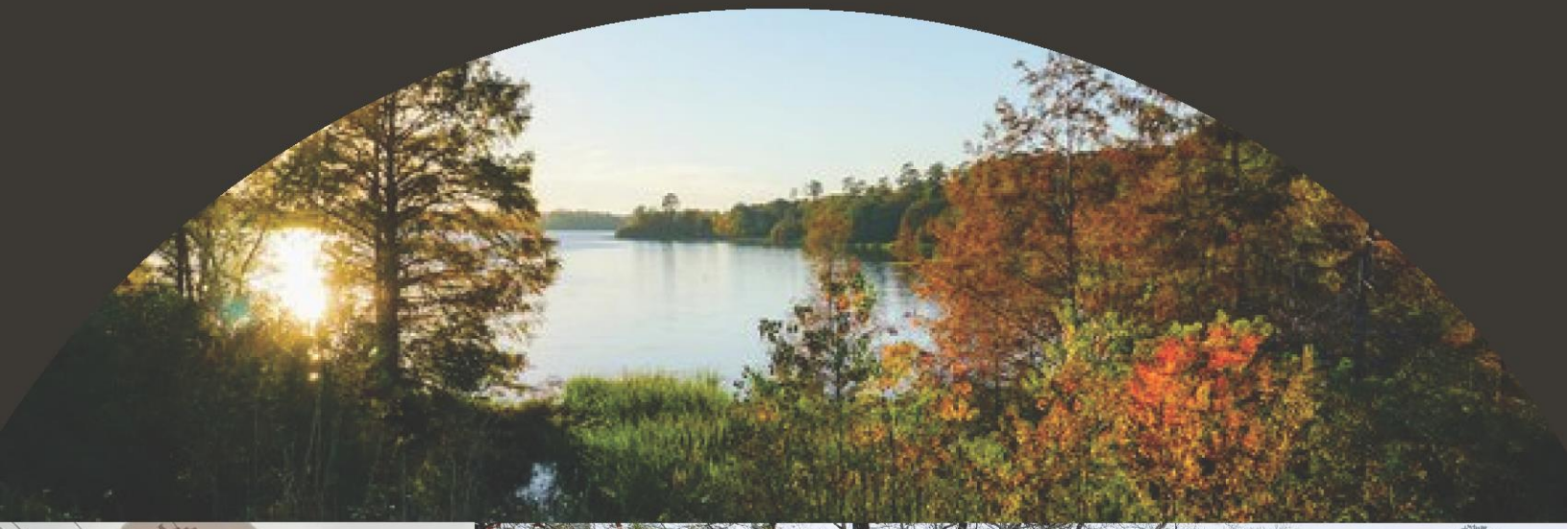
2021 WEBSTER PARISH MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

UNINCORPORATED WEBSTER PARISH, COTTON VALLEY, CULLEN, DIXIE INN, DOYLINE, DUBBERLY, HEFLIN, MINDEN, SAREPTA, SHONGALOO, SIBLEY, SPRINGHILL



WEBSTER PARISH
MULTI-JURISDICTIONAL
HAZARD MITIGATION PLAN UPDATE

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Webster Parish

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Webster Parish
Town of Cotton Valley
Town of Cullen
Village of Dixie Inn
Village of Doyline
Village of Dubberly
Village of Heflin
City of Minden
Town of Sarepta
Village of Shongaloo
Town of Sibley
City of Springhill

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1. Introduction

Hazard Mitigation is defined as sustained actions taken to reduce or eliminate long-term risk from hazards and their effects. Hazard Mitigation Planning is the process through which natural hazards that threaten communities are identified, likely impacts of those hazards are determined, mitigation goals are set, and appropriate strategies that would lessen the impacts are determined, prioritized, and implemented.

In that regard, this plan (a) documents the Webster Parish Hazard Mitigation Plan Update (HMPU) process; (b) identifies natural hazards and risks within the parish; and (c) identifies the parish's hazard mitigation strategy to make Webster Parish and its jurisdictions less vulnerable and more disaster resilient. It also includes mitigation project scoping to further identify scopes of work, funding sources, and implementation timing requirements of proposed selected mitigation projects. Information in the plan will be used to help guide and coordinate mitigation and local policy decisions affecting future land use.

The Webster Parish Hazard Mitigation Plan is a multi-jurisdictional plan that includes the following jurisdictions which participated in the planning process:

- Unincorporated Webster Parish
- Town of Cotton Valley
- Town of Cullen
- Village of Dixie Inn
- Village of Doyline
- Village of Dubberly
- Village of Heflin
- City of Minden
- Town of Sarepta
- Village of Shongaloo
- Town of Sibley
- City of Springhill

The Federal Emergency Management Agency (FEMA), now under the Department of Homeland Security, has made reducing losses from natural disasters one of its primary goals. The Hazard Mitigation Plan (HMP) and subsequent implementation of recommended projects, measures, and policies is the primary means to achieving these goals. Mitigation planning and project implementation has become even more significant in a post-Katrina/Rita, Gustav/Ike, and Laura/Delta environment in Louisiana.

This Hazard Mitigation Plan is a comprehensive plan for disaster resiliency in Webster Parish. The parish is subject to natural hazards that threaten life and health and have caused extensive property damage. To better understand these hazards and their impacts on people and property, and to identify ways to reduce those impacts, the parish's Office of Homeland Security and Emergency Preparedness undertook this Natural Hazards Mitigation Plan. "Hazard mitigation" does not mean that all hazards are stopped or prevented. It does not suggest complete elimination of the damage or disruption caused by such incidents. Natural forces are powerful and most natural hazards are well beyond our ability to control. Mitigation does not mean quick fixes. It is a long-term approach to reduce hazard vulnerability. As defined by FEMA, "hazard mitigation" means any sustained action taken to reduce or eliminate the long-term risk to life and property from a hazard event.

Every community faces different hazards, and every community has different resources and interests to bring to bear on its problems. Because there are many ways to deal with natural hazards and many agencies that can help, there is no one solution for managing or mitigating their effects. Planning is one of the best ways to correct these shortcomings and produce a program of activities that will best mitigate the impact of local hazards and meet other local needs. A well-prepared plan will ensure that all possible activities are reviewed and implemented so that the problem is addressed by the most appropriate and efficient solutions. It can also ensure that activities are coordinated with each other and with other goals and programs, preventing conflicts and reducing the costs of implementing each individual activity.

Under the Disaster Mitigation Act of 2000 (42 USC 5165), a mitigation plan is a requirement for Federal mitigation funds. Therefore, a mitigation plan will both guide the best use of mitigation funding and meet the prerequisite for obtaining such funds from FEMA. FEMA also recognizes plans through its Community Rating System (CRS), a program that reduces flood insurance premiums in participating communities. This program is further described in Section Three: Capability Assessment.

This plan identifies activities that can be undertaken by both the public and the private sectors to reduce safety hazards, health hazards, and property damage caused by natural hazards. It fulfills the Federal mitigation planning requirements, qualifies for CRS credit, and provides Webster Parish and its communities with a blueprint for reducing the impacts of these natural hazards on people and property.

Geography, Population and Economy

Geography

Webster Parish is located in northwest Louisiana, approximately 17 miles east of Shreveport (*Figure 1-1*). The planning area covers approximately 615 square miles including roughly 20 square miles of water area. Webster Parish is bounded by Lafayette County, Arkansas to the northwest, Columbia County, Arkansas to the north, Claiborne Parish to the east, Bienville Parish to the southeast and south, and Bossier Parish to the southwest and west. The City of Minden is the Parish seat.

Figure 1-1: Location of Webster Parish in the State of Louisiana

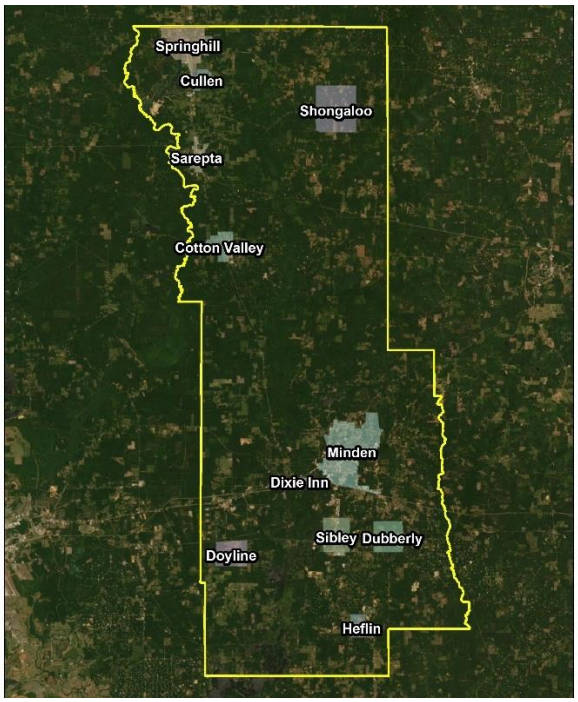

Figure 1-2: Incorporated Jurisdictions within Webster Parish

The topography of Webster Parish consists of wooded areas, rolling hills, and open farmland. Some of the land around Minden and Springhill is urban or suburban. Dorcheat Bayou flows north-south through the middle of the parish, ultimately leading to Lake Bistineau. It is complemented by other bayous and lakes including Bodcau, Bayou, Lake Murray, and Caney Lake.

Webster Parish weather is typically warm and humid. Variations in daily temperature within the state are determined by distance from the Gulf of Mexico and, to a much lesser degree, by differences in elevation. The average annual temperature for the state as a whole is 68ºF. January is typically the coldest month for Louisiana, averaging approximately 54ºF, while July is typically the warmest at an average of 83ºF. Winter months are usually mild with cold spells of short duration. For Webster Parish in particular, the summer months are usually quite warm, with an average daily maximum temperature in July and August of 93°F. Winters are typically mild. Snowfall averages less than one inch per year. Average annual rainfall for the area is approximately 54 inches.

Webster Parish is located in Louisiana Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP) Region 7 (*Figure 1-3*).

As noted above, Webster Parish is located in the northwestern region of Louisiana.

Figure 1-3: Louisiana Homeland Security Regions

Population

The population of Webster Parish is estimated at 36,967 (2020 Census) with a population percent change from April 1, 2010 – April 1, 2020 of -11.47%.

Table 1-1: Webster Parish Population
(Source: US Census)

	2010 Census	2014 Estimate	2020 Census	Percent Change 2010 - 2020
Total Population	41,207	40,333	36,967	-11.47%
Population Density (Pop/Sq. Mi.)	69.5	-------	-------	-------
Total Households	19,336	19,428	16,551	-16.83%
Persons Per Household	-------	-------	2.31	-------

Economy

A hard-working labor force, abundant raw materials, location near a corridor of significant industrial activity, and land for commercial and industrial development make Webster Parish an ideal prospect for business investment. Major industrial products manufactured include paper and paper products, oil, gas, butane, timber, timber products, farm implements, dump trailer, plywood board and extensive gravel and road contracting businesses.

Tourism and recreation also play a role in the economy of Webster Parish. Part of the "Sportsman's Paradise" region of Louisiana, Webster Parish boasts superb hunting and fishing in beautiful Lake Bistineau, Caney Lakes and Kisatchie Forest. Just north of Minden, the Germantown Colony and Museum showcases German settlers who established a commune beginning in the mid-1800's in a quest to avoid religious persecution.

Industry data for business patterns in Webster Parish can be found in the table on the next page.

Table 1-2: Webster Parish Business Patterns
(Source: US Census, CBP)

Business Description	Number of Establishments	Number of Employees	Annual Payroll ($1,000)
Retail Trade	154	1,784	46,938
Manufacturing	28	1,336	83,534
Health Care and Social Assistance	94	2,349	82,049
Mining, Quarrying, Oil and Gas Extraction	28	451	35,512
Transportation and Warehousing	29	360	20,932
Construction	51	999	58,969
Administration/Support and Waste Management/Remediation Services	32	185	5,679
Real Estate and Rental and Leasing	24	119	6,157
Wholesale Trade	21	322	14,297
Other Services (except Public Administration)	92	460	11,254
Accommodation and Food Services	61	857	11,559
Financial and Insurance	64	321	13,080
Professional, Scientific, and Technical Services	42	162	6,047
Information	11	53	2,749
Arts, Entertainment, and Recreation	9	89	627
Agriculture, Forestry, Fishing and Hunting	10	45	1,691
Utilities	7	17	1,459
Management of Companies and Enterprises	4	81	3,891

Hazard Mitigation

To fully understand hazard mitigation efforts in Webster Parish and throughout Louisiana, it is first crucial to understand how hazard mitigation relates to the broader concept of emergency management. In the early 1980s, the newly-created Federal Emergency Management Agency (FEMA) was charged with developing a structure for how the federal, state, and local governments would respond to disasters. FEMA developed the *four phases of emergency management*, an approach which can be applied to all disasters. The four phases are as follows:

- **Hazard Mitigation**—described by FEMA and the Disaster Mitigation Act of 2000 (DMA 2000) as "any sustained action taken to reduce or eliminate long-term risk to life and property from a hazard event." The goal of mitigation is to save lives and reduce property damage. Besides significantly aiding in the obviously desirous goal of saving human lives, mitigation can reduce the enormous cost of disasters to property owners and all levels of government. In addition, mitigation can protect critical community facilities and minimize community disruption, helping communities return to usual daily living in the aftermath of disaster. Examples of mitigation involve a range of activities and actions including the following: land-use planning, adoption and enforcement of building codes, and construction projects (e.g., flood proofing homes through elevation, or acquisition or relocation away from floodplains).

- **Emergency Preparedness**—includes plans and preparations made to save lives and property and to facilitate response operations in advance of a disaster event.

- **Disaster Response**—includes actions taken to provide emergency assistance, save lives, minimize property damage, and speed recovery immediately following a disaster.
- **Disaster Recovery**—includes actions taken to return to a normal or improved operating condition following a disaster.

Figure 1-4 illustrates the basic relationship between these phases of emergency management. While hazard mitigation may occur both before and after a disaster event, it is significantly more effective when implemented before an event occurs. This is one of the key elements of this plan and its overall strategy*:* reduce risk before disaster strikes in order to minimize the need for post-disaster response and recovery.

As *Figure 1-4* demonstrates, mitigation relies on updating in the wake of disaster. This can give the appearance that mitigation is only reactive rather than proactive. In reality, post-disaster revision is a vital component of improving mitigation. Each hazardous event affords an opportunity to reduce the consequences of future occurrences.

Unfortunately, this cycle can be painful for a community. For instance, the risks of disasters that could create catastrophic incidents in Louisiana were thought to be relatively well-understood prior to 2005. However, the impact of the 2005 hurricane season on the Gulf Coast region of the United States prompted a new level of planning and engagement related to disaster response, recovery, and hazard mitigation. Hurricanes Katrina and Rita hit three weeks apart and together caused astonishing damage to human life and to property. The two storms highlighted a hurricane season that spawned 28 storms—unparalleled in American history. The 2005 hurricane season confirmed Louisiana's extreme exposure to natural disasters and both the positive effects and the concerns resulting from engineered flood-protection solutions. More recently, the historically impactful 2020 hurricane season reinforced the need for proper planning and mitigation strategies.

Figure 1-4: The Four Phases of Emergency Management and their Relation to Future Hazard Mitigation (Source: Louisiana State Hazard Mitigation Plan 2014)

The catastrophic tropical events of 2005 and 2020, coupled with the unprecedented flooding events of 2016 have had profound impacts on emergency management and hazard mitigation throughout Louisiana. As detailed later in this document, significant funding has been made available to the State of Louisiana and its parishes for the purpose of hazard mitigation planning. The storms also raised awareness of the importance of hazard mitigation among decision-makers and the general population, which has been particularly important since natural hazards will likely be increasing in frequency, magnitude, and impact in the coming years due to climate change.

General Strategy

During the last update to the Louisiana State Hazard Mitigation Plan, the State Hazard Mitigation Team (SHMT) began a long-term effort to better integrate key components of all plans with hazard mitigation implications in Louisiana to ensure that the programs, policies, recommendations, and implementation strategies are internally consistent. As each of these documents has been adopted by various agencies within the state, the SHMT has worked to incorporate this information into the decision process.

Part of the ongoing integration process is that the Louisiana Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP) encourages the parishes and the local communities with independent hazard mitigation plans to utilize the same plan format and methodologies as the State Hazard Mitigation Plan in order to create continuity of information from local to state mitigation plans and programs.

The 2021 Webster Parish Hazard Mitigation Plan (HMP) maintains much of the information from the 2016 plan version, but it now incorporates the order and methodologies of the 2019 Louisiana State Hazard Mitigation Plan.

The sections in the 2016 Webster Parish HMP were as follows:

- Section One Introduction
- Section Two Hazard Identification and Parish-Wide Risk Assessment
- Section Three Capability Assessment
- Section Four Mitigation Strategy
- Appendix A Planning Process
- Appendix B Plan Maintenance
- Appendix C Essential Facilities
- Appendix D Plan Adoption
- Appendix E State Required Worksheets

This plan update also coheres with the Plain Writing Act of 2010, which requires federal agencies to use clear communication that is accessible, consistent, understandable, and useful to the public. While the State of Louisiana and its political subdivisions are not required to meet such standards, the Act aligns with best practices in hazard mitigation. Since successful hazard mitigation relies on full implementation and cooperation at all levels of government and community, a successful hazard mitigation plan must also be easily used at all of these levels. Nevertheless, the Webster Parish Hazard Mitigation Steering Committee recognized the benefits from the successful analysis and mitigation planning executed in previous plan updates, as well as improvements to be made in the 2021 update. This plan update remains coherent with those documents, retaining language and content when needed, deleting it when appropriate, and augmenting it when constructive.

2021 Plan Update

This 2021 plan update proceeds with the previous goals of the Webster Parish Hazard Mitigation Plan. The current goals are as follows:

1. Reduce or prevent injury and loss of life

2. Reduce or prevent damage to property and material assets

3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control

4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources

5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways

6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.

This plan update makes a number of textual changes throughout, but the most obvious changes are data related and structural edits. First, the National Oceanic and Atmospheric Administration's (NOAA) National Centers for Environmental Information's (NCEI) Storm Events Database was used in the analysis, which provides historical hazard data from 1950 to 2020. The steering committee was also instrumental in providing detailed data where appropriate to more accurately reflect hazard impacts on the parish and jurisdictions. Furthermore, all of the sections were updated to reflect the most current information and the most current vision of the plan update. The most significant changes are the newly developed hazard profiles and risk assessments, as well as the removal of much repetition between sections from the previous plan updates.

The 2021 plan update is organized in the same format as the 2016 update, with one minor change to this 2021 update as outlined below:

- Section One Introduction
- Section Two Hazard Identification and Parish-Wide Risk Assessment
- Section Three Capability Assessment
- Section Four Mitigation Strategies
- Appendix A Planning Process
- Appendix B Plan Maintenance
- Appendix C Critical Facilities
- Appendix D Plan Adoption
- Appendix E State Required Worksheets

Table 1-3: 2021 Plan Update Crosswalk

Plan Update Crosswalk	
2016 Update	**2021 Update**
Section 1: Introduction	Section 1: Introduction
Section 2: Hazard Identification and Parish-Wide Risk Assessment	Section 2: Hazard Identification and Parish-Wide Risk Assessment
Section 3: Capability Assessment	Section 3: Capability Assessment
Section 4: Mitigation Strategy	Section 4: Mitigation Strategy
Appendix A: Planning Process	Appendix A: Planning Process
Appendix B: Plan Maintenance	Appendix B: Plan Maintenance
Appendix C: Essential Facilities	Appendix C: Critical Facilities
Appendix D: Plan Adoptions	Appendix D: Plan Adoptions
Appendix E: State Required Worksheets	Appendix E: State Required Worksheets

Despite numerous changes in this plan update, the plan remains consistent in its emphasis on the types of hazards that pose the most risk to loss of life, injury, and property in Webster Parish and its communities. The extent of this risk is dictated primarily by its geographic location. Most significantly, Webster Parish remains at high risk of water inundation from various sources, including riverine flooding. The entire parish is also at high risk of damages from high winds and wind-borne debris. The 2016 flooding events, along with the 2020 hurricane season were both felt heavily in Webster Parish. Other hazards threaten the parish and/or its communities, although not to such great degrees and not in such widespread ways. In all cases, the relative social vulnerability of areas threatened and affected plays a significant role in how governmental agencies and their partners (local, parish, state and federal) prepare for and respond to disasters.

Mitigation efforts related to particular hazards are highly individualized by jurisdiction. Flexibility in response and planning is essential. The most important step forward to improve hazard management capability is to improve coordination and information sharing between the various levels of government regarding hazards.

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2. Hazard Identification and Parish-Wide Risk Assessment

This section assesses the various hazard risks that Webster Parish faces in order to identify a strategy for mitigation. Having identified the categories of hazards, emergencies, disasters, and catastrophes, this section details the major climatological and natural/human-influenced hazards by (1) defining them, (2) explaining how they are measured, (3) describing their geographic extent, (4) surveying their previous occurrences, and (5) evaluating their future likelihood of occurrences.

The table below provides an overview of the hazards that had been previously profiled in the Webster Parish Hazard Mitigation Plan published in 2016, as well as the hazards that were identified in the state's 2019 Hazard Mitigation Plan that were of high or medium risk for the parish by the state. Those hazards identified as high or medium risk by the state or previously identified as a risk by the parish, have been determined to provide a risk to the parish and will be profiled in this section.

Table 2-1: Hazard Profile Summary.

Hazard	Profiled in Previous Plan	Considered Medium or High Risk in the State's HM Plan	Profiled in the 2021 Update
Drought	X		X
Earthquakes	*		
Extreme Heat	X		X
Flooding	X	X	X
Sinkholes	X		X
Thunderstorms (Hail, Lightning, & Wind)	X	X	X
Tornadoes	X	X	X
Tropical Cyclones	X	X	X
Wildfires	X		X
Winter Storms	X		X
Dam Failure	X		X
Levee Failure	*		

* Hazard was discounted in previous HMP Update

Prevalent Hazards to the Community

While many of the hazards identified in *Table 2-1* occur in the parish, their occurrence was not merited for further study by the planning committee. The determination was made to focus attention and resources on the most prevalent hazards, which include the hazards previously profiled. The following hazards have been selected to be included in this risk assessment:

a) Drought
b) Extreme Heat
c) Flooding
d) Sinkholes
e) Thunderstorms (Hail, Lightning, & Wind)
f) Tornadoes
g) Tropical Cyclones

h) Wildfires
i) Winter Storms
j) Dam Failure

For analysis purposes, the impact of the critical and prevalent hazards is summarized as follows:

- Flooding from rivers and waterways, rainstorms, tropical cyclones, and hurricanes in the following forms:
  a) Riverine
  b) Stormwater
  c) Surge
  d) Backwater flooding (as the result of river flooding and surge)
  e) Coastal
- High wind damage most commonly resulting from hurricanes, thunderstorms, and tornadoes
- Property damage resulting from all profiled natural hazards

The potential destructive power of tropical cyclones and floods were determined to be the most prevalent hazard to the parish. Fourteen of the twenty-two disaster declarations Webster Parish have received resulted from tropical cyclones (8) and flooding (6), which validates tropical cyclones and flooding as the most significant hazards. Therefore, the issues of hurricanes and flooding will serve as the main focus during the mitigation planning process. Hurricanes present risks from the potential for flooding, primarily resulting from storm surge, and high wind speeds. While storm surge is considered the hazard with the most destructive potential, the risk assessment will also assess non-storm surge flooding as well. Flooding can also occur from non-hurricane events, as flash floods are a common occurrence due to heavy rainfall.

Hurricanes, tropical storms, and heavy storms are common occurrences, and resultant wind damage is of utmost concern. Damage from high winds can include roof damage, destruction of homes and commercial buildings, downed trees and power lines, and damage and disruption to services caused by heavy debris. A wind map for Webster Parish is included in the hurricane risk assessment.

Webster Parish is also susceptible to tornadoes. Tornadoes can spawn from tropical cyclones or severe weather systems that pass-through Webster Parish. High winds produced by tornadoes have the potential to destroy residential and commercial buildings, as well as create wind-borne objects from the debris produced by the destruction of the natural and human environment, such as building materials and trees.

Previous Occurrences

On the next page, *Table 2-2* summarizes federal disaster declarations for Webster Parish since 1965. Information includes names, dates, and types of disaster.

Table 2-2: Webster Parish Major Disaster Declarations.

Disaster Number	Year	Declaration
3031	2/22/1977	Drought and Freezing
567	12/6/1978	Severe Storms and Tornadoes
829	5/20/1989	Severe Storms, Flooding
835	7/17/1989	Tropical Cyclone – Tropical Storm Allison
902	4/23/1991	Severe Storms and Flooding
904	5/3/1991	Severe Storms, Tornadoes, and Flooding
1012	2/28/1994	Severe Winter Ice
1264	1/21/1999	Severe Ice Storm
1269	4/9/1999	Severe Storms, Tornadoes, and Flooding
1314	2/15/2000	Severe Winter Storm
1357	1/12/2001	Severe Winter Ice Storm
3172	2/1/2003	Loss of Space Shuttle Columbia
1548	9/15/2004	Tropical Cyclone – Hurricane Ivan
1603	8/29/2005	Tropical Cyclone – Hurricane Katrina
1607	9/24/2005	Tropical Cyclone – Hurricane Rita
1786	9/2/2008	Tropical Cyclone – Hurricane Gustav
1863	12/10/2009	Severe Storms, Tornadoes, and Flooding
4263	3/13/2016	Severe Storms and Flooding
4484	3/24/2020	COVID-19 Pandemic
3527	6/7/2020	Tropical Cyclone – Tropical Storm Cristobal
3538	8/23/2020	Tropical Cyclone – Tropical Storms Laura and Marco
4559	8/28/2020	Tropical Cyclone – Hurricane Laura

Probability of Future Hazard Events

The probability of a hazard event occurring in Webster Parish is estimated in the table on the following page. The percent chance of an event happening during any given year was calculated by posting past events and dividing by the time period. Unless otherwise indicated, the time period used to access probability followed the method used in the State of Louisiana's most current Hazard Mitigation Plan. The primary source for historical data used throughout the plan is the National Oceanic and Atmospheric Administration's (NOAA) National Centers for Environmental Information's (NCEI) Storm Events Database, which provides historical hazard data from 1950 to 2020. In staying consistent with the state plan, the Storm Events Database was evaluated for the last thirty years (1990 – 2020) to determine future probability of a hazard occurring. While the 30-year record used by the State was adopted for the purpose of determining the overall probability, to assist with determining estimated losses, unless otherwise stated, the full 70-year record was used when Hazus was not available to determine losses. This full record was used to provide a more extensive record to determine losses. All assessed damages were adjusted for inflation in order to reflect the equivalent amount of damages with the value of the U.S. dollar today.

The following table shows the annual probability for each hazard occurring across the parish:

Table 2-3: Probability of Future Hazard Reoccurrence.

Hazard	Probability					
	Webster Parish (Unincorporated)	Cotton Valley	Cullen	Dixie Inn	Doyline	Dubberly
Drought	30%	30%	30%	30%	30%	30%
Excessive Heat	< 1%	< 1%	< 1%	< 1%	< 1%	< 1%
Flooding	40%	72%	16%	16%	16%	16%
Sinkholes	< 1%	< 1%	< 1%	< 1%	< 1%	< 1%
Thunderstorms - Hail	100%	100%	100%	100%	100%	100%
Thunderstorms - Lightning	43%	43%	43%	43%	43%	43%
Thunderstorms - Winds	100%	100%	100%	100%	100%	100%
Tornadoes	100%	100%	100%	100%	100%	100%
Tropical Cyclones	22%	22%	22%	22%	22%	22%
Wildfires	3%	3%	3%	3%	3%	3%
Winter Storms	27%	27%	27%	27%	27%	27%
Dam Failure	< 1%	< 1%	< 1%	< 1%	< 1%	< 1%

Table 2-4: Probability of Future Hazard Reoccurrence.

Hazard	Probability					
	Heflin	Minden	Sarepta	Shongaloo	Sibley	Springhill
Drought	30%	30%	30%	30%	30%	30%
Excessive Heat	< 1%	< 1%	< 1%	< 1%	< 1%	< 1%
Flooding	28%	24%	20%	20%	24%	16%
Sinkholes	< 1%	< 1%	< 1%	< 1%	< 1%	< 1%
Thunderstorms - Hail	100%	100%	100%	100%	100%	100%
Thunderstorms - Lightning	43%	43%	43%	43%	43%	43%
Thunderstorms - Winds	100%	100%	100%	100%	100%	100%
Tornadoes	100%	100%	100%	100%	100%	100%
Tropical Cyclones	22%	22%	22%	22%	22%	22%
Wildfires	3%	3%	3%	3%	3%	3%
Winter Storms	27%	27%	27%	27%	27%	27%
Dam Failure	< 1%	< 1%	< 1%	< 1%	< 1%	< 1%

As shown in the above tables, thunderstorm hail, tornadoes, and thunderstorm winds have the highest chance of occurrence in the parish (100%). These are followed by flooding for the incorporated area of Cotton Valley (72%), lightning (43%), flooding for the unincorporated area of the parish (40%), drought (30%), flooding for the incorporated area of Heflin (28%), winter storms (27%), flooding for the incorporated areas of Minden and Sibley (24%), tropical cyclones (22%), flooding for the incorporated areas of Sarepta and Shongaloo (20%), flooding for the incorporated areas of Cotton Valley, Cullen, Dixie

Inn, Doyline, Dubberly, and Springhill (16%), and wildfires (3%). Dam failure, excessive heat, and sinkholes for the entire parish have an annual chance of occurrence of less than 1%.

Inventory of Assets for the Entire Parish

As part of the Risk Assessment, the planning team identified essential facilities throughout the parish. Several methods were used to assist in identifying all essential facilities, including field data collected by the Louisiana Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP) on critical infrastructure from a previous hazard mitigation project.

Within the entire planning area, there is an estimated value of $6,269,806,000 in structures throughout the parish. The table below provides the total estimated value for each type of structure by occupancy.

Table 2-5: Estimated Total of Potential Losses throughout Webster Parish.

Occupancy	Webster Parish	Unincorporated Area	Cotton Valley	Cullen	Dixie Inn
Agricultural	$4,764,580,000	$1,962,274,000	$115,506,000	$136,430,000	$25,655,000
Commercial	$849,961,000	$185,923,000	$5,194,000	$2,480,000	$8,618,000
Government	$318,473,000	$178,961,000	$402,000	$0	$9,128,000
Industrial	$11,868,000	$6,470,000	$0	$0	$0
Religion	$203,324,000	$59,720,000	$5,854,000	$0	$4,060,000
Residential	$44,731,000	$11,560,000	$1,432,000	$0	$844,000
Education	$76,869,000	$19,560,000	$946,000	$0	$0
Total	**$6,269,806,000**	**$2,424,468,000**	**$129,334,000**	**$138,910,000**	**$48,305,000**

Table 2-6: Estimated Total of Potential Losses throughout Webster Parish.

Occupancy	Doyline	Dubberly	Heflin	Minden	Sarepta
Agricultural	$91,715,000	$21,526,000	$28,731,000	$1,457,908,000	$93,690,000
Commercial	$9,486,000	$2,012,000	$1,088,000	$449,811,000	$3,492,000
Government	$2,770,000	$1,265,000	$396,000	$78,225,000	$19,900,000
Industrial	$140,000	$0	$0	$3,590,000	$8,000
Religion	$10,282,000	$1,488,000	$850,000	$79,816,000	$882,000
Residential	$948,000	$432,000	$408,000	$19,749,000	$26,000
Education	$6,782,000	$1,922,000	$0	$31,384,000	$4,424,000
Total	**$122,123,000**	**$28,645,000**	**$31,473,000**	**$2,120,483,000**	**$122,422,000**

Table 2-7: Estimated Total of Potential Losses throughout Webster Parish.

Occupancy	Shongaloo	Sibley	Springhill
Agricultural	$21,986,000	$111,226,000	$697,933,000
Commercial	$5,898,000	$10,214,000	$165,745,000
Government	$174,000	$1,660,000	$25,592,000
Industrial	$0	$0	$1,660,000
Religion	$1,242,000	$3,816,000	$35,314,000
Residential	$346,000	$1,038,000	$7,948,000
Education	$3,692,000	$0	$8,159,000
Total	**$33,338,000**	**$127,954,000**	**$942,351,000**

Essential Facilities of the Parish

The following figures show the locations and names of the essential facilities within the parish:

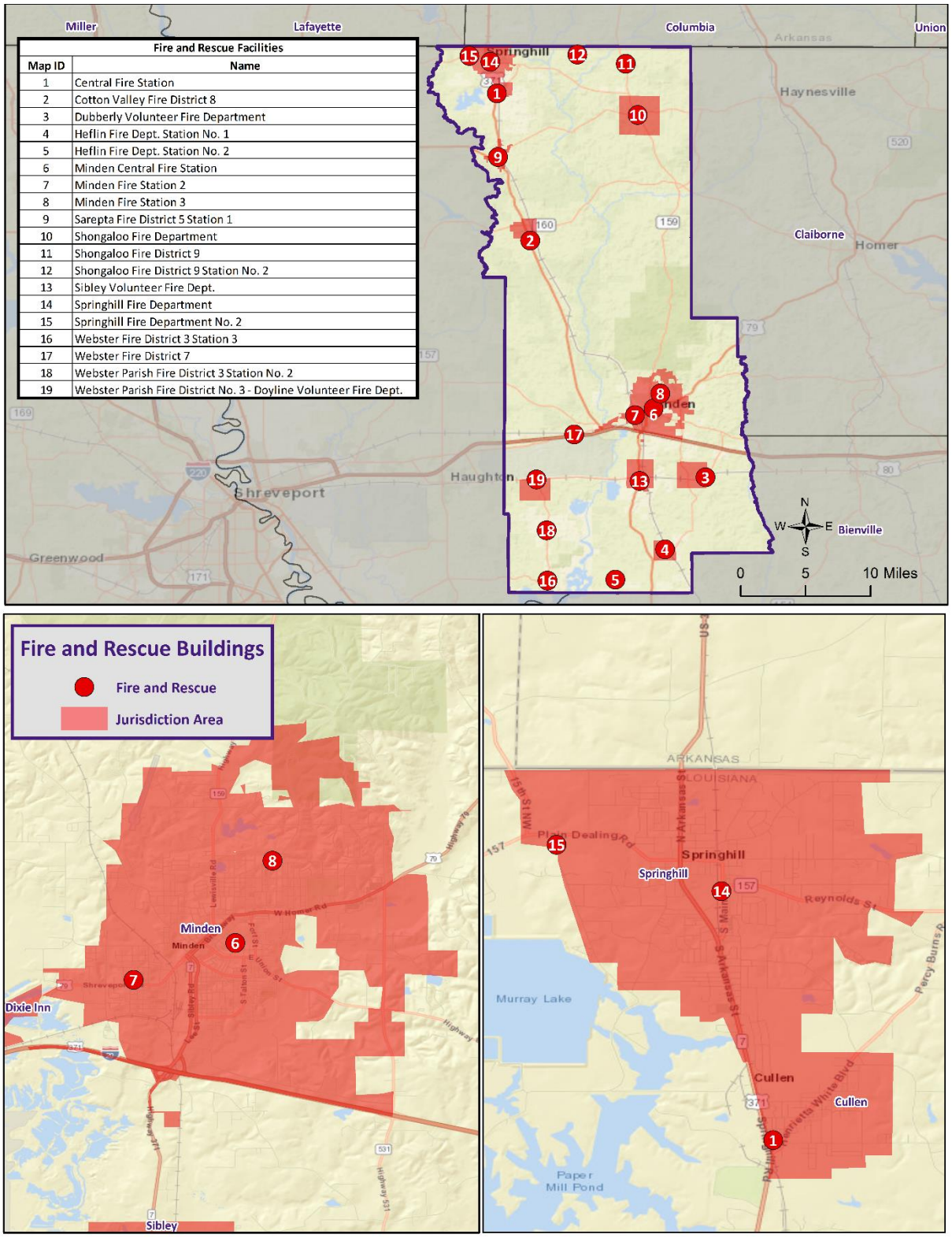


Figure 2-1: Fire and Rescue Facilities in Webster Parish.

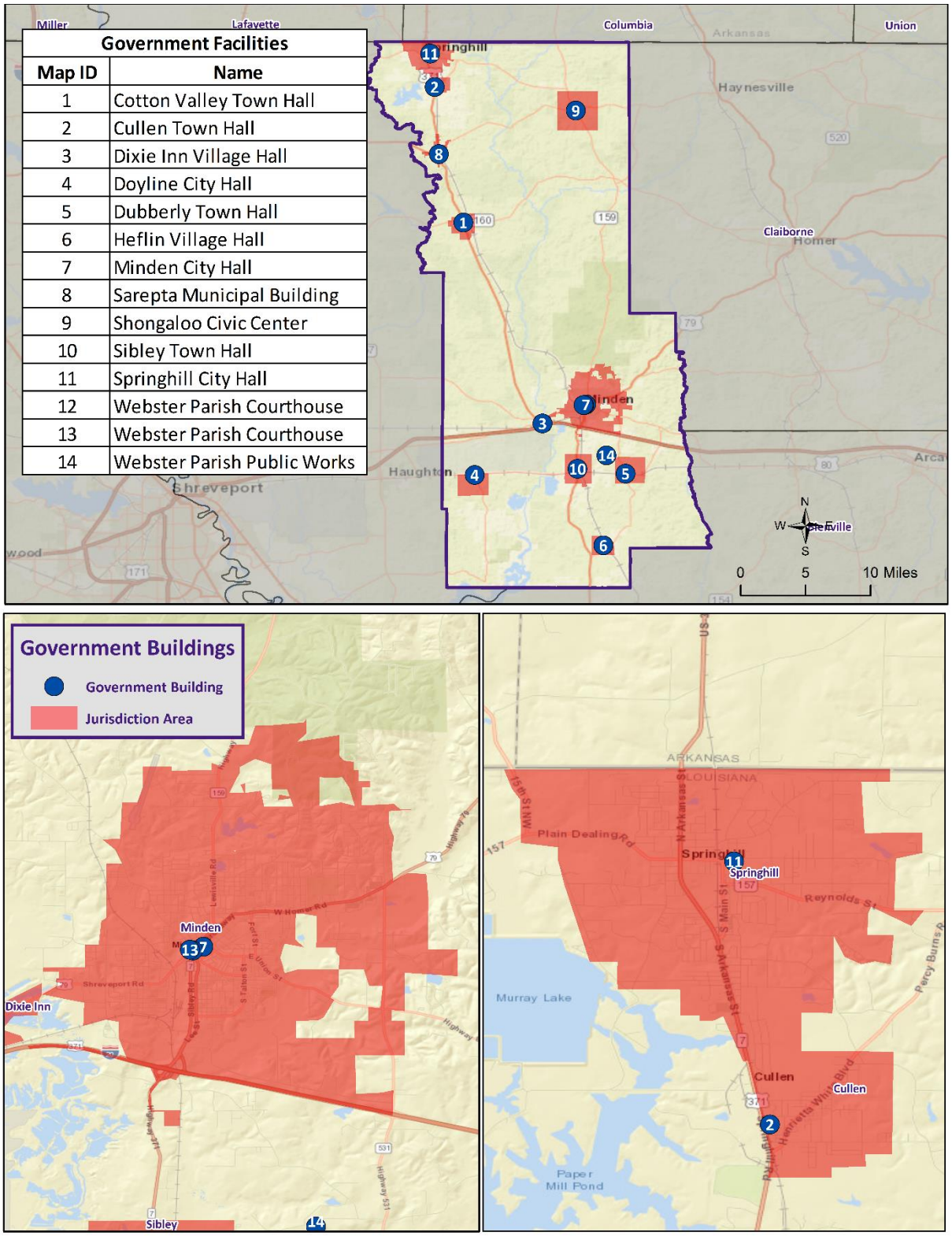
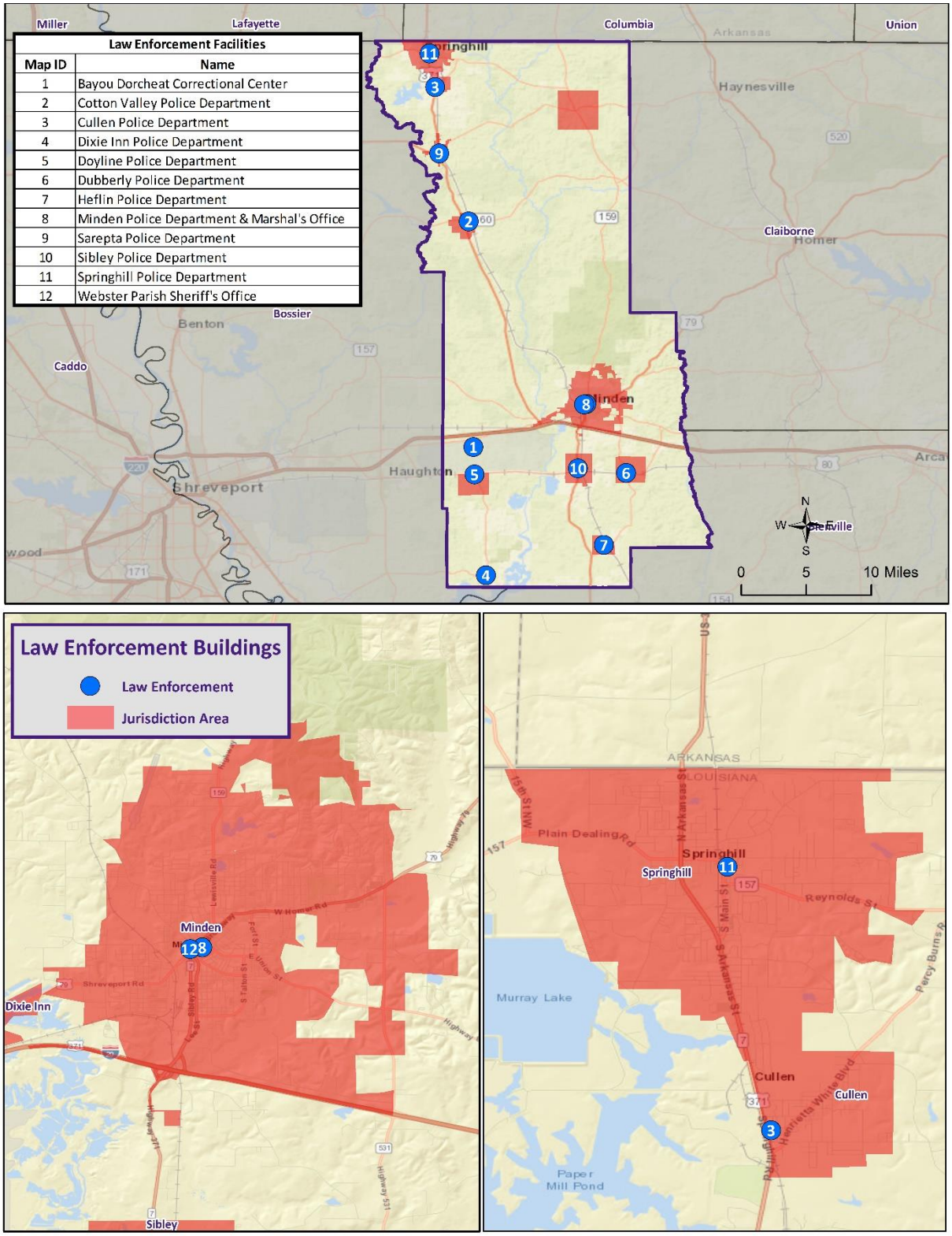


Figure 2-2: Government Buildings in Webster Parish.



Law Enforcement Facilities	
Map ID	Name
1	Bayou Dorcheat Correctional Center
2	Cotton Valley Police Department
3	Cullen Police Department
4	Dixie Inn Police Department
5	Doyline Police Department
6	Dubberly Police Department
7	Heflin Police Department
8	Minden Police Department & Marshal's Office
9	Sarepta Police Department
10	Sibley Police Department
11	Springhill Police Department
12	Webster Parish Sheriff's Office

Figure 2-3: Law Enforcement in Webster Parish.

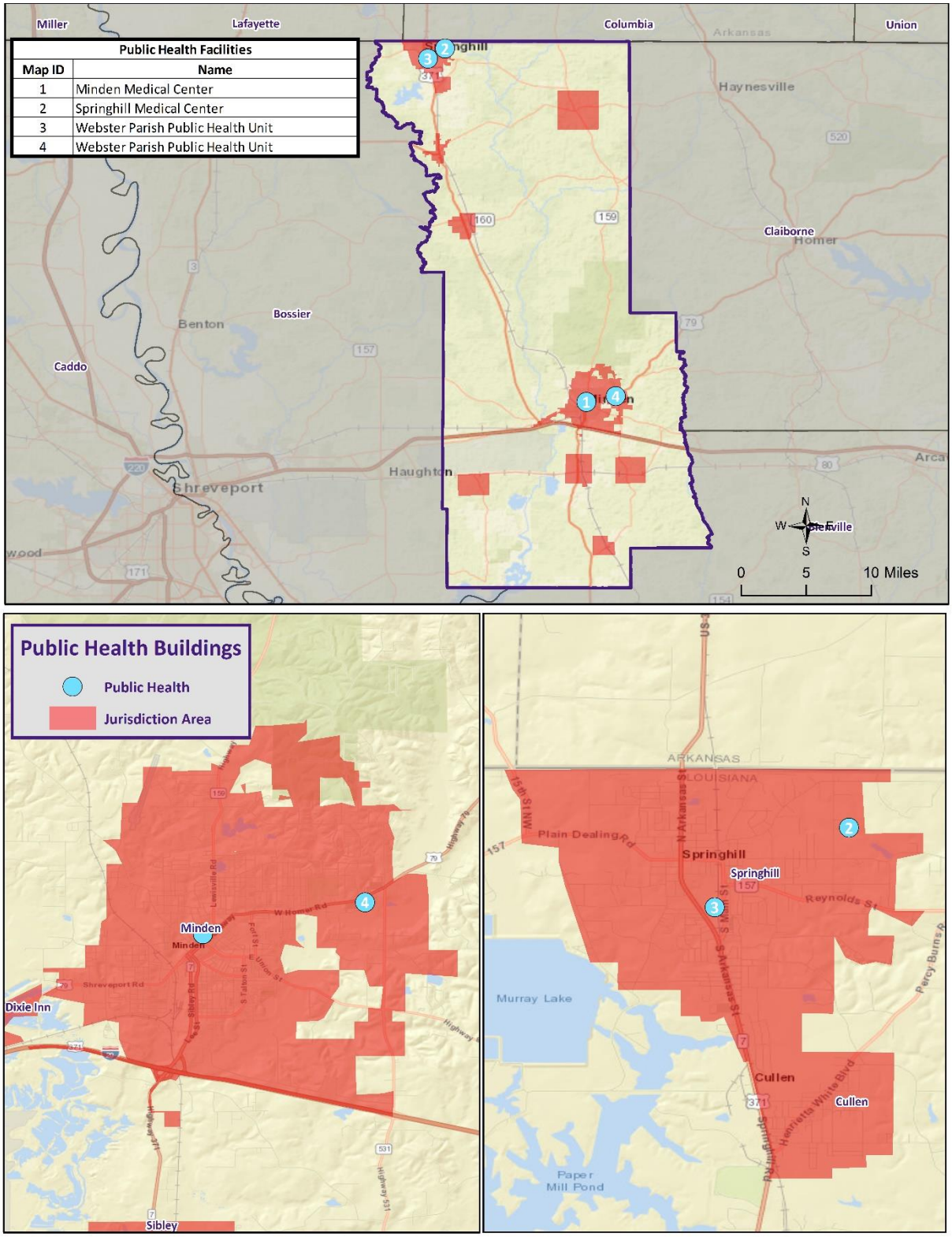
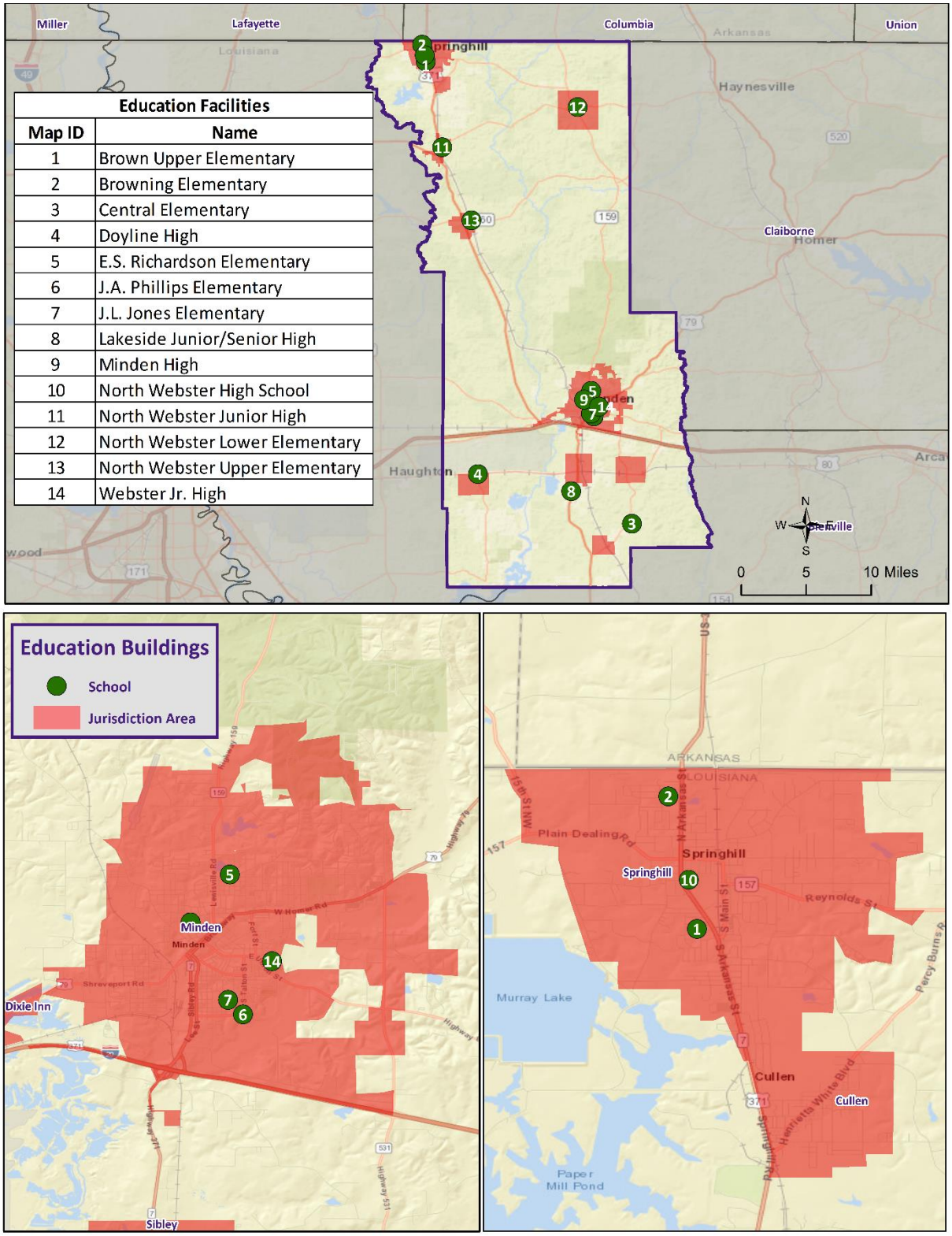


Figure 2-4: Public Health Facilities in Webster Parish.



Education Facilities	
Map ID	Name
1	Brown Upper Elementary
2	Browning Elementary
3	Central Elementary
4	Doyline High
5	E.S. Richardson Elementary
6	J.A. Phillips Elementary
7	J.L. Jones Elementary
8	Lakeside Junior/Senior High
9	Minden High
10	North Webster High School
11	North Webster Junior High
12	North Webster Lower Elementary
13	North Webster Upper Elementary
14	Webster Jr. High

Figure 2-5: Educational Facilities in Webster Parish.

Future Development Trends

Webster Parish experienced a decline in population and a rise in housing between the years of 2000 and 2019, falling from a population of 41,700 with 18,991 housing units in the year 2000 to a population of 38,340 with 19,681 housing units in the year 2019. The incorporated area of Minden experienced the largest population decline within the area falling from a populace of 13,085 in 2010 to 11,840 in 2019 (9.5% overall decline) which is then followed by the incorporated areas of Heflin and Springhill with a 9.4% overall decline. The incorporated area of Cullen experienced an 8.3% overall decline, the incorporated area of Shongaloo a 7.7% decline, the incorporate area of Sarepta a 7.3% decline, the incorporated area of Cotton Valley a 7.2% overall decline, the incorporated area of Dubberly with a 5.9% overall decline, the incorporated area of Sibley with a 4.8% overall decline, the incorporated area of Doyline and unincorporated area of St. James Parish with a 4.4% overall decline, and the incorporated area of Dixie Inn with a 3.7% overall decline during this same time period.

The incorporated area of Dubberly experienced the largest growth of housing units from 2010 to 2019 growing from 121 in 2010 to 169 in 2019. The incorporated area of Sibley experienced the second largest growth in housing units during this time period with a 2.8% annual growth rate followed by the incorporated area of Springhill with a 1.6% annual growth rate, the incorporated area of Cotton Valley with a 1.4% annual growth rate, the incorporated area of Doyline with a 1.3% annual growth rate, the incorporated area of Cullen and Sarepta with a 0.9% annual growth rate, the incorporated area of Dixie Inn with a 0.7% annual growth rate, the incorporated area of Heflin with a 0.1% annual growth rate, and the incorporated area of Minden with a less than 0.1% annual growth rate. The incorporated area of Shangloo and the unincorporated area of St. James Parish had a decline in housing units during this same time period. The future population and number of buildings can be estimated using U.S. Census Bureau housing and population data. The following tables show population and housing unit estimates from 2000 to 2019:

Table 2-8: Population Growth Rate for Webster Parish.

Total Population	Webster Parish	Unincorporated Area	Cotton Valley	Cullen	Dixie Inn	Doyline	Dubberly
1-Apr-00	41,700	16,579	1,154	1,265	358	850	278
1-Apr-10	41,215	16,789	1,009	1,163	273	818	273
1-Jul-19	38,340	16,049	936	1,066	263	782	257
Population Growth between 2000 – 2010	-1.2%	1.3%	-12.6%	-8.1%	-23.7%	-3.8%	-1.8%
Average Annual Growth Rate between 2000 – 2010	-0.1%	0.1%	-1.3%	-0.8%	-2.4%	-0.4%	-0.2%
Population Growth between 2010 – 2019	-7.0%	-4.4%	-7.2%	-8.3%	-3.7%	-4.4%	-5.9%
Average Annual Growth Rate between 2010 – 2019	-0.78%	-0.49%	-0.80%	-0.93%	-0.41%	-0.49%	-0.65%

Table 2-9: Population Growth Rate for Webster Parish.

Total Population	Heflin	Minden	Sarepta	Shongaloo	Sibley	Springhill
1-Apr-00	249	13,366	931	165	1,108	5,397
1-Apr-10	244	13,085	891	182	1,218	5,270
1-Jul-19	221	11,840	826	168	1,160	4,772
Population Growth between 2000 – 2010	-2.0%	-2.1%	-4.3%	10.3%	9.9%	-2.4%
Average Annual Growth Rate between 2000 – 2010	-0.2%	-0.2%	-0.4%	1.0%	1.0%	-0.2%
Population Growth between 2010 – 2019	-9.4%	-9.5%	-7.3%	-7.7%	-4.8%	-9.4%
Average Annual Growth Rate between 2010 – 2019	-1.05%	-1.06%	-0.81%	-0.85%	-0.53%	-1.05%

Table 2-10: Housing Growth Rate for Webster Parish.

Total Housing Units	Webster Parish	Unincorporated Area	Cotton Valley	Cullen	Dixie Inn	Doyline	Dubberly
1-Apr-00	18,991	7,737	568	600	189	359	143
1-Apr-10	19,336	8,044	530	637	139	373	121
1-Jul-19	19,681	7,625	598	688	148	416	169
Housing Growth between 2000 – 2010	1.8%	4.0%	-6.7%	6.2%	-26.5%	3.9%	-15.4%
Average Annual Growth Rate between 2000 – 2010	0.2%	0.4%	-0.7%	0.6%	-2.6%	0.4%	-1.5%
Housing Growth between 2010 – 2019	1.8%	-5.2%	12.8%	8.0%	6.5%	11.5%	39.7%
Average Annual Growth Rate between 2010 – 2019	0.2%	-0.6%	1.4%	0.9%	0.7%	1.3%	4.4%

Table 2-11: Housing Growth Rate for Webster Parish.

Total Housing Units	Heflin	Minden	Sarepta	Shongaloo	Sibley	Springhill
1-Apr-00	104	5,795	411	77	457	2,551
1-Apr-10	99	5,832	401	78	511	2,571
1-Jul-19	100	5,845	435	76	641	2,940
Housing Growth between 2000 – 2010	-4.8%	0.6%	-2.4%	1.3%	11.8%	0.8%
Average Annual Growth Rate between 2000 – 2010	-0.5%	0.1%	-0.2%	0.1%	1.2%	0.1%
Housing Growth between 2010 – 2019	1.0%	0.2%	8.5%	-2.6%	25.4%	14.4%
Average Annual Growth Rate between 2010 – 2019	0.1%	0.0%	0.9%	-0.3%	2.8%	1.6%

Future Hazard Impacts

Hazard impacts were estimated for five years and ten years in the future (2025 and 2030). Yearly population and housing growth rates were applied to parish inventory assets for composite flood and tropical cyclones. Based on a review of available information, it is assumed that population and housing units will grow within Webster Parish from the present until 2030. A summary of estimated future impacts is shown in the table below. Dollar values are expressed in future costs and assume an annual rate of inflation of 1.02%.

Table 2-12: Estimated Future Impacts, 2018-2030.
(Source: Hazus, US Census Bureau)

Hazard / Impact	Total in Parish (2019)	Hazard Area (2018)	Hazard Area (2025)	Hazard Area (2030)
Flood Damage				
Structures	19,720	2,959	2,988	3,024
Value of Structures	$6,346,314,603	$952,247,511	$1,011,782,858	$1,088,158,810
# of People	38,378	5,759	5,787	5,822
Tropical Cyclone Damage				
Structures	19,720	19,720	19,916	20,154
Value of Structures	$6,346,314,603	$6,346,314,603	$6,743,091,743	$7,252,104,173
# of People	38,378	38,378	38,571	38,803

Assessing Vulnerability Overview

The purpose of assessing vulnerability is to quantify and/or qualify exposure and determine how various threats and hazards impact life, property, the environment, and critical operations in Webster Parish. Vulnerability can be defined as the manifestation of the inherent states of the system (e.g., physical, technical, organizational, cultural) that can be exploited to adversely affect (cause harm or damage to) that system. For example, identifying areas in the parish that suffer disproportional damages from flooding compared with other areas, or overall exposure of an entire town to flooding. Identifying and understanding vulnerability to each threat and hazard provides a strong foundation for developing and pursuing mitigation actions.

