



SECTION 9. JURISDICTIONAL ANNEXES

9.9 City of Needville

This section presents the jurisdictional annex for the City of Needville that provides resources and information to assist public and private sectors to reduce losses from future hazard events. This annex is not guidance of what to do when a disaster occurs. Rather, this annex concentrates on actions to reduce or eliminate damage to property and people that can be implemented prior to a disaster. Information presented includes a general overview of the municipality, the City of Needville representatives who participated in the planning process, an assessment of the City of Needville's risk and vulnerability, the different capabilities used in the City of Needville, and an action plan that will be implemented to achieve a more resilient community.

9.9.1 Hazard Mitigation Planning Team

The City of Needville identified primary and alternate points of contact and developed the 2023 Hazard Mitigation Plan (HMP) update over the course of several months with input from many City of Needville departments, including the Police Department and Operations. The Chief of the Police Department represented the community on the Fort Bend County HMP Planning Partnership and supported the local planning process requirements by securing input from persons with specific knowledge to enhance the plan. All departments were asked to contribute to the annex development through reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

The following table summarizes municipal officials that participated in the development of the annex and in what capacity. Additional documentation on the municipality's planning process through Planning Partnership meetings is included in Volume 1, Section 2 (Planning Process) and Appendix C (Meeting Documentation).

Table 9-1. Hazard Mitigation Planning Team

Primary Point of Contact		Alternate Point of Contact	
Name/Title:	Michael Dickerson, Chief/Police Department	Name/Title:	Brian Sebesta, Operations Manager
Address:	P.O. Box 527 Needville, Texas 77461	Address:	P.O. Box 527 Needville, Texas 77461
Phone Number:	832-344-6665	Phone Number:	832-945-8009
Email:	chiefdickerson@cityofneedville.com	Email:	bsebesta@cityofneedville.com
NFIP Floodplain Administrator			
Name/Title:	Brian Sebesta/Operations Manager*		
Address:	15502 Fm 442 Rd, Needville, TX 77461-9116		
Phone Number:	979-793-4253		
Email:	bsebesta@cityofneedville.com		
Additional Contributors:			
Name/Title:		Brian Sebesta/Operations Manager	
Method of Participation:		Provided key input in the planning process	
Name/Title:		Michael Dickerson	
Method of Participation:		Provided key input in the planning process	

*Information obtained from <https://www.texasflood.org/flood-basics/fpa.html>



9.9.2 Municipal Profile

The City of Needville is located in southern Fort Bend County near the Village of Fairchilds, Village of Pleak, and the City of Beasley. Texas State Highway 36 passes through the City. Downtown Houston is located 41 miles to the northeast. The City of Needville has a total area of 2.01 square miles.

According to the American Community Survey, the 2021 population for the City of Needville was 3,059. Data from the 2021 ACS indicates that 5.9 percent of the population is 5 years of age or younger, and 15.6 percent is 65 years of age or older. Communities must deploy a support system that enables all populations to safely reach shelters or to quickly evacuate a hazard area.

9.9.3 Jurisdictional Capability Assessment and Integration

The City of Needville performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Volume 1, Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. The jurisdictional assessment includes the following analyses:

- An assessment of legal and regulatory capabilities
- Development and permitting capabilities
- An assessment of administrative and technical capabilities
- An assessment of fiscal capabilities
- An assessment of education and outreach capabilities
- Classification under various community mitigation programs
- The community's adaptive capacity to withstand hazard events

For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into the day-to-day local government operations. As part of the hazard mitigation analysis, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress toward plan integration. The updated mitigation strategy provided an opportunity for the City of Needville to identify opportunities for integration of mitigation concepts that can be incorporated into municipal procedures.

Planning, Legal, and Regulatory Capability and Integration

The table below summarizes the regulatory tools that are available to the City of Needville. The comment field provides information as to how the capability integrates hazard mitigation and risk reduction.

Table 9-2. Planning, Legal, and Regulatory Capability and Integration

	Jurisdiction has this? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
Codes, Ordinances, & Regulations				
Building Code	Yes	International Building Code 2015	Local	Code Official
<i>How does this reduce risk?</i> The City of Needville adopted the 2015 International Building Code.				
Zoning/Land Use Code	No	-	-	-
<i>How does this reduce risk?</i>				
Subdivision Ordinance	Yes	Chapter 78 – Subdivisions	Local	City Council
<i>How does this reduce risk?</i>				



	Jurisdiction has this? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
The City Ordinance requires all subdivisions and developers provide for constructions or underground utilities, street improvements, alleys or easements.				
Site Plan Ordinance	Yes	-	Local	Planning and Zoning Commission
How does this reduce risk? All development designs are required to submit plat designs with details of infrastructure that includes egress, utility lines, driveways, any easements and setbacks.				
Stormwater Management Ordinance	No	-	-	-
How does this reduce risk?				
Post-Disaster Recovery/ Reconstruction Ordinance	No	-	-	-
How does this reduce risk?				
Real Estate Disclosure	-	The Private Real Property Rights Preservation Act - Subchapter B: Chapter 2007 of the General Government Code	-	-
How does this reduce risk?				
Growth Management	No	-	-	-
How does this reduce risk?				
Environmental Protection Ordinance	No	-	-	-
How does this reduce risk?				
Flood Damage Prevention Ordinance	Yes	Chapter 38 – Flood Prevention	Local	City Mayor/ Floodplain Administrator
How does this reduce risk? The Flood Damage Prevention Ordinance identifies the Floodplain Administrator and the duties they are responsible for. These responsibilities include; <ul style="list-style-type: none"> • Maintain and hold open for public inspection all records. • Review permit applications to determine whether to ensure that the proposed building site project, including the placement of manufactured homes, will be reasonably safe from flooding. • Review, approve, or deny all applications for development permits required by adoption of this chapter. • Review permits for proposed development to assure that all necessary permits have been obtained from those federal, state or local governmental agencies, including section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 USC 1334, from which prior approval is required. • Where interpretation is needed as to the exact location of the boundaries of the areas of special flood hazards, for example, where there appears to be a conflict between a mapped boundary and actual field conditions, the Floodplain Administrator shall make the necessary interpretation. • Notify, in riverine situations, adjacent communities and the state coordinating agency which is the Texas Water Development Board (TWDB) and also the Texas Commission on Environmental Quality (TCEQ), prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Emergency Management Agency. • Assure that the flood carrying capacity within the altered or relocated portion of any watercourse is maintained. • When base flood elevation data has not been provided the Floodplain Administrator shall obtain, review and reasonably utilize any base flood elevation data and floodway data available from a federal, state or other source, in order to administer the provisions of article III of this chapter. • When a regulatory floodway has not been designated, the Floodplain Administrator must require that no new construction, substantial improvements, or other development, including fill, shall be permitted within zones A1-30 and AE on the community's FIRM, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point within the community. 				
Wellhead Protection	No	-	-	-
How does this reduce risk?				
Emergency Management Ordinance	Yes	Chapter 26 – Emergency Management	Local	Emergency Manager



	Jurisdiction has this? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
How does this reduce risk? The Emergency Management Ordinance is designed to establish an emergency operations plan and emergency operations manager and establish the requirements for the plan and position.				
Climate Change Ordinance	No	-	-	-
How does this reduce risk?				
Other	-	-	-	-
Planning Documents				
Comprehensive/Master Plan	No	-	-	-
How does this reduce risk?				
Capital Improvement Plan	No	-	-	-
How does this reduce risk?				
Disaster Debris Management Plan	No	-	-	-
How does this reduce risk?				
Floodplain Management or Watershed Plan	No	-	-	-
How does this reduce risk?				
Stormwater Management Plan	No	-	-	-
How does this reduce risk?				
Open Space Plan	No	-	-	-
How does this reduce risk?				
Urban Water Management Plan	No	-	-	-
How does this reduce risk?				
Habitat Conservation Plan	No	-	-	-
How does this reduce risk?				
Economic Development Plan	No	-	-	-
How does this reduce risk?				
Shoreline Management Plan	No	-	-	-
How does this reduce risk?				
Community Wildfire Protection Plan	No	-	-	-
How does this reduce risk?				
Community Forest Management Plan	No	-	-	-
How does this reduce risk?				
Transportation Plan	No	-	-	-
How does this reduce risk?				
Agriculture Plan	No	-	-	-
How does this reduce risk?				
Climate Action/ Resiliency/Sustainability Plan	No	-	-	-
How does this reduce risk?				
Tourism Plan	No	-	-	-
How does this reduce risk?				
Business/ Downtown Development Plan	No	-	-	-
How does this reduce risk?				



