19: MITIGATION ACTIONS

ARANSAS COUNTY MITIGATION ACTIONS														
*Reduces risk to new and/or existing buildings and infrastructure														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
30	Master Plan - Drainage Improvements - Project 3 - Market St (FM1069) at SH 35 Bypass, Hickory & Steart.	County-wide	Reduce the threat of flooding to new and existing buildings and infrastructure.	Structure and Infrastructure	Flood	Safety/Security	Y	H	\$1,411,411	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Street Department	36 Months	Stormwater Management Plan	Protects infrastructure, reduces cost of reparation, and prevents injury to residents.
31	Stormwater Crossing at FM 1781 - Upgrade/replacement of box culverts to accommodate growth.	County-wide	Reduce the threat of flooding to new and existing buildings and infrastructure.	Structure and Infrastructure	Flood	Safety/Security	Y	H	\$171,248	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Street Department	36 Months	Stormwater Management Plan	Protects infrastructure, reduces cost of reparation, and prevents injury to residents.

SECTION 19: MITIGATION ACTIONS

ARANSAS COUNTY MITIGATION ACTIONS														
<i>*Reduces risk to new and/or existing buildings and infrastructure</i>														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
32	Create a process for property acquisition for open space preservation for stormwater and floodplain management.	County-wide	Reduce damages to infrastructure; Ensure continuity of services during and after event.	Natural Systems Protections	Flood, Hurricane/Tropical Storm	Safety/Security	Y	H	\$1,000,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Aransas County Floodplain Administrator	60 Months	Stormwater Management Plan	Protects communities and reduces risk of flooding.
33	Develop a County-wide transportation plan.	County-wide	Reduce damages to infrastructure; Ensure continuity of services during and after event.	Local Plans and Regulations	Flood, Hurricane/Tropical Storm	Safety/Security	Y	H	\$100,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Aransas County Road & Bridge	24 Months	Colonia Plan	Protects infrastructure, reduces cost of repair, and prevents injury to residents.

SECTION 19: MITIGATION ACTIONS

ARANSAS COUNTY MITIGATION ACTIONS														
*Reduces risk to new and/or existing buildings and infrastructure														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
34	Create and implement a process to add Tiger Field Shade Canopy/Awnings for vehicle protection.	Tiger Field	Reduce loss of life and property.	Structure and Infrastructure	Extreme Heat, Hail	Safety/Security	Y	H	\$100,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Aransas County Road & Bridge	12 Months	Long Term Recovery Plan	N/A
35	Implement a process to place flood sensors on low roads.	County-wide*	Reduce risk to residents through improved communication.	Structure and Infrastructure	Flood, Hurricane/Tropical Storm	Safety/Security	Y	H	\$500,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Aransas County Road & Bridge	24 Months	N/A	Protects infrastructure, reduces cost of reparation, and prevents injury to residents.
* Evacuation roadways														

SECTION 19: MITIGATION ACTIONS

ARANSAS COUNTY MITIGATION ACTIONS														
*Reduces risk to new and/or existing buildings and infrastructure														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
36	Improve public sidewalks and lighting.	County-wide*	Reduce risk to residents through improved communication.	Structure and Infrastructure Preparedness/Response	Flood, Wildfire	Safety/Security	Y	H	\$500,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Aransas County Road & Bridge	48 Months	N/A	Promotes public safety.
* Along FM 2165/Pearl St., from Linden St to Bypass 35														
37	Bayshore Drive stabilization.	County-wide*	Reduce damages to infrastructure; Ensure continuity of services during and after event.	Structure and Infrastructure	Flood, Hurricane/Tropical Storm	Safety/Security	Y	H	\$500,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Aransas County Road & Bridge	36 Months	Emergency Management Action Plan	Protects infrastructure, reduces cost of repair, and prevents injury to residents.
* Bayshore Drive in Key Allegro subdivision														

SECTION 19: MITIGATION ACTIONS

ARANSAS COUNTY MITIGATION ACTIONS														
*Reduces risk to new and/or existing buildings and infrastructure														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
38	Acquisition of Repetitive and Severe Repetitive Loss (RL & SRL) properties for stormwater management.	County-wide	Reduce repetitive and severe repetitive losses related to flooding.	Local Plans and Regulations	Flood, Hurricane/Tropical Storm	Safety/Security	Y	H	\$500,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Aransas County Stormwater Management	48 Months	Floodplain Ordinance	Protects communities and reduces risk of flooding.
39	Basin 39 Drainage Improvements.	County-wide*	Reduce damages to infrastructure; Ensure continuity of services during and after event.	Structure and Infrastructure	Flood, Hurricane/Tropical Storm	Safety/Security	Y	H	\$500,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Aransas County Stormwater Management	36 Months	Stormwater Management Plan	Protects infrastructure, reduces cost of repair, and prevents injury to residents.
* West 3036 & FM 1781														

SECTION 19: MITIGATION ACTIONS

ARANSAS COUNTY MITIGATION ACTIONS														
<i>*Reduces risk to new and/or existing buildings and infrastructure</i>														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
40	Create and implement rain gardens that allow water to soak naturally into the ground rather than becoming run-off to decrease or prevent the amount of phosphorus creation. Decreasing phosphorus will prevent the blooms from having nutrients to form.	County-wide	Reduce impact of algal blooms using natural systems.	Natural Systems Protection	Human-caused Hazard (Harmful Algal Bloom)	Safety/Security	N/A	M	\$500,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Aransas County Office of Emergency Management	36 Months	N/A	N/A
41	Create and implement a clay flocculation program to control the spread of toxic algae.	County-wide	Reduce impact of algal blooms using natural systems.	Natural Systems Protection	Human-caused Hazard (Harmful Algal Bloom)	Safety/Security	N/A	M	\$500,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Aransas County Office of Emergency Management	36 Months	N/A	N/A

SECTION 19: MITIGATION ACTIONS

ARANSAS COUNTY MITIGATION ACTIONS														
*Reduces risk to new and/or existing buildings and infrastructure														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
42	Create and implement a program to administer CLEAR, Xtreme, or another EPA-certified specialized spray system when algal blooms are present. This technology inhibits the spread of algal blooms.	County-wide	Reduce impact of algal blooms using natural systems.	Natural Systems Protection	Human-caused Hazard (Harmful Algal Bloom)	Safety/Security	N/A	M	\$500,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Aransas County Office of Emergency Management	36 Months	N/A	N/A
43	Create and Implement a Wildfire Mitigation and Preparedness Program. This program would outline mitigation activities and preparedness actions that can be done to prepare the county for wildfire events. These actions or activities could include training, education, and equipment procurement for county departments to help with mitigation and debris cleanup.	County-wide	Reduce the risk of loss of life and property.	Preparedness/Response	Wildfire	Safety/Security	Y	H	\$500,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Aransas County Office of Emergency Management	24-36 Months	Emergency Management Action Plan	N/A

SECTION 19: MITIGATION ACTIONS

ARANSAS COUNTY MITIGATION ACTIONS														
<i>*Reduces risk to new and/or existing buildings and infrastructure</i>														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
44	Implement automatic flashing lights for school zones.	County-wide*	Reduce risk to residents through improved communication.	Preparedness/Response	Flood, Wildfire	Safety/Security	Y	H	\$100,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Aransas County Road & Bridge	24 Months	N/A	Promotes public safety.
* Live Oak Learning Center egress and ingress														

SECTION 19: MITIGATION ACTIONS

TOWN OF FULTON

TOWN OF FULTON MITIGATION ACTIONS														
*Reduces risk to new and/or existing buildings and infrastructure														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
1	Acquire and distribute NOAA weather radios for all critical facilities.	Town-wide	Reduce risk to citizens through improved education.	Education and Awareness	Earthquake, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Lightning, Thunderstorm, Wind, Tornado, Wildfire, Winter Storm, Human-caused Hazards	Communication	Y	M	\$50,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Emergency Operations Department	12 Months	Emergency Management Action Plan	Promotes public safety.
2	Develop a water conservation program, including public education and outreach to warn citizens about the risks to public health caused by drought. Promote xeriscaping to conserve water.	Town-wide	Reduce water use and conserve water resources.	Education and Awareness Preparedness/Response	Drought	Communication	N/A	M	\$5,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Emergency Operations Department	36 Months	Drought Contingency Plan	N/A

SECTION 19: MITIGATION ACTIONS

TOWN OF FULTON MITIGATION ACTIONS														
<i>*Reduces risk to new and/or existing buildings and infrastructure</i>														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
3	Build safe room shelters throughout Town facilities so the occupants can reach shelter in less than five minutes.	Town-wide	Reduce risk to citizens by providing shelter in high-risk areas during extreme weather events.	Structure and Infrastructure	Earthquake, Hail, Hurricane/Tropical Storm, Thunderstorm Wind, Tornado, Human-caused Hazards	Safety/Security, Food/Hydration/Shelter	N/A	H	\$500,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Office of Emergency Management	48 Months	Emergency Management Action Plan	N/A
4	Harden/retrofit critical facilities to hazard-resistant levels including schools.	Town-wide	Reduce damages at critical facilities; Ensure continuity of critical services during and after event.	Structure and Infrastructure	Coastal Erosion, Drought, Earthquake, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm, Human-caused Hazards	Safety/Security	Y	H	\$500,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Office of Emergency Management	36-48 Months	Emergency Management Action Plan Capital Improvement Plan	Protects infrastructure, reduces cost of reparation, and prevents injury to residents.

SECTION 19: MITIGATION ACTIONS

TOWN OF FULTON MITIGATION ACTIONS														
<i>*Reduces risk to new and/or existing buildings and infrastructure</i>														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
5	Acquire and implement a hazard warning system, including a system that detects and provides warnings during hazard events. These sirens will be installed throughout the Town.	Town-wide	Reduce risk to citizens through improved communication and early warning.	Education and Awareness Preparedness/Response Structure and Infrastructure	Earthquake, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Lightning, Thunderstorm, Wind, Tornado, Wildfire, Winter Storm, Human-caused Hazards	Communication	Y	M	\$100,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Office of Emergency Management	12 Months	Emergency Management Action Plan	Promotes public safety.
6	In conjunction with the County, implement education and awareness program utilizing media, social media, bulletins, flyers, etc. to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. Include links to weather alerts and departmental phone listings with contact personnel for residents.	Town-wide	Promote hazard awareness and protect citizens from potential injuries and damages.	Education and Awareness	Coastal Erosion, Drought, Earthquake, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Lightning, Thunderstorm, Wind, Tornado, Wildfire, Winter Storm, Human-caused Hazards	Communication	N/A	M	\$5,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Emergency Operations Department	24 Months	Capital Improvement plan	Promotes public safety.

SECTION 19: MITIGATION ACTIONS

TOWN OF FULTON MITIGATION ACTIONS														
*Reduces risk to new and/or existing buildings and infrastructure														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
7	Update Stormwater Master Plan.	Town-wide	Reduce the threat of flooding to new and existing buildings and infrastructure.	Local Plans and Regulations	Flood, Hail, Hurricane/Tropical Storm	Safety/Security	Y	H	\$2,500	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Street Department	12 Months	Stormwater Management Plan	Protects infrastructure, reduces cost of repair, and prevents injury to residents.
8	Acquire and install generators with hard wired quick connections at all critical facilities including schools.	Town-wide	Provide power for critical facilities during power outages and ensure continuity of critical services.	Structure and Infrastructure	Earthquake, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm, Human-caused Hazards	Energy (Power/Fuel)	Y	M	\$2,005,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Fulton Public Works	24 Months	Emergency Management Action Plan Capital Improvement Plan	Helps ensure critical facilities continue to provide services during a power outage caused by unforeseen events.

SECTION 19: MITIGATION ACTIONS

TOWN OF FULTON MITIGATION ACTIONS														
<i>*Reduces risk to new and/or existing buildings and infrastructure</i>														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
9	Implement a process for digitizing vital records and off-site storage.	Town-wide	Digitizing records enable local government to maintain continuity of operations and protect irreplaceable community records for the benefit of the public welfare	Local Plans and Regulations Structure and Infrastructure	Coastal Erosion, Drought, Earthquake, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm, Human-caused Hazards	Safety/Security	Y	H	\$1,500,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	City Secretary	48 Months	Emergency Management Action Plan	Protects communities and reduces risk of flooding.
10	Fulton Beach Road stabilization project.	Town-wide	Reduce the threat of flooding to new and existing buildings and infrastructure.	Structure and Infrastructure	Coastal Erosion, Flood, Hurricane/Tropical Storm	Safety/Security	Y	H	\$1,000,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Town of Fulton Public Works	60 Months	Capital Improvement Plan	Protects infrastructure, reduces cost of reparation, and prevents injury to residents.

SECTION 19: MITIGATION ACTIONS

CITY OF ROCKPORT

CITY OF ROCKPORT MITIGATION ACTIONS														
*Reduces risk to new and/or existing buildings and infrastructure														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
1	Develop a water conservation program, including public education and outreach to warn citizens about the risks to public health caused by drought. Promote xeriscaping to conserve water.	City-wide	Reduce water use and conserve water resources.	Education and Awareness Preparedness /Response	Drought	Communication	N/A	M	\$5,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Emergency Operations Department	36 Months	Drought Contingency Plan	N/A
2	Implement education and awareness program utilizing media, social media, bulletins, flyers, etc. to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. Include links to weather alerts and departmental phone listings with contact personnel for residents.	City-wide	Promote hazard awareness and protect citizens from potential injuries and damages.	Education and Awareness	Coastal Erosion, Drought, Earthquake, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm, Human-caused Hazards	Communication	N/A	M	\$5,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Emergency Operations Department	24 Months	Emergency Management Action Plan	Promotes public safety.

SECTION 19: MITIGATION ACTIONS

CITY OF ROCKPORT MITIGATION ACTIONS														
*Reduces risk to new and/or existing buildings and infrastructure														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
3	Implement a Phased Project for FEMA Domes. Phase I: Complete a feasibility study of potential locations in Aransas County. This study will identify location suitability, dome specifications, and costs. Phase II: Implement installation of FEMA compliant Domes at identified sites from the Phase I study.	City-wide	Reduce risk to citizens by providing shelter in high-risk areas during extreme weather events.	Structure and Infrastructure	Earthquake, Hail, Hurricane/Tropical Storm, Lightning, Thunderstorm Wind, Tornado, Wildfire, Human-caused Hazards	Safety/Security	Y	H	\$7,500,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Emergency Operations Department	48 Months	Emergency Management Action Plan	N/A
4	Retrofit residences for flood and wind through mitigation reconstruction.	City-wide	Reduce damages at critical facilities; Ensure continuity of critical services during and after event.	Structure and Infrastructure	Flood, Hurricane/Tropical Storm, Thunderstorm Wind, Tornado	Safety/Security	N/A	H	\$26,700,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Emergency Operations Department	36-48 Months	Comprehensive Master Plan	Protects infrastructure, reduces cost of reparation, and prevents injury to residents.

SECTION 19: MITIGATION ACTIONS

CITY OF ROCKPORT MITIGATION ACTIONS														
<i>*Reduces risk to new and/or existing buildings and infrastructure</i>														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
5	Implement a process for digitizing vital records and off-site storage.	City-wide	Digitizing records enable local government to maintain continuity of operations and protect irreplaceable community records for the benefit of the public welfare	Local Plans and Regulations Structure and Infrastructure	Coastal Erosion, Drought, Earthquake, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm, Human-caused Hazards	Safety/Security	Y	H	\$1,500,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	City Secretary	48 Months	Emergency Management Action Plan	Protects communities and reduces risk of flooding.
6	Harden/retrofit commercial properties designated as critical facilities to hazard-resistant levels.	City-wide	Reduce damages at critical facilities; Ensure continuity of critical services during and after event.	Structure and Infrastructure	Coastal Erosion, Drought, Earthquake, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm, Human-caused Hazards	Safety/Security	Y	H	\$15,000,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants: (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Office of Emergency Management, County and City Floodplain Management Offices	36-48 Months	Emergency Management Action Plan Continuity of Operations Plan	Protects infrastructure, reduces cost of repair, and prevents injury to residents.

SECTION 19: MITIGATION ACTIONS

CITY OF ROCKPORT MITIGATION ACTIONS														
<i>*Reduces risk to new and/or existing buildings and infrastructure</i>														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
7	Create and implement heat exhaustion policies for employees.	City-wide	Reduce risks to employees from extreme heat hazards.	Education and Awareness	Extreme Heat	Safety/Security, Communication	N/A	H	\$2,500	Local Budget	Local Emergency Management	12 Months	Emergency Management Action Plan	N/A
8	Create, adopt, and implement a county-wide wetlands preservation plan.	City-wide	Reduce risks of loss of life and property.	Local Plans and Regulations Natural Systems Protection	Coastal Erosion, Flood, Hurricane/Tropical Storm	Safety/Security	N/A	H	\$2,500	Local Budget; CMP	Aransas County Office of Emergency Management, Local Emergency Management Offices	12 Months	N/A	Protects communities and reduces risk of flooding.
9	Obtain certification in the National Weather Service StormReady Program.	City-wide	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Education and Awareness Local Plans and Regulations	Flood, Hail, Hurricane/Tropical Storm, Lightning, Thunderstorm Wind, Tornado, Winter Storm	Communication	N/A	H	\$10,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Aransas County Office of Emergency Management, Local Emergency Management Offices	12 Months	Emergency Management Action Plan	Promotes public safety.

SECTION 19: MITIGATION ACTIONS

CITY OF ROCKPORT MITIGATION ACTIONS														
*Reduces risk to new and/or existing buildings and infrastructure														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
10	Design and implement a debris removal program in local drainage systems.	City-wide	Reduce damages caused by flooding by maintaining or restoring drainage capacity.	Structure and Infrastructure	Flood	Safety/Security	N/A	H	\$2,500	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Public Works	12 Months	Stormwater Management Plan	Protects communities and reduces risk of flooding.
11	Acquire and install generators with hard wired quick connections at all critical facilities.	City--wide	Provide power for critical facilities during power outages and ensure continuity of critical services.	Structure and Infrastructure	Earthquake, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Lightning, Thunderstorm, Wind, Tornado, Wildfire, Winter Storm, Human-caused Hazards	Energy (Power/Fuel)	Y	M	\$1,500,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Public Works	48 Months	Emergency Management Action Plan Continuity of Operations Plan	Helps ensure critical facilities continue to provide services during a power outage caused by unforeseen events.

SECTION 19: MITIGATION ACTIONS

CITY OF ROCKPORT MITIGATION ACTIONS														
*Reduces risk to new and/or existing buildings and infrastructure														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
12	Create and implement an erosion response plan.	County-wide	Reduce loss of property due to coastal erosion.	Local Plans and Regulations Natural Systems Protection	Coastal Erosion	Safety/Security	N/A	M	\$2,500	Local Budget; CMP	Aransas County Office of Emergency Management, Local Emergency Management Offices	12 Months	N/A	N/A
13	Acquire and implement a hazard warning system, including a system that detects and provides warnings during hazard events. These sirens will be installed throughout the City.	City-wide	Reduce risk to citizens through improved communication and early warning.	Education and Awareness Preparedness/Response Structure and Infrastructure	Earthquake, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Lightning, Thunderstorm, Wind, Tornado, Wildfire, Winter Storm, Human-caused Hazards	Communication	Y	M	\$100,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Emergency Operations Department	12 Months	Emergency Management Action Plan	Promotes public safety.