The Vulnerability Assessment section for each hazard builds upon the information provided in the Risk Assessment by assessing the potential impact and amount of damage that each hazard has on the parish and each jurisdiction location. To complete the assessment, best available data were collected from a variety of sources, including local, state, and federal agencies, and multiple analyses were performed qualitatively and quantitatively. The estimates provided in the Vulnerability Assessment should be used to understand relative risk from each hazard and the potential losses that may be incurred; however, uncertainties are inherent in any loss estimation methodology, arising in part from incomplete scientific knowledge concerning specific hazards and their effects on the built environment, as well as incomplete datasets from approximations and simplifications that are necessary to provide a meaningful and complete analysis. Further, most datasets used in this assessment contain relatively short periods of records, which increases the uncertainty of any statistically based analysis.

Quantitative Methodology

The quantitative methodology consists of utilizing a detailed GIS-based approach informed through the development of comprehensive hazard and infrastructure databases. This data-centric approach forms the foundation for our quantitative vulnerability assessment. GIS technology allowed for the identification and analysis of potentially at-risk community assets such as people and infrastructure. This analysis was completed for hazards that can be spatially defined in a meaningful manner (i.e., hazards with an official and scientifically determined geographic extent) and for which GIS data were readily available.

Qualitative Methodology

The qualitative assessment relies less on technology, but more on historical and anecdotal data regarding expected hazard impacts. The qualitative assessment completed for Webster Parish is based on the Priority Risk Index (PRI). The purpose of the PRI is to prioritize all potential hazards, and then group them into three categories of high, moderate, or low risk to identify and prioritize mitigation opportunities. The PRI is a good practice to use when prioritizing hazards because it provides a standardized numerical value for hazards to be compared. PRI scores were calculated using five categories:

- Probability
- Impact
- Spatial Extent
- Warning Time
- Duration

Each degree of risk is assigned a value (1-4) and a weighting factor. To calculate the Risk Factor for a given hazard, the assigned risk value for each category is multiplied by the weighted factor, and the sum of all six categories is totaled together to determine the final Risk Factor. The highest possible Risk Factor is 4.0.

Risk Factor = [(Probability * 0.25) + (Impact * 0.25) + (Spatial Extent * 0.20) + (Warning Time *0.15) + (Duration * 0.15)]

Priority Risk Index and Hazard Risk

Hazard risk is determined by calculating the Risk Factor for each hazard impacting Webster Parish. A summary of the PRI is found in the table on the next page. The conclusions drawn from the qualitative and quantitative assessments are fitted into three categories based on High, Moderate, or Low designations. Hazards identified as high risk have risk factors of 2.5 or greater. Risk Factors ranging from 2.0 to 2.4 are deemed moderate risk hazards. Hazards with Risk Factors less than 2.0 are considered low risk.

Table 2-13: Summary of the Priority Risk Index.

PRI Category	Degree of Risk			Assigned Weighting Factor
	Level	Criteria	Index Value	
Probability	Unlikely	Less than 1% annual probability	1	25%
	Possible	Between 1 and 10% annual probability	2	
	Likely	Between 10 and 100% probability	3	
	Highly Likely	100% annual probability	4	
Impact	Minor	Very few injuries, if any. Only minor property damage and minimal disruption on quality of life. Temporary shutdown of critical facilities.	1	25%
	Limited	Minor injuries only. More than 10% of property in affected area damaged or destroyed. Complete shutdown of critical facilities for more than one day.	2	
	Critical	Multiple deaths/injuries possible. More than 25% of property in affected area damaged or destroyed. Complete shutdown of critical facilities for more than a week.	3	
	Catastrophic	High number of deaths/injuries possible. More than 50% of property in affected area damaged or destroyed. Complete shutdown of critical facilities for 30 days or more.	4	
Spatial Extent	Negligible	Less than 1% of area affected	1	20%
	Small	Between 1 and 10% of area affected	2	
	Moderate	Between 10 and 50% of area affected	3	
	Large	Between 50 and 100% of area affected	4	
Warning Time	More than 24 hours	Self-explanatory	1	15%
	12 to 24 hours	Self-explanatory	2	
	6 to 12 hours	Self-explanatory	3	
	Less than 6 hours	Self-explanatory	4	
Duration	Less than 6 hours	Self-explanatory	1	15%
	Less than 24 hours	Self-explanatory	2	
	Less than one week	Self-explanatory	3	
	More than one week	Self-explanatory	4	

Table 2-14: Associated Risk Factor with PRI Value Range.

Risk Factor	PRI Range
High Risk	2.5 to 4.0
Moderate Risk	2.0 to 2.4
Low Risk	0 to 1.9

Table 2-15: Risk Assessment for Webster Parish.

Hazard	Probability	Impact	Spatial Extent	Warning Time	Duration	Overall Risk
Drought	3	2	4	2	3	**2.8**
Extreme Heat	1	1	4	1	4	**2.05**
Flooding	3	4	3	4	3	**3.4**
Sinkholes	1	2	1	4	2	**1.85**
Thunderstorms - Hail	4	2	3	3	1	**2.7**
Thunderstorms - Lightning	3	2	2	3	1	**2.25**
Thunderstorms - Wind	4	2	3	3	1	**2.7**
Tornadoes	4	3	2	4	3	**3.2**
Tropical Cyclones	3	4	4	1	4	**3.3**
Wildfires	2	3	4	1	2	**2.5**
Winter Storms	3	2	2	4	2	**2.55**
Dam Failure	1	2	1	4	2	**1.85**

Land Use

The Webster Parish Land Use table is provided below. Residential, commercial, and industrial areas account for only 12% of the parish's land use. Forested areas at 224,891 acres is the largest category accounting for 75% of land in the parish. The parish also consists of agricultural land (9%), water areas (2%), and wetland areas (2%).

Table 2-16: Webster Parish Land Use.
(Source: USGS Land Use Map)

Land Use	Acres	Percentage
Agricultural Land, Cropland, and Pasture	26,549	9%
Wetlands	5,774	2%
Forest Land (Not including forested wetlands)	224,891	75%
Urban/Development	34,707	12%
Water	6,288	2%

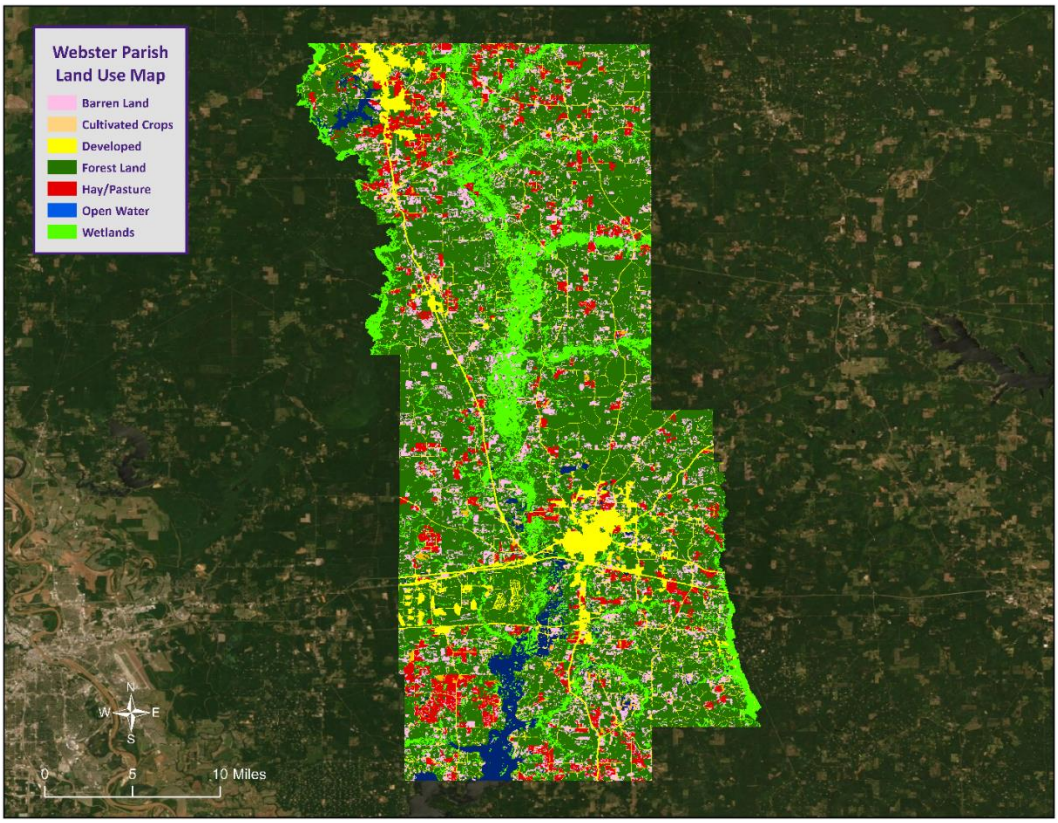


Figure 2-6: Webster Parish Land Use Map.
(Source: USGS Land Use Map)

Hazard Identification

Drought

A drought is a deficiency in water availability over an extended period of time, caused by precipitation totals and soil water storages that do not satisfy the environmental demand for water, either by evaporation or transpiration through plant leaves. It is important to note that the lack of precipitation alone does not constitute drought; the season during which the precipitation is lacking has a major impact on whether drought occurs. For example, a week of no precipitation in July, when the solar energy to evaporate water and vegetation's need for water to carry on photosynthesis are both high, may trigger a drought, while a week of no precipitation in January may not initiate a drought.

Drought is a unique and insidious hazard. Unlike other natural hazards, no specific threshold of "dryness" exists for declaring a drought. In addition, the definition of drought depends on stakeholder needs. For instance, the onset (and demise) of agricultural drought is quick, as crops need water every few days; once they get rainfall, they improve. But hydrologic drought sets in (and is alleviated) only over longer time periods. A few dry days will not drain a reservoir, but a few rain showers cannot replenish it either. Moreover, different geographical regions define drought differently based on the deviation from local, normal precipitation. And drought can occur anywhere, triggered by changes in the local-to-regional-scale atmospheric circulation over an area, or by broader-scale circulation variations such as the expansion of semi-permanent oceanic high-pressure systems or the stalling of an upper-level atmospheric ridge in place over a region. The severity of a drought depends upon the degree and duration of moisture deficiency, as well as the size of the affected area. Periods of drought also tend to be associated with other hazards, such as wildfires and/or heat waves. Lastly, drought is a slow onset event, causing less direct—but tremendous indirect—damage. Depletion of aquifers, crop loss, and livestock and wildlife mortality rates are examples of direct impacts. Since the groundwater found in aquifers is the source of about 38% of all county and city water supplied to households (and comprises 97% of the water for all rural populations that are not already supplied by cities and counties), droughts can potentially have direct, disastrous effects on human populations. The indirect consequences of drought, such as unemployment, reduced tax revenues, increased food prices, reduced outdoor recreation opportunities, higher energy costs as water levels in reservoirs decrease and consumption increases, and water rationing, are not often fully known. This complex web of impacts causes drought to affect people and economies well beyond the area physically experiencing the drought.

This hazard is often measured using the Palmer Drought Severity Index (PDSI, also known operationally as the Palmer Drought Index). The PDSI, first developed by Wayne Palmer in a 1965 paper for the U.S. Weather Bureau, measures drought through recent precipitation and temperature data with regard to a basic supply-and-demand model of soil moisture. It is most effective in long-term calculations. Three other indices used to measure drought are the Palmer Hydrologic Drought Index (PHDI), the Crop Moisture Index (CMI), which is derived from the PDSI, and the Keetch-Byram Drought Index (KBDI), created by John Keetch and George Byram in 1968 for the U.S. Forest Service. The KBDI is used mainly for predicting the likelihood of wildfire outbreaks. As a compromise, the PDSI is used most often for droughts since it is a medium-response drought indicator. The objective of the PDSI is to provide measurements of moisture conditions that are standardized so that comparisons using the index can be made between locations and between months. On the next page, *Table 2-17* displays the range and Palmer classifications of the PDSI index while *Figure 2-7* displays the current drought monitor for the state of Louisiana and its parishes.

Table 2-17: Palmer Drought Severity Index Classification and Range

Range	Palmer Classifications
4.0 or more	Extremely Wet
3.0 to 3.9	Very Wet
2.0 to 2.9	Moderately Wet
1.0 to 1.99	Slightly Wet
0.5 to 0.99	Incipient Wet Spell
0.49 to -0.49	Near Normal
-0.5 to -0.99	Incipient Dry Spell
-1.0 to -1.99	Mild Drought
-2.0 to -2.99	Moderate Drought
-3.0 to -3.99	Severe Drought
-4.0 or less	Extreme Drought

The PDSI best measures the duration and intensity of drought-inducing circulation patterns at a somewhat long-term time scale, although not as long-term as the PHDI. Long-term drought is cumulative, so the intensity of drought during the current month is dependent on the current weather patterns in addition to the effects of cumulative patterns of previous months. Although weather patterns can change almost overnight from a long-term drought pattern to a long-term wet pattern, as a medium-response indicator, the PDSI responds relatively rapidly. Data compiled by the National Drought Mitigation Center indicates normal conditions currently exists within Webster Parish.

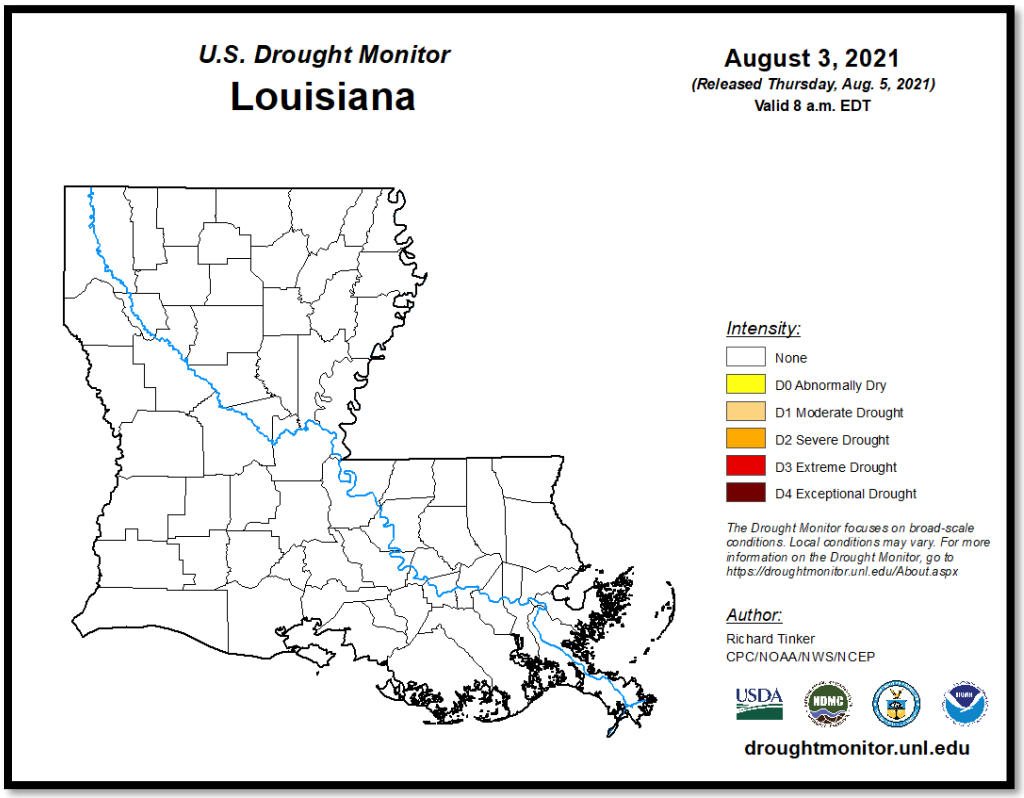


Figure 2-7: United States Drought Monitor for the State of Louisiana and its Parishes. (Source: The National Drought Mitigation Center)

Location

Drought typically impacts a region and not one specific parish or jurisdiction. While the entire planning area can experience drought, the major impact of a drought event in Webster Parish is on the agricultural community. The worst-case drought scenario for Webster Parish would be an extreme drought (D3).

Previous Occurrences / Extent

Historically, there have been nine drought incidents in Webster Parish. Drought events have ranged from Mild to Extreme per the National Climatic Data Center. Since the last update in 2016, there have been three drought events within the boundaries of Webster Parish. Below is a brief synopsis of the drought events which occurred since the last Webster Parish HMP Update in 2016.

Table 2-18: Historical Droughts in Webster Parish with Locations since the 2016 Webster Parish HMP Update.

Date	Magnitude	Estimated Damages
2017-2018	Severe (D2)	$0
2018	Severe (D2)	$0
2019	Severe (D2)	$0

Frequency / Probability

Based on nine drought events since 1990, the annual chance of occurrence of a drought event occurring within a given year is calculated at 30% for Webster Parish.

Estimated Potential Loses

According to the NCEI Storm Events Database, there have been nine drought events which have impacted Webster Parish which resulted in limited to no damage to crops in the parish. When examining the drought hazard, the main impact will primarily be on the crops. The following table presents an analysis of agricultural exposure which are susceptible to droughts by type for Webster Parish.

Table 2-19: Agricultural Exposure by Crop Type for Droughts in Webster Parish. (Source: LSU AG Center 2018 Parish Totals)

Agricultural Exposure by Type for Drought				
Forestry	**Hay**	**Southern Peas**	**Sweet Corn**	**Watermelon**
$21,144,354	$3,743,111	$213,332	$471,332	$291,432

There have been no reported injuries or deaths as a direct result of drought in Webster Parish.

Vulnerability

See *Appendix C: Critical Facilities* for parish and municipality buildings that are susceptible to drought.

Excessive Heat

There is no operational definition for defining heat or a heat wave. Heat waves are the consequence of the same weather pattern as drought and therefore both hazards often occur concurrently. A heat wave is an extended period of oppressive and above normal temperatures over a given period of time. The World Meteorological Organization recommends the declaration of a heat wave when the daily maximum temperature exceeds the average maximum temperatures by 9 F° and lasts for a period of at least five days.

However, temperature alone is insufficient to describe the stress placed on humans (as well as flora and fauna) in hot weather. It is crucial to consider the effect of relative humidity since it is essential to the body's ability to perspire and cool. Once air temperature reaches 95° F, perspiration becomes a very significant biophysical mechanism to ensure heat loss. Perspiration is ineffective as a cooling mechanism if the water cannot evaporate (i.e., sweating in high relative humidity is reduced as compared to during dry conditions). To communicate this relationship between temperature and humidity, the National Weather Service (NWS) developed the Heat Index (HI), which provides a warning system based on a combination of air temperature and relative humidity. The HI is presented in *Figure 2-8* and *Table 2-20* summarizes the HI risk levels and protective measures. The NWS devised the index for shady, light wind conditions, and thus advises that the HI value can be increased by as much as 15 F° if a person is in direct sunlight, and that strong winds of hot, dry air can be extremely hazardous.

Most heat disorders (e.g., sunburn, heat cramps, heat exhaustion, and heat stroke) occur because the victim has been overexposed to heat or has over-exercised considering age and physical condition. Other circumstances that can induce heat-related illnesses include stagnant atmospheric conditions and poor air quality. Seniors and children are most at risk from adverse heat effects. Excessive heat can also damage roads, bridges, pipelines, utilities, and railroads. High temperatures can be partially responsible for deflection of rails and related railroad accidents.

According to NOAA, excessive heat is the leading weather-related cause of deaths in the United States. And while heat-related deaths in Louisiana are not common, due in part to the consistency and predictability of high seasonal temperatures, they do occur, and are still very intense and dangerous. Such deaths happen in a variety of circumstances, often in ways that are not easily categorized because they are unexpected. For instance, although exposure to heat is higher at the beach than usual, NOAA does not track heat-related deaths there because such deaths happen infrequently.

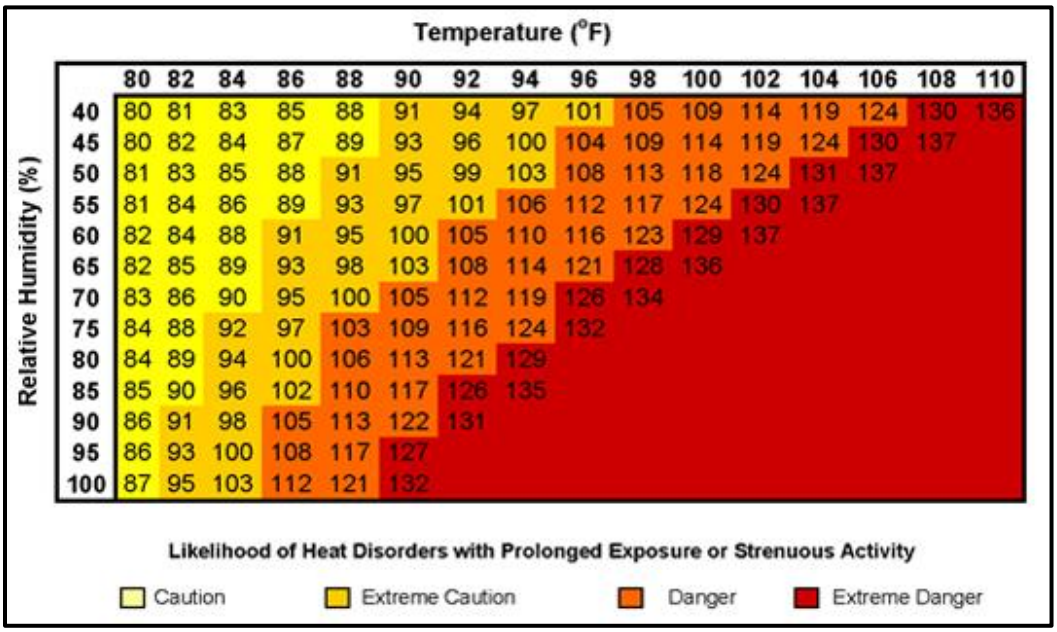


Figure 2-8: Heat Index Advisor based on Air Temperature (°F) and Relative Humidity. (Source: National Weather Service)

Table 2-20: Summary of Heat Index Risk Levels with Protective Measures (Source: National Weather Service)

Heat Index	Risk Level	Protective Measures
Less than 91°F	Lower (Caution)	Basic heat safety and planning.
91°F to 103°F	Moderate	Implement precautions and heighten awareness.
103°F to 115°F	High	Additional precautions to protect workers.
Greater than 115°F	Very High to Extreme	Triggers even more aggressive protective measures.

Location

Excessive heat typically impacts a region and not one specific parish or jurisdiction. Because excessive heat is a climatological based hazard, it has the same probability of occurring in Webster Parish as all of the adjacent parishes. The entire planning area of Webster Parish is equally at risk for excessive heat. Based on historical data, the worst-case scenario for Webster Parish involving excessive heat would be a high-risk level on the HI scale with temperatures ranging from 103°F to 115°F.

Previous Occurrences / Extent

Per the NCEI Storm Events Database, there have been no records of an excessive heat event in Webster Parish since 1990.

Frequency / Probability

Based on historical data, the annual chance of occurrence of an excessive heat event occurring within a given year is calculated at less than 1% for Webster Parish.

Estimated Potential Loses

According to the NCEI Storm Events Database, there have been no excessive heat events which have impacted Webster Parish which has resulted in injuries, deaths, or crop damages.

Vulnerability

See *Appendix C: Critical Facilities* for parish and municipality buildings that are susceptible to excessive heat.

Flooding

A flood is the overflow of water onto land that is usually not inundated. The National Flood Insurance Program defines a flood as:

> A general and temporary condition of partial or complete inundation of two or more acres of normally dry land area or of two or more properties from overflow of inland or tidal waves, unusual and rapid accumulation or runoff of surface waters from any source, mudflow, or collapse or subsidence of land along the shore of a lake or similar body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels that result in a flood as defined above.

Factors influencing the type and severity of flooding include natural variables such as precipitation, topography, vegetation, soil texture, and seasonality, as well as anthropogenic factors such as urbanization (extent of impervious surfaces), land use (agricultural and forestry tend to remove native vegetation and accelerate soil erosion), and the presence of flood-control structures such as levees and dams.

Excess precipitation, produced from thunderstorms or hurricanes, is often the major initiating condition for flooding, and Louisiana can have high rainfall totals at any time of day or year. During the cooler months, slow-moving frontal weather systems produce heavy rainfalls, while the summer and autumn seasons produce major precipitation in isolated thunderstorm events (often on warm afternoons) that may lead to localized flooding. During these warmer seasons, floods are overwhelmingly of the flash flood variety, as opposed to the slower-developing river floods caused by heavy stream flow during the cooler months.

In cooler months, particularly in the spring, Louisiana is in peak season for severe thunderstorms. The fronts that cause these thunderstorms often stall while passing over the state, occasionally producing rainfall totals exceeding ten inches within a period of a few days. Since soil tends to be nearly saturated at this time (due to relatively low overall evaporation rates), spring typically becomes the period of maximum stream flow across the state. Together, these characteristics increase the potential for high water, with low-lying, poorly drained areas being particularly susceptible to flooding during these months.

In Louisiana, six specific types of flooding are of main concern: riverine, flash, ponding, backwater, urban, and coastal.

- **Riverine flooding** occurs along a river or smaller stream. It is the result of runoff from heavy rainfall or intensive snow or ice melt. The speed with which riverine flood levels rise and fall depends not only on the amount of rainfall, but even more on the capacity of the river itself, as well as the shape and land cover of its drainage basin. The smaller the river, the faster that water levels rise and fall. Thus, the Mississippi River levels rise and fall slowly due to its large capacity. Generally, elongated and intensely developed drainage basins will reach faster peak discharges and faster falls than circular-shaped and forested basins of the same area.
- **Flash flooding** occurs when locally intense precipitation inundates an area in a short amount of time, resulting in local stream flow and drainage capacity being overwhelmed.
- **Ponding** occurs when concave areas (e.g., parking lots, roads, and clay-lined natural low areas) collect water and are unable to drain.

- **Backwater flooding** occurs when water slowly rises from a normally unexpected direction where protection has not been provided. A model example is the flooding that occurred in LaPlace during Hurricane Isaac in 2012. Although the town was protected by a levee on the side facing the Mississippi River, floodwaters from Lake Maurepas and Lake Pontchartrain crept into the community on the side of town opposite the Mississippi River.
- **Urban flooding** is similar to flash flooding but is specific to urbanized areas. It takes place when storm water drainage systems cannot keep pace with heavy precipitation, and water accumulates on the surface. Most urban flooding is caused by slow-moving thunderstorms or torrential rainfall.
- **Coastal flooding** can appear similar to any of the other flood types, depending on its cause. It occurs when normally dry coastal land is flooded by seawater but may be caused by direct inundation (when the sea level exceeds the elevation of the land), overtopping of a natural or artificial barrier, or the breaching of a natural or artificial barrier (i.e., when the barrier is broken down by the sea water). Coastal flooding is typically caused by storm surge, tsunamis, or gradual sea level rise.

Historically, in Webster Parish, all types of flooding events have historically been observed except for coastal flooding. For purposes of this assessment, ponding, flash flood, and urban flooding are considered to be flooding as a result of storm water from heavy precipitation thunderstorms

Based on stream gauge levels and precipitation forecasts, the National Weather Service (NWS) posts flood statements, watches, and warnings. The NWS issues the following weather statements with regard to flooding:

- **Flood Categories**
    - Minor Flooding: Minimal or no property damage, but possibly some public threat.
    - Moderate Flooding: Some inundation of structures and roads near streams. Some evacuations of people and/or transfer of property to higher elevations.
    - Major Flooding: Extensive inundation of structures and roads. Significant evacuations of people and/or transfer of property to higher elevations.
    - Record Flooding: Flooding which equals or exceeds the highest stage or discharge at a given site during the period of record keeping.

- **Flood Warning**
    - Issued along larger streams when there is a serious threat to life or property.

- **Flood Watch**
    - Issued when current and developing hydrometeorological conditions are such that there is a threat of flooding, but the occurrence is neither certain nor imminent.

Floods are measured mainly by probability of occurrence. A 10-year flood event, for example, is an event of small magnitude (in terms of stream flow or precipitation) but with a relatively high annual probability of recurrence (10%). A 100-year flood event is larger in magnitude, but it has a smaller chance of recurrence (1%). A 500-year flood is significantly larger than both a 100-year event and a 10-year event, but it has a lower probability than both to occur in any given year (0.2%). It is important to understand that an X-year flood event does not mean an event of that magnitude occurs only once in X years. Instead, it means that on average, we can expect a flood event of that magnitude to occur once every X years. Given that such statistical probability terms are inherently difficult for the general population to

understand, the Association of State Floodplain Managers (ASFPM) promotes the use of more tangible expressions of flood probability. As such, the ASFPM also expresses the 100-year flood event as having a 25% chance of occurring over the life of a 30-year mortgage.

It is essential to understand that the magnitude of an X-year flood event for a particular area depends on the source of flooding and the area's location. The size of a specific flood event is defined through historic data of precipitation, flow, and discharge rates. Consequently, different 100-year flood events can have very different impacts. The 100-year flood event in two separate locations have the same likelihood to occur, but they do not necessarily have the same magnitude. For example, a 100-year event for the Mississippi River means something completely different in terms of discharge values (ft^3/s) than for the Amite River. Not only are the magnitudes of 100-year events different between rivers, but they can also be different along any given river. A 100-year event upstream is different from one downstream due to the change of river characteristics (volume, discharge, and topography). As a result, the definition of what constitutes a 100-year flood event is specific to each location, river, and time since floodplain and river characteristics change over time. Finally, it is important to note that each flood event is unique. Two hypothetical events at the same location, given the same magnitude of stream flow, may still produce substantially different impacts if there were different antecedent moisture characteristics, different times of day of occurrence (which indicates the population's probable activities at the flood's onset), or other characteristic differences.

The 100-year flood event is of particular significance since it is the regulatory standard that determines the obligation (or lack thereof) to purchase flood insurance. Flood insurance premiums are set depending on the flood zone, as modeled by National Flood Insurance Program (NFIP) Rate Maps. The NFIP and FEMA suggest insurance rates based on Special Flood Hazard Areas (SFHAs), as diagrammed in *Figure 2-9*.

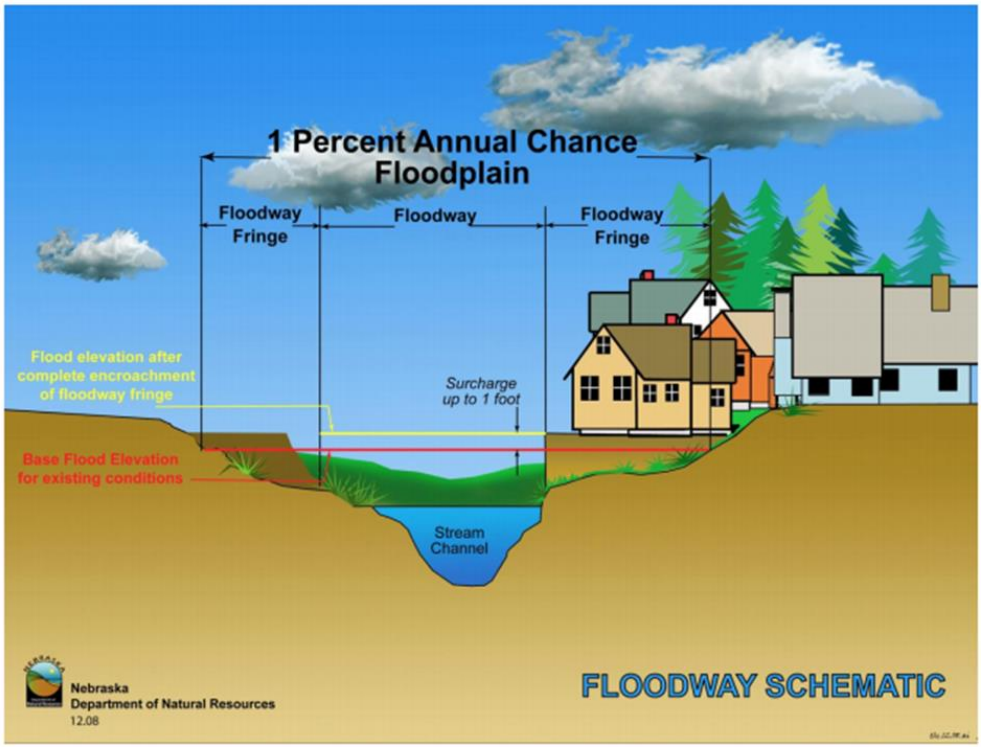


Figure 2-9: Schematic of 100-year Floodplain. The Special Flood Hazard Area (SFHA) extends to the end of the floodway fringe.
(Source: Nebraska Department of Natural Resources)

A SFHA is the land area covered by the floodwaters of the base flood (red line in *Figure 2-9*), where the NFIP's floodplain management regulations must be enforced and the area where the mandatory purchase of flood insurance applies.

Property Damage

The depth and velocity of flood waters are the major variables in determining property damage. Flood velocity is important because the faster water moves, the more pressure it puts on a structure and the more it will erode stream banks and scour the earth around a building's foundation. In some situations, deep and fast-moving waters can push a building off its foundation. Structural damage can also be caused by the weight of standing water (hydrostatic pressure).

Another threat to property from a flood is called "soaking". When soaked, many materials change their composition or shape. Wet wood will swell, and if dried too quickly, will crack, split, or warp. Plywood can come apart and gypsum wallboard can deteriorate if it is bumped before it has time to completely dry. The longer these materials are saturated, the more moisture, sediment, and pollutants they absorb.

Soaking can also cause extensive damage to household goods. Wooden furniture may become warped, making it unusable, while other furnishings such as books, carpeting, mattresses, and upholstery usually are not salvageable. Electrical appliances and gasoline engines will flood, making them worthless until they are professionally dried and cleaned.

Many buildings that have succumbed to flood waters may look sound and unharmed after a flood, but water has the potential to cause severe property damage. Any structure that experiences a flood should be stripped, cleaned, and allowed to dry before being reconstructed. This can be an extremely expensive and time-consuming effort.

Repetitive Loss Properties

Repetitive loss structures are structures covered by a contract for flood insurance made available under the NFIP that:

a. Have incurred flood-related damage on two occasions, in which the cost of the repair, on average, equaled or exceeded 25 percent of the market value of the structure at the time of each such flood event; and
b. At the time of the second incidence of flood-related damage, the contract for flood insurance contains increased cost of compliance coverage.

Severe repetitive loss (SRL) is defined by the Flood Insurance Reform Act of 2004 and updated in the Biggert-Waters Flood Insurance Reform Act of 2012. For a property to be designated SRL, the following criteria must be met:

a. It is covered under a contract for flood insurance made available under the NFIP; and
b. It has incurred flood related damage –
    1) For which four or more separate claims payments have been made under flood insurance coverage with the amount of each claim exceeding $5,000 and with the cumulative amount of such claims payments exceeding $20,000; or
    2) For which at least two separate claims payments have been made under such coverage, with the cumulative amount of such claims exceeding the market value of the insured structure.

Figures regarding repetitive loss structures for Washington Parish are provided in the table below:

Table 2-21: Repetitive Loss Structures for Webster Parish.

Jurisdiction	Number of Structures	Residential	Commercial	Government	Total Claims	Total Claims Paid	Average Claim Paid
Webster Parish (Unincorporated)	28	29	0	0	87	$3,170,279	$36,440
Cotton Valley	0	0	0	0	0	$0	$0
Cullen	0	0	0	0	0	$0	$0
Dixie Inn	0	0	0	0	0	$0	$0
Doyline	0	0	0	0	0	$0	$0
Dubberly	0	0	0	0	0	$0	$0
Heflin	0	0	0	0	0	$0	$0
Minden	4	4	0	0	11	$147,514	$13,410
Sarepta	0	0	0	0	0	$0	$0
Shongaloo	0	0	0	0	0	$0	$0
Sibley	0	0	0	0	0	$0	$0
Springhill	4	1	3	0	10	$202,254	$20,225
Total	**36**	**33**	**3**	**0**	**108**	**$3,520,047**	**$32,593**

All 36 repetitive loss structures were geocoded in order to provide an overview of where the repetitive loss structures are located throughout the parish. *Figure 2-10* shows the approximate location of the structures, while *Figure 2-11* shows where the highest concentration of repetitive loss structures is located. Through the repetitive loss map, it is clear the primary concentrated area of repetitive loss structures is focused in the unincorporated areas of Webster Parish near the incorporated areas of Doyline and Sibley.

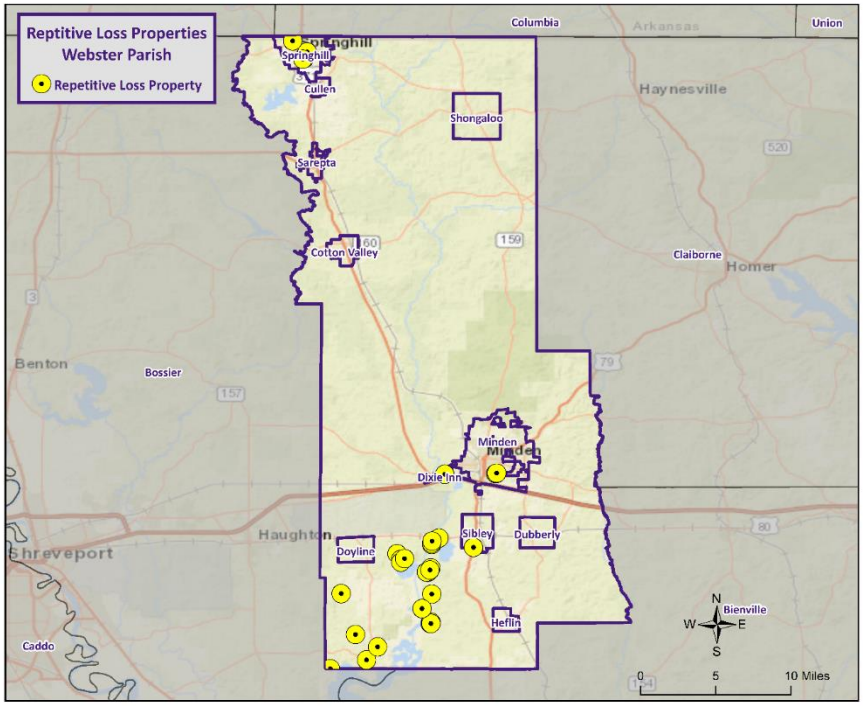


Figure 2-10: Repetitive Loss Properties in Webster Parish.

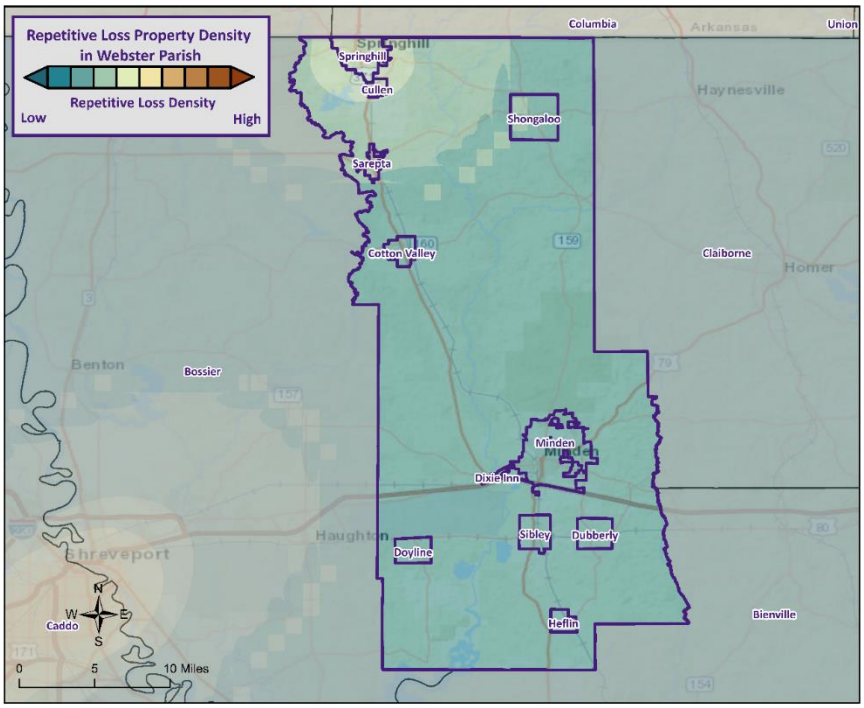


Figure 2-11: Repetitive Loss Property Densities in Webster Parish.

National Flood Insurance Program

Flood insurance statistics indicate that Webster Parish has 139 flood insurance policies with the NFIP, with total annual premiums of $189,078. Webster Parish and the jurisdictions of Cotton Valley, Cullen, Dixie Inn, Doyline, Minden, Sarepta, Sibley, Springhill are all participants in the NFIP. The incorporated areas of Dubberly, Heflin, and Shongaloo do not participate in the NFIP. Those particular jurisdictions are very limited when it comes to personnel, funding, and resources needed to administer the NFIP program. The jurisdictions have determined that participation in the NFIP has little or no benefit or impact on the residents or the economies of their respective jurisdictions. Webster Parish and all of its jurisdictions will continue to adopt and enforce floodplain management requirements, including regulating new construction Special Flood Hazard Areas, and will continue to monitor activities including local requests for new map updates. Flood insurance statistics and additional NFIP participation details for Webster Parish and its jurisdictions is provided in the tables to follow.

Table 2-22: Summary of NFIP Policies for Webster Parish.

Location	No. of Insured Structures	Total Insurance Coverage Value	Annual Premiums Paid	Insurance Claims Filed Since 1978	Total Loss Payments
Webster Parish	72	$14,968,800	$52,117	156	$257,789
Cotton Valley	1	$280,000	$395	0	$0
Cullen	0	$0	$0	0	$0
Dixie Inn	1	$306,600	$675	0	$0
Doyline	1	$350,000	$467	1	$16,036
Dubberly	0	$0	$0	0	$0
Heflin	0	$0	$0	0	$0
Minden	33	$6,331,900	$45,879	39	$774,155
Sarepta	0	$0	$0	0	$0
Shongaloo	0	$0	$0	0	$0
Sibley	3	$1,405,000	$3,823	0	$0
Springhill	28	$8,671,400	$85,722	16	$488,913
Total	**139**	**$32,313,700**	**$189,078**	**212**	**$1,536,893**

Table 2-23: Summary of Community Flood Maps for Webster Parish.

CID	Community Name	Initial FHBM Identified	Initial FIRM Identified	Current Effective Map Date	Date Joined the NFIP	Tribal
220357#	Webster Parish	5/31/1977	7/15/1988	3/2/2010	5/1/1985	No
220322#	Cotton Valley	1/14/1977	10/15/1985	3/2/2010 (M)	10/15/1985	No
220235#	Cullen	4/12/1974	3/2/2010	3/2/2010 (M)	2/12/1979	No
220269#	Dixie Inn	-	3/2/2010	3/2/2010 (M)	7/23/2010	No
220236#	Doyline	4/5/1974	9/18/1979	3/2/2010 (M)	9/18/1979	No
-	Dubberly	-	-	-	-	No
-	Heflin	-	-	-	-	No
220237#	Minden	3/15/1974	7/18/1985	3/2/2010	7/18/1985	No
220348#	Sarepta	6/11/1976	3/2/2010	3/2/2010 (M)	3/2/2010	No
-	Shongaloo	-	-	-	-	No
220258#	Sibley	2/7/1975	7/18/1985	3/2/2010 (M)	7/18/1985	No
220238#	Springhill	3/15/1974	6/15/1981	3/2/2010	6/15/1981	No

According to the Community Rating System (CRS) list of eligible communities dated October 1, 2021, neither Webster Parish nor the incorporated areas of Cotton Valley, Cullen, Dixie Inn, Doyline, Dubberly, Heflin, Minden, Sarepta, Shongaloo, Sibley, and Springhill participate in the CRS program.

Threat to People

Just as with property damage, depth and velocity are major factors in determining the threat posed to people by flooding. It takes very little depth or velocity for flood waters to become dangerous. A car will float in less than two feet of moving water, and can be swept downstream into deeper waters, trapping

passengers within the vehicle. Victims of floods have often put themselves in perilous situations by entering flood waters that they believe to be safe, or by ignoring travel advisories.

Major health concerns are also associated with floods. Flood waters can transport materials such as dirt, oil, animal waste, and chemicals (e.g., farm, lawn, and industrial) that may cause illnesses of various degrees when coming in contact with humans. Flood waters can also infiltrate sewer lines and inundate wastewater treatment plants, causing sewage to backup and creating a breeding ground for dangerous bacteria. This infiltration may also cause water supplies to become contaminated and undrinkable.

Flooding in Webster Parish

By definition, flooding is caused when an area receives more water than the drainage system can convey. The following is a synopsis of the types of flooding that Webster Parish experiences.

Flash Floods: Flash floods are characterized by a rapid rise in water level, high velocity, and large amounts of debris. They are capable of uprooting trees, undermining buildings, and bridges, and scouring new channels. Major factors in flash flooding are the high intensity and short duration of rainfall, as well as the steepness of watershed and stream gradients.

Local Drainage or High Groundwater Levels: Locally heavy precipitation may produce flooding in areas other than delineated floodplains or along recognizable drainage channels. If local conditions cannot accommodate intense precipitation through a combination of infiltration and surface runoff, water may accumulate and cause flooding problems.

Backwater Flooding: Backwater flooding is normally associated with riverine flooding and connotes minimal velocity. All low-lying areas are at risk. A heavy rainfall event coupled with a swollen river, canal, bayou, or marsh hinders drainage outflow, causing backwater flooding to the same areas susceptible to storm surge.

Riverine Flooding: Riverine flooding, by definition, is river-based. Most of the riverine flooding problems occur when rivers crests at flood stage levels, causing extensive flooding in low-lying areas.

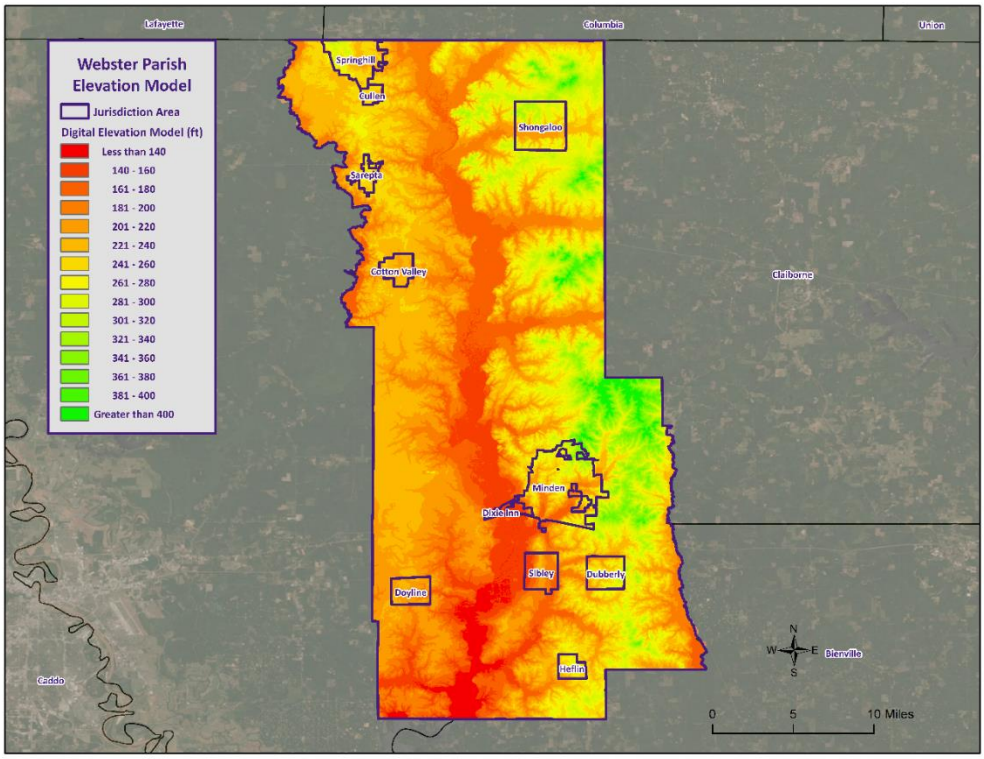


Figure 2-12: Elevation throughout Webster Parish.

The digital elevation model (DEM) in the figure below for Webster Parish is instructive in visualizing where the low-lying and high-risk areas are for the parish. Elevations in the parish rang from approximately 140 feet (NAVD88) to over 400 feet (NAVD88). The highest elevations in the parish are approximately 480 feet (NAVD88), located in the unincorporated area of the parish. The incorporated areas range in elevation from approximately 167 feet (NAVD88) to 297 feet (NAVD88), with Dixie Inn averaging 167 feet (NAVD88), Sibley averaging 200 feet (NAVD88), Cotton Valley and Doyline averaging 226 feet (NAVD88), Minden averaging 240 feet (NAVD88), Cullen and Dubberly averaging 249 feet (NAVD88), Shongaloo averaging 256 feet (NAVD88), Sarepta and Heflin averaging 272 feet (NAVD88), and Springhill averaging 292 feet (NAVD88).

Location

Webster Parish has experienced significant flooding in its history and can expect more in the future. There are portions of three watersheds within Webster Parish: Bodcau Bayou, Black Lake Bayou, and the Loggy Bayou. The Loggy Bayou is the largest watershed in Webster Parish. Each watershed possesses unique flooding characteristics due to topography, vegetative cover, soil type, and the like. However, riverine flooding from the Bayou Dorcheat emptying into Lake Bistineau poses the largest flood hazard in terms of linear miles.

Based on previous flood events, the worst-case scenarios are based on several different types of flooding events. Storm water excesses and riverine flooding primarily affect the low-lying areas of the parish, and flood depths of up to six to eight feet can be expected in the unincorporated areas of the parish. The incorporated areas of Cotton Valley, Dixie Inn, Doyline, and Minden can expect flood depths from four to six feet, while the incorporated areas of Cullen, Dubberly, Heflin, and Springhill can expect flooding levels of approximately two to four feet. The incorporated areas of Sarepta, Shongaloo, and Sibley can expect flood levels of approximately one to four feet.

The following is a flood zone map displaying 100- and 500-year flood zones for Webster Parish:

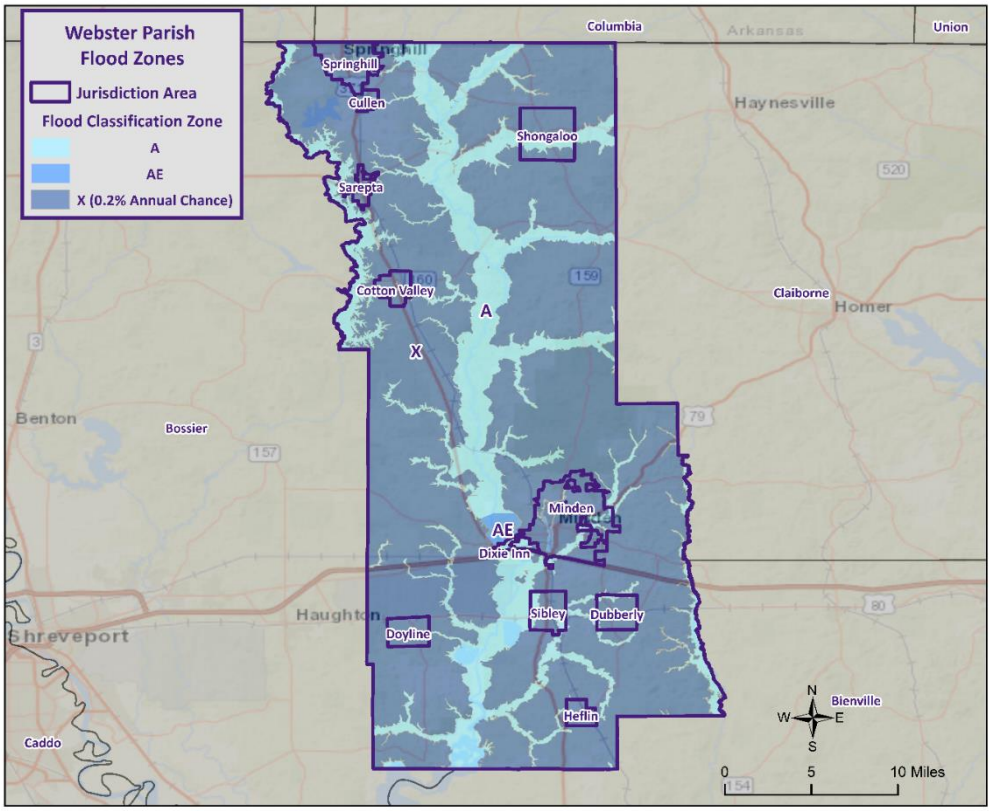


Figure 2-13: Webster Parish Areas within the Flood Zones.

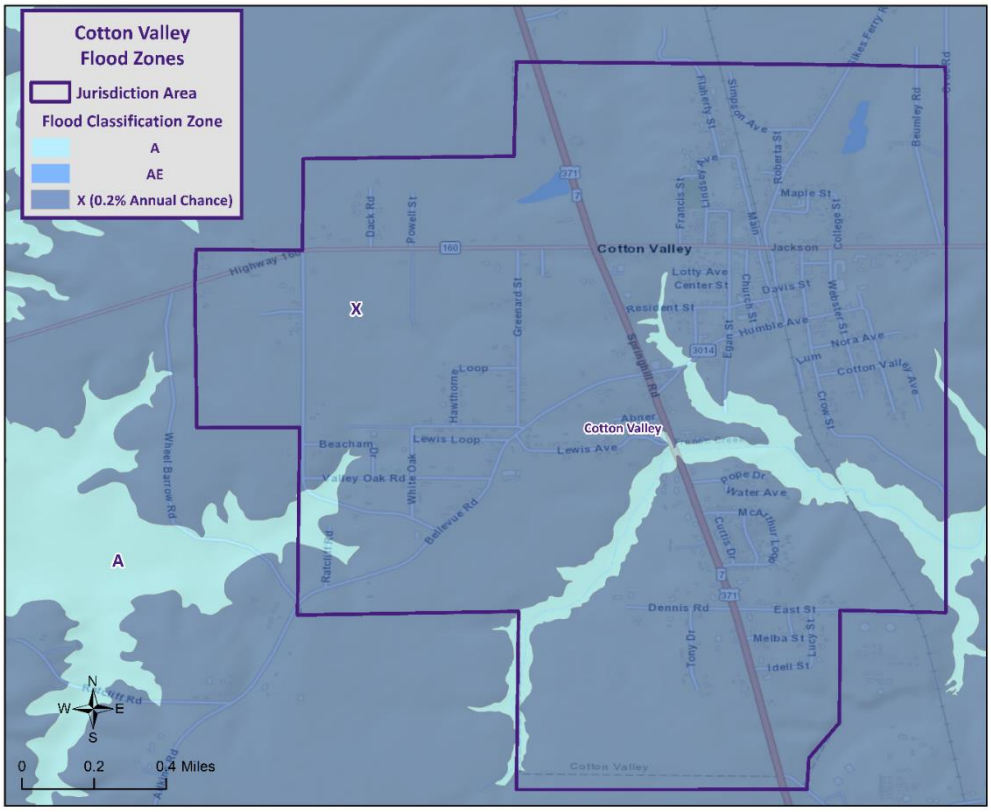


Figure 2-14: Cotton Valley Areas within the Flood Zones.

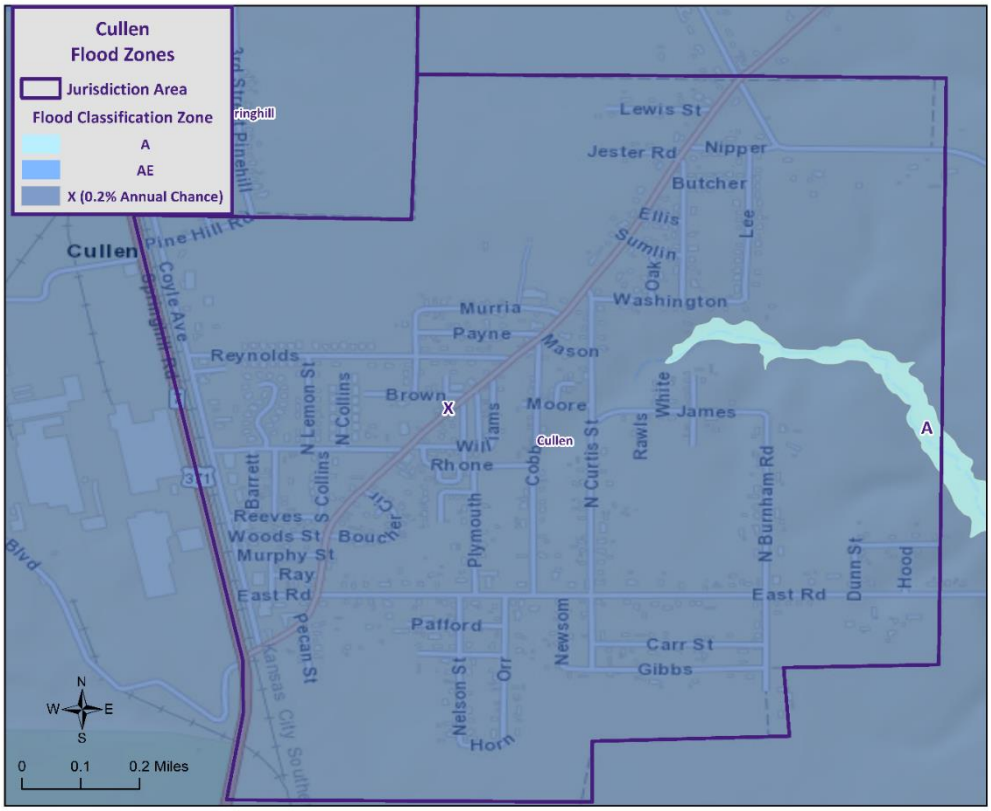


Figure 2-15: Cullen Areas within the Flood Zones.

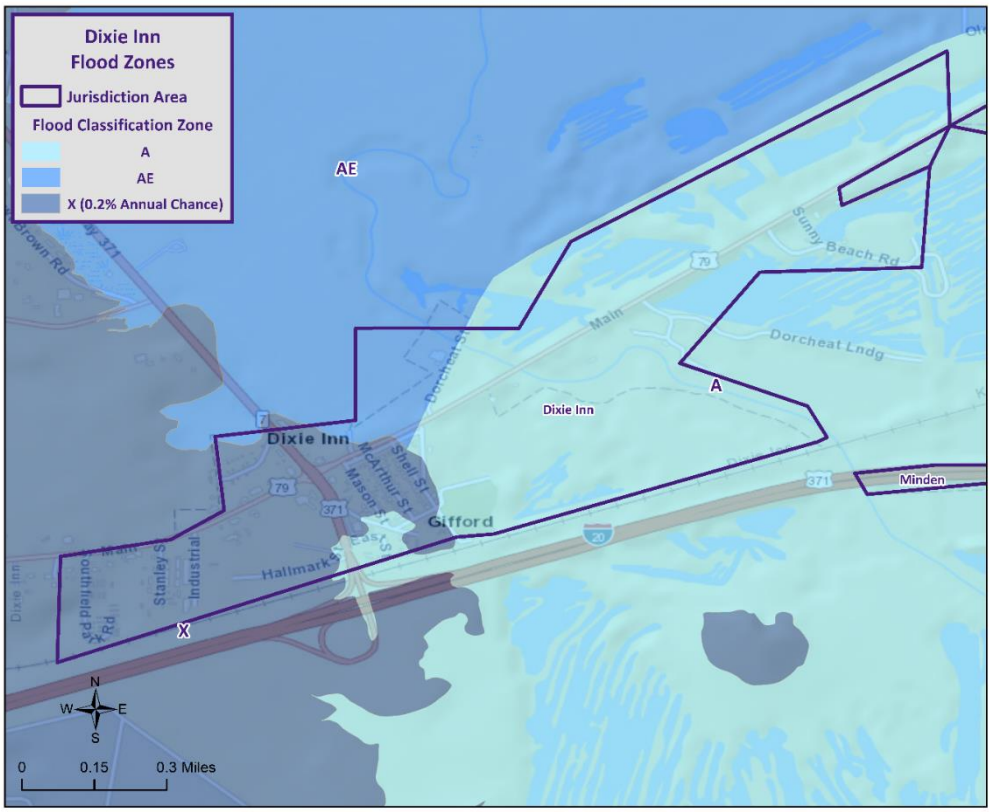


Figure 2-16: Dixie Inn Areas within the Flood Zones.