	Jurisdiction has this? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
Other	-	-	-	-
Response/Recovery Planning				
Comprehensive Emergency Management Plan	Yes	Emergency Management Plan	Local	Emergency Operations Manager
How does this reduce risk? A comprehensive emergency management plan shall be developed and maintained in a current state. The plan shall set forth the form of the organization, establish and designate divisions and functions, assign responsibilities, tasks, duties, and powers, and designate officers and employees to carry out the provisions of this chapter. As provided by state law, the plan shall follow the standards and criteria established by the governor's division of emergency management of the state. Insofar as possible, the form of organization, titles and terminology shall conform to the recommendations of the governor's division of emergency management. When approved, it shall be the duty of all departments and agencies to perform the functions assigned by the plan and to maintain their portion of the plan in a current state of readiness at all times. The emergency management plan shall be considered supplementary to this chapter and have the effect of law during the time of a disaster.				
Continuity of Operations Plan	No	-	-	-
How does this reduce risk?				
Strategic Recovery Planning Report	No	-	-	-
How does this reduce risk?				
Threat & Hazard Identification & Risk Assessment (THIRA)	No	-	-	-
How does this reduce risk?				
Post-Disaster Recovery Plan	No	-	-	-
How does this reduce risk?				
Public Health Plan	Yes	The Fort Bend County Health and Human Services Department (FBHHS) provides public health services for the City of Needville. FBHHS has public health plans as part of Annex H of the Fort Bend County Emergency Operations Plan.	County	FBHHS
How does this reduce risk?				
Other	-	-	-	-
How does this reduce risk?				

Development and Permitting Capability

The table below summarizes the capabilities of the City of Needville to oversee and track development.

Table 9-3. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Yes/No	Comment:
Do you issue development permits? • If yes, what department is responsible?	Yes	Development Permits within the special flood hazard areas are issued at City Hall in accordance with the Flood Prevention Ordinance.



Indicate if your jurisdiction implements the following	Yes/No	Comment:
If you do not issue development permits, what is your process for tracking new development?	N/A	-
Are permits tracked by hazard area? (For example, floodplain development permits.)	No	No permits have been issued within special flood hazard areas.
Do you have a buildable land inventory? • If yes, please describe	No	-
Describe the level of build-out in your jurisdiction.	N/A	Build-out is currently estimated at 65% of the area within the existing City limits.

Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the City of Needville and their current responsibilities that contribute to hazard mitigation.

Table 9-4. Administrative and Technical Capabilities

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Administrative Capability		
Planning Board	Yes	Planning Commissions is a six person board that is responsible for the following: <ul style="list-style-type: none"> Identifying community needs and to advise the city council of their short range and long range implications for the total development of the city Provide recommendations for achievable community goals as a basis for long range planning and development programs Recommend plans, programs and policies that will aid the entire community in achieving its defined goals Interpretation of the adopted plans and programs to concerned citizens so that private activities and desires may be accomplished in harmony with public needs and policies.
Zoning Board of Adjustment	No	The City does not have zoning regulations.
Planning Department	No	-
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	Yes	Economic Development Corporations. The Development Corporation of Needville's mission is to enhance the economic well-being of the City of Needville and its citizens.
Public Works/Highway Department	Yes	Public Works includes construction equipment and field personnel for responding to drainage and City utility problems.
Construction/Building/Code Enforcement Department	Yes	Code Review & Inspections by TX BBG Consulting, Inc. (Consultant).
Emergency Management/Public Safety Department	Yes	The Emergency Management Coordinator is established and decided by an elected official.



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Warning Systems / Services (mass notification system, outdoor warning signals, etc.)	No	-
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	Ditch and Storm sewer maintenance by Public Works.
Mutual aid agreements	No	-
Human Resources Manual	No	-
Other	No	-
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	City Engineer (Consultant)
Engineers or professionals trained in building or infrastructure construction practices	Yes	City Engineer & Buildings by TX BBG Consulting, Inc. (Consultants).
Planners or engineers with an understanding of natural hazards	Yes	-
Staff with expertise or training in benefit/cost analysis	No	-
Professionals trained in conducting damage assessments	No	-
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	No	-
Environmental scientist familiar with natural hazards	No	-
Surveyor(s)	Yes	City Engineer (Consultant)
Emergency manager	Yes	City Mayor- Director; Police Chief & Public Works Director - Coordinators
Grant writer(s)	No	-
Resilience officer	No	-
Other (this could include stormwater engineer, environmental specialist, etc.)	No	-

Fiscal Capability

The table below summarizes financial resources available to the City of Needville.

Table 9-5. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use? (Yes/No)
Community Development Block Grants (CDBG, CDBG-DR)	Yes
Capital improvements project funding	Yes
Authority to levy taxes for specific purposes	No
User fees for water, sewer, gas, or electric service	Yes
Impact fees for homebuyers or developers of new development/homes	Yes
Stormwater utility fee	No
Incur debt through general obligation bonds	No
Incur debt through special tax bonds	Yes
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	No
Other federal or state funding programs	Yes
Open space acquisition funding programs	No
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	-

**Education and Outreach Capability**

The table below summarizes the education and outreach resources available to the City of Needville.

Table 9-6. Education and Outreach Capabilities

Outreach Resources	Available? (Yes/No)	Comment:
Public information officer or communications office	No	-
Personnel skilled or trained in website development	No	-
Hazard mitigation information available on your website	No	-
Social media for hazard mitigation education and outreach	No	-
Citizen boards or commissions that address issues related to hazard mitigation	No	-
Warning systems for hazard events	No	-
Natural disaster/safety programs in place for schools	No	-
Does the jurisdiction have any public outreach mechanisms / programs in place to inform citizens on natural hazards, risk, and ways to protect themselves during such events? • If yes, please describe.	No	-

Community Classifications

The table below summarizes classifications for community programs available to the City of Needville.

Table 9-7. Community Classifications

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	No	-	-
Public Protection (ISO Fire Protection Classes 1 to 10)	No	-	-
Storm Ready Certification	No	-	-
Firewise Communities classification	No	-	-
Other	-	-	-

Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 2014). Each jurisdiction has a unique combination of capabilities to adjust to, protect from, and withstand a future hazard event, future conditions, and changing risk. The table below summarizes the adaptive capacity for each identified hazard of concern and the jurisdiction’s capability to address related actions using the following classifications:



- Strong: Capacity exists and is in use.
- Moderate: Capacity might exist; but is not used or could use some improvement.
- Weak: Capacity does not exist or could use substantial improvement.

Table 9-8. Adaptive Capacity

Hazard	Adaptive Capacity – Strong/Moderate/Weak
Dam/Levee Failure	Moderate
Disease Outbreak	Moderate
Drought	Moderate
Extreme Temperature	Moderate
Flood	Moderate
Geologic Hazards	Moderate
Hurricane/Tropical Storm	Moderate
Severe Weather	Moderate
Tornado	Moderate
Wildfire	Moderate
Winter Weather	Moderate

9.9.4 National Flood Insurance Program (NFIP) Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the NFIP. The Floodplain Administrator is responsible for maintaining this information and is listed in the Hazard Mitigation Planning Team table at the beginning of this annex.

NFIP Summary

The following table summarizes the NFIP statistics for the City of Needville.

Table 9-9. NFIP Summary

Municipality	Policies in Force ^a	Number of Paid Claims ^a	Amount of Paid Claims ^a	Number of NFIP RL Properties ^b	Number of NFIP SRL Properties ^b
Needville (C)	145	39	\$1,535,039.29	2	N/A

Sources: a BureauNet 2022 (<https://nfipservices.floodsmart.gov/reports-flood-insurance-data>)

b 2018 Fort Bend County HMP

Notes: Due to a contractual agreement with FEMA, detailed information at the municipal level was not available to incorporate into the 2023 HMP Update. The information presented here was collected from data provided by the State of Texas and from FEMA's HUDEX Report.

*Number of RL and SRL properties provided by the State of Texas

**Total policies in force and paid claims collected from FEMA's OpenFEMA Dataset: FIMA NFIP Redacted Claims

RL Repetitive Loss

SRL Severe Repetitive Loss

Flood Vulnerability Summary

The following table provides a summary of the NFIP program in the City of Needville.

Table 9-10. NFIP Summary

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction. <ul style="list-style-type: none"> • Do you maintain a list of properties that have been damaged by flooding? 	Yes, available from City Staff.