SECTION 19: MITIGATION ACTIONS

CITY OF ROCKPORT MITIGATION ACTIONS														
<i>*Reduces risk to new and/or existing buildings and infrastructure</i>														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
14	Upgrade underground utilities to critical facilities.	County-wide	Reduce damages to infrastructure.	Structure and Infrastructure	Coastal Erosion, Drought, Earthquake, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm, Human-caused Hazards	Safety/Security, Energy (Power/Fuel)	Y	M	\$200,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Aransas County Office of Emergency Management, Local Emergency Management Offices	48 Months	Emergency Management Action Plan	Protects infrastructure, reduces cost of reparation, and prevents injury to residents.
15	Acquire and distribute NOAA weather radios for all critical facilities.	City-wide	Reduce risk to citizens through improved education.	Education and Awareness	Earthquake, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm, Human-caused Hazards	Communication	Y	M	\$50,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Emergency Operations Department	12 Months	Emergency Management Action Plan	Promotes public safety.

SECTION 19: MITIGATION ACTIONS

CITY OF ROCKPORT MITIGATION ACTIONS														
<i>*Reduces risk to new and/or existing buildings and infrastructure</i>														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
16	Create and implement a plan for fiber optic network installation in crucial facilities.	City-wide	Reduce interrupted services in communication infrastructure and ensure continuity of operations during hazard events.	Structure and Infrastructure	Earthquake, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm, Human-caused Hazards	Communication	Y	H	\$15,000,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Information Technology Department	48 Months	Emergency Management Action Plan	Protects infrastructure, reduces cost of reparation, and prevents injury to residents.
17	Master Plan - Drainage Improvements - Project 1 - SH 35 BUS - Traylor Ave & Tule Park Dr.	City-wide	Reduce the threat of flooding to new and existing buildings and infrastructure.	Structure and Infrastructure	Flood, Hurricane/Tropical Storm	Safety/Security	Y	H	\$6,000,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Street Department	48 Months	Stormwater Management Plan	Protects infrastructure, reduces cost of reparation, and prevents injury to residents.

SECTION 19: MITIGATION ACTIONS

CITY OF ROCKPORT MITIGATION ACTIONS														
<i>*Reduces risk to new and/or existing buildings and infrastructure</i>														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
18	Master Plan - Drainage Improvements - Project 2 - SH 35 BUS - Enterprise & Maple.	City-wide	Reduce the threat of flooding to new and existing buildings and infrastructure.	Structure and Infrastructure	Flood, Hurricane/Tropical Storm	Safety/Security	Y	H	\$540,798	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Street Department	48 Months	Stormwater Management Plan	Protects infrastructure, reduces cost of reparation, and prevents injury to residents.
19	Master Plan - Drainage Improvements - Project 6 - Enterprise from Pearl St (FM2165) to Omohundro & Live Oak at Maple.	City-wide	Reduce the threat of flooding to new and existing buildings and infrastructure.	Structure and Infrastructure	Flood, Hurricane/Tropical Storm	Safety/Security	Y	H	\$1,079,118	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Street Department	24 Months	Stormwater Management Plan	Protects infrastructure, reduces cost of reparation, and prevents injury to residents.

SECTION 19: MITIGATION ACTIONS

CITY OF ROCKPORT MITIGATION ACTIONS														
<i>*Reduces risk to new and/or existing buildings and infrastructure</i>														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
20	Master Plan - Drainage Improvements - Project 8 - Pearl St (FM2165) at Orleans & Laurel.	City-wide	Reduce the threat of flooding to new and existing buildings and infrastructure.	Structure and Infrastructure	Flood, Hurricane/Tropical Storm	Safety/Security	Y	H	\$2,813,827	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Street Department	48 Months	Stormwater Management Plan	Protects infrastructure, reduces cost of reparation, and prevents injury to residents.
21	Construction and upgrades to substandard roadways - Construction of approx. 2 miles/year due to annexation and development.	City-wide	Reduce the threat of flooding to new and existing buildings and infrastructure.	Structure and Infrastructure	Flood, Hurricane/Tropical Storm	Safety/Security	Y	H	\$1,348,301	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Street Department	48 Months	Stormwater Management Plan	Protects infrastructure, reduces cost of reparation, and prevents injury to residents.

SECTION 19: MITIGATION ACTIONS

CITY OF ROCKPORT MITIGATION ACTIONS														
<i>*Reduces risk to new and/or existing buildings and infrastructure</i>														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
22	RCC Lakes – removal of sediment for drainage improvements.	City-wide	Reduce the threat of flooding to new and existing buildings and infrastructure.	Structure and Infrastructure	Flood, Hurricane/Tropical Storm	Safety/Security	Y	H	\$376,800	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Street Department	48 Months	Stormwater Management Plan	Protects infrastructure, reduces cost of reparation, and prevents injury to residents.
23	Concho Street Drainage - Construction of drainage pipe down Concho starting at low west Hwy 35 to Harbor.	City-wide	Reduce the threat of flooding to new and existing buildings and infrastructure.	Structure and Infrastructure	Flood, Hurricane/Tropical Storm	Safety/Security	Y	H	\$2,192,971	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Street Department	48 Months	Stormwater Management Plan	Protects infrastructure, reduces cost of reparation, and prevents injury to residents.

SECTION 19: MITIGATION ACTIONS

CITY OF ROCKPORT MITIGATION ACTIONS														
<i>*Reduces risk to new and/or existing buildings and infrastructure</i>														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
24	Design and conduct an engineering study to address flooding in downtown Rockport.	City-wide	Reduce the threat of flooding to new and existing buildings and infrastructure.	Local Plans and Regulations	Flood	Safety/Security	Y	H	\$1,348,301	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Street Department	48 Months	Stormwater Management Plan	Protects infrastructure, reduces cost of reparation, and prevents injury to residents.
25	Update Stormwater Master Plan.	City-wide	Reduce the threat of flooding to new and existing buildings and infrastructure.	Structure and Infrastructure	Flood, Hurricane/Tropical Storm	Safety/Security	Y	H	\$1,348,301	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Street Department	48 Months	Stormwater Management Plan	Protects infrastructure, reduces cost of reparation, and prevents injury to residents.

SECTION 19: MITIGATION ACTIONS

CITY OF ROCKPORT MITIGATION ACTIONS														
*Reduces risk to new and/or existing buildings and infrastructure														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
26	Repair outfalls of pump station that pump into Aransas Bay.	City-wide	Reduce the threat of flooding to new and existing buildings and infrastructure.	Structure and Infrastructure	Flood, Hurricane/Tropical Storm	Safety/Security	Y	H	\$2,000,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Public Works	12 Months	Emergency Management Action Plan Continuity of Operations Plan	Protects infrastructure, reduces cost of reparation, and prevents injury to residents.
27	Perform an assessment of pump stations to determine if stormwater mitigation is efficient or needs to be improved. Based on assessment results there will be improvements or upgrades made to existing pump stations or installation of new pump stations.	City-wide	Reduce the threat of flooding to new and existing buildings and infrastructure.	Structure and Infrastructure	Flood, Hurricane/Tropical Storm	Safety/Security	Y	H	\$2,000,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Street Department	24 Months	Emergency Management Action Plan Continuity of Operations Plan	Protects infrastructure, reduces cost of reparation, and prevents injury to residents.

SECTION 19: MITIGATION ACTIONS

CITY OF ROCKPORT MITIGATION ACTIONS														
<i>*Reduces risk to new and/or existing buildings and infrastructure</i>														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
28	Maintain the adoption of the most current I-Codes and BCEGS rating.	City--wide	Reduce damages to structures and infrastructure; Reduce risk of injuries or fatalities.	Local Plans and Regulations	Earthquake, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm, Human-caused Hazards	Safety/Security	Y	M	\$2,500	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Building Department	12 Months	Building Codes/Ordinances	Protects infrastructure, reduces cost of reparation, and prevents injury to residents.
29	Design and implement outreach projects for special needs populations.	City-wide	Promote hazard awareness and protect citizens from potential injuries and damages.	Education and Awareness	Coastal Erosion, Drought, Earthquake, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm, Human-caused Hazards	Communication	N/A	M	\$2,500	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Planning Department, Emergency Operations Department	12 Months	Emergency Management Action Plan	Promotes public safety.

SECTION 19: MITIGATION ACTIONS

CITY OF ROCKPORT MITIGATION ACTIONS														
<i>*Reduces risk to new and/or existing buildings and infrastructure</i>														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
30	Design and implement outreach projects for tourist populations.	City-wide	Promote hazard awareness and protect citizens from potential injuries and damages.	Education and Awareness	Coastal Erosion, Drought, Earthquake, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm, Human-caused Hazards	Communication	N/A	M	\$5,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Planning Department, Emergency Operations Department	12 Months	Emergency Management Action Plan	Promotes public safety.
31	Design and implement an open space plan, adopt regulations that prohibit development in identified areas.	City-wide	Reduce flood risk to structures and infrastructure in and near the floodplain; Reduce downstream impacts associated with development in the floodplain.	Local Plans and Regulations	Coastal Erosion, Flood, Hurricane/Tropical Storm	Safety/Security, Natural Systems Protection	N/A	M	\$2,500	Local Budget; CMP	Planning Department	12 Months	Building Codes/Ordinances Comprehensive Master Plan	Promotes public safety.

SECTION 19: MITIGATION ACTIONS

CITY OF ROCKPORT MITIGATION ACTIONS														
*Reduces risk to new and/or existing buildings and infrastructure														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
32	Roadway and drainage infrastructure improvements on Water Street and Austin Street (from Market St. to southern end of streets).	City-wide	Reduce impact to infrastructure by reducing impact of coastal erosion, improve shoreline resiliency, and prevent flood damage.	Structure and Infrastructure	Coastal Erosion, Flood, Hurricane/Tropical Storm	Safety/Security, Natural Systems Protection	N/A	M	\$4,00,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Planning Department	36 Months	Stormwater Management Plan	Promotes public safety.
33	Create and implement a City-wide Records Management Project with a Disaster Plan.	City-wide	Reduce loss of potential reimbursements and allow for city staff to maintain policies and records related to disaster management.	Local Plans and Regulations Preparedness/Response	Coastal Erosion, Drought, Earthquake, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm, Human-caused Hazards	Safety/Security	Y	H	\$5,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	City Secretary	12 Months	Emergency Management Action Plan	Protects infrastructure, reduces cost of reparation, and prevents injury to residents.

SECTION 19: MITIGATION ACTIONS

CITY OF ROCKPORT MITIGATION ACTIONS														
*Reduces risk to new and/or existing buildings and infrastructure														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
34	Educate citizens on mitigation measures to prevent frozen pipes, gas furnace maintenance, carbon monoxide monitors/alarms. Coordinate with RV Parks to ensure message is communicated.	City-wide	Promote hazard awareness and protect citizens from potential injuries and damages.	Education and Awareness Local Plans and Regulations	Winter Storm	Communication	N/A	M	\$2,500	Local Budget	City of Rockport Building Department	12 Months	Emergency Management Action Plan	N/A
35	Implementation of a twice-yearly brush pick up and removal program to reduce fuel load near wildland urban interface and beyond.	City-wide	Reduce damages to infrastructure; Ensure continuity of services during and after event.	Local Plans and Regulations Structure and Infrastructure	Lightning, Wildfire, Winter Storm	Safety/Security	Y	M	\$50,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	City of Rockport Planning Department, Emergency Operations Department	36 Months	Emergency Management Action Plan	N/A

SECTION 19: MITIGATION ACTIONS

CITY OF ROCKPORT MITIGATION ACTIONS														
<i>*Reduces risk to new and/or existing buildings and infrastructure</i>														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
36	Feasibility Study for the remaining debris from Hurricane Harvey that is located on private property. This would be a phased project. Phase I: Hire a debris management company to assess the remaining debris at locations throughout the community. The management company would provide mitigation projects that could be done as a result of the study. Projects would be ranked based on priority. Phase II: Implement the projects that were identified in Phase I.	City-wide	Clearing the remaining debris from Hurricane Harvey will reduce the risk and spread of wildfires in the City; Reducing and clearing debris will also reduce the risk to the life and safety of first responders and citizens during hazard events.	Local Plans and Regulations	Hurricane/Tropical Storm, Wildfire	Safety/Security	N/A	H	\$500,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Emergency Operations Department	24 Months	Emergency Management Action Plan	N/A

SECTION 19: MITIGATION ACTIONS

ROCKPORT-FULTON INDEPENDENT SCHOOL DISTRICT (ISD)

ROCKPORT-FULTON INDEPENDENT SCHOOL DISTRICT MITIGATION ACTIONS

**Reduces risk to new and/or existing buildings and infrastructure*

Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
1	Develop a water conservation program, including public education and outreach to warn the community about the risks to public health caused by drought. Promote xeriscaping to conserve water.	ISD-wide	Reduce water use and conserve water resources.	Education and Awareness Preparedness /Response	Drought	Communication	N/A	M	\$5,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Rockport-Fulton ISD Administration	36 Months	N/A	N/A
2	Implement education and awareness program utilizing media, social media, bulletins, flyers, etc. to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. Include links to weather alerts and departmental phone listings with contact personnel for residents.	ISD-wide	Promote hazard awareness and protect citizens from potential injuries and damages.	Education and Awareness	Coastal Erosion, Drought, Earthquake, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm, Human-caused Hazards	Communication	N/A	M	\$5,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Rockport-Fulton ISD Administration	24 Months	N/A	N/A

SECTION 19: MITIGATION ACTIONS

ROCKPORT-FULTON INDEPENDENT SCHOOL DISTRICT MITIGATION ACTIONS														
<i>*Reduces risk to new and/or existing buildings and infrastructure</i>														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
3	Harden/retrofit critical facilities to hazard-resistant levels.	ISD-wide	Reduce damages at critical facilities; Ensure continuity of critical services during and after event.	Structure and Infrastructure	Coastal Erosion, Drought, Earthquake, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm, Human-caused Hazards	Safety/Security	Y	H	\$500,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Rockport-Fulton ISD Administration	36-48 Months	N/A	N/A
4	Acquire and install generators with hard wired quick connections at all critical facilities.	ISD-wide	Provide power for critical facilities during power outages and ensure continuity of critical services.	Structure and Infrastructure	Earthquake, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm, Human-caused Hazards	Energy (Power/Fuel)	Y	M	\$1,500,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Rockport-Fulton ISD Administration	48 Months	N/A	N/A

SECTION 19: MITIGATION ACTIONS

ROCKPORT-FULTON INDEPENDENT SCHOOL DISTRICT MITIGATION ACTIONS														
*Reduces risk to new and/or existing buildings and infrastructure														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
5	Construct covered areas, awnings, and walkways, throughout ISD to protect students and staff from extreme heat and other hazard events.	ISD-wide	Reduce risk of damages or injuries through improved building standards; reduce risk of damages and injuries	Structure and Infrastructure	Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm, Human-caused Hazards	Safety/Security	N/A	H	\$200,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Rockport-Fulton ISD Administration	24 Months	N/A	N/A
6	Acquire and implement a hazard warning system, including a system that detects and provides warnings during hazard events. These sirens will be installed throughout the district.	ISD-wide	Reduce risk through improved communications and early warning.	Education and Awareness Preparedness/Response Structure and Infrastructure	Earthquake, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm, Human-caused Hazards	Communication	N/A	H	\$1,000,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants: (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Rockport-Fulton ISD Administration	48 Months	N/A	N/A

SECTION 19: MITIGATION ACTIONS

ROCKPORT-FULTON INDEPENDENT SCHOOL DISTRICT MITIGATION ACTIONS														
*Reduces risk to new and/or existing buildings and infrastructure														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
7	Acquire and distribute NOAA weather radios.	ISD-wide	Reduce risk through improved communications and early warning.	Education and Awareness	Drought, Earthquake, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm, Human-caused Hazards	Communication	N/A	H	\$50,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Rockport-Fulton ISD Administration	24 Months	N/A	N/A
8	Build safe room shelters throughout facilities so the occupants can reach shelter in less than five minutes.	ISD-wide	Reduce risk to citizens by providing shelter in high-risk areas during extreme weather events.	Structure and Infrastructure	Earthquake, Hail, Hurricane/Tropical Storm, Thunderstorm Wind, Tornado, Human-caused Hazards	Safety/Security, Food/Hydration/Shelter	N/A	H	\$500,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	Rockport-Fulton ISD Administration	48 Months	N/A	N/A

SECTION 19: MITIGATION ACTIONS

ARANSAS COUNTY NAVIGATION DISTRICT (ACND)

ARANSAS COUNTY NAVIGATION DISTRICT (ACND) MITIGATION ACTIONS

**Reduces risk to new and/or existing buildings and infrastructure*

Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
1	Acquire and distribute NOAA weather radios for all critical facilities.	District-wide	Reduce risk to citizens through improved education.	Education and Awareness	Earthquake, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Lightning, Thunderstorm, Wind, Tornado, Wildfire, Winter Storm, Human-caused Hazards	Communication	Y	M	\$50,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	ACND	12 Months	Emergency Management Action Plan	N/A
2	Implement education and awareness program utilizing media, social media, bulletins, flyers, etc. to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. Include links to weather alerts and departmental phone listings with contact personnel for residents.	District-wide	Promote hazard awareness and protect citizens from potential injuries and damages.	Education and Awareness	Coastal Erosion, Drought, Earthquake, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Lightning, Thunderstorm, Wind, Tornado, Wildfire, Winter Storm, Human-caused Hazards	Communication	N/A	M	\$5,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	ACND	24 Months	Emergency Management Action Plan	N/A

SECTION 19: MITIGATION ACTIONS

ARANSAS COUNTY NAVIGATION DISTRICT (ACND) MITIGATION ACTIONS														
<i>*Reduces risk to new and/or existing buildings and infrastructure</i>														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
3	Harden/retrofit critical facilities to hazard-resistant levels.	District-wide	Reduce damages at critical facilities; Ensure continuity of critical services during and after event.	Structure and Infrastructure	Coastal Erosion, Drought, Earthquake, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm, Human-caused Hazards	Safety/Security	Y	H	\$500,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	ACND	36-48 Months	Emergency Management Action Plan	N/A
4	Acquire and install generators with hard wired quick connections at all critical facilities.	District-wide	Provide power for critical facilities during power outages and ensure continuity of critical services.	Structure and Infrastructure	Earthquake, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm, Human-caused Hazards	Energy (Power/Fuel)	Y	M	\$1,500,000	Local Budget; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	ACND	48 Months	Emergency Management Action Plan	N/A

SECTION 19: MITIGATION ACTIONS

ARANSAS COUNTY NAVIGATION DISTRICT (ACND) MITIGATION ACTIONS														
*Reduces risk to new and/or existing buildings and infrastructure														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
5	Cove Harbor Bulkheads - bulkhead construction will provide erosion protection improvements.	District-wide	Reduce threat of coastal erosion to infrastructure.	Structure and Infrastructure	Coastal Erosion, Flood	Safety/Security	N/A	H	\$20,000,000	Local Budget; CPM; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	ACND	24 Months	Capital Improvement Plan	N/A
6	Little Bay - Hydraulic Restoration - remove sediment from the bay and use it for nourishment and habitat restoration projects.	District-wide	Reduce threat of coastal erosion to infrastructure.	Structure and Infrastructure	Coastal Erosion, Flood	Safety/Security	N/A	M	\$7,266,070	Local Budget; CMP; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	ACND	24 Months	Capital Improvement Plan	N/A

SECTION 19: MITIGATION ACTIONS

ARANSAS COUNTY NAVIGATION DISTRICT (ACND) MITIGATION ACTIONS														
<i>*Reduces risk to new and/or existing buildings and infrastructure</i>														
Action #	Proposed Action	Site	Benefit	Action Type	Hazards	Community Lifeline	Infra.*	Priority (High, Mod., Low)	Cost	Potential Funding Sources	Lead Agency	Timeline	Existing Plans	NFIP
7	Bulkhead construction in Rockport Harbor	District-wide	Reduce threat of coastal erosion to infrastructure.	Structure and Infrastructure	Coastal Erosion, Flood	Safety/Security	Y	H	\$4,500,000	Local Budget; CMP; State Grants (GLO, TAMFS, TDA, TDEM, TWDB, TXDOT); Federal Grants (FEMA HMA Grants, CDBG, CDC, DOH, EDA, EPA, HUD, NFIP, NFWF, NOAA, NRCS, SBA, USACE, USDA, USFS, USFWS)	ACND	36-48 Months	Capital Improvement Plan	N/A



SECTION 20 **PLAN MAINTENANCE**

SECTION 20: PLAN MAINTENANCE

Plan Maintenance Procedures	1
Incorporation	1
Process of Incorporation	1
Monitoring and Evaluation	4
Monitoring	4
Evaluation	5
Updating	5
Plan Revisions	5
Five (5) Year Review	6
Continued Public Involvement	6

PLAN MAINTENANCE PROCEDURES

The following is an explanation of how the participating jurisdictions within Aransas County, and the general public will be involved in implementing, evaluating, and enhancing the Plan over time. When the Plan is discussed in all maintenance procedures it includes mitigation actions and hazard assessments. The sustained hazard mitigation planning process consists of four main parts:

- Incorporation
- Monitoring and Evaluation
- Updating
- Continued Public Involvement

INCORPORATION

Participating jurisdictions within Aransas County will be responsible for further development and implementation of mitigation actions. Each action has been assigned to a specific department within the participating jurisdictions. The following describes the process by which participating jurisdictions will incorporate elements of the mitigation plan into other planning mechanisms.