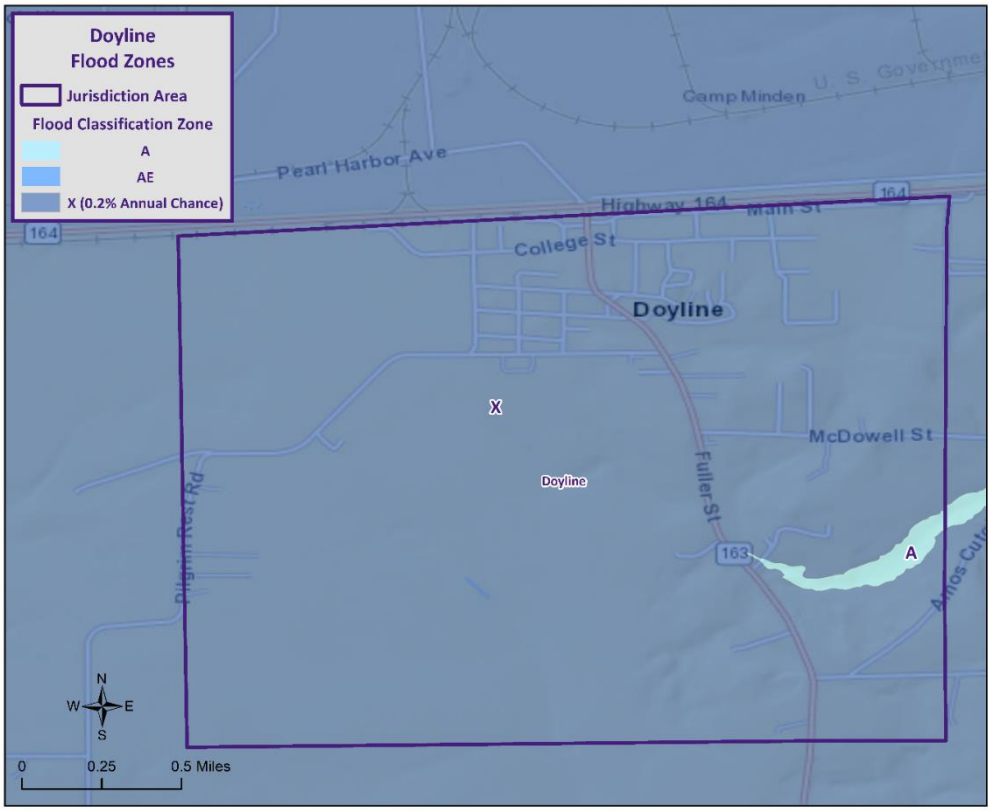


Figure 2-17: Doyline Areas within the Flood Zones.

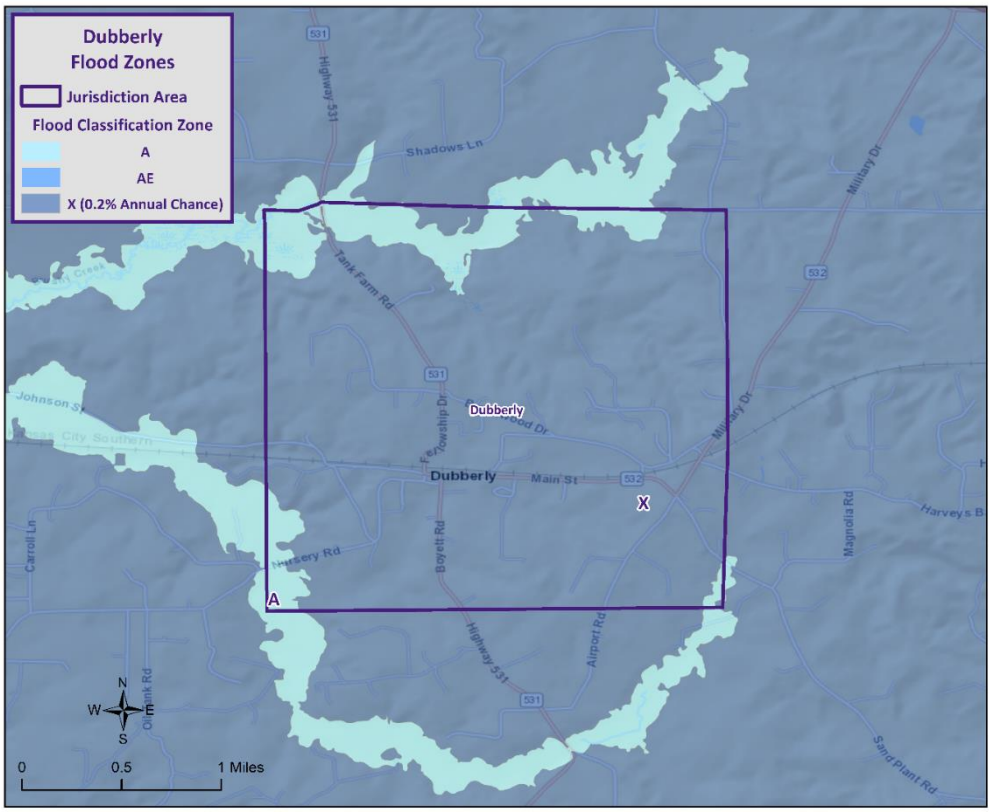


Figure 2-18: Dubberly Areas within the Flood Zones.

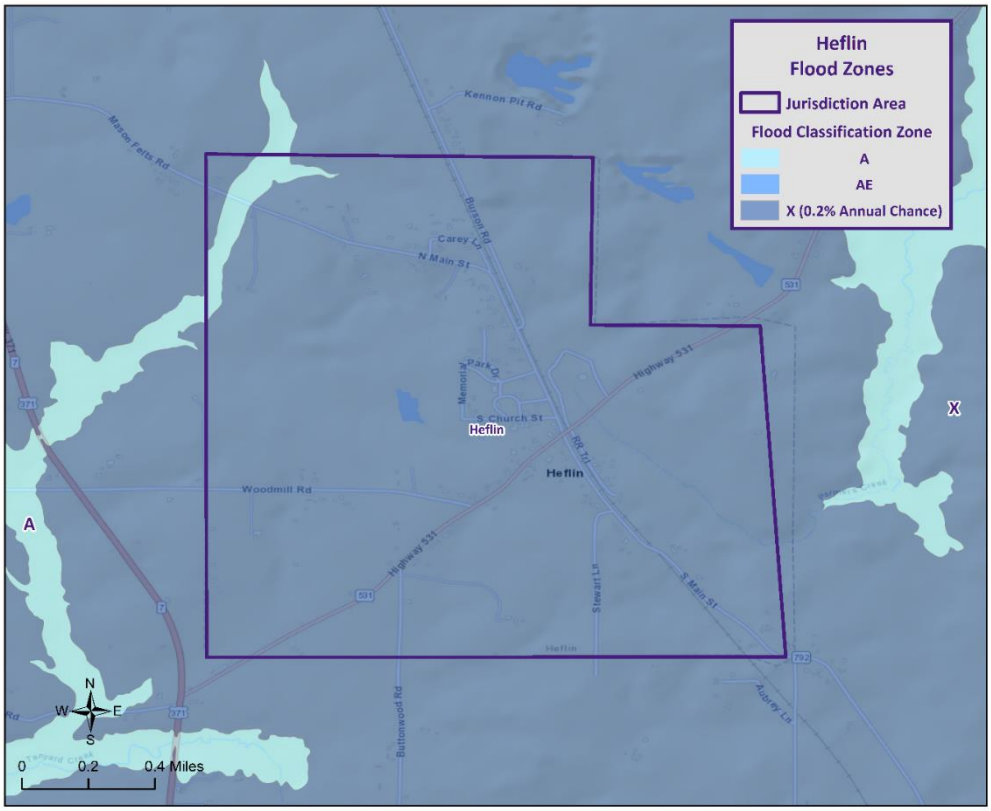


Figure 2-19: Heflin Areas within the Flood Zones.

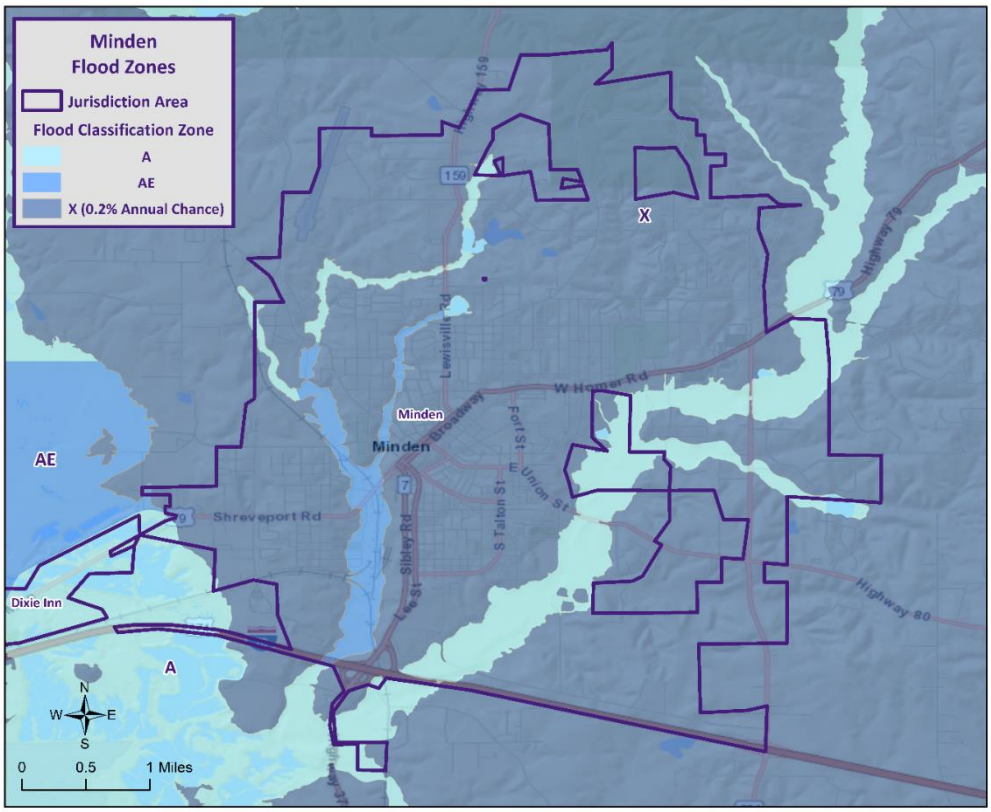


Figure 2-20: Minden Areas within the Flood Zones.

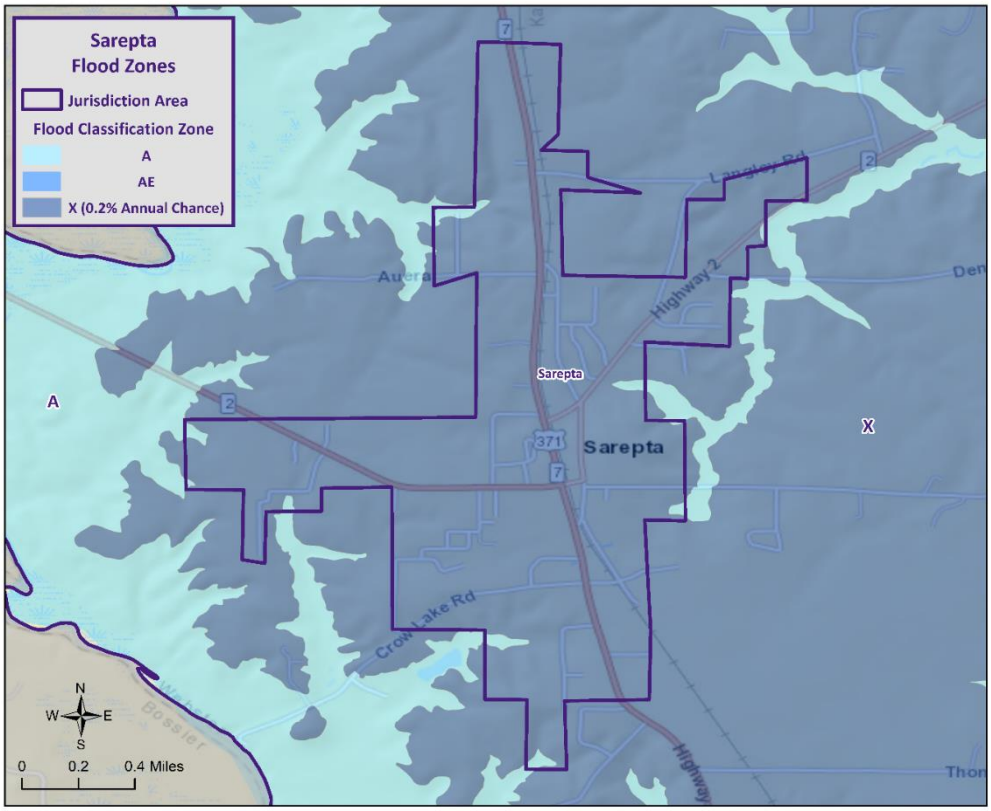


Figure 2-21: Sarepta Areas within the Flood Zones.

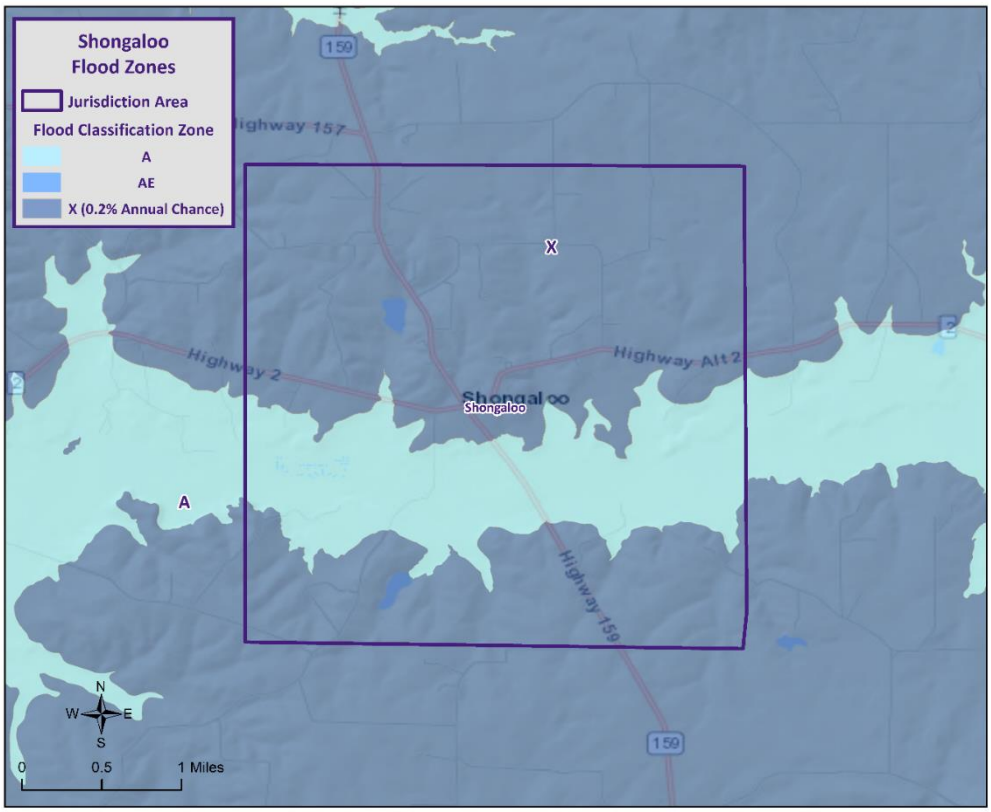


Figure 2-22: Shongaloo Areas within the Flood Zones.

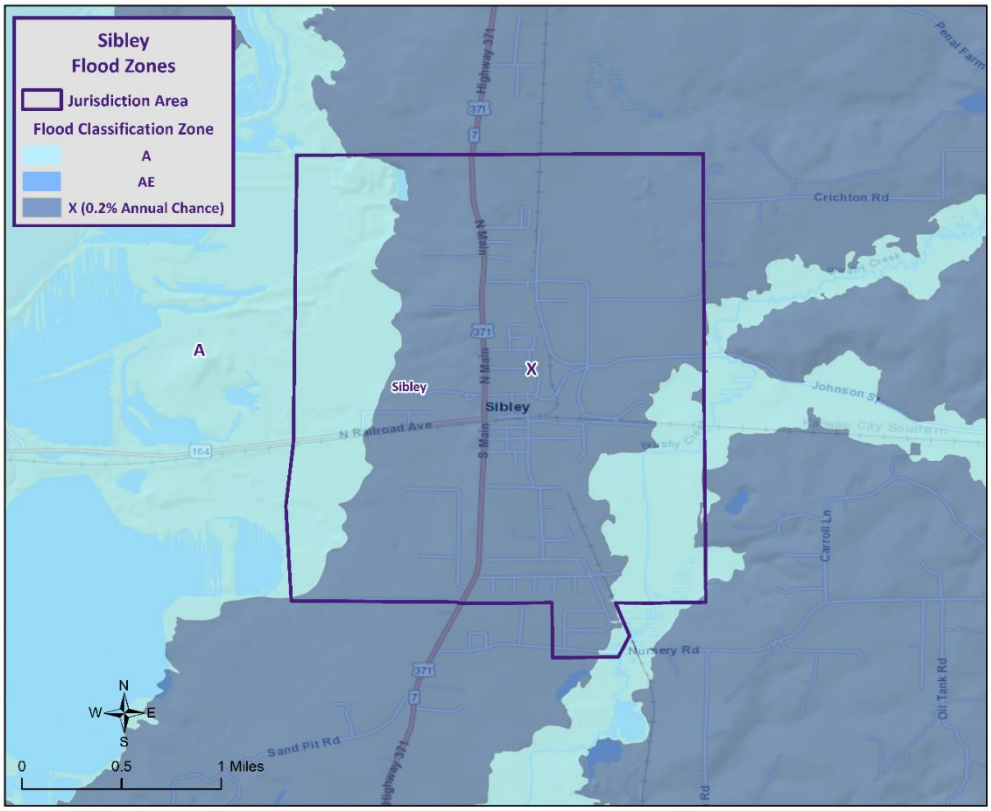


Figure 2-23: Sibley Areas within the Flood Zones.

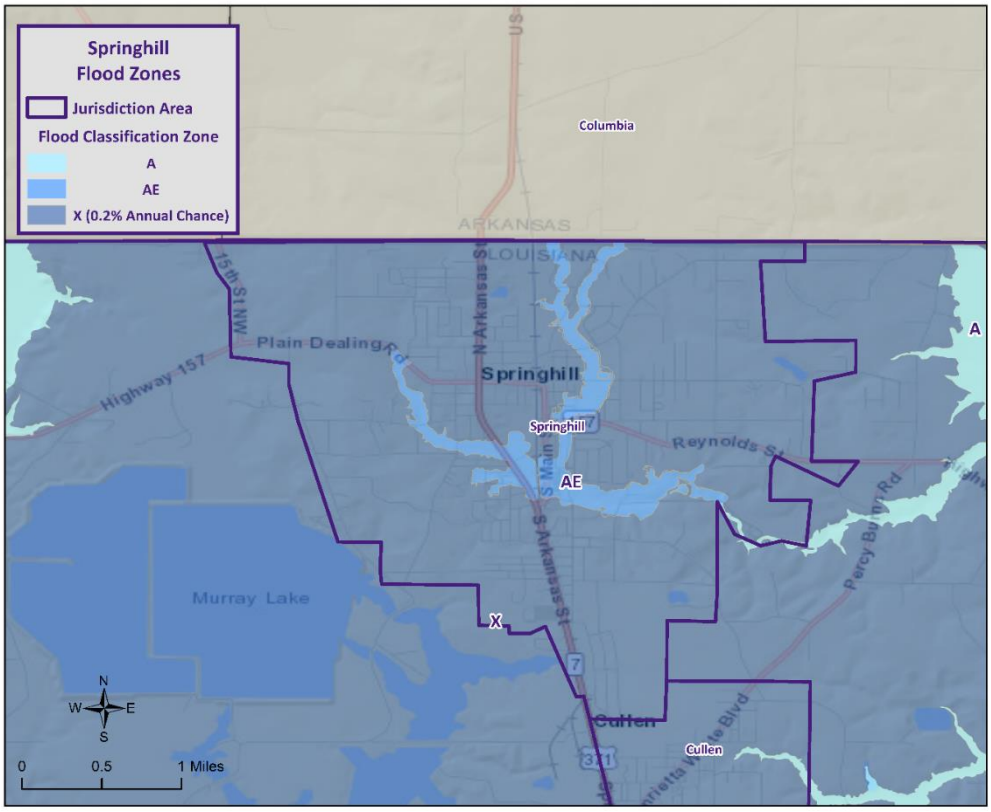


Figure 2-24: Springhill Areas within the Flood Zones.

Previous Occurrences / Extents

Historically, there have been 63 flooding events that have caused significant flooding in Webster Parish and its jurisdictions between 1990 and 2020. Below is a brief synopsis of the flooding events which occurred since the last Webster Parish HMP Update in 2016.

Table 2-24: Historical Floods in Webster Parish with Locations since the 2016 Webster Parish HMP Update.

Date	Extents	Type of Flooding	Estimated Damages	Location
March 8, 2016	A 5-day heavy rainfall event resulted in massive flooding across all of Webster Parish in Northwest Louisiana. Some of the more impressive 5 day totals across the parish were as follows: Minden: 18.73 inches. The Louisiana National Guard was deployed by the Governor of Louisiana to assist local law enforcement in the massive response to the prolonged flooding event. These operations included evacuations, search and rescue, distribution and supply of water and meals, security and shelter support and distribution of sandbags and sandbag filling machines. In addition, 36 high water vehicles and 16 boats were called in to assist in the effort. Numerous roads were inundated with flood waters and closed across Webster Parish. Numerous high water rescues were conducted by first responders which included rescuing occupants trapped in their vehicles as well as the rescuing of residents from flooded homes across the parish. Flooding was significant for residents along Lake Bistineau as well as Dorcheat Bayou in Webster Parish. These bodies of water saw significant rises from the excessive heavy rainfall. Lake Bistineau in the southern portion of Webster Parish set a new record stage of 150.16 feet on March 13th which broke the previous record stage of 147.79 feet in April of 1991. This resulted in severe flooding of both stilted and unstilted homes. Numerous boathouses were submerged. Nearly all access roads to the lake were cut off and travel by boat was the only practical method of transportation. On Dorcheat Bayou at Dixie Inn, the bayou crested at 25.95 feet on March 12th which was a	Flash Flood	$0	PARISHWIDE

Date	Extents	Type of Flooding	Estimated Damages	Location
	record crest beating the previous record of 25.12 feet in April of 1997. At this stage, thousands of acres of land occurred. Low parts of Dixie Inn suffered severe flooding and the restaurant and boat launch adjacent to the gauge in Dixie Inn was flooded. The Governor's Office of Homeland Security determined that upwards of 400 homes across Webster Parish were completely flooded with 819 homes having registered some sort of flood damage from the 5-day event. Public property damage estimates were still pending at the time of this writing. Several Red Cross shelters were set up across the parish for flooded residents. As a result, the Governor of Louisiana declared a State of Emergency for Webster Parish and wrote a Federal Disaster Declaration for the parish as well.			
March 9, 2016	All major roadways on the south end of Webster Parish are flooded and closed. Travel was very difficult even where it was possible. Many roadways were washed out.	Flash Flood	$0	PARISHWIDE
September 10, 2016	Heavy rainfall resulted in high water on Hwy. 80 just south of the intersection of Hwy. 79 near downtown Minden, Louisiana. The highway had to be closed with several cars stalled out in the high water.	Flash Flood	$30,000	MINDEN
February 10, 2020	About 1.5-2 feet of water covered the front steps of a home on Wiggins Lane east of Minden.	Flash Flood	$0	NINE FORKS

Frequency / Probability

The NCEI Storm Events Database identified 63 flooding events within the Webster Parish planning area since 1990. The table below shows the probability and return frequency for each jurisdiction.

Table 2-25: Annual Flood Probabilities for Webster Parish.

Jurisdiction	Annual Probability	Return Frequency
Webster Parish (Unincorporated)	40%	Once every 3 years
Cotton Valley	72%	Once every 1 to 2 years
Cullen	16%	Once every 7 to 8 years
Dixie Inn	16%	Once every 7 to 8 years
Doyline	16%	Once every 7 to 8 years
Dubberly	16%	Once every 7 to 8 years
Heflin	28%	Once every 4 to 5 years
Minden	24%	Once every 5 years
Sarepta	20%	Once every 6 years
Shongaloo	20%	Once every 6 years
Sibley	24%	Once every 5 years
Springhill	16%	Once every 7 to 8 years

Based on historical record, the overall flooding probability for the entire Webster Parish Planning area is 100%, with 63 events occurring over a 30-year period.

Estimated Potential Losses

Using the Hazus Flood Model, the 100-year flood scenario, along with the Parish DFIRM, was analyzed to determine losses from this worst-case scenario. *Table 2-26* shows the total economic losses that would result from this occurrence.

Table 2-26: Estimated Losses in Webster Parish from a 100-year Flood Event. (Source: Hazus)

Jurisdiction	Estimated Total Losses from 100-Year Flood Event
Webster Parish (Unincorporated)	$56,997,000
Cotton Valley	$0
Cullen	$0
Dixie Inn	$1,612,000
Doyline	$0
Dubberly	$0
Heflin	$0
Minden	$29,898,000
Sarepta	$48,000
Shongaloo	$605,000
Sibley	$1,530,000
Springhill	$0
Total	**$90,690,000**

The Hazus Flood model also provides a breakdown for seven primary sectors (Hazus occupancy) throughout the parish. The losses for Webster Parish by sector are listed in the following table:

Table 2-27: Estimated 100-year Flood Losses for Webster Parish by Sector. (Source: Hazus)

Webster Parish (Unincorporated)	Estimated Total Losses from 100-Year Flood Event
Agricultural	$272,000
Commercial	$4,434,000
Government	$5,000
Industrial	$2,568,000
Religious / Non-Profit	$2,851,000
Residential	$46,721,000
Schools	$146,000
Total	**$56,997,000**

Table 2-28: Estimated 100-year Flood Losses for Dixie Inn by Sector. (Source: Hazus)

Dixie Inn	Estimated Total Losses from 100-Year Flood Event
Agricultural	$0
Commercial	$1,368,000
Government	$0
Industrial	$0
Religious / Non-Profit	$0
Residential	$244,000
Schools	$0
Total	**$1,612,000**

Table 2-29: Estimated 100-year Flood Losses for Minden by Sector. (Source: Hazus)

Minden	Estimated Total Losses from 100-Year Flood Event
Agricultural	$98,000
Commercial	$21,349,000
Government	$376,000
Industrial	$380,000
Religious / Non-Profit	$344,000
Residential	$6,703,000
Schools	$648,000
Total	**$29,898,000**

Table 2-30: Estimated 100-year Flood Losses for Sarepta by Sector. (Source: Hazus)

Sarepta	Estimated Total Losses from 100-Year Flood Event
Agricultural	$0
Commercial	$0
Government	$0
Industrial	$0
Religious / Non-Profit	$0
Residential	$48,000
Schools	$0
Total	**$48,000**

Table 2-31: Estimated 100-year Flood Losses for Shongaloo by Sector. (Source: Hazus)

Shongaloo	Estimated Total Losses from 100-Year Flood Event
Agricultural	$0
Commercial	$46,000
Government	$53,000
Industrial	$0
Religious / Non-Profit	$0
Residential	$506,000
Schools	$0
Total	**$605,000**

Table 2-32: Estimated 100-year Flood Losses for Sibley by Sector. (Source: Hazus)

Sibley	Estimated Total Losses from 100-Year Flood Event
Agricultural	$0
Commercial	$86,000
Government	$0
Industrial	$12,000
Religious / Non-Profit	$2,000
Residential	$1,430,000
Schools	$0
Total	**$1,530,000**

Threat to People

The total population within the parish that is susceptible to a flood hazard is shown in the table below:

Table 2-33: Vulnerable Populations Susceptible to a 100-year Flood Event. (Source: Hazus)

Number of People Exposed to Flood Hazards			
Location	**# in Community**	**# in Hazard Area**	**% in Hazard Area**
Webster Parish (Unincorporated)	16,785	5,226	31.1%
Cotton Valley	1,009	0	0.0%
Cullen	1,163	0	0.0%
Dixie Inn	273	8	2.9%
Doyline	818	0	0.0%
Dubberly	273	0	0.0%
Heflin	244	0	0.0%
Minden	13,082	731	5.6%
Sarepta	891	4	0.4%
Shongaloo	182	64	35.2%
Sibley	1,218	218	17.9%
Springhill	5,269	0	0.0%
Total	**41,207**	**6,183**	**15.0%**

The Hazus flood model was also extrapolated to provide an overview of vulnerable populations throughout the jurisdictions in the following tables:

Table 2-34: Vulnerable Populations Susceptible to a 100-year Flood Event in Webster Parish. (Source: Hazus)

Webster Parish (Unincorporated)		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	5,226	31.1%
Persons Under 5 Years	334	6.4%
Persons Under 18 Years	898	17.2%
Persons 65 Years and Over	874	16.7%
White	3,357	64.2%
Minority	1,869	35.8%

Table 2-35: Vulnerable Populations Susceptible to a 100-year Flood Event in Dixie Inn. (Source: Hazus)

Dixie Inn		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	8	2.9%
Persons Under 5 Years	1	7.7%
Persons Under 18 Years	1	15.0%
Persons 65 Years and Over	1	9.5%
White	4	51.7%
Minority	4	48.4%

Table 2-36: Vulnerable Populations Susceptible to a 100-year Flood Event in Minden. (Source: Hazus)

Minden		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	731	5.6%
Persons Under 5 Years	51	6.9%
Persons Under 18 Years	131	18.0%
Persons 65 Years and Over	126	17.2%
White	338	46.2%
Minority	393	53.8%

Table 2-37: Vulnerable Populations Susceptible to a 100-year Flood Event in Sarepta. (Source: Hazus)

Sarepta		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	4	0.4%
Persons Under 5 Years	0	6.2%
Persons Under 18 Years	1	20.9%
Persons 65 Years and Over	1	17.0%
White	4	98.8%
Minority	0	1.2%

Table 2-38: Vulnerable Populations Susceptible to a 100-year Flood Event in Shongaloo. (Source: Hazus)

Shongaloo		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	64	35.2%
Persons Under 5 Years	6	9.9%
Persons Under 18 Years	14	21.4%
Persons 65 Years and Over	5	8.2%
White	60	94.5%
Minority	4	5.5%

Table 2-39: Vulnerable Populations Susceptible to a 100-year Flood Event in Sibley. (Source: Hazus)

Sibley		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	218	17.9%
Persons Under 5 Years	15	7.0%
Persons Under 18 Years	44	20.0%
Persons 65 Years and Over	32	14.8%
White	156	71.7%
Minority	62	28.3%

Vulnerability

See *Appendix C: Critical Facilities* for parish and municipality buildings that are susceptible to flooding due to proximity within the 100-year flood plain.

Sinkholes

Sinkholes are areas of ground—varying in size from a few square feet to hundreds of acres and reaching in depth from 1 to more than 100 ft.—with no natural external surface drainage. Sinkholes are usually found in karst terrain—that is, areas where limestone, carbonate rock, salt beds, and other water-soluble rocks lie below the Earth's surface. Karst terrain is marked by the presence of other uncommon geologic features such as springs, caves, and dry streambeds that lose water into the ground. In general, sinkholes form gradually (in the case of cover subsidence sinkholes), but they can also occur suddenly (in the case of cover-collapse sinkholes).

Sinkhole formation is a very simple process. Whenever water is absorbed through soil, encounters water-soluble bedrock, and then begins to dissolve it, sinkholes start to form. The karst rock dissolves along cracks; as the fissures grow, soil and other particles fill the gaps, loosening the soil above the bedrock. Figure 1 illustrates the development of a cover subsidence sinkhole. As the soil sinks from the surface, a depression forms, which draws in more water, funneling it down to the water-soluble rock. The increase of water and soil in the rock pushes open the cracks, again drawing more soil and water into it. This positive feedback loop continues, unless clay plugs into the cracks in the bedrock, at which time a pond may form. A sudden cover-collapse sinkhole occurs when the topsoil above dissolving bedrock does not sink, but forms a bridge over the soil that is sinking beneath it. Underground soil continues to fill the bedrock fissures, until finally the soil bridge collapses and fills the void beneath it.

Both kinds of sinkholes can occur naturally or through human influence. While sinkholes tend to form naturally in karst areas, sinkholes can form in other geological areas that have been altered by humans such as mining, sewers, hydraulic fracture drilling, groundwater pumping, irrigation, or storage ponds. In all of these cases, and others, the cause for the sinkhole is that support for surface soil has been weakened or substantially removed.

In the United States, 20% of land in the United States is susceptible to sinkholes. Most of this area lies in Florida, Texas, Alabama, Missouri, Kentucky, Tennessee, and Pennsylvania. In Louisiana, most of the sinkholes are precipitated by the human-influenced collapse of salt dome caverns. The collapse of a salt dome is usually a slow process; however, it may occur suddenly and without any advance warning.

Location

Currently, there are three identifiable salt dome locations in Webster Parish. *Figure 2-25* displays the location of this salt domes with their relative location to the nearest jurisdiction. As depicted in the figure, the salt domes are dispersed throughout Webster parish, with all three of the salt domes located in the unincorporated areas of the parish. At this time, there are no salt domes or sinkholes located in or near the incorporated areas of Cotton Valley, Cullen, Dixie Inn, Doyline, Dubberly, Heflin, Minden, Sarepta, Sibley, Shongaloo, and Springhill, but the salt domes will continue to be monitored.

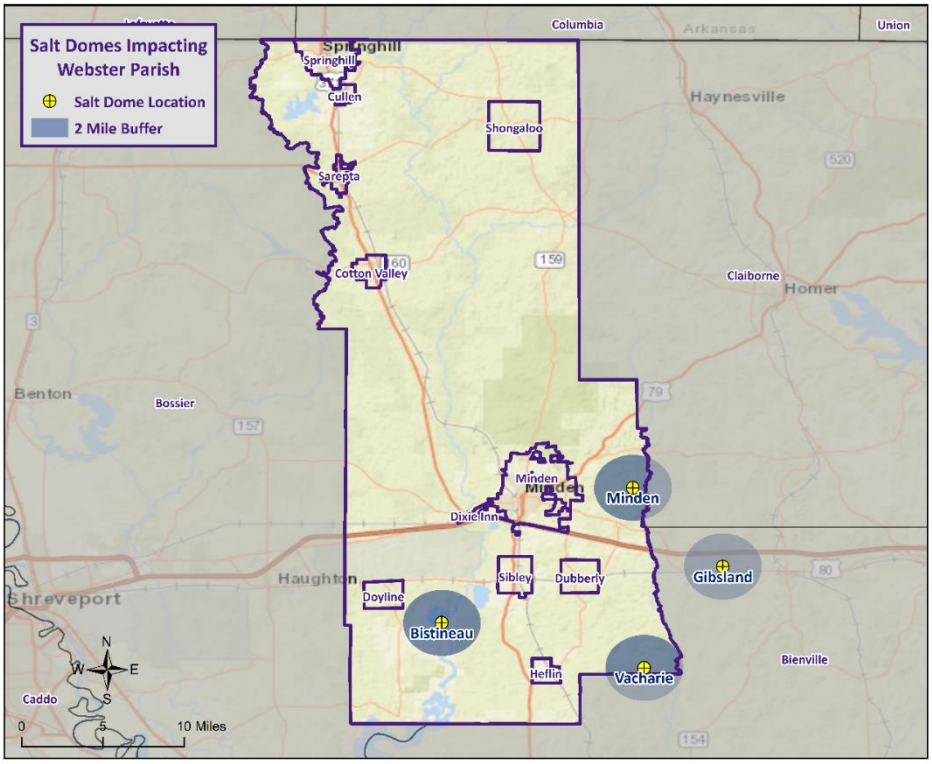


Figure 2-25: Salt Dome Locations in Webster Parish.

Previous Occurrences / Extent

There have been no recorded incidents of sinkholes or salt dome collapses in Webster Parish to date.

Frequency / Probability

Based on historical data for the past 30-years, there has been no incident of a sinkhole formation or salt dome collapse in Webster Parish. The annual chance of occurrence is calculated at less than 1%.

Estimated Potential Losses

The three salt dome locations were analyzed to determine the number of people and homes that are potentially susceptible to losses from a sinkhole materializing from the salt domes. The following table is based on conducting a two-mile buffer around the center of the salt domes. The values were determined by querying the 2010 U.S. Census block data to determine the number of houses and people located within two miles of the salt domes and sinkholes. Critical facilities were also analyzed to determine if they fell within the two-mile buffer of the salt domes and sinkholes. Total value for all occupancy group from Hazus was used to estimate a total loss of all facilities that were within two miles of the salt domes and sinkholes.

Table 2-40: Estimated Potential Losses from a Sinkhole formation.
(Source: U.S. 2010 Census Data and Hazus)

Salt Dome Name	Total Building Exposure	Critical Infrastructure Exposure	Number of People Exposed	Number of Houses Exposed
Bistineau	$189,807,000	0	1,306	744
Minden	$111,727,000	0	965	414
Vacharie	$3,109,000	0	147	81

The salt dome that poses the greatest risk to Webster Parish is the Bistineau Salt Dome. The Bistineau Salt Dome contains a total of 744 homes and 1,306 people within its two mile buffer.

Vulnerability

See *Appendix C: Critical Facilities* for parish and municipality building exposure to a sinkhole hazard.

Thunderstorms

The term "thunderstorm" is usually used as a catch-all term for several kinds of storms. Here "thunderstorm" is defined to include any precipitation event in which thunder is heard or lightning is seen. Thunderstorms are often accompanied by heavy rain and strong winds and, depending on conditions, occasionally by hail or snow. Thunderstorms form when humid air masses are heated, which causes them to become convectively unstable and therefore rise. Upon rising, the air masses' water vapor condenses into liquid water and/or deposits directly into ice when they rise sufficiently to cool to the dew-point temperature.

Thunderstorms are classified into four main types (single cell, multicell, squall line, and supercell), depending on the degree of atmospheric instability, the change in wind speed with height (called wind shear), and the degree to which the storm's internal dynamics are coordinated with those of adjacent storms. There is no such interaction for single-cell thunderstorms, but there is significant interaction with clusters of adjacent thunderstorms in multicell thunderstorms and with a linear "chain" of adjacent storms in squall line thunderstorms. Though supercell storms have no significant interactions with other storms, they have very well-organized and self-sustaining internal dynamics, which allows them to be the longest-lived and most severe of all thunderstorms.

The life of a thunderstorm proceeds through three stages: the developing (or cumulus) stage, the mature stage, and the dissipation stage. During the developing stage, the unstable air mass is lifted as an updraft into the atmosphere. This sudden lift rapidly cools the moisture in the air mass, releasing latent heat as condensation and/or deposition occurs, and warming the surrounding environment, thus making it less dense than the surrounding air. This process intensifies the updraft and creates a localized lateral rush of air from all directions into the area beneath the thunderstorm to feed continued updrafts. At the mature stage, the rising air is accompanied by downdrafts caused by the shear of falling rain (if melted completely), or hail, freezing rain, sleet, or snow (if not melted completely). The dissipation stage is characterized by the dominating presence of the downdraft as the hot surface that gave the updrafts their buoyancy is cooled by precipitation. During the dissipation stage, the moisture in the air mass largely empties out.

The Storm Prediction Center in conjunction with the National Weather Service (NWS) have the ability to issue advisory messages based on forecasts and observations. The following are the advisory messages that may be issued with definitions of each:

- ***Severe Thunderstorm Watch***: Issued to alert people to the possibility of a severe thunderstorm developing in the area. Expected time frame for these storms is three to six hours.

- ***Severe Thunderstorm Warning***: Issued when severe thunderstorms are imminent. This warning is highly localized and covers parts of one to several counties (parishes).

A variety of hazards might be produced by thunderstorms, including lightning, hail, tornadoes or waterspouts, flash floods, and high-speed winds called downbursts. Nevertheless, given all of these criteria, the National Oceanic and Atmospheric Administration (NOAA) characterizes a thunderstorm as severe when it produces one or more of the following:

- Hail of 1 inch in diameter or larger
- Wind gusts to 58 mph or greater
- One or more tornadoes

Tornadoes and flooding hazards have been profiled within this report; therefore, for the purpose of thunderstorms, the sub hazards of hail, high winds, and lightning will be profiled.

Thunderstorms occur throughout Louisiana at all times of the year, although the types and severity of those storms vary greatly, depending on a wide variety of atmospheric conditions. Thunderstorms generally occur more frequently during the late spring and early summer when extreme variations exist between ground surface temperatures and upper atmospheric temperatures.

Hazard Description

Hailstorms

Hailstorms are severe thunderstorms in which balls or chunks of ice fall along with rain. Hail develops in the upper atmosphere initially as ice crystals that are bounced about by high-velocity updraft winds. The ice crystals grow through deposition of water vapor onto their surface, fall partially to a level in the cloud where the temperature exceeds the freezing point, melt partially, get caught in another updraft whereupon re-freezing and deposition grows another concentric layer of ice, and fall after developing enough weight, sometimes after several trips up and down the cloud. The size of hailstones varies depending on the severity and size of the thunderstorm. Higher surface temperatures generally mean stronger updrafts, which allows more massive hailstones to be supported by updrafts, leaving them suspended longer. This longer time means larger hailstone sizes. The tables on the next page display the TORRO Hailstorm Intensity Scale along with a spectrum of hailstone diameters and their everyday equivalents.

Table 2-41: TORRO Hailstorm Intensity Scale.

Intensity Category		Hail Diameter (mm)	Probable Kinetic Energy	Typical Damage Impacts
H0	Hard Hail	5	0 - 20	No damage
H1	Potentially Damaging	5 - 15	>20	Slight general damage to plant, crops
H2	Significant	10 - 20	>100	Significant damage to fruit, crops, vegetation
H3	Severe	20 - 30	>300	Severe damage to fruit and crops, damage to glass and plastic structures, paint and wood scored
H4	Severe	25 - 40	>500	Widespread glass damage, vehicle body work
H5	Destructive	30 - 50	>800	Wholesale destruction of glass, damage to tiled roofs, significant risk of injuries
H6	Destructive	40 - 60		Bodywork of grounded aircraft dented, brick walls pitted
H7	Destructive	50 - 75		Severe roof damage, risk of serious injuries
H8	Destructive	60 - 90		Severe damage to aircraft bodywork
H9	Super Hailstorms	75 - 100		Extensive structural damage. Risk of severe or even fatal injuries to persons caught in the open
H10	Super Hailstorms	>100		Extensive structural damage. Risk of severe or even fatal injuries to persons caught in the open

Table 2-42: Spectrum of Hailstone Diameters and their Everyday Description. (Source: National Weather Service)

Spectrum of Hailstone Diameters	
Hail Diameter Size	**Description**
1/4”	Pea
1/2”	Plain M&M
3/4”	Penny
7/8”	Nickle
1” (severe)	Quarter
1 1/4”	Half Dollar
1 1/2”	Ping Pong Ball / Walnut
1 3/4”	Golf Ball
2”	Hen Egg / Lime
2 1/2"	Tennis Ball
2 3/4"	Baseball
3”	Teacup / Large Apple
4”	Softball
4 1/2"	Grapefruit
4 3/4” – 5”	Computer CD-DVD

Hailstorms can cause widespread damage to homes and other structures, automobiles, and crops. While the damage to individual structures or vehicles is often minor, the cumulative cost to communities, especially across large metropolitan areas, can be quite significant. Hailstorms can also be devastating to crops. Thus, the severity of hailstorms depends on the size of the hailstones, the length of time the storm lasts, and where it occurs.

Hail rarely causes loss of life, although large hailstones can cause bodily injury.

High Winds

In general, high winds can occur in a number of different ways, within and without thunderstorms. The Federal Emergency Management Agency (FEMA) distinguishes these as shown in *Table 2-43*.

Table 2-43: High Winds Categorized by Source, Frequency, and Duration.
(Source: Making Critical Facilities Safe from High Wind, FEMA)

High Winds Categories			
High Wind Type	**Description**	**Relative Frequency in Louisiana**	**Relative Maximum Duration in Louisiana**
Straight-line Winds	Wind blowing in straight line; usually associated with intense low-pressure area	High	Few-minutes – 1 day
Downslope Winds	Wind blowing down the slope of a mountain; associated with temperature and pressure gradients	N/A	N/A
Thunderstorm Winds	Wind blowing due to thunderstorms, and thus associated with temperature and pressure gradients	High (especially in the spring and summer	~Few minutes – several hours
Downbursts	Sudden wind blowing down due to downdraft in a thunderstorm; spreads out horizontally at the ground, possibly forming horizontal vortex rings around the downdraft	Medium-to-High (~5% of all thunderstorms)	~15 – 20 minutes
Northeaster (nor'easter) Winds	Wind blowing due to cyclonic storm off the east coast of North America; associated with temperature and pressure gradients between the Atlantic and land	N/A	N/A
Hurricane Winds	Wind blowing in spirals, converging with increasing speed toward eye; associated with temperature and pressure gradients between the Atlantic and Gulf and land	Low-to-Medium	Several days
Tornado Winds	Violently rotating column of air from base of a thunderstorm to the ground with rapidly decreasing winds at greater distances from center; associated with extreme temperature gradient	Low-to-Medium	Few minutes – few hours

The only high winds of present concern are thunderstorm winds and downbursts. Straight-line winds are common but are a relatively insignificant hazard (on land) compared to other high winds. Downslope winds are common but relatively insignificant in the hilly areas of Louisiana where they occur. Nor'easters are cyclonic events that have at most a peripheral effect on Louisiana, and none associated with high winds. Winds associated with hurricanes and tornadoes will be considered in their respective sections.

Table 2-44 presents the Beaufort Wind Scale, first developed in 1805 by Sir Francis Beaufort, which aids in determining relative force and wind speed based on the appearance of wind effects.

Table 2-44: Beaufort Wind Scale.
(Source: NOAA's SPC)

Beaufort Wind Scale			
Force	**Wind (MPH)**	**WMO Classification**	**Appearance of Wind Effects on Land**
			Calm, smoke rises vertically
1	1-3	Light Air	Smoke drift indicates wind direction, still wind vanes
2	4-7	Light Breeze	Wind felt on face, leaves rustle, vanes begin to move
3	8-12	Gentle Breeze	Leaves and small twigs constantly moving, light flags extended
4	13-17	Moderate Breeze	Dust, leaves, and loose paper lifted, small tree branches move
5	18-24	Fresh Breeze	Small trees in leaf begin to sway
6	25-30	Strong Breeze	Larger tree branches moving, whistling in wires
7	31-38	Near Gale	Whole trees moving, resistance felt walking against wind
8	39-46	Gale	Twigs breaking off trees, generally impedes progress
9	47-54	Strong Gale	Slight structural damage occurs, slate blows off roofs
10	55-63	Storm	Seldom experienced on land, trees broken or uprooted, "considerable structural damage"
11	54-73	Violent Storm	
12	74+	Hurricane	

Major damage directly caused by thunderstorm winds is relatively rare, while minor damage is common and pervasive, and most noticeable when it contributes to power outages. These power outages can have major negative impacts such as increased tendency for traffic accidents, loss of revenue for businesses, increased vulnerability to fire, food spoilage, and other losses that might be sustained by a loss of power.

Power outages may pose a health risk for those requiring electric medical equipment and/or air conditioning.

Lightning

Lightning is a natural electrical discharge in the atmosphere that is a by-product of thunderstorms. Every thunderstorm produces lightning. There are three primary types of lightning: intra-cloud, cloud-to-ground, and cloud-to-cloud. Cloud-to-ground lightning has the potential to cause the most damage to property and crops, while also posing as a health risk to the populace in the area of the strike.

Damage caused by lightning is usually to homes or businesses. These strikes have the ability to damage electrical equipment inside the home or business and can also ignite a fire that could destroy homes or crops.

Lightning continues to be one of the top three storm-related killers in the United States per FEMA, but it also has the ability to cause negative long-term health effects to the individual that is struck. The following table outlines the lightning activity level that is a measurement of lightning activity.

Table 2-45: Lightning Activity Level (LAL) Grids.

LAL	Cloud and Storm Development	Lightning Strikes/15 Min
1	No thunderstorms.	-
2	Cumulus clouds are common but only a few reach the towering cumulus stage. A single thunderstorm must be confirmed in the observation area. The clouds produce mainly virga, but light rain will occasionally reach the ground. Lightning is very infrequent.	1-8
3	Towering cumulus covers less than two-tenths of the sky. Thunderstorms are few, but two to three must occur within the observation. Light to moderate rain will reach the ground, and lightning is infrequent.	9-15
4	Towering cumulus covers two to three-tenths of the sky. Thunderstorms are scattered and more than three must occur within the observation area. Moderate rain is common and lightning is frequent.	16-25
5	Towering cumulus and thunderstorms are numerous. They cover more than three-tenths and occasionally obscure the sky. Rain is moderate to heavy and lightning is frequent.	>25
6	Similar to LAL 3 except thunderstorms are dry	

Hazard Profile

Hailstorms

Location

Hailstorms are a meteorological phenomenon that can occur anywhere. Therefore, the entire planning area for Webster Parish and its jurisdictions are equally at risk for hailstorms. The worst-case scenario for hailstorms is hail up to a 1.75” diameter.

Previous Occurrences / Extents

Historically, there have been 187 hail incidents in Webster Parish. Hailstorm diameters have ranged from 0.5inches to 2.75 inches per the National Climatic Data Center since 1990. The most frequently recorded hail sizes have been 1-inch in diameter. There have been 20 significant hailstorm events in Webster Parish since the 2016 Webster Parish HMP update. The next page contains a brief synopsis of the events.

Table 2-46: Previous Occurrences for Hailstorm Events since the 2016 Hazard Mitigation Plan Update. (Source: NCEI Storm Events Database)

Date	Hail Size (inches)	Property Damage	Crop Damage
January 2, 2017	1	$0	$0
January 21, 2017	1.75	$0	$0
January 21, 2017	2	$0	$0
January 21, 2017	2.5	$0	$0
January 21, 2017	1.75	$0	$0
January 21, 2017	2.5	$0	$0
January 21, 2017	1.75	$0	$0
April 26, 2017	1	$0	$0
April 29, 2017	0.75	$0	$0
April 29, 2017	1	$0	$0
May 20, 2017	1	$0	$0
December 14, 2018	1	$0	$0
April 7, 2019	1	$0	$0
April 7, 2019	1.5	$0	$0
April 7, 2019	0.75	$0	$0
April 24, 2020	1	$0	$0
April 24, 2020	2	$0	$0
April 24, 2020	1.5	$0	$0
April 28, 2020	1	$0	$0
April 9, 2021	1.25	$0	$0

Frequency

Hailstorms occur frequently within Webster Parish with an annual chance of occurrence calculated at 100% based on the records for the past 30 years (1990 - 2020). On the next page, *Figure 2-26* displays the density of hailstorm events in Webster Parish, while *Figure 2-27* provides an overview of hailstorm size based on location.

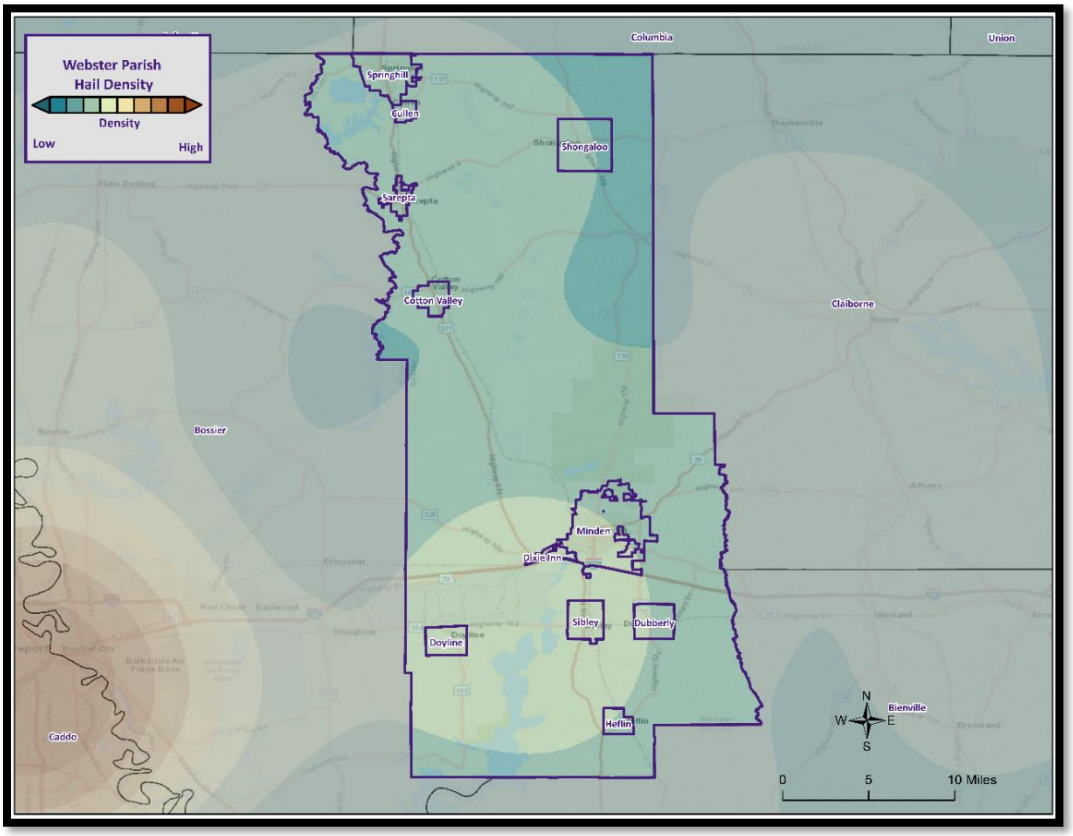


Figure 2-26: Density of Hailstorms by Diameter from 1950-2019.

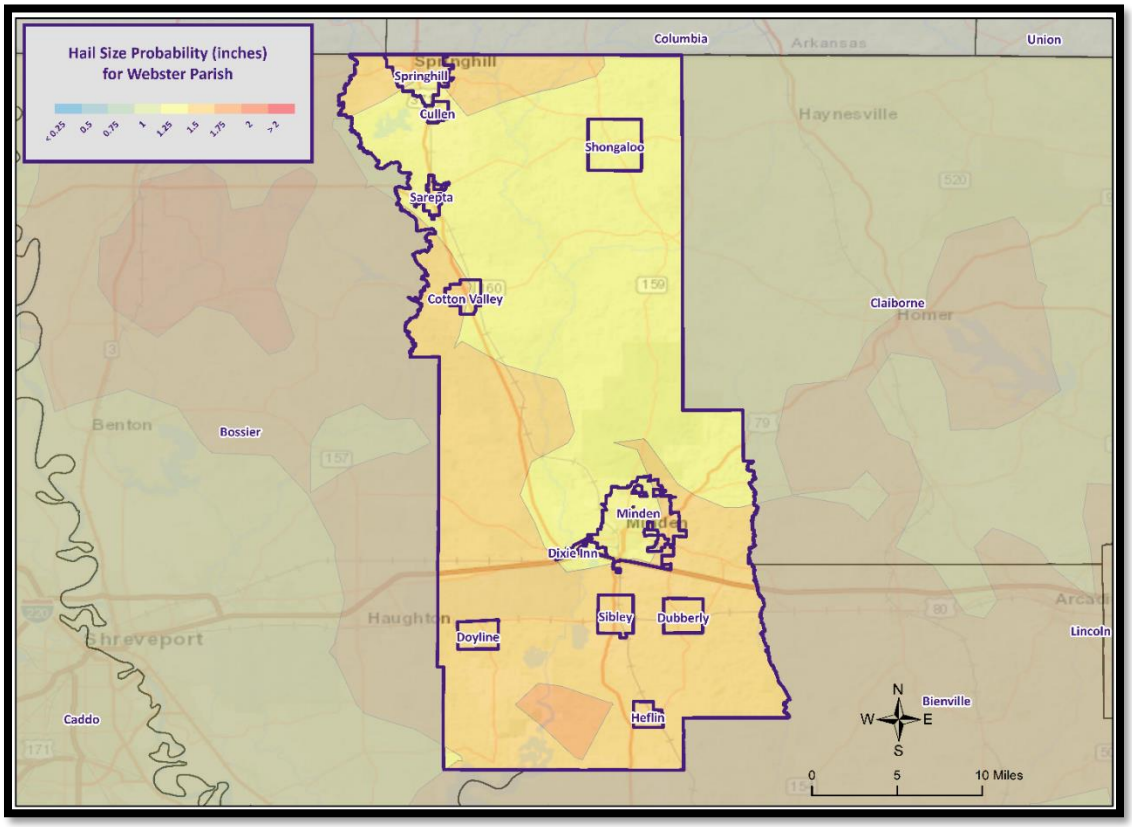


Figure 2-27: Hail Size Probability in Inches for Webster Parish.

Estimated Potential Losses

Since 1990, there have been 187 significant hail events that have resulted in property damages according to NCEI Storm Events Database. The total property damages associated with those storms have totaled approximately $41,000. To estimate the potential losses of a hailstorm event on an annual basis, the total damages recorded for wind events was divided by the total number of years of available wind data in the NCEI Storm Events Database (1990 - 2020). This provides an annual estimated potential loss of $1,367 and $220 per event. The following tables provide an estimate of potential property losses for Webster Parish:

Table 2-47: Estimated Annual Losses Webster Parish and its Jurisdictions Resulting from Hailstorms.

Estimated Annual Potential Losses From Hailstorms					
Unincorporated Area	**Cotton Valley**	**Cullen**	**Dixie Inn**	**Doyline**	**Dubberly**
$557	$33	$39	$9	$27	$9

Table 2-48: Estimated Annual Losses Webster Parish and its Jurisdictions Resulting from Hailstorms.

Estimated Annual Potential Losses From Hailstorms					
Heflin	**Minden**	**Sarepta**	**Shongaloo**	**Sibley**	**Springhill**
$8	$434	$30	$6	$40	$175

There have been no reported injuries or fatalities as a result of a hail events over the 30-year record.

Vulnerability

See *Appendix C: Critical Facilities* for parish and municipality buildings that are susceptible to hailstorms.