NFIP Topic	Comments
<ul style="list-style-type: none"> Do you maintain a list of property owners interested in flood mitigation? How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)? 	No
Are any RiskMAP projects currently underway in your jurisdiction?	No
<ul style="list-style-type: none"> If so, state what projects are underway. How do you make Substantial Damage determinations? How many were declared for recent flood events in your jurisdiction? 	<p>The City does not have a Substantial Damage Management Plan in place, nor do they have a formal process in place when conducting substantial damage determinations. The City is in need of a formal process and plan to provide a framework for conducting such inspections and determinations.</p> <p>No SD declarations for recent flood events.</p>
How many properties have been mitigated (elevation or acquisition) in your jurisdiction?	One slab raised; private funding.
<ul style="list-style-type: none"> If there are mitigated properties, how were the projects funded? 	
Do your flood hazard maps adequately address the flood risk within your jurisdiction?	No, due to the size of the watersheds with the City Limits, the maps do not show flood hazard designations for waterways within the City.
<ul style="list-style-type: none"> If not, state why. 	
NFIP Compliance	
What local department is responsible for floodplain management?	City Mayor or Mayor's Designee
Are any certified floodplain managers on staff in your jurisdiction?	No
Do you have access to resources to determine possible future flooding conditions from climate change?	No
Does your floodplain management staff need any assistance or training to support its floodplain management program?	No
<ul style="list-style-type: none"> If so, what type of assistance/training is needed? 	
Provide an explanation of NFIP administration services you provide (e.g. permit review, GIS, education/outreach, inspections, engineering capability)	Permit Review by TX BBG Consulting, Inc. (Consultant).
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	Replacement/Rehabilitation cost greater than 50% of the replacement cost.
What are the barriers to running an effective NFIP program in the community, if any?	Lack of special flood hazard designations adjoining waterways in the City.
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?	No
<ul style="list-style-type: none"> If so, state the violations. 	
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	Unknown
<ul style="list-style-type: none"> What is the local law number or municipal code of your flood damage prevention ordinance? What is the date that your flood damage prevention ordinance was last amended? 	Chapter 38 – Flood Prevention
Does your floodplain management program meet or exceed minimum requirements?	Yes, Meets
<ul style="list-style-type: none"> If exceeds, in what ways? 	
Are there other local ordinances, plans or programs (e.g. site plan review) that support floodplain management and meeting the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce	Chapter 78 - Subdivisions



NFIP Topic	Comments
flood risk when reviewing variances such as height restrictions?	
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	No

9.9.5 Growth/Development Trends

Understanding how past, current, and projected development patterns have or are likely to increase or decrease risk in hazard areas is a key component to appreciating a jurisdiction's overall risk to its hazards of concern. The table below summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development.

Table 9-11. Number of Building Permits for New Construction

Type of Development	2018		2019		2020		2021		2022	
Number of Building Permits for New Construction Issued Since the previous HMP* (total/within regulatory floodplain)										
	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA
Single Family	-	-	-	-	-	-	-	-	-	-
Multi-Family	-	-	-	-	-	-	-	-	-	-
Other (commercial, mixed-use, etc.)	-	-	-	-	-	-	-	-	-	-
Total Permits Issued	-	-	-	-	-	-	-	-	-	-

SFHA Special Flood Hazard Area (1% annual chance flood event)

* Only location-specific hazard zones or vulnerabilities identified.

Table 9-12. Recent and Expected Future Development

Property or Development Name	Type (e.g. Res., Comm.)	# of Units / Structures	Address and Parcel ID	Known Hazard Zone(s)	Description/Status of Development
Recent Major Development from 2018 to Present					
None Identified					
Known or Anticipated Major Development in the Next Five (5) Years					
None Identified					

9.9.6 Jurisdictional Risk Assessment

The hazard profiles in Volume 1, Section 4 (Risk Assessment) provide detailed information regarding each plan participant's vulnerability to the identified hazards. Section 4.1 (Methodology and Tools) and Section 4.4 (Hazard Ranking) provide detailed summaries for the City of Needville's risk assessment results and data used to determine the hazard ranking discussed later in this section.

Hazard area extent and location maps provided below illustrate the probable areas impacted within the jurisdiction based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Maps were generated only for those hazards that can be identified clearly using mapping techniques and technologies and for which the City of Needville has significant exposure. The maps also show the location of potential new development, where available.



Figure 9-1. City of Needville Hazard Area Extent and Location Map-Dam Inundation

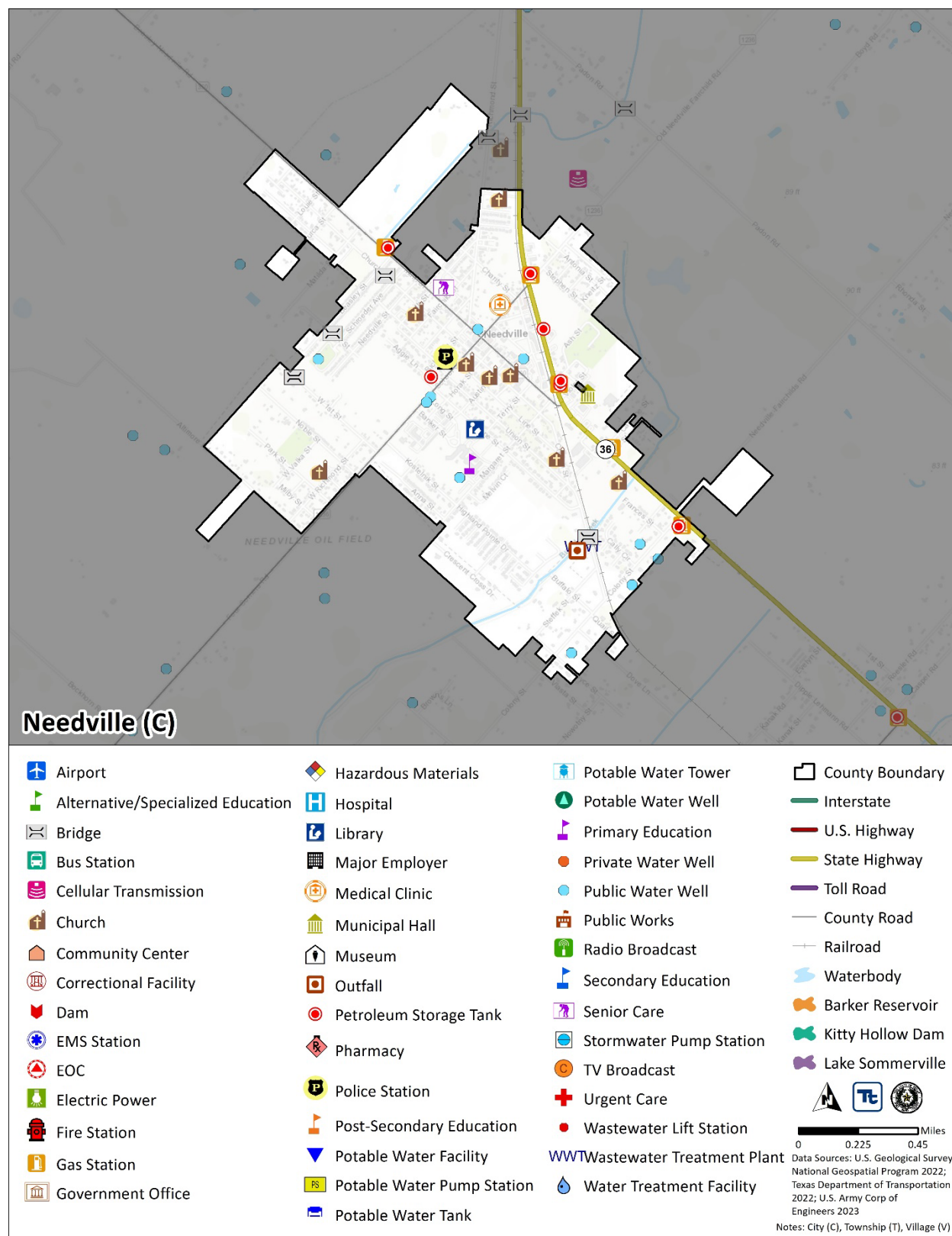




Figure 9-2. City of Needville Hazard Area Extent and Location Map-Expansive Soils