PROCESS OF INCORPORATION

Once the Plan Update is adopted, participating jurisdictions within Aransas County will implement actions based on priority and the availability of funding. The planning area currently implements policies and programs to reduce loss of life and property from hazards. The mitigation actions developed for this Plan Update enhance this ongoing effort and will be implemented through other program mechanisms where possible.

The potential funding sources listed for each identified action may be used when the jurisdiction seeks funds to implement actions. An implementation time period or a specific implementation date has been assigned to each action as an incentive for completing each task and gauging whether actions are implemented in a timely manner.

Participating jurisdictions within Aransas County will integrate implementation of their mitigation actions with other plans and policies, such as construction standards and emergency management plans, and ensure that these actions, or proposed projects, are reflected in other

SECTION 20: PLAN MAINTENANCE

planning efforts. Coordinating and integrating components of other plans and policies into the goals and objectives of the Plan Update will further maximize funding and provide possible cost-sharing of key projects, thereby reducing loss of lives and property and mitigating hazards affecting the area.

Upon formal adoption of the Plan Update, Planning Team members from each participating jurisdiction will work to integrate the hazard mitigation strategies into other plans and codes as they are developed. Participating team members will conduct periodic reviews of plans and policies, once per year at a minimum, and analyze the need for revisions in light of the approved Plan. The Planning Team will review all Comprehensive Land Use Plans (applicable jurisdictions only), Capital Improvement Plans, annual budget reviews, Emergency Operations or Management Plans, and Transportation Plans (applicable jurisdictions only) to guide and control development. Participating jurisdictions will ensure that capital improvement planning in the future will also contribute to the goals of this hazard mitigation Plan Update to reduce the long-term risk to life and property from all hazards. Within one year of formal adoption of the hazard mitigation Plan Update, existing planning mechanisms will be reviewed by each jurisdiction.

Aransas County is committed to supporting the participating jurisdictions as they implement their mitigation actions. Planning Team members will review and revise, as necessary, the long-range goals and objectives in strategic plans and budgets to ensure that they are consistent with this Mitigation Action Plan. Additionally, the planning area will work to advance the goals of this hazard mitigation plan through its routine, ongoing, long-range planning, budgeting, and work processes.

Table 20-1 identifies types of planning mechanisms and examples of methods for incorporating the Plan Update into other planning efforts. The team members, listed in Table 20-2 below, will be responsible for the review of these planning mechanisms and their incorporation of the plan, with the exception of the Floodplain Management Plans; the jurisdictions who have a Floodplain Administrator on staff will be responsible for incorporating the plan when Floodplain Management Plans are updated, or new plans are developed.

Table 20-1. Methods of Incorporation of the Plan

PLANNING MECHANISM	DEPARTMENT / TITLE RESPONSIBLE	INCORPORATION OF PLAN
Annual Budget Review	Aransas County – Administration: County Auditor Town of Fulton – Administration: City Secretary City of Rockport – Administration: City Manager Rockport-Fulton ISD – Administration: Director of Operations Aransas County Navigation District – Administration: Executive Administrator	Various departments and key personnel that participated in the planning process for participating jurisdictions within Aransas County will review the Plan and mitigation actions therein when conducting their annual budget review. Allowances will be made in accordance with grant applications sought, and mitigation actions that will be undertaken, according to the implementation schedule of the specific action.

SECTION 20: PLAN MAINTENANCE

PLANNING MECHANISM	DEPARTMENT / TITLE RESPONSIBLE	INCORPORATION OF PLAN
Capital Improvement Plans	Aransas County – Emergency Management: Emergency Management Coordinator Town of Fulton – Administration: City Secretary City of Rockport – Administration: City Manager Rockport-Fulton ISD – Administration: Director of Operations Aransas County Navigation District – Administration: Executive Administrator	Several participating jurisdictions within Aransas County have a Capital Improvement Plan (CIP) in place or under development. Prior to any developments or revisions to the CIP, county, city, town, ISD, and special district departments will review the risk assessment and mitigation strategy sections of the HMAP, as limiting public spending in hazardous zones is one of the most effective long-term mitigation actions available to local governments.
Comprehensive Plans	Town of Fulton – Administration: City Secretary City of Rockport – Building: Community Planner Rockport-Fulton ISD – Administration: Director of Operations	Several participating jurisdictions within Aransas County have a Comprehensive Land Use Plan in place or under development. Since Comprehensive Plans involve developing a unified vision for a community, the mitigation vision and goals of the Plan will be reviewed in the development or revision of a Comprehensive Plan.
Floodplain Management Plans	Aransas County – Floodplain Administrator Town of Fulton – Floodplain Administrator City of Rockport – Floodplain Administrator	Floodplain management plans include preventative and corrective actions to address the flood hazard. Therefore, the actions for flooding and information found in Section 9 of this Plan Update discussing the people and property at risk to flood will be reviewed and revised when the county and participating jurisdictions within Aransas County update their management plans or develop new plans.
Grant Applications	Aransas County – Administration: Grant Administrator Town of Fulton – Administration: City Secretary City of Rockport – Administration: City Manager Rockport-Fulton ISD – Administration: Director of Operations Aransas County Navigation District – Administration: Executive Administrator	The HMAP will be evaluated by participating jurisdictions within Aransas County when grant funding is sought for mitigation projects. If a project is not in the Plan Update, a Plan Revision may be necessary to include the action in the Plan.

SECTION 20: PLAN MAINTENANCE

PLANNING MECHANISM	DEPARTMENT / TITLE RESPONSIBLE	INCORPORATION OF PLAN
Regulatory Plans	Aransas County – Emergency Management: Emergency Management Coordinator Town of Fulton – Administration: City Secretary City of Rockport – Administration: City Manager Rockport-Fulton ISD – Administration: Director of Operations Aransas County Navigation District – Administration: Executive Administrator	Currently, several participating jurisdictions within Aransas County have regulatory plans in place or under development, such as Emergency Operations Plans, Land Use Plans, and Evacuation Plans. The Plan Update will be consulted when county, city, town, ISD, and district departments review or revise their current regulatory planning mechanisms or in the development of regulatory plans that are not currently in place.

MONITORING AND EVALUATION

Periodic revisions of the Plan are required to ensure that goals, objectives, and mitigation actions are kept current. When the plan is discussed in these sections, it includes the risk assessment and mitigation actions as a part of the monitoring, evaluating, updating, and review process. Revisions may be required to ensure the Plan is in compliance with federal and state statutes and regulations. This section outlines the procedures for completing Plan revisions, updates, and reviews. Table 20-2 indicates the department and title of the party responsible for Plan monitoring, evaluating, updating, and reviewing of the Plan.

Table 20-2. Team Members Responsible for Plan Monitoring, Evaluating, Updating, and Review of the Plan

ORGANIZATION / DEPARTMENT	TITLE
Aransas County – Administration	County Auditor
Aransas County – Administration	Development Services Coordinator
Aransas County – Emergency Management	Emergency Management Coordinator
Town of Fulton – Development Services	Director of Operations
City of Rockport – Public Works	GIS Specialist
Rockport-Fulton ISD – Administration	Director of Operations
Aransas County Navigation District – Administration	Harbor Master

MONITORING

Designated Planning Team members are responsible for monitoring, evaluating, updating, and reviewing the Plan, as shown in Table 20-2. Individuals holding the title listed in Table 20-2 will be responsible for monitoring the Plan on an annual basis. Plan monitoring includes reviewing and incorporating into the Plan other existing planning mechanisms that relate or support goals

SECTION 20: PLAN MAINTENANCE

and objectives of the Plan; monitoring the incorporation of the Plan into future updates of other existing planning mechanisms as appropriate; reviewing mitigation actions submitted and coordinating with various county, city, town, ISD, and special district departments to determine if mitigation actions need to be re-evaluated and updated; evaluating and updating the Plan as necessary; and monitoring plan maintenance to ensure that the process described is being followed, on an annual basis, throughout the planning process. The Planning Team will develop a brief report that identifies policies and actions in the Plan that have been successfully implemented and any changes in the implementation process needed for continued success. A summary of meeting notes will report the particulars involved in developing an action into a project. In addition to the annual monitoring, the Plan will be similarly reviewed immediately after extreme weather events, including but not limited to state and federally declared disasters.

EVALUATION

As part of the evaluation process, the Planning Team will assess changes in risk; determine whether the implementation of mitigation actions is on schedule; determine whether there are any implementation problems, such as technical, political, legal, or coordination issues; and identify changes in land development or programs that affect mitigation priorities for each respective department or organization.

The Planning Team will meet on an annual basis to evaluate the Plan, identify any needed changes, and assess the effectiveness of the Plan in achieving its stated purpose and goals. The team will evaluate the number of mitigation actions implemented along with the loss reduction associated with each action. Actions that have not been implemented will be evaluated to determine if any social, political, or financial barriers are impeding implementation and if any changes are necessary to improve the viability of an action. The team will evaluate changes in land development and/or programs that affect mitigation priorities in their respective jurisdictions. The annual evaluation process will help to determine if any changes are necessary. In addition, the Plan will be similarly evaluated immediately after extreme weather events, including but not limited to state and federally declared disasters.

UPDATING

PLAN REVISIONS

At any time, minor technical changes may be made to update the Aransas County Hazard Mitigation Action Plan Update 2025. Material changes to mitigation actions or major changes in the overall direction of the Plan or the policies contained within it must be subject to formal adoption by the participating jurisdictions.

The participating jurisdictions within Aransas County will review proposed revisions and vote to accept, reject, or amend the proposed change. Upon ratification, the revision will be transmitted to the Texas Division of Emergency Management (TDEM).

In determining whether to recommend approval or denial of a Plan Revision request, participating jurisdictions will consider the following factors:

- Errors or omissions made in the identification of issues or needs during the preparation of the Plan Update;
- New issues or needs that were not adequately addressed in the Plan Update; and

SECTION 20: PLAN MAINTENANCE

- Changes in information, data, or assumptions from those on which the Plan Update was based.

FIVE (5) YEAR REVIEW

The Plan will be thoroughly reviewed by the Planning Team at the end of three years from the approval date to determine whether there have been significant changes in the planning area that necessitate changes in the types of mitigation actions proposed. Factors that may affect the content of the Plan include new development in identified hazard areas, increased exposure to hazards, disaster declarations, increase or decrease in capability to address hazards, and changes to federal or state legislation.

The Plan review process provides the participating jurisdictions within Aransas County an opportunity to evaluate mitigation actions that have been successful, identify losses avoided due to the implementation of specific mitigation measures, and address mitigation actions that may not have been successfully implemented as assigned.

It is recommended that the full Executive and Advisory Planning Team (Section 2, Tables 2-1 and 2-2) meet to review the Plan at the end of three years because grant funds may be necessary for the development of a five-year update. Reviewing planning grant options in advance of the five-year Plan update deadline is recommended considering the timelines for grant and planning cycles can be in excess of a year.

Following the Plan review, any revisions deemed necessary will be summarized and implemented according to the reporting procedures and Plan Revision process outlined herein. Upon completion of the review, update, and revision process the revised Plan will be submitted to TDEM for final review and approval in coordination with FEMA.

CONTINUED PUBLIC INVOLVEMENT

Public input was an integral part of the preparation of this Plan and will continue to be essential for Plan updates. The public will be directly involved in the annual evaluation, monitoring, reviews, and cyclical updates. Changes or suggestions to improve or update the Plan will provide opportunities for additional public input.

The public can review the Plan on the participating jurisdictions' websites, where officials and the public are invited to provide ongoing feedback via email.

The Planning Team may also designate voluntary citizens from the planning area or willing stakeholder members from the private sector businesses that were involved in the Plan's development to provide feedback on an annual basis. It is important that stakeholders and the immediate community maintain a vested interest in preserving the functionality of the planning area as it pertains to the overall goals of the mitigation plan. The Planning Team is responsible for notifying stakeholders and community members on an annual basis and maintaining the Plan.

Media, including local newspapers and radio stations, will be used to notify the public of any maintenance or periodic review activities during the implementation, monitoring, and evaluation phases. Additionally, local news media will be contacted to cover information regarding Plan updates, the status of grant applications, and project implementation. Local and social media outlets, such as Facebook, will keep the public and stakeholders apprised of potential opportunities to fund and implement mitigation projects identified in the Plan.



APPENDIX A

HUMAN-CAUSED HAZARDS

APPENDIX A: HUMAN-CAUSED HAZARDS

Appendix A is For **Official Use Only (FOUO)** and may be exempt from public release under the Freedom of Information Act (FOIA).



APPENDIX B **PLANNING TEAM**

APPENDIX B: PLANNING TEAM

Planning Team Members	1
Stakeholders	2

PLANNING TEAM MEMBERS

The Aransas County Hazard Mitigation Action Plan Update 2025 was organized using a direct representative model. An Executive Planning Team from the participating jurisdictions, shown in Table B-1, was formed to coordinate planning efforts and request input and participation in the planning process. Table B-2 reflects the Advisory Planning Team, consisting of area organizations and departments that participated throughout the planning process. Table B-3 is comprised of stakeholders who were invited to provide Plan input. Public outreach efforts and meeting documentation is provided in Appendix E.

Table B-1. Executive Planning Team

ORGANIZATION / DEPARTMENT	TITLE
Aransas County – Administration	County Auditor
Aransas County – Administration	Development Services Coordinator
Aransas County – Emergency Management	Emergency Management Coordinator
Fulton, Town of – Development Services	Director of Operations
Rockport, City of – Public Works	GIS Specialist
Rockport-Fulton ISD – Administration	Director of Operations
Aransas County Navigation District – Administration	Harbor Master

Table B-2. Advisory Planning Team

ORGANIZATION / DEPARTMENT	TITLE
Aransas County – Administration	Assistant Auditor / Grant Administrator
Aransas County – Administration	County Clerk
Aransas County – Administration	Administrative Assistant / Public Information Officer
Aransas County – Emergency Management	Assistant Emergency Management Coordinator
Aransas County – Environmental Health	Code Enforcement – Precinct 1 and 2
Aransas County – Environmental Health	Code Enforcement – Precinct 3 and 4
Aransas County – Environmental Health	Director
Aransas County – Government	County Judge

APPENDIX B: PLANNING TEAM

ORGANIZATION / DEPARTMENT	TITLE
Aransas County – Maintenance	Director
Aransas County – Road & Bridge	County Engineer
Aransas County – Sheriff	Sheriff
Aransas County - Administration	GIS Specialist
Fulton, Town of – Administration	City Secretary
Fulton, Town of – Development Services	Building Official
Fulton, Town of – Finance	Comptroller
Fulton, Town of – Government	Mayor
Fulton, Town of – Police	Police Chief
Rockport, City of – Administration	City Manager
Rockport, City of – Administration	City Secretary
Rockport, City of – Administration	Grant Administrator
Rockport, City of – Building & Development	Chief Building Official
Rockport, City of – Building & Development	Director
Rockport, City of – Government	Mayor
Rockport, City of – Parks & Recreation	Director of Operations
Rockport, City of – Police	Police Chief
Rockport, City of – Police	Lieutenant
Rockport, City of – Public Works	Director of Operations
Rockport-Fulton ISD – Administration	Superintendent
Rockport-Fulton ISD – Police	District Police Officer
Rockport-Fulton ISD – Police	Lieutenant
Aransas County Navigation District – Administration	Executive Administrator

STAKEHOLDERS

The following groups listed in Table B-3 represent a list of organizations invited to stakeholder meetings, public meetings, and workshops throughout the planning process and include members of community groups, non-profit organizations, private businesses, utility providers, neighboring counties, schools, state and federal agencies. The public were also invited to participate via e-

APPENDIX B: PLANNING TEAM

mail throughout the planning process. Many of the invited organizations and stakeholders participated and were integral to providing comments and data for the Plan. For a list of attendees at meetings, please see Appendix E.¹

Table B-3. Stakeholders

AGENCY	TITLE	STAKEHOLDER TYPE
American Red Cross Central and South Texas Region	Executive Director, Coastal Bend Texas Chapter	Non-profit / community Organization
Aransas County Commissioners Court	Precinct 3 Commissioner	Local Government
Aransas Bay Utilities	Board President	Utility Provider
Aransas County Airport	Manager	Community Organization
Aransas County Animal Care	Director	Community Organization
Aransas County Area Go Texas	General Representative	Regional and Local Agencies
Aransas County Commissioners Court	Precinct 1-1A Commissioner	Local Government
Aransas County Commissioners Court	Precinct 2 Commissioner	Local Government
Aransas County Commissioners Court	Precinct 4 Commissioner	Local Government
Aransas County Council on Aging / Senior Center	Director of Operations	Regional and Local Agencies
Aransas County Medical Services Inc	General Representative	Regional and Local Agencies
Aransas County Municipal Utility District #1	Operations Manager	Utility Provider
Aransas County Public Library	Librarian	Community Organization
Aransas County School (ACISD)	Director of Maintenance and Transportation	Academia
Aransas County School (ACISD)	Superintendent	Academia
Aransas Pass, City of	Interim Police Chief	Neighboring Jurisdiction
Aransas Veteran's Service Office	Veterans Services Officer	Regional and Local Agencies
Calhoun County	Emergency Management Coordinator	Neighboring Jurisdiction
Coastal Bend Council of Governments	Director of Emergency Management	Regional and Local Agencies

¹ Information contained in Appendix E is exempt from public release under the Freedom of Information Act (FOIA).