High Winds

Location

Because high winds are a meteorological phenomenon that can occur anywhere, the entire planning area for Webster Parish is equally at risk from high winds. The worst-case scenario for thunderstorm high wind is wind speeds of approximately 90 mph.

Previous Occurrences / Extents

Historically, there have been 221 thunderstorm high wind event in Webster Parish. High wind events range in speeds from 58 mph to 90 mph per the National Climatic Data Center since 1990. There have been 33 high wind speed events which impacted the Webster Parish Planning area since the 2016 Webster Parish HMP update.

Table 2-49: Previous Occurrences for Thunderstorm High Wind Events since the 2016 Hazard Mitigation Plan Update.
(Source: NCEI Storm Events Database)

Date	Windspeed (mph)	Property Damage	Crop Damage
July 13, 2017	70	$0	$0
March 1, 2018	70	$0	$0
April 3, 2018	60	$0	$0
April 3, 2018	64	$0	$0
April 14, 2018	75	$0	$0
May 25, 2018	64	$0	$0
May 25, 2018	64	$0	$0
June 19, 2019	70	$0	$0
June 23, 2019	64	$0	$0
June 23, 2019	64	$0	$0
June 23, 2019	64	$0	$0
October 3, 2019	75	$0	$0
October 3, 2019	60	$0	$0
January 11, 2020	81	$0	$0
April 12, 2020	90	$0	$0
April 12, 2020	75	$0	$0
April 22, 2020	64	$0	$0
April 22, 2020	64	$0	$0
April 28, 2020	64	$0	$0
April 29, 2020	70	$0	$0
April 29, 2020	60	$0	$0
May 8, 2020	70	$0	$0
May 8, 2020	70	$0	$0
May 8, 2020	70	$0	$0
May 8, 2020	70	$0	$0
May 8, 2020	70	$0	$0
May 8, 2020	70	$0	$0
July 3, 2020	64	$0	$0
November 25, 2020	60	$0	$0
November 25, 2020	64	$0	$0
May 4, 2021	64	$0	$0
May 4, 2021	60	$0	$0
May 28, 2021	70	$0	$0

Frequency

High winds are a fairly common occurrence within Webster Parish and its jurisdictions with an annual chance of occurrence calculated at 100% based on the records for the past 30 years (1990 - 2020). *Figure 2-28* displays the thunderstorm wind speed probability for Webster Parish and its jurisdictions.

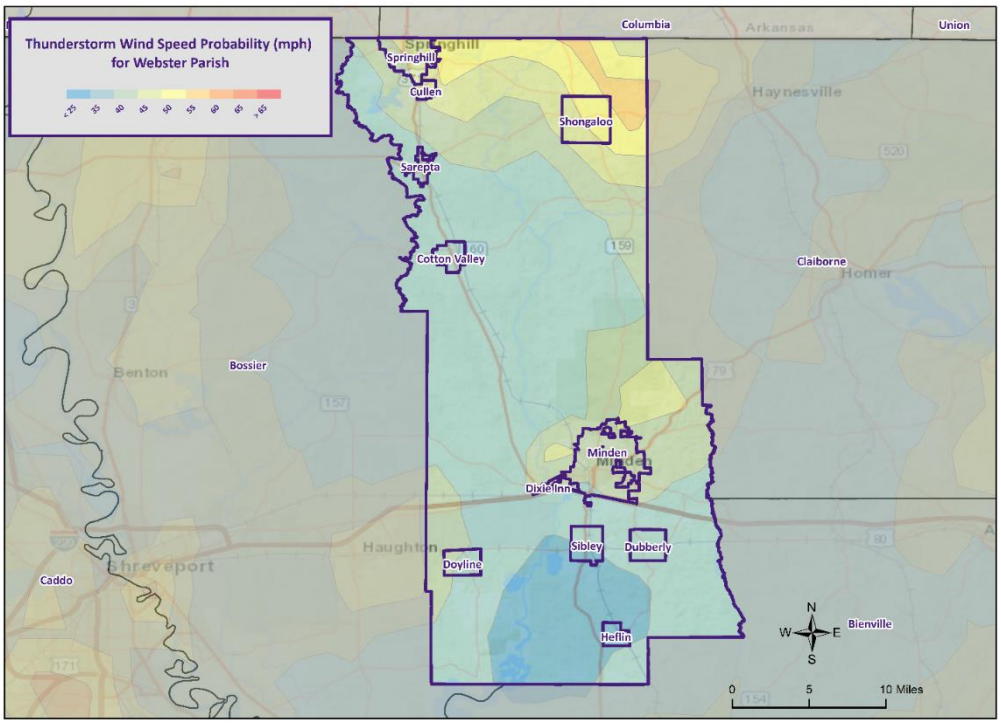


Figure 2-28: Thunderstorm High Wind Speed Probability in Miles Per Hour for Webster Parish.

Estimated Potential Losses

Since 1990, there have been 221 significant wind events that have resulted in property damages according to NCEI Storm Events Database. The total property damage associated with this storm totaled approximately $573,000. To estimate the potential losses of a wind event on an annual basis, the total damages recorded for wind events was divided by the total number of years of available wind data in the NCEI Storm Events Database (1990 - 2020). This provides an annual estimated potential loss of $19,100 and $2,593 per event. The following tables provide an estimate of potential property losses for Webster Parish:

Table 2-50: Estimated Annual Losses Webster Parish and its Jurisdictions Resulting from Wind Damage.

Estimated Annual Potential Losses From High Winds					
Unincorporated Area	**Cotton Valley**	**Cullen**	**Dixie Inn**	**Doyline**	**Dubberly**
$7,780	$468	$539	$127	$379	$127

Table 2-51: Estimated Annual Losses Webster Parish and its Jurisdictions Resulting from Wind Damage.

Estimated Annual Potential Losses From High Winds					
Heflin	**Minden**	**Sarepta**	**Shongaloo**	**Sibley**	**Springhill**
$113	$6,064	$413	$84	$565	$2,442

There has been one injury and no fatalities as a result of a thunderstorm high wind event over the 30-year record.

Vulnerability

See *Appendix C: Critical Facilities* for parish and municipality buildings that are susceptible to thunderstorm high winds.

Lightning

Location

Like hail and high winds, lightning is a meteorological phenomenon that can occur anywhere within the Webster Parish planning area. The worst-case scenario for lightning events is a lightning activity level of 4 which is approximately 16 to 25 lightning strikes every 15 minutes.

Previous Occurrences / Extent

Historically, there have been 13 lightning events in Webster Parish and its jurisdictions between the years 1990 and 2020. Since the last HMP update, there has been no significant lighting events within the boundaries of Webster Parish.

Frequency

Lightning can strike anywhere and is produced by every thunderstorm, so the chance of lightning occurring in Webster Parish is high. However, lightning that meets the definition that is used by the NCEI Storm Events Database that results in damages to property and injury or death to people is a less likely event. Webster Parish experienced 13 significant lightning events between the years 1990 and 2020 resulting in a 43% annual chance of occurrence.

Estimated Potential Losses

Since 1990, there have been 13 significant lightning events that have resulted in property damages according to NCEI Storm Events Database. The total property damages associated with this storm has totaled approximately $216,000. To estimate the potential losses of a lightning event on an annual basis, the total damages recorded for lightning events was divided by the total number of years of available lightning data in the NCEI Storm Events Database (1990 - 2020). This provides an annual estimated potential loss of $7,200 and $16,615 per event. The following tables provide an estimate of potential property losses for Webster Parish:

Table 2-52: Estimated Annual Losses Webster Parish and its Jurisdictions Resulting from Lightning.

Estimated Annual Potential Losses From Lightning					
Unincorporated Area	**Cotton Valley**	**Cullen**	**Dixie Inn**	**Doyline**	**Dubberly**
$2,933	$176	$203	$48	$143	$48

Table 2-53: Estimated Annual Losses Webster Parish and its Jurisdictions Resulting from Lightning.

Estimated Annual Potential Losses From Lightning					
Heflin	**Minden**	**Sarepta**	**Shongaloo**	**Sibley**	**Springhill**
$43	$2,286	$156	$32	$213	$921

Per the NCEI Storm Events Database, there have been no fatalities or injuries as a result of lightning in Webster Parish.

Vulnerability

See *Appendix C: Critical Facilities* for parish and municipality building exposure to lightning hazards.

Tornadoes

Tornadoes (also called twisters and cyclones) are rapidly rotating funnels of wind extending between storm clouds and the ground. For their size, tornadoes are the most severe storms, and 70% of the world's reported tornadoes occur within the continental United States, making them one of the most significant hazards Americans face. Tornadoes and waterspouts form during severe weather events, such as thunderstorms and hurricanes, when cold air overrides a layer of warm air, causing the warm air to rise rapidly, which usually occurs in a counterclockwise direction in the northern hemisphere. The updraft of air in tornadoes always rotates because of wind shear (differing speeds of moving air at various heights), and it can rotate in either a clockwise or counterclockwise direction; clockwise rotations (in the northern hemisphere) will sustain the system, at least until other forces cause it to die seconds to minutes later.

Since February 1, 2007, the Enhanced Fujita (EF) Scale has been used to classify tornado intensity. The EF Scale classifies tornadoes based on their damage pattern rather than wind speed; wind speed is then derived and estimated. This contrasts with the Saffir-Simpson scale used for hurricane classification, which is based on measured wind speed. *Table 2-54* shows the EF scale in comparison with the old Fujita (F) Scale, which was used prior to February 1, 2007. When discussing past tornadoes, the scale used at the time of the hazard is used. Damage and adjustment between scales can be made using the following tables.

Table 2-54: Comparison of the Enhanced Fujita (EF) Scale to the Fujita (F) Scale.

	Enhanced Fujita Scale					
	EF0	**EF1**	**EF2**	**EF3**	**EF4**	**EF5**
Wind Speed (mph)	65-85	86-110	111-135	136-165	166-200	>200
	Fujita Scale					
	F0	**F1**	**F2**	**F3**	**F4**	**F5**
	<73	73-112	113-157	158-206	207-260	>261

Table 2-55: Fujita and Enhanced Fujita Tornado Damage Scale.

Scale	Typical Damage
F0/EF0	Light damage. Some damage to chimneys; branches broken off trees; shallow-rooted trees pushed over; sign boards damaged.
F1/EF1	Moderate damage. Peels surface off roofs; mobile homes pushed off foundations or overturned; moving autos blown off roads.
F2/EF2	Considerable damage. Roofs torn off frame houses; mobile homes demolished; boxcars overturned; light-object missiles generated; cars lifted off ground.
F3/EF3	Severe damage. Roofs and some walls torn of well-constructed houses; trains overturned; most trees in forest uprooted; heavy cars lifted off the ground and thrown.
F4/EF4	Devastating damage. Well-constructed houses leveled; structures with weak foundations blown away some distance; cars thrown and large missiles generated.
F5/EF5	Incredible damage. Strong frame houses leveled off foundations and swept away; automobile-sized missiles fly through the air in excess of 100 meters (109 yards); trees debarked; incredible phenomena will occur.

The National Weather Service (NWS) has the ability to issue advisory messages based on forecasts and observations. The following are the advisory messages that may be issued with definitions of each:

- ***Tornado Watch***: Issued to alert people to the possibility of a tornado developing in the area. A tornado has not been spotted but the conditions are favorable for tornadoes to occur.

- ***Tornado Warning***: Issued when a tornado has been spotted or when Doppler radar identifies a distinctive "hook-shaped" area within a thunderstorm line.

Structures within the direct path of a tornado vortex are often reduced to rubble. Structures adjacent to the tornado's path are often severely damaged by high winds flowing into the tornado vortex, known as inflow winds. It is here, adjacent to the tornado's path, that the building type and construction techniques are critical to the structure's survival. Although tornadoes strike at random, making all buildings vulnerable, mobile homes, homes on crawlspaces, and buildings with large spans are more likely to suffer damage.

The major health hazard from tornadoes is physical injury from flying debris or being in a collapsed building or mobile home. Within a building, flying debris or missiles are generally stopped by interior walls. However, if a building has no partitions, any glass, brick, or other debris blown into the interior is life threatening. Following a tornado, damaged buildings are a potential health hazard due to instability, electrical system damage, and gas leaks. Sewage and water lines may also be damaged.

Peak tornado activity in Louisiana occurs during the spring, as it does in the rest of the United States. Nearly one-third of observed tornadoes in the United States occur during April. About half of those in Louisiana, including many of the strongest, occur between March and June. Fall and winter tornadoes are less frequent, but the distribution of tornadoes throughout the year is more uniform in Louisiana than in locations farther north.

Location

While there is a significant tornado record in Webster Parish with actual locations, tornadoes in general are a climatological based hazard and have the same approximate probability of occurring in Webster Parish as all of its jurisdictions. Because a tornado has a similar probability of striking anywhere within the planning area for Webster Parish, all areas in the parish are equally at risk for tornadoes.

Previous Occurrences / Extent

The NCEI Storm Events Database reports a total of 30 tornadoes or waterspouts occurring within the boundaries of Webster Parish since 1990 ranging in extent from F0 to F2 under the Fujita Scale and EF0 to EF2 on the Enhanced Fujita Scale. Webster Parish can expect future tornadoes up to an EF2 under the Enhanced Fujita Scale as a worst-case scenario.

The most destructive tornado to impact Webster Parish was an F2 tornado which occurred on April 23, 2000. The tornado caused approximately $800,000 in damages with approximately 200 homes suffering some form of roof damage and numerous trees uprooted or snapped. Since the 2016 HMP Update, nine tornadoes have occurred within the boundaries of Webster Parish. On the next page is a list and brief description of the impact for the events.

Table 2-56: Historical Tornadoes in Webster Parish with Locations since the 2016 Update.

Date	Impacts	Property Damage	Location	Magnitude
January 21, 2017	2.23 mile path with a width of 990 yards. This tornado had weakened to EF-1 as it entered Northwest Webster Parish, but still uprooted numerous trees and power lines along its track and it tore through the Muddy Bottoms ATV Park. Within the park, the tornado removed a portion of the roof of a building before lifting in the extreme northern portion of the park. Maximum estimated winds ranged between 90-100 mph.	$25,000	Springhill	EF1
January 21, 2017	3.5 mile path with a width of 350 yards. An EF-1 tornado with maximum estimated winds near 105 mph touched down just south of Shongaloo along Elmer Moore Road and continued northeast across Rodney Martin, Wortham, and Thomas Rhone Roads before crossing Highway 159. The tornado continued northeast before lifting along Hearn Road. Damage consisted of numerous trees that were snapped and/or uprooted. A tree fell on a carport and a portion of a mobile home on Wortham Road.	$10,000	Shongaloo	EF1
April 13, 2008	2.02 mile path with a width of 300 yards. This EF-0 tornado, with estimated maximum winds near 80 mph, continued northeast traveling across Highway 2 in Sarepta uprooting a few trees, before eventually crossing Highway 371 just north of Sarepta where most of the damage occurred. Several trees were uprooted and snapped in this area especially along North Main Street, with a tree falling on a home, before the tornado lifted.	$50,000	Sykes Ferry	EF0
April 13, 2008	2.93 mile path with a width of 500 yards. An EF-1 tornado with estimated maximum winds near 95 mph touched down just west of Shongaloo along Highway 2 where it uprooted several trees. It continued northeast causing sporadic tree damage along Highway 159. The tornado then intensified as it approached Highway 615, where it uprooted and snapped several trees and snapped numerous large limbs between the intersections of Highway 615 and Red Oak Road, and Highway 615 and Barge Road, before lifting just to the northeast.	$15,000	Shongaloo	EF1
March 9, 2019	0.8 mile path with a width of 75 yards. An EF-1 tornado with maximum estimated winds near 105 mph touched down near Park Loop on the west side of Springhill, where it uprooted trees and damaged the roofs of an outbuilding on the grounds of Brown Middle School and continued on to damage the covered porch and roof of a single family home. The tornado then crossed South Main Street and downed power lines near the Panda	$150,000	Springhill	EF1

Date	Impacts	Property Damage	Location	Magnitude
	Garden before moving over the Piggly Wiggly and Lumberjack Lanes bowling alley. Behind the bowling alley, the tornado downed approximately 30 trees in a neighborhood between South Park Drive and Center Park Drive in Springhill before lifting.			
December 16, 2019	13.47 mile path with a width of 250 yards. This tornado, with estimated maximum winds near 110 mph, tracked northeast across Fuller Road, with damage confined to trees as it moved over Bayou Dorcheat and over Dorcheat Road. The tornado then crossed Highway 371 and Couchwood Road, where additional trees were snapped and uprooted, with a portion of one tree responsible for minor damage to a shed off of Couchwood Road. The tornado then moved across heavily wooded areas in Central Webster Parish that was inaccessible by vehicle, but tornadic debris signatures from doppler radar remained consistent within the tight rotation in the favorable area of the storm to suggest that it remained on the ground where it crossed Mims Road, where several hundred hardwood and softwood trees were snapped and uprooted. The tornado continued to Evergreen School Road where two single family homes and their sheds were significantly damaged. A brick home lost most of its roof and as the roof was torn off, it toppled a brick wall. The damage to the brick wall was not rated up to an EF-2 as it occurred due to impacts from the removal of the roof and not the direct winds of the tornado. However, it was here where the tornado was strongest, with estimated maximum winds near 110 mph. The second home also had most of its roof torn off. The tornado then crossed Highway 159, where it picked up a single wide mobile home and carried it approximately 50 yards, with the undercarriage separating from the rest of the home and wrapping it around a tree. The rest of the mobile home was destroyed when it landed. Three other nearby mobile homes suffered minor damage to their roofs and/or carports. The tornado showed signs of weakening in the tree damage indicators after it crossed Angi Road and into Western Claiborne Parish.	$500,000	Hortman	EF1
January 11, 2020	16.69 mile path with a width of 300 yards. This tornado weakened slightly as it crossed Pilgrim Rest Road, and tracked northeast before entering the southern sections of Doyline, downing hundreds of trees as it crossed Highways 163 and 164, before entering the extreme	$750,000	Doyline	EF2

Date	Impacts	Property Damage	Location	Magnitude
	southeast corner of Camp Minden. The tornado then tore through the town of Sibley and the northern fringes of Dubberly, where it downed trees and power lines, damaged a metal barn, the roof of a home, and destroyed a shed on Wallraven Road. An 18-wheeler trailer was overturned at the South Webster Industrial Park in Sibley, and a building, fencing, and equipment were damaged at an oil field service company at the park. Just before the tornado crossed Interstate 20 between exits 49 and 52, it developed a much wider swath of damaging straight line winds with its rear flank downdraft near and just south of the tornado track. In fact, a large sign was blown over onto an 18-wheeler at Love's Truckstop at I-20 Exit 49 (Highway 531). After it crossed Interstate 20 southeast of Minden, the tornado then rolled a single-wide mobile home on Fuller Cemetery Road near the Nine Forks community and damaged the roofs of two structures before it moved into Southwest Claiborne Parish. The tornadic winds as it tracked through Southern Webster Parish did weaken slightly from its estimated maximum winds in Eastern Bossier Parish, and ranged from 95-110 mph, which is in the EF-1 range. At least 120 broken power poles and over 250 spans of downed wire were the result of this tornado and associated widespread damaging winds near Doyline, Sibley, Dubberly, and Minden. Significant damage was done to the major power distribution lines that feed the town of Sibley and the South Webster Industrial District.			
April 12, 2020	6.13 mile path with a width of 1,000 yards. An EF-1 tornado with estimated maximum winds near 105 mph touched down west of Gorton Road and north of Highway 163 on the southwest shore of Lake Bistineau in Southwest Webster Parish, where it uprooted and snapped multiple trees as it crossed the lake near Moss Point Loop Road. The tornado lifted part of the roof off of a single family home near the intersection of Diamond and Webster Roads as it continued to track northeast. It continued to uproot and snap numerous trees as it moved along Woodmill Road before dissipating after crossing Highway 371 north of Woodmill Road just west of Heflin. Several homes suffered roof damage and a small metal storage building was relocated several yards away from its foundation.	$100,000	Lake Bistineau North	EF1

Date	Impacts	Property Damage	Location	Magnitude
May 28, 2021	2.48 mile path with a width of 300 yards. An EF-1 tornado with estimated maximum winds near 95 mph touched down just southwest of the Minden airport along Methodist Camp Road and tore through Downtown Minden over the course of its 2.5+ mile track. The tornado tracked southeast through the heart of Minden, crossing Main Street/Highway 79 in the Downtown area. Nearly all of the damage was limited to trees being uprooted or having large limbs and the tops of trunks broken with some scattered structural damage in the town due to tree debris falling on these structures. The tornado weakened and lifted as it crossed Fincher Road on the eastern side of the Minden city limits.	$1,000,000	Minden Webster Fld	EF1

Frequency / Probability

Tornadoes occur frequently within Webster Parish and its jurisdictions with an annual chance of occurrence calculated at 100% based on the records for the past 30 years (1990 - 2020). *Figure 2-29* displays the density of tornado touchdowns in Webster Parish and neighboring parishes.

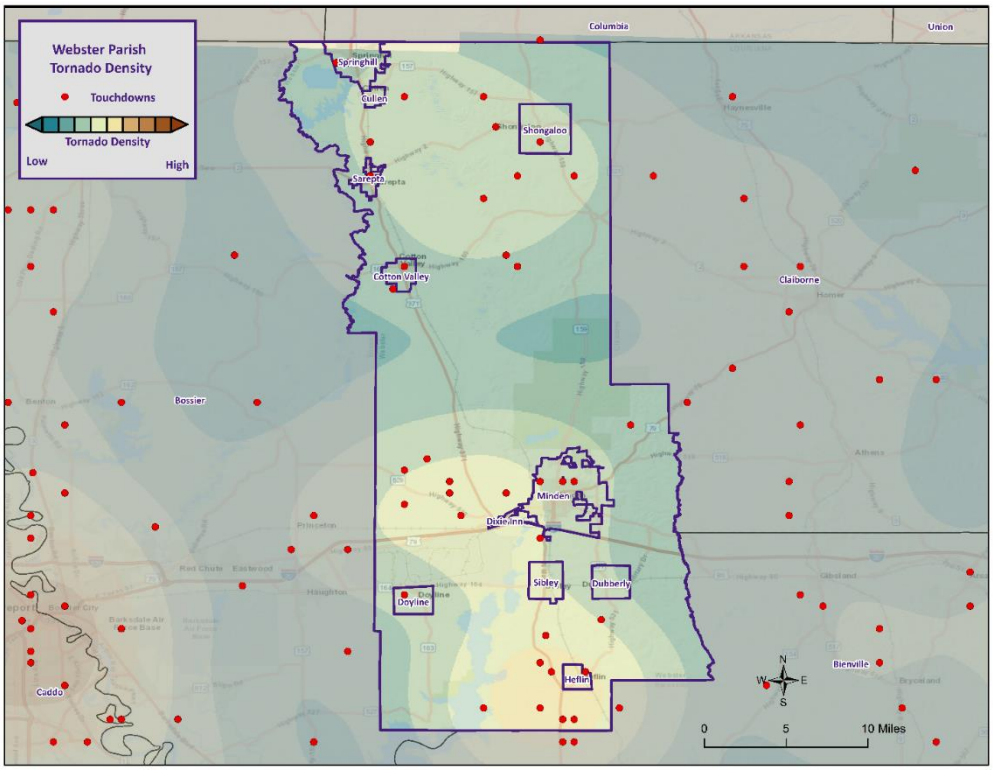


Figure 2-29: Location and Density of Tornadoes to Touchdown in Webster Parish. (Source: NOAA/SPC Severe Weather Database)

Estimated Potential Loses

According to the NCEI Storm Events Database, there have been 30 tornadoes that have caused some level of property damage. The total damage from the actual claims for property is approximately $4,433,000 with an average cost of $147,767 per tornado event. When annualizing the total cost over the 30-year record, total annual loses based on tornadoes are estimated to be $177,320. The following tables provide an annual estimate of potential losses for Webster Parish.

Table 2-57: Estimated Annual Losses Webster Parish and its Jurisdictions Resulting from Tornadoes.

Estimated Annual Potential Losses From Tornadoes					
Unincorporated Area	**Cotton Valley**	**Cullen**	**Dixie Inn**	**Doyline**	**Dubberly**
$72,228	$4,342	$5,005	$1,175	$3,520	$1,175

Table 2-58: Estimated Annual Losses Webster Parish and its Jurisdictions Resulting from Tornadoes.

Estimated Annual Potential Losses From Tornadoes					
Heflin	**Minden**	**Sarepta**	**Shongaloo**	**Sibley**	**Springhill**
$1,050	$56,294	$3,834	$783	$5,241	$56,294

Table 2-59 presents an analysis of building exposure that are susceptible to tornadoes by general occupancy type for Webster Parish along with the percentage of building stock that are mobile homes.

Table 2-59: Building Exposure by General Occupancy Type for Tornadoes in Webster Parish. (Source: Hazus)

Building Exposure by General Occupancy Type for Tornadoes ($1,000)							
Residential	**Commercial**	**Industrial**	**Agricultural**	**Religion**	**Government**	**Education**	**Mobile Homes (%)**
44,731	849,961	11,868	4,764,580	203,324	318,473	76,869	13.2%

The Parish has suffered through a total of 30 events in which tornadoes or waterspouts have accounted for no injuries or fatalities during this 30-year period.

In accessing the overall risk to population, the most vulnerable population throughout the parish are those residing in manufacturing housing. Approximately 13.2% of all housing in Webster Parish consists of manufactured housing. The location and density of manufactured houses can be seen in *Figure 2-30*.

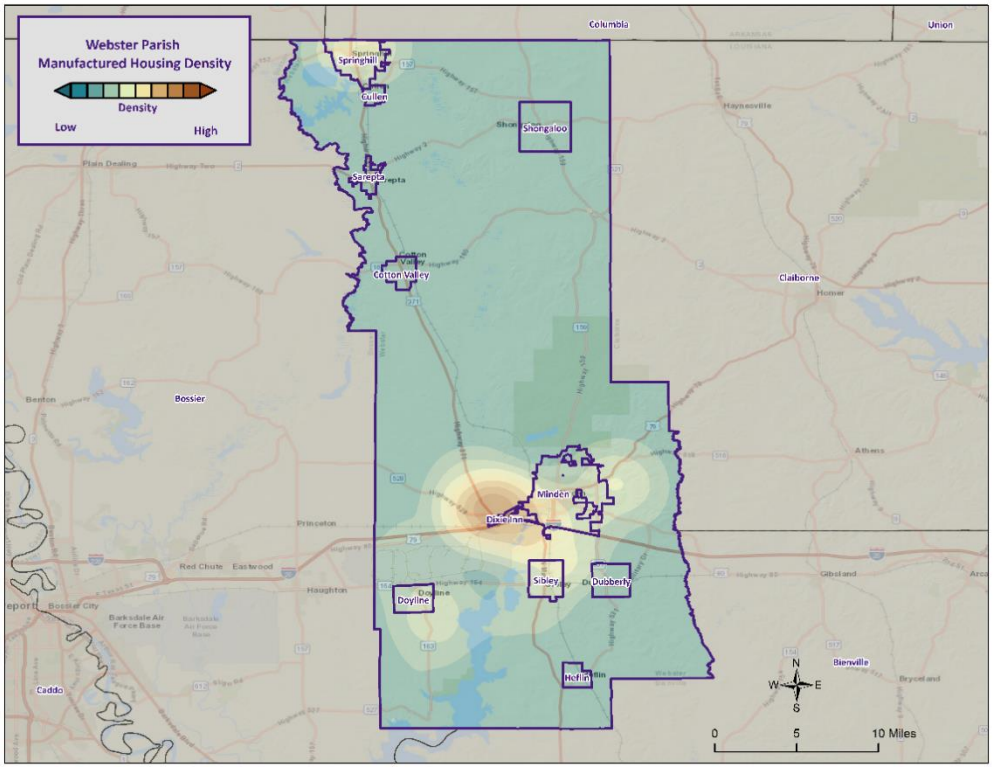


Figure 2-30: Location and Approximate Number of Units in Manufactured Housing Locations throughout Webster Parish.

Vulnerability

See *Appendix C: Critical Facilities* for parish and municipality building exposure to tornadoes.

Tropical Cyclones

Tropical cyclones are among the worst hazards Louisiana faces. These spinning, low-pressure air masses draw surface air into their centers and attain strength ranging from weak tropical waves to the most intense hurricanes. Usually, these storms begin as clusters of oceanic thunderstorms off the western coast of Africa, moving westward in the trade wind flow. The spinning of these thunderstorm clusters begins because of the formation of low pressure in a perturbation in the westerly motion of the storms associated with differential impacts of the Earth's rotation. The west-moving, counterclockwise-spinning collection of storms, now called a tropical disturbance, may then gather strength as it draws humid air toward its low-pressure center. This results in the formation of a tropical depression (defined when the maximum sustained surface wind speed is 38 mph or less), then a Tropical Cyclone (when the maximum sustained surface wind ranges from 39 mph to 73 mph), and finally a hurricane (when the maximum sustained surface wind speeds exceed 73 mph). On the next page, the table presents the Saffir-Simpson Hurricane Wind Scale, which categorizes tropical cyclones based on sustained winds.

Table 2-60: Saffir-Simpson Hurricane Wind Scale.

Saffir-Simpson Hurricane Wind Scale			
Category	**Sustained Winds**	**Pressure**	**Types of Damage Due to Winds**
Tropical Depression	<39 mph	N/A	N/A
Tropical Cyclone	39-73 mph	N/A	N/A
1	74-95 mph	>14.2 psi	Very dangerous winds will produce some damage. Well-constructed frame homes could have damage to roof, shingles, vinyl siding, and gutters. Large branches of trees will snap and shallow-rooted trees may be toppled, especially after the soil becomes waterlogged. Extensive damage to power lines and poles will likely result in power outages that could last several days.
2	96-110 mph	14-14.2 psi	Extremely dangerous winds will cause extensive damage. Well-constructed frame homes could sustain major roof and siding damage. Many shallow-rooted trees will be snapped or uprooted, especially after the soil becomes waterlogged, and block numerous roads. Near total power loss is expected, with outages that could last from several days to weeks.
3	111-129 mph	13.7 -14 psi	Devastating damage will occur. Well-built framed homes may incur major damage or removal of roof decking and gable ends. Many trees will be snapped or uprooted, especially after the soil becomes waterlogged, blocking numerous roads. Electricity and water may be unavailable for several days to weeks after the storm passes.
4	130-156 mph	13.3-13.7 psi	Catastrophic damage will occur. Well-built framed homes can sustain severe damage with loss of most of the roof structure and/or some exterior walls. Most trees will be snapped or uprooted, especially after the soil becomes waterlogged, and power poles downed. Fallen trees and power poles will isolate residential areas. Power outages will last weeks to possibly months. Most of the area will be uninhabitable for weeks or months.
5	157 mph or higher	<13.7 psi	Catastrophic damage will occur. A high percentage of framed homes will be destroyed, with total roof failure and wall collapse. Fallen trees and power poles will isolate residential areas. Power outages will last for weeks to possibly months. Most of the area will be uninhabitable for weeks to months.

Many associated hazards can occur during a hurricane, including heavy rains, flooding, high winds, and tornadoes. A general rule of thumb in coastal Louisiana is that the number of inches of rainfall to be expected from a tropical cyclone is approximately 100 divided by the forward velocity of the storm in mph; so, a fast-moving storm (20 mph) might be expected to drop five inches of rain while a slow-moving (5 mph) storm could produce totals of around 20 inches. However, no two storms are alike, and such generalizations have limited utility for planning purposes. Hurricane Beulah, which struck Texas in 1967, spawned 115 confirmed tornadoes. In recent years, extensive coastal development has increased the storm surge resulting from these storms so much that this has become the greatest natural hazard threat to property and loss of life in the state. Storm surge is a temporary rise in sea level generally caused by reduced air pressure and strong onshore winds associated with a storm system near the coast. Although storm surge can technically occur at any time of the year in Louisiana, surges caused by hurricanes can be particularly deadly and destructive. Such storm surge events are often accompanied by large, destructive waves (exceeding ten meters in some places) that can inflict a high number of fatalities and economic losses. In 2005, Hurricane Katrina clearly demonstrated the destructive potential of this hazard, as it produced the highest modern-day storm surge levels in the State of Louisiana, reaching up to 18.7 feet near Alluvial City in St. Bernard Parish.

Property can be damaged by the various forces that accompany a tropical cyclone. High winds can directly impact structures in three ways: wind forces, flying debris, and pressure. By itself, the force of the wind can knock over trees, break tree limbs, and destroy loose items, such as television antennas and power lines. Many things can be moved by high winds. As winds increase, so does the pressure against stationary objects. Pressure against a wall rises with the square of the wind speed. For some structures, this force is enough to cause failure. The potential for damage to structures is increased when debris breaks the building “envelope” and allows the wind pressure to impact all surfaces (the building envelope includes all surfaces that make up the barrier between the indoors and the outdoors, such as the walls, foundation, doors, windows, and roof). Mobile homes and buildings in need of maintenance are most subject to wind damage. High winds mean bigger waves. Extended pounding by waves can demolish any poorly or improperly designed structures. The waves also erode sand beaches, roads, and foundations. When foundations are compromised, the building will collapse.

Nine out of ten deaths during hurricanes are caused by storm surge flooding. Falling tree limbs and flying debris caused by high winds have the ability to cause injury or death. Downed trees and damaged buildings are a potential health hazard due to instability, electrical system damage, broken pipelines, chemical releases, and gas leaks. Sewage and water lines may also be damaged. Salt water and freshwater intrusions from storm surge send animals, such as snakes, into areas occupied by humans.

Location

Hurricanes are the single biggest threat to the State of Louisiana. With any single tropical cyclone event having the potential to devastate multiple parishes at once, tropical cyclones are a significant threat to the entire Webster Parish planning area. The worst-case scenario for a tropical cyclone event in Webster Parish is a Category 1 Hurricane.

Previous Occurrences / Extents

Webster Parish has experienced four major tropical cyclone events since 2002. The table on the next page provides a list of tropical cyclones which have impacted Webster Parish since 2002.

Table 2-61: Historical Tropical Cyclone Events in Webster Parish from 2002 – 2020.

Date	Name	Storm Type at Time of Impact
2005	Rita	Tropical Storm
2008	Gustav	Tropical Storm
2008	Ike	Tropical Storm
2020	Laura	Tropical Storm

Since the last Webster Parish HMP update in 2016, there has been one tropical cyclone event which has impacted the parish. Below is a brief description of the event and the impact it had on Webster Parish.

Tropical Storm Laura (2020)

Laura began as a large tropical wave that emerged off the west coast of Africa on August 16th. The wave traversed the tropical Atlantic for the next several days with little additional organization. On August 19th, the system became better organized, closed off a low-level circulation, and subsequently the National Hurricane Center began issuing advisories on Tropical Depression Thirteen late that evening.

On the morning of August 21st, Tropical Depression Thirteen strengthened into Tropical Storm Laura, which was the earliest twelfth named Atlantic storm, beating the previous record of Hurricane Luis of 1995 by eight days. As Laura moved westward, little additional strengthening took place as the center moved over the northern Lesser Antilles later that evening, and south of Puerto Rico on August 22nd. Early on August 23rd, Tropical Storm Laura made landfall across Hispaniola, traversed the entire island, and made landfall across Eastern Cuba later that evening. Tropical Storm Laura continued west northwestward, traveling just south of the island with a second landfall across Western Cuba late on August 24th.

On August 25th, Laura entered the Gulf of Mexico and became a Category 1 hurricane at 10 AM CDT. Laura began to explosively intensify on August 26th, reaching category 2 by 1 AM CDT, category 3 by 7 AM CDT, and category 4 by 1 PM CDT. Laura reached a peak intensity of 150 mph (130 knots) and a minimum central pressure of 937 millibars (27.67 inches of mercury) by 8 PM CDT.

With little change in strength, Laura made landfall at Cameron, Louisiana around 1 AM CDT August 27th, with sustained winds of 150 mph (130 knots) and a minimum central pressure of 938 millibars (27.70 inches of mercury). Laura was the strongest hurricane to strike Southwest Louisiana since records began in 1851. Laura slowly weakened after landfall but maintained major hurricane status throughout its passage across Cameron, Calcasieu, and southern Beauregard Parishes, and category 2 status across northern Beauregard and Vernon parishes as daybreak approached on August 27th. Laura finally weakened below hurricane strength by Noon as it was crossing I-20 in North Louisiana. With this being the strongest hurricane to affect Southwest Louisiana, wind damage to buildings and trees was major to catastrophic across Cameron and Calcasieu parishes, with considerable damage across Beauregard and Vernon parishes where the core of the hurricane passed.

The National Weather Service in Lake Charles, Louisiana recorded a station record highest peak wind gust of 116 knots (133 mph) at 1:42 AM CDT before the Automated Surface Observing System (ASOS) wind equipment failed. However, the ASOS barometer sensor that was safely within the NWS building (which received very little damage) recorded a station record minimum sea level pressure of 956 millibars (28.23 inches of mercury) at 2:20 AM CDT when the eye of Hurricane Laura passed nearly overhead.

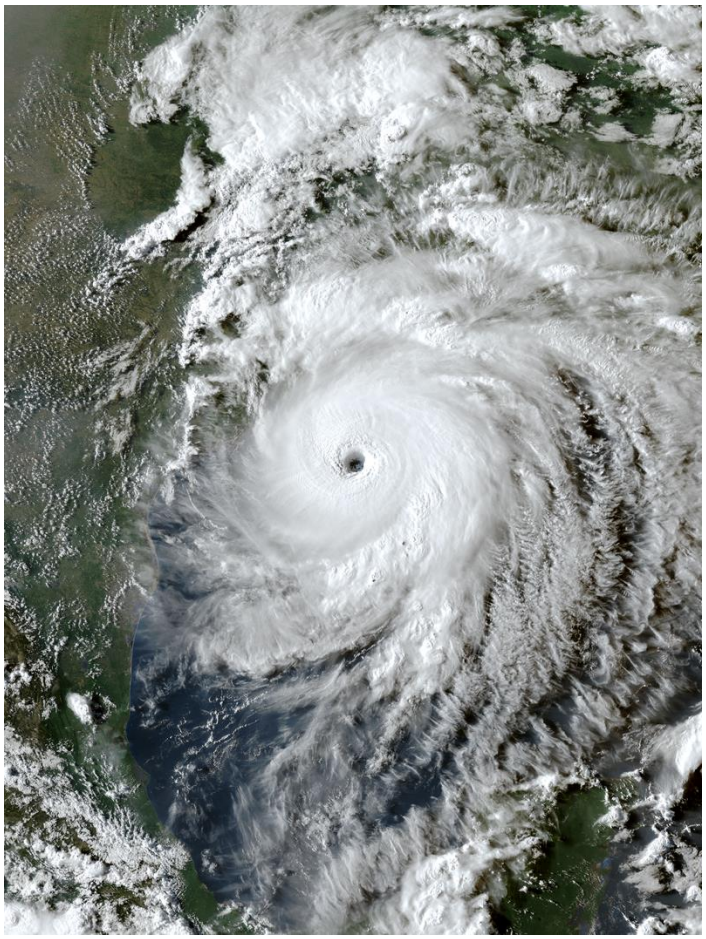


Figure 2-31: Hurricane Laura in the Gulf Coast Area.
(Source: NOAA)

A total of 33 fatalities occurred throughout the state with four of them coming from falling trees. They included a 14-year-old girl in Vernon Parish, a 68-year-old man in Acadia Parish, a 51-year-old man in Jackson Parish, and a 64-year-old man in Allen Parish. Carbon monoxide poisoning from generators being inside homes, which is strongly discouraged, led to the deaths of twelve people in Calcasieu Parish and two people in Allen Parish. Another man died of drowning while aboard a sinking boat during the storm. Finally, one person died in Calcasieu Parish in a house fire, four people died in Calcasieu Parish, Natchitoches Parish, and Rapides Parish during the cleanup process, and eight others died in Beauregard Parish, Grant Parish, Rapides Parish, and Vernon Parish due to heat-related illnesses following the loss of electricity.

In Webster Parish, numerous trees and power lines were downed. There were over 220 reports of incidents from trees down throughout the parish. The El Jimador restaurant in Minden had part of the roof removed due to high winds.

The following figure displays the wind zones that affect Webster Parish in relation to critical facilities throughout the parish.

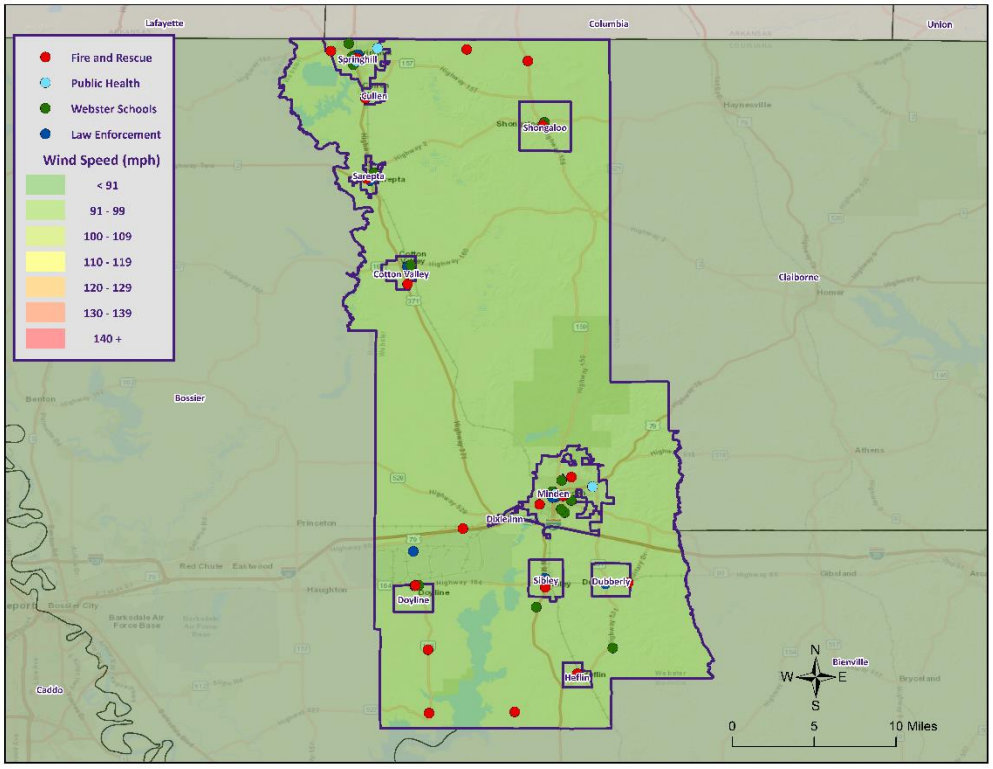


Figure 2-32: Winds Zones for Webster Parish in Relation to Critical Facilities

Frequency / Probability

Tropical cyclones are large natural hazard events that occasionally impact Webster Parish. The annual chance of occurrence for a tropical cyclone is estimated at 22% for Webster Parish with four events occurring within 18 years (2002 to 2020). The tropical cyclone season for the Atlantic Basin is from June 1st through November 30th, with most of the major hurricanes (Saffir-Simpson Categories 3, 4, & 5) occurring between the months of August and October. Based on geographical location alone Webster Parish and its jurisdictions are highly vulnerable to tropical cyclones. This area has experienced several tropical cyclone events in the past and can expect more in the future.

Estimated Potential Losses

Using Hazus 100-Year Hurricane Model, the 100-year hurricane scenario was analyzed to determine losses from this worst-case scenario. The table on the next page shows the total economic losses that would result from this occurrence.

Table 2-62: Total Estimated Losses for a 100-Year Hurricane Event (Source: Hazus)

Jurisdiction	Estimated Total Losses from 100-Year Hurricane Event
Webster Parish (Unincorporated)	$553,780
Cotton Valley	$33,290
Cullen	$38,370
Dixie Inn	$9,007
Doyline	$26,988
Dubberly	$9,007
Heflin	$8,050
Minden	$431,609
Sarepta	$29,396
Shongaloo	$6,005
Sibley	$40,185
Springhill	$70,810
Total	**$1,256,497**

Total losses from a 100-year hurricane event for Webster Parish were compared with the total value of assets to determine the ratio of potential damage to total inventory in the table below.

Table 2-63: Ratio of Total Losses to Total Estimated Value of Assets for Webster Parish (Source: Hazus)

Jurisdiction	Estimated Total Losses from 100-Year Hurricane Event	Total Estimated Value of Assets	Ratio of Estimated Losses to Total Value
Webster Parish (Unincorporated)	$553,780	$2,424,468,000	< 1%
Cotton Valley	$33,290	$129,334,000	< 1%
Cullen	$38,370	$138,910,000	< 1%
Dixie Inn	$9,007	$48,305,000	< 1%
Doyline	$26,988	$122,123,000	< 1%
Dubberly	$9,007	$28,645,000	< 1%
Heflin	$8,050	$31,473,000	< 1%
Minden	$431,609	$2,120,483,000	< 1%
Sarepta	$29,396	$122,422,000	< 1%
Shongaloo	$6,005	$33,338,000	< 1%
Sibley	$40,185	$127,954,000	< 1%
Springhill	$70,810	$942,351,000	< 1%

Based on the Hazus Hurricane Model, estimated total losses for Webster Parish and its jurisdictions were < 1% of the total estimated value of all assets.

The Hazus Hurricane Model also provides a breakdown for seven primary sectors (Hazus occupancy) throughout the parish. The losses for Webster Parish by sector are listed in the tables below.

Table 2-64: Estimated Losses in Unincorporated Webster Parish for a 100-Year Hurricane Event (Source: Hazus)

Webster Parish (Unincorporated)	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	$0
Commercial	$18
Government	$0
Industrial	$0
Religious / Non-Profit	$0
Residential	$553,762
Schools	$0
Total	**$553,780**

Table 2-65: Estimated Losses in Cotton Valley for a 100-Year Hurricane Event (Source: Hazus)

Cotton Valley	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	$0
Commercial	$1
Government	$0
Industrial	$0
Religious / Non-Profit	$0
Residential	$33,288
Schools	$0
Total	**$33,290**

Table 2-66: Estimated Losses in Cullen for a 100-Year Hurricane Event (Source: Hazus)

Cullen	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	$0
Commercial	$1
Government	$0
Industrial	$0
Religious / Non-Profit	$0
Residential	$38,369
Schools	$0
Total	**$38,370**

Table 2-67: Estimated Losses in Dixie Inn for a 100-Year Hurricane Event (Source: Hazus)

Dixie Inn	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	$0
Commercial	$0
Government	$0
Industrial	$0
Religious / Non-Profit	$0
Residential	$9,007
Schools	$0
Total	**$9,007**

Table 2-68: Estimated Losses in Doyline for a 100-Year Hurricane Event (Source: Hazus)

Doyline	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	$0
Commercial	$1
Government	$0
Industrial	$0
Religious / Non-Profit	$0
Residential	$26,987
Schools	$0
Total	**$0**

Table 2-69: Estimated Losses in Dubberly for a 100-Year Hurricane Event (Source: Hazus)

Dubberly	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	$0
Commercial	$0
Government	$0
Industrial	$0
Religious / Non-Profit	$0
Residential	$9,007
Schools	$0
Total	**$9,007**

Table 2-70: Estimated Losses in Heflin for a 100-Year Hurricane Event (Source: Hazus)

Heflin	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	$0
Commercial	$0
Government	$0
Industrial	$0
Religious / Non-Profit	$0
Residential	$8,050
Schools	$0
Total	**$8,050**

Table 2-71: Estimated Losses in Minden for a 100-Year Hurricane Event (Source: Hazus)

Minden	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	$0
Commercial	$14
Government	$0
Industrial	$0
Religious / Non-Profit	$0
Residential	$431,594
Schools	$0
Total	**$431,609**

Table 2-72: Estimated Losses in Sarepta for a 100-Year Hurricane Event (Source: Hazus)

Sarepta	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	$0
Commercial	$1
Government	$0
Industrial	$0
Religious / Non-Profit	$0
Residential	$29,395
Schools	$0
Total	**$29,396**

Table 2-73: Estimated Losses in Shongaloo for a 100-Year Hurricane Event (Source: Hazus)

Shongaloo	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	$0
Commercial	$0
Government	$0
Industrial	$0
Religious / Non-Profit	$0
Residential	$6,004
Schools	$0
Total	**$6,005**

Table 2-74: Estimated Losses in Sibley for a 100-Year Hurricane Event (Source: Hazus)

Sibley	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	$0
Commercial	$1
Government	$0
Industrial	$0
Religious / Non-Profit	$0
Residential	$40,184
Schools	$0
Total	**$40,185**

Table 2-75: Estimated Losses in Springhill for a 100-Year Hurricane Event (Source: Hazus)

Springhill	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	$0
Commercial	$2
Government	$0
Industrial	$0
Religious / Non-Profit	$0
Residential	$70,808
Schools	$0
Total	**$70,810**

Threat to People

The total population within the parish that is susceptible to a hurricane hazard is shown in the table below:

Table 2-76: Number of People Susceptible to a 100-Year Hurricane Event in Webster Parish (Source: Hazus)

Number of People Exposed to Hurricane Hazards			
Location	**# in Community**	**# in Hazard Area**	**% in Hazard Area**
Webster Parish (Unincorporated)	16,785	16,785	100%
Cotton Valley	1,009	1,009	100%
Cullen	1,163	1,163	100%
Dixie Inn	273	273	100%
Doyline	818	818	100%
Dubberly	273	273	100%
Heflin	244	244	100%
Minden	13,082	13,082	100%
Sarepta	891	891	100%
Shongaloo	182	182	100%
Sibley	1,218	1,218	100%
Springhill	5,269	5,269	100%
Total	**41,207**	**41,207**	**100%**

The Hazus hurricane model was also extrapolated to provide an overview of vulnerable populations throughout Webster Parish. These populations are illustrated in the following tables:

Table 2-77: Vulnerable Populations in Unincorporated Webster Parish for a 100-Year Hurricane Event (Source: Hazus)

Webster Parish (Unincorporated)		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	16,785	100.0%
Persons Under 5 Years	1,073	6.4%
Persons Under 18 Years	2,884	17.2%
Persons 65 Years and Over	2,808	16.7%
White	10,781	64.2%
Minority	6,004	35.8%

Table 2-78: Vulnerable Populations in Cotton Valley for a 100-Year Hurricane Event (Source: Hazus)

Cotton Valley		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	1,009	100.0%
Persons Under 5 Years	66	6.5%
Persons Under 18 Years	210	20.8%
Persons 65 Years and Over	146	14.5%
White	537	53.2%
Minority	472	46.8%

Table 2-79: Vulnerable Populations in Cullen for a 100-Year Hurricane Event (Source: Hazus)

Cullen		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	1,163	100.0%
Persons Under 5 Years	83	7.1%
Persons Under 18 Years	247	21.2%
Persons 65 Years and Over	159	13.7%
White	154	13.2%
Minority	1,009	86.8%

Table 2-80: Vulnerable Populations in Dixie Inn for a 100-Year Hurricane Event (Source: Hazus)

Dixie Inn		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	273	100.0%
Persons Under 5 Years	21	7.7%
Persons Under 18 Years	41	15.0%
Persons 65 Years and Over	26	9.5%
White	141	51.7%
Minority	132	48.4%

Table 2-81: Vulnerable Populations in Doyline for a 100-Year Hurricane Event (Source: Hazus)

Doyline		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	818	100.0%
Persons Under 5 Years	65	8.0%
Persons Under 18 Years	147	18.0%
Persons 65 Years and Over	119	14.6%
White	656	80.2%
Minority	162	19.8%

Table 2-82: Vulnerable Populations in Dubberly for a 100-Year Hurricane Event (Source: Hazus)

Dubberly		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	273	100.0%
Persons Under 5 Years	18	6.6%
Persons Under 18 Years	49	18.0%
Persons 65 Years and Over	36	13.2%
White	248	90.8%
Minority	25	9.2%

Table 2-83: Vulnerable Populations in Heflin for a 100-Year Hurricane Event (Source: Hazus)

Heflin		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	244	100.0%
Persons Under 5 Years	21	8.6%
Persons Under 18 Years	41	16.8%
Persons 65 Years and Over	35	14.3%
White	210	86.1%
Minority	34	13.9%

Table 2-84: Vulnerable Populations in Minden for a 100-Year Hurricane Event (Source: Hazus)

Minden		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	13,082	100.0%
Persons Under 5 Years	907	6.9%
Persons Under 18 Years	2,348	18.0%
Persons 65 Years and Over	2,247	17.2%
White	6,041	46.2%
Minority	7,041	53.8%

Table 2-85: Vulnerable Populations in Sarepta for a 100-Year Hurricane Event (Source: Hazus)

Sarepta		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	891	100.0%
Persons Under 5 Years	55	6.2%
Persons Under 18 Years	186	20.9%
Persons 65 Years and Over	151	17.0%
White	880	98.8%
Minority	11	1.2%

Table 2-86: Vulnerable Populations in Shongaloo for a 100-Year Hurricane Event (Source: Hazus)

Shongaloo		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	182	100.0%
Persons Under 5 Years	18	9.9%
Persons Under 18 Years	39	21.4%
Persons 65 Years and Over	15	8.2%
White	172	94.5%
Minority	10	5.5%

Table 2-87: Vulnerable Populations in Sibley for a 100-Year Hurricane Event (Source: Hazus)

Sibley		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	1,218	100.0%
Persons Under 5 Years	85	7.0%
Persons Under 18 Years	244	20.0%
Persons 65 Years and Over	180	14.8%
White	873	71.7%
Minority	345	28.3%

Table 2-88: Vulnerable Populations in Springhill for a 100-Year Hurricane Event (Source: Hazus)

Springhill		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	5,269	100.0%
Persons Under 5 Years	82	6.8%
Persons Under 18 Years	193	15.9%
Persons 65 Years and Over	237	19.5%
White	775	63.6%
Minority	443	36.4%

Vulnerability

See *Appendix C: Critical Facilities* for parish and municipality buildings that are susceptible to tropical cyclones.

Wildfires

A wildfire is combustion in a natural setting, marked by flames or intense heat. Most frequently wildfires are ignited by lightning or unintentionally by humans. Fires set purposefully (but lawfully) are referred to as controlled fires or burns. There are three different types of wildfires. (1) **Ground fires** burn primarily in the thick layers of organic matter directly on the forest floor and even within the soil. Ground fires destroy root networks, peat, and compact litter. These fires spread extremely slowly and can smolder for months. (2) **Surface fires** burn litter and vegetative matter in the underbrush of a forest. (3) **Crown fires** spread rapidly by wind and move quickly by jumping along the tops of trees. There are two types of crown fires—(a) passive (or dependent) crown fires rely on heat transfer from surface fire, whereas (b) active (or independent) crown fires do not require any heat transfer from below. Active crown fires tend to occur with greater tree density and drier conditions. A firestorm is a mass, crown fire (also called a running crown fire, area fire, or conflagration). They are large, continuous, intense fires that lead to violent convection. They are characterized by destructively violent surface in-drafts near and beyond their perimeter. Crown fires are the most damaging and most difficult to contain. The intensity of crown fires enables the fire to produce its own wind gusts. These so-called fire whirls can move embers ahead of the fire front and ignite new fires. Fire whirls are spinning vortex columns of ascending hot air and gases rising from the fire. Large fire whirls have the intensity of a small tornado.

The conditions conducive to the occurrence of wildfires are not distributed equally across the United States. Wildfires have a much greater likelihood of occurring in the western part of the country. Although less frequent than in other areas, wildfires do occur in Louisiana. Wildfire danger can vary greatly season to season and is exacerbated by dry weather conditions. Factors that increase susceptibility to wildfires are the availability of fuel (e.g., litter and debris), topography (i.e., slope and elevation affect various factors like precipitation, fuel amount, and wind exposure), and specific meteorological conditions (e.g., low rainfall, high temperatures, low relative humidity, and winds). The potential for wildfire is often measured by the Keetch–Byram Drought Index (KBDI), which represents the net effect of evapotranspiration and precipitation in producing cumulative moisture deficiency in the soil. The KBDI tries to measure the amount of precipitation needed to return soil to its full field capacity, with KBDI values ranging from 0 (moist soil) to 800 (severe drought).

According to the State of Louisiana Forestry Division, most forest fires in Louisiana are caused by intentional acts (arson) or carelessness and negligence committed by people, exacerbated by human confrontation with nature. The wildland–urban interface is the area in which development meets wildland vegetation, where both vegetation and the built environment provide fuel for fires. As development near wildland settings continues, more people and property are exposed to wildfire danger.

The Southern Group of State Foresters developed the Southern Wildfire Risk Assessment Portal to create awareness among the public and government sectors about the threat of wildfires in their areas. The Southern Wildfire Assessment Portal allows users to identify areas that are most prone to wildfires. The table on the next page summarizes the intensity levels assigned to areas in the Southern Wildfire Assessment Portal.

Table 2-89: Southern Group of State Foresters Wildfire Risk Assessment Fire Intensity Scale. (Source: Southern Wildfire Assessment Portal)

Fire Intensity	
Level	**Definition**
1	Lowest Intensity: Minimal direct wildfire impacts. Location has a minimal chance of being directly impacted by a wildfire.
2	Low Intensity: Small flames usually less than two feet long; small amount of very short-range spotting possible. Fires are easy to suppress.
3	Moderate Intensity: Flames up to eight feet in length; short-range spotting is possible.
4	High Intensity: Large flames up to 30 feet in length; short-range spotting common; medium range spotting possible.
5	Highest Intensity: Very large flames up to 150 feet in length; profuse short-range spotting, frequent long-range spotting; strong fire induced winds.

Location

Wildfires impact areas that are populated with forests and grasslands. The worse-case scenario for Webster Parish is a level 5; Cotton Valley a level 3.5; Cullen a level 2; Dixie Inn a level 3.5; Doyline a level 2; Dubberly a level 3; Heflin a level 3; Minden a level 3; Sarepta a level 3; Shongaloo a level 2; Sibley a level 3; and Springhill a level 2 on the fire intensity scale. The following figures display the areas of wildland-urban interface and intermix in Webster Parish and its jurisdictions.