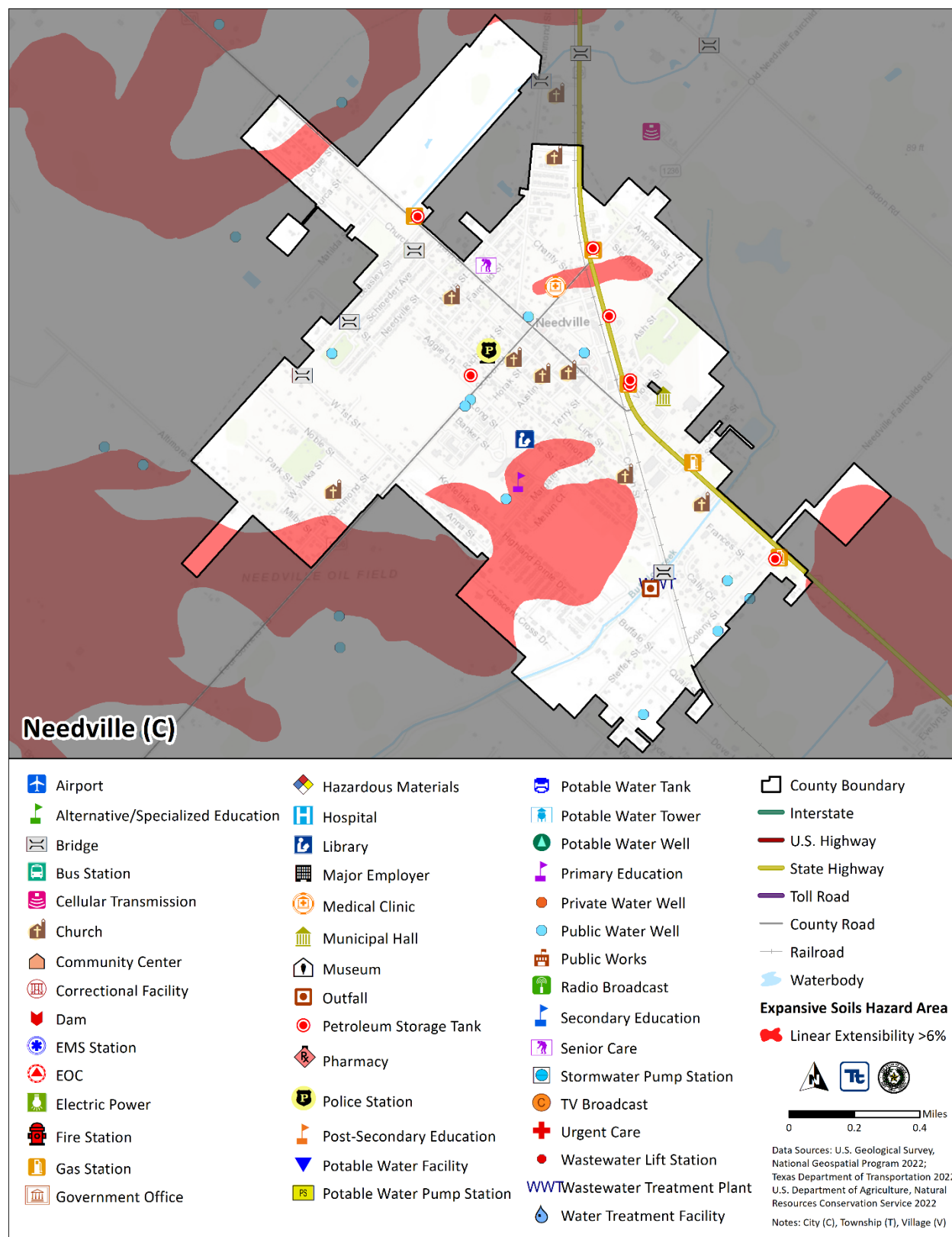




Figure 9-3. City of Needville Hazard Area Extent and Location Map-Flood

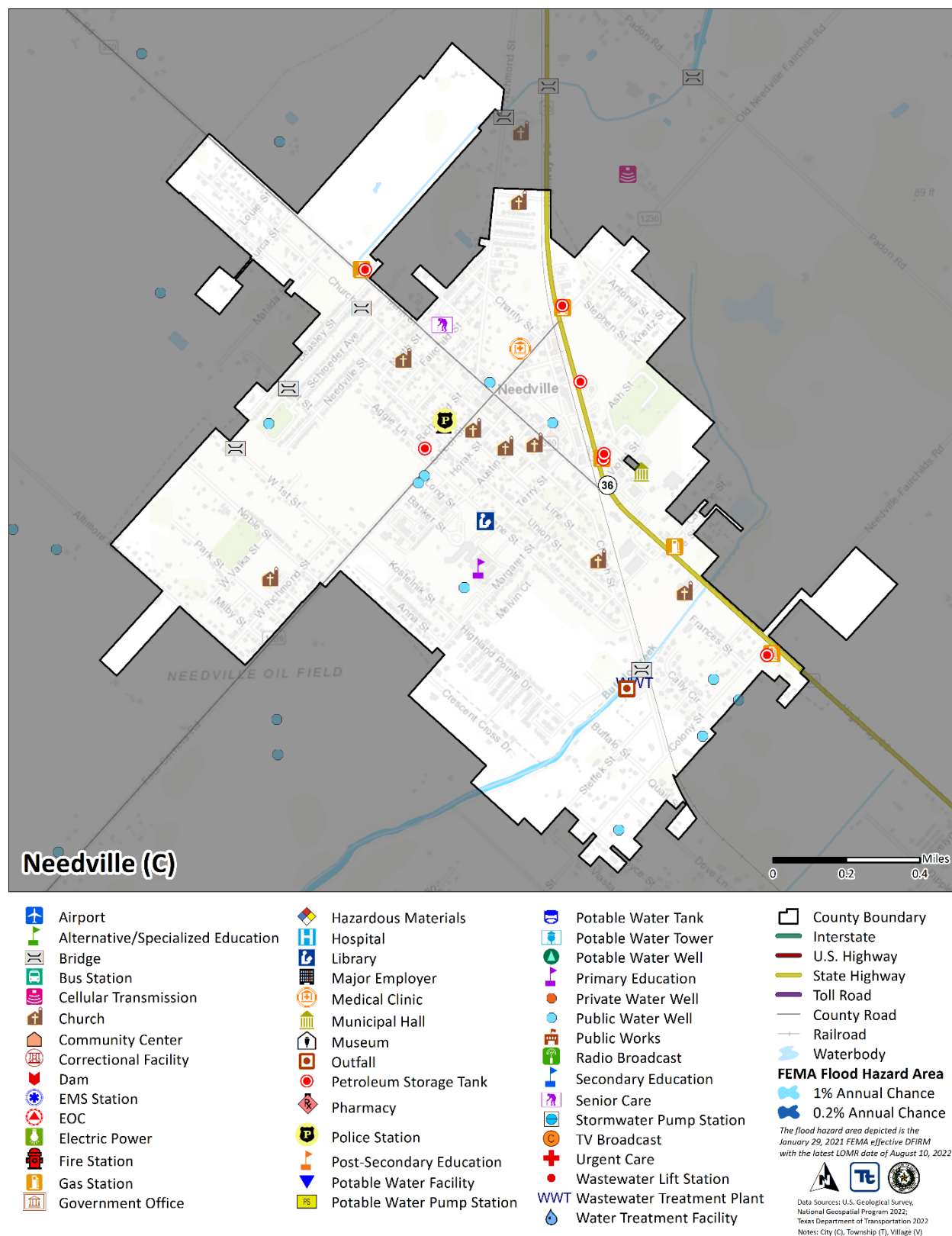




Figure 9-4. City of Needville Hazard Area Extent and Location Map-Inland Erosion

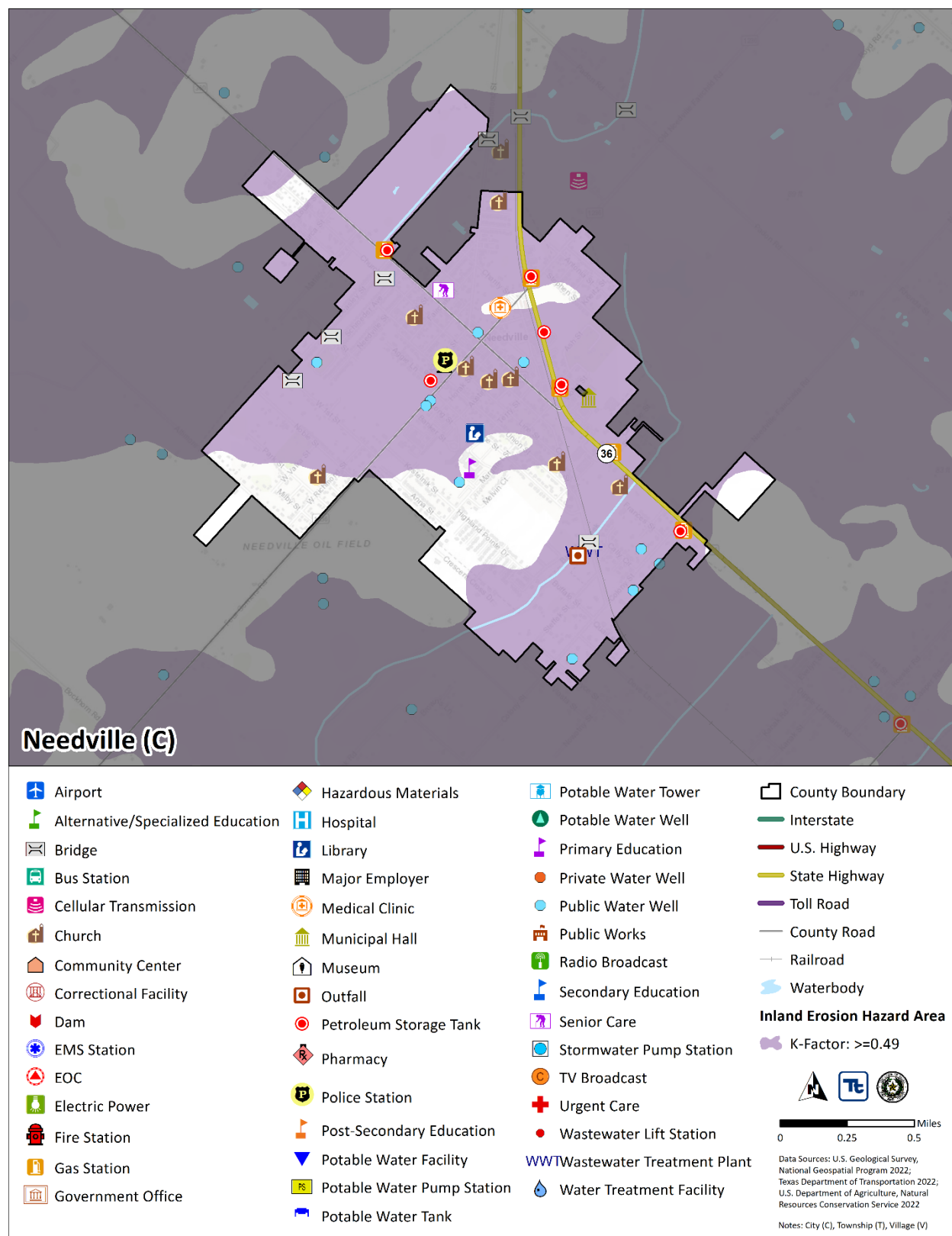
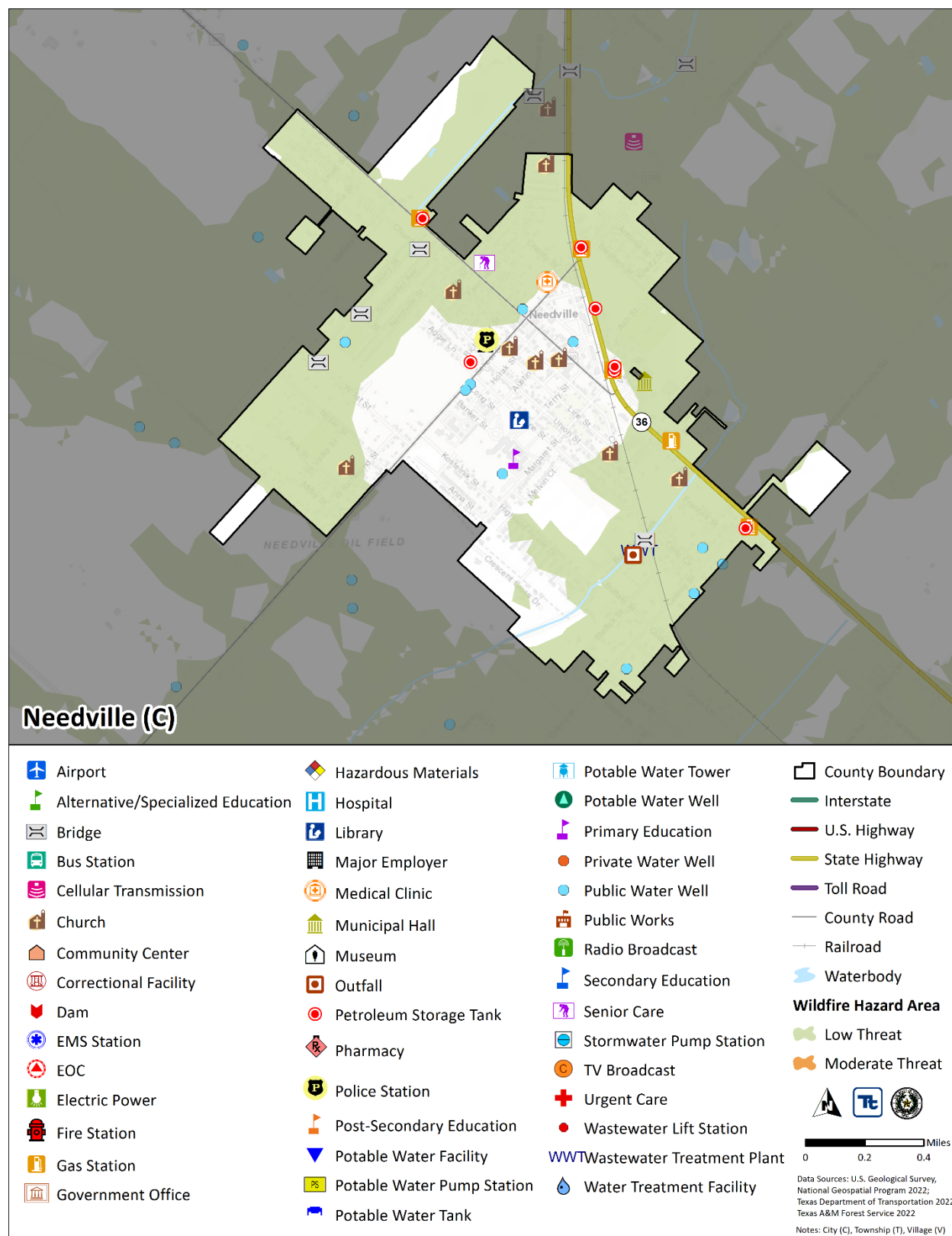




Figure 9-5. City of Needville Hazard Area Extent and Location Map-Wildfire





Hazard Event History

Fort Bend County has a history of natural and non-natural hazard events, as detailed in Volume I, Section 4 (Risk Assessment). A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the County and its municipalities.

The City of Needville's history of federally declared (as presented by FEMA) and significant hazard events [as presented in NOAA-National Centers for Environmental Information (NCEI)] is consistent with that of the County. The table below provides details regarding municipal-specific loss and damages the City of Needville experienced during hazard events since the last HMP update. Information provided in the table below is based on reference material or local sources.

Table 9-13. Hazard Event History

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
January 20, 2020 – continuing	EM-3458 – Covid-19; DR-4485 – Covid-19 Pandemic	Yes	COVID-19 pandemic	The City experienced damages equivalent to the County level.