APPENDIX B: PLANNING TEAM

AGENCY	TITLE	STAKEHOLDER TYPE
Coastal Bend Council of Governments	Director of Planning & Economic Development	Regional and Local Agencies
Coastal Bend Council of Governments	Executive Director	Regional and Local Agencies
Coastal Bend Council of Governments	Homeland Security Planner	Regional and Local Agencies
Corpus Christi, City of	City Manager	Neighboring Jurisdiction
Ed & Hazel Richmond Public Library - Aransas Pass	Librarian	Community Organization
Ellis Memorial Library - Port Aransas	Library Director	Community Organization
Environmental Protection Agency (EPA)	Director of Superfund Emergency Management Division	Federal Agency
Environmental Protection Agency (EPA)	Regional Administrator	Federal Agency
Fulton Volunteer Fire Dept.	Fire Chief	Community Organization
Fulton, Town of	Alderman Place 2	Local Government
Fulton, Town of	Alderman Place 3	Local Government
Fulton, Town of	Alderman Place 4	Local Government
Fulton, Town of	Alderman Place 5	Local Government
Fulton, Town of	Mayor Pro-Tem	Local Government
Goodwill Industries of South Texas (Rockport)	General Representative	Regional and Local Agencies
Habitat for Humanity	General Representative	Regional and Local Agencies
Holiday Beach Water Supply Corporation (WSC)	General Representative	Utility Provider
Humane Society & Adoption Center of Rockport/Fulton	General Representative	Regional and Local Agencies
Keep Aransas County Beautiful	General Representative	Regional and Local Agencies
Lamar Volunteer Fire Dept	Fire Chief	Community Organization
Mission-Aransas Reserve	Manager	Regional and Local Agencies
Nueces County	Emergency Management Coordinator	Neighboring Jurisdiction
NWS - Corpus Christi	Regional Representative	Federal Agency

APPENDIX B: PLANNING TEAM

AGENCY	TITLE	STAKEHOLDER TYPE
Pape Dawson	Engineer	Community Organization
Refugio County	Emergency Management Coordinator	Neighboring Jurisdiction
Rockport Volunteer Fire Dept	Fire Chief	Community Organization
Rockport, City of	Ward 1 Council Member	Local Government
Rockport, City of	Ward 2 Council Member	Local Government
Rockport, City of	Ward 3 Council Member	Local Government
Rockport, City of	Ward 4 Council Member	Local Government
Rockport-Fulton Chamber of Commerce	President / CEO	Community Organization
Rockport-Fulton Good Samaritans, Inc	General Representative	Regional and Local Agencies
San Patricio County	Emergency Management Coordinator	Neighboring Jurisdiction
Texas A&M AgriLife Extension	District 11 Office	State Agency
Texas A&M Forest Service	Program Coordinator Mitigation and Prevention	State Agency
Texas Commission on Environmental Quality, Region 14	Dam Safety Program	State Agency
Texas Commission on Environmental Quality, Region 14	Executive Assistant	State Agency
Texas Commission on Environmental Quality, Region 14	Regional Director, Region 14	State Agency
Texas Department of Health and Human Services, Region 11	General Representative	State Agency
Texas Department of Health and Human Services, Region 11	Preparedness Manager	State Agency
Texas Department of Homeland Security	Media Representative	State Agency
Texas Department of Housing and Community Affair	Director of Single-Family and Homeless Program	State Agency
Texas Department of Housing and Community Affair	Manager of Single-Family Program	State Agency

APPENDIX B: PLANNING TEAM

AGENCY	TITLE	STAKEHOLDER TYPE
Texas Department of Transportation	Area Engineer, Corpus Christi	State Agency
Texas Department of Transportation	District Engineer, Corpus Christi District	State Agency
Texas Division of Emergency Management, Region 5	Aransas County Liaison Officer	State Agency
Texas Division of Emergency Management, Region 5	Assistant Chief	State Agency
Texas Division of Emergency Management, Region 5	District 20 Chief Corpus Christi	State Agency
Texas Division of Emergency Management, Region 5	Section Chief Recovery & Mitigation	State Agency
Texas State Representative	House District 32	State Legislature
Texas State Senate	Senate District 18	State Legislature
Texas State Soil & Water	Program Administrator and Regional Office Coordinator	State Agency
Texas State Soil & Water	Program Supervisor - Wharton Region	State Agency
Texas Water Development Board	Regional Water Planning Group Representative	State Agency
Texas Windstorm Associations	Public Information Officer	State Agency
The Rockport Pilot	South Texas News Inc.	Community Organization
United Ways - Aransas County	Representative	Regional and Local Agencies
US Army Corps of Engineers	Fort Worth & Galveston District	Federal Agency
US Fish & Wildlife	Southwest Regional Representative	Federal Agency



APPENDIX C PUBLIC SURVEY RESULTS

APPENDIX C: PUBLIC SURVEY RESULTS

Overview.....	1
Public Survey Results	2

OVERVIEW

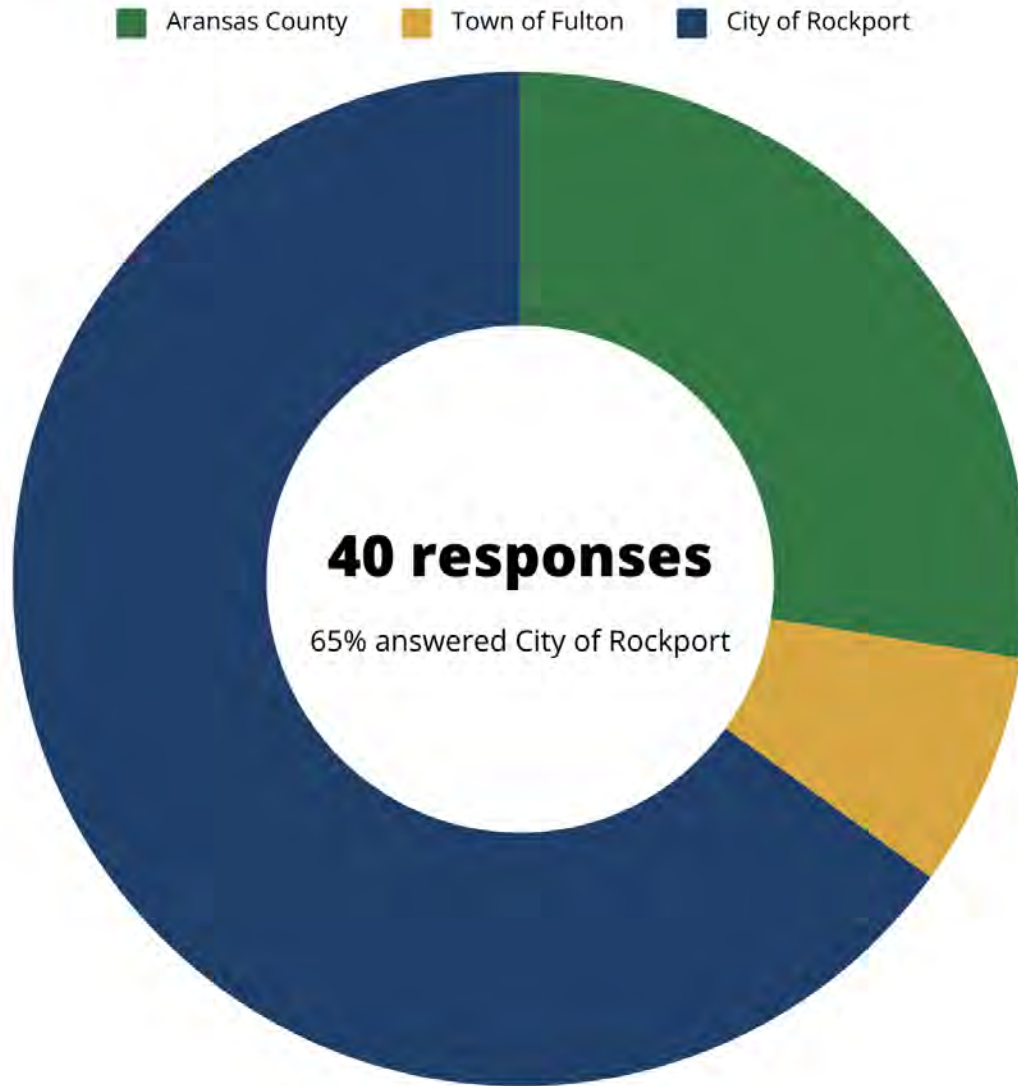
Aransas County prepared a public survey that requested public opinion on a wide range of questions relating to natural hazards. The survey was made available via the participating jurisdictions' websites. This survey link was also distributed at public meetings and stakeholder events throughout the planning process.

A total of 40 surveys were collected, the results of which are analyzed in Appendix C. The purpose of the survey was twofold: 1) to solicit public input during the planning process, and 2) to help the jurisdictions identify any potential actions or problem areas.

All public survey results were discussed and shared with the Planning Team during the Mitigation Strategy Workshop. These results are also provided below. The survey results provide information regarding the public's experience with natural hazards, their perceived hazards of concern, recommended mitigation actions, and additional valuable insights. Overall, this survey enhances the mitigation planning process by ensuring the plan properly represents the community, is informed through local knowledge, and by promoting equity.

APPENDIX C: PUBLIC SURVEY RESULTS

PUBLIC SURVEY RESULTS



APPENDIX C: PUBLIC SURVEY RESULTS

Have you ever experienced or been impacted by a disaster?



**85%
Responded
'Yes'**

Personal experiences shared in survey responses included:

"Hurricane Harvey - lost a few large trees and hundreds of branches. 50 year old mobile, which is anchored to slab. Home was okay, but the winds shook the trailer so much that all my plumbing developed leaks."

"Numerous including flood, winter storm, tornado, drought and hurricane."

"During heavy rainfalls our street floods due to the retention pond to which our stormwater drains being unable to hold stormwater input and draining to another pond. When the water reaches a certain level it backs up into our street to levels of 18" or more and can stay there for days blocking people from getting out."

"Evacuated from hurricane Harvey in 2017. It took all the shingles off the roof, broke many limbs, took down entire fence, moved workshop away from deck, destroyed several RVs in my RV park and destroyed many trees. Winter storm Uri destroyed all house water pipes."

"I was a resident for hurricane Harvey and sustained moderate damage to my home. I was also a resident during the winter storm Uri freeze/loss of power."

"A house fire in 2013 and Hurricane Harvey in 2017."

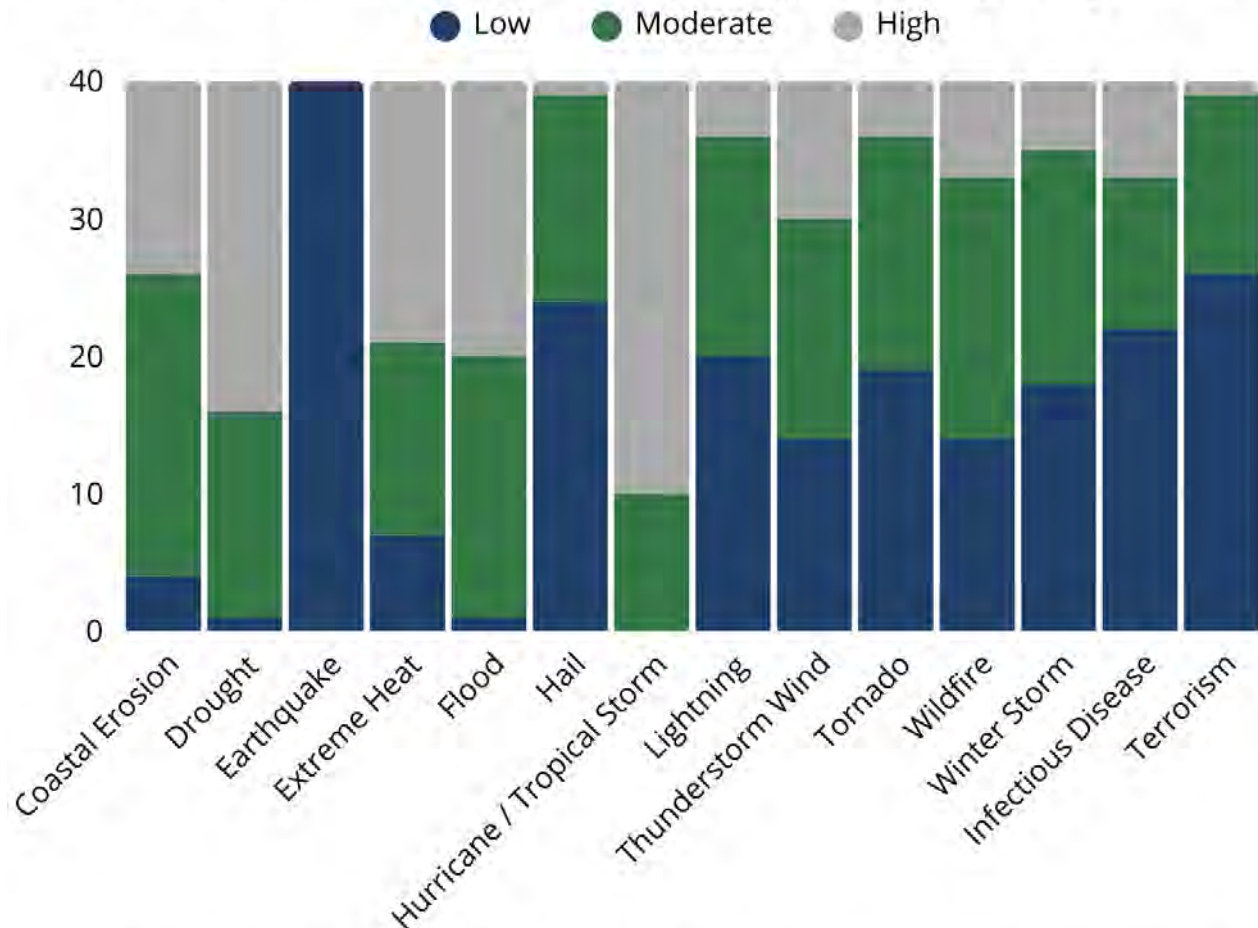
97% of those who have been impacted by a disaster mentioned hurricane and/or tropical storm in their explanations.



The secondary hazards mentioned in explanations are winter storm and/or flooding.

APPENDIX C: PUBLIC SURVEY RESULTS

With the consideration of frequency of occurrence and potential impact severity, please select the one hazard you think is the highest and second highest threat to your neighborhood:



Is there another hazard not listed above that you think is a wide-scale threat to your neighborhood?



Infrastructure Failure



Land Subsidence



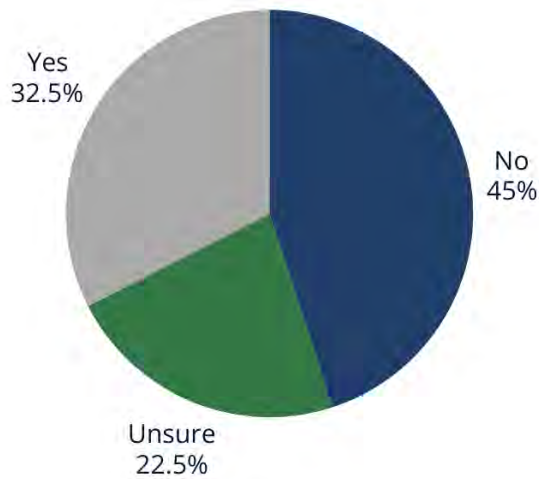
Cyber Attack



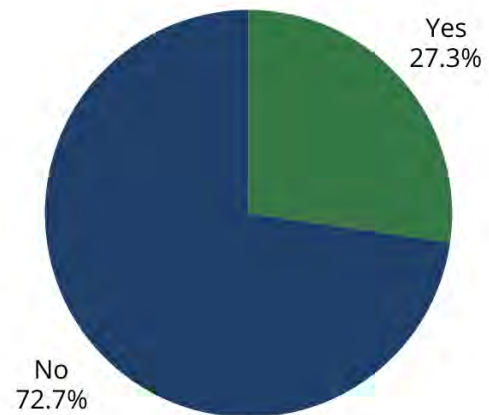
Hazardous Materials

APPENDIX C: PUBLIC SURVEY RESULTS

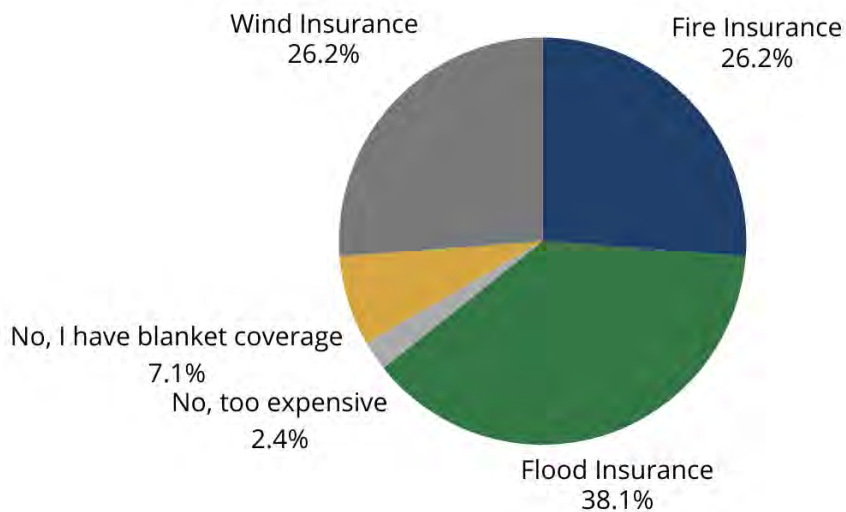
To your knowledge, is your home located in any high hazard risk zones?



Have you had any issues getting homeowners or renters insurance due to risks of hazardous events?



Do you have any hazard specific insurance? If not, why?