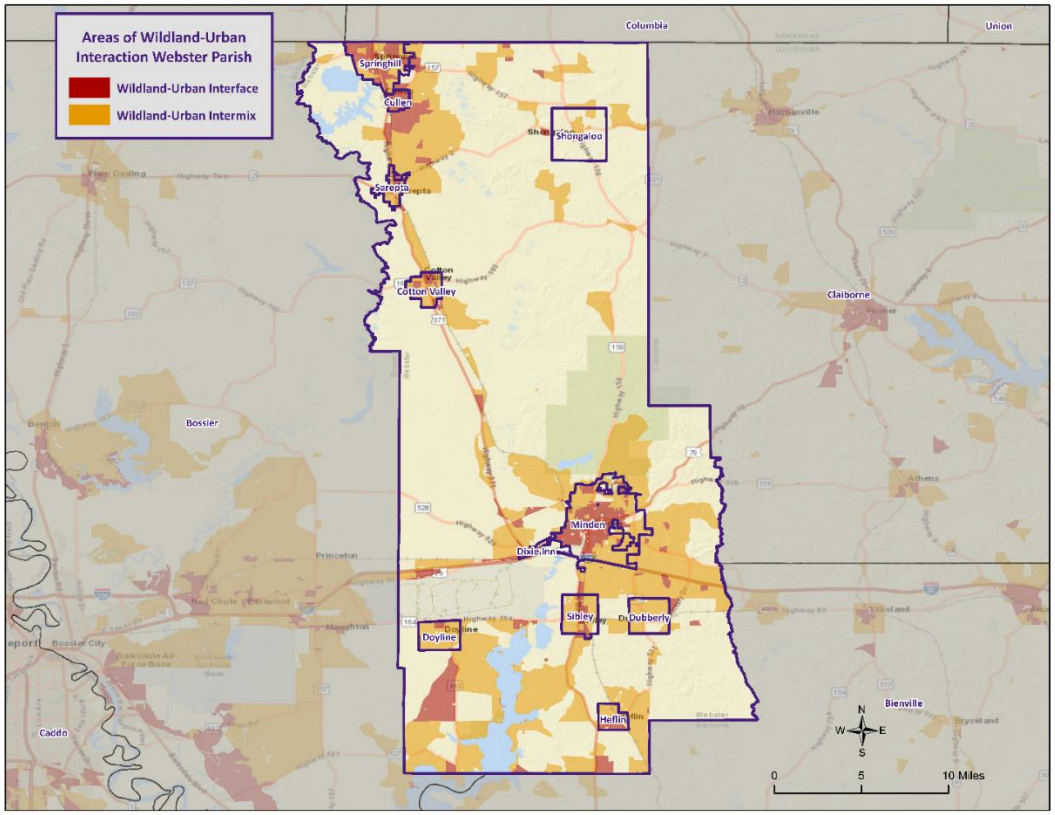


Figure 2-33: Wildland-Urban Interaction in Webster Parish.

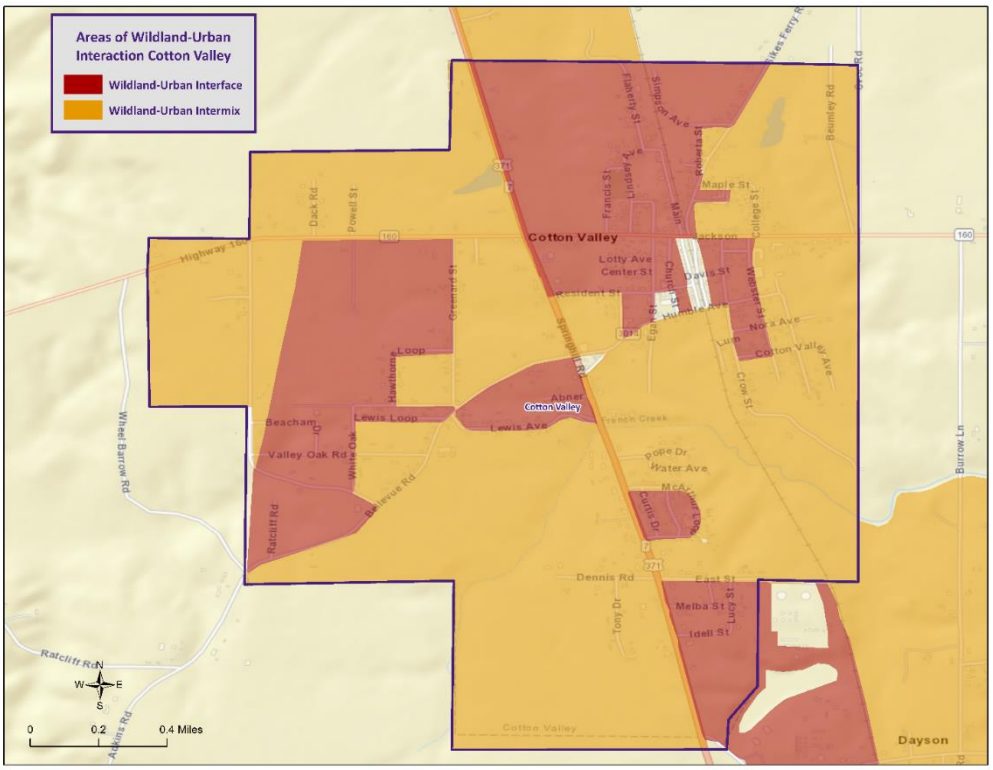


Figure 2-34: Wildland-Urban Interaction in Cotton Valley.

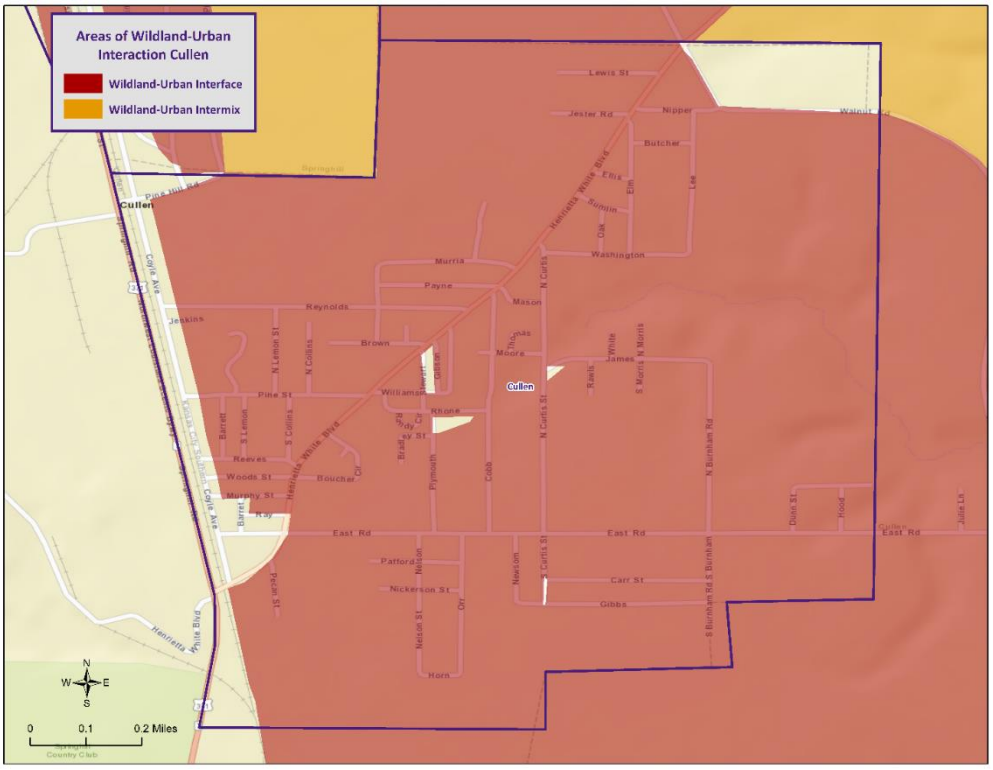


Figure 2-35: Wildland-Urban Interaction in Cullen.

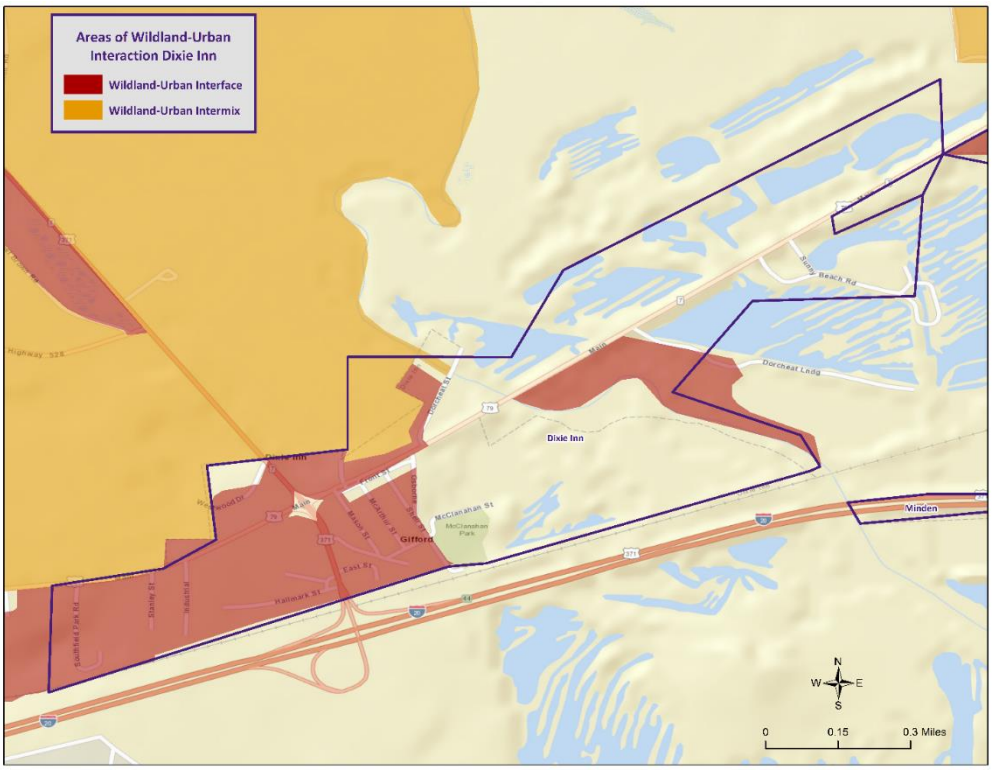


Figure 2-36: Wildland-Urban Interaction in Dixie Inn.

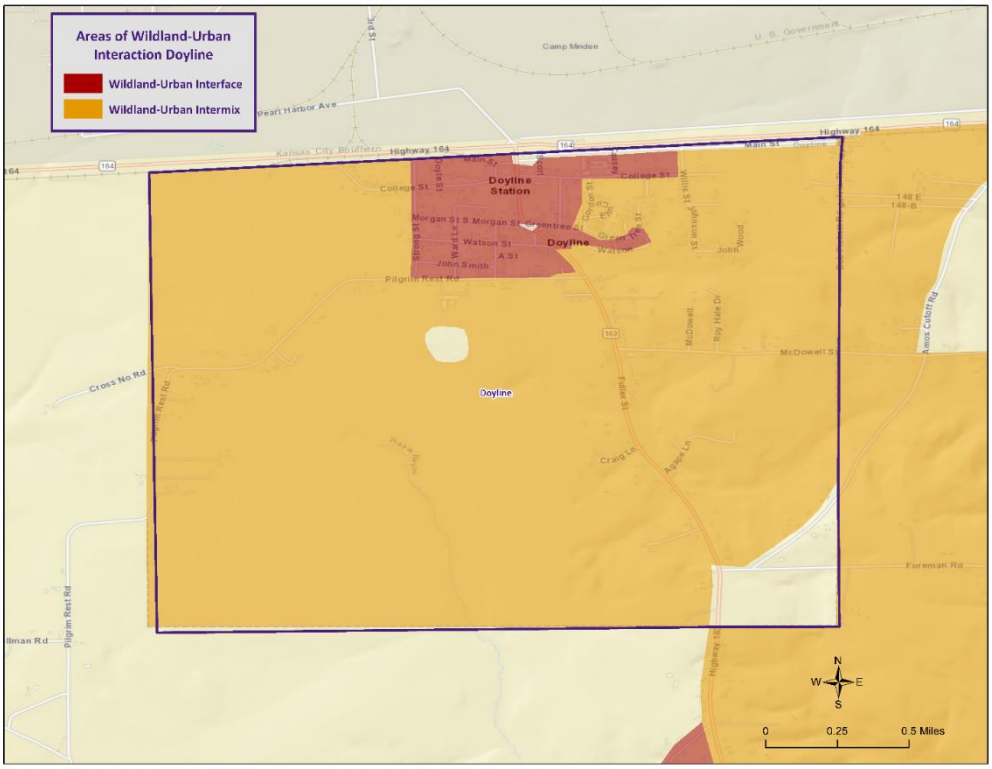


Figure 2-37: Wildland-Urban Interaction in Doyline.

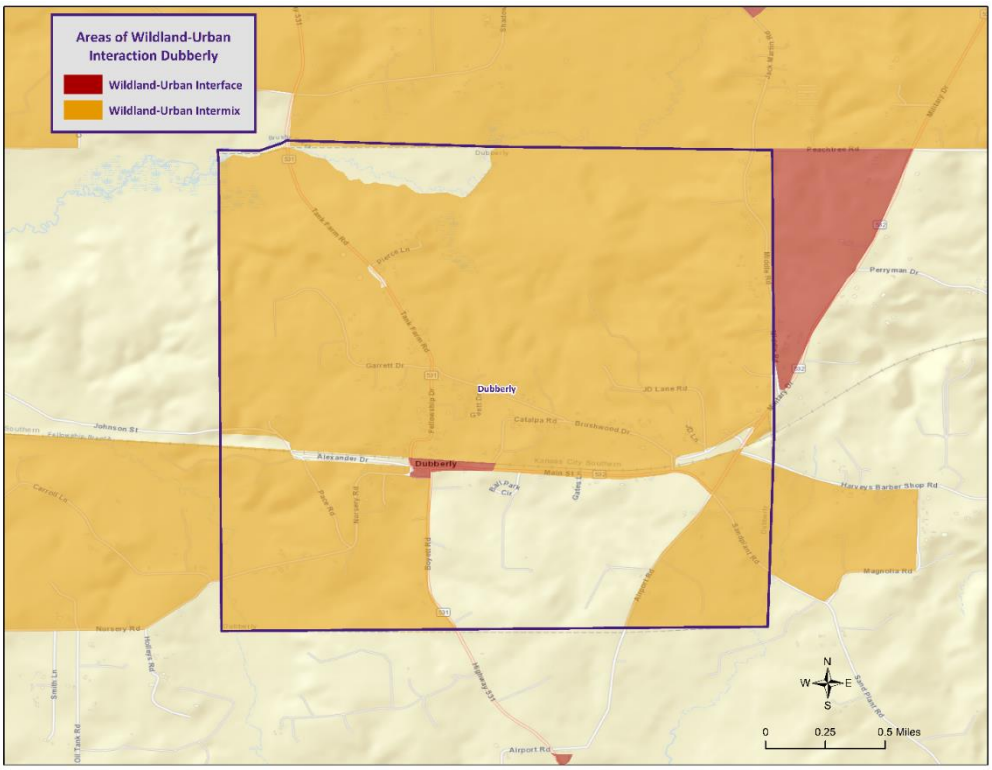


Figure 2-38: Wildland-Urban Interaction in Dubberly.

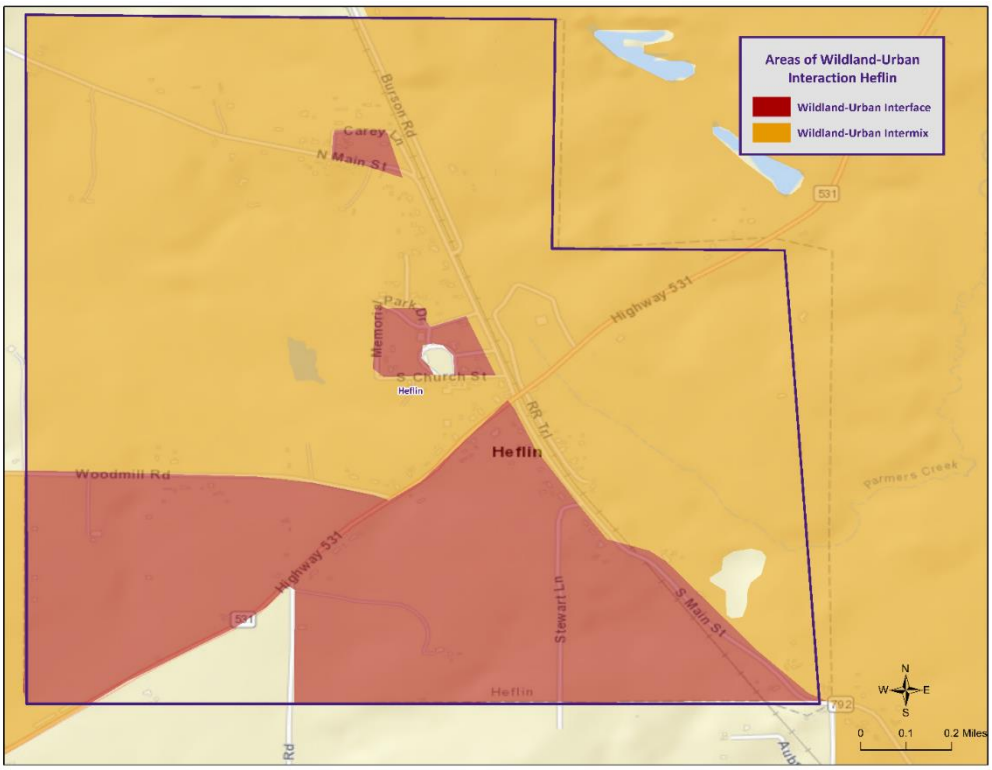


Figure 2-39: Wildland-Urban Interaction in Heflin.

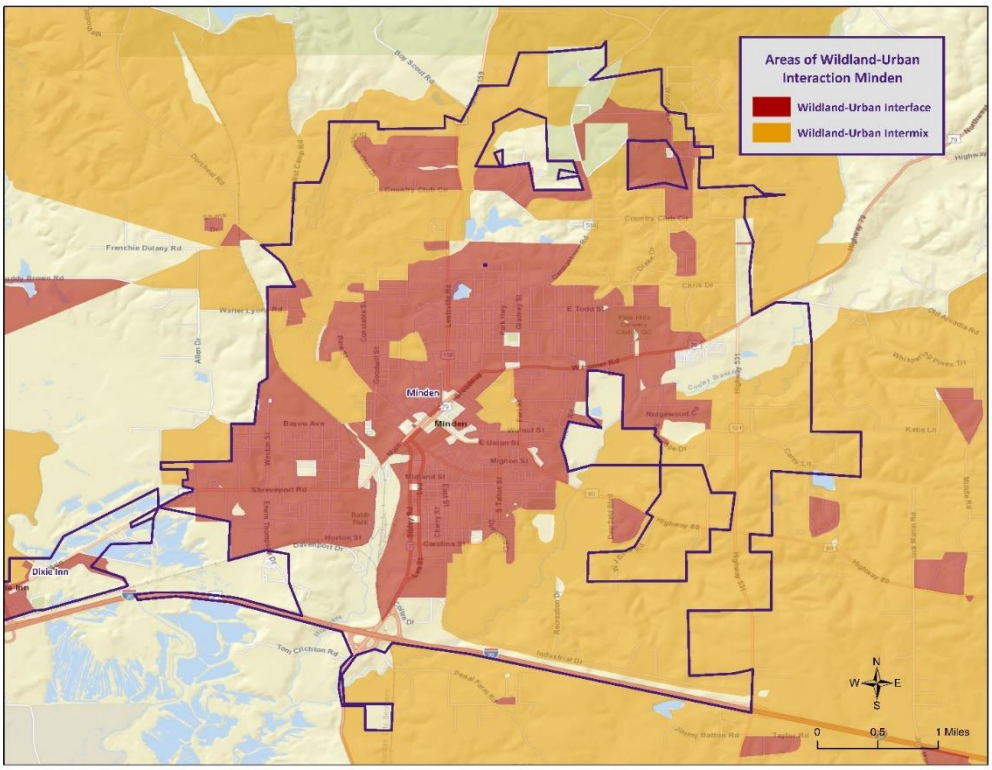


Figure 2-40: Wildland-Urban Interaction in Minden.

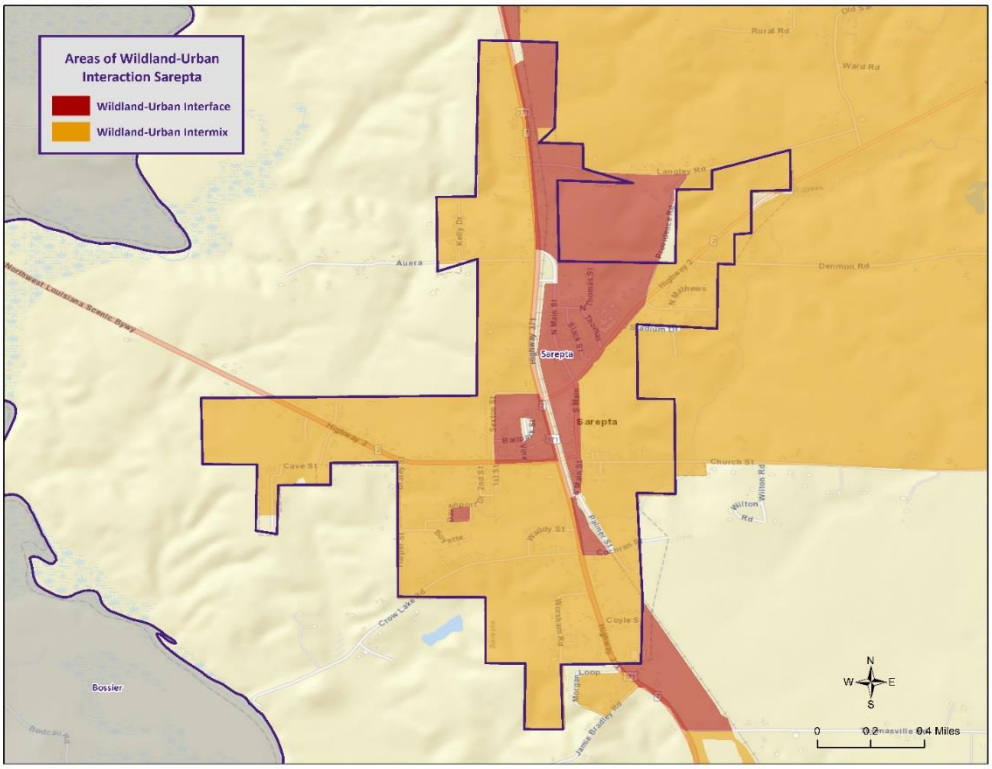


Figure 2-41: Wildland-Urban Interaction in Sarepta.

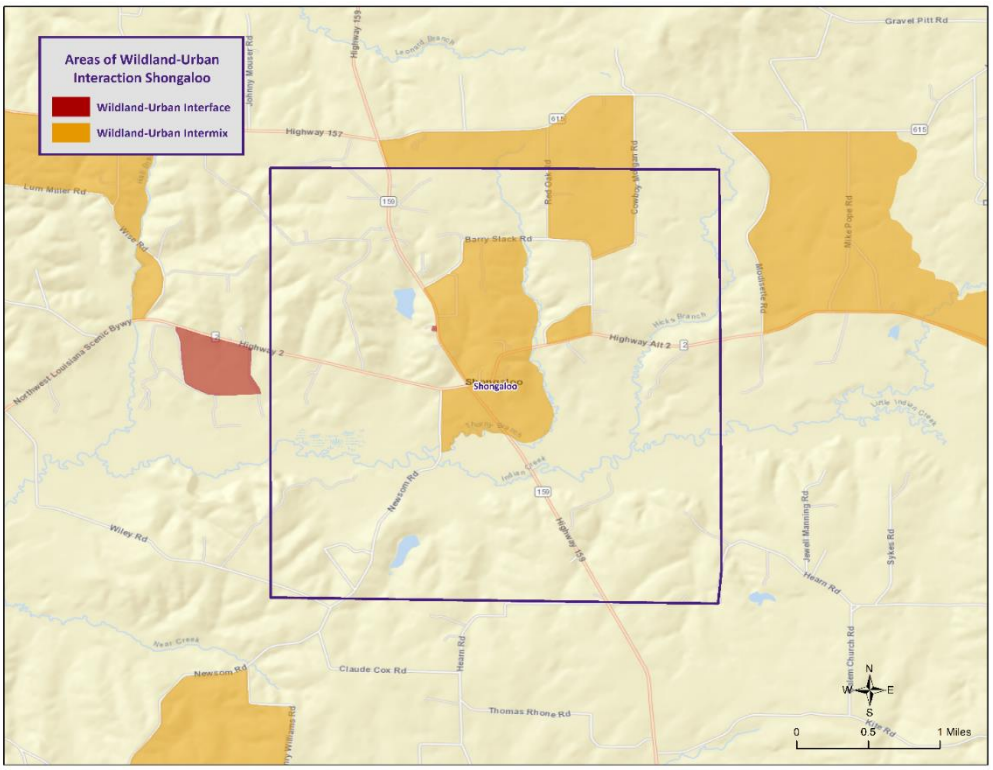


Figure 2-42: Wildland-Urban Interaction in Shongaloo.

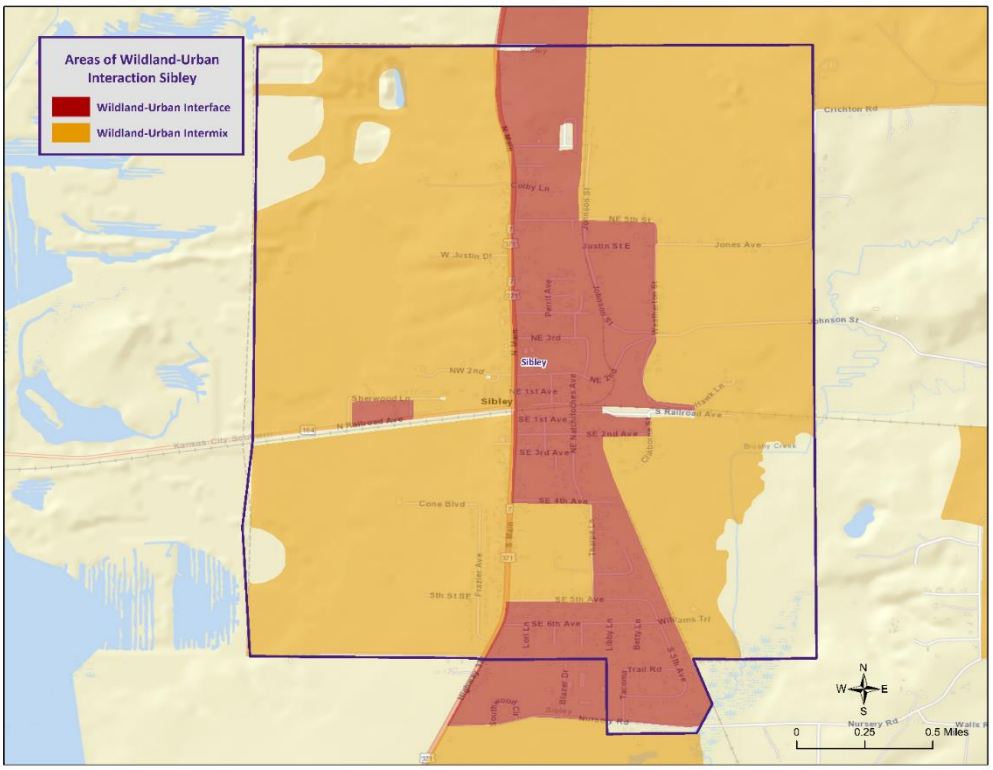


Figure 2-43: Wildland-Urban Interaction in Sibley.

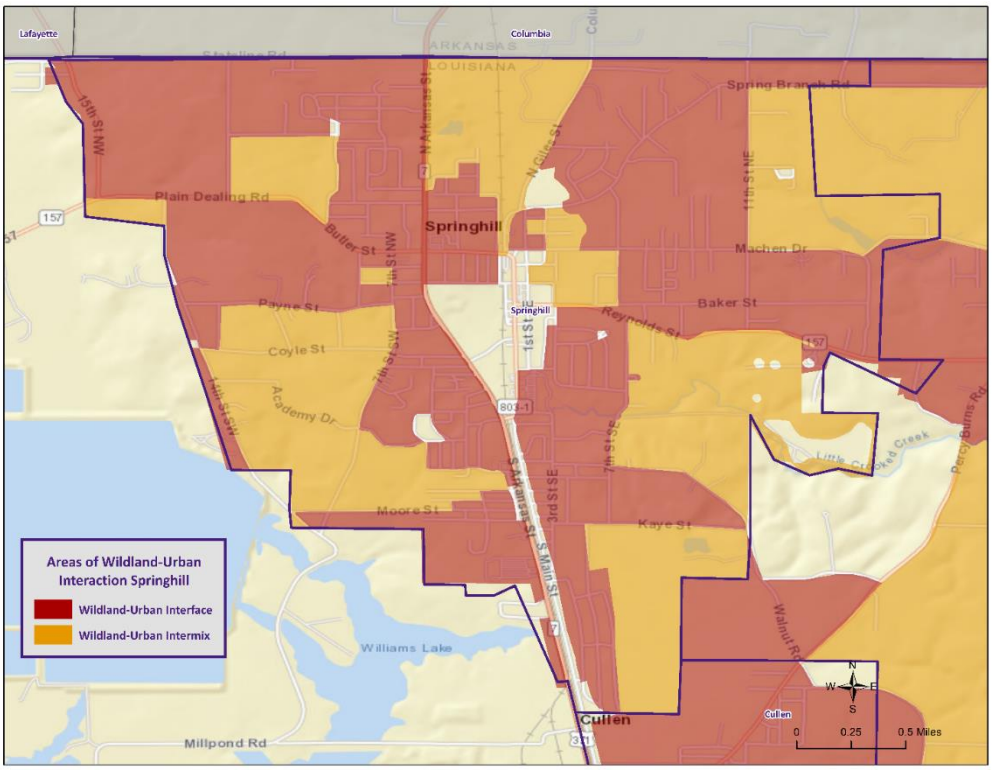


Figure 2-44: Wildland-Urban Interaction in Springhill.

Previous Occurrences / Extents

The NCEI Storm Events reports one wildfire event occurring within the boundaries of Webster Parish between the years 1990 and 2020. Since the last Webster Parish HMP Update in 2016, there have been no occurrences of wildfire events in Webster Parish or its jurisdictions.

Based on the Southern Group of State Foresters Risk Assessment Portal, the following table outlines the intensity that each jurisdictional area within Webster Parish could potential experience due to a wildfire event.

Table 2-90: Potential Wildfire Intensity Levels for Webster Parish.
(Source: Southern Wildfire Assessment Portal)

Fire Intensity	
Webster Parish	Highest Intensity Level 5
Cotton Valley	Moderate to High Intensity Level 3.5
Cullen	Low Intensity Level 2
Dixie Inn	Moderate to High Intensity Level 3.5
Doyline	Low Intensity Level 2
Dubberly	Moderate Intensity Level 3
Heflin	Moderate Intensity Level 3
Minden	Moderate Intensity Level 3
Sarepta	Moderate Intensity Level 3
Shongaloo	Low Intensity Level 2
Sibley	Moderate Intensity Level 3
Springhill	Low Intensity Level 2

Frequency / Probability

Based on historical records, there has been one significant wildfire event within the boundaries of Webster Parish and its jurisdictions; therefore, the annual chance of occurrence for wildfires is estimated at less than 3%.

Estimated Potential Loses

According to the NCEI Storm Events database, there has been one wildfire event which has caused property damage, crop damage, injuries, or fatalities in Webster Parish and its jurisdictions. In assessing over risk to population, the most vulnerable population throughout the parish consists of those residing in areas of wildland-urban interaction.

Using Hazus, along with wildland-urban interaction areas, the following table presents an analysis of total building exposure that is located within the wildland-urban interaction areas.

Table 2-91: Total Building Exposure by Wildland-Urban Interaction Areas. (Source: Hazus)

Jurisdiction	Estimated Total Building Exposure
Webster Parish (Unincorporated)	$2,177,986,000
Cotton Valley	$129,894,000
Cullen	$138,721,000
Dixie Inn	$47,873,000
Doyline	$122,123,000
Dubberly	$28,645,000
Heflin	$31,473,000
Minden	$2,095,182,000
Sarepta	$39,779,000
Shongaloo	$31,035,000
Sibley	$132,760,000
Springhill	$880,493,000
Total	**$5,855,964,000**

Hazus also provides a breakdown by jurisdiction for seven primary sectors (Hazus occupancy) throughout the parish. Utilizing this information with the wildland-urban interaction areas allows for identifying the total exposure by jurisdiction. The total exposure for each jurisdiction by sector is listed in the following tables. These sectors are comprised of privately owned structures/facilities, as well as locally, state, and federally owned structures/facilities.

Table 2-92: Estimated Exposure for Unincorporated Webster Parish by Sector. (Source: Hazus)

Webster Parish (Unincorporated)	Estimated Total Building Exposure by Sector
Agricultural	$5,220,000
Commercial	$149,226,000
Government	$11,560,000
Industrial	$155,273,000
Religious / Non-Profit	$45,432,000
Residential	$1,792,315,000
Schools	$18,960,000
Total	**$2,177,986,000**

Table 2-93: Estimated Exposure for Cotton Valley by Sector. (Source: Hazus)

Cotton Valley	Estimated Total Building Exposure by Sector
Agricultural	$0
Commercial	$5,496,000
Government	$1,432,000
Industrial	$402,000
Religious / Non-Profit	$5,854,000
Residential	$115,764,000
Schools	$946,000
Total	**$129,894,000**

Table 2-94: Estimated Exposure in Cullen by Sector. (Source: Hazus)

Cullen	Estimated Total Building Exposure by Sector
Agricultural	$0
Commercial	$2,480,000
Government	$0
Industrial	$0
Religious / Non-Profit	$0
Residential	$136,241,000
Schools	$0
Total	**$138,721,000**

Table 2-95: Estimated Exposure for Dixie Inn by Sector.
(Source: Hazus)

Dixie Inn	Estimated Total Building Exposure by Sector
Agricultural	$0
Commercial	$8,618,000
Government	$844,000
Industrial	$9,128,000
Religious / Non-Profit	$4,060,000
Residential	$25,223,000
Schools	$0
Total	**$47,873,000**

Table 2-96: Estimated Exposure for Doyline by Sector.
(Source: Hazus)

Doyline	Estimated Total Building Exposure by Sector
Agricultural	$140,000
Commercial	$9,486,000
Government	$948,000
Industrial	$2,770,000
Religious / Non-Profit	$10,282,000
Residential	$91,715,000
Schools	$6,782,000
Total	**$122,123,000**

Table 2-97: Estimated Exposure in Dubberly by Sector.
(Source: Hazus)

Dubberly	Estimated Total Building Exposure by Sector
Agricultural	$0
Commercial	$2,012,000
Government	$432,000
Industrial	$1,265,000
Religious / Non-Profit	$1,488,000
Residential	$21,526,000
Schools	$1,922,000
Total	**$28,645,000**

Table 2-98: Estimated Exposure for Heflin by Sector.
(Source: Hazus)

Heflin	Estimated Total Building Exposure by Sector
Agricultural	$0
Commercial	$1,088,000
Government	$408,000
Industrial	$396,000
Religious / Non-Profit	$850,000
Residential	$28,731,000
Schools	$0
Total	**$31,473,000**

Table 2-99: Estimated Exposure for Minden by Sector.
(Source: Hazus)

Minden	Estimated Total Building Exposure by Sector
Agricultural	$3,590,000
Commercial	$423,783,000
Government	$18,877,000
Industrial	$77,530,000
Religious / Non-Profit	$79,816,000
Residential	$1,460,202,000
Schools	$31,384,000
Total	**$2,095,182,000**

Table 2-100: Estimated Exposure in Sarepta by Sector.
(Source: Hazus)

Sarepta	Estimated Total Building Exposure by Sector
Agricultural	$8,000
Commercial	$4,050,000
Government	$26,000
Industrial	$20,055,000
Religious / Non-Profit	$882,000
Residential	$10,334,000
Schools	$4,424,000
Total	**$39,779,000**

Table 2-101: Estimated Exposure for Shongaloo by Sector.
(Source: Hazus)

Shongaloo	Estimated Total Building Exposure by Sector
Agricultural	$0
Commercial	$5,898,000
Government	$346,000
Industrial	$174,000
Religious / Non-Profit	$1,242,000
Residential	$19,683,000
Schools	$3,692,000
Total	**$31,035,000**

Table 2-102: Estimated Exposure for Sibley by Sector.
(Source: Hazus)

Sibley	Estimated Total Building Exposure by Sector
Agricultural	$0
Commercial	$12,054,000
Government	$1,038,000
Industrial	$1,660,000
Religious / Non-Profit	$5,030,000
Residential	$112,978,000
Schools	$0
Total	**$132,760,000**

Table 2-103: Estimated Exposure in Springhill by Sector.
(Source: Hazus)

Springhill	Estimated Total Building Exposure by Sector
Agricultural	$1,660,000
Commercial	$123,520,000
Government	$2,498,000
Industrial	$23,541,000
Religious / Non-Profit	$35,314,000
Residential	$685,201,000
Schools	$8,759,000
Total	**$880,493,000**

Threat to People

The total population within the parish that is located within a wildland-urban interaction area is shown in the table below:

Table 2-104: Population Located within a Wildland-Urban Interaction Areas.
(Source: 2010 U.S. Census Data)

Number of People Located in Wildland-Urban Interaction Areas			
Location	**# in Community**	**# in Hazard Area**	**% in Hazard Area**
Webster Parish (Unincorporated)	16,785	14,595	87.0%
Cotton Valley	1,009	1,009	100.0%
Cullen	1,163	1,163	100.0%
Dixie Inn	273	266	97.4%
Doyline	818	818	100.0%
Dubberly	273	273	100.0%
Heflin	244	244	100.0%
Minden	13,082	13,056	99.8%
Sarepta	891	829	93.0%
Shongaloo	182	182	100.0%
Sibley	1,218	1,218	100.0%
Springhill	5,269	5,063	96.1%
Total	**41,207**	**38,716**	**94.0%**

The 2010 U.S. Census data was also extrapolated to provide an overview of populations located within wildland-urban interaction areas throughout the jurisdictions. The date is illustrated in the following tables:

Table 2-105: Population in Unincorporated Webster Parish Located within a Wildland-Urban Interaction Area.
(Source: 2010 Census Data)

Webster Parish (Unincorporated)		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	14,595	87.0%
Persons Under 5 Years	933	6.4%
Persons Under 18 Years	2,507	17.2%
Persons 65 Years and Over	2,442	16.7%
White	9,374	64.2%
Minority	5,221	35.8%

Table 2-106: Population in Cotton Valley Located within a Wildland-Urban Interaction Area. (Source: 2010 Census Data)

Cotton Valley		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	1,009	100.0%
Persons Under 5 Years	66	6.5%
Persons Under 18 Years	210	20.8%
Persons 65 Years and Over	146	14.5%
White	537	53.2%
Minority	472	46.8%

Table 2-107: Population in Cullen Located within a Wildland-Urban Interaction Area. (Source: 2010 Census Data)

Cullen		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	1,163	100.0%
Persons Under 5 Years	83	7.1%
Persons Under 18 Years	247	21.2%
Persons 65 Years and Over	159	13.7%
White	154	13.2%
Minority	1,009	86.8%

Table 2-108: Population in Dixie Inn Located within a Wildland-Urban Interaction Area. (Source: 2010 Census Data)

Dixie Inn		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	266	97.4%
Persons Under 5 Years	20	7.7%
Persons Under 18 Years	40	15.0%
Persons 65 Years and Over	25	9.5%
White	137	51.7%
Minority	129	48.4%

Table 2-109: Population in Doyline Located within a Wildland-Urban Interaction Area. (Source: 2010 Census Data)

Doyline		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	818	100.0%
Persons Under 5 Years	65	8.0%
Persons Under 18 Years	147	18.0%
Persons 65 Years and Over	119	14.6%
White	656	80.2%
Minority	162	19.8%

Table 2-110: Population in Dubberly Located within a Wildland-Urban Interaction Area. (Source: 2010 Census Data)

Dubberly		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	273	100.0%
Persons Under 5 Years	18	6.6%
Persons Under 18 Years	49	18.0%
Persons 65 Years and Over	36	13.2%
White	248	90.8%
Minority	25	9.2%

Table 2-111: Population in Heflin Located within a Wildland-Urban Interaction Area. (Source: 2010 Census Data)

Heflin		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	244	100.0%
Persons Under 5 Years	21	8.6%
Persons Under 18 Years	41	16.8%
Persons 65 Years and Over	35	14.3%
White	210	86.1%
Minority	34	13.9%

Table 2-112: Population in Minden Located within a Wildland-Urban Interaction Area. (Source: 2010 Census Data)

Minden		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	13,056	99.8%
Persons Under 5 Years	905	6.9%
Persons Under 18 Years	2,344	18.0%
Persons 65 Years and Over	2,243	17.2%
White	6,029	46.2%
Minority	7,027	53.8%

Table 2-113: Population in Sarepta Located within a Wildland-Urban Interaction Area. (Source: 2010 Census Data)

Sarepta		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	829	93.0%
Persons Under 5 Years	51	6.2%
Persons Under 18 Years	173	20.9%
Persons 65 Years and Over	141	17.0%
White	819	98.8%
Minority	10	1.2%

Table 2-114: Population in Shongaloo Located within a Wildland-Urban Interaction Area. (Source: 2010 Census Data)

Shongaloo		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	182	100.0%
Persons Under 5 Years	24	9.9%
Persons Under 18 Years	52	21.4%
Persons 65 Years and Over	20	8.2%
White	231	94.5%
Minority	13	5.5%

Table 2-115: Population in Sibley Located within a Wildland-Urban Interaction Area. (Source: 2010 Census Data)

Sibley		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	1,218	100.0%
Persons Under 5 Years	911	7.0%
Persons Under 18 Years	2,615	20.0%
Persons 65 Years and Over	1,930	14.8%
White	9,357	71.7%
Minority	3,699	28.3%

Table 2-116: Population in Springhill Located within a Wildland-Urban Interaction Area. (Source: 2010 Census Data)

Springhill		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	5,063	96.1%
Persons Under 5 Years	342	6.8%
Persons Under 18 Years	802	15.9%
Persons 65 Years and Over	986	19.5%
White	3,222	63.6%
Minority	1,841	36.4%

Vulnerability

See *Appendix C: Critical Facilities* for parish and municipality facilities that could potentially be exposed to a wildfire hazard. Buildings were determined based on whether or not they fall within the wildfire-urban interface and/or intermix.

Winter Weather

For Louisiana and other parts of the southeastern United States, a severe winter storm occurs when humid air from the Gulf of Mexico meets a cold air mass from the north. Once the cold air mass crosses Louisiana, and the temperature drops, precipitation may fall in the form of snow or sleet. If the ground temperature is cold enough but air temperature is above freezing, rain can freeze instantly on contact with the surface, causing massive ice storms.

The winter storm events that affect the state of Louisiana are ice storms, freezes, and snow events. Of the winter storm types listed above, ice storms are the most dangerous. Ice storms occur during a precipitation event when warm air aloft exceeds 32 °F, while the surface remains below the freezing point. Ice will form on all surfaces when precipitation originating as rain or drizzle contacts physical structures. These ice storms are usually accompanied by freezing temperatures and occasionally snow.

Winter storms can be accompanied by strong winds, creating blizzard conditions with blinding, wind driven snow, severe drifting, and dangerous wind chill. These types of conditions are very rare in Louisiana, even in north Louisiana, but ice storms are more common. The climatic line between snow and rain often stalls over north Louisiana, creating ideal conditions for ice accumulation.

In a typical winter storm event, homes and buildings are damaged by ice accumulation, either directly by the weight of the ice on the roofs or by trees and/or limbs falling on buildings. While it is not very prevalent, this type of damage can occur in Louisiana, particularly in north Louisiana. Effects of winter weather more likely to occur in Louisiana, especially southern Louisiana, include extreme temperatures which can cause waterlines to freeze and sewer lines to rupture. This is especially true with elevated or mobile homes since cold air is able to access more of the building's infrastructure. Winter storms can also have a devastating effect on agriculture, particularly on crops (like citrus) that are dependent on warm weather. Long exposures to low temperatures can kill many kinds of crops, and ice storms can weigh down branches and fruit.

Winter storms are not only a direct threat to human health through conditions like frostbite and hypothermia, but they are also an indirect threat to human health due to vehicle accidents and loss of power and heat, which can be disrupted for days. However, these impacts are rarely seen in Louisiana. As people use space heaters and fireplaces to stay warm, the risk of household fires and carbon monoxide poisoning increases.

Winter storm events occur throughout Louisiana usually during the colder calendar months of December, January, and February. Severe weather events do not occur with the same frequency across all parts of Louisiana. The northern quarter of Louisiana has historically experienced the most severe winter events between 1987 and 2012. The central, and to an even greater extent the southern parts of the state, such as Ascension Parish, have experienced the fewest severe winter events. The table on the next page shows the Sperry-Piltz Ice Accumulation Index which is utilized to predict the potential damage to overhead utility systems from freezing rain and ice storms.

Table 2-117: Sperry-Piltz Ice Accumulation Index

Ice Damage Index	Damage and Impact Descriptions
0	Minimal risk of damage to exposed utility systems; no alerts or advisories needed for crews, few outages.
1	Some isolated or localized utility interruptions are possible, typically lasting only a few hours. Roads and bridges may become slick and hazardous.
2	Scattered utility interruptions expected, typically lasting 12 to 24 hours. Roads and travel conditions may be extremely hazardous due to ice accumulation.
3	Numerous utility interruptions with some damage to main feeder lines and equipment expected. Tree limb damage is excessive. Outages lasting 1 – 5 days.
4	Prolonged and widespread utility interruptions with extensive damage to main distribution feeder lines and some high voltage transmission lines/structure. Outages lasting 5 – 10 days.
5	Catastrophic damage to entire exposed utility systems, including both distribution and transmission networks. Outages could last several weeks in some areas. Shelters needed.

Location

Because a winter storm is a climatological based hazard and has the same probability of occurring in Webster Parish as all of the adjacent parishes, the entire planning area for Webster Parish is equally at risk for winter storms.

Previous Occurrences / Extents

The NCEI Storm Events Database reports eight winter weather events occurring within the boundaries of Webster Parish between the years 1990 and 2020. Since the last Webster Parish HMP Update in 2016, there has been one winter weather event occurring within the boundaries of Webster Parish. Below is a brief synopsis of the winter weather event which occurred since the last Webster Parish HMP Update in 2016.

Table 2-118: Historical Winter Weather in Webster Parish with Locations since the 2016 Webster Parish HMP Update.

Date	Synopsis	Estimated Damages
February 28, 2019	An arctic cold front progressed southeast across the Ark-La-Tex during the daytime hours on February 7th, with temperatures falling from the 70s on the 7th, into the 20s and lower 30s by the morning of February 8th. Extensive mid and high clouds moved back into the region during the daytime hours on the 8th, and thickened up ahead of a shortwave trough that progressed east across Central and East Texas during the afternoon and evening. Large scale forcing and overrunning of warmer air atop the cold, dry, arctic air in place ahead of this trough resulted in areas of sleet initially developing by midday and through the afternoon over East Texas and	$0

Date	Synopsis	Estimated Damages
	Northwest Louisiana. Afternoon temperatures over these areas were above freezing as they climbed into the mid 30s to near 40 degrees, such that no ice accumulations occurred initially. However, the warmer air overrunning the cold air mass resulted in a mix of light rain and sleet from the mid-afternoon through the evening. Temperatures cooled to near freezing during the evening through the overnight hours across much of East Texas and North Louisiana along and south of the Interstate 20 corridor as the rain/sleet mix continued, resulting in the light rain changing over to light freezing rain and sleet. Minor ice accumulations were observed (less than one-tenth of an inch), mainly over elevated objects including bridges and overpasses, trees and other vegetation across North Louisiana, which resulted in the closure of Interstate 49 through Shreveport between Interstate 20 and Bert Kouns Industrial Loop, as well as the Interstate 49 interchange along Interstate 220 in North Shreveport. What ice accumulations were observed quickly melted by mid-morning on February 9th as temperatures climbed back above freezing.	

The worst-case scenario for Webster Parish is a level 3 on the Sperry-Piltz ice accumulation index.

Frequency / Probability

Based on historical records, there has been eight significant winter weather events within the boundaries of Webster Parish and its jurisdictions; therefore, the annual chance of occurrence for winter weather is estimated at 27%.

Estimated Potential Loses

Since 1990, there has been eight winter weather events that have resulted in property damages according to NCEI Storm Events Database. The total property damages associated with these storms have totaled approximately $1,000. To estimate the potential losses of winter weather events on an annual basis, the total damages recorded for winter weather was divided by the total number of years of available winter weather in the NCEI Storm Events Database (1990 - 2020). This provides an annual estimated potential loss of $33 and $1,000 per event. The following tables provide an estimate of potential property losses for Webster Parish:

Table 2-119: Estimated Annual Losses Webster Parish and its Jurisdictions Resulting from Winter Weather.

Estimated Annual Potential Losses From Winter Weather					
Unincorporated Area	**Cotton Valley**	**Cullen**	**Dixie Inn**	**Doyline**	**Dubberly**
$16	$1	$1	< $1	$1	< $1

Table 2-120: Estimated Annual Losses Webster Parish and its Jurisdictions Resulting from Winter Weather.

Estimated Annual Potential Losses From Winter Weather					
Heflin	**Minden**	**Sarepta**	**Shongaloo**	**Sibley**	**Springhill**
< $1	$13	$1	< $1	$1	$4

There have been no reported injuries or fatalities as a result of winter weather over the 30-year record.

Vulnerability

See *Appendix C: Critical Facilities* for parish and municipality building exposure to winter weather.

Dam Failure

Dams are water storage, control, or diversion barriers that impound water upstream and in reservoirs. Dams are a vital part of our nation's infrastructure, providing drinking water, flood protection, renewable hydroelectric power, navigation, irrigation, and recreation. These critical daily benefits are also inextricably linked to the potential harmful consequences of a dam failure.

Dam failure is a collapse or breach in a structure. A dam failure can result in severe loss of life, economic disaster, and extensive environmental damage. While most dams have storage volumes small enough that failures have few repercussions, dams with large storage volumes can cause significant flooding downstream. Dam failures often have a rapid rate of onset, leaving little time for evacuation. The first signs of the failure may go unnoticed upon visual inspection of the dam structure. However, continual maintenance and inspection of dams often provide the opportunity to identify possible deficiencies in their earlier stages and can prevent a possible catastrophic failure event.

The duration of the flooding event caused by the failure depends largely on the amount of water and downstream topography. Given smaller volumes of water and topography suited for transporting the water rapidly downstream, the event may only last hours. Because of the lack of seasonality and other predictive factors, a predictive frequency or likelihood of dam failures cannot be determined. However, the National Dam Safety Program (NDPS) produces hazard rankings (high, significant, and low) and definitions of dam structures, based on potential impact. These rankings can be defined as the following:

- **High**: Dams assigned the high hazard potential classification are those where failure or misoperation will probably cause loss of human life.
- **Significant**: Dams assigned the significant hazard potential classification are those dams where failure or mis operation results in no probable loss of human life, but can case economic loss, environmental damage, disruption of lifeline facilities, or can impact other concerns. Significant hazard potential classification dams are often located n predominately rural or agricultural areas, but could be located in areas with population and significant infrastructure.
- **Low**: Dams assigned the low hazard potential classification are those where failure or mis operation results in no probable loss of human life and low economic and/or environmental losses. Losses are principally limited to the owner's property.

Dam/reservoir failures can result from any one of or a combination of the following causes:

- Prolonged periods of rainfall and flooding, which cause most failures.
- Inadequate spillway capacity, resulting in excess overtopping flows;
- Internal erosion caused by embankment or foundation leakage or piping;
- Improper maintenance, including failure to remove trees, repair internal seepage problems, replace lost material from the cross-section f the dam and abutments, or maintain gates, valves, and other operational components;
- Improper design, including the use of improper construction materials and construction practices;
- Negligent operation, including the failure to remove or open gates or valves during high flow periods;
- Failure of upstream dams on the same waterway;
- Landslides into reservoirs, which cause surges that result in overtopping;
- High winds, which can cause significant wave action and result in substantial erosion; and
- Earthquakes, which typically cause longitudinal cracks at the tops of the embankments that can weaken entire structures.

In Louisiana, there are 513 dams included in the Army Corps of Engineers National Inventory of Dams. Of these, 41 are considered high hazard, 63 are significant hazard, and 409 are low hazard potential dams.

Location

According to the National Inventory of Dams, Webster Parish has one significant hazard dam which is located in the unincorporated area of Webster Parish. The significant dam located in Webster Parish is shown in the following figure:

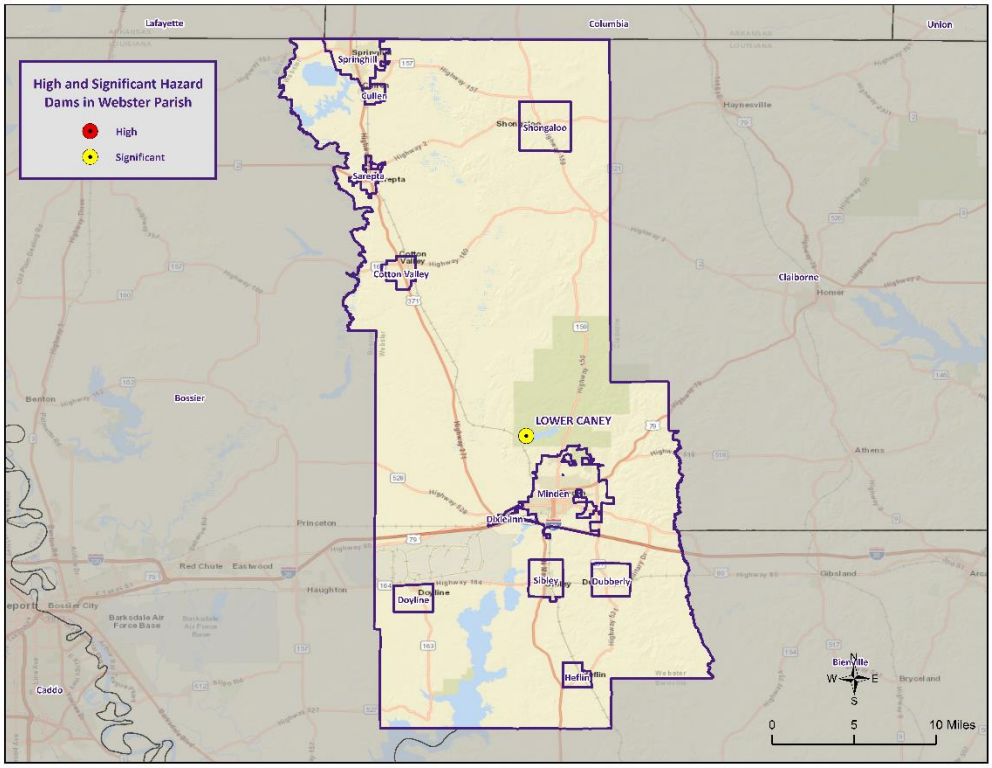


Figure 2-45: National Inventory of Dam Locations in Webster Parish.

Webster Parish has contacted the United States Army Corps of Engineers to inquire about the extent of flooding that could occur due to the failure of Lower Caney. The parish is claiming a data deficiency at this time for the extent of flooding which could potential occur with the failure of Lower Caney due to receiving no response.

Previous Occurrences / Extents

The National Performance of Dams Program (NPDP), a database of dam incidents maintained by Stanford University, lists one dam incident in Louisiana, which occurred in Kisatchie Lake Dam in Grant Parish in 1991. However, there have been no dam failures within the boundaries of Webster Parish and its jurisdictions.

Frequency / Probability

It is nearly impossible to predict and model dam failure and its impacts on Webster Parish. Due to the unpredictability of dam failures, it is calculated that the probability of a dam failure is less than 1% annually for the unincorporated areas of Webster Parish and its jurisdictions.

Estimated Potential Loses

Determining the annualized loss as a result of a dam failure is difficult in Webster Parish due to availability of data on past dam failure events. The National Inventory of Dams was utilized to determine the dams within Webster Parish, the risk level, and storage capacity of the reservoir. The NLD is a congressional authorized database that documents dams in the United States and its territories and is maintained by the U.S. Army Corps of Engineers (USACE). The following table provides an extensive list of the dams in Webster Parish with the risk associated with each system.

Table 2-121: Dams and Risk Associated with each in Webster Parish.
(Source: National Inventory of Dams)

System	Rating	Height (ft)	Storage (Acre-Feet)	Dam Type	Last Inspection Date
Lower Caney	Significant	27	4,722	Earth	5/30/2013

Vulnerability

See *Appendix C: Critical Facilities* for parish and municipality building exposure to dam failures.

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3. Capability Assessment

This section summarizes the results of efforts by each jurisdiction and other agency to develop policies, programs, and activities that directly or indirectly support hazard mitigation. It also provides information on resources and gaps in the parish's infrastructure, as well as relevant changes in its law since the last plan update, in order to suggest a mitigation strategy.

Through this assessment, Webster Parish and the incorporated jurisdictions are able to identify strengths that could be used to reduce losses and reduce risk throughout the communities. It also identifies areas where mitigation actions might be used to supplement current capabilities and create a more resilient community before, during, and after a hazard event.

Policies, Plans and Programs

These capabilities are unique to the parish and jurisdictions, including planning, regulatory, administrative, technical, financial, and education and outreach resources. There are a number of mitigation-specific acts, plans, executive orders, and policies that lay out specific goals, objectives, and policy statements which already support or could support pre- and post-disaster hazard mitigation. Many of the ongoing plans and policies hold significant promise for hazard mitigation, and take an integrated and strategic look holistically at hazard mitigation in the Webster Parish planning area to propose ways to continually improve it. These tools are valuable instruments in pre- and post-disaster mitigation as they facilitate the implementation of mitigation activities through the current legal and regulatory framework. Examples of existing documents include the following:

Table 3-1: Planning and Regulatory Capabilities

Planning and Regulatory												
Please indicate which of the following plans and regulatory capabilities your jurisdiction has in place.												
	Webster Unincorporated	Cotton Valley	Cullen	Dixie Inn	Doyline	Dubberly	Heflin	Minden	Sarepta	Shongaloo	Sibley	Springhill
Plans	**Yes / No**											
Comprehensive / Master Plan	No	No	No	No	No	No	No	No	No	No	No	No
Capital Improvements Plan	No	No	No	Yes	No	No	No	Yes	Yes	No	No	No
Economic Development Plan	No	No	No	No	No	No	No	Yes	No	No	No	Yes
Local Emergency Operations Plan	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No	No
Continuity of Operations Plan	No	No	No	No	No	No	No	No	No	No	No	No
Transportation Plan	No	No	No	No	No	No	No	No	No	No	No	No
Stormwater Management Plan	No	No	No	No	No	No	No	No	No	No	No	No
Community Wildfire Protection Plan	No	No	No	No	No	No	No	Yes	No	No	No	No
Other plans (redevelopment, recovery, coastal zone management)	No	No	No	No	No	No	No	No	No	No	No	No
Building Code, Permitting and Inspections	**Yes / No**											
Building Code	Yes	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
Building Code Effectiveness Grading Schedule (BCEGS) Score	No	No	No	No	No	No	No	No	No	No	No	No
Fire Department ISO/PIAL rating	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Site plan review requirements	No	No	No	Yes	No	No	No	Yes	No	No	No	No
Land Use Planning and Ordinances	**Yes / No**											
Zoning Ordinance	No	No	No	No	No	No	No	Yes	No	No	No	Yes
Subdivision Ordinance	No	No	No	No	No	No	Yes	Yes	No	No	No	No
Floodplain Ordinance	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	No	No	No	No	No	No	No	Yes	No	No	No	No
Flood Insurance Rate Maps	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes
Acquisition of land for open space and public recreation uses	No	Yes	No	No	No	No	No	No	No	No	No	Yes
Other	No	No	No	No	No	No	No	No	No	No	No	No

All jurisdictions within the Webster Parish planning area will work to expand their capabilities by adding to these plans, as well as work to create new plans that will address a long-term recovery and resiliency framework. In instances where there are no existing plans, there will be a concerted effort to explore opportunities to create new plans that will address long-term recovery and resiliency framework as parish and local resources allow.