July 25-31, 2020	EM-3530 – Hurricane Hanna	Yes	Hurricane-force winds resulted in significant number of downed trees and utility lines.	The City experienced damages equivalent to the County level.
August 23-27, 2020	EM-3540 – Tropical Storms Marco and Laura	Yes	Fort Bend County activated their emergency operations center as fringe impacts of Tropical Storms Marco and Laura impacted the County	The City experienced damages equivalent to the County level.
September 12-18, 2021	EM-3572 Hurricane Nicholas	Yes	Hurricane Nicholas produced several hours of tropical storm-force sustained winds and gusts. There were numerous power outages and minor to moderate damage to some structures and roofs. Trees down in areas.	The City experienced damages equivalent to the County level.
February 11-21, 2021	DR-4586; EM 3554 – Severe Winter Storms	Yes	Winter Storm Uri distributed a record amount of snow throughout Texas. Snow, ice, and ultra-low temperatures caused widespread road closures.	The City experienced damages equivalent to the County level.

Source: FEMA 2023; NOAA 2023

Hazard Ranking and Vulnerabilities

The hazard profiles in Volume 1, Section 4 (Risk Assessment) have detailed information regarding each plan participant's vulnerability to the identified hazards. The following summarizes the City of Needville's risk assessment results and data used to determine the hazard ranking.