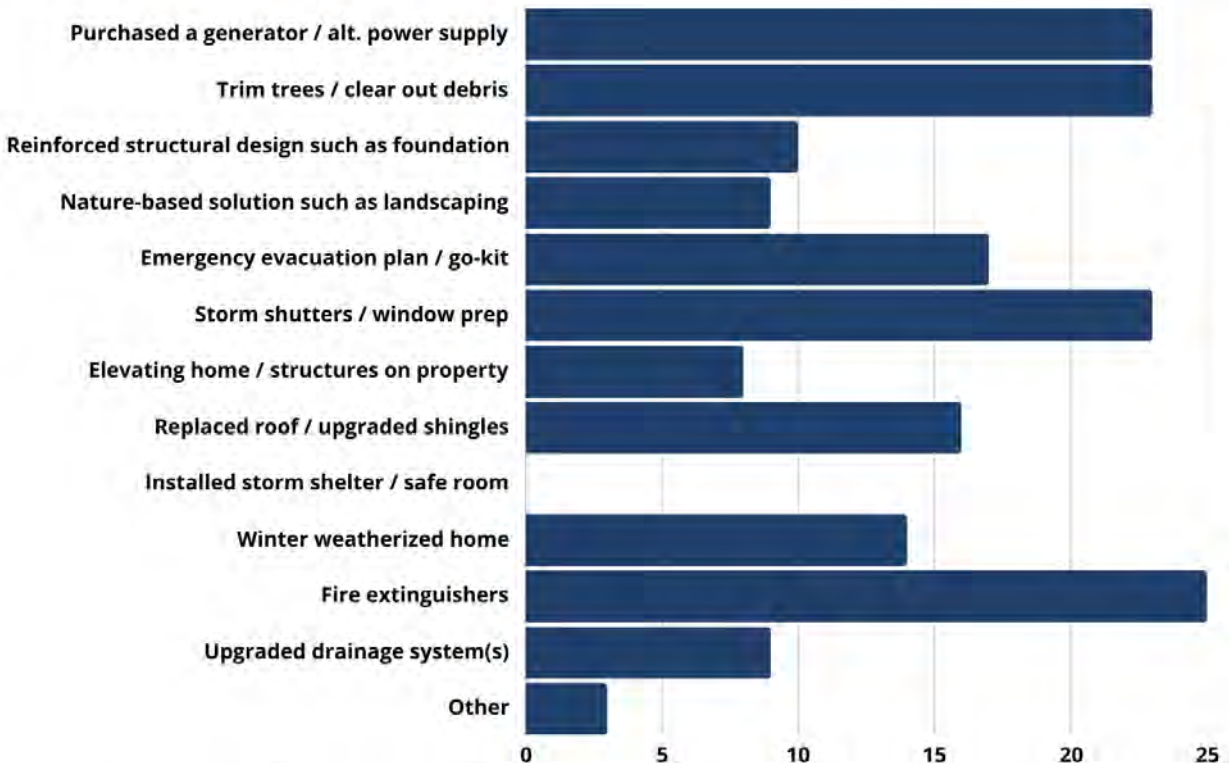


APPENDIX C: PUBLIC SURVEY RESULTS

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



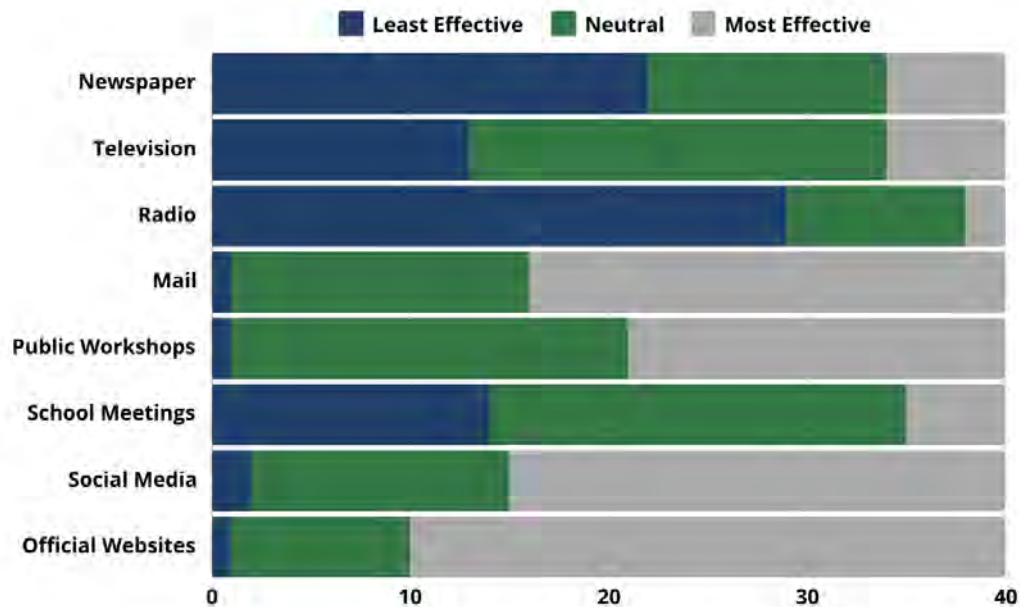
**83%
Responded
'Yes'**



**90% of survey responders are
interested in making their homes or
neighborhoods more resistant to
hazards.**

APPENDIX C: PUBLIC SURVEY RESULTS

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



Effectiveness of communication methods for receiving information about how to make your home and neighborhood more resistant to hazards



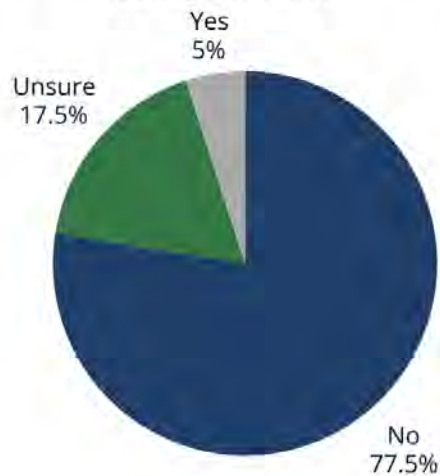
Official Websites

Additional communication methods recommended:

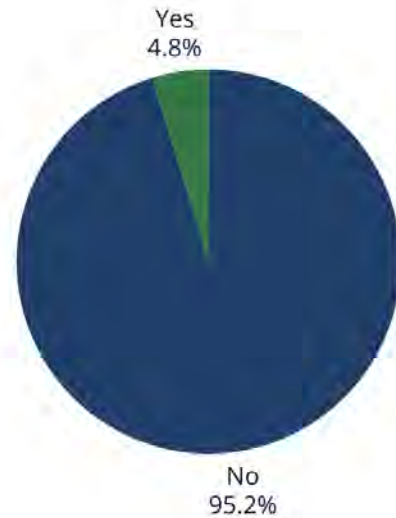


APPENDIX C: PUBLIC SURVEY RESULTS

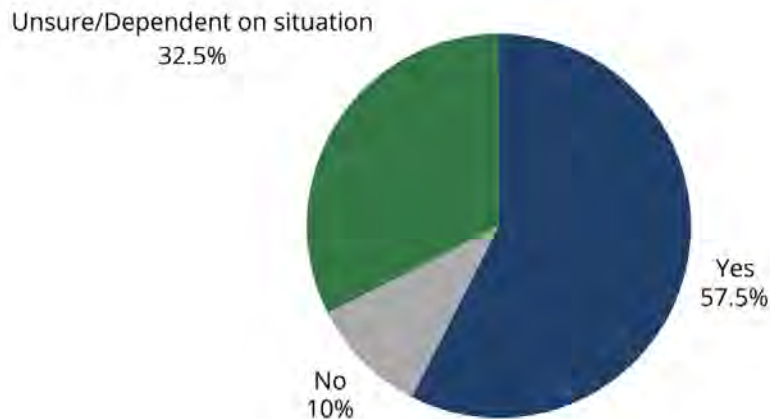
Do you have any special access to functional needs (AFN) within your household that would require early warning or specialized response during disasters?



Are you or other members of your household enrolled in the State of Texas Emergency Assistance Registry (STEAR) Program?

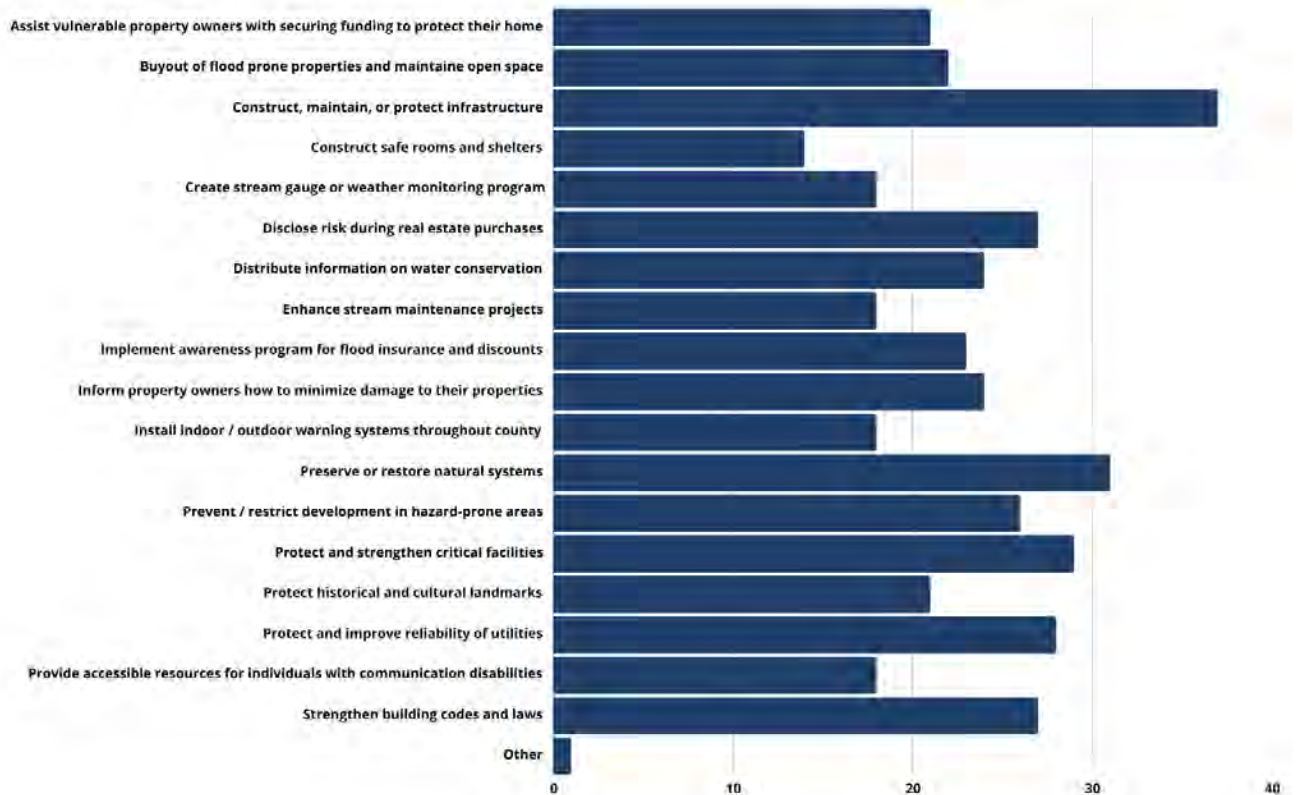


Would you support regulation (restrictions) on land uses within known high hazard areas?



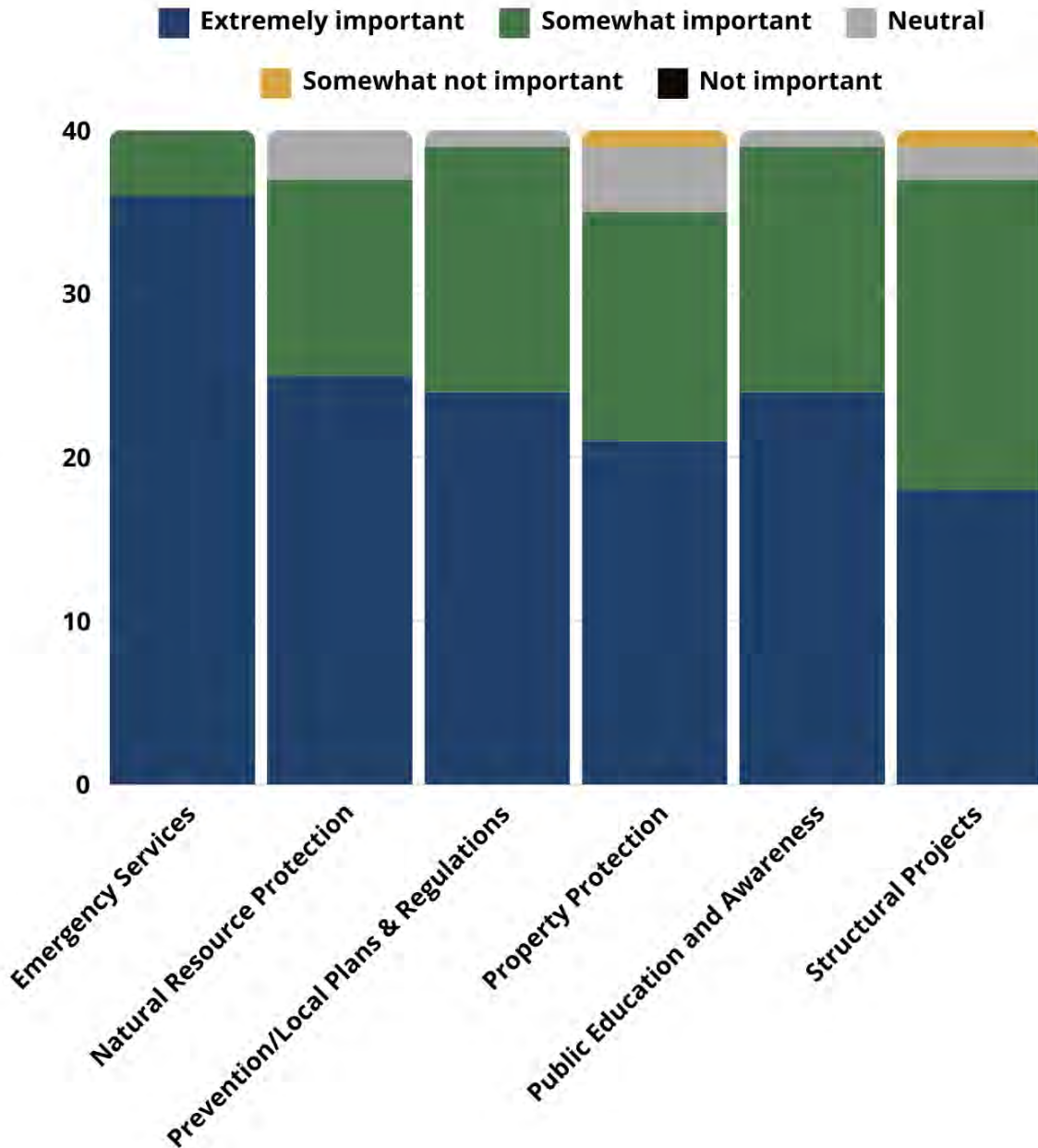
APPENDIX C: PUBLIC SURVEY RESULTS

In your opinion, please select steps your local government should prioritize to reduce or eliminate the risk of future hazard damages in your neighborhood.



APPENDIX C: PUBLIC SURVEY RESULTS

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.



Emergency Services - 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 facilities or systems.

APPENDIX C: PUBLIC SURVEY RESULTS

Natural Resource Protection - 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.

Prevention / Local Plans & Regulations - 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.

Property Protection - 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.

Public Education and Awareness - Actions to inform citizens about hazards and techniques they can use to protect themselves and their property. Examples include outreach projects, school education programs, library materials, and demonstration events.

Structural Projects - 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.



APPENDIX D

CRITICAL FACILITIES

APPENDIX D: CRITICAL FACILITIES

Appendix D is For **Official Use Only (FOUO)** and may be exempt from public release under the Freedom of Information Act (FOIA).



BAY EDUCATION CENTER



APPENDIX E MEETING DOCUMENTATION

APPENDIX E: MEETING DOCUMENTATION

Appendix E is For **Official Use Only (FOUO)** and may be exempt from public release under the Freedom of Information Act (FOIA).



APPENDIX F **CAPABILITY ASSESSMENT**

APPENDIX F: CAPABILITY ASSESSMENT

Appendix F is For **Official Use Only (FOUO)** and may be exempt from public release under the Freedom of Information Act (FOIA).



APPENDIX G STATE AND FEDERAL FUNDING OPPORTUNITIES

APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

Overview.....	1
---------------	---

OVERVIEW

Texas utilizes state funds to improve statewide hazard mitigation capabilities and advance their hazard mitigation goals to help identify, understand, and manage various risks associated with natural hazards. State funds also provide funding for state facility and infrastructure upgrades, hazard mapping, mitigation planning, and other mitigation programmatic activities. Table G-1 describes a variety of loan and grant programs offered by state agencies for which mitigation activities may be eligible.

Table G-1. Summary of State Funded Mitigation Programs

AGENCY	FUNDING PROGRAM
Texas A&M Forest Service (TAMFS)	- Community Fire Protection Program - Community Wildfire Defense Grant - Fire-Adapted Communities Program (FAC) - Firewise USA Program - Forest Land Enhancement Program - Forest Legacy Program - Mitigation Project Support Fund Prescribed Fire Grants - Resilient Landscapes Program - Rural Fire Assistance Grant - State Fire Assistance for Mitigation (SFAM) - Mechanical Fuels Grants - State Fire Assistance for Mitigation (SFAM) - Vegetative Fuel Break Grant - Texas Longleaf Conservation Assistance Program - Urban Tree Canopy Project (UTC)
Texas Commission on Environmental Quality (TCEQ)	- Clean Water Act Section 319 Grants - High Hazard Potential Dam Program (HHPD) - Nonpoint Source Grant Program - U.S.-Mexico Border Water Infrastructure Program
Texas Department of Agriculture (TDA)	- Agricultural Management Assistance (AMA) - Agricultural Water Enhancement Program (AWEP) - Community Development Block Grant - Community Development Block Grant for Rural Texas - Conservation Innovation Grants (CIG) - Environmental Quality Incentives Program (EQUIP)
Texas Department of Housing and Community Affairs (TDHCA)	Texas HOME Disaster Relief

APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

AGENCY	FUNDING PROGRAM
Texas Department of State Health Services (TXDSHS)	- Hospital Preparedness Program (HPP) Cooperative Agreement - Public Health Emergency Preparedness (PHEP) Cooperative Agreement
Texas Department of Transportation (TXDOT)	- Bridge Preventative Maintenance Program - Emergency Relief (ER) Program - Highway Bridge Replacement and Rehabilitation Program - Safe Rest Stops Program - Transportation Enhancement Program
Texas Division of Emergency Management (TDEM)	- Emergency Management Performance Grant (EMPG) - Fire Management Assistance Grants (FMAG) - Hazard Mitigation Planning Grants Program (HMGP) - Homeland Security Grant Program (HSGP) - Individual Assistance (IA) - National Earthquake Hazard Reduction Program (NEHRP) - Public Assistance (PA) Section 406 Funds
Texas Economic Development & Tourism (EDT)	Economic Development Administration Grants and Investments
Texas General Land Office (TXGLO)	- Beach Grants - Beach Maintenance Reimbursement Fund - Coastal Erosion Planning and Response Act (CEPRA) - Coastal and Estuarine Land Conservation Program (CELCP) - Coastal Management Program (CMP) - Community Development Block Grant – Disaster Recovery (CDBG-DR) - Community Development Block Grant – Mitigation (CDBG-MIT) - Gulf of Mexico Energy Security Act (GOMESA) - Hazard Mitigation Grant Program Supplemental – LHMP
Texas Parks and Wildlife Department (TPWD)	- Nation Resources Damage Assessment (NRDA) - National Wildlife Wetland Refuge System - North American Wetland Conservation Fund - Partners for Fish and Wildlife - Texas Farm and Ranch Lands Conservation Program (TFRLCP) - Wildlife Habitat Incentive Program (WHIP)
Texas State Soil and Water Conservation Board (TSSWCB)	- Clean Water Act Section 319 Grants - Nonpoint Source Grant Program

APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

AGENCY	FUNDING PROGRAM
Texas Water Development Board (TWDB)	• Agricultural Water Conservation Grants • Agricultural Water Conservation Loans • Clean Water State Revolving Fund (CWSRF) • Community Assistance Program (CAP) • Drinking Water State Revolving Fund (DWSRF) • Economically Distressed Areas Program • Emergency Community Water Assistance Grants • Flood Infrastructure Fund (FIF) • Flood Mitigation Assistance (FMA) Program • Flood Protection Planning Program • Groundwater Conservation District Loan Program • Planning Assistance to States • Regional Facility Planning Grant Program • Regional Water Planning Group Grants • Research and Planning Fund and Fund Development Program • Risk MAP Program • Rural Development Grants • Rural Water Assistance Fund (RWAf) • Silver Jackets • Small Flood Control Projects (USACE Section 205) • State Participation Program – Regional Water and Wastewater Facilities • State Water Implementation Fund for Texas (SWIFT) • State Water Resources Research Act Program • Texas Infrastructure Resiliency Fund (TIRF) • Texas Water Development Fund (DFund) • Water Research Grant Program • WaterSMART - Drought Response Program

In addition to state-funded programs, many local jurisdictions benefit from federal mitigation funding opportunities. FEMA's Hazard Mitigation Assistance is a primary source for the implementation of mitigation projects throughout the nation. Table G-2 describes additional federal, state, local, and nonprofit mitigation funding sources specifically within the State of Texas.

APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

Table G-2. Federal, State, Local and Non-Profit Mitigation Funding Sources in Texas

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
Agricultural Conservation Easement Program (ACEP)	Federal	NRCS		Provides financial and technical assistance to help conserve agricultural lands and wetlands and their related benefits.
Agricultural Management Assistance (AMA)	Federal	USDA, NRCS	TDA	Provides financial and technical assistance to agricultural producers to voluntarily address issues such as water management, water quality, and erosion control by incorporating conservation methods into their farming operations.
Agricultural Water Enhancement Program (AWEP)	Federal	USDA, NRCS	TDA	Voluntary conservation initiative that provides financial and technical assistance to agricultural producers to implement water enhancement activities on agricultural land to conserve surface and ground water and improve water quality.
Agricultural Water Conservation Grants	State	TWDB	TWDB	Funding is available to state agencies and political subdivisions for projects that advance the implementation of conservation or water management strategies identified in state and regional water plans. Applications are accepted annually, with up to \$1.2 million in total funding available each year. Grant categories are subject to change annually.
Agricultural Water Conservation Loans	State	TWDB	TWDB	Agricultural water conservation loans to use either for facility improvements or as loans to individuals. Low-interest, fixed rates. Up to 10-year repayment terms. U.S. Iron and Steel requirements apply to certain projects. Eligible loan applicants include political subdivisions.
AmeriCorps - Corporation for National & Community Service (CNCS)	Federal	AmeriCorps	N/A	Provides funding for volunteers to serve communities, including disaster prevention. AmeriCorps/Vista has assisted local communities with wildfire mitigation projects.
American Recovery and Reinvestment Act (ARRA)	Federal	EPA		Provides significant funding for states to finance high priority water infrastructure projects through a \$2 billion appropriation to the Drinking Water State Revolving Fund (DWSRF) program and a \$4 billion appropriation to the Clean Water State Revolving Fund (CWSRF) program.

APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
American Recovery and Reinvestment Act (ARRA)	Federal	DOT Federal Transit Administration	TDA	The American Recovery and Reinvestment Act (ARRA), commonly referred to as the Recovery Act, is a stimulus package enacted by the 111th U.S. Congress and signed into law by President Barack Obama in February 2009. Designed in response to the Great Recession, the primary goal of the Act was to preserve existing jobs and generate new employment opportunities as quickly as possible. Additional objectives include providing temporary relief to individuals most affected by the recession and investing in infrastructure, education, healthcare, and renewable energy.
Aquatic Ecosystem Restoration	Federal	DOD-USACE		Direct support for carrying out aquatic ecosystem restoration projects that will improve the equality of the environment.
Assistance to Firefighters program - Fire Prevention & Safety (FP&S) Grants	Federal	FEMA, AFG		Fire Prevention & Safety (FP&S) Grants support projects that enhance the safety of the public and firefighters from fire and related hazards.
Beach Grants	Federal	EPA	TXGLO	EPA awards grants under the authority of the BEACH Act to eligible states, territories, and tribes with beaches on oceans and the Great Lakes coasts to develop and implement programs to monitor their beaches and notify the public when it is not safe to swim.
Beach Maintenance Reimbursement Fund	State	GLO	TXGLO	Allocates approximately \$750,000 per year to help communities maintain their beaches. Applications are distributed to eligible participants in early fall and are due within a specified amount of time, no less than 30 days. Contracts are renewable annually.
Bridge Preventative Maintenance Program	State	TXDOT	TXDOT	A planned, cost-effective treatment that preserves, improves, or delays future deterioration of the condition of a bridge. To be eligible, a bridge must have a condition rating of 5 or 6 for at least one of the following: deck, superstructure, substructure, culvert, or channel. Safety and improvements to the physical condition of the State's on-system bridges are TxDOT's main goals in the prioritization of the bridges using BMIP funds. Each FY, the Bridge Division develops and distributes an initial list of eligible bridges in each district for the annual program call.

APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
Carbon Reduction Program (CRP)	Federal	USDOT	TXDOT, TCEQ	Provides funds for projects that are designed to reduce transportation emissions (CO2). This program can fund a wide range of projects designed to reduce carbon dioxide emissions from on-road highway sources.
Center for Integration of Natural Disaster Information	Federal	DOI/USGS, The Center for Integration of Natural Hazards Research	Texas A&M	Technical Assistance: Develops and evaluates technology for information integration and dissemination.
Clean School Bus Program	Federal	EPA	TCEQ	Provides assistance in replacing existing school buses with zero-emission and low-emission models.
Clean Water Act Section 319 Grants	Federal	EPA	TCEQ and TSSWCB	Provides grants for a wide variety of activities related to non-point source pollution runoff mitigation.
Clean Water State Revolving Fund (CWSRF)	Federal	EPA	TWDB	Provides low-cost financing for a wide range of wastewater, stormwater, reuse, and other pollution control projects.
Climate Pollution Reduction Grant	Federal	EPA	TCEQ	Supports the state in creating two climate action plans (i.e., one priority plan and one comprehensive plan) for implementing effective greenhouse gas reduction strategies while ensuring the benefits of these actions are delivered to Texans, especially Low Income or Disadvantaged communities (LIDAC) as defined by US EPA. This grant will give Texas communities the opportunity to collaborate with the state to build projects and programs that provide high-quality jobs, improve health, and keep families safe where they live.
Coastal Erosion Planning and Response Act (CEPRA)	State	GLO	TXGLO	Since its inception in 2000, the Texas General Land Office's Coastal Erosion Planning and Response Program has secured over \$62 million in state funding, complemented by an additional \$62 million in matching funds. This program has facilitated the completion of more than 200 coastal erosion projects and studies. The application process for non-emergency project funding opens every even-numbered year in February and closes in early June of the same year.

APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
Coastal and Estuarine Land Conservation Program (CELCP)	Federal	NOAA	TXGLO	When the National Oceanic and Atmospheric Administration (NOAA) provides funding for CELCP, the General Land Office (GLO) offers coastal communities the opportunity to submit up to three project applications per year. Federal grant awards for individual projects may not exceed \$3 million.
Coastal Management Program (CMP)	Federal	NOAA	TXGLO	Texas receives approximately \$2 million annually in grants from NOAA and 90 percent of the funds are passed through to local governments and entities to address environmental needs and promote sustainable economic development along the coast. Projects must improve the management of the state's coastal resources and ensure long-term ecological and economic productivity. Section 306 administrative funds can be used for non- construction, coastal planning and education, and research. Section 306A improvement funds can be utilized for construction and land acquisition projects, preservation, and restoration. CMP funding categories include Coastal Natural Hazards Response, Critical Areas Enhancement, Public Access, Water/Sediment Quantity and Quality Improvements, Waterfront Revitalization and Ecotourism Development, Permit Streamlining/ Assistance, Governmental Coordination and Local Government Planning Assistance.
Community Assistance Program (CAP)	Federal	FEMA, NFIP	TWDB	Product-oriented financial assistance program directly related to the flood loss reduction objectives of the National Flood Insurance Program (NFIP).
Community Development Block Grant (CDBG)	Federal	HUD	TDA	The primary objective is to develop viable communities by providing decent housing and suitable living environments and expanding economic opportunities principally for persons of low- to moderate- income. Eligible applicants are non-entitlement cities under 50,000 in population and non-entitlement counties that have a non-metropolitan population under 200,000 and that are not eligible for direct CDBG funding from HUD may apply for funding through any of the Texas CDBG programs.

APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
Community Development Block Grant for Rural Texas	State	TDA	TDA	TDA administers the Community Development Block Grant for Rural Texas. The primary objective of the CDBG is to develop viable communities by providing decent housing and suitable living environments and expanding economic opportunities principally for persons of low- to moderate-income. Eligible applicants are non-entitlement cities under 50,000 in population and non-entitlement counties that have a non-metropolitan population under 200,000 and that are not eligible for direct CDBG funding from HUD may apply for funding through any of the Texas CDBG programs.
Community Development Block Grant – Disaster Recovery (CDBG-DR)	Federal	HUD	TXGLO	Often following a disaster, the state may receive a CDBG-DR Supplement intended for mitigation and disaster recovery projects in the affected areas. Funding can be used to acquire properties in hazard prone areas. Since CDBG funds lose their federal identify they can also be used to supplement state or local match requirements on other funds such as FEMA HMA grants. Funding also supports public facilities including water and wastewater.
Community Development Block Grant – Mitigation (CDBG-MIT)	Federal	HUD	TXGLO	Eligible grantees can use this assistance in areas impacted by recent disasters to carry out strategic and high-impact activities to mitigate disaster risks and reduce future losses. In February of 2018, Congress appropriated \$12 billion dollars in Community Development Block Grant (CDBG) funds specifically for mitigation activities for qualifying disasters in 2015, 2016, and 2017. HUD was able to allocate an additional \$3.9 billion, bringing the amount available for mitigation to nearly \$16 billion.
Community Fire Protection Program	Federal	USDA	TAMFS	Mitigation is delivered via the USDA Forest Service and Private Forestry Coop Fire Program.
Community Rating System (CRS)	Federal	FEMA		A voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum NFIP requirements. CRS not only assists communities in reducing flood risks, but also enhances public safety, reduces damage to property and public infrastructure, avoids

APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
CRS (continued)				economic disruption and losses, reduces human suffering, and protects the environment. Technical assistance in designing and implementing some activities is available at no charge. Participating in the CRS provides an incentive to maintain and improve a community's floodplain management program over the years. Implementing some CRS activities can help the project qualify for certain other Federal assistance funds.
Community Wildfire Defense Grant	Federal	USFS	TAMFS	Offers financial assistance to at-risk local communities with planning for and against the risk of catastrophic wildfire. This program is authorized in Public Law 117-58, the Infrastructure Investment and Jobs Act. Two primary objectives: The development and revision of Community Wildfire Protection Plans (CWPP), and the implementation of projects described in a CWPP that is less than ten years old. Prioritizes at-risk communities that are in an area identified as having high or very high wildfire hazard potential, are low-income, and/or have been impacted by a severe disaster with no minimum federal funding limit for projects.
Conservation Contracts	Federal	USDA-FSA		Debt reduction for delinquent and non-delinquent borrowers in exchange for conservation contracts placed on environmentally sensitive real property that secures FSA loans.
Conservation Innovation Grants (CIG)	Federal	USDA, NRCS	TDA	A voluntary program intended to stimulate the development and adoption of innovative conservation approaches and technologies while leveraging federal investment in environmental enhancement and protection, in conjunction with agricultural production.
Conservation Technical Assistance (CTA) Program	Federal	USDA-NRCS		Technical assistance for run-off retardation and soil erosion prevention to reduce hazards to life and property.
Decision, Risk, and Management Science Program	Federal	NSF		Funding is provided for research and related educational activities focused on risk, perception, communication, and management, with an emphasis on technological hazards.

APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
Disaster Mitigation Planning and Technical Assistance	Federal	DOC, EDA		Technical and planning assistance grants for capability building and mitigation project activities focusing on creating disaster resistant jobs and workplaces.
Division of Homeland Security Financial Assistance	Federal	US Department of Homeland Security	OOG	Supports a wide variety of funding and financial assistance programs that promote preparedness, resilience, and post-disaster relief.
Drinking Water State Revolving Fund (DWSRF)	Federal	EPA	TWDB	Provides funding for infrastructure improvements to drinking water systems. The program also emphasizes providing funds to small and disadvantaged communities and for programs that encourage pollution prevention as a tool for ensuring safe drinking water.
Economic Development Administration Grants and Investments	Federal	U.S. DOC, EDA	EDT	Provides grants and investments for community construction projects, including mitigation activities.
Economically Distressed Areas Program	State	TWDB	TWDB	Provides financial assistance for projects serving economically distressed areas where water or sewer services do not exist, or systems do not meet minimum state standards. Eligible EDAP applicants include cities, counties, water districts, nonprofit water supply corporations, and all other political subdivisions. The city or county where the project is located must adopt and enforce Model Subdivision Rules for the regulation of subdivisions prior to application for financial assistance. Projects must also be in an economically distressed area where the median household income is not greater than 75 percent of the median state household income.
Economic Injury Disaster Loan	Federal	SBA		The COVID EIDL program ceased accepting applications on December 31, 2021, however, the disaster EIDL program continues to be available to businesses impacted by other publicly declared disasters.

APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
Emergency Community Water Assistance Grants	Federal	USDA	TWDB	\$150,000 to \$500,000 available to rural communities with populations over 10,000 people with a median household income of less than \$65,900. Aids communities that have experienced a decline in quantity or quality of drinking water as a result of an emergency, including drought.
Emergency Management / Mitigation Training	Federal	FEMA		Training in disaster mitigation, preparedness, and planning.
Emergency Management Institute	Federal	FEMA		Education training programs to prepare emergency management professionals to prepare for, respond to, and recover from disasters and emergencies.
Emergency Management Performance Grant (EMPG)	Federal	FEMA	TDEM	Provides a yearly allocation of funding to support state and local emergency management programs. This has included providing funding for local mitigation plans, mitigation-oriented studies, and related activities.
Emergency Relief (ER) Program	Federal	US DOT - FHWA	TXDOT	Provides funding for the repair or reconstruction of roads and bridges on Federal-aid highways that have sustained damage as a direct result of a natural disaster or a catastrophic failure due to an external cause.
Emergency Watershed Protection (EWP)	Federal	USDA, NRCS	TWDB	Provides funding and technical assistance for emergency measures, including floodplain easements in impaired watersheds. Funding is available through Simplified Acquisition Procedures (SAP), typically ranging from \$25,000 to \$100,000. Support is provided through contracts between project sponsors and the Natural Resources Conservation Service (NRCS); grants are not offered under this program. The NRCS covers up to 75 percent of total project costs.
Environmental Justice Government-to-Government Program (EJG2G)	Federal	EPA		Provides funding to support government activities that lead to measurable environmental or public health impacts in communities disproportionately burdened by environmental harms.

APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
Environmental Justice Collaborative Problem Solving Program	Federal	EPA		Provides funding directly to community-based organizations to address environmental injustices.
Environmental Quality Incentives Program (EQUIP)	Federal	USDA, NRCS	TDA	Provides funding and technical assistance to farmers and ranchers to promote agricultural production and environmental quality as compatible goals.
Farm Ownership Loans	Federal	USDA-FSA		Direct loans, guaranteed / insured loans, and technical assistance to farmers so that they may develop, construct, improve, or repair farm homes, farms, and service buildings, and to make other necessary improvements.
Federal Land Transfer / Federal Land to Parks Program	Federal	DOI-NPS		Identifies, assesses, and transfers available federal real property for acquisition for use in state and local parks and recreation, such as open space.
Fire-Adapted Communities Program (FAC)	Federal	FEMA, USFA	TAMFS	Collaborates to identify wildfire risk and take actionable steps to reduce risk of loss by protecting property and enhancing the safety of firefighters and residents.
Fire Management Assistance Grants (FMAG)	Federal	FEMA	TDEM	Provides fire suppression support to states when loss of life and property is imminent. Wildfire mitigation is also eligible under emergency protection if life is in imminent danger.
Fire Prevention and Safety Grant Program	Federal	US Fire Administration		Provides funding for projects that enhance the safety of the public and firefighters from fire and related hazards. The primary goal is to target high-risk populations and reduce injury and prevent death.
Firewise USA Program	Federal	USDA, DOI, NASFF, NFPA	TAMFS	Provides a collaborative framework to help neighbors in a geographic area organize and enhance ignition resistance of their homes and community to reduce wildfire risks at the local level.

APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
Flood Infrastructure Fund (FIF)	State	TWDB	TWDB	Provides financial assistance in the form of loans and grants for flood control, flood mitigation, and drainage projects. The Flood Intended Use Plan (Flood IUP) details the structure of each funding cycle and the SWIFT Advisory Committee serves as the oversight entity.
Flood Mitigation Assistance Program (FMA)	Federal	FEMA	TWDB	Repetitive flood loss property reduction and projects that mitigate losses to NFIP-insured properties.
Floodplain Management Services	Federal	DOD-USACE		Provides technical and planning assistance at the local, regional, or national level needed to support effective floodplain management.
Flood Protection Planning Program	State	TWDB	TWDB	Grant funding available to political subdivisions of the State of Texas for the evaluation of structural and nonstructural solutions to flooding problems. Upstream and/or downstream effects of proposed solutions must be considered in the planning and must be regional in nature by considering the flood protection needs of the entire watershed. Eligible planning activities include, but are not limited to, determining and describing flooding-related problems ; conducting hydrologic and hydraulic studies; identifying potential solutions; estimating the benefits and costs of potential solutions, including structural and nonstructural measures; determining the views and needs of the affected public regarding flooding problems; recommending feasible flood protection solutions; evaluating environmental, social, and cultural factors; and ensuring proposed solutions are consistent with regional or statewide plans as well as relevant laws and regulations.
Forest Land Enhancement Program	Federal	USDA, NRCS	TAMFS	Provides educational, technical, and financial assistance to help landowners implement sustainable forestry management objectives.
Forest Legacy Program	Federal	USFS	TAMFS	Provides funding to protect private forest lands that are environmentally, economically, and socially critical, thereby reducing development in the wildland-urban interface.

APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
Greenhouse Gas Reduction Fund (GGRF)	Federal	EPA		The program is designed to combat the climate crisis by mobilizing financing and private capital for greenhouse gas- and air pollution-reducing projects in communities across the country.
Grid Resilience Program (GRIP)	Federal	DOE		Enhance grid flexibility and improve the resilience of the nation's power grid against threats of extreme weather and climate change.
Hazard Mitigation Grant Program (HMGP)	Federal	FEMA	TDEM	Post-disaster multi-hazard mitigation funding for federally declared disasters. HMGP Post Fire funds are available for FMAG declarations.
Hazard Mitigation Grant Program Supplemental – Local Hazard Mitigation Plan Program (LHMPP)	Federal	FEMA	TXGLO	The Local Hazard Mitigation Plan Program (LHMPP) assists eligible entities by providing grants to develop or update local hazard mitigation plans, or to provide cost share for hazard mitigation planning activities funded through other federal sources. Grant awards range from \$20,000 to \$100,000.
Hazardous Materials Emergency Preparedness (HMEP) Grant Program	Federal	DOT	TDEM	Funding is available to help facilitate preparedness in transporting hazardous materials. The program recognizes Local Emergency Planning Committees (LEPCs) as applicants to maximize funding impact through regional partnerships.
Healthy Forests Reserve Program (HFRP)	Federal	NRCS		Assist landowners, on a voluntary basis, in restoring, enhancing and protecting forestland resources on private lands through various means, including conservation easements and cost-sharing agreements.
High Hazard Potential Dam Program (HHPD)	Federal	FEMA	TCEQ	Provides assistance for technical, planning, and design activities related to the repair, removal, and/or structural or nonstructural rehabilitation of eligible non-federal high hazard dams classified as high hazard potential by the state/territory dam safety agency, with an approved Emergency Action Plan (EAP) and rated in poor condition, through a pre-disaster or annual cycle.
Highway Bridge Replacement and Rehabilitation Program	Federal	FHWA	TXDOT	Provides funding to enable states to improve the condition of highway bridges through replacement, rehabilitation, and systematic preventive maintenance. Also includes the National Historic Covered Bridge Preservation Program.

APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
Homeland Security Grant Program (HSGP)	Federal	DHS	TDEM	Funding supports homeland security activities identified in state and local strategic plans, including threat and hazard risk identification for natural, technological, and human-caused hazards.
Hospital Preparedness Program (HPP) Cooperative Agreement	Federal	HHS	TXDSHS	The HPP is the primary source of federal funding for health care system preparedness and response. In collaboration with public health, it prepares health-care delivery systems to save lives through the development of health care coalitions (HCCs). Under the direction of the HPP providers, the HCCs develop plans, provide training, and coordinate regional exercises.
Hydrologic Research Grants	Federal	NOAA		Offers up to \$125,000 to conduct joint research and development on pressing surface water hydrology issues common to national, regional, and local operational offices. Eligible applicants include federally recognized agencies of state or local governments, quasi-public institutions such as water supply or power companies, hydrologic consultants and companies involved in using and developing hydrologic forecasts.
Groundwater Conservation District Loan Program	State	TWDB	TWDB	Provides short-term loans to finance the start-up costs of Groundwater Conservation Districts. Funding is available for any Groundwater District or Authority with the ability to regulate water well spacing and/or production. The program is authorized under Texas Water Code Chap. 36, Subchapter. L, and governed by TWDB rules in 31 Tex. Admin. Code Chap. 363, Subchapter. H.
Gulf of Mexico Energy Security Act (GOMESA)	Federal	DOI	TXGLO	GOMESA significantly enhances oil and gas leasing activities and creates revenue sharing provisions for the oil- and gas-producing states of Alabama, Louisiana, Mississippi, Texas, and their coastal political subdivisions (CPSs). The funds are used for coastal conservation, restoration, and hurricane protection. The second phase of GOMESA revenue sharing, which began in Fiscal Year 2017, expands the definition of qualified Outer Continental Shelf revenues to include receipts from Gulf of Mexico leases that are subject to withdrawal or moratoria restrictions. A revenue-sharing cap of \$500 million per year for the four Gulf-producing states, their CPSs and the Land and Water Conservation Fund, effective from fiscal years 2016 through 2055.

APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
Indian Housing Assistance - Housing Improvement Program (HIP)	Federal	DOI-BIA		The Housing Improvement Program (HIP) is a home repair, renovation, replacement and new housing grant program administered by the Bureau of Indian Affairs (BIA) and federally recognized Indian tribes. It is designed to assist American Indian and Alaska Native (AI/AN) individuals and families who lack immediate standard housing resources.
Individual Assistance (IA)	Federal	FEMA	TDEM	Following a disaster, funds can be used to mitigate hazards when repairing individual and family homes.
In-Lieu Fee Program Mitigation Projects	Federal	USACE	Community Applicants	Supports the restoration, establishment, enhancement, and/or preservation of aquatic resources through funds paid to a governmental or non-profit natural resources management entity to satisfy compensatory mitigation requirements for Department of the Army permits.
Land Acquisition	Federal	DOI-FWS		Acquires high-quality lands and waters, or easements thereon, for inclusion in the National Wildlife Refuge System.
Landowner Incentive Program	Federal	USFWS	EMNRD	Collaborates with the Forestry Division and private landowners to protect the habitats of at-risk species on private lands. Landowner involvement is voluntary.
Mapping Standards Support	Federal	DOI/USGS		Provides mapping and digital data standards expertise in support the National Flood Insurance Program (NFIP).
Mitigation Banks	Federal	USACE	Community Applicants	Mitigation Banks are Corps-approved sites that sell compensatory mitigation credits for projects that cause unavoidable impacts to waters of the U.S. When a permit requires compensatory mitigation, it specifies the number of credits to be purchased from an approved mitigation bank.
National Dam Safety Program	Federal	FEMA		Provides technical assistance, training, and grants to enhance state dam safety programs.
National Digital Orthophoto Program	Federal	DOI-USGS		Develops topographic quadrangles for use in flood mapping and other hazards.

APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
National Earthquake Hazards Reduction Program (NEHRP)	Federal	FEMA	TDEM	Provides funding to support enhanced earthquake risk assessments in local hazard mitigation plans, as well as other earthquake hazard mitigation and preparedness activities.
National Earthquake Hazard Reduction Program (NEHRP) in Earth Sciences	Federal	NSF		Conducts research on basic and applied earth and building sciences.
National Earthquake Hazard Reduction Program	Federal	DOI-USGS		NEHRP's work encompasses research, development, and implementation activities. Research helps to advance our understanding of why and how earthquakes occur and impact the natural and built environments. The program develops strategies, tools, techniques, and other measures that can reduce the adverse effects of earthquakes and facilitates and promotes implementation of these measures, thereby strengthening earthquake resilience among at-risk communities.
Natural Resources Damage Assessment (NRDA)	Federal	EPA	TPWD	Evaluates the likelihood of adverse ecological effects that are occurring or may occur as a result of exposure to physical (e.g., cleanup) or chemical (e.g., hazardous release) stressors at a site.
National Flood Insurance Program (NFIP)	Federal	FEMA	TWDB	Provides affordable insurance to property owners and encourages communities to adopt and enforce floodplain management regulations.
National Flood Insurance Program: Technical Mapping Advisory Council	Federal	DOI-USGS		Provides technical guidance and advice to coordinate FEMA's map modernization efforts for the National Flood Insurance Program (NFIP).

APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
National Training and Education (NTE)	Federal	FEMA		Offers educational and training programs through online course catalog, which provides searchable, integrated information on courses provided or managed by FEMA's Center for Domestic Preparedness (CDP), Emergency Management Institute (EMI), and National Training and Education Division (NTED).
National Weather Service (NWS)	Federal	NOAA - NWS		The National Weather Service (NWS) offers storm spotter training as well as weather and flood safety guides. It may also provide funding to support severe weather signage in parks and other public areas.
National Wildlife Wetland Refuge System	Federal	USFWS	TPWD	Provides funding for the acquisition of land for inclusion in the National Federal Wildlife Refuge System.
Nonpoint Source Grant Program	Federal	EPA	TCEQ, TSSWCB	The Clean Water Act (CWA) requires states to develop programs to protect the water quality from the adverse effects of nonpoint source (NPS) water pollution. The Texas Commission on Environmental Quality (TCEQ) and the Texas State Soil and Water Conservation Board (TSSWCB) administer federal grants for activities that prevent or reduce NPS pollution.
Non-Structural Alternatives to Structural Rehabilitation of Damaged Flood Control Works	Federal	DOD-USACT		Provides planning and construction grants for non-structural alternatives to the rehabilitation of flood control works damaged by floods or coastal storms.
North American Wetland Conservation Fund	Federal	USFWS	TPWD	Provides funding for wetland conservation projects.
NRCS Conservation Programs	Federal	USDA, NRCS	Community Applicants	Provides funding through various programs for the conservation of natural resources.

APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
Office of Disaster Assistance	Federal	SBA		Provides financial assistance through low interest disaster loans to businesses of all sizes, private non-profit organizations, homeowners, and renters to repair or replace real estate, personal property, machinery and equipment, inventory and business assets that have been damaged or destroyed in a declared disaster.
Partners for Fish and Wildlife	Federal	USFWS	TPWD	Provides financial and technical assistance to landowners for wetland restoration projects in “focus areas” of the state.
Planning Assistance to States	Federal	USACE	TWDB	Aids states in planning for development, utilization, and conservation of water and related land resources.
Pollution Prevention Grant: Environmental Justice in Communities	Federal	EPA		Provides technical assistance to businesses aiming to improve human health and the environment in disadvantaged communities.
Pollution Prevention Grant: Environmental Justice Through Safer and More Sustainable Products	Federal	EPA		Provides technical assistance to businesses to increase the supply, demand, and use of safer, more sustainable products.
Post-Disaster Economic Recovery Grants and Assistance	Federal	DOC-EDA		Provides funding to assist with the long-term economic recovery of communities, industries, and firms adversely impacted by disasters.
Pre-Disaster Mitigation Loan Program	Federal	SBA		Provides low-interest loans to small businesses for mitigation projects.
Pre-Disaster Mitigation (PDM)	Federal	FEMA		Congressional funding for local governments, tribes, and states to plan and implement sustainable, cost-effective measures designed to reduce risk to individuals and property from future natural hazards.

APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
Preparedness (Non-Disaster) Grants	Federal	FEMA		Provides financial assistance to state and local governments for preparedness programs. Funding is allocated to enhance the capacity of emergency responders to prevent, respond to, and recover from terrorism incidents involving weapons of mass destruction—chemical, biological, radiological, nuclear, and explosive devices—as well as cyber-attacks.
Prescribed Fire Grants	State	TAMFS	TAMFS	The Texas A&M Forest Service’s Mitigation & Prevention Department annually implements four prescribed fire grants to protect communities and restore ecosystems. (1) SFAM Plains Prescribed Fire Grant – Supports prescribed burns to reduce hazardous fuels near Texas communities at high risk for wildfires—specifically those threatened by Southern Plains Wildfire Outbreaks. Treatment areas are located adjacent to identified priority communities. (2) The Community Protection Program Grant – Funds prescribed burns on private lands within 10 miles of a National Forest boundary to reduce high-risk fuels. The goal is to protect nearby communities and forest resources by lowering the risk of catastrophic wildfire across public and private lands. (3) The State Fire Assistance for Mitigation Central & East Texas Grant – Provides funding for prescribed burns on private lands in 43 Central and East Texas counties that have approved Community Wildfire Protection Plans (CWPPs). The goal is to protect high-risk communities and restore ecosystems by reducing hazardous vegetation. Priority is given to sites that are within a CWPP, near Firewise communities or residential areas (as identified by the Texas Wildfire Risk Assessment Portal), and support ecosystems that benefit from prescribed fire. (4) Neches River and Cypress Basin Watershed Restoration Program – Assists landowners with prescribed burns to improve ecological health in the Neches River and Cypress Basin watersheds. The program benefits water quality and quantity, controls invasive species, and enhances wildlife habitat. Priority is given to treatment areas on private land that promote native ecosystem restoration, fall within priority watershed protection zones, and are located near public lands.

APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
Project Modifications for Improvement of the Environment	Federal	DOD-USACE		Provides funds for ecosystem restoration by modifying structures and/or operations of water resources projects constructed by the U.S. Army Corps of Engineers (USACE), or by restoring areas where a USACE project contributed to environmental degradation.
Protection of Essential Highways, Highway Bridge Approaches, and Public Works	Federal	USACE		Provides technical assistance to ensure bank protection for highways, highway bridges, essential public works, churches, hospitals, schools, and other nonprofit public services endangered by flood-caused erosion.
Public Assistance	Federal	FEMA	DHSEM	Funds are allocated to states and communities to repair damaged infrastructure and public facilities, and to help restore government or government-related services.
Public Assistance (PA) Section 406 Funds	Federal	FEMA	TDEM	Following a disaster, funds can be used to mitigate hazards while repairing damages to public structures or infrastructure. Wildfire mitigation is also eligible under emergency protection if lives are in imminent danger.
Public Health Emergency Preparedness (PHEP) Cooperative Agreement	Federal	CDC	TXDSHS	Aids health departments in building and strengthening their ability to effectively respond to a range of public health threats, including infectious diseases, natural disasters, and biological, chemical, nuclear, and radiological events. Preparedness activities funded by the PHEP Cooperative Agreement specifically target the development of emergency-ready public health departments that are both flexible and adaptable.
Public Housing Capital Fund	Federal	HUD		Funding available towards public housing agencies for modernization needs resulting from natural disasters including elevation, flood proofing, and retrofitting.
Regional Facility Planning Grant Program	State	TWDB	TWDB	Provides funds to political subdivisions in Texas for studies and analyses to evaluate and determine the most feasible alternatives to meet regional water supply and wastewater facility needs, estimate the costs associated with implementing these alternatives, and identify institutional arrangements for providing regional water supply and wastewater services.

APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
Regional Water Planning Group Grants	State	TWDB	TWDB	Developed to guide and support the planning of the State's water resources, this program administers and assists in the development of regional and state water plans. It aims to improve the planning process by providing clear guidance for stakeholders and utilizing the best available data, methodologies, and technical innovations for each funding cycle.
Repetitive Flood Claims Program	Federal	FEMA	DHSEM	Provides funds to assist states and communities reduce flood damages to insured properties that have had one or more claims under the National Flood Insurance Program (NFIP).
Research and Planning Fund and Fund Development Program	State	TWDB	TWDB	Provides funds to eligible applicants for the development or revision of regional water plans. Eligible activities include the development, revision, or improvement of regional water plans including public meetings, hearings, and special studies. Plans must comply with Texas Water Code, §16.053 and Chapter 357, or other special studies approved by the Texas Water Development Board (TWDB) that enhance water planning efforts in the region.
Resilient Landscapes Program	Federal	USDA, USFS	TAMFS	Provides coordination to restore healthy, resilient, fire-adapted ecosystems. Restoration efforts include thinning crowded forests and using prescribed fire on two to three million acres annually, which helps prevent the buildup of flammable vegetation that feeds extreme wildfires.
Risk MAP Program	Federal	FEMA, NFIP	TWDB	Establishes or updates floodplain mapping and multi-hazard risk products.
Rural Development Grants	Federal	USDA-Rural Development	TWDB	Provides grants and loans for the development and enhancement of infrastructure and public safety in rural areas, offering up to \$100,000 or 75 percent of the total project cost, whichever is less.
Rural Fire Assistance Grant	Federal	NIFC	TAMFS	Funds fire mitigation activities in rural communities.

APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
Rural Utilities Service (RUS)	Federal	USDA-Rural Development		Programs designed to provide needed infrastructure or infrastructure improvements to rural communities, including water and wastewater treatment, electric power, and telecommunications services.
Rural Water Assistance Fund (RWAF)	State	TWDB	TWDB	Provides low-cost financing to assist small rural utilities with water and wastewater projects. The Rural Water Assistance Fund (RWAF) offers tax-exempt equivalent interest rate loans and long-term financing options.
Safe Rest Stops Program	State	TXDOT	TXDOT	Texas has 21 major highways that function as long-distance travel corridors. Along these routes, rest areas serve as critical safety features designed to reduce accidents caused by driver fatigue. These facilities provide travelers with an opportunity to pause, rest, and return to the road more alert and refreshed.
Section 108 Loan Guarantee Program	Federal	HUD		Provides loans to public entities for community and economic development projects, including mitigation measures.
Section 502 Loan Guaranteed Loan Program	Federal	USDA-RHS		Provides loans, loan guarantees, and technical assistance to very low- and low-income applicants seeking to purchase, build, or rehabilitate homes in rural areas.
Section 504 Loans for Housing	Federal	USDA-RHS		Provides repair loans, grants, and technical assistance to low-income senior homeowners in rural areas to address home repairs and eliminate health and safety hazards.
Societal Dimensions of Engineering, Science, and Technology Program	Federal	NSF		Provides funding for research and educational activities on topics such as ethics, values, risk assessment, communication, risk management, and risk perception.
Soil Survey	Federal	USDA-NRCS		Maintains soil surveys of counties or other areas to assist with farming, conservation, mitigation or related purposes.

APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
State Fire Assistance for Mitigation (SFAM) - Mechanical Fuels Grants	State	TAMFS	TAMFS	Provides financial assistance for hazardous fuel reduction on private lands to decrease wildfire risk. The grant targets high-risk communities within 32 counties in Central Texas, as identified by the Texas A&M Forest Service Mitigation and Prevention Department. Priority is given to landowners who reside in one of the 32 high-risk counties, are located within a city or county with an active Community Wildfire Protection Plan (CWPP) or live in a recognized Firewise USA site.
State Fire Assistance for Mitigation (SFAM) - Vegetative Fuel Break Grant	State	TAMFS	TAMFS	Provides financial assistance for the creation of vegetative fuel breaks on private lands in Texas. Vegetative fuel breaks are trees and shrubs systematically planted adjacent to fields, homesteads, or feedlots to reduce or redirect wind. The goal of the grant is to protect high-risk communities by reducing the risk of catastrophic wildfires on private and public lands. Grant recipients will be reimbursed up to \$2,500 for actual costs associated with creating a green, vegetative fuel break, consisting of a minimum of three rows of trees and 400 feet in length. Eligible projects must be located within the Texas High Plains.
Silver Jackets	Federal	USACE	TWDB	Provides funding for flood-related studies, public awareness efforts, risk analyses, flood response plans, and the construction of small flood control projects.
Small Flood Control Projects (USACE Section 205)	Federal	USACE	TWDB	Authorizes the U.S. Army Corps of Engineers (USACE) to conduct feasibility studies and construct small flood control projects
State Participation Program – Regional Water and Wastewater Facilities	State	TWDB	TWDB	Provides funding and assumes a temporary ownership interest in regional water, wastewater, or flood control projects when local sponsors are unable to assume debt for an optimally sized facility. The program is intended to encourage the optimum regional development of projects by funding excess capacity for future use, where benefits can be documented and such development is otherwise unaffordable without state participation. The goal is to enable the right-sizing of projects by accounting for future demand.

APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
State Water Implementation Fund for Texas (SWIFT)	State	TWDB	TWDB	The SWIFT program helps communities develop and optimize water supplies at cost-effective rates. It offers low-interest loans, extended repayment terms, deferred loan repayments, and incremental repurchase terms for projects with state ownership aspects.
State Water Resources Research Act Program	Federal	USGS	TWDB	The U.S. Geological Survey (USGS), in cooperation with the National Institutes for Water Resources (NIWR), issues an annual call for proposals that address water challenges and concerns of regional or interstate significance, or that relate to a specific program priority identified by the Secretary of the Interior and the Institutes.
Stream Gauging and Flood Monitoring Network	Federal	DOE-USGS		Operation of a network of over 7,000 stream gauging stations that provide data on river flooding characteristics.
Surface Transportation Program	Federal	USDOT/ FHWA		Provides funding for activities such as safety-related construction and transportation enhancements. These enhancements include a broad range of initiatives, from safety education to environmentally and historically focused activities.
Texas Farm and Ranch Lands Conservation Program (TFRLCP) TFRLCP (continued)	State	TPWD	TPWD	Maintains and enhances the ecological and agricultural productivity of lands through Agricultural Conservation Easements. The TFRLCP supports responsible stewardship and conservation of working lands, water, fish and wildlife, and agricultural production through: • Generating interest and awareness in easement programs and other options for conserving working lands. • Leveraging available monies to fund as many high-quality projects as possible. • Highlighting the ecological and economic value of working lands and the long-term opportunities for their conservation.

APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
Texas HOME Disaster Relief	Federal	TDHCA	TDHCA	The Texas HOME Disaster Relief Program is a long-term housing initiative designed to help eligible organizations assist income-qualified households affected by disasters. Funds are available for federal or state-declared disasters, as well as other natural or man-made events. It is the Department's practice to maintain a HOME Disaster Relief Fund balance of \$1 million whenever possible. These funds may be used to support affected households located outside communities that receive HOME funds directly from the U.S. Department of Housing and Urban Development (HUD).
Texas Longleaf Conservation Assistance Program	Federal	National Fish and Wildlife Foundation (NFWF)	TAMFS	Provides eligible landowners with financial and technical assistance for establishing, enhancing, and managing longleaf pine. Landowners with property within 11 East Texas counties—including Angelina, Hardin, Jasper, Nacogdoches, Newton, Polk, San Augustine, Sabine, San Jacinto, Trinity, and Tyler—are eligible to apply. Approved participants may receive up to 50 percent payment not to exceed a standard cap rate, for implementing approved conservation practices. Approved conservation practices include prescribed burning, reforestation, site preparation, and forest stand improvement.
Texas Infrastructure Resiliency Fund (TIRF)	State	TWDB	TWDB	The purpose of this program is to provide loans, grants, and matching funds for flood projects through four separate accounts. It was enacted through Senate Bill 7 to address needs identified following the flood disasters of 2015, 2016, and 2017. Senate Bill 500 appropriated \$685 million to support the program. Each account serves a distinct purpose. The oversight entity is the Texas Infrastructure Resiliency Fund (TIRF) Advisory Board, with the SWIFT Advisory Committee and the Texas Division of Emergency Management (TDEM) Director as non-voting members.

APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
Texas Water Development Fund (DFund)	State	TWDB	TWDB	Provides financing for various types of eligible infrastructure projects, including planning, design, acquisition, and construction of projects for: water supply (such as reservoirs and well fields), conservation, water quality enhancement, flood control, and wastewater. This program enables the Texas Water Development Board (TWDB) to fund multi-purpose projects (e.g., water and wastewater) through a single commitment. Eligible applicants include political subdivisions and nonprofit water supply corporations.
Transfers of Inventory Farm Properties to Federal and State Agencies for Conservation Purposes	Federal	USDA-FSA		Transfers the titles of certain inventory farm properties owned by the FSA to federal and state agencies for conservation purposes, including the restoration of wetlands and floodplain areas to reduce future flood potential.
Transportation Enhancement Program	Federal	FHWA	TXDOT	This program supports non-traditional transportation-related activities that extend beyond standard infrastructure initiatives. Eligible projects must demonstrate thoughtful integration with the surrounding environment, contributing meaningfully to community vitality, environmental quality, and the visual character of transportation corridors. Reimbursement of up to 80 percent of allowable costs is available for qualifying enhancement activities.
United States Geological Survey (USGS)	Federal	USGS		The U.S. Geological Survey (USGS) issues competitive grants and cooperative agreements to support research in earthquake hazards, the physics of earthquakes, earthquake occurrence, and earthquake safety policy.
Urban Tree Canopy Project (UTC)	Federal	USDA, USFS	TAMFS	The urban tree canopy (UTC) refers to the layer of leaves, branches, and stems of trees that cover the ground when viewed from above. In urban environments, the UTC plays a crucial role in stormwater management by intercepting rainfall that would otherwise run off paved surfaces and enter local waterways through storm drainage systems, carrying pollutants along the way. Additionally, the UTC mitigates

APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
UTC (continued)				the urban heat island effect, reduces heating and cooling costs, lowers air temperatures, improves air quality, increases property values, provides wildlife habitat, and offers aesthetic and community benefits, including an enhanced quality of life.
Urban Waters Small Grants	Federal	EPA		Funding is allocated to improve urban water quality through activities that also support community revitalization and other local priorities, which may include the implementation of green infrastructure.
USDA Conservation Programs	Federal	USDA/FSA		These programs ¹ work to address a large number of farming and ranching related conservation issues including drinking water protection, soil erosion reduction, wildlife habitat preservation, the preservation and restoration of forests and wetlands, and aiding farmers whose farms have been damaged by natural disasters.
U.S.-Mexico Border Water Infrastructure Program	Federal	EPA	TCEQ	Provides grant assistance to U.S. and Mexican communities located within 60 miles of the border for the development and construction of high-priority drinking water and wastewater facilities. The program furthers EPA's mission to protect human health and the environment by providing critical resources for what is often an area's first drinking water and basic sanitation services.
Water Research Grant Program Water Research Grant Program	State	TWDB	TWDB	The Texas Water Development Board (TWDB) funds a variety of water planning and research studies and projects designed to support regional water planning efforts and address region-specific water resource questions..
Water Conservation Field Services Program	Federal	HUD	Texas A&M AgriLife	Encourage beneficiaries of federal water projects to conserve water and assists agricultural and urban water districts in developing and implementing water conservation plans in accordance with the Reclamation Reform Act (RRA) of 1982. Through the WCFSP, cost-shared financial assistance is available for developing water conservation plans, identification of water management

¹ Programs include Conservation Reserve Program, Conservation Reserve Enhancement Program, Emergency Conservation Program, Emergency Forest Restoration Program, Farmable Wetlands Program, Grassland Reserve Program, Source Water Protection Program.

APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
Water Conservation Filed Services Program (continued)				improvements through System Optimization Reviews (SORs), design of water management improvements, and promotion of water conservation techniques through demonstration activities. WaterSMART also supports Reclamation's priorities to increase water reliability and resilience, advance racial and economic equity, and enhance water conservation, ecosystem health, and climate resilience.
Water2025 Challenge Grant Program for Western States	Federal	Bureau of Reclamation	TWDB	Provides up to \$25,000 in funding for projects that enhance water use efficiency and promote improved water management practices.
Watershed Processes and Water Resources	Federal	Bureau of Reclamation	TWDB	Promotes up to \$250,000 for projects that can be completed within 24 months and that reduce conflicts through water conservation, efficiency, and markets.
Watershed Processes and Water Resources – National Research Initiative Standard Research (Part T)	Federal	USDA	TWDB	Provides \$100,000 in funding to support research in two key areas: (1) understanding fundamental watershed processes; and (2) developing technologies and management practices that enhance the efficient use of water—both consumptive and non-consumptive—while protecting or improving water quality for agricultural and forestry production.
WaterSMART – Drought Response Program	Federal	USDA	TWDB	Provides \$500,000 to support innovative research focused on: (1) understanding the fundamental processes that influence the quality and quantity of water resources across diverse spatial and temporal scales; (2) improving water resource management in agricultural, forested, and rangeland watersheds; and (3) developing appropriate technologies to achieve these objectives.
Wetlands Protection – Development Grants	Federal	EPA		Provides funding to support the development and enhancement of state and tribal wetlands protection programs.

APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
Wetlands Reserve Program	Federal	USDA, NRCS		Provides financial and technical assistance to protect and restore wetlands through the use of easements and restoration agreements.
Wildlife Habitat Incentive Program (WHIP)	Federal	USDA, NRCS	TPWD	A voluntary program for conservation-minded landowners seeking to develop and improve wildlife habitat on agricultural land, nonindustrial private forest lands, and tribal lands.



ADOPTION RESOLUTIONS



THE STATE OF TEXAS §
§

COMMISSIONERS' COURT

COUNTY OF ARANSAS §

ARANSAS COUNTY, TEXAS

RESOLUTION NO. R-16-2025

A RESOLUTION OF ARANSAS COUNTY ADOPTING THE ARANSAS COUNTY 2025 HAZARD MITIGATION ACTION PLAN UPDATE.

WHEREAS, Aransas County recognizes the threat that natural hazards pose to people and property within Aransas County; and

WHEREAS, Aransas County has prepared a multi-hazard mitigation plan, hereby known as Aransas County Hazard 2025 Mitigation Action Plan in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS, Aransas County 2025 Hazard Mitigation Plan identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in Aransas County from the impacts of future hazards and disasters; and

WHEREAS adoption by the County Commissioners demonstrates their commitment to hazard mitigation and achieving the goals outlined in the Aransas County 2025 Mitigation Action Plan.

NOW THEREFORE, BE IT RESOLVED BY ARANSAS COUNTY, TEXAS, THAT:

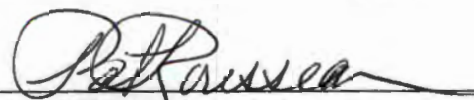
The County Commissioner's Court adopts the Aransas County 2025 Hazard Mitigation Action Plan. This plan, approved by the community, may be edited or amended after submission for review, but will not require the community to re-adopt any further iterations. This only applies to this specific plan and does not absolve the community from updating the plan in 5 years.

ADOPTED by a vote of 4 in favor and 0 against, and 0 abstaining, this 27th day of May, 2025.

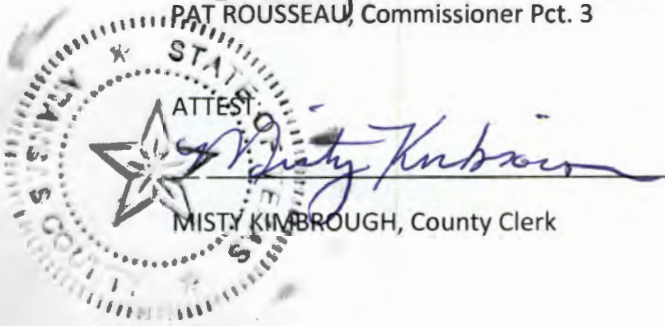

RAY A. GARZA., County Judge

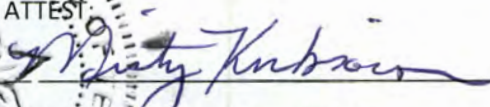
JACK CHANEY, Commissioner Pct. 1-1A


LESLIE CASTERLINE, Commissioner Pct. 2


PAT ROUSSEAU, Commissioner Pct. 3


ROBERT DUPNIK, Commissioner Pct. 4-4A



ATTEST:

MISTY KIMBROUGH, County Clerk



TOWN OF FULTON, TEXAS

RESOLUTION NO. R-03-2025

**A RESOLUTION OF THE TOWN OF FULTON ADOPTING THE ARANSAS COUNTY
2025 HAZARD MITIGATION ACTION PLAN.**

WHEREAS, the Town of Fulton recognizes the threat that natural hazards pose to people and property within the Town of Fulton; and

WHEREAS, the County of Aransas has prepared a multi-hazard mitigation plan, hereby known as Aransas County 2025 Hazard Mitigation Action Plan, in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS, the Aransas County Hazard 2025 Mitigation Action Plan identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the Town of Fulton from the impacts of future hazards and disasters; and

WHEREAS, adoption by the Town Council demonstrates their commitment to hazard mitigation and achieving the goals outlined in the Aransas County 2025 Hazard Mitigation Action Plan.

NOW THEREFORE, BE IT RESOLVED BY THE TOWN OF FULTON, TEXAS, THAT:

The Town Council adopts the Aransas County Hazard 2025 Mitigation Action Plan. This plan, approved by the community, may be edited or amended after submission for review, but will not require the community to re-adopt any further iterations. This only applies to this specific plan and does not absolve the community from updating the plan in 5 years.

ADOPTED by a vote of 5 in favor and ____ against, and ____ abstaining, this 4th day of June, 2025.

By: _____

Kelli Cole, Mayor

ATTEST: By: _____

Stephanie Garcia, City Secretary

RESOLUTION NO. 2025-22R

**A RESOLUTION OF THE CITY OF ROCKPORT ADOPTING THE
ARANSAS COUNTY 2025 HAZARD MITIGATION ACTION PLAN**

WHEREAS, the City of Rockport recognizes the threat that natural hazards pose to people and property within the City of Rockport; and

WHEREAS, the County of Aransas has prepared a multi-hazard mitigation plan, hereby known as Aransas County 2025 Hazard Mitigation Action Plan, in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS, the Aransas County Hazard 2025 Mitigation Action Plan, identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the City of Rockport from the impacts of future hazards and disasters; and

WHEREAS, adoption by the City Council demonstrates their commitment to hazard mitigation and achieving the goals outlined in the Aransas County 2025 Hazard Mitigation Action Plan.

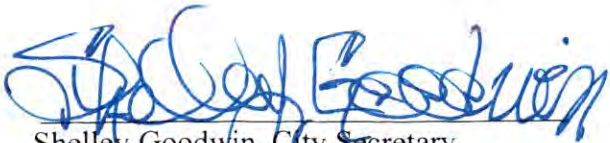
NOW THEREFORE, BE IT RESOLVED BY THE CITY OF ROCKPORT, TEXAS, THAT:

The City Council adopts the Aransas County Hazard 2025 Mitigation Action Plan. This plan, approved by the community, may be edited or amended after submission for review, but will not require the community to re-adopt any further iterations. This only applies to this specific plan and does not absolve the community from updating the plan in 5 years.

PASSED AND APPROVED by a vote of five (5) in favor, none (0) against, and none (0) abstaining, this 24th day of June, 2025.


Timothy Jayroe, Mayor

ATTEST


Shelley Goodwin, City Secretary

ROCKPORT-FULTON INDEPENDENT SCHOOL DISTRICT

RESOLUTION

A RESOLUTION OF THE ROCKPORT-FULTON INDEPENDENT SCHOOL DISTRICT (ISD) ADOPTING THE ARANSAS COUNTY 2025 HAZARD MITIGATION ACTION PLAN.

WHEREAS, Rockport-Fulton ISD recognizes the threat that natural hazards pose to people and property within the Rockport-Fulton ISD; and

WHEREAS, the County of Aransas has prepared a multi-hazard mitigation plan, hereby known as Aransas County 2025 Hazard Mitigation Action Plan, in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS, the Aransas County Hazard 2025 Mitigation Action Plan, identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in Rockport-Fulton ISD from the impacts of future hazards and disasters; and

WHEREAS, adoption by the Rockport-Fulton ISD School Board demonstrates their commitment to hazard mitigation and achieving the goals outlined in the Aransas County 2025 Hazard Mitigation Action Plan.

NOW THEREFORE, BE IT RESOLVED BY THE ROCKPORT-FULTON ISD SCHOOL BOARD, TEXAS, THAT:

The Rockport-Fulton ISD adopts the Aransas County Hazard 2025 Mitigation Action Plan. This plan, approved by the community, may be edited or amended after submission for review, but will not require the community to re-adopt any further iterations. This only applies to this specific plan and does not absolve the community from updating the plan in 5 years.

ADOPTED by a vote of 5 in favor and 0 against, and 0 abstaining, this 19 day of June, 2025.

By: Kenny Cruzan
Kenny Cruzan, President RFISD Board of Trustees

ATTEST: By: Bonni Randall
Bonni Randall, Secretary RFISD Board of Trustees

**ARANSAS COUNTY NAVIGATION DISTRICT
RESOLUTION NO. 25-01**

**A RESOLUTION OF THE ARANSAS COUNTY NAVIGATION DISTRICT ADOPTING THE
ARANSAS COUNTY 2025 HAZARD MITIGATION ACTION PLAN.**

WHEREAS, the Aransas County Navigation District (the District), located with boundaries co-terminus with the boundaries of Aransas County, Texas hereby recognizes the threat that natural hazards pose to people and property within the District; and

WHEREAS, Aransas County, in collaboration with the District and other affected entities, has prepared a multi-hazard mitigation plan, hereby known as the Aransas County 2025 Hazard Mitigation Action Plan (the Plan), in accordance with the Disaster Mitigation Act of 2000; and

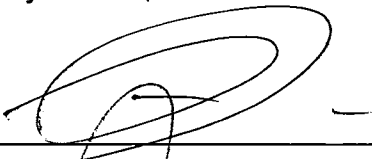
WHEREAS, the Plan identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the District from the impacts of future hazards and disasters; and

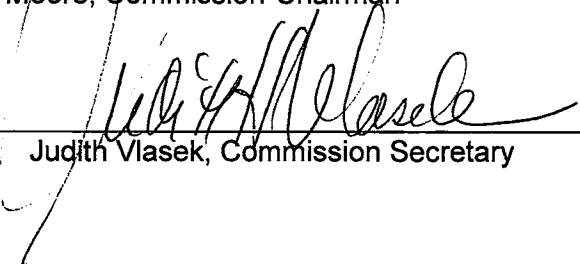
WHEREAS, adoption by the District Commissioners demonstrates their commitment to hazard mitigation and to achieving the goals outlined in the Plan.

**NOW THEREFORE, BE IT RESOLVED BY THE NAVIGATION AND CANAL COMMISSION OF THE
ARANSAS COUNTY NAVIGATION DISTRICT AS FOLLOWS:**

The Navigation and Canal Commission hereby adopts the Aransas County Hazard 2025 Mitigation Action Plan. This Plan, approved by the community, may be edited or amended after submission for review, but will not require the community to re-adopt any further iterations. This only applies to this specific Plan and does not absolve the community from updating the Plan in 5 years.

ADOPTED by a vote of 5 in favor, 0 against, and 0 abstaining,
this 2nd day of June, 2025.

By: 
Tommy Moore, Commission Chairman

ATTEST: By: 
Judith Vasek, Commission Secretary