Building Codes, Permitting, Land Use Planning and Ordinances

The Webster Parish Police Jury provides oversight for building permits and codes, land use planning, and all parish ordinances.

As of the 2021 update, Webster Parish and the incorporated communities ensure that all adopted building codes are enforced and in compliance relating to the construction of any structure within the boundaries of the parish. Building permits are required prior to beginning any type of construction or renovation projects, installation of electrical wiring, plumbing or gas piping, moving manufactured/modular or portable buildings, and reroofing or demolitions.

The Webster Parish Police Jury is also responsible for enforcing the parish ordinances related to health and safety, property maintenance standards, and condemnation of unsafe structures.

The Webster Parish Police Jury meets regularly to consider any proposed ordinance changes, and to take final actions on proposed changes.

While local capabilities for mitigation can vary from community to community, the jurisdictions within the Webster Parish planning area as a whole have a system in place to coordinate and share these capabilities through the OHSEP and through this Parish Hazard Mitigation Plan.

Some programs and policies, such as the above described, might use complementary tools to achieve a common end, but fail to coordinate with or support each other. Thus, coordination among local mitigation policies and programs is essential to hazard mitigation.

Administration, Technical, and Financial

The jurisdictions within the Webster Parish planning area have administrative and technical capabilities in place that may be utilized in reducing hazard impacts or implementing hazard mitigation activities. Such capabilities include staff, skillset, and tools available in the community that may be accessed to implement mitigation activities and to effectively coordinate resources. The ability to access and coordinate these resources is also important. The table on the following page shows examples of resources in place.

Table 3-2: Administration and Technical Capabilities

Administration and Technical												
Identify whether your community has the following administrative and technical capabilities. For smaller jurisdictions without local staff resources, if there are public resources at the next higher level government that can provide technical assistance, indicate so in your comments.												
	Webster Unincorporated	Cotton Valley	Cullen	Dixie Inn	Doyline	Dubberly	Heflin	Minden	Sarepta	Shongaloo	Sibley	Springhill
Administration	**Yes / No**											
Planning Commission	No	No	No	No	No	No	No	Yes	No	No	No	No
Mitigation Planning Committee	Yes	No	No	No	No	No	No	No	No	No	No	No
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	Yes	No	No	Yes	No	No	No	Yes	No	No	No	Yes
Staff	**Yes / No**											
Chief Building Official	No	No	No	No	No	No	No	Yes	No	No	No	No
Floodplain Administrator	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes
Emergency Manager	Yes	No	No	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Community Planner	No	No	No	No	No	No	No	No	No	No	No	No
Civil Engineer	Yes	No	No	No	No	No	No	No	No	No	No	No
GIS Coordinator	Yes	No	No	No	No	No	No	Yes	No	No	No	No
Grant Writer	Yes	No	No	No	No	No	No	No	Yes	No	No	No
Other	No			No	No	No	No	No	No	No	No	No
Technical	**Yes / No**											
Warning Systems / Service (Reverse 911, outdoor warning signals)	No	No	No	No	No	No	No	No	No	No	Yes	No
Hazard Data & Information	Yes	No	No	No	No	No	No	No	No	No	No	No
Grant Writing	Yes	No	No	Yes	No	No	No	No	Yes	No	No	No
Hazus Analysis	Yes	No	No	No	No	No	No	No	No	No	No	No
Other	No		No	No	No	No	No	No	No	No	No	No

Financial capabilities are the resources that the Webster Parish Police Jury and its incorporated jurisdictions have access to or are eligible to use in order to fund mitigation actions. Costs associated with implementing the actions identified by the parish may vary from little to no cost actions, such as outreach efforts, or substantial action costs such acquisition of flood prone properties.

The following financial resources are available to fund mitigation actions in the Webster Parish planning area:

Table 3-3: Financial Capabilities

Financial												
Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.												
	Webster Unincorporated	Cotton Valley	Cullen	Dixie Inn	Doyline	Dubberly	Heflin	Minden	Sarepta	Shongaloo	Sibley	Springhill
Funding Resource	**Yes / No**											
Capital Improvements project funding	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Authority to levy taxes for specific purposes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fees for water, sewer, gas, or electric services	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Impact fees for new development	No	No	No	No	No	No	No	No	No	No	No	No
Stormwater Utility Fee	No	No	No	No	No	No	No	No	No	No	No	No
Community Development Block Grant (CDBG)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Other Funding Programs	Yes	Yes	LGAP GWEF	Yes	No	Yes		Yes	No	No	No	Yes

Education and Outreach

A key element in hazard mitigation is promoting a safer, more disaster resilient community through education and outreach activities and/or programs. Successful outreach programs provide data and information that improves overall quality and accuracy of important information for citizens to feel better prepared and educated with mitigation activities. These programs enable the individual communities and the parish as a whole to maximize opportunities for implementation of activities through greater acceptance and consensus of the community.

The jurisdictions within the Webster Parish planning area have existing education and outreach programs to implement mitigation activities, as well as communicate risk and hazard related information to its communities. The existing programs are outlined on the following page.

Table 3-4: Education and Outreach Capabilities

Education and Outreach												
Identify education and outreach programs and methods, already in place that could be used to implement mitigation activities and communicate hazard-related information.												
	Webster Unincorporated	Cotton Valley	Cullen	Dixie Inn	Doyline	Dubberly	Heflin	Minden	Sarepta	Shongaloo	Sibley	Springhill
Program / Organization	Yes / No											
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	No	No	No	No	No	No	No	No	No	No	No	No
Ongoing public education or information program (responsible water use, fire safety, household preparedness, environmental education)	No	No	No	No	No	No	No	Yes	No	No	No	No
Natural Disaster or safety related school program	Yes	No	No	No	No	No	No	No	No	No	No	No
Storm Ready certification	No	No	No	No	No	No	No	No	No	No	No	No
Firewise Communities certification	No	No	No	No	No	No	No	No	No	No	No	No
Public/Private partnership initiatives addressing disaster-related issues	No	No	No	No	No	No	No	No	No	No	No	Yes
Other	No	No	No	No	No	No	No	No	No	No	No	No

As reflected with the above existing regulatory mechanisms, programs and resources within the parish, the jurisdictions within the Webster Parish planning area remain committed to expanding and improving on the existing capabilities within the parish. Communities will work together along with Webster Parish toward increased participation in funding opportunities and available mitigation programs. Should funding become available, the hiring of additional personnel to dedicate to hazard mitigation initiatives and programs, as well as increasing ordinances within the parish, will enhance and expand overall risk reduction for the entirety of Webster Parish.

Flood Insurance and Community Rating System

Participation in the CRS strengthens local capabilities by lowering flood insurance premiums for jurisdictions that exceed NFIP minimum requirements. As noted in the CRS Eligible Communities List effective October 1, 2021, neither Webster Parish nor any of its incorporated jurisdictions participate in the CRS program.

The Federal Emergency Management Agency's National Flood Insurance Program (NFIP) administers the Community Rating System (CRS). Under the CRS, flood insurance premiums for properties in participating communities are reduced to reflect the flood protection activities that are being implemented. This program can have a major influence on the design and implementation of flood mitigation activities, so a brief summary is provided here.

A community receives a CRS classification based upon the credit points it receives for its activities. It can undertake any mix of activities that reduce flood losses through better mapping, regulations, public information, flood damage reduction and/or flood warning and preparedness programs.

There are ten CRS classes: Class 1 requires the most credit points and gives the largest premium reduction; Class 10 receives no premium reduction (see *Figure 3-1*). A community that does not apply for the CRS or that does not obtain the minimum number of credit points is a class 10 community.

CLASS	DISCOUNT	CLASS	DISCOUNT
1	45%	6	20%
2	40%	7	15%
3	35%	8	10%
4	30%	9	5%
5	25%	10	–

SFHA (Zones A, AE, A1–A30, V, V1–V30, AO, and AH): Discount varies depending on class.

SFHA (Zones A99, AR, AR/A, AR/AE, AR/A1–A30, AR/AH, and AR/AO): 10% discount for Classes 1–6; 5% discount for Classes 7–9.*

Non-SFHA (Zones B, C, X, D): 10% discount for Classes 1–6; 5% discount for Classes 7–9.

Figure 3-1: CRS Discounts by Class (Source: FEMA)

As of April 2021, 352 communities in the State of Louisiana participate in the Federal Emergency Management Agency's National Flood Insurance Program (NFIP). Of these communities, 46 (or 13%) participate in the Community Rating System (CRS). Jefferson Parish leads the state with a rating of Class 5, followed by three cities with a rating of Class 6: the Cities of Gretna and Kenner in Jefferson Parish and the City of Mandeville in St. Tammany Parish. Of the top fifty Louisiana communities, in terms of total flood insurance policies held by residents, 27 participate in the CRS. The remaining 23 communities present an outreach opportunity for encouraging participation in the CRS.

The CRS provides an incentive not just to start new mitigation programs, but to keep them going. There are two requirements that "encourage" a community to implement flood mitigation activities. Once the parish has obtained a CRS rating and is a participant, the parish will receive CRS credit for this plan when it is adopted. To retain that credit, though, the parish must submit an evaluation report on progress toward implementing this plan to FEMA by October 1 of each year. That report must be made available to the media and the public. Second, the parish must annually recertify to FEMA that it is continuing to implement its CRS credited activities. Failure to maintain the same level of involvement in flood protection can result in a loss of CRS credit points and a resulting increase in flood insurance rates to residents.

In 2011[1], the National Flood Insurance Program (NFIP) completed a comprehensive review of the Community Rating System (CRS) that resulted in the release of a new CRS Coordinator's Manual. The changes to the 2013 CRS Coordinator's Manual are the result of a multi-year program evaluation that included input from a broad group of contributors to evaluate the CRS and refine the program to meet its stated goals. The changes helped to drive new achievements in the following six core flood loss reduction areas important to the NFIP: (1) reduce liabilities to the NFIP Fund; (2) improve disaster resiliency and sustainability of communities; (3) integrate a Whole Community approach to addressing emergency management; (4) promote natural and beneficial functions of floodplains; (5) increase understanding of risk, and; (6) strengthen adoption and enforcement of disaster-resistant building codes.

Since the revision of the 2013 Coordinator's Manual, FEMA released the 2017 CRS Coordinator's Manual which continued the evolution of the CRS program and its mission to reward communities that prioritize mindful floodplain regulations. As with the 2013 manual, the changes made in the 2017 manual impact each CRS community differently. Some communities see an increase in the points they receive since points for certain activities have increased (e.g., Activity 420 Open Space Preservation). Other communities receive fewer points for certain activities (e.g., Activity 320 Map Information Service). It is likely that some communities with marginal CRS Class 9 programs have to identify new CRS credits in order to remain in the CRS class. Most notably, as it relates to this hazard mitigation plan, more credit was made available for Activity 410 Floodplain Mapping.

[1] https://www.fema.gov/national-flood-insurance-program-community-rating-system

Typically, CRS communities do not request credit for all the activities they are currently implementing unless it would earn enough credit to advance the community to a higher CRS Class. A community that finds itself losing CRS credit with the 2017 manual could likely identify activities deserving credit they had not previously received. Due to the changes in both activities and CRS points, community CRS coordinators should speak with their ISO/CRS Specialist to understand how the 2017 manual will impact their community and when.

In addition to the direct financial reward for participating in the Community Rating System, there are many other reasons to participate in the CRS. As FEMA staff often say, "If you are only interested in saving premium dollars, you're in the CRS for the wrong reason."

The other benefits that are more difficult to measure in dollars include:

1. The activities credited by the CRS provide direct benefits to residents, including:
   - Enhanced public safety
   - A reduction in damage to property and public infrastructure
   - Avoidance of economic disruption and losses
   - Reduction of human suffering
   - Protection of the environment

2. A community's flood programs will be better organized and more formal. Ad hoc activities, such as responding to drainage complaints rather than an inspection program, will be conducted on a sounder, more equitable basis.

3. A community can evaluate the effectiveness of its flood program against a nationally recognized benchmark.

4. Technical assistance in designing and implementing a number of activities is available at no charge from the Insurance Services Office.

5. The public information activities will build a knowledgeable constituency interested in supporting and improving flood protection measures.

6. A community would have an added incentive to maintain its flood programs over the years. The fact that its CRS status could be affected by the elimination of a flood related activity or a weakening of the regulatory requirements for new developments would be taken into account by the governing board when considering such actions.

7. Every time residents pay their insurance premiums, they are reminded that the community is working to protect them from flood losses, even during dry years.

NFIP Worksheets

Parish NFIP worksheets can be found in *Appendix E: State Required Worksheets*.

4. Mitigation Strategy

Introduction

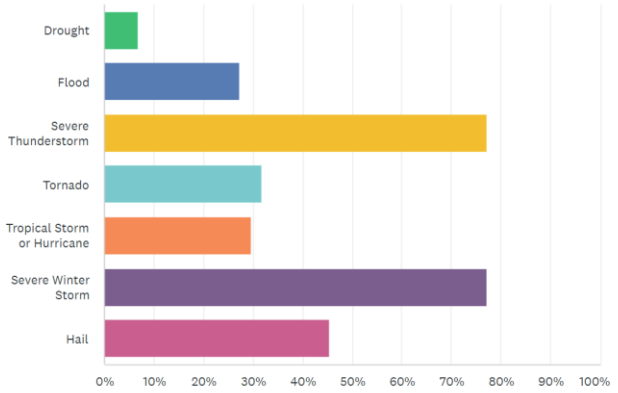
The Hazard Mitigation Strategy for Webster Parish and its incorporated communities have a common guiding principle and is the demonstration of the parish's commitment to reduce risks from hazards. The strategy also serves as a guide for parish and local decision makers as they commit resources to reducing the effects of hazards.

Officials from all jurisdictions within the planning area confirmed the goals, objectives, actions and projects over the period of the hazard mitigation plan update process. The mitigation actions and projects in this 2021 HMP update are a product of analysis and review of the Webster Parish Hazard Mitigation Plan Steering Committee under the coordination of the Webster Parish Office of Homeland Security and Emergency Preparedness. The committee was presented a list of projects and actions, new and from the 2016 plan, for review from June 2021 – October 2021.

An online public opinion survey of Webster Parish residents was conducted between April and October 2021. The survey was designed to capture public perceptions and opinions regarding natural hazards in the Webster Parish planning area. In addition, the survey collected information regarding the methods and techniques preferred by the respondents for reducing the risks and losses associated with local hazards.

When asked which natural disasters citizens or someone in their household had experienced in the last five years, the following responses were recorded:

1. Severe Thunderstorms
2. Severe Winter Storms
3. Hail



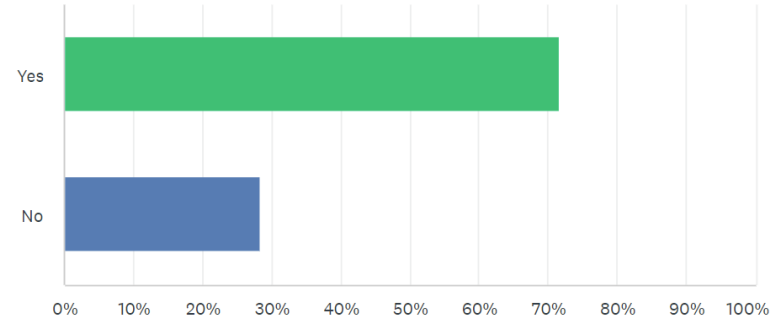
ANSWER CHOICES	RESPONSES	
Drought	6.82%	3
Flood	27.27%	12
Severe Thunderstorm	77.27%	34
Tornado	31.82%	14
Tropical Storm or Hurricane	29.55%	13
Severe Winter Storm	77.27%	34
Hail	45.45%	20
Total Respondents: 44		

The survey results also indicated which natural disasters citizens were *concerned* with being affected by in the Webster Parish planning area. The top three natural disasters selected for "very concerned" were:

1. Tornadoes
2. Severe Thunderstorms
3. Hail

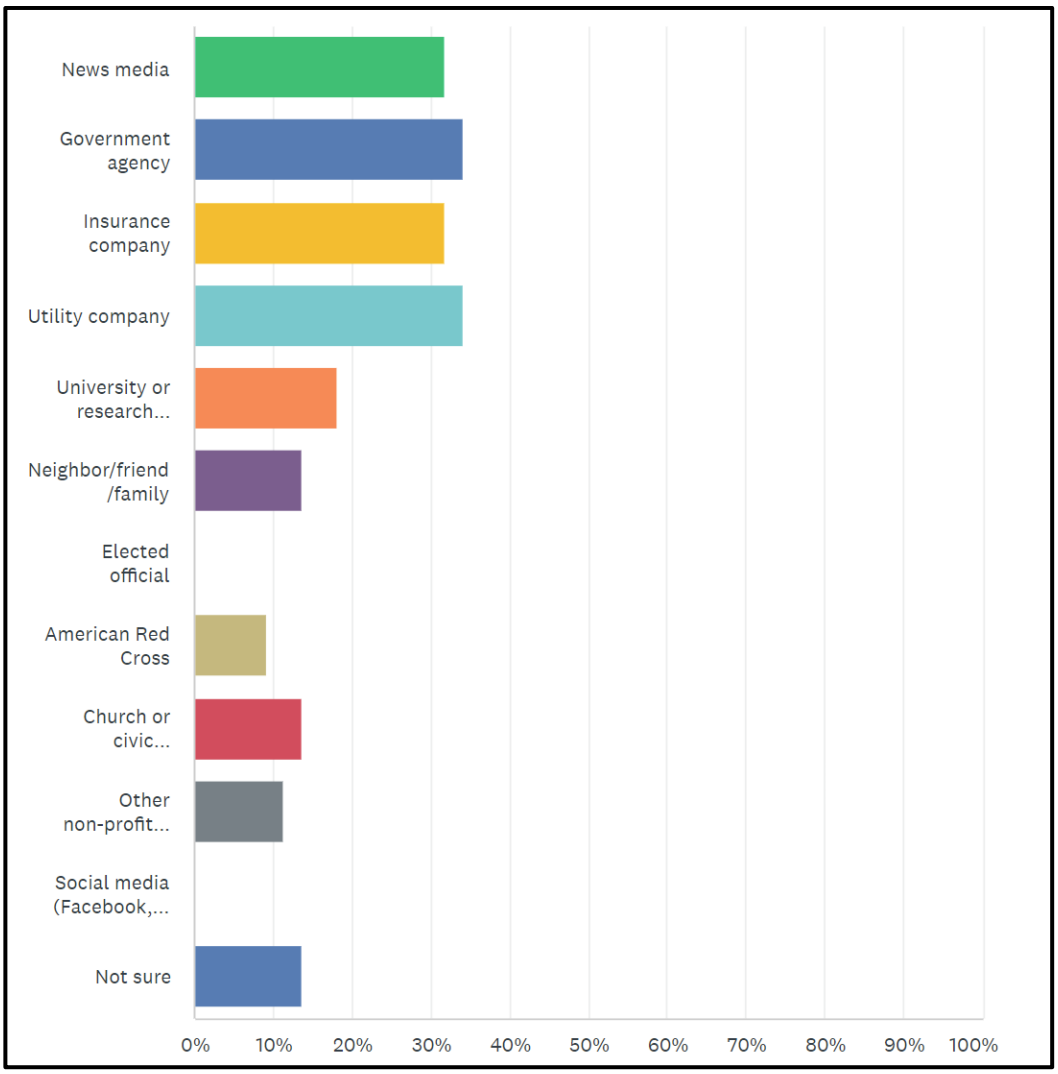
	NOT CONCERNED	NOT VERY CONCERNED	NEUTRAL	SOMEWHAT CONCERNED	VERY CONCERNED	TOTAL	WEIGHTED AVERAGE
Drought	9.30% 4	18.60% 8	39.53% 17	25.58% 11	6.98% 3	43	3.02
Flood	8.89% 4	13.33% 6	20.00% 9	37.78% 17	20.00% 9	45	3.47
Severe Thunderstorm	0.00% 0	6.82% 3	9.09% 4	34.09% 15	50.00% 22	44	4.27
Tornado	2.27% 1	0.00% 0	0.00% 0	31.82% 14	65.91% 29	44	4.59
Tropical Storm or Hurricane	6.98% 3	20.93% 9	20.93% 9	32.56% 14	18.60% 8	43	3.35
Severe Winter Storm	0.00% 0	6.82% 3	13.64% 6	45.45% 20	34.09% 15	44	4.07
Hail	0.00% 0	2.38% 1	19.05% 8	38.10% 16	40.48% 17	42	4.17

The survey also asked if citizens had received information about making their homes safer from disasters. The following responses were recorded:



ANSWER CHOICES	RESPONSES	
Yes	71.74%	33
No	28.26%	13
TOTAL		46

Always important to decision makers is how citizens best receive emergency information. According to the survey, the citizens within the Lafayette Parish planning area MOST trust the following entities in the dissemination of emergency related information:



The results shown above are related to the manner in which the general population receives information on how to make their home safer from natural disasters. These results are encouraging because it shows that the public has high confidence in the information being disseminated by local government agencies. Implementation of the outreach activities put forth by parish officials and offices seem to have been executed in a successful manner.

This activity confirms that the goals and action items developed by the Webster Parish Hazard Mitigation Plan Steering Committee are representative of the outlook of the community at large. Full survey results can be found here:

https://www.surveymonkey.com/results/SM-KNSLHRN29/

Goals

The goals represent the guidelines that the parish and its communities want to achieve with this plan update. To help implement the strategy and adhere to the mission of the Hazard Mitigation Plan, the preceding section of the plan update was focused on identifying and quantifying the risks faced by the residents and property owners in Webster Parish from natural and manmade hazards. By articulating goals and objectives based on the previous plans, the risk assessment results, and intending to address those results, this section sets the stage for identifying, evaluating, and prioritizing feasible, cost effective, and environmentally sound actions to be promoted at the parish and municipal level – and to be undertaken by the state for its own property and assets. By doing so, Webster Parish can make progress toward reducing identified risks.

For the purposes of this plan update, goals and action items are defined as follows:

- **Goals** are general guidelines that explain what the parish wants to achieve. Goals are expressed as broad policy statements representing desired long-term results.
- **Action Items** are the specific steps (projects, policies, and programs) that advance a given goal. They are highly focused, specific, and measurable.

The current goals of the Webster Parish Hazard Mitigation Plan Update Steering Committee represent long-term commitments by the parish. After assessing these goals, the committee decided that the current remain valid.

The goals are as follows:

1. Reduce or prevent injury and loss of life

2. Reduce or prevent damage to property and material assets

3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control

4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources

5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways

6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.

The Mitigation Action Plan focuses on actions to be taken by Wester Parish and its communities. All of the activities in the Mitigation Action Plan will be focused on helping the parish and its communities in developing and funding projects that are not only cost effective but also meet the other DMA 2000 criteria of environmental compatibility and technical feasibility.

After the adoption of the 2016 Webster Parish Hazard Mitigation Plan, large portions of both North and South Louisiana were impacted by flooding events whose ramifications are still being felt by the population. Because of these events, Webster Parish and its jurisdictions reprioritized its efforts and

became much more aggressive in seeking funding for flood mitigation efforts, particularly related to drainage. Pressure was placed on political leaders throughout the parish and jurisdictions to ensure that money and resources were sought and made available to mitigate against such events in the future.

The Hazard Mitigation Plan Steering Committee reviewed and evaluated the potential action and project lists in which consideration was given to a variety of factors. Such factors include determining a project's eligibility for federal mitigation grants as well as its ability to be funded. This process required evaluation of each project's engineering feasibility, cost effectiveness, and environmental and cultural factors.

2021 Mitigation Actions and Update on Previous Plan Actions

The Webster Parish Hazard Mitigation Plan Steering Committee identified new actions that would reduce and/or prevent future damage within the Webster Parish planning area. In that effort, the committee focused on a comprehensive range of specific mitigation actions. These actions were identified in thorough fashion by the consultant team and the committee by way of frequent and open communications and meetings held throughout the planning process. The addition of these new actions, coupled with any ongoing and/or carried over projects from their previous update, provide Webster Parish with a solid mitigation strategy through which risk and losses will be reduced throughout the parish and its communities.

As outlined in the Local Mitigation Planning Handbook the following are eligible types of mitigation actions:

- **Local Plans and Regulations –** These actions include government authorities, policies, or codes that influence the way land and buildings are developed and built.
- **Structure and Infrastructure Projects –** These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area, and also includes projects to construct manmade structures to reduce the impact of hazards.
- **Natural System Protection –** These actions minimize the damage and losses and also preserve or restore the functions of natural systems.
- **Education and Awareness Programs –** These actions inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them.

Status updates for actions included in the previous plan can be found on the following pages. Additionally, new mitigation actions agreed upon by the parish and its jurisdictions are included.

Unincorporated Webster Parish Mitigation Actions

Previous Action Update

Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
W1: Building Retrofits	Retrofit public buildings exterior shell to maintain use during and after storm events. Benefits: Reduces damage from high winds, and helps assure that the public buildings can be used, occupied and operable during or after natural hazard events.	FEMA HMGP, Local	1-5 years	Webster Parish OHSEP	Thunderstorms, Tropical Cyclones, Tornadoes	1,2,3,4,5, 6	Not Started/ Carried Over
W2: Drainage Improvement	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation. Benefits: Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.	FEMA HMGP, Local	1-5 years	Webster Parish OHSEP	Flooding, Thunderstorms, Tropical Cyclones	1,2,3,4,5, 6	Not Started/ Carried Over
W3: Mitigation of Repetitive Loss and Severe Repetitive Loss Properties and Other Hazard Prone Structures	Elevation, acquisition-demolition, acquisition-relocations, and reconstruction of repetitive loss or flooding or other hazard prone properties.	FEMA HMGP, Local	1-5 years	Webster Parish OHSEP	Flooding, Tropical Cyclones, Dam Failure	1,2,4,6	Not Started/ Carried Over
W4: Safe Room Projects	Construction of a safe room for first responders located in Webster Parish. Other locations will be identified based on funding availability.	FEMA HMGP, Local	1-5 years	Webster Parish OHSEP	Tornadoes, Thunderstorms, Tropical Cyclones, Wildfires	1	Not Started/ Carried Over

W5: Education and Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for Flooding, Tropical Cyclone, Tornadoes, Wildfires, Excessive Heat, Thunderstorms (lightning, high wind, hail), Drought, Sinkholes, Dam Failure, and Winter Storm hazards as well as providing information on high risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.	FEMA HMGP, Local	1-5 years	Webster Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes, Wildfires, Excessive Heat, Thunderstorms, Winter Storms, Drought, Sinkholes, Dam Failure	1,2,3,4,5, 6	Not Started/ Carried Over
W6: Generators for Continuity of Operations and Government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA HMGP, Local	1-5 years	Webster Parish OHSEP	Tornadoes, Winter Storms, Tropical Cyclones, Thunderstorms, Excessive Heat, Sinkholes	1,2,3,4,5, 6	Not Started/ Carried Over
W7: Lightning Mitigation	Procurement and Installation of Lightning rods and surge protectors for public buildings to preserve life and property	FEMA HMGP, Local	1-5 years	Webster Parish OHSEP	Thunderstorms	1,2,3,4,6	Not Started/ Carried Over
W8: Warning Systems	Update/upgrade public warning system components throughout Webster Parish as necessary. Install audible and/or reverse 911 warning system(s)	FEMA HMGP, Local	1-5 years	Webster Parish OHSEP	Winter Weather, Wildfires, Tornadoes, Tropical Cyclones, Dam Failure, Sinkholes	1,2,3,4,5, 6	Not Started/ Carried Over
W9: Potable Water	Create redundancy of potable water supply to critical facilities, especially hospitals in Parish, and provide protection of potable water supply by acquisition/installation of backflow preventers at appropriate critical locations.	FEMA HMGP, Local	1-5 years	Webster Parish OHSEP	Tropical Cyclones, Thunderstorms, Tornadoes, Drought, Excessive Heat	1	Not Started/ Carried Over

W10: Promote Flood Insurance	Promote the purchase of flood insurance. Advertise the availability, cost, and coverage of flood insurance through the National Flood Insurance Program (NFIP).	FEMA HMGP, Local	1-5 years	Webster Parish OHSEP	Tropical Cyclones, Flooding	1,2	Not Started/ Carried Over
W11: Flood Control Measures	Install and/or upgrade minor flood control structures including berms and floodwalls to protect critical facilities.	FEMA HMGP, Local	1-5 years	Webster Parish OHSEP	Tropical Cyclones, Flooding, Dam Failure	1,2,3,4,5, 6	Not Started/ Carried Over
W12: Dam Failure Working Group	Create a working group in order to assess the extent and determine the possible effects of a dam failure.	FEMA HMGP, Local	1-5 years	Webster Parish OHSEP and Mayors	Dam Failure, Flooding	1,2,3,4,5, 6	Not Started/ Carried Over
W13: Elevate Structures	Elevate existing repetitive loss and structures susceptible to flooding	RFC, SRL, FMA, HMGP, PDM	1-5 years	Webster Parish Police Jury	Flood, Dam Failure		Delete (Duplicate)
W14: Upgrade Bridges	Upgrade bridges and elevate roadways at locations prone to flooding.	HMGP, PDM, DoTD, Louisiana Capital Outlay, CDBG	1-5 years	Webster Parish Police Jury	Flood, Dam Failure		Not Started/ Carried Over
W15: Mitigate Storm Damage	Retrofit critical facilities to mitigate storm damage and maintain functionality during storm events. Retrofit projects can include but are not limited to installation of window shutters or glass protective film, roof anchoring devices, reinforced doors, flood protection measures, power surge protection and data back-up systems, generators for back-up power source, et al. Implement general policy to install storm hardened features on future public facilities.	HMGP, PDM, DoTD, Louisiana Capital Outlay, CDBG	1-5 years	Webster Parish Police Jury	Hurricanes, Thunderstorms, Tornadoes		Delete (Duplicate)
W16: Upgrade Culverts and Elevate Roads	Upgrade approaches at locations prone to flooding. Install, upgrade, or upsize road crossing culverts and elevate roadway	HMGP, PDM, DoTD, Louisiana Capital Outlay, CDBG	1-5 years	Webster Parish Police Jury	Flood, Dam Failure		Not Started/ Carried Over

W17: Drainage Improvements	Construct drainage improvement projects involving widening and deepening stormwater conveyance channels, upsizing culverts.	HMGP, PDM, FMA	1-5 years	Webster Parish Police Jury	Flood, Dam Failure		Delete (Duplicate)
W18: Relocation for Properties	Pursue voluntary acquisition-relocation for properties susceptible to flooding and/or dam and levee failure.	RFC, SRL, FMA, HMGP, PDM	1-5 years	Webster Parish Police Jury	Flood, Dam Failure		Delete (Duplicate)
W19: Minor Flood Control	Install minor flood control structures including berms and floodwalls to protect critical facilities.	HMGP, PDM, FMA	1-5 years	Webster Parish Police Jury	Flood, Dam Failure		Delete (Duplicate)
W20: Distribute Handouts	Distribute handouts describing appropriate mitigation measures individuals can take pursuant to damage prevention and disaster preparation. Handouts can be available at local libraries, included as an insert in utility bills, and as a link on websites of participating jurisdictions	N/A	1-5 years	Webster Parish Police Jury	Drought, Flooding, Excessive Heat, Sinkholes, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather, Dam Failure		Not Started/ Carried Over
W21: Implement SOP	Develop and implement SOP for data collection/sharing to provide extent for dam failure as funds become available. Compile and review existing and future dam failure studies and incorporate findings into future iterations of hazard mitigation plan.	N/A	1-5 years	Webster Parish Police Jury	Dam Failure		Not Started/ Carried Over
W22: Retrofit Community Rooms	Retrofit rooms in community facilities to serve as heating or cooling centers for vulnerable populations.	N/A	1-5 years	Webster Parish Police Jury	Winter Storms, Excessive Heat		Not Started/ Carried Over
W23: Educate the Public	Develop educational handouts describing appropriate preparation and response to Excessive heat conditions.	HMGP; PDM	1-5 years	Webster Parish Police Jury	Excessive Heat		Delete (Duplicate)
W24: Develop Database	Develop database of contact information for residents vulnerable to Excessive heat and solicit volunteers to make check-in calls.	N/A	1-5 years	Webster Parish Police Jury	Excessive Heat		Not Started/ Carried Over

W25: Internal Site Review Process	Implement internal site review process for future public facilities or infrastructure that could increase vulnerability to hazardous material accidents.	HMGP; PDM	1-5 years	Webster Parish Police Jury	Hazardous materials		Deleted (Not covered in this HMP)
W26: Relocate Electric Lines	Relocate electric and communications lines that serve critical facilities underground to minimize the risk of loss of services. Institute general policy to install underground electric and communications lines for future public facilities in cases where it is cost-effective to do so.	Utilities, public works (parish and municipaliti es)	1-5 years	Webster Parish Police Jury	Tropical Cyclones, Thunderstorms, Tornadoes, Winter Weather		Not Started/ Carried Over
W27: Install Frangible Pole Connections	Install frangible (break away) pole connections for power line networks to reduce potential for electrical transmission loss.	Utilities, public works	1-5 years	Webster Parish Police Jury	Tropical Cyclones, Thunderstorms, Tornadoes, Winter Weather		Not Started/ Carried Over
W28: Public Education and Community Awareness Program	Develop a public education and community awareness program detailing the importance of maintaining defensible space near homes, the locations of wildfire prone areas in the parish, and general wildfire mitigation.	PDM; HMGP	1-5 years	Webster Parish Police Jury	Wildfires		Not Started/ Carried Over
W29: Mechanical Fuels Reduction Projects	Implement mechanical fuels reduction projects in urban-wildland interface	PDM; HMGP	1-5 years	Webster Parish Police Jury	Wildfires		Delete
W30: Safe Shelters	Construct/install safe shelters in public buildings capable of providing protection from severe tornados, extreme straight line winds in accordance with FEMA Publication 320 and/or National Performance Criteria for Tornado Shelters	PDM; HMGP	1-5 years	Webster Parish Police Jury	Tornadoes, Thunderstorms, Tropical Cyclones		Delete (Duplicate)

W31: Homeowner Safe Shelters	Develop incentives and provide instruction for homeowners to construct/install safe shelters capable of providing protection from severe tornados, extreme straight line winds, and hailstorms in accordance with FEMA Publication 320 and/or National Performance Criteria for Tornado Shelters specifications	PDM; HMGP	1-5 years	Webster Parish Police Jury	Tornadoes, Thunderstorms, Tropical Cyclones		Not Started/ Carried Over
W32: Water Efficient Fixtures	Coordinate with water districts to establish incentives for installing water efficient fixtures and landscaping in new construction. Institute general parish policy to consider water efficiency in construction of new infrastructure and facilities.	Water Districts, WPPJ Public Works	1-5 years	Webster Parish Police Jury	Drought		Not Started/ Carried Over
W33: Pilot Reconstruction	Pursue pilot reconstruction for repetitive loss homes in cases where it is not cost effective to elevate to adequate height (1' above base flood elevation).	PDM; HMGP; FMA	1-5 years	Webster Parish Police Jury	Flood, Dam Failure		Delete

New Mitigation Actions

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS WEBSTER PARISH	
	DESCRIPTION
WEBSTER PARISH MITGATION ACTION 1	Building Retrofits
LEAD AGENCY	Webster Parish OHSEP
SUPPORTING AGENCIES	Webster Parish Public Works
TIMELINE	1-5 years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	FEMA HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Medium
Action Description	Retrofit public buildings exterior shell to maintain use during and after storm events. Benefits: Reduces damage from high winds and helps assure that the public buildings can be used, occupied and operable during or after natural hazard events.
Type of Mitigation Action	Structural and Infrastructure Projects
How Action Aligns with Risk Reduction	Hardening and retrofitting of public buildings and critical infrastructure allows for continued operations and reduced risk of failure during and after hazard events.
Current Status of Action	New (Not Started/Carried Over from 2016 Plan)
Hazard Addressed	Thunderstorms, Tornadoes, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS WEBSTER PARISH	
	DESCRIPTION
WEBSTER PARISH MITGATION ACTION 2	Drainage Improvements
LEAD AGENCY	Webster Parish OHSEP
SUPPORTING AGENCIES	Webster Parish Public Works
TIMELINE	1-5 years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	FEMA HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	High
Action Description	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation.
Type of Mitigation Action	Structural and Infrastructure Project
How Action Aligns with Risk Reduction	Drainage improvements will help to relieve property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods
Current Status of Action	New (Not Started/Carried Over from 2016 Plan)
Hazard Addressed	Flooding, Thunderstorms, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS WEBSTER PARISH	
	DESCRIPTION
WEBSTER PARISH MITGATION ACTION 3	Mitigation of Repetitive Loss and Severe Repetitive Loss Properties and Other Hazard Prone Structures
LEAD AGENCY	Webster Parish OHSEP
SUPPORTING AGENCIES	Webster Parish Police Jury
TIMELINE	1-5 years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	FEMA HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	High
Action Description	Elevation, acquisition-demolition, acquisition-relocations, and reconstruction of repetitive loss or flooding or other hazard prone properties.
Type of Mitigation Action	Structural and Infrastructure Projects
How Action Aligns with Risk Reduction	Eliminates risk associated with repetitive and severe repetitive loss structures.
Current Status of Action	New (Not Started/Carried Over from 2016 Plan)
Hazard Addressed	Dam Failure, Flooding, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS WEBSTER PARISH	
	DESCRIPTION
WEBSTER PARISH MITGATION ACTION 4	Safe Room Projects
LEAD AGENCY	Webster Parish OHSEP
SUPPORTING AGENCIES	Webster Parish Police Jury
TIMELINE	1-5 years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	FEMA HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life
PRIORITY	Medium
Action Description	Construction of a safe room for first responders located in Webster Parish. Other locations will be identified based on funding availability.
Type of Mitigation Action	Structural and Infrastructure Projects
How Action Aligns with Risk Reduction	Allows for continued operations of essential personal to actively respond during a natural hazard event.
Current Status of Action	New (Not Started/Carried Over from 2016 Plan)
Hazard Addressed	Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS WEBSTER PARISH	
	DESCRIPTION
WEBSTER PARISH MITGATION ACTION 5	Education and Outreach
LEAD AGENCY	Webster Parish OHSEP
SUPPORTING AGENCIES	Webster Parish Police Jury
TIMELINE	1-5 years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	FEMA HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	High
Action Description	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for hazards as well as providing information on high-risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.
Type of Mitigation Action	Education and Awareness Program
How Action Aligns with Risk Reduction	Providing educational information to the citizens of Webster Parish regarding relevant hazards will aid them in preparation and mitigation techniques to hopefully lessen the impact of hazards facing the parish.
Current Status of Action	New (Not Started/Carried Over from 2016 Plan)
Hazard Addressed	Dam Failure, Drought, Excessive Heat, Flooding, Sinkholes, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS WEBSTER PARISH	
	DESCRIPTION
WEBSTER PARISH MITGATION ACTION 6	Generators for Continuity of Operations and Government
LEAD AGENCY	Webster Parish OHSEP
SUPPORTING AGENCIES	Webster Parish Police Jury
TIMELINE	1-5 years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	FEMA HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	High
Action Description	Procurement and installation of generators at public facilities to ensure continued operations during and after events.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Having redundant power supplies for critical facilities and public buildings will alleviate disruptions of power and ensure continued operations during and after events
Current Status of Action	New (Not Started/Carried Over from 2016 Plan)
Hazard Addressed	Dam Failure, Extreme Heat, Flooding, Sinkholes, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS WEBSTER PARISH	
	DESCRIPTION
WEBSTER PARISH MITGATION ACTION 7	Lightning Mitigation
LEAD AGENCY	Webster Parish OHSEP
SUPPORTING AGENCIES	Webster Parish Police Jury
TIMELINE	1-5 years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	FEMA HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Low
Action Description	Procurement and installation of lightning rods and surge protectors for public buildings to preserve life and property
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Decreases the risk of damage or halting operations of critical facilities due to lightning
Current Status of Action	New (Not Started/Carried Over from 2016 Plan)
Hazard Addressed	Thunderstorms

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS WEBSTER PARISH	
	DESCRIPTION
WEBSTER PARISH MITGATION ACTION 8	Warning Systems
LEAD AGENCY	Webster Parish OHSEP
SUPPORTING AGENCIES	Webster Parish Police Jury
TIMELINE	1-5 years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	FEMA HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Low
Action Description	Update/upgrade public warning system components throughout Webster Parish as necessary. Install audible and/or reverse 911 warning system(s) with backup capabilities
Type of Mitigation Action	Structure and Infrastructure Projects Education and Awareness Programs
How Action Aligns with Risk Reduction	Upgrading public warning systems will allow for timely notification of imminent hazard events for the public
Current Status of Action	New (Not Started/Carried Over from 2016 Plan)
Hazard Addressed	Dam Failure, Flooding, Sinkholes, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS WEBSTER PARISH	
	DESCRIPTION
WEBSTER PARISH MITGATION ACTION 9	Potable Water
LEAD AGENCY	Webster Parish OHSEP
SUPPORTING AGENCIES	Webster Parish Public Works
TIMELINE	1-5 years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	FEMA HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Low
Action Description	Create redundancy of potable water supply to critical facilities, especially hospitals in Parish, and provide protection of potable water supply by acquisition/installation of backflow preventers at appropriate critical locations.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Having a redundant water supply would help maintain the continuity of operations of essential and critical facilities.
Current Status of Action	New (Not Started/Carried Over from 2016 Plan)
Hazard Addressed	Drought, Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS WEBSTER PARISH	
	DESCRIPTION
WEBSTER PARISH MITGATION ACTION 10	Promote Flood Insurance
LEAD AGENCY	Webster Parish OHSEP
SUPPORTING AGENCIES	Webster Parish Police Jury
TIMELINE	1-5 years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	FEMA HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets
PRIORITY	Medium
Action Description	Promote the purchase of flood insurance. Advertise the availability, cost, and coverage of flood insurance through the National Flood Insurance Program (NFIP).
Type of Mitigation Action	Education and Awareness Programs
How Action Aligns with Risk Reduction	Promotion of flood insurance to the citizens of Webster Parish will help to relieve the burden of payouts related to non-insured properties after flooding events.
Current Status of Action	New (Not Started/Carried Over from 2016 Plan)
Hazard Addressed	Flooding, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS WEBSTER PARISH	
	DESCRIPTION
WEBSTER PARISH MITGATION ACTION 11	Flood Control Measures
LEAD AGENCY	Webster Parish OHSEP
SUPPORTING AGENCIES	Webster Parish Police Jury
TIMELINE	1-5 years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	FEMA HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	High
Action Description	Install and/or upgrade minor flood control structures including berms and floodwalls to protect critical facilities.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Construction, installation, and upgrading of flood control structures will increase protection of potential impacts areas and lessen the chance of flooding related impacts to critical facilities.
Current Status of Action	New (Not Started/Carried Over from 2016 Plan)
Hazard Addressed	Dam Failure, Flooding, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS WEBSTER PARISH	
	DESCRIPTION
WEBSTER PARISH MITGATION ACTION 12	Dam Failure Working Group
LEAD AGENCY	Webster Parish OHSEP and Mayors
SUPPORTING AGENCIES	Webster Parish Police Jury
TIMELINE	1-5 years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	FEMA HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Low
Action Description	Create a working group in order to assess the extent and determine the possible effects of a dam failure.
Type of Mitigation Action	Education and Awareness Programs
How Action Aligns with Risk Reduction	The creation of a dam failure working group would allow for a more accurate impact assessment in the event of a dam failure in the parish.
Current Status of Action	New (Not Started/Carried Over from 2016 Plan)
Hazard Addressed	Dam Failure, Flooding

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS WEBSTER PARISH	
	DESCRIPTION
WEBSTER PARISH MITGATION ACTION 13	Upgrade Bridges
LEAD AGENCY	Webster Parish Police Jury
SUPPORTING AGENCIES	Webster Parish Public Works
TIMELINE	1-5 years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, PDM, DoTD, Louisiana Capital Outlay, CDBG
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways
PRIORITY	High
Action Description	Upgrade bridges at locations prone to high water and flooding.
Type of Mitigation Action	Structural and Infrastructure Projects
How Action Aligns with Risk Reduction	Upgrading of bridges flood prone areas will allow for the passage of traffic during times of high water, aiding in both evacuation and recovery efforts.
Current Status of Action	New (Not Started/Carried Over from 2016 Plan)
Hazard Addressed	Dam Failure, Flooding

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS WEBSTER PARISH	
	DESCRIPTION
WEBSTER PARISH MITGATION ACTION 14	Upgrade Culverts and Elevate Roads
LEAD AGENCY	Webster Parish Police Jury
SUPPORTING AGENCIES	Webster Parish Public Works
TIMELINE	1-5 years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, PDM, DoTD, Louisiana Capital Outlay, CDBG
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways
PRIORITY	High
Action Description	Approaches at locations prone to flooding. Install, upgrade, or upsize road crossing culverts and elevate roadway
Type of Mitigation Action	Structural and Infrastructure Projects
How Action Aligns with Risk Reduction	Upgrading of culverts and elevation of roads flood prone areas will allow for the passage of traffic during times of high water, aiding in both evacuation and recovery efforts.
Current Status of Action	New (Not Started/Carried Over from 2016 Plan)
Hazard Addressed	Dam Failure, Flooding

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS WEBSTER PARISH	
	DESCRIPTION
WEBSTER PARISH MITGATION ACTION 15	Distribute Handouts
LEAD AGENCY	Webster Parish OHSEP
SUPPORTING AGENCIES	Webster Parish Police Jury
TIMELINE	1-5 years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	TBD
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets
PRIORITY	Medium
Action Description	Distribute handouts describing appropriate mitigation measures individuals can take pursuant to damage prevention and disaster preparation. Handouts can be available at local libraries, included as an insert in utility bills, and as a link on websites of participating jurisdictions
Type of Mitigation Action	Education and Awareness Programs
How Action Aligns with Risk Reduction	Providing educational information to the citizens of Webster Parish regarding relevant hazards will aid them in preparation and mitigation techniques to hopefully lessen the impact of hazards facing the parish.
Current Status of Action	New (Not Started/Carried Over from 2016 Plan)
Hazard Addressed	Dam Failure, Drought, Extreme Heat, Flooding, Sinkholes, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS WEBSTER PARISH	
	DESCRIPTION
WEBSTER PARISH MITGATION ACTION 16	Implement SOP
LEAD AGENCY	Webster Parish OHSEP
SUPPORTING AGENCIES	Webster Parish Police Jury
TIMELINE	1-5 years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	TBD
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Low
Action Description	Develop and implement SOP for data collection/sharing to provide extent for dam failure as funds become available. Compile and review existing and future dam failure studies and incorporate findings into future iterations of hazard mitigation plan.
Type of Mitigation Action	Local Plans and Regulations Education and Awareness Programs
How Action Aligns with Risk Reduction	Collection and sharing of data will help to better understand the impacts of a dam failure on Webster Parish
Current Status of Action	New (Not Started/Carried Over from 2016 Plan)
Hazard Addressed	Dam Failure

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS WEBSTER PARISH	
	DESCRIPTION
WEBSTER PARISH MITGATION ACTION 17	Retrofit Community Rooms
LEAD AGENCY	Webster Parish OHSEP
SUPPORTING AGENCIES	Webster Parish Police Jury
TIMELINE	1-5 years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	TBD
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life
PRIORITY	Low
Action Description	Retrofit rooms in community facilities to serve as heating or cooling centers for vulnerable populations.
Type of Mitigation Action	Structural and Infrastructure Projects
How Action Aligns with Risk Reduction	Providing heating and/or cooling centers for residents of Webster Parish will help to reduce harmful impacts from excessive heat and severe winter weather
Current Status of Action	New (Not Started/Carried Over from 2016 Plan)
Hazard Addressed	Excessive Heat, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS WEBSTER PARISH	
	DESCRIPTION
WEBSTER PARISH MITGATION ACTION 18	Develop Database for Populations Vulnerable to Extreme Heat
LEAD AGENCY	Webster Parish Police Jury
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	TBD
ASSOCIATED GOALS	Reduce or prevent injury and loss of life
PRIORITY	Low
Action Description	Develop database of contact information for residents vulnerable to extreme heat and solicit volunteers to make check-in calls.
Type of Mitigation Action	Education an Awareness Programs
How Action Aligns with Risk Reduction	Developing and maintaining a database of those residents at increased vulnerability to excessive heat will allow for a more targeted mitigation approach, as well facilitate wellness checks in times of excessive heat
Current Status of Action	New (Not Started/Carried Over from 2016 Plan)
Hazard Addressed	Excessive Heat

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS WEBSTER PARISH	
	DESCRIPTION
WEBSTER PARISH MITGATION ACTION 19	Relocate Electric Lines
LEAD AGENCY	Webster Parish Police Jury
SUPPORTING AGENCIES	Webster Parish Public Works
TIMELINE	1-5 years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	Utilities, public works (parish and municipalities)
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Medium
Action Description	Relocate electric and communications lines that serve critical facilities underground to minimize the risk of loss of services. Institute general policy to install underground electric and communications lines for future public facilities in cases where it is cost-effective to do so.
Type of Mitigation Action	Structural and Infrastructure Projects
How Action Aligns with Risk Reduction	Reducing or preventing further power outages and/or damages can significantly reduce the impacts on local government, residents, etc. throughout the Parish
Current Status of Action	New (Not Started/Carried Over from 2016 Plan)
Hazard Addressed	Dam Failure, Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS WEBSTER PARISH	
	DESCRIPTION
WEBSTER PARISH MITGATION ACTION 20	Install Frangible Pole Connections
LEAD AGENCY	Webster Parish Police Jury
SUPPORTING AGENCIES	Webster Parish Public Works
TIMELINE	1-5 years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	Utilities, public works
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Medium
Action Description	Install frangible (break away) pole connections for power line networks to reduce potential for electrical transmission loss.
Type of Mitigation Action	Structural and Infrastructure Projects
How Action Aligns with Risk Reduction	Reducing or preventing further power outages and/or damages can significantly reduce the impacts on local government, residents, etc. throughout the Parish
Current Status of Action	New (Not Started/Carried Over from 2016 Plan)
Hazard Addressed	Dam Failure, Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS WEBSTER PARISH	
	DESCRIPTION
WEBSTER PARISH MITGATION ACTION 21	Public Education and Community Awareness Programs
LEAD AGENCY	Webster Parish OHSEP
SUPPORTING AGENCIES	Webster Parish Fire Departments
TIMELINE	1-5 years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	PDM; HMGP
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Low
Action Description	Develop a public education and community awareness program detailing the importance of maintaining defensible space near homes, the locations of wildfire prone areas in the parish, and general wildfire mitigation.
Type of Mitigation Action	Education and Awareness Programs
How Action Aligns with Risk Reduction	Educating residents about the benefits of maintaining a defensible space around structures will provide an additional safety measure to protect them against the possibility of a wildfire hazard.
Current Status of Action	New (Not Started/Carried Over from 2016 Plan)
Hazard Addressed	Wildfires

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS WEBSTER PARISH	
	DESCRIPTION
WEBSTER PARISH MITGATION ACTION 22	Homeowner Safe Shelters
LEAD AGENCY	Webster Parish OHSEP
SUPPORTING AGENCIES	Webster Parish Police Jury
TIMELINE	1-5 years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	PDM; HMGP
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life
PRIORITY	Medium
Action Description	Develop incentives and provide instruction for homeowners to construct/install safe shelters capable of providing protection from severe tornados, extreme straight-line winds, and hailstorms in accordance with FEMA Publication 320 and/or National Performance Criteria for Tornado Shelters specifications
Type of Mitigation Action	Structural and Infrastructure Projects Education and Awareness Programs
How Action Aligns with Risk Reduction	Residential safe shelters would help to protect residents of Webster Parish in times of high wind events
Current Status of Action	New (Not Started/Carried Over from 2016 Plan)
Hazard Addressed	Thunderstorms, Tornadoes, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS WEBSTER PARISH	
	DESCRIPTION
WEBSTER PARISH MITGATION ACTION 23	Water Efficient Fixtures
LEAD AGENCY	Webster Parish Police Jury
SUPPORTING AGENCIES	Webster Parish Public Works
TIMELINE	1-5 years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	Water Districts, WPPJ Public Works
ASSOCIATED GOALS	5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways. 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Low
Action Description	Coordinate with water districts to establish incentives for installing water efficient fixtures and landscaping in new construction. Institute general parish policy to consider water efficiency in construction of new infrastructure and facilities.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Installation of water efficient fixtures and landscaping will help to reduce the over usage of water in times of drought
Current Status of Action	New (Not Started/Carried Over from 2016 Plan)
Hazard Addressed	Drought

Additional Supporting Information:

Town of Cotton Valley Mitigation Actions

Previous Action Update

Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
CV1: Building Retrofits	Retrofit public buildings exterior shell to maintain use during and after storm events. Benefits: Reduces damage from high winds, and helps assure that the public buildings can be used, occupied and operable during or after natural hazard events.	FEMA HMGP, Local	1-5 years	Town of Cotton Valley/Webster Parish OHSEP	Thunderstorms, Tropical Cyclones, Tornadoes	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
CV2: Drainage Improvement	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation. Benefits: Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.	FEMA HMGP, Local	1-5 years	Town of Cotton Valley/Webster Parish OHSEP	Flooding, Thunderstorms, Tropical Cyclones	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
CV3: Mitigation of Repetitive Loss and Severe Repetitive Loss Properties and Other Hazard Prone Structures	Elevation, acquisition-demolition, acquisition-relocations, and reconstruction of repetitive loss or flooding or other hazard prone properties.	FEMA HMGP, Local	1-5 years	Town of Cotton Valley/Webster Parish OHSEP	Flooding, Tropical Cyclones, Dam Failure	1, 2, 4, 6	Carried Over/ Not Started
CV4: Safe Room Projects	Construction of a safe room for first responders located in Cotton Valley. Other locations will be identified based on funding availability.	FEMA HMGP, Local	1-5 years	Town of Cotton Valley/Webster Parish OHSEP	Tornadoes, Thunderstorms, Tropical Cyclones, Wildfires	1	Carried Over/ Not Started

CV5: Education and Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for Flooding, Tropical Cyclone, Tornadoes, Wildfires, Extreme Heat, Thunderstorms (lightning, high wind, hail), Drought, Sinkholes, Dam Failure, and Winter Storm hazards as well as providing information on high risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.	FEMA HMGP, Local	1-5 years	Town of Cotton Valley/Webster Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes, Wildfires, Excessive Heat, Thunderstorms, Winter Weather, Drought, Sinkholes, Dam Failure	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
CV6: Generators for Continuity of Operations and Government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA HMGP, Local	1-5 years	Town of Cotton Valley/Webster Parish OHSEP	Tornadoes, Winter Storms, Tropical Cyclones, Thunderstorms, Excessive Heat, Sinkholes	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
CV7: Lightning Mitigation	Procurement and Installation of Lightning rods and surge protectors for public buildings to preserve life and property	FEMA HMGP, Local	1-5 years	Town of Cotton Valley/Webster Parish OHSEP	Thunderstorms	1, 2, 3, 4, 6	Carried Over/ Not Started
CV8: Warning Systems	Update/upgrade public warning system components throughout Cotton Valley as necessary. Install audible and/or reverse 911 warning system(s)	FEMA HMGP, Local	1-5 years	Town of Cotton Valley/Webster Parish OHSEP	Winter Weather, Wildfires, Tornadoes, Tropical Cyclones, Dam Failure, Sinkholes	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
CV9: Potable Water	Create redundancy of potable water supply to critical facilities, especially hospitals in Parish, and provide protection of potable water supply by acquisition/installation of backflow preventers at appropriate critical locations.	FEMA HMGP, Local	1-5 years	Town of Cotton Valley/Webster Parish OHSEP	Tropical Cyclones, Thunderstorms, Tornadoes, Drought, Excessive Heat	1	Carried Over/ Not Started

CV10: Promote Flood Insurance	Promote the purchase of flood insurance. Advertise the availability, cost, and coverage of flood insurance through the National Flood Insurance Program (NFIP).	FEMA HMGP, Local	1-5 years	Town of Cotton Valley/Webster Parish OHSEP	Tropical Cyclones, Flooding	1, 2	Carried Over/ Not Started
CV11: Flood Control Measures	Install and/or upgrade minor flood control structures including berms and floodwalls to protect critical facilities.	FEMA HMGP, Local	1-5 years	Town of Cotton Valley/Webster Parish OHSEP	Tropical Cyclones, Flooding, Dam Failure	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
CV12: Dam Failure Working Group	Create a working group in order to assess the extent and determine the possible effects of a dam Failure.	FEMA HMGP, Local	1-5 years	Webster Parish OHSEP and Mayors	Dam Failure, Flooding	1, 2, 3, 4, 5, 6	Carried Over/ Not Started