Hazard Ranking

This section provides the community specific identification of the primary hazard concerns based on identified problems, impacts and the results of the risk assessment as presented in Volume 1, Section 4 (Risk Assessment). The ranking process involves an assessment of the likelihood of occurrence for each hazard; the potential impacts of the hazard on people, property, and the economy; and community capabilities to address the hazard



and changing future climate conditions. Mitigation action development uses the inputs from the evaluation to target those hazards with highest level of concern.

As discussed in Volume 1, Section 4.4 (Hazard Ranking), each participating jurisdiction has differing degrees of risk exposure and vulnerability compared with the County as a whole. Therefore, each municipality ranked the degree of risk to each hazard as it pertains to their community. The table below summarizes the hazard risk/vulnerability rankings of potential natural hazards for the City of Needville. The City of Needville reviewed the County hazard risk/vulnerability risk ranking table and individual results to reflect the relative risk of the hazards of concern to the community.

Table 9-14. Hazard Ranking Input

Hazard	Rankings
Dam/Levee Failure	Medium
Disease Outbreak	Low
Drought	Medium
Extreme Temperature	Medium
Flood	Low
Geologic Hazards	Medium
Hurricane/Tropical Storm	Medium
Severe Weather	High
Tornado	Medium
Wildfire	Low
Winter Weather	Low

Critical Facilities

The table below identifies the number of critical facilities and community lifelines in the community located in hazard areas. The community reviewed the list of facilities and lifelines to determine appropriate mitigation measures for the facilities, where appropriate. Refer to Section 4.3 (Hazard Profiles) for details on the risk assessment and the facilities and lifelines exposed to each hazard of concern.



Table 9-15. Potential Flood Losses to Critical Facilities

Jurisdiction	1-Percent Annual Chance Flood Event Hazard Area		Wildfire Hazard Area – Moderate Risk		Inland Erosion (K-Factor: ≥ 0.49) Hazard Area		Expansive Soils (Linear Extensibility $>6\%$) Hazard Area		Dam Inundation Hazard Area - Barker Reservoir Dam Inundation Area		Dam Inundation Hazard Area - Lake Somerville Dam Inundation Area		Dam Inundation Hazard Area - Kitty Hollow Dam Inundation Area	
	Critical Facilities	Lifelines	Critical Facilities	Lifelines	Critical Facilities	Lifelines	Critical Facilities	Lifelines	Critical Facilities	Lifelines	Critical Facilities	Lifelines	Critical Facilities	Lifelines
Needville (C)	1	1	0	0	39	31	2	2	0	0	0	0	0	0

Source: Fort Bend County; Hazus v5.1; FEMA 2022; Fort Bend Drainage District 2023



Identified Issues

After review of the City of Needville's hazard event history, hazard rankings, jurisdiction specific vulnerabilities, hazard area extent and location, and current capabilities, the City of Needville identified the following vulnerabilities within their community:

- The City has an aged maintenance barn that is not designed to meet current standards and cannot withstand high winds from severe weather and tornadoes.
- The City does not currently have a map documenting their wildfire hazard area.
- The high-risk and socially vulnerable populations are underrepresented in City plans, which puts them at a greater risk than the rest of the population.
- The City has limited plans and resources to address the risk posed by winter weather and extreme cold.
- The City is at risk for wildfire risk due to property owners not fully understanding what causes wildfires.
- The City has numerous at-risk public structures that need upgrades in order to withstand the hazards of concern.
- The Police Department Office and wastewater treatment plant are susceptible to damages from the hazards of concern.
- The City does not have an alert system in place to alert the public of incoming hazard events which limits the time that the residents have to react.
- The City does not have an evacuation plan developed in the event an evacuation is needed.
- City Hall cannot perform continuity of operations during power/utility outages because it does not have backup power.
- The Cities critical facilities are at risk from extreme hazard events that may damage windows and prevent continuity of operations.
- There are residents of the City that are unaware of hazard preparation and mitigation due to lack of informative material.
- The City has two repetitive loss and severe repetitive loss properties. Many of these structures were built without flood design standards. These properties require mitigation to prevent future losses and prevent loss of life and property damage.
- The City does not have a Substantial Damage Management Plan in place, nor do they have a formal process in place when conducting substantial damage determinations. The City is in need of a formal process and plan to provide a framework for conducting such inspections and determinations.

**This issue was identified as a specific area of concern based on resident response to the Fort Bend County Hazard Mitigation public survey.*

9.9.7 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and prioritizes actions to address over the next five years.

Past Mitigation Initiative Status

The following table indicates progress on the community's mitigation strategy identified in the 2018 HMP. Actions that are in progress are carried forward and combined with new actions as part of this plan update and



are included in the tables with prioritization. Previous actions that are now ongoing programs and capabilities are indicated as such and previously presented in the Capability Assessment earlier in this annex.



Table 9-16. Status of Previous Mitigation Actions

Project	Responsible Party	What is the status? (e.g., In Progress, No Progress, Ongoing Capability, or Completed) If in progress or completed, please describe the funding source, cost and who is implementing.	If you did not complete the action, should the action be included in the 2023 HMP (i.e., there is still a need, this is still a priority)?		
			Yes/No	If Yes, please describe the original problem (i.e., hazard, location, historic losses)	If Yes, identify the responsible department/person to implement the project.
Replace existing culverts with larger culverts for better drainage along Charity and Richmond Streets.	FBC Engineer, FBC Road and Sewer, City of Needville	Complete	No	-	-
Install culverts at Gene and Church Street.	FBC Engineer, FBC Road and Sewer, City of Needville	No Progress	No	-	-
Reinforcement of critical facilities to withstand high winds from severe weather and geological hazards (Hurricanes, Tornadoes, High Winds) – specifically the fire station.	Needville City Hall	No Progress	No	-	-
Reinforce the Needville City maintenance barn to withstand high winds from severe weather and tornadoes.	Needville City Hall	In Progress	Yes	Aged facilities not designed to meet current standards.	Public Works
Install a 50-kilowatt (kW) generator for the Public Safety buildings to include Police, Fire, EMS and Emergency Management.	Needville City Hall	No Progress	No	-	-
Promote the purchase of flood insurance. Advertise the availability, cost, and coverage of flood insurance through the NFIP.	Needville City Hall	No Progress	No	-	-
Conduct study to determine and map potential wildfire hazard areas.	City of Needville Fire Dept.	Ongoing	Yes	-	-
Increase public awareness of hazards, hazardous areas and mitigation techniques. Distribute public awareness information regarding flood hazards, SFHA's, and potential mitigation measures using the local newspaper, utility bill inserts, inserts in the phone book, a City hazard awareness website, and an educational program for school-age children or "how to" classes in retrofitting by local merchants.	Needville City Hall	No Progress	No	-	-
In cooperation with County and State officials, ensure that high-risk populations are	Needville City Hall	Ongoing	Yes	-	-



Project	Responsible Party	What is the status? (e.g., In Progress, No Progress, Ongoing Capability, or Completed) If in progress or completed, please describe the funding source, cost and who is implementing.	If you did not complete the action, should the action be included in the 2023 HMP (i.e., there is still a need, this is still a priority)?		
			Yes/No	If Yes, please describe the original problem (i.e., hazard, location, historic losses)	If Yes, identify the responsible department/person to implement the project.
adequately addressed in response plans that are related to excessive heat risks.					
Review plans and resources to address risk posed by snow and ice hazard during winter storms.	Needville City Hall	Ongoing	Yes	-	-
On a case-by-case basis, develop and initiate mitigation actions to reduce wildfire and brushfire risk. Actions may include informing property owners of appropriate actions, clearing vegetation and wildfire fuels, and monitoring antecedent conditions, among others.	City of Needville Fire Dept.	Ongoing	Yes	-	-
Initiate upgrades to at-risk public structures and public higher standards for new structures.	City of Needville Inspections Dept.	No Progress	Yes	-	-
Complete a detailed structural/engineering survey of Needville public facilities to ensure their soundness with respect to resisting the effects of high winds, extreme roof loading from snow or ice, and hail. Forms basis of decisions about any additional actions to mitigate risk. Geological hazard consideration made for new facility locations.	City of Needville Engineer	No Progress	No	-	-
Upgrading the Police Department office to help mitigate the risk of lightning, windstorms, tornadoes, or hurricanes/ tropical storms. Mitigate expansive soil impacts on building foundation. Consider xeriscaping options for landscaping.	Needville City Hall	Ongoing	Yes	-	-
Upgrading the wastewater treatment plant to help mitigate the risk of lightning, tornadoes, floods, or hurricanes/tropical storms.	Needville City Hal	Ongoing	Yes	-	-
Upgrading the street department gradall to help mitigate the risk of tornadoes, floods, or hurricanes/tropical storms	Needville Inspections Dept/	Complete	No	-	-

**Additional Mitigation Efforts**

In addition to the mitigation initiatives completed in the table above, the City of Needville identified the following mitigation efforts completed since the last HMP:

- None identified

Since the adoption of the County's first HMP, the City of Needville has made significant mitigation progress in the following areas:

- None identified

Proposed Hazard Mitigation Initiatives for the HMP Update

Fort Bend County participated in a mitigation action workshop in March 2023 and was provided the following FEMA publications to use as a resource as part of their comprehensive review of all possible activities and mitigation measures to address their hazards: FEMA Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards (January 2013) and FEMA Mitigation Assistance Resource Guide for Texas (2020).