New Mitigation Actions

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF COTTON VALLEY	
	DESCRIPTION
TOWN OF COTTON VALLEY MITGATION ACTION 1	Building Retrofits
LEAD AGENCY	Town of Cotton Valley Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent damage to property and material assets 2. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 3. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 4. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 5. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Medium
Action Description	Retrofit public buildings exterior shell to maintain use during and after hazard events. Benefits: Reduces damage from various hazards, and helps assure that the public buildings can be used, occupied and operable during or after events while sustaining minimal damage.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Hardening and retrofitting of public buildings and critical infrastructure allows for continued operations and reduced risk of failure during and after hazard events.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF COTTON VALLEY	
	DESCRIPTION
TOWN OF COTTON VALLEY MITGATION ACTION 2	Drainage Improvements
LEAD AGENCY	Town of Cotton Valley Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Medium
Action Description	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Flooding, Thunderstorms, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF COTTON VALLEY	
	DESCRIPTION
TOWN OF COTTON VALLEY MITGATION ACTION 3	Mitigation of Repetitive Loss and Severe Repetitive Loss Properties and Other Hazard Prone Structures
LEAD AGENCY	Town of Cotton Valley Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	High
Action Description	Elevation, acquisition-demolition, acquisition-relocations, and reconstruction of repetitive loss or flooding or other hazard prone properties. .
Type of Mitigation Action	Structure and Infrastructure Projects Natural System Protection
How Action Aligns with Risk Reduction	Elevating, acquiring, and/or demolishing at-risk properties will reduce flooding impacts on the community
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Flooding, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF COTTON VALLEY	
	DESCRIPTION
TOWN OF COTTON VALLEY MITGATION ACTION 4	Safe Room Projects
LEAD AGENCY	Town of Cotton Valley Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control
PRIORITY	Medium
Action Description	Construction of a safe room for first responders located in Cotton Valley. Other locations will be identified based on funding availability.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Allows for continued operations of essential personal to actively respond during a natural hazard event.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF COTTON VALLEY	
	DESCRIPTION
TOWN OF COTTON VALLEY MITGATION ACTION 5	Education and Outreach
LEAD AGENCY	Town of Cotton Valley Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	High
Action Description	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for Dam Failure, Drought, Excessive Heat, Flooding, Sinkholes, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, and Winter Weather hazards as well as providing information on high-risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.
Type of Mitigation Action	Education and Awareness Programs
How Action Aligns with Risk Reduction	Providing educational information to the citizens of Webster Parish regarding relevant hazards will aid them in preparation and mitigation techniques to hopefully lessen the impact of hazards facing the parish.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure, Drought, Excessive Heat, Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF COTTON VALLEY	
	DESCRIPTION
TOWN OF COTTON VALLEY MITGATION ACTION 6	Generators for Continuity of Operations and Government
LEAD AGENCY	Town of Cotton Valley Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources
PRIORITY	High
Action Description	Procurement and installation of generators at public facilities to ensure continued operations during and after events.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Having redundant power supplies for critical facilities and public buildings will alleviate disruptions of power and ensure continued operations during and after events
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure, Excessive Heat, Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF COTTON VALLEY	
	DESCRIPTION
TOWN OF COTTON VALLEY MITGATION ACTION 7	Lightning Mitigation
LEAD AGENCY	Town of Cotton Valley Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control
PRIORITY	Low
Action Description	Procurement and installation of lightning rods and surge protectors for public buildings to preserve life and property
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Decreases the risk of damage or halting operations of critical facilities due to lightning
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Thunderstorms, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF COTTON VALLEY	
	DESCRIPTION
TOWN OF COTTON VALLEY MITGATION ACTION 8	Warning Systems
LEAD AGENCY	Town of Cotton Valley Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Low
Action Description	Update/upgrade public warning system components throughout Cotton Valley as necessary. Install audible and/or reverse 911 warning system(s) with backup capabilities
Type of Mitigation Action	Structure and Infrastructure Projects Education and Awareness Programs
How Action Aligns with Risk Reduction	Upgrading public warning systems will allow for timely notification of imminent hazard events for the public
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure, Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF COTTON VALLEY	
	DESCRIPTION
TOWN OF COTTON VALLEY MITGATION ACTION 9	Potable Water
LEAD AGENCY	Town of Cotton Valley Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources
PRIORITY	Low
Action Description	Create redundancy of potable water supply to critical facilities, especially hospitals in Cotton Valley, and provide protection of potable water supply by acquisition/installation of backflow preventers at appropriate critical locations.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Having a redundant water supply would help maintain the continuity of operations of essential and critical facilities.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Drought, Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF COTTON VALLEY	
	DESCRIPTION
TOWN OF COTTON VALLEY MITGATION ACTION 10	Promote Flood Insurance
LEAD AGENCY	Town of Cotton Valley Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	2. Reduce or prevent damage to property and material assets
PRIORITY	Medium
Action Description	Promote the purchase of flood insurance. Advertise the availability, cost, and coverage of flood insurance through the National Flood Insurance Program (NFIP).
Type of Mitigation Action	Education and Awareness Programs
How Action Aligns with Risk Reduction	Promotion of flood insurance to the citizens of Webster Parish will help to relieve the burden of payouts related to non-insured properties after flooding events.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Flooding, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF COTTON VALLEY	
	DESCRIPTION
TOWN OF COTTON VALLEY MITGATION ACTION 11	Flood Control Measures
LEAD AGENCY	Town of Cotton Valley Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Low
Action Description	Install and/or upgrade minor flood control structures including berms and floodwalls to protect critical facilities.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Construction, installation, and upgrading of flood control structures will increase protection of potential impacts areas and lessen the chance of flooding related impacts to critical facilities.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure, Flooding, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF COTTON VALLEY	
	DESCRIPTION
TOWN OF COTTON VALLEY MITGATION ACTION 12	Dam Failure Working Group
LEAD AGENCY	Town of Cotton Valley Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP; Other Webster Parish Mayor's Offices
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Low
Action Description	Create a working group in order to assess the extent and determine the possible effects of a dam failure.
Type of Mitigation Action	Education and Awareness Programs
How Action Aligns with Risk Reduction	The creation of a dam failure working group would allow for a more accurate impact assessment in the event of a dam failure in the parish.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF COTTON VALLEY	
	DESCRIPTION
TOWN OF COTTON VALLEY MITGATION ACTION 13	Adopt ordinances to restrict the use of public water resources for non-essential usage
LEAD AGENCY	Town of Cotton Valley Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources
PRIORITY	Medium
Action Description	Adopt ordinances to restrict the use of public water resources for non-essential usage
Type of Mitigation Action	Local Planning and Regulation
How Action Aligns with Risk Reduction	Restricting the use of public water resources for non-essential usage during times of drought will allow the parish to allocate water resources to critical operations
Current Status of Action	New
Hazard Addressed	Drought

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF COTTON VALLEY	
	DESCRIPTION
TOWN OF COTTON VALLEY MITGATION ACTION 14	Warming and Cooling Stations
LEAD AGENCY	Town of Cotton Valley Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	2. Reduce or prevent injury and loss of life
PRIORITY	Medium
Action Description	Planning and execution of warming and/or cooling stations for use by vulnerable populations during longer than expected events with extended power outages and damage to infrastructure.
Type of Mitigation Action	Local Planning and Regulation Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	This project would ensure that in times of extreme weather, residents could take shelter in climate-controlled environments, thus reducing the risk of heat or cold induced health problems
Current Status of Action	New
Hazard Addressed	Excessive Heat, Winter Weather

Additional Supporting Information:

Town of Cullen Mitigation Actions

Previous Action Update

Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
C1: Building Retrofits	Retrofit public buildings exterior shell to maintain use during and after storm events. Benefits: Reduces damage from high winds, and helps assure that the public buildings can be used, occupied and operable during or after natural hazard events.	FEMA HMGP, Local	1-5 years	Town of Cullen/ Webster Parish OHSEP	Thunderstorms, Tropical Cyclones, Tornadoes	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
C2: Drainage Improvement	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation. Benefits: Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.	FEMA HMGP, Local	1-5 years	Town of Cullen/ Webster Parish OHSEP	Flooding, Thunderstorms, Tropical Cyclones	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
C3: Mitigation of Repetitive Loss and Severe Repetitive Loss Properties and Other Hazard Prone Structures	Elevation, acquisition-demolition, acquisition-relocations, and reconstruction of repetitive loss or flooding or other hazard prone properties.	FEMA HMGP, Local	1-5 years	Town of Cullen/ Webster Parish OHSEP	Flooding, Tropical Cyclones, Dam Failure	1, 2, 4, 6	Carried Over/ Not Started
C4: Safe Room Projects	Construction of a safe room for first responders located in Cullen. Other locations will be identified based on funding availability.	FEMA HMGP, Local	1-5 years	Town of Cullen/ Webster Parish OHSEP	Tornadoes, Thunderstorms, Tropical Cyclones, Wildfires	1	Carried Over/ Not Started

C5: Education and Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for Flooding, Tropical Cyclone, Tornadoes, Wildfires, Extreme Heat, Thunderstorms (lightning, high wind, hail), Drought, Sinkholes, Dam Failure, and Winter Storm hazards as well as providing information on high risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.	FEMA HMGP, Local	1-5 years	Town of Cullen/ Webster Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes, Wildfires, Excessive Heat, Thunderstorms, Winter Weather, Drought, Sinkholes, Dam Failure	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
C6: Generators for Continuity of Operations and Government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA HMGP, Local	1-5 years	Town of Cullen/ Webster Parish OHSEP	Tornadoes, Winter Storms, Tropical Cyclones, Thunderstorms, Excessive Heat, Sinkholes	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
C7: Lightning Mitigation	Procurement and Installation of Lightning rods and surge protectors for public buildings to preserve life and property	FEMA HMGP, Local	1-5 years	Town of Cullen/ Webster Parish OHSEP	Thunderstorms	1, 2, 3, 4, 6	Carried Over/ Not Started
C8: Warning Systems	Update/upgrade public warning system components throughout Cullen as necessary. Install audible and/or reverse 911 warning system(s)	FEMA HMGP, Local	1-5 years	Town of Cullen/ Webster Parish OHSEP	Winter Weather, Wildfires, Tornadoes, Tropical Cyclones, Dam Failure, Sinkholes	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
C9: Potable Water	Create redundancy of potable water supply to critical facilities, especially hospitals in Parish, and provide protection of potable water supply by acquisition/installation of backflow preventers at appropriate critical locations.	FEMA HMGP, Local	1-5 years	Town of Cullen/ Webster Parish OHSEP	Tropical Cyclones, Thunderstorms, Tornadoes, Drought, Excessive Heat	1	Carried Over/ Not Started

C10: Promote Flood Insurance	Promote the purchase of flood insurance. Advertise the availability, cost, and coverage of flood insurance through the National Flood Insurance Program (NFIP).	FEMA HMGP, Local	1-5 years	Town of Cullen/ Webster Parish OHSEP	Tropical Cyclones, Flooding	1, 2	Carried Over/ Not Started
C11: Flood Control Measures	Install and/or upgrade minor flood control structures including berms and floodwalls to protect critical facilities.	FEMA HMGP, Local	1-5 years	Town of Cullen/ Webster Parish OHSEP	Tropical Cyclones, Flooding, Dam Failure	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
C12: Dam Failure Working Group	Create a working group in order to assess the extent and determine the possible effects of a dam Failure.	FEMA HMGP, Local	1-5 years	Webster Parish OHSEP and Mayors	Dam Failure, Flooding	1, 2, 3, 4, 5, 6	Carried Over/ Not Started

New Mitigation Actions

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF CULLEN	
	DESCRIPTION
TOWN OF CULLEN MITGATION ACTION 1	Building Retrofits
LEAD AGENCY	Town of Cullen Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Medium
Action Description	Retrofit public buildings exterior shell to maintain use during and after hazard events. Benefits: Reduces damage from various hazards, and helps assure that the public buildings can be used, occupied and operable during or after events while sustaining minimal damage.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Hardening and retrofitting of public buildings and critical infrastructure allows for continued operations and reduced risk of failure during and after hazard events.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF CULLEN	
	DESCRIPTION
TOWN OF CULLEN MITGATION ACTION 2	Drainage Improvements
LEAD AGENCY	Town of Cullen Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Medium
Action Description	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Flooding, Thunderstorms, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF CULLEN	
	DESCRIPTION
TOWN OF CULLEN MITGATION ACTION 3	Mitigation of Repetitive Loss and Severe Repetitive Loss Properties and Other Hazard Prone Structures
LEAD AGENCY	Town of Cullen Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	High
Action Description	Elevation, acquisition-demolition, acquisition-relocations, and reconstruction of repetitive loss or flooding or other hazard prone properties. .
Type of Mitigation Action	Structure and Infrastructure Projects Natural System Protection
How Action Aligns with Risk Reduction	Elevating, acquiring, and/or demolishing at-risk properties will reduce flooding impacts on the community
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Flooding, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF CULLEN	
	DESCRIPTION
TOWN OF CULLEN MITGATION ACTION 4	Safe Room Projects
LEAD AGENCY	Town of Cullen Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control
PRIORITY	Medium
Action Description	Construction of a safe room for first responders located in Cullen. Other locations will be identified based on funding availability.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Allows for continued operations of essential personal to actively respond during a natural hazard event.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF CULLEN	
	DESCRIPTION
TOWN OF CULLEN MITGATION ACTION 5	Education and Outreach
LEAD AGENCY	Town of Cullen Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	High
Action Description	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for Dam Failure, Drought, Excessive Heat, Flooding, Sinkholes, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, and Winter Weather hazards as well as providing information on high-risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.
Type of Mitigation Action	Education and Awareness Programs
How Action Aligns with Risk Reduction	Providing educational information to the citizens of Webster Parish regarding relevant hazards will aid them in preparation and mitigation techniques to hopefully lessen the impact of hazards facing the parish.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure, Drought, Excessive Heat, Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF CULLEN	
	DESCRIPTION
TOWN OF CULLEN MITGATION ACTION 6	Generators for Continuity of Operations and Government
LEAD AGENCY	Town of Cullen Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources
PRIORITY	High
Action Description	Procurement and installation of generators at public facilities to ensure continued operations during and after events.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Having redundant power supplies for critical facilities and public buildings will alleviate disruptions of power and ensure continued operations during and after events
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure, Excessive Heat, Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF CULLEN	
	DESCRIPTION
TOWN OF CULLEN MITGATION ACTION 7	Lightning Mitigation
LEAD AGENCY	Town of Cullen Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control
PRIORITY	Low
Action Description	Procurement and installation of lightning rods and surge protectors for public buildings to preserve life and property
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Decreases the risk of damage or halting operations of critical facilities due to lightning
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Thunderstorms, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF CULLEN	
	DESCRIPTION
TOWN OF CULLEN MITGATION ACTION 8	Warning Systems
LEAD AGENCY	Town of Cullen Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Low
Action Description	Update/upgrade public warning system components throughout Cullen as necessary. Install audible and/or reverse 911 warning system(s) with backup capabilities
Type of Mitigation Action	Structure and Infrastructure Projects Education and Awareness Programs
How Action Aligns with Risk Reduction	Upgrading public warning systems will allow for timely notification of imminent hazard events for the public
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure, Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF CULLEN	
	DESCRIPTION
TOWN OF CULLEN MITGATION ACTION 9	Potable Water
LEAD AGENCY	Town of Cullen Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources
PRIORITY	Low
Action Description	Create redundancy of potable water supply to critical facilities, especially hospitals in Cullen, and provide protection of potable water supply by acquisition/installation of backflow preventers at appropriate critical locations.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Having a redundant water supply would help maintain the continuity of operations of essential and critical facilities.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Drought, Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF CULLEN	
	DESCRIPTION
TOWN OF CULLEN MITGATION ACTION 10	Promote Flood Insurance
LEAD AGENCY	Town of Cullen Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	2. Reduce or prevent damage to property and material assets
PRIORITY	Medium
Action Description	Promote the purchase of flood insurance. Advertise the availability, cost, and coverage of flood insurance through the National Flood Insurance Program (NFIP).
Type of Mitigation Action	Education and Awareness Programs
How Action Aligns with Risk Reduction	Promotion of flood insurance to the citizens of Webster Parish will help to relieve the burden of payouts related to non-insured properties after flooding events.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Flooding, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF CULLEN	
	DESCRIPTION
TOWN OF CULLEN MITGATION ACTION 11	Flood Control Measures
LEAD AGENCY	Town of Cullen Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Low
Action Description	Install and/or upgrade minor flood control structures including berms and floodwalls to protect critical facilities.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Construction, installation, and upgrading of flood control structures will increase protection of potential impacts areas and lessen the chance of flooding related impacts to critical facilities.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure, Flooding, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF CULLEN	
	DESCRIPTION
TOWN OF CULLEN MITGATION ACTION 12	Dam Failure Working Group
LEAD AGENCY	Town of Cullen Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Low
Action Description	Create a working group in order to assess the extent and determine the possible effects of a dam failure.
Type of Mitigation Action	Education and Awareness Programs
How Action Aligns with Risk Reduction	The creation of a dam failure working group would allow for a more accurate impact assessment in the event of a dam failure in the parish.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF CULLEN	
	DESCRIPTION
TOWN OF CULLEN MITGATION ACTION 13	Adopt ordinances to restrict the use of public water resources for non-essential usage
LEAD AGENCY	Town of Cullen Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources
PRIORITY	Medium
Action Description	Adopt ordinances to restrict the use of public water resources for non-essential usage
Type of Mitigation Action	Local Planning and Regulation
How Action Aligns with Risk Reduction	Restricting the use of public water resources for non essential usage during times of drought will allow the parish to allocate water resources to critical operations
Current Status of Action	New
Hazard Addressed	Drought

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF CULLEN	
	DESCRIPTION
TOWN OF CULLEN MITGATION ACTION 14	Warming and Cooling Stations
LEAD AGENCY	Town of Cullen Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	2. Reduce or prevent injury and loss of life
PRIORITY	Medium
Action Description	Planning and execution of warming and/or cooling stations for use by vulnerable populations during longer than expected events with extended power outages and damage to infrastructure.
Type of Mitigation Action	Local Planning and Regulation Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	This project would ensure that in times of extreme weather, residents could take shelter in climate-controlled environments, thus reducing the risk of heat or cold induced health problems
Current Status of Action	New
Hazard Addressed	Excessive Heat, Winter Weather

Additional Supporting Information:

Village of Dixie Inn Mitigation Actions

Previous Action Update

Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
D1: Building Retrofits	Retrofit public buildings exterior shell to maintain use during and after storm events. Benefits: Reduces damage from high winds, and helps assure that the public buildings can be used, occupied and operable during or after natural hazard events.	FEMA HMGP, Local	1-5 years	Village of Dixie Inn/ Webster Parish OHSEP	Thunderstorms, Tropical Cyclones, Tornadoes	1,2,3,4,5,6	Completed
D2: Drainage Improvement	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation. Benefits: Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.	FEMA HMGP, Local	1-5 years	Village of Dixie Inn/ Webster Parish OHSEP	Flooding, Thunderstorms, Tropical Cyclones	1,2,3,4,5,6	In Progress / Ongoing
D3: Mitigation of repetitive loss and severe repetitive loss properties and other hazard prone structures	Elevation, acquisition-demolition, acquisition-relocations, and reconstruction of repetitive loss or flooding or other hazard prone properties. .	FEMA HMGP, Local	1-5 years	Village of Dixie Inn/ Webster Parish OHSEP	Flooding, Tropical Cyclones, Dam Failure	1,2,4,6	Not Started/ Carried Over

D4: Safe Room Projects	Construction of a safe room for first responders located in Dixie Inn. Other locations will be identified based on funding availability.	FEMA HMGP, Local	1-5 years	Village of Dixie Inn/ Webster Parish OHSEP	Tornadoes, Thunderstorms, Tropical Cyclones, Wildfires	1	Deleted
D5: Education and Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for Flooding, Tropical Cyclone, Tornadoes, Wildfires, Extreme Heat, Thunderstorms (lightning, high wind, hail), Drought, Sinkholes, Dam Failure, and Winter Storm hazards as well as providing information on high risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.	FEMA HMGP, Local	1-5 years	Village of Dixie Inn/ Webster Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes, Wildfires, Excessive Heat, Thunderstorms, Winter Storms, Drought, Sinkholes, Dam Failure	1,2,3,4,5,6	In Progress/ Ongoing
D6: Generators for continuity of operations and government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA HMGP, Local	1-5 years	Village of Dixie Inn/ Webster Parish OHSEP	Tornadoes, Winter Weather, Tropical Cyclones, Thunderstorms, Excessive Heat, Sinkholes	1,2,3,4,5,6	In Progress/ Ongoing
D7: Lightning Mitigation	Procurement and Installation of Lightning rods and surge protectors for public buildings to preserve life and property	FEMA HMGP, Local	1-5 years	Village of Dixie Inn/ Webster Parish OHSEP	Thunderstorms	1,2,3,4,6	In Progress/ Ongoing
D8: Warning Systems	Update/upgrade public warning system components throughout Dixie Inn as necessary. Install audible and/or reverse 911 warning system(s)	FEMA HMGP, Local	1-5 years	Village of Dixie Inn/ Webster Parish OHSEP	Winter Weather, Wildfires, Tornadoes, Tropical Cyclones, Dam Failure, Sinkholes	1,2,3,4,5,6	Not Started/ Carried Over

D9: Potable Water	Create redundancy of potable water supply to critical facilities, especially hospitals in Parish, and provide protection of potable water supply by acquisition/installation of backflow preventers at appropriate critical locations.	FEMA HMGP, Local	1-5 years	Village of Dixie Inn/ Webster Parish OHSEP	Tropical Cyclones, Thunderstorms, Tornadoes, Drought, Excessive Heat	1	Completed
D10: Promote Flood Insurance	Promote the purchase of flood insurance. Advertise the availability, cost, and coverage of flood insurance through the National Flood Insurance Program (NFIP).	FEMA HMGP, Local	1-5 years	Village of Dixie Inn/ Webster Parish OHSEP	Tropical Cyclones, Flooding	1,2	In Progress/ Ongoing
D11: Flood Control Measures	Install and/or upgrade minor flood control structures including berms and floodwalls to protect critical facilities.	FEMA HMGP, Local	1-5 years	Village of Dixie Inn/ Webster Parish OHSEP	Tropical Cyclones, Flooding, Dam Failure	1,2,3,4,5,6	In Progress/ Ongoing
D12: Dam Failure Working Group	Create a working group in order to assess the extent and determine the possible effects of a dam failure.	FEMA HMGP, Local	1-5 years	Webster Parish OHSEP and Mayors	Dam Failure, Flooding	1,2,3,4,5,6	Not Started/ Carried Over

New Mitigation Actions

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF DIXIE INN	
	DESCRIPTION
VILLAGE OF DIXIE INN MITGATION ACTION 1	Mitigation of Repetitive Loss and Severe Repetitive Loss Properties and Other Hazard Prone Structures
LEAD AGENCY	Village of Dixie Inn Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	FEMA HMGP; Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	High
Action Description	Elevation, acquisition-demolition, acquisition-relocations, and reconstruction of repetitive loss or flooding or other hazard prone properties.
Type of Mitigation Action	Structural and Infrastructure Projects
How Action Aligns with Risk Reduction	Elevating, acquiring, and/or demolishing at-risk properties will reduce flooding impacts on the community
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure, Flooding, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF DIXIE INN	
	DESCRIPTION
VILLAGE OF DIXIE INN MITGATION ACTION 2	Warning Systems
LEAD AGENCY	Village of Dixie Inn Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Low
Action Description	Update/upgrade public warning system components throughout Dixie Inn as necessary. Install audible and/or reverse 911 warning system(s) with backup capabilities
Type of Mitigation Action	Structure and Infrastructure Projects Education and Awareness Programs
How Action Aligns with Risk Reduction	Upgrading public warning systems will allow for timely notification of imminent hazard events for the public
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure, Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF DIXIE INN	
	DESCRIPTION
VILLAGE OF DIXIE INN MITGATION ACTION 3	Dam Failure Working Group
LEAD AGENCY	Village of Dixie Inn Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	FEMA HMGP; Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	High
Action Description	Create a working group in order to assess the extent and determine the possible effects of a dam failure.
Type of Mitigation Action	Education and Awareness Programs
How Action Aligns with Risk Reduction	
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF DIXIE INN	
	DESCRIPTION
VILLAGE OF DIXIE INN MITGATION ACTION 4	Water System Retrofitting
LEAD AGENCY	Village of Dixie Inn Mayor's Office
SUPPORTING AGENCIES	Webster Parish Public Works
TIMELINE	1-5 years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	FEMA HMGP; Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy
PRIORITY	Low
Action Description	Upgrading of the existing water delivery system to eliminate breaks/leaks and account for the natural expansion/compaction of soils through which the water system runs.
Type of Mitigation Action	Structure and Infrastructure Project
How Action Aligns with Risk Reduction	Improving water delivery systems reduces chance of loss through damaged infrastructure and ultimately saves water when it is needed most.
Current Status of Action	New
Hazard Addressed	Drought, Excessive Heat

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF DIXIE INN	
	DESCRIPTION
VILLAGE OF DIXIE INN MITGATION ACTION 5	Adopt ordinances to restrict the use of public water resources for non-essential usage
LEAD AGENCY	Village of Dixie Inn Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources
PRIORITY	Medium
Action Description	Adopt ordinances to restrict the use of public water resources for non-essential usage
Type of Mitigation Action	Local Planning and Regulation
How Action Aligns with Risk Reduction	Restricting the use of public water resources for non essential usage during times of drought will allow the parish to allocate water resources to critical operations
Current Status of Action	New
Hazard Addressed	Drought

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF DIXIE INN	
	DESCRIPTION
VILLAGE OF DIXIE INN MITGATION ACTION 6	Warming and Cooling Stations
LEAD AGENCY	Village of Dixie Inn Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	2. Reduce or prevent injury and loss of life
PRIORITY	Medium
Action Description	Planning and execution of warming and/or cooling stations for use by vulnerable populations during longer than expected events with extended power outages and damage to infrastructure.
Type of Mitigation Action	Local Planning and Regulation Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	This project would ensure that in times of extreme weather, residents could take shelter in climate-controlled environments, thus reducing the risk of heat or cold induced health problems
Current Status of Action	New
Hazard Addressed	Excessive Heat, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF DIXIE INN	
	DESCRIPTION
VILLAGE OF DIXIE INN MITGATION ACTION 7	Encourage/Require Fire-Resistant Construction Techniques
LEAD AGENCY	Village of Dixie Inn Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	As funding is available; 1-5 years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	Parish Budget, HMGP
ASSOCIATED GOALS	2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy
PRIORITY	Medium
Action Description	• Encourage the use of non-combustible materials (i.e., stone, brick, and stucco) for new construction in wildfire hazard areas. • Using fire resistant roofing and building materials in remodels, upgrades, and new construction. • Encourage the use of functional shutters on windows.
Type of Mitigation Action	Local Planning and Regulations
How Action Aligns with Risk Reduction	Encouraging fire-resistant construction will provide the citizens of Dixie Inn a safety measure to protect them against the possibility of a wildfire hazard.
Current Status of Action	New
Hazard Addressed	Wildfires

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF DIXIE INN	
	DESCRIPTION
VILLAGE OF DIXIE INN MITGATION ACTION 8	Construct and install design-failure mode power lines.
LEAD AGENCY	Village of Dixie Inn Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	As funding is available; 1-5 years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	Parish Budget, HMGP
ASSOCIATED GOALS	3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy
PRIORITY	Low
Action Description	Incorporate and implement design-failure mode for power line design to allow lines to fall or fail in small sections rather than as a complete system to enable faster restoration.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Reducing or preventing further power outages and/or damages can significantly reduce the impacts on local government, residents, etc. throughout the Parish
Current Status of Action	New
Hazard Addressed	Thunderstorms, Tornadoes, Tropical Cyclones, Winter Weather

Additional Supporting Information:

Village of Doyline Mitigation Actions

Previous Action Update

Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
D1: Building Retrofits	Retrofit public buildings exterior shell to maintain use during and after storm events. Benefits: Reduces damage from high winds, and helps assure that the public buildings can be used, occupied and operable during or after natural hazard events.	FEMA HMGP, Local	1-5 years	Village of Doyline/ Webster Parish OHSEP	Thunderstorms, Tropical Cyclones, Tornadoes	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
D2: Drainage Improvement	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation. Benefits: Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.	FEMA HMGP, Local	1-5 years	Village of Doyline/ Webster Parish OHSEP	Flooding, Thunderstorms, Tropical Cyclones	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
D3: Mitigation of Repetitive Loss and Severe Repetitive Loss Properties and Other Hazard Prone Structures	Elevation, acquisition-demolition, acquisition-relocations, and reconstruction of repetitive loss or flooding or other hazard prone properties.	FEMA HMGP, Local	1-5 years	Village of Doyline/ Webster Parish OHSEP	Flooding, Tropical Cyclones, Dam Failure	1, 2, 4, 6	Carried Over/ Not Started
D4: Safe Room Projects	Construction of a safe room for first responders located in Doyline. Other locations will be identified based on funding availability.	FEMA HMGP, Local	1-5 years	Village of Doyline/ Webster Parish OHSEP	Tornadoes, Thunderstorms, Tropical Cyclones, Wildfires	1	Carried Over/ Not Started

D5: Education and Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for Flooding, Tropical Cyclone, Tornadoes, Wildfires, Extreme Heat, Thunderstorms (lightning, high wind, hail), Drought, Sinkholes, Dam Failure, and Winter Storm hazards as well as providing information on high risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.	FEMA HMGP, Local	1-5 years	Village of Doyline/ Webster Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes, Wildfires, Excessive Heat, Thunderstorms, Winter Weather, Drought, Sinkholes, Dam Failure	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
D6: Generators for Continuity of Operations and Government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA HMGP, Local	1-5 years	Village of Doyline/ Webster Parish OHSEP	Tornadoes, Winter Storms, Tropical Cyclones, Thunderstorms, Excessive Heat, Sinkholes	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
D7: Lightning Mitigation	Procurement and Installation of Lightning rods and surge protectors for public buildings to preserve life and property	FEMA HMGP, Local	1-5 years	Village of Doyline/ Webster Parish OHSEP	Thunderstorms	1, 2, 3, 4, 6	Carried Over/ Not Started
D8: Warning Systems	Update/upgrade public warning system components throughout Doyline as necessary. Install audible and/or reverse 911 warning system(s)	FEMA HMGP, Local	1-5 years	Village of Doyline/ Webster Parish OHSEP	Winter Weather, Wildfires, Tornadoes, Tropical Cyclones, Dam Failure, Sinkholes	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
D9: Potable Water	Create redundancy of potable water supply to critical facilities, especially hospitals in Parish, and provide protection of potable water supply by acquisition/installation of backflow preventers at appropriate critical locations.	FEMA HMGP, Local	1-5 years	Village of Doyline/ Webster Parish OHSEP	Tropical Cyclones, Thunderstorms, Tornadoes, Drought, Excessive Heat	1	Carried Over/ Not Started

D10: Promote Flood Insurance	Promote the purchase of flood insurance. Advertise the availability, cost, and coverage of flood insurance through the National Flood Insurance Program (NFIP).	FEMA HMGP, Local	1-5 years	Village of Doyline/ Webster Parish OHSEP	Tropical Cyclones, Flooding	1, 2	Carried Over/ Not Started
D11: Flood Control Measures	Install and/or upgrade minor flood control structures including berms and floodwalls to protect critical facilities.	FEMA HMGP, Local	1-5 years	Village of Doyline/ Webster Parish OHSEP	Tropical Cyclones, Flooding, Dam Failure	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
D12: Dam Failure Working Group	Create a working group in order to assess the extent and determine the possible effects of a dam Failure.	FEMA HMGP, Local	1-5 years	Webster Parish OHSEP and Mayors	Dam Failure, Flooding	1, 2, 3, 4, 5, 6	Carried Over/ Not Started

New Mitigation Actions

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF DOYLINE	
	DESCRIPTION
VILLAGE OF DOYLINE MITGATION ACTION 1	Building Retrofits
LEAD AGENCY	Village of Doyline Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Medium
Action Description	Retrofit public buildings exterior shell to maintain use during and after hazard events. Benefits: Reduces damage from various hazards, and helps assure that the public buildings can be used, occupied and operable during or after events while sustaining minimal damage.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Hardening and retrofitting of public buildings and critical infrastructure allows for continued operations and reduced risk of failure during and after hazard events.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF DOYLINE	
	DESCRIPTION
VILLAGE OF DOYLINE MITGATION ACTION 2	Drainage Improvements
LEAD AGENCY	Village of Doyline Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Medium
Action Description	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Flooding, Thunderstorms, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF DOYLINE	
	DESCRIPTION
VILLAGE OF DOYLINE MITGATION ACTION 3	Mitigation of Repetitive Loss and Severe Repetitive Loss Properties and Other Hazard Prone Structures
LEAD AGENCY	Village of Doyline Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	High
Action Description	Elevation, acquisition-demolition, acquisition-relocations, and reconstruction of repetitive loss or flooding or other hazard prone properties. .
Type of Mitigation Action	Structure and Infrastructure Projects Natural System Protection
How Action Aligns with Risk Reduction	Elevating, acquiring, and/or demolishing at-risk properties will reduce flooding impacts on the community
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Flooding, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF DOYLINE	
	DESCRIPTION
VILLAGE OF DOYLINE MITGATION ACTION 4	Safe Room Projects
LEAD AGENCY	Village of Doyline Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control
PRIORITY	Medium
Action Description	Construction of a safe room for first responders located in Doyline. Other locations will be identified based on funding availability.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Allows for continued operations of essential personal to actively respond during a natural hazard event.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF DOYLINE	
	DESCRIPTION
VILLAGE OF DOYLINE MITGATION ACTION 5	Education and Outreach
LEAD AGENCY	Village of Doyline Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	High
Action Description	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for Dam Failure, Drought, Excessive Heat, Flooding, Sinkholes, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, and Winter Weather hazards as well as providing information on high-risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.
Type of Mitigation Action	Education and Awareness Programs
How Action Aligns with Risk Reduction	Providing educational information to the citizens of Webster Parish regarding relevant hazards will aid them in preparation and mitigation techniques to hopefully lessen the impact of hazards facing the parish.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure, Drought, Excessive Heat, Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF DOYLINE	
	DESCRIPTION
VILLAGE OF DOYLINE MITGATION ACTION 6	Generators for Continuity of Operations and Government
LEAD AGENCY	Village of Doyline Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources
PRIORITY	High
Action Description	Procurement and installation of generators at public facilities to ensure continued operations during and after events.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Having redundant power supplies for critical facilities and public buildings will alleviate disruptions of power and ensure continued operations during and after events
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure, Excessive Heat, Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF DOYLINE	
	DESCRIPTION
VILLAGE OF DOYLINE MITGATION ACTION 7	Lightning Mitigation
LEAD AGENCY	Village of Doyline Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control
PRIORITY	Low
Action Description	Procurement and installation of lightning rods and surge protectors for public buildings to preserve life and property
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Decreases the risk of damage or halting operations of critical facilities due to lightning
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Thunderstorms, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF DOYLINE	
	DESCRIPTION
VILLAGE OF DOYLINE MITGATION ACTION 8	Warning Systems
LEAD AGENCY	Village of Doyline Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Low
Action Description	Update/upgrade public warning system components throughout Doyline as necessary. Install audible and/or reverse 911 warning system(s) with backup capabilities
Type of Mitigation Action	Structure and Infrastructure Projects Education and Awareness Programs
How Action Aligns with Risk Reduction	Upgrading public warning systems will allow for timely notification of imminent hazard events for the public
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure, Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF DOYLINE	
	DESCRIPTION
VILLAGE OF DOYLINE MITGATION ACTION 9	Potable Water
LEAD AGENCY	Village of Doyline Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources
PRIORITY	Low
Action Description	Create redundancy of potable water supply to critical facilities, especially hospitals in Doyline, and provide protection of potable water supply by acquisition/installation of backflow preventers at appropriate critical locations.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Having a redundant water supply would help maintain the continuity of operations of essential and critical facilities.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Drought, Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF DOYLINE	
	DESCRIPTION
VILLAGE OF DOYLINE MITGATION ACTION 10	Promote Flood Insurance
LEAD AGENCY	Village of Doyline Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	2. Reduce or prevent damage to property and material assets
PRIORITY	Medium
Action Description	Promote the purchase of flood insurance. Advertise the availability, cost, and coverage of flood insurance through the National Flood Insurance Program (NFIP).
Type of Mitigation Action	Education and Awareness Programs
How Action Aligns with Risk Reduction	Promotion of flood insurance to the citizens of Webster Parish will help to relieve the burden of payouts related to non-insured properties after flooding events.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Flooding, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF DOYLINE	
	DESCRIPTION
VILLAGE OF DOYLINE MITGATION ACTION 11	Flood Control Measures
LEAD AGENCY	Village of Doyline Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Low
Action Description	Install and/or upgrade minor flood control structures including berms and floodwalls to protect critical facilities.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Construction, installation, and upgrading of flood control structures will increase protection of potential impacts areas and lessen the chance of flooding related impacts to critical facilities.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure, Flooding, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF DOYLINE	
	DESCRIPTION
VILLAGE OF DOYLINE MITGATION ACTION 12	Dam Failure Working Group
LEAD AGENCY	Village of Doyline Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Low
Action Description	Create a working group in order to assess the extent and determine the possible effects of a dam failure.
Type of Mitigation Action	Education and Awareness Programs
How Action Aligns with Risk Reduction	The creation of a dam failure working group would allow for a more accurate impact assessment in the event of a dam failure in the parish.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF DOYLINE	
	DESCRIPTION
VILLAGE OF DOYLINE MITGATION ACTION 13	Adopt ordinances to restrict the use of public water resources for non-essential usage
LEAD AGENCY	Village of Doyline Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources
PRIORITY	Medium
Action Description	Adopt ordinances to restrict the use of public water resources for non-essential usage
Type of Mitigation Action	Local Planning and Regulation
How Action Aligns with Risk Reduction	Restricting the use of public water resources for non-essential usage during times of drought will allow the parish to allocate water resources to critical operations
Current Status of Action	New
Hazard Addressed	Drought

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF DOYLINE	
	DESCRIPTION
VILLAGE OF DOYLINE MITGATION ACTION 14	Warming and Cooling Stations
LEAD AGENCY	Village of Doyline Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	2. Reduce or prevent injury and loss of life
PRIORITY	Medium
Action Description	Planning and execution of warming and/or cooling stations for use by vulnerable populations during longer than expected events with extended power outages and damage to infrastructure.
Type of Mitigation Action	Local Planning and Regulation Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	This project would ensure that in times of extreme weather, residents could take shelter in climate-controlled environments, thus reducing the risk of heat or cold induced health problems
Current Status of Action	New
Hazard Addressed	Excessive Heat, Winter Weather

Additional Supporting Information:

Village of Dubberly Mitigation Actions

Previous Action Update

Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
D1: Building Retrofits	Retrofit public buildings exterior shell to maintain use during and after storm events. Benefits: Reduces damage from high winds, and helps assure that the public buildings can be used, occupied and operable during or after natural hazard events.	FEMA HMGP, Local	1-5 years	Village of Dubberly/ Webster Parish OHSEP	Thunderstorms, Tropical Cyclones, Tornadoes	1,2,3,4,5,6	Completed
D2: Drainage Improvement	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation. Benefits: Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.	FEMA HMGP, Local	1-5 years	Village of Dubberly/ Webster Parish OHSEP	Flooding, Thunderstorms, Tropical Cyclones	1,2,3,4,5,6	In Progress
D3: Mitigation of repetitive loss and severe repetitive loss properties and other hazard prone structures	Elevation, acquisition-demolition, acquisition-relocations, and reconstruction of repetitive loss or flooding or other hazard prone properties. .	FEMA HMGP, Local	1-5 years	Village of Dubberly/ Webster Parish OHSEP	Flooding, Tropical Cyclones, Dam Failure	1,2,4,6	Deleted

D4: Safe Room Projects	Construction of a safe room for first responders located in Dixie Inn. Other locations will be identified based on funding availability.	FEMA HMGP, Local	1-5 years	Village of Dubberly/ Webster Parish OHSEP	Tornadoes, Thunderstorms, Tropical Cyclones, Wildfires	1	In Progress
D5: Education and Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for Flooding, Tropical Cyclone, Tornadoes, Wildfires, Extreme Heat, Thunderstorms (lightning, high wind, hail), Drought, Sinkholes, Dam Failure, and Winter Storm hazards as well as providing information on high risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.	FEMA HMGP, Local	1-5 years	Village of Dubberly/ Webster Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes, Wildfires, Excessive Heat, Thunderstorms, Winter Storms, Drought, Sinkholes, Dam Failure	1,2,3,4,5,6	In Progress
D6: Generators for continuity of operations and government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA HMGP, Local	1-5 years	Village of Dubberly/ Webster Parish OHSEP	Tornadoes, Winter Weather, Tropical Cyclones, Thunderstorms, Excessive Heat, Sinkholes	1,2,3,4,5,6	Completed
D7: Lightning Mitigation	Procurement and Installation of Lightning rods and surge protectors for public buildings to preserve life and property	FEMA HMGP, Local	1-5 years	Village of Dubberly/ Webster Parish OHSEP	Thunderstorms	1,2,3,4,6	Completed
D8: Warning Systems	Update/upgrade public warning system components throughout Dixie Inn as necessary. Install audible and/or reverse 911 warning system(s)	FEMA HMGP, Local	1-5 years	Village of Dubberly/ Webster Parish OHSEP	Winter Weather, Wildfires, Tornadoes, Tropical Cyclones, Dam Failure, Sinkholes	1,2,3,4,5,6	Carried Over/ Not Started

D9: Potable Water	Create redundancy of potable water supply to critical facilities, especially hospitals in Parish, and provide protection of potable water supply by acquisition/installation of backflow preventers at appropriate critical locations.	FEMA HMGP, Local	1-5 years	Village of Dubberly/ Webster Parish OHSEP	Tropical Cyclones, Thunderstorms, Tornadoes, Drought, Excessive Heat	1	Completed
D10: Promote Flood Insurance	Promote the purchase of flood insurance. Advertise the availability, cost, and coverage of flood insurance through the National Flood Insurance Program (NFIP).	FEMA HMGP, Local	1-5 years	Village of Dubberly/ Webster Parish OHSEP	Tropical Cyclones, Flooding	1,2	Deleted
D11: Flood Control Measures	Install and/or upgrade minor flood control structures including berms and floodwalls to protect critical facilities.	FEMA HMGP, Local	1-5 years	Village of Dubberly/ Webster Parish OHSEP	Tropical Cyclones, Flooding, Dam Failure	1,2,3,4,5,6	Deleted
D12: Dam Failure Working Group	Create a working group in order to assess the extent and determine the possible effects of a dam failure.	FEMA HMGP, Local	1-5 years	Village of Dubberly/ Webster Parish OHSEP and Mayors	Dam Failure, Flooding	1,2,3,4,5,6	Deleted

New Mitigation Actions

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF DUBBERLY	
	DESCRIPTION
VILLAGE OF DUBBERLY MITGATION ACTION 1	Warning Systems
LEAD AGENCY	Village of Dubberly Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	FEMA HMGP; local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Medium
Action Description	Update/upgrade public warning system components throughout Dubberly as necessary. Install audible and/or reverse 911 warning system(s)
Type of Mitigation Action	Structural and Infrastructure Projects
How Action Aligns with Risk Reduction	Upgrading public warning systems will allow for timely notification of imminent hazard events for the public
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure, Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF DUBBERLY	
	DESCRIPTION
VILLAGE OF DUBBERLY MITGATION ACTION 2	Water System Retrofitting
LEAD AGENCY	Village of Dubberly Mayor's Office
SUPPORTING AGENCIES	Webster Parish Public Works
TIMELINE	1-5 years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	FEMA HMGP; Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy
PRIORITY	Low
Action Description	Upgrading of the existing water delivery system to eliminate breaks/leaks and account for the natural expansion/compaction of soils through which the water system runs.
Type of Mitigation Action	Structure and Infrastructure Project
How Action Aligns with Risk Reduction	Improving water delivery systems reduces chance of loss through damaged infrastructure and ultimately saves water when it is needed most.
Current Status of Action	New
Hazard Addressed	Drought, Excessive Heat

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF DUBBERLY	
	DESCRIPTION
VILLAGE OF DUBBERLY MITGATION ACTION 3	Adopt ordinances to restrict the use of public water resources for non-essential usage
LEAD AGENCY	Village of Dubberly Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources
PRIORITY	Medium
Action Description	Adopt ordinances to restrict the use of public water resources for non-essential usage
Type of Mitigation Action	Local Planning and Regulation
How Action Aligns with Risk Reduction	Restricting the use of public water resources for non essential usage during times of drought will allow the parish to allocate water resources to critical operations
Current Status of Action	New
Hazard Addressed	Drought

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF DUBBERLY	
	DESCRIPTION
VILLAGE OF DUBBERLY MITGATION ACTION 4	Warming and Cooling Stations
LEAD AGENCY	Village of Dubberly Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	2. Reduce or prevent injury and loss of life
PRIORITY	Medium
Action Description	Planning and execution of warming and/or cooling stations for use by vulnerable populations during longer than expected events with extended power outages and damage to infrastructure.
Type of Mitigation Action	Local Planning and Regulation Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	This project would ensure that in times of extreme weather, residents could take shelter in climate-controlled environments, thus reducing the risk of heat or cold induced health problems
Current Status of Action	New
Hazard Addressed	Excessive Heat, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF DUBBERLY	
	DESCRIPTION
VILLAGE OF DUBBERLY MITGATION ACTION 5	Encourage/Require Fire-Resistant Construction Techniques
LEAD AGENCY	Village of Dubberly Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	As funding is available; 1-5 years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	Parish Budget, HMGP
ASSOCIATED GOALS	2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy
PRIORITY	Medium
Action Description	• Encourage the use of non-combustible materials (i.e., stone, brick, and stucco) for new construction in wildfire hazard areas. • Using fire resistant roofing and building materials in remodels, upgrades, and new construction. • Encourage the use of functional shutters on windows.
Type of Mitigation Action	Local Planning and Regulations
How Action Aligns with Risk Reduction	Encouraging fire-resistant construction will provide the citizens of Dubberly a safety measure to protect them against the possibility of a wildfire hazard.
Current Status of Action	New
Hazard Addressed	Wildfires

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF DUBBERLY	
	DESCRIPTION
VILLAGE OF DUBBERLY MITGATION ACTION 6	Construct and install design-failure mode power lines.
LEAD AGENCY	Village of Dubberly Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	As funding is available; 1-5 years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	Parish Budget, HMGP
ASSOCIATED GOALS	3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy
PRIORITY	Low
Action Description	Incorporate and implement design-failure mode for power line design to allow lines to fall or fail in small sections rather than as a complete system to enable faster restoration.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Reducing or preventing further power outages and/or damages can significantly reduce the impacts on local government, residents, etc. throughout the Parish
Current Status of Action	New
Hazard Addressed	Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF DUBBERLY	
	DESCRIPTION
VILLAGE OF DUBBERLY MITGATION ACTION 7	Produce and Provide Dam Inundation Maps
LEAD AGENCY	Village of Dubberly Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	As funding is available; 1-5 years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	Parish Budget, HMGP
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Low
Action Description	Produce Dam Inundation Maps and provide them to local officials and residents
Type of Mitigation Action	Education and Awareness Program
How Action Aligns with Risk Reduction	Identifying the areas most heavily impacted by a dam failure would be the first step in implementing programs to mitigate loss of life and property should such as failure occur.
Current Status of Action	New
Hazard Addressed	Dam Failure, Flooding

Additional Supporting Information:

Village of Heflin Mitigation Actions

Previous Action Update

Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
H1: Building Retrofits	Retrofit public buildings exterior shell to maintain use during and after storm events. Benefits: Reduces damage from high winds, and helps assure that the public buildings can be used, occupied and operable during or after natural hazard events.	FEMA HMGP, Local	1-5 years	Village of Heflin/ Webster Parish OHSEP	Thunderstorms, Tropical Cyclones, Tornadoes	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
H2: Drainage Improvement	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation. Benefits: Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.	FEMA HMGP, Local	1-5 years	Village of Heflin/ Webster Parish OHSEP	Flooding, Thunderstorms, Tropical Cyclones	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
H3: Mitigation of Repetitive Loss and Severe Repetitive Loss Properties and Other Hazard Prone Structures	Elevation, acquisition-demolition, acquisition-relocations, and reconstruction of repetitive loss or flooding or other hazard prone properties.	FEMA HMGP, Local	1-5 years	Village of Heflin/ Webster Parish OHSEP	Flooding, Tropical Cyclones, Dam Failure	1, 2, 4, 6	Carried Over/ Not Started
H4: Safe Room Projects	Construction of a safe room for first responders located in Heflin. Other locations will be identified based on funding availability.	FEMA HMGP, Local	1-5 years	Village of Heflin/ Webster Parish OHSEP	Tornadoes, Thunderstorms, Tropical Cyclones, Wildfires	1	Carried Over/ Not Started

H5: Education and Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for Flooding, Tropical Cyclone, Tornadoes, Wildfires, Extreme Heat, Thunderstorms (lightning, high wind, hail), Drought, Sinkholes, Dam Failure, and Winter Storm hazards as well as providing information on high risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.	FEMA HMGP, Local	1-5 years	Village of Heflin/ Webster Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes, Wildfires, Excessive Heat, Thunderstorms, Winter Weather, Drought, Sinkholes, Dam Failure	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
H6: Generators for Continuity of Operations and Government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA HMGP, Local	1-5 years	Village of Heflin/ Webster Parish OHSEP	Tornadoes, Winter Storms, Tropical Cyclones, Thunderstorms, Excessive Heat, Sinkholes	1, 2, 3, 4, 5, 6	In Progress
H7: Lightning Mitigation	Procurement and Installation of Lightning rods and surge protectors for public buildings to preserve life and property	FEMA HMGP, Local	1-5 years	Village of Heflin/ Webster Parish OHSEP	Thunderstorms	1, 2, 3, 4, 6	Carried Over/ Not Started
H8: Warning Systems	Update/upgrade public warning system components throughout Heflin as necessary. Install audible and/or reverse 911 warning system(s)	FEMA HMGP, Local	1-5 years	Village of Heflin/ Webster Parish OHSEP	Winter Weather, Wildfires, Tornadoes, Tropical Cyclones, Dam Failure, Sinkholes	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
H9: Potable Water	Create redundancy of potable water supply to critical facilities, especially hospitals in Parish, and provide protection of potable water supply by acquisition/installation of backflow preventers at appropriate critical locations.	FEMA HMGP, Local	1-5 years	Village of Heflin/ Webster Parish OHSEP	Tropical Cyclones, Thunderstorms, Tornadoes, Drought, Excessive Heat	1	Completed

H10: Promote Flood Insurance	Promote the purchase of flood insurance. Advertise the availability, cost, and coverage of flood insurance through the National Flood Insurance Program (NFIP).	FEMA HMGP, Local	1-5 years	Village of Heflin/ Webster Parish OHSEP	Tropical Cyclones, Flooding	1, 2	Carried Over/ Not Started
H11: Flood Control Measures	Install and/or upgrade minor flood control structures including berms and floodwalls to protect critical facilities.	FEMA HMGP, Local	1-5 years	Village of Heflin/ Webster Parish OHSEP	Tropical Cyclones, Flooding, Dam Failure	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
H12: Dam Failure Working Group	Create a working group in order to assess the extent and determine the possible effects of a dam Failure.	FEMA HMGP, Local	1-5 years	Webster Parish OHSEP and Mayors	Dam Failure, Flooding	1, 2, 3, 4, 5, 6	Carried Over/ Not Started

New Mitigation Actions

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF HEFLIN	
	DESCRIPTION
VILLAGE OF HEFLIN MITGATION ACTION 1	Building Retrofits
LEAD AGENCY	Village of Heflin Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Medium
Action Description	Retrofit public buildings exterior shell to maintain use during and after hazard events. Benefits: Reduces damage from various hazards, and helps assure that the public buildings can be used, occupied and operable during or after events while sustaining minimal damage.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Hardening and retrofitting of public buildings and critical infrastructure allows for continued operations and reduced risk of failure during and after hazard events.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF HEFLIN	
	DESCRIPTION
VILLAGE OF HEFLIN MITGATION ACTION 2	Drainage Improvements
LEAD AGENCY	Village of Heflin Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Medium
Action Description	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Flooding, Thunderstorms, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF HEFLIN	
	DESCRIPTION
VILLAGE OF HEFLIN MITGATION ACTION 3	Mitigation of Repetitive Loss and Severe Repetitive Loss Properties and Other Hazard Prone Structures
LEAD AGENCY	Village of Heflin Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	High
Action Description	Elevation, acquisition-demolition, acquisition-relocations, and reconstruction of repetitive loss or flooding or other hazard prone properties. .
Type of Mitigation Action	Structure and Infrastructure Projects Natural System Protection
How Action Aligns with Risk Reduction	Elevating, acquiring, and/or demolishing at-risk properties will reduce flooding impacts on the community
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Flooding, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF HEFLIN	
	DESCRIPTION
VILLAGE OF HEFLIN MITGATION ACTION 4	Safe Room Projects
LEAD AGENCY	Village of Heflin Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control
PRIORITY	Medium
Action Description	Construction of a safe room for first responders located in Heflin. Other locations will be identified based on funding availability.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Allows for continued operations of essential personal to actively respond during a natural hazard event.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF HEFLIN	
	DESCRIPTION
VILLAGE OF HEFLIN MITGATION ACTION 5	Education and Outreach
LEAD AGENCY	Village of Heflin Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	High
Action Description	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for Dam Failure, Drought, Excessive Heat, Flooding, Sinkholes, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, and Winter Weather hazards as well as providing information on high-risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.
Type of Mitigation Action	Education and Awareness Programs
How Action Aligns with Risk Reduction	Providing educational information to the citizens of Webster Parish regarding relevant hazards will aid them in preparation and mitigation techniques to hopefully lessen the impact of hazards facing the parish.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure, Drought, Excessive Heat, Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF HEFLIN	
	DESCRIPTION
VILLAGE OF HEFLIN MITGATION ACTION 6	Lightning Mitigation
LEAD AGENCY	Village of Heflin Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control
PRIORITY	Low
Action Description	Procurement and installation of lightning rods and surge protectors for public buildings to preserve life and property
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Decreases the risk of damage or halting operations of critical facilities due to lightning
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Thunderstorms, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF HEFLIN	
	DESCRIPTION
VILLAGE OF HEFLIN MITGATION ACTION 7	Warning Systems
LEAD AGENCY	Village of Heflin Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Low
Action Description	Update/upgrade public warning system components throughout Heflin as necessary. Install audible and/or reverse 911 warning system(s) with backup capabilities
Type of Mitigation Action	Structure and Infrastructure Projects Education and Awareness Programs
How Action Aligns with Risk Reduction	Upgrading public warning systems will allow for timely notification of imminent hazard events for the public
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure, Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF HEFLIN	
	DESCRIPTION
VILLAGE OF HEFLIN MITGATION ACTION 8	Promote Flood Insurance
LEAD AGENCY	Village of Heflin Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	2. Reduce or prevent damage to property and material assets
PRIORITY	Medium
Action Description	Promote the purchase of flood insurance. Advertise the availability, cost, and coverage of flood insurance through the National Flood Insurance Program (NFIP).
Type of Mitigation Action	Education and Awareness Programs
How Action Aligns with Risk Reduction	Promotion of flood insurance to the citizens of Webster Parish will help to relieve the burden of payouts related to non-insured properties after flooding events.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Flooding, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF HEFLIN	
	DESCRIPTION
VILLAGE OF HEFLIN MITGATION ACTION 9	Flood Control Measures
LEAD AGENCY	Village of Heflin Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Low
Action Description	Install and/or upgrade minor flood control structures including berms and floodwalls to protect critical facilities.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Construction, installation, and upgrading of flood control structures will increase protection of potential impacts areas and lessen the chance of flooding related impacts to critical facilities.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure, Flooding, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF HEFLIN	
	DESCRIPTION
VILLAGE OF HEFLIN MITGATION ACTION 10	Dam Failure Working Group
LEAD AGENCY	Village of Heflin Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Low
Action Description	Create a working group in order to assess the extent and determine the possible effects of a dam failure.
Type of Mitigation Action	Education and Awareness Programs
How Action Aligns with Risk Reduction	The creation of a dam failure working group would allow for a more accurate impact assessment in the event of a dam failure in the parish.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF HEFLIN	
	DESCRIPTION
VILLAGE OF HEFLIN MITGATION ACTION 11	Adopt ordinances to restrict the use of public water resources for non-essential usage
LEAD AGENCY	Village of Heflin Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources
PRIORITY	Medium
Action Description	Adopt ordinances to restrict the use of public water resources for non-essential usage
Type of Mitigation Action	Local Planning and Regulation
How Action Aligns with Risk Reduction	Restricting the use of public water resources for non-essential usage during times of drought will allow the parish to allocate water resources to critical operations
Current Status of Action	New
Hazard Addressed	Drought

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF HEFLIN	
	DESCRIPTION
VILLAGE OF HEFLIN MITGATION ACTION 12	Warming and Cooling Stations
LEAD AGENCY	Village of Heflin Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	2. Reduce or prevent injury and loss of life
PRIORITY	Medium
Action Description	Planning and execution of warming and/or cooling stations for use by vulnerable populations during longer than expected events with extended power outages and damage to infrastructure.
Type of Mitigation Action	Local Planning and Regulation Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	This project would ensure that in times of extreme weather, residents could take shelter in climate-controlled environments, thus reducing the risk of heat or cold induced health problems
Current Status of Action	New
Hazard Addressed	Excessive Heat, Winter Weather

Additional Supporting Information:

City of Minden Mitigation Actions

Previous Action Update

Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
M1: Building Retrofits	Retrofit public buildings exterior shell to maintain use during and after storm events. Benefits: Reduces damage from high winds, and helps assure that the public buildings can be used, occupied and operable during or after natural hazard events.	FEMA HMGP, Local	1-5 years	Town of Cullen/ Webster Parish OHSEP	Thunderstorms, Tropical Cyclones, Tornadoes	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
M2: Drainage Improvement	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation. Benefits: Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.	FEMA HMGP, Local	1-5 years	Town of Cullen/ Webster Parish OHSEP	Flooding, Thunderstorms, Tropical Cyclones	1, 2, 3, 4, 5, 6	Completed
M3: Mitigation of Repetitive Loss and Severe Repetitive Loss Properties and Other Hazard Prone Structures	Elevation, acquisition-demolition, acquisition-relocations, and reconstruction of repetitive loss or flooding or other hazard prone properties.	FEMA HMGP, Local	1-5 years	Town of Cullen/ Webster Parish OHSEP	Flooding, Tropical Cyclones, Dam Failure	1, 2, 4, 6	Carried Over/ Not Started
M4: Safe Room Projects	Construction of a safe room for first responders located in Minden. Other locations will be identified based on funding availability.	FEMA HMGP, Local	1-5 years	Town of Cullen/ Webster Parish OHSEP	Tornadoes, Thunderstorms, Tropical Cyclones, Wildfires	1	Carried Over/ Not Started

M5: Education and Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for Flooding, Tropical Cyclone, Tornadoes, Wildfires, Extreme Heat, Thunderstorms (lightning, high wind, hail), Drought, Sinkholes, Dam Failure, and Winter Storm hazards as well as providing information on high risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.	FEMA HMGP, Local	1-5 years	Town of Cullen/ Webster Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes, Wildfires, Excessive Heat, Thunderstorms, Winter Weather, Drought, Sinkholes, Dam Failure	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
M6: Generators for Continuity of Operations and Government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA HMGP, Local	1-5 years	Town of Cullen/ Webster Parish OHSEP	Tornadoes, Winter Storms, Tropical Cyclones, Thunderstorms, Excessive Heat, Sinkholes	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
M7: Lightning Mitigation	Procurement and Installation of Lightning rods and surge protectors for public buildings to preserve life and property	FEMA HMGP, Local	1-5 years	Town of Cullen/ Webster Parish OHSEP	Thunderstorms	1, 2, 3, 4, 6	Carried Over/ Not Started
M8: Warning Systems	Update/upgrade public warning system components throughout Minden as necessary. Install audible and/or reverse 911 warning system(s)	FEMA HMGP, Local	1-5 years	Town of Cullen/ Webster Parish OHSEP	Winter Weather, Wildfires, Tornadoes, Tropical Cyclones, Dam Failure, Sinkholes	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
M9: Potable Water	Create redundancy of potable water supply to critical facilities, especially hospitals in Parish, and provide protection of potable water supply by acquisition/installation of backflow preventers at appropriate critical locations.	FEMA HMGP, Local	1-5 years	Town of Cullen/ Webster Parish OHSEP	Tropical Cyclones, Thunderstorms, Tornadoes, Drought, Excessive Heat	1	Carried Over/ Not Started

M10: Promote Flood Insurance	Promote the purchase of flood insurance. Advertise the availability, cost, and coverage of flood insurance through the National Flood Insurance Program (NFIP).	FEMA HMGP, Local	1-5 years	Town of Cullen/ Webster Parish OHSEP	Tropical Cyclones, Flooding	1, 2	Carried Over/ Not Started
M11: Flood Control Measures	Install and/or upgrade minor flood control structures including berms and floodwalls to protect critical facilities.	FEMA HMGP, Local	1-5 years	Town of Cullen/ Webster Parish OHSEP	Tropical Cyclones, Flooding, Dam Failure	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
M12: Dam Failure Working Group	Create a working group in order to assess the extent and determine the possible effects of a dam Failure.	FEMA HMGP, Local	1-5 years	Webster Parish OHSEP and Mayors	Dam Failure, Flooding	1, 2, 3, 4, 5, 6	Carried Over/ Not Started