The table below indicates the range of proposed mitigation action categories. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table to further demonstrate the wide range of activities and mitigation measures selected.

Table 9-17. Analysis of Mitigation Actions by Hazard and Category

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Dam/Levee Failure	X	X	-	X	X	X	X	-	X	X
Disease Outbreak	X	-	-	X	-	X	X	-	-	X
Drought	X	X	-	X	X	X	X	-	X	X
Extreme Temperature	X	X	-	X	X	X	X	-	X	X
Flood	X	X	-	X	X	X	X	-	X	X
Geologic Hazards	X	X	-	X	X	X	X	-	X	X
Hurricane/Tropical Storm	X	X	-	X	X	X	X	-	X	X
Severe Weather	X	X	-	X	X	X	X	-	X	X
Tornado	X	X	-	X	X	X	X	-	X	X
Wildfire	X	X	-	X	X	X	X	-	X	X
Winter Weather	X	X	-	X	X	X	X	-	X	X

Note: Mitigation categories are described below the Mitigation Initiatives.



The table below summarizes the specific mitigation initiatives the City of Needville would like to pursue in the future to reduce the effects of hazards. The initiatives are dependent upon available funding (grants and local match availability) and may be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities.

Table 9-18. Proposed Hazard Mitigation Initiatives

Project Number	Mitigation Initiative Name	Description of Problem and Solution	Hazard(s) to be Mitigated	Goals Met	Estimated Timeline	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Priority	Mitigation Category	CRS Category
2023-City of Needville-001	Reinforce the Needville City maintenance barn	Problem: The City has an aged maintenance barn that is not designed to meet current standards and cannot withstand high winds from severe weather and tornadoes. Solution: The City will conduct a study to determine how to best reinforce the building and will implement it.	Hurricane/Tropical Storm, Severe Weather, Tornado	2	2 Years	Public Works	BRIC, HMGP, City Budget	The maintenance barn will be better able to withstand high wind events.	>\$100,000	High	SIP	PP, SP
2023-City of Needville-002	Conduct study to determine and map potential wildfire hazard areas.	Problem: The City does not currently have a map documenting their wildfire hazard area. Solution: The City will conduct a study to determine the wildfire hazard area and will map it for reference.	Wildfire	2, 4	1 Year	Public Works, Fire Department	BRIC, HMGP, City Budget	The City will be able to reference a fire hazard map when looking at building something.	\$50,000	High	EAP	PR, PP
2023-City of Needville-003	In cooperation with County and State officials, ensure that high-risk and socially vulnerable populations are adequately addressed in plans	Problem: The high-risk and socially vulnerable populations are underrepresented in City plans which puts them at a greater risk than the rest of the population. Solution: The City will ensure that all plans adequately address the high-risk and socially vulnerable populations and will integrate the current HMP into all plans, including listing medical and emergency equipment that may be needed in a hazard emergency.	Dam/Levee Failure, Disease Outbreak, Drought, Extreme Temperature, Flood, Geologic Hazards, Hurricane/Tropical Storm, Severe Weather, Tornado, Wildfire, Winter Weather	1, 2	1 Year	Public Works	HMGP, City Budget	The high-risk and socially vulnerable populations will be better protected from hazards of concern.	\$5,000	High	LPR	ES
2023-City of Needville-004	Review Plans and Resources to Address Risk	Problem: The City has limited plans and resources to address the risk posed by winter weather and extreme cold.	Extreme Temperature, Winter Weather	1, 2	1 Year	Public Works	HMGP, City Budget	Extreme Cold and Winter Weather will be adequately	\$1,000	High	LMP	ES



Project Number	Mitigation Initiative Name	Description of Problem and Solution	Hazard(s) to be Mitigated	Goals Met	Estimated Timeline	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Priority	Mitigation Category	CRS Category
	Posed by Snow and Ice Hazard During Winter Storms	Solution: The City will review plans and resources and update them to address the risk posed by extreme cold and winter weather.						addressed in the City's plans and resources.				
2023-City of Needville-005	Develop and initiate mitigation actions to reduce wildfire and brushfire risk.	Problem: The City is at risk for wildfire risk due to property owners not fully understanding what causes wildfires. Solution: The City will develop and initiate mitigation actions to reduce wildfire risk and educate property owners on appropriate actions to take to lessen the risk.	Wildfire	2, 3	6 months	Public Works	HMGP, City Budget	The City's population will be less at risk for the wildfire hazard.	\$1,000	High	EAP	PP, PI
2023-City of Needville-006	Initiate Upgrades to at-risk Public Structures	Problem: The City has numerous at-risk public structures that need upgrades in order to withstand the hazards of concern. Solution: The City will inventory at-risk structures and conduct engineering studies for each building before implementing strategies to upgrade these structures and limit risk.	Dam/Levee Failure, Drought, Extreme Temperature, Flood, Geologic Hazards, Hurricane/Tropical Storm, Severe Weather, Tornado, Wildfire, Winter Weather	2, 3	4 Years	Public Works, Building Department	BRIC, HMGP, FMA, City Budget	The at-risk buildings will become safer and less at risk from the hazards of concern.	>\$500,000	High	SIP	SP, PP, PR
2023-City of Needville-007	Upgrading the Police Department office and wastewater treatment plant	Problem: The Police Department Office and wastewater treatment plant are susceptible to damages from the hazards of concern. Solution: The City will conduct a study to evaluate how to best upgrade the Police Department Office and wastewater treatment plant and will implement those strategies.	Dam/Levee Failure, Drought, Extreme Temperature, Flood, Geologic Hazards, Hurricane/Tropical Storm, Severe Weather, Tornado, Wildfire, Winter Weather	2, 3, 5	Less than 5 Years	Public Works, Police Department	BRIC, HMGP, FMA, City Budget	The Police Department Office building will be able to withstand the hazards of concern better than the current office.	>\$500,000	High	SIP	SP, PP



Project Number	Mitigation Initiative Name	Description of Problem and Solution	Hazard(s) to be Mitigated	Goals Met	Estimated Timeline	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Priority	Mitigation Category	CRS Category
2023-City of Needville-008	Public Alert/Warning System	Problem: The City does not have an alert system in place to alert the public of incoming hazard events which limits the time that the residents have to react. Solution: The City will obtain funding and install a warning system that covers the entire City and operates using outdoor sirens and notifications on cell phones so that residents have ample time to prepare for a hazard event.	Dam/Levee Failure, Disease Outbreak, Drought, Extreme Temperature, Flood, Geologic Hazards, Hurricane/Tropical Storm, Severe Weather, Tornado, Wildfire, Winter Weather	1	Less than 5 Years	Public Works, County, Fire Department	BRIC, FMA, HMGP, City Budget	City residents will have a greater warning time period to prepare for incoming hazard events.	>\$100,000	High	EAP	ES
2023-City of Needville-009	Develop an Evacuation Plan	Problem: The City does not have an evacuation plan developed in the event an evacuation is needed. Solution: The City will develop an evacuation plan that takes into account the at-risk population.	Dam/Levee Failure, Disease Outbreak, Drought, Extreme Temperature, Flood, Geologic Hazards, Hurricane/Tropical Storm, Severe Weather, Tornado, Wildfire, Winter Weather	1, 2	1 Year	Public Works	HMGP, City Budget	The City will have an evacuation plan prepared which will make evacuating a more time efficient process.	\$5,000	High	LPR	ES
2023-City of Needville-010	Generator for City Hall	Problem: City Hall cannot perform continuity of operations during power/utility outages because it does not have backup power. Solution: The City will conduct a generator study and will purchase and install the correct sized generator to keep City Hall functioning during hazard events.	Dam/Levee Failure, Drought, Extreme Temperature, Flood, Geologic Hazards, Hurricane/Tropical Storm, Severe Weather, Tornado, Wildfire,	2	Less than 5 Years	Public Works	HMGP, BRIC, City Budget	City Hall will be able to perform continuity of operations during outages.	\$100,000	High	SIP	ES



Project Number	Mitigation Initiative Name	Description of Problem and Solution	Hazard(s) to be Mitigated	Goals Met	Estimated Timeline	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Priority	Mitigation Category	CRS Category
			Winter Weather									
2023-City of Needville-011	Firewise Storm Shutters on Critical Facilities	<p>Problem: The Cities critical facilities are at risk from extreme hazard events that may damage windows and prevent continuity of operations.</p> <p>Solution: The City will inventory what facilities need Firewise Storm Shutters to ensure continuity of operations.</p>	Hurricane/Tropical Storm, Severe Weather, Tornado, Wildfire, Winter Weather	2	Less than 5 years	Public Works	HMGP, BRIC, City Budget	The City's critical facilities will be able to operate more safely during extreme hazard events.	>\$100,000	High	SIP	ES, PP
2023-City of Needville-012	Public Outreach	<p>Problem: There are residents of the City that are unaware of hazard preparation and mitigation due to lack of informative material.</p> <p>Solution: The City will add a webpage to their website that details proper hazard mitigation and preparation. This will include actions that property owners can take in order to protect their properties better.</p>	Dam/Levee Failure, Disease Outbreak, Drought, Extreme Temperature, Flood, Geologic Hazards, Hurricane/Tropical Storm, Severe Weather, Tornado, Wildfire, Winter Weather	1	1 Year	Public Works	HMGP, City Budget	The City's residents will become more aware of hazard preparation and mitigation.	\$500	High	EAP	PI, PP
2023-City of Needville-013	Repetitive Loss Mitigation	<p>Problem: The City has two repetitive loss and severe repetitive loss properties. Many of these structures were built without flood design standards. These properties require mitigation to prevent future losses and prevent loss of life and property damage.</p> <p>Solution: The City will conduct outreach to the RL/SRL property owners and provide information on mitigation alternatives. After preferred mitigation measures are identified, collect required property-owner information and develop a FEMA grant application and BCA to obtain funding to implement acquisition/purchase/moving/elevating</p>	Flood, Hurricane/Tropical Storm, Severe Weather, Winter Weather	2, 3	Less than 5 Years	NFIP Floodplain Administrator, supported by homeowners	HMGP and FMA, BRIC, local cost share by residents	Eliminates flood damage to homes and residents.	>\$500,000	High	SIP	SP



Project Number	Mitigation Initiative Name	Description of Problem and Solution	Hazard(s) to be Mitigated	Goals Met	Estimated Timeline	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Priority	Mitigation Category	CRS Category
		residential homes in the flood prone areas that experience frequent flooding (high-risk areas).										
2023-City of Needville-014	Substantial Damage Management Plan	<p>Problem: The City does not have a Substantial Damage Management Plan in place, nor do they have a formal process in place when conducting substantial damage determinations. The City is in need of a formal process and plan to provide a framework for conducting such inspections and determinations.</p> <p>Solution: The City will develop a Substantial Damage Management Plan, following the six-step planning process in 2021 Developing a Substantial Damage Management Plan (https://crsresources.org/files/500/developing_subst_damage_mgmt_plan.pdf). This plan will outline responsibilities for Substantial Damage determinations, determining market value, and permit approval processes following a disaster event.</p>	Dam/Levee Failure, Drought, Extreme Temperature, Flood, Geologic Hazards, Hurricane/Tropical Storm, Severe Weather, Tornado, Wildfire, Winter Weather	2, 4	Within 5 years to develop the plan; ongoing to maintain and update the plan	Floodplain Administrator, Public Works, OEM, Construction Department	City Budget	This plan will provide a process in making Substantial Damage Determinations and allow the municipality to make these determinations and meet NFIP requirements more quickly.	< \$5,000	High	LPR	ES, PR

*Mitigation initiative is related to a critical facility and/or community lifeline

Notes: Not all acronyms and abbreviations defined below are included in the table.

Acronyms and Abbreviations:

CRS Community Rating System

FEMA Federal Emergency Management

Agency

HMA Hazard Mitigation Assistance

N/A Not applicable

NFIP National Flood Insurance Program

Potential FEMA HMA Funding Sources:

FMA Flood Mitigation Assistance Grant Program

HMGP Hazard Mitigation Grant Program

BRIC Building Resilient Infrastructure and Communities Program

Timeline:

The time required for completion of the project upon implementation.

Cost:

The estimated cost for implementation.

Benefits:

A description of the estimated benefits, either quantitative and/or qualitative.

Mitigation Category:

- Local Plans and Regulations (LPR)—These actions include government authorities, policies or codes that influence the way land and buildings are being developed and built.
- Structure and Infrastructure Project (SIP)—These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures, as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.
- Natural Systems Protection (NSP)—These are actions that minimize damage and losses, and also preserve or restore the functions of natural systems.
- Education and Awareness Programs (EAP)—These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady and Firewise Communities.

**CRS Category:**

- **Preventative Measures (PR)**—Government, administrative or regulatory actions, or processes that influence the way land and buildings are developed and built. Examples include planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations.
- **Property Protection (PP)**—These actions include public activities to reduce hazard losses or actions that involve (1) modification of existing buildings or structures to protect them from a hazard or (2) removal of the structures from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.
- **Public Information (PI)**—Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and educational programs for school-age children and adults.
- **Natural Resource Protection (NR)**—Actions that minimize hazard loss and also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
- **Structural Flood Control Projects (SP)**—Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, setback levees, floodwalls, retaining walls, and safe rooms.
- **Emergency Services (ES)**—Actions that protect people and property during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities.

The prioritization criteria provided in Volume 1, Section 6 (Mitigation Strategy) identify 14 evaluation/prioritization criteria to complete the prioritization of mitigation initiatives. For each new mitigation action, a numeric rank is assigned (-1, 0, or 1) for each of the 14 evaluation criteria to assist with prioritizing actions as High, Medium, or Low. The table below provides a summary of the prioritization of all proposed mitigation initiatives for the HMP update.

Table 9-19. Summary of Prioritization of Actions

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2023-City of Needville-001	Reinforce the Needville City maintenance barn	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
2023-City of Needville-002	Conduct study to determine and map potential wildfire hazard areas	1	1	1	1	1	1	1	1	1	1	0	1	1	0	12	High
2023-City of Needville-003	In cooperation with County and State officials, ensure that high-risk and socially vulnerable populations are adequately addressed in plans	1	0	1	1	1	1	1	1	1	1	1	1	1	1	13	High



Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2023-City of Needville-004	Review Plans and Resources to Address Risk Posed by Snow and Ice Hazard During Winter Storms	1	1	1	1	1	1	1	1	1	1	1	1	1	0	13	High
2023-City of Needville-005	Develop and initiate mitigation actions to reduce wildfire and brushfire risk	1	1	1	1	1	1	1	1	1	1	0	1	1	0	12	High
2023-City of Needville-006	Initiate Upgrades to at-risk Public Structures	1	1	1	1	1	1	1	1	1	1	1	1	1	0	13	High
2023-City of Needville-007	Upgrading the Police Department office and wastewater treatment plant	1	1	1	1	1	1	0	0	1	1	1	1	1	1	12	High
2023-City of Needville-008	Public Alert/Warning System	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
2023-City of Needville-009	Develop an Evacuation Plan	1	0	1	1	1	1	1	1	1	1	1	1	1	0	12	High
2023-City of Needville-010	Generator for City Hall	1	1	1	1	1	1	0	0	1	1	1	1	1	1	12	High
2023-City of Needville-011	Firewise Storm Shutters on Critical Facilities	1	1	1	1	1	1	0	0	1	1	1	1	1	0	11	High
2023-City of Needville-012	Public Outreach	1	1	1	1	1	1	1	0	1	1	1	1	1	0	12	High
2023-City of Needville-013	Repetitive Loss Mitigation	1	1	1	1	1	1	0	1	0	0	1	0	1	1	10	High
2023-City of Needville-014	Substantial Damage Management Plan	0	1	1	1	1	1	1	0	1	1	1	1	0	0	10	High

Note: Volume 1, Section 6 (Mitigation Strategy) conveys guidance on prioritizing mitigation actions. Low (0-4), Medium (5-8), High (9-14).