New Mitigation Actions

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF MINDEN	
	DESCRIPTION
CITY OF MINDEN MITGATION ACTION 1	Building Retrofits
LEAD AGENCY	City of Minden Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Medium
Action Description	Retrofit public buildings exterior shell to maintain use during and after hazard events. Benefits: Reduces damage from various hazards, and helps assure that the public buildings can be used, occupied and operable during or after events while sustaining minimal damage.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Hardening and retrofitting of public buildings and critical infrastructure allows for continued operations and reduced risk of failure during and after hazard events.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF MINDEN	
	DESCRIPTION
CITY OF MINDEN MITGATION ACTION 2	Mitigation of Repetitive Loss and Severe Repetitive Loss Properties and Other Hazard Prone Structures
LEAD AGENCY	City of Minden Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	High
Action Description	Elevation, acquisition-demolition, acquisition-relocations, and reconstruction of repetitive loss or flooding or other hazard prone properties. .
Type of Mitigation Action	Structure and Infrastructure Projects Natural System Protection
How Action Aligns with Risk Reduction	Elevating, acquiring, and/or demolishing at-risk properties will reduce flooding impacts on the community
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Flooding, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF MINDEN	
	DESCRIPTION
CITY OF MINDEN MITGATION ACTION 3	Safe Room Projects
LEAD AGENCY	City of Minden Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control
PRIORITY	Medium
Action Description	Construction of a safe room for first responders located in Minden. Other locations will be identified based on funding availability.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Allows for continued operations of essential personal to actively respond during a natural hazard event.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF MINDEN	
	DESCRIPTION
CITY OF MINDEN MITGATION ACTION 4	Education and Outreach
LEAD AGENCY	City of Minden Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	High
Action Description	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for Dam Failure, Drought, Excessive Heat, Flooding, Sinkholes, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, and Winter Weather hazards as well as providing information on high-risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.
Type of Mitigation Action	Education and Awareness Programs
How Action Aligns with Risk Reduction	Providing educational information to the citizens of Webster Parish regarding relevant hazards will aid them in preparation and mitigation techniques to hopefully lessen the impact of hazards facing the parish.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure, Drought, Excessive Heat, Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF MINDEN	
	DESCRIPTION
CITY OF MINDEN MITGATION ACTION 5	Generators for Continuity of Operations and Government
LEAD AGENCY	City of Minden Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources
PRIORITY	High
Action Description	Procurement and installation of generators at public facilities to ensure continued operations during and after events.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Having redundant power supplies for critical facilities and public buildings will alleviate disruptions of power and ensure continued operations during and after events
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure, Excessive Heat, Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF MINDEN	
	DESCRIPTION
CITY OF MINDEN MITGATION ACTION 6	Lightning Mitigation
LEAD AGENCY	City of Minden Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control
PRIORITY	Low
Action Description	Procurement and installation of lightning rods and surge protectors for public buildings to preserve life and property
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Decreases the risk of damage or halting operations of critical facilities due to lightning
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Thunderstorms, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF MINDEN	
	DESCRIPTION
CITY OF MINDEN MITGATION ACTION 7	Warning Systems
LEAD AGENCY	City of Minden Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Low
Action Description	Update/upgrade public warning system components throughout Minden as necessary. Install audible and/or reverse 911 warning system(s) with backup capabilities
Type of Mitigation Action	Structure and Infrastructure Projects Education and Awareness Programs
How Action Aligns with Risk Reduction	Upgrading public warning systems will allow for timely notification of imminent hazard events for the public
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure, Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF MINDEN	
	DESCRIPTION
CITY OF MINDEN MITGATION ACTION 8	Potable Water
LEAD AGENCY	City of Minden Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources
PRIORITY	Low
Action Description	Create redundancy of potable water supply to critical facilities, especially hospitals in Parish, and provide protection of potable water supply by acquisition/installation of backflow preventers at appropriate critical locations.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Having a redundant water supply would help maintain the continuity of operations of essential and critical facilities.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Drought, Flooding, Thunderstorms, Tornadoes, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF MINDEN	
	DESCRIPTION
CITY OF MINDEN MITGATION ACTION 9	Promote Flood Insurance
LEAD AGENCY	City of Minden Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	2. Reduce or prevent damage to property and material assets
PRIORITY	Medium
Action Description	Promote the purchase of flood insurance. Advertise the availability, cost, and coverage of flood insurance through the National Flood Insurance Program (NFIP).
Type of Mitigation Action	Education and Awareness Programs
How Action Aligns with Risk Reduction	Promotion of flood insurance to the citizens of Webster Parish will help to relieve the burden of payouts related to non-insured properties after flooding events.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Flooding, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF MINDEN	
	DESCRIPTION
CITY OF MINDEN MITGATION ACTION 10	Flood Control Measures
LEAD AGENCY	City of Minden Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Low
Action Description	Install and/or upgrade minor flood control structures including berms and floodwalls to protect critical facilities.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Construction, installation, and upgrading of flood control structures will increase protection of potential impacts areas and lessen the chance of flooding related impacts to critical facilities.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure, Flooding, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF MINDEN	
	DESCRIPTION
CITY OF MINDEN MITGATION ACTION 11	Dam Failure Working Group
LEAD AGENCY	City of Minden Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Low
Action Description	Create a working group in order to assess the extent and determine the possible effects of a dam failure.
Type of Mitigation Action	Education and Awareness Programs
How Action Aligns with Risk Reduction	The creation of a dam failure working group would allow for a more accurate impact assessment in the event of a dam failure in the parish.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF MINDEN	
	DESCRIPTION
CITY OF MINDEN MITGATION ACTION 12	Adopt ordinances to restrict the use of public water resources for non-essential usage
LEAD AGENCY	City of Minden Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources
PRIORITY	Medium
Action Description	Adopt ordinances to restrict the use of public water resources for non-essential usage
Type of Mitigation Action	Local Planning and Regulation
How Action Aligns with Risk Reduction	Restricting the use of public water resources for non essential usage during times of drought will allow the parish to allocate water resources to critical operations
Current Status of Action	New
Hazard Addressed	Drought

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF MINDEN	
	DESCRIPTION
CITY OF MINDEN MITGATION ACTION 13	Warming and Cooling Stations
LEAD AGENCY	City of Minden Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	2. Reduce or prevent injury and loss of life
PRIORITY	Medium
Action Description	Planning and execution of warming and/or cooling stations throughout the city for use by vulnerable populations during longer than expected events with extended power outages and damage to infrastructure.
Type of Mitigation Action	Local Planning and Regulation Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	This project would ensure that in times of extreme weather, residents could take shelter in climate-controlled environments, thus reducing the risk of heat or cold induced health problems
Current Status of Action	New
Hazard Addressed	Excessive Heat, Winter Weather

Additional Supporting Information:

Town of Sarepta Mitigation Actions

Previous Action Update

Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
S1: Building Retrofits	Retrofit public buildings exterior shell to maintain use during and after storm events. Benefits: Reduces damage from high winds, and helps assure that the public buildings can be used, occupied and operable during or after natural hazard events.	FEMA HMGP, Local	1-5 years	Town of Sarepta/ Webster Parish OHSEP	Thunderstorms, Tropical Cyclones, Tornadoes	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
S2: Drainage Improvement	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation. Benefits: Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.	FEMA HMGP, Local	1-5 years	Town of Sarepta/ Webster Parish OHSEP	Flooding, Thunderstorms, Tropical Cyclones	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
S3: Mitigation of Repetitive Loss and Severe Repetitive Loss Properties and Other Hazard Prone Structures	Elevation, acquisition-demolition, acquisition-relocations, and reconstruction of repetitive loss or flooding or other hazard prone properties.	FEMA HMGP, Local	1-5 years	Town of Sarepta/ Webster Parish OHSEP	Flooding, Tropical Cyclones, Dam Failure	1, 2, 4, 6	Carried Over/ Not Started
S4: Safe Room Projects	Construction of a safe room for first responders located in Sarepta. Other locations will be identified based on funding availability.	FEMA HMGP, Local	1-5 years	Town of Sarepta/ Webster Parish OHSEP	Tornadoes, Thunderstorms, Tropical Cyclones, Wildfires	1	Carried Over/ Not Started

S5: Education and Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for Flooding, Tropical Cyclone, Tornadoes, Wildfires, Extreme Heat, Thunderstorms (lightning, high wind, hail), Drought, Sinkholes, Dam Failure, and Winter Storm hazards as well as providing information on high risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.	FEMA HMGP, Local	1-5 years	Town of Sarepta/ Webster Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes, Wildfires, Excessive Heat, Thunderstorms, Winter Weather, Drought, Sinkholes, Dam Failure	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
S6: Generators for Continuity of Operations and Government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA HMGP, Local	1-5 years	Town of Sarepta/ Webster Parish OHSEP	Tornadoes, Winter Storms, Tropical Cyclones, Thunderstorms, Excessive Heat, Sinkholes	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
S7: Lightning Mitigation	Procurement and Installation of Lightning rods and surge protectors for public buildings to preserve life and property	FEMA HMGP, Local	1-5 years	Town of Sarepta/ Webster Parish OHSEP	Thunderstorms	1, 2, 3, 4, 6	Carried Over/ Not Started
S8: Warning Systems	Update/upgrade public warning system components throughout Sarepta as necessary. Install audible and/or reverse 911 warning system(s)	FEMA HMGP, Local	1-5 years	Town of Sarepta/ Webster Parish OHSEP	Winter Weather, Wildfires, Tornadoes, Tropical Cyclones, Dam Failure, Sinkholes	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
S9: Potable Water	Create redundancy of potable water supply to critical facilities, especially hospitals in Parish, and provide protection of potable water supply by acquisition/installation of backflow preventers at appropriate critical locations.	FEMA HMGP, Local	1-5 years	Town of Sarepta/ Webster Parish OHSEP	Tropical Cyclones, Thunderstorms, Tornadoes, Drought, Excessive Heat	1	Carried Over/ Not Started

S10: Promote Flood Insurance	Promote the purchase of flood insurance. Advertise the availability, cost, and coverage of flood insurance through the National Flood Insurance Program (NFIP).	FEMA HMGP, Local	1-5 years	Town of Sarepta/ Webster Parish OHSEP	Tropical Cyclones, Flooding	1, 2	Carried Over/ Not Started
S11: Flood Control Measures	Install and/or upgrade minor flood control structures including berms and floodwalls to protect critical facilities.	FEMA HMGP, Local	1-5 years	Town of Sarepta/ Webster Parish OHSEP	Tropical Cyclones, Flooding, Dam Failure	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
S12: Dam Failure Working Group	Create a working group in order to assess the extent and determine the possible effects of a dam Failure.	FEMA HMGP, Local	1-5 years	Webster Parish OHSEP and Mayors	Dam Failure, Flooding	1, 2, 3, 4, 5, 6	Carried Over/ Not Started

New Mitigation Actions

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF SAREPTA	
	DESCRIPTION
TOWN OF SAREPTA MITGATION ACTION 1	Building Retrofits
LEAD AGENCY	Town of Sarepta Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent damage to property and material assets 2. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 3. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 4. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 5. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Medium
Action Description	Retrofit public buildings exterior shell to maintain use during and after hazard events. Benefits: Reduces damage from various hazards, and helps assure that the public buildings can be used, occupied and operable during or after events while sustaining minimal damage.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Hardening and retrofitting of public buildings and critical infrastructure allows for continued operations and reduced risk of failure during and after hazard events.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Thunderstorms, Tornadoes, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF SAREPTA	
	DESCRIPTION
TOWN OF SAREPTA MITGATION ACTION 2	Drainage Improvements
LEAD AGENCY	Town of Sarepta Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Medium
Action Description	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Flooding, Thunderstorms, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF SAREPTA	
	DESCRIPTION
TOWN OF SAREPTA MITGATION ACTION 3	Mitigation of Repetitive Loss and Severe Repetitive Loss Properties and Other Hazard Prone Structures
LEAD AGENCY	Town of Sarepta Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	High
Action Description	Elevation, acquisition-demolition, acquisition-relocations, and reconstruction of repetitive loss or flooding or other hazard prone properties. .
Type of Mitigation Action	Structure and Infrastructure Projects Natural System Protection
How Action Aligns with Risk Reduction	Elevating, acquiring, and/or demolishing at-risk properties will reduce flooding impacts on the community
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Flooding, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF SAREPTA	
	DESCRIPTION
TOWN OF SAREPTA MITGATION ACTION 4	Safe Room Projects
LEAD AGENCY	Town of Sarepta Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control
PRIORITY	Medium
Action Description	Construction of a safe room for first responders located in Sarepta. Other locations will be identified based on funding availability.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Allows for continued operations of essential personal to actively respond during a natural hazard event.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF SAREPTA	
	DESCRIPTION
TOWN OF SAREPTA MITGATION ACTION 5	Education and Outreach
LEAD AGENCY	Town of Sarepta Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	High
Action Description	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for Dam Failure, Drought, Excessive Heat, Flooding, Sinkholes, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, and Winter Weather hazards as well as providing information on high-risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.
Type of Mitigation Action	Education and Awareness Programs
How Action Aligns with Risk Reduction	Providing educational information to the citizens of Webster Parish regarding relevant hazards will aid them in preparation and mitigation techniques to hopefully lessen the impact of hazards facing the parish.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure, Drought, Excessive Heat, Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF SAREPTA	
	DESCRIPTION
TOWN OF SAREPTA MITGATION ACTION 6	Generators for Continuity of Operations and Government
LEAD AGENCY	Town of Sarepta Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources
PRIORITY	High
Action Description	Procurement and installation of generators at public facilities to ensure continued operations during and after events.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Having redundant power supplies for critical facilities and public buildings will alleviate disruptions of power and ensure continued operations during and after events
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure, Excessive Heat, Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF SAREPTA	
	DESCRIPTION
TOWN OF SAREPTA MITGATION ACTION 7	Lightning Mitigation
LEAD AGENCY	Town of Sarepta Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control
PRIORITY	Low
Action Description	Procurement and installation of lightning rods and surge protectors for public buildings to preserve life and property
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Decreases the risk of damage or halting operations of critical facilities due to lightning
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Thunderstorms

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF SAREPTA	
	DESCRIPTION
TOWN OF SAREPTA MITGATION ACTION 8	Warning Systems
LEAD AGENCY	Town of Sarepta Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Low
Action Description	Update/upgrade public warning system components throughout Sarepta as necessary. Install audible and/or reverse 911 warning system(s) with backup capabilities
Type of Mitigation Action	Structure and Infrastructure Projects Education and Awareness Programs
How Action Aligns with Risk Reduction	Upgrading public warning systems will allow for timely notification of imminent hazard events for the public
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure, Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF SAREPTA	
	DESCRIPTION
TOWN OF SAREPTA MITGATION ACTION 9	Potable Water
LEAD AGENCY	Town of Sarepta Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources
PRIORITY	Low
Action Description	Create redundancy of potable water supply to critical facilities, especially hospitals in Sarepta, and provide protection of potable water supply by acquisition/installation of backflow preventers at appropriate critical locations.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Having a redundant water supply would help maintain the continuity of operations of essential and critical facilities.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Drought, Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF SAREPTA	
	DESCRIPTION
TOWN OF SAREPTA MITGATION ACTION 10	Promote Flood Insurance
LEAD AGENCY	Town of Sarepta Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	2. Reduce or prevent damage to property and material assets
PRIORITY	Medium
Action Description	Promote the purchase of flood insurance. Advertise the availability, cost, and coverage of flood insurance through the National Flood Insurance Program (NFIP).
Type of Mitigation Action	Education and Awareness Programs
How Action Aligns with Risk Reduction	Promotion of flood insurance to the citizens of Webster Parish will help to relieve the burden of payouts related to non-insured properties after flooding events.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Flooding, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF SAREPTA	
	DESCRIPTION
TOWN OF SAREPTA MITGATION ACTION 11	Flood Control Measures
LEAD AGENCY	Town of Sarepta Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Low
Action Description	Install and/or upgrade minor flood control structures including berms and floodwalls to protect critical facilities.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Construction, installation, and upgrading of flood control structures will increase protection of potential impacts areas and lessen the chance of flooding related impacts to critical facilities.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure, Flooding, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF SAREPTA	
	DESCRIPTION
TOWN OF SAREPTA MITGATION ACTION 12	Dam Failure Working Group
LEAD AGENCY	Town of Sarepta Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Low
Action Description	Create a working group in order to assess the extent and determine the possible effects of a dam failure.
Type of Mitigation Action	Education and Awareness Programs
How Action Aligns with Risk Reduction	The creation of a dam failure working group would allow for a more accurate impact assessment in the event of a dam failure in the parish.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF SAREPTA	
	DESCRIPTION
TOWN OF SAREPTA MITGATION ACTION 13	Adopt ordinances to restrict the use of public water resources for non-essential usage
LEAD AGENCY	Town of Sarepta Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources
PRIORITY	Medium
Action Description	Adopt ordinances to restrict the use of public water resources for non-essential usage
Type of Mitigation Action	Local Planning and Regulation
How Action Aligns with Risk Reduction	Restricting the use of public water resources for non essential usage during times of drought will allow the parish to allocate water resources to critical operations
Current Status of Action	New
Hazard Addressed	Drought

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF SAREPTA	
	DESCRIPTION
TOWN OF SAREPTA MITGATION ACTION 14	Warming and Cooling Stations
LEAD AGENCY	Town of Sarepta Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life
PRIORITY	Medium
Action Description	Planning and execution of warming and/or cooling stations for use by vulnerable populations during longer than expected events with extended power outages and damage to infrastructure.
Type of Mitigation Action	Local Planning and Regulation Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	This project would ensure that in times of extreme weather, residents could take shelter in climate-controlled environments, thus reducing the risk of heat or cold induced health problems
Current Status of Action	New
Hazard Addressed	Excessive Heat, Winter Weather

Additional Supporting Information:

Village of Shongaloo Mitigation Actions

Previous Action Update

Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
SH1: Building Retrofits	Retrofit public buildings exterior shell to maintain use during and after storm events. Benefits: Reduces damage from high winds, and helps assure that the public buildings can be used, occupied and operable during or after natural hazard events.	FEMA HMGP, Local	1-5 years	Village of Shongaloo/ Webster Parish OHSEP	Thunderstorms, Tropical Cyclones, Tornadoes	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
SH2: Drainage Improvement	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation. Benefits: Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.	FEMA HMGP, Local	1-5 years	Village of Shongaloo/ Webster Parish OHSEP	Flooding, Thunderstorms, Tropical Cyclones	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
SH3: Mitigation of Repetitive Loss and Severe Repetitive Loss Properties and Other Hazard Prone Structures	Elevation, acquisition-demolition, acquisition-relocations, and reconstruction of repetitive loss or flooding or other hazard prone properties.	FEMA HMGP, Local	1-5 years	Village of Shongaloo/ Webster Parish OHSEP	Flooding, Tropical Cyclones, Dam Failure	1, 2, 4, 6	Carried Over/ Not Started
SH4: Safe Room Projects	Construction of a safe room for first responders located in Shongaloo. Other locations will be identified based on funding availability.	FEMA HMGP, Local	1-5 years	Village of Shongaloo/ Webster Parish OHSEP	Tornadoes, Thunderstorms, Tropical Cyclones, Wildfires	1	Carried Over/ Not Started

SH5: Education and Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for Flooding, Tropical Cyclone, Tornadoes, Wildfires, Extreme Heat, Thunderstorms (lightning, high wind, hail), Drought, Sinkholes, Dam Failure, and Winter Storm hazards as well as providing information on high risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.	FEMA HMGP, Local	1-5 years	Village of Shongaloo/ Webster Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes, Wildfires, Excessive Heat, Thunderstorms, Winter Weather, Drought, Sinkholes, Dam Failure	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
SH6: Generators for Continuity of Operations and Government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA HMGP, Local	1-5 years	Village of Shongaloo/ Webster Parish OHSEP	Tornadoes, Winter Storms, Tropical Cyclones, Thunderstorms, Excessive Heat, Sinkholes	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
SH7: Lightning Mitigation	Procurement and Installation of Lightning rods and surge protectors for public buildings to preserve life and property	FEMA HMGP, Local	1-5 years	Village of Shongaloo/ Webster Parish OHSEP	Thunderstorms	1, 2, 3, 4, 6	Carried Over/ Not Started
SH8: Warning Systems	Update/upgrade public warning system components throughout Shongaloo as necessary. Install audible and/or reverse 911 warning system(s)	FEMA HMGP, Local	1-5 years	Village of Shongaloo/ Webster Parish OHSEP	Winter Weather, Wildfires, Tornadoes, Tropical Cyclones, Dam Failure, Sinkholes	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
SH9: Potable Water	Create redundancy of potable water supply to critical facilities, especially hospitals in Parish, and provide protection of potable water supply by acquisition/installation of backflow preventers at appropriate critical locations.	FEMA HMGP, Local	1-5 years	Village of Shongaloo/ Webster Parish OHSEP	Tropical Cyclones, Thunderstorms, Tornadoes, Drought, Excessive Heat	1	Carried Over/ Not Started

SH10: Promote Flood Insurance	Promote the purchase of flood insurance. Advertise the availability, cost, and coverage of flood insurance through the National Flood Insurance Program (NFIP).	FEMA HMGP, Local	1-5 years	Village of Shongaloo/ Webster Parish OHSEP	Tropical Cyclones, Flooding	1, 2	Carried Over/ Not Started
SH11: Flood Control Measures	Install and/or upgrade minor flood control structures including berms and floodwalls to protect critical facilities.	FEMA HMGP, Local	1-5 years	Village of Shongaloo/ Webster Parish OHSEP	Tropical Cyclones, Flooding, Dam Failure	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
SH12: Dam Failure Working Group	Create a working group in order to assess the extent and determine the possible effects of a dam Failure.	FEMA HMGP, Local	1-5 years	Webster Parish OHSEP and Mayors	Dam Failure, Flooding	1, 2, 3, 4, 5, 6	Carried Over/ Not Started

New Mitigation Actions

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF SHONGALOO	
	DESCRIPTION
VILLAGE OF SHONGALOO MITGATION ACTION 1	Building Retrofits
LEAD AGENCY	Village of Shongaloo Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Medium
Action Description	Retrofit public buildings exterior shell to maintain use during and after hazard events. Benefits: Reduces damage from various hazards, and helps assure that the public buildings can be used, occupied and operable during or after events while sustaining minimal damage.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Hardening and retrofitting of public buildings and critical infrastructure allows for continued operations and reduced risk of failure during and after hazard events.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF SHONGALOO	
	DESCRIPTION
VILLAGE OF SHONGALOO MITGATION ACTION 2	Drainage Improvements
LEAD AGENCY	Village of Shongaloo Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Medium
Action Description	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Flooding, Thunderstorms, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF SHONGALOO	
	DESCRIPTION
VILLAGE OF SHONGALOO MITGATION ACTION 3	Mitigation of Repetitive Loss and Severe Repetitive Loss Properties and Other Hazard Prone Structures
LEAD AGENCY	Village of Shongaloo Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	High
Action Description	Elevation, acquisition-demolition, acquisition-relocations, and reconstruction of repetitive loss or flooding or other hazard prone properties. .
Type of Mitigation Action	Structure and Infrastructure Projects Natural System Protection
How Action Aligns with Risk Reduction	Elevating, acquiring, and/or demolishing at-risk properties will reduce flooding impacts on the community
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Flooding, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF SHONGALOO	
	DESCRIPTION
VILLAGE OF SHONGALOO MITGATION ACTION 4	Safe Room Projects
LEAD AGENCY	Village of Shongaloo Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control
PRIORITY	Medium
Action Description	Construction of a safe room for first responders located in Shongaloo. Other locations will be identified based on funding availability.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Allows for continued operations of essential personal to actively respond during a natural hazard event.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF SHONGALOO	
	DESCRIPTION
VILLAGE OF SHONGALOO MITGATION ACTION 5	Education and Outreach
LEAD AGENCY	Village of Shongaloo Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	High
Action Description	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for Dam Failure, Drought, Excessive Heat, Flooding, Sinkholes, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, and Winter Weather hazards as well as providing information on high-risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.
Type of Mitigation Action	Education and Awareness Programs
How Action Aligns with Risk Reduction	Providing educational information to the citizens of Webster Parish regarding relevant hazards will aid them in preparation and mitigation techniques to hopefully lessen the impact of hazards facing the parish.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure, Drought, Excessive Heat, Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF SHONGALOO	
	DESCRIPTION
VILLAGE OF SHONGALOO MITGATION ACTION 6	Generators for Continuity of Operations and Government
LEAD AGENCY	Village of Shongaloo Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources
PRIORITY	High
Action Description	Procurement and installation of generators at public facilities to ensure continued operations during and after events.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Having redundant power supplies for critical facilities and public buildings will alleviate disruptions of power and ensure continued operations during and after events
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure, Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF SHONGALOO	
	DESCRIPTION
VILLAGE OF SHONGALOO MITGATION ACTION 7	Lightning Mitigation
LEAD AGENCY	Village of Shongaloo Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control
PRIORITY	Low
Action Description	Procurement and installation of lightning rods and surge protectors for public buildings to preserve life and property
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Decreases the risk of damage or halting operations of critical facilities due to lightning
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Thunderstorms, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF SHONGALOO	
	DESCRIPTION
VILLAGE OF SHONGALOO MITGATION ACTION 8	Warning Systems
LEAD AGENCY	Village of Shongaloo Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Low
Action Description	Update/upgrade public warning system components throughout Shongaloo as necessary. Install audible and/or reverse 911 warning system(s) with backup capabilities
Type of Mitigation Action	Structure and Infrastructure Projects Education and Awareness Programs
How Action Aligns with Risk Reduction	Upgrading public warning systems will allow for timely notification of imminent hazard events for the public
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure, Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF SHONGALOO	
	DESCRIPTION
VILLAGE OF SHONGALOO MITGATION ACTION 9	Potable Water
LEAD AGENCY	Village of Shongaloo Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources
PRIORITY	Low
Action Description	Create redundancy of potable water supply to critical facilities, especially hospitals in Shongaloo, and provide protection of potable water supply by acquisition/installation of backflow preventers at appropriate critical locations.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Having a redundant water supply would help maintain the continuity of operations of essential and critical facilities.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure, Drought, Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF SHONGALOO	
	DESCRIPTION
VILLAGE OF SHONGALOO MITGATION ACTION 10	Promote Flood Insurance
LEAD AGENCY	Village of Shongaloo Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	2. Reduce or prevent damage to property and material assets
PRIORITY	Medium
Action Description	Promote the purchase of flood insurance. Advertise the availability, cost, and coverage of flood insurance through the National Flood Insurance Program (NFIP).
Type of Mitigation Action	Education and Awareness Programs
How Action Aligns with Risk Reduction	Promotion of flood insurance to the citizens of Webster Parish will help to relieve the burden of payouts related to non-insured properties after flooding events.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Flooding, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF SHONGALOO	
	DESCRIPTION
VILLAGE OF SHONGALOO MITGATION ACTION 11	Flood Control Measures
LEAD AGENCY	Village of Shongaloo Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Low
Action Description	Install and/or upgrade minor flood control structures including berms and floodwalls to protect critical facilities.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Construction, installation, and upgrading of flood control structures will increase protection of potential impacts areas and lessen the chance of flooding related impacts to critical facilities.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure, Flooding, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF SHONGALOO	
	DESCRIPTION
VILLAGE OF SHONGALOO MITGATION ACTION 12	Dam Failure Working Group
LEAD AGENCY	Village of Shongaloo Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Low
Action Description	Create a working group in order to assess the extent and determine the possible effects of a dam failure.
Type of Mitigation Action	Education and Awareness Programs
How Action Aligns with Risk Reduction	The creation of a dam failure working group would allow for a more accurate impact assessment in the event of a dam failure in the parish.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF SHONGALOO	
	DESCRIPTION
VILLAGE OF SHONGALOO MITGATION ACTION 13	Adopt ordinances to restrict the use of public water resources for non-essential usage
LEAD AGENCY	Village of Shongaloo Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources
PRIORITY	Medium
Action Description	Adopt ordinances to restrict the use of public water resources for non-essential usage
Type of Mitigation Action	Local Planning and Regulation
How Action Aligns with Risk Reduction	Restricting the use of public water resources for non essential usage during times of drought will allow the parish to allocate water resources to critical operations
Current Status of Action	New
Hazard Addressed	Drought

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF SHONGALOO	
	DESCRIPTION
VILLAGE OF SHONGALOO MITGATION ACTION 14	Warming and Cooling Stations
LEAD AGENCY	Village of Shongaloo Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	2. Reduce or prevent injury and loss of life
PRIORITY	Medium
Action Description	Planning and execution of warming and/or cooling stations for use by vulnerable populations during longer than expected events with extended power outages and damage to infrastructure.
Type of Mitigation Action	Local Planning and Regulation Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	This project would ensure that in times of extreme weather, residents could take shelter in climate-controlled environments, thus reducing the risk of heat or cold induced health problems
Current Status of Action	New
Hazard Addressed	Excessive Heat, Winter Weather

Additional Supporting Information:

Town of Sibley Mitigation Actions

Previous Action Update

Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
S1: Building Retrofits	Retrofit public buildings exterior shell to maintain use during and after storm events. Benefits: Reduces damage from high winds, and helps assure that the public buildings can be used, occupied and operable during or after natural hazard events.	FEMA HMGP, Local	1-5 years	Town of Sarepta/ Webster Parish OHSEP	Thunderstorms, Tropical Cyclones, Tornadoes	1,2,3,4,5,6	Deleted
S2: Drainage Improvements	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation. Benefits: Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.	FEMA HMGP, Local	1-5 years	Town of Sarepta/ Webster Parish OHSEP	Flooding, Thunderstorms, Tropical Cyclones	1,2,3,4,5,6	In Progress
S3: Mitigation of repetitive loss and severe repetitive loss properties and other hazard prone structures	Elevation, acquisition-demolition, acquisition-relocations, and reconstruction of repetitive loss or flooding or other hazard prone properties. .	FEMA HMGP, Local	1-5 years	Town of Sarepta/ Webster Parish OHSEP	Flooding, Tropical Cyclones, Dam Failure	1,2,4,6	Not Started/ Carried Over

S4 Safe Room Projects	Construction of a safe room for first responders located in Sarepta. Other locations will be identified based on funding availability.	FEMA HMGP, Local	1-5 years	Town of Sarepta/ Webster Parish OHSEP	Tornadoes, Thunderstorms, Tropical Cyclones, Wildfires	1	Not Started/ Carried Over
S5: Education and Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for Flooding, Tropical Cyclone, Tornadoes, Wildfires, Extreme Heat, Thunderstorms (lightning, high wind, hail), Drought, Sinkholes, Dam Failure, and Winter Storm hazards as well as providing information on high risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.	FEMA HMGP, Local	1-5 years	Town of Sarepta/ Webster Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes, Wildfires, Excessive Heat, Thunderstorms, Winter Storms, Drought, Sinkholes, Dam Failure	1,2,3,4,5,6	In Progress
S6: Generators for continuity of operations and government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA HMGP, Local	1-5 years	Town of Sarepta/ Webster Parish OHSEP	Tornadoes, Winter Weather, Tropical Cyclones, Thunderstorms, Excessive Heat, Sinkholes	1,2,3,4,5,6	In Progress
S7: Lightning Mitigation	Procurement and Installation of Lightning rods and surge protectors for public buildings to preserve life and property	FEMA HMGP, Local	1-5 years	Town of Sarepta/ Webster Parish OHSEP	Thunderstorms	1,2,3,4,6	Not Started/ Carried Over
S8: Warning Systems	Update/upgrade public warning system components throughout Sarepta as necessary. Install audible and/or reverse 911 warning system(s)	FEMA HMGP, Local	1-5 years+D10:D11	Town of Sarepta/ Webster Parish OHSEP	Winter Weather, Wildfires, Tornadoes, Tropical Cyclones, Dam Failure, Sinkholes	1,2,3,4,5,6	Completed

S9: Potable Water	Create redundancy of potable water supply to critical facilities, especially hospitals in Parish, and provide protection of potable water supply by acquisition/installation of backflow preventers at appropriate critical locations.	FEMA HMGP, Local	1-5 years	Town of Sarepta/ Webster Parish OHSEP	Tropical Cyclones, Thunderstorms, Tornadoes, Drought, Excessive Heat	1	In Progress
S10: Promote Flood Insurance	Promote the purchase of flood insurance. Advertise the availability, cost, and coverage of flood insurance through the National Flood Insurance Program (NFIP).	FEMA HMGP, Local	1-5 years	Town of Sarepta/ Webster Parish OHSEP	Tropical Cyclones, Flooding	1,2	Not Started/ Carried Over
S11: Flood Control Measures	Install and/or upgrade minor flood control structures including berms and floodwalls to protect critical facilities.	FEMA HMGP, Local	1-5 years	Town of Sarepta/ Webster Parish OHSEP	Tropical Cyclones, Flooding, Dam Failure	1,2,3,4,5,6	In Progress
S12: Dam Failure Working Group	Create a working group in order to assess the extent and determine the possible effects of a dam failure.	FEMA HMGP, Local	1-5 years	Webster Parish OHSEP and Mayors	Dam Failure, Flooding	1,2,3,4,5,6	Deleted

New Mitigation Actions

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF SIBLEY	
	DESCRIPTION
TOWN OF SIBLEY MITGATION ACTION 1	Mitigation of Repetitive Loss and Severe Repetitive Loss Properties and Other Hazard Prone Structures
LEAD AGENCY	Town of Sibley Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	FEMA HMGP; local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	High
Action Description	Elevation, acquisition-demolition, acquisition-relocations, and reconstruction of repetitive loss or flooding or other hazard prone properties.
Type of Mitigation Action	Structural and Infrastructure Projects
How Action Aligns with Risk Reduction	Elevating, acquiring, and/or demolishing at-risk properties will reduce flooding impacts on the community
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure, Flooding, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF SIBLEY	
	DESCRIPTION
TOWN OF SIBLEY MITGATION ACTION 2	Safe Room Projects
LEAD AGENCY	Town of Sibley Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	FEMA HMGP; local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control
PRIORITY	Medium
Action Description	Construction of a safe room for first responders located in Sarepta. Other locations will be identified based on funding availability.
Type of Mitigation Action	Structural and Infrastructure Projects
How Action Aligns with Risk Reduction	Allows for continued operations of essential personal to actively respond during a natural hazard event.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF SIBLEY	
	DESCRIPTION
TOWN OF SIBLEY MITGATION ACTION 3	Lightning Mitigation
LEAD AGENCY	Town of Sibley Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	FEMA HMGP; local
ASSOCIATED GOALS	2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control
PRIORITY	High
Action Description	Procurement and Installation of Lightning rods and surge protectors for public buildings to preserve life and property
Type of Mitigation Action	Structural and Infrastructure Projects
How Action Aligns with Risk Reduction	Decreases the risk of damage or halting operations of critical facilities due to lightning
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Thunderstorms, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF SIBLEY	
	DESCRIPTION
TOWN OF SIBLEY MITGATION ACTION 4	Promote Flood Insurance
LEAD AGENCY	Town of Sibley Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	FEMA HMGP; local
ASSOCIATED GOALS	2. Reduce or prevent damage to property and material assets
PRIORITY	High
Action Description	Promote the purchase of flood insurance. Advertise the availability, cost, and coverage of flood insurance through the National Flood Insurance Program (NFIP).
Type of Mitigation Action	Education and Awareness Programs
How Action Aligns with Risk Reduction	Promotion of flood insurance to the citizens of Webster Parish will help to relieve the burden of payouts related to non-insured properties after flooding events.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Flooding, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF SIBLEY	
	DESCRIPTION
TOWN OF SIBLEY MITGATION ACTION 5	Water System Retrofitting
LEAD AGENCY	Town of Sibley Mayor's Office
SUPPORTING AGENCIES	Webster Parish Public Works
TIMELINE	1-5 years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	FEMA HMGP; Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy
PRIORITY	Low
Action Description	Upgrading of the existing water delivery system to eliminate breaks/leaks and account for the natural expansion/compaction of soils through which the water system runs.
Type of Mitigation Action	Structure and Infrastructure Project
How Action Aligns with Risk Reduction	Improving water delivery systems reduces chance of loss through damaged infrastructure and ultimately saves water when it is needed most.
Current Status of Action	New
Hazard Addressed	Drought, Excessive Heat

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF SIBLEY	
	DESCRIPTION
TOWN OF SIBLEY MITGATION ACTION 6	Adopt ordinances to restrict the use of public water resources for non-essential usage
LEAD AGENCY	Town of Sibley Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources
PRIORITY	Low
Action Description	Adopt ordinances to restrict the use of public water resources for non-essential usage
Type of Mitigation Action	Local Planning and Regulation
How Action Aligns with Risk Reduction	Restricting the use of public water resources for non essential usage during times of drought will allow the parish to allocate water resources to critical operations
Current Status of Action	New
Hazard Addressed	Drought

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF SIBLEY	
	DESCRIPTION
TOWN OF SIBLEY MITGATION ACTION 7	Warming and Cooling Stations
LEAD AGENCY	Town of Sibley Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	2. Reduce or prevent injury and loss of life
PRIORITY	Low
Action Description	Planning and execution of warming and/or cooling stations for use by vulnerable populations during longer than expected events with extended power outages and damage to infrastructure.
Type of Mitigation Action	Local Planning and Regulation Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	This project would ensure that in times of extreme weather, residents could take shelter in climate-controlled environments, thus reducing the risk of heat or cold induced health problems
Current Status of Action	New
Hazard Addressed	Excessive Heat, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF SIBLEY	
	DESCRIPTION
TOWN OF SIBLEY MITGATION ACTION 8	Encourage/Require Fire-Resistant Construction Techniques
LEAD AGENCY	Town of Sibley Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	As funding is available; 1-5 years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	Parish Budget, HMGP
ASSOCIATED GOALS	2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy
PRIORITY	Low
Action Description	• Encourage the use of non-combustible materials (i.e., stone, brick, and stucco) for new construction in wildfire hazard areas. • Using fire resistant roofing and building materials in remodels, upgrades, and new construction. • Encourage the use of functional shutters on windows.
Type of Mitigation Action	Local Planning and Regulations
How Action Aligns with Risk Reduction	Encouraging fire-resistant construction will provide the citizens of Sibley a safety measure to protect them against the possibility of a wildfire hazard.
Current Status of Action	New
Hazard Addressed	Wildfires

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF SIBLEY	
	DESCRIPTION
TOWN OF SIBLEY MITGATION ACTION 9	Construct and install design-failure mode power lines.
LEAD AGENCY	Town of Sibley Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	As funding is available; 1-5 years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	Parish Budget, HMGP
ASSOCIATED GOALS	3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy
PRIORITY	Low
Action Description	Incorporate and implement design-failure mode for power line design to allow lines to fall or fail in small sections rather than as a complete system to enable faster restoration.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Reducing or preventing further power outages and/or damages can significantly reduce the impacts on local government, residents, etc. throughout the Parish
Current Status of Action	New
Hazard Addressed	Thunderstorms, Tornadoes, Tropical Cyclones, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF SIBLEY	
	DESCRIPTION
TOWN OF SIBLEY MITGATION ACTION 10	Produce and Provide Dam Inundation Maps
LEAD AGENCY	Town of Sibley Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	As funding is available; 1-5 years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	Parish Budget, HMGP
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Low
Action Description	Produce Dam Inundation Maps and provide them to local officials and residents
Type of Mitigation Action	Education and Awareness Program
How Action Aligns with Risk Reduction	Identifying the areas most heavily impacted by a dam failure would be the first step in implementing programs to mitigate loss of life and property should such as failure occur.
Current Status of Action	New
Hazard Addressed	Dam Failure, Flooding

Additional Supporting Information:

City of Springhill Mitigation Actions

Previous Action Update

Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
SP1: Building Retrofits	Retrofit public buildings exterior shell to maintain use during and after storm events. Benefits: Reduces damage from high winds, and helps assure that the public buildings can be used, occupied and operable during or after natural hazard events.	FEMA HMGP, Local	1-5 years	City of Springhill/ Webster Parish OHSEP	Thunderstorms, Tropical Cyclones, Tornadoes	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
SP2: Drainage Improvement	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation. Benefits: Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.	FEMA HMGP, Local	1-5 years	City of Springhill/ Webster Parish OHSEP	Flooding, Thunderstorms, Tropical Cyclones	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
SP3: Mitigation of Repetitive Loss and Severe Repetitive Loss Properties and Other Hazard Prone Structures	Elevation, acquisition-demolition, acquisition-relocations, and reconstruction of repetitive loss or flooding or other hazard prone properties.	FEMA HMGP, Local	1-5 years	City of Springhill/ Webster Parish OHSEP	Flooding, Tropical Cyclones, Dam Failure	1, 2, 4, 6	Carried Over/ Not Started
SP4: Safe Room Projects	Construction of a safe room for first responders located in Springhill. Other locations will be identified based on funding availability.	FEMA HMGP, Local	1-5 years	City of Springhill/ Webster Parish OHSEP	Tornadoes, Thunderstorms, Tropical Cyclones, Wildfires	1	Carried Over/ Not Started

SP5: Education and Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for Flooding, Tropical Cyclone, Tornadoes, Wildfires, Extreme Heat, Thunderstorms (lightning, high wind, hail), Drought, Sinkholes, Dam Failure, and Winter Storm hazards as well as providing information on high risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.	FEMA HMGP, Local	1-5 years	City of Springhill/ Webster Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes, Wildfires, Excessive Heat, Thunderstorms, Winter Weather, Drought, Sinkholes, Dam Failure	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
SP6: Generators for Continuity of Operations and Government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA HMGP, Local	1-5 years	City of Springhill/ Webster Parish OHSEP	Tornadoes, Winter Storms, Tropical Cyclones, Thunderstorms, Excessive Heat, Sinkholes	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
SP7: Lightning Mitigation	Procurement and Installation of Lightning rods and surge protectors for public buildings to preserve life and property	FEMA HMGP, Local	1-5 years	City of Springhill/ Webster Parish OHSEP	Thunderstorms	1, 2, 3, 4, 6	Carried Over/ Not Started
SP8: Warning Systems	Update/upgrade public warning system components throughout Springhill as necessary. Install audible and/or reverse 911 warning system(s)	FEMA HMGP, Local	1-5 years	City of Springhill/ Webster Parish OHSEP	Winter Weather, Wildfires, Tornadoes, Tropical Cyclones, Dam Failure, Sinkholes	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
SP9: Potable Water	Create redundancy of potable water supply to critical facilities, especially hospitals in Parish, and provide protection of potable water supply by acquisition/installation of backflow preventers at appropriate critical locations.	FEMA HMGP, Local	1-5 years	City of Springhill/ Webster Parish OHSEP	Tropical Cyclones, Thunderstorms, Tornadoes, Drought, Excessive Heat	1	Carried Over/ Not Started

SP10: Promote Flood Insurance	Promote the purchase of flood insurance. Advertise the availability, cost, and coverage of flood insurance through the National Flood Insurance Program (NFIP).	FEMA HMGP, Local	1-5 years	City of Springhill/ Webster Parish OHSEP	Tropical Cyclones, Flooding	1, 2	Carried Over/ Not Started
SP11: Flood Control Measures	Install and/or upgrade minor flood control structures including berms and floodwalls to protect critical facilities.	FEMA HMGP, Local	1-5 years	City of Springhill/ Webster Parish OHSEP	Tropical Cyclones, Flooding, Dam Failure	1, 2, 3, 4, 5, 6	Carried Over/ Not Started
SP12: Dam Failure Working Group	Create a working group in order to assess the extent and determine the possible effects of a dam Failure.	FEMA HMGP, Local	1-5 years	Webster Parish OHSEP and Mayors	Dam Failure, Flooding	1, 2, 3, 4, 5, 6	Carried Over/ Not Started

New Mitigation Actions

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF SPRINGHILL	
	DESCRIPTION
CITY OF SPRINGHILL MITGATION ACTION 1	Building Retrofits
LEAD AGENCY	City of Springhill Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Medium
Action Description	Retrofit public buildings exterior shell to maintain use during and after hazard events. Benefits: Reduces damage from various hazards, and helps assure that the public buildings can be used, occupied and operable during or after events while sustaining minimal damage.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Hardening and retrofitting of public buildings and critical infrastructure allows for continued operations and reduced risk of failure during and after hazard events.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF SPRINGHILL	
	DESCRIPTION
CITY OF SPRINGHILL MITGATION ACTION 2	Drainage Improvements
LEAD AGENCY	City of Springhill Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Medium
Action Description	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Flooding, Thunderstorms, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF SPRINGHILL	
	DESCRIPTION
CITY OF SPRINGHILL MITGATION ACTION 3	Mitigation of Repetitive Loss and Severe Repetitive Loss Properties and Other Hazard Prone Structures
LEAD AGENCY	City of Springhill Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	High
Action Description	Elevation, acquisition-demolition, acquisition-relocations, and reconstruction of repetitive loss or flooding or other hazard prone properties. .
Type of Mitigation Action	Structure and Infrastructure Projects Natural System Protection
How Action Aligns with Risk Reduction	Elevating, acquiring, and/or demolishing at-risk properties will reduce flooding impacts on the community
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Flooding, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF SPRINGHILL	
	DESCRIPTION
CITY OF SPRINGHILL MITGATION ACTION 4	Safe Room Projects
LEAD AGENCY	City of Springhill Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control
PRIORITY	Medium
Action Description	Construction of a safe room for first responders located in SPRINGHILL. Other locations will be identified based on funding availability.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Allows for continued operations of essential personal to actively respond during a natural hazard event.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF SPRINGHILL	
	DESCRIPTION
CITY OF SPRINGHILL MITGATION ACTION 5	Education and Outreach
LEAD AGENCY	City of Springhill Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	High
Action Description	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for Dam Failure, Drought, Excessive Heat, Flooding, Sinkholes, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, and Winter Weather hazards as well as providing information on high-risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.
Type of Mitigation Action	Education and Awareness Programs
How Action Aligns with Risk Reduction	Providing educational information to the citizens of Webster Parish regarding relevant hazards will aid them in preparation and mitigation techniques to hopefully lessen the impact of hazards facing the parish.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure, Drought, Excessive Heat, Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF SPRINGHILL	
	DESCRIPTION
CITY OF SPRINGHILL MITGATION ACTION 6	Generators for Continuity of Operations and Government
LEAD AGENCY	City of Springhill Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources
PRIORITY	High
Action Description	Procurement and installation of generators at public facilities to ensure continued operations during and after events.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Having redundant power supplies for critical facilities and public buildings will alleviate disruptions of power and ensure continued operations during and after events
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure, Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF SPRINGHILL	
	DESCRIPTION
CITY OF SPRINGHILL MITGATION ACTION 7	Lightning Mitigation
LEAD AGENCY	City of Springhill Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control
PRIORITY	Low
Action Description	Procurement and installation of lightning rods and surge protectors for public buildings to preserve life and property
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Decreases the risk of damage or halting operations of critical facilities due to lightning
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Thunderstorms, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF SPRINGHILL	
	DESCRIPTION
CITY OF SPRINGHILL MITGATION ACTION 8	Warning Systems
LEAD AGENCY	City of Springhill Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Low
Action Description	Update/upgrade public warning system components throughout Springhill as necessary. Install audible and/or reverse 911 warning system(s) with backup capabilities
Type of Mitigation Action	Structure and Infrastructure Projects Education and Awareness Programs
How Action Aligns with Risk Reduction	Upgrading public warning systems will allow for timely notification of imminent hazard events for the public
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure, Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Wildfires, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF SPRINGHILL	
	DESCRIPTION
CITY OF SPRINGHILL MITGATION ACTION 9	Potable Water
LEAD AGENCY	City of Springhill Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources
PRIORITY	Low
Action Description	Create redundancy of potable water supply to critical facilities, especially hospitals in Parish, and provide protection of potable water supply by acquisition/installation of backflow preventers at appropriate critical locations.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Having a redundant water supply would help maintain the continuity of operations of essential and critical facilities.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure, Drought, Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Winter Weather

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF SPRINGHILL	
	DESCRIPTION
CITY OF SPRINGHILL MITGATION ACTION 10	Promote Flood Insurance
LEAD AGENCY	City of Springhill Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	2. Reduce or prevent damage to property and material assets
PRIORITY	Medium
Action Description	Promote the purchase of flood insurance. Advertise the availability, cost, and coverage of flood insurance through the National Flood Insurance Program (NFIP).
Type of Mitigation Action	Education and Awareness Programs
How Action Aligns with Risk Reduction	Promotion of flood insurance to the citizens of Webster Parish will help to relieve the burden of payouts related to non-insured properties after flooding events.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Flooding, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF SPRINGHILL	
	DESCRIPTION
CITY OF SPRINGHILL MITGATION ACTION 11	Flood Control Measures
LEAD AGENCY	City of Springhill Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Low
Action Description	Install and/or upgrade minor flood control structures including berms and floodwalls to protect critical facilities.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Construction, installation, and upgrading of flood control structures will increase protection of potential impacts areas and lessen the chance of flooding related impacts to critical facilities.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure, Flooding, Tropical Cyclones

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF SPRINGHILL	
	DESCRIPTION
CITY OF SPRINGHILL MITGATION ACTION 12	Dam Failure Working Group
LEAD AGENCY	City of Springhill Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	1. Reduce or prevent injury and loss of life 2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources 5. Reduce or prevent future damage to infrastructure including: stormwater conveyance structures, utility systems, pipelines, railroads, highways, bridges, and waterways 6. Reduce or prevent future damage to facilities that if damaged, could endanger people, damage the environment, or harm the local economy.
PRIORITY	Low
Action Description	Create a working group in order to assess the extent and determine the possible effects of a dam failure.
Type of Mitigation Action	Education and Awareness Programs
How Action Aligns with Risk Reduction	The creation of a dam failure working group would allow for a more accurate impact assessment in the event of a dam failure in the parish.
Current Status of Action	New (Carried Over/Not Started from 2016 Update)
Hazard Addressed	Dam Failure

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF SPRINGHILL	
	DESCRIPTION
CITY OF SPRINGHILL MITGATION ACTION 13	Adopt ordinances to restrict the use of public water resources for non-essential usage
LEAD AGENCY	City of Springhill Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	2. Reduce or prevent damage to property and material assets 3. Reduce or prevent future damage to critical facilities essential for protection and public safety including: fire, rescue, law enforcement, communications, command and control 4. Reduce or prevent future damage to special facilities and commercial facilities including: schools, nursing homes, hospitals and clinics, prisons, historical and cultural resources
PRIORITY	Medium
Action Description	Adopt ordinances to restrict the use of public water resources for non-essential usage
Type of Mitigation Action	Local Planning and Regulation
How Action Aligns with Risk Reduction	Restricting the use of public water resources for non essential usage during times of drought will allow the parish to allocate water resources to critical operations
Current Status of Action	New
Hazard Addressed	Drought

Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF SPRINGHILL	
	DESCRIPTION
CITY OF SPRINGHILL MITGATION ACTION 14	Warming and Cooling Stations
LEAD AGENCY	City of Springhill Mayor's Office
SUPPORTING AGENCIES	Webster Parish OHSEP
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local
ASSOCIATED GOALS	2. Reduce or prevent injury and loss of life
PRIORITY	Medium
Action Description	Planning and execution of warming and/or cooling stations throughout the city for use by vulnerable populations during longer than expected events with extended power outages and damage to infrastructure.
Type of Mitigation Action	Local Planning and Regulation Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	This project would ensure that in times of extreme weather, residents could take shelter in climate-controlled environments, thus reducing the risk of heat or cold induced health problems
Current Status of Action	New
Hazard Addressed	Excessive Heat, Winter Weather

Additional Supporting Information:

Action Prioritization

During the prioritization process, the steering committee considered the costs and relative benefits of each new action. Costs can usually be listed in terms of dollars, although at times it involves staff time rather than the purchase of equipment or services that can be readily measured in dollars. In most cases, benefits, such as lives saved or future damage prevented, are hard to measure in dollars. Therefore, many projects were prioritized with these factors in mind. In addition, prioritization of the mitigation actions was performed based on the following economic criteria: i) whether the action can be performed with the existing parish resources; ii) whether the action requires additional funding from external sources; and iii) relative costs of the mitigation actions.

In all cases, the committee concluded that the benefits (in terms of reduced property damage, lives saved, health problems averted and/or economic harm prevented) outweighed the costs for the recommended action items.

The steering committee prioritized the possible activities that could be pursued. Steering committee members consulted appropriate agencies in order to assist with the prioritizations. The results were items that address the major hazards, are appropriate for those hazards, are cost-effective, and are affordable. On-going actions, as well as actions which will provide maximum benefit that can be undertaken by existing parish staff with or without additional external funding were given high priority. The actions with medium benefit and relatively low cost, political support, and public support but require additional funding from parish or external sources were given medium priority. The actions that require substantial funding from external sources and would result in limited benefit to the community were given low priority.

Webster Parish and the incorporated jurisdictions will implement and administer the identified actions based off the proposed timeframes and priorities for each reflected in the portions of this section where actions are summarized. The inclusion of any specific action item in this document does not commit the parish to implementation. Each action item will be subject to availability of staff and funding. Certain items may require regulatory changes or other decisions that must be implemented through standard processes. This plan is intended to offer priorities based on an examination of hazards.

Appendix A: Planning Process

Purpose

The Hazard Mitigation Plan Update process prompts local jurisdictions to keep their hazard mitigation plan current and moving toward a more resilient community. The plan update builds on the research and planning efforts of previous plans while reviewing recent trends. The steering committee followed FEMA's hazard mitigation planning process per the FEMA Local Mitigation Planning Handbook. This planning process assured public involvement and the participation of interested agencies and private organizations. Documentation of the planning process for the updated plan is addressed in this section.

The Webster Parish Hazard Mitigation Plan Update

The Webster Parish Hazard Mitigation Plan Update process began in April 2021 with a series of emails, phone calls, meetings, and collaborations between the contractor (SDMI) and a diverse group of participating agencies and stakeholders. Update activities were intended to give each participating agency and stakeholder the opportunity to shape the plan to best fit their community's mitigation goals. Community stakeholders and the general public were invited to attend and contribute information to the planning process during specific time periods or meetings.

The table below details the meeting schedule and purpose for the planning process:

Date	Meeting or Outreach	Location	Public Invited	Purpose
4/22/2021	Kick Off Email	Email	No	Schedule kick off call with Parish OHSEP and SDMI Staff.
4/27/2021	Kick Off Meeting	Phone Conference	No	Discuss with the Parish OHSEP Director expectations and requirements of the project. Discuss meeting schedules, committee make up, and next steps.
6/23/2021	Steering Committee Meeting (Planning Process)	Minden, LA	No	Discussion with Webster Parish Hazard Mitigation Steering Committee the process and expectations of plan participants. Discuss timeline and action items of each jurisdiction and parish.
8/17/2021	Risk Assessment Review with Steering Committee	Zoom VTC	Yes	Presentation of Risk Assessment Hazards and maps to Steering Committee.
8/17/2021	Public Meeting	Zoom VTC	Yes	Presentation of Risk Assessment Hazards and maps to Public. Presentation also includes current mitigation project highlights within communities and public survey discussion.
4/27/2020 – 10/15/21	Public Opinion Survey	Online	Yes	This survey asked participants about public perceptions and opinions regarding natural hazards in Webster Parish. In addition, questions covered the methods and techniques preferred for reducing the risks and losses associated with these hazards. Survey Results: https://www.surveymonkey.com/results/SM-KNSLHRN29/

Planning

The plan update process consisted of several phases:

	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10
Plan Revision										
Data Collection										
Risk Assessment										
Public Input										
Mitigation Strategy										
Plan Review by GOHSEP and FEMA										
FEMA APA										
Plan Adoptions										
Final Plan Approval										

Coordination

The Webster Parish Office of Homeland Security and Emergency Preparedness (OHSEP) oversaw the coordination of the 2021 Hazard Mitigation Plan Update Steering Committee during the update process. The parish OHSEP was responsible for identifying members for the committee.

The Parish Director was responsible for inviting the steering committee and key stakeholders to planned meetings and activities via phone call and/or email. SDMI assisted the Parish Director with press releases and social media statements for notification to the media and general public for public meetings and public outreach activities.

SDMI was responsible for facilitating all meetings and outreach efforts during the update process.

Neighboring Community, Local and Regional Planning Process Involvement

From the outset of the planning process, the steering committee encouraged participation from a broad range of parish entities. The involvement of representatives from the city, state, and regional agencies provided diverse perspectives and mitigation ideas.

Formal participation in this plan includes but is not limited to the following activities:

- Participation in Hazard Mitigation planning meetings at the local and parish level
- Sharing local data and information with jurisdictions
- Incorporation of other planning documents, studies and efforts
- Action item development and action progress from 2016 update
- Risk Assessment review
- Plan document draft review
- Formal adoption of the Hazard Mitigation Plan

The Claiborne Parish OHSEP Director was invited to attend the Initial Planning, and Risk Assessment Meetings for Webster Parish in an effort to coordinate mitigation efforts where possible as neighboring communities. The Claiborne OHSEP Director was invited via email and phone call to participate in an effort to collaborate with neighboring communities. SDMI assisted Webster Parish with encouraging the collaboration with these neighboring communities via email by extending an invitation to the Webster Hazard Mitigation Plan Update Meetings.

As part of the coordination and planning process, the parish was provided the State Required Hazard Mitigation Plan Update Worksheet. The completed worksheets can be found in Appendix E – State Required Plan Update Worksheets.

The 2021 Hazard Mitigation Plan Update Steering Committee consisted of representatives from the following parish, municipal or community stakeholders. Below is a detailed list of the 2021 HMPU Steering Committee:

Webster Parish Hazard Mitigation Planning Committee			
Name	**Title**	**Agency**	**Email**
Brian Williams	Director	Webster Parish OHSEP	webster.ohsep@gmail.com
Lisa Balkom	Secretary-Treasurer	Webster Parish Police Jury	lbalkom@suddenlinkmail.com
Jim Bonsall	President	Webster Parish Police Jury	bonsallJm@aol.com
Ashley Williams-Jones	Mayor	Town of Cotton Valley	cvmayor@centurytel.net
Terry Hoof	Mayor	Town of Cullen	mayorhoof@outlook.com
Kay Hallmark-Stratton	Mayor	Village of Dixie Inn	mayor@villageofdixieinn.com
Steven Bridwell	Mayor	Village of Doyline	doylinemayor@att.net
W.C. Hirth	Mayor	Village of Dubberly	dubberlytownhall@cebridge.net
Todd Leake	Mayor	Village of Heflin	villageofheflin@suddenlinkmail.com
Terry Gardner	Mayor	City of Minden	mayor@mindenusa.com
Peggy Adkins	Mayor	Town of Sarepta	sareptamayor@gmail.com
Tim L. Mouser	Mayor	Village of Shongaloo	tim.mouser@emailsmc.com
Jimmy Williams	Mayor	Town of Sibley	sibleymayor@bellsouth.net
W. Ray Huddleston	Mayor	City of Springhill	mayor@springhill-la.us

Program Integration

Local governments are required to describe how their mitigation planning process is integrated with other ongoing local and area planning efforts. This subsection describes Webster Parish programs and planning.

A measure of integration and coordination is achieved through the HMPU participation of Steering Committee members and community stakeholders who administer programs such as: floodplain management under the National Flood Insurance Program (NFIP), Community Rating System, parish planning and zoning and building code enforcement.
Webster Parish will continue to integrate the requirements of this Hazard Mitigation Plan into other local planning mechanisms that are to be identified through future meetings of the parish, and through the five-year review process described in Appendix B: Plan Maintenance. The primary means for integrating mitigation strategies into other local planning mechanisms will be through the revision, update and implementation of any individual municipal plans that require specific planning and administrative tasks (e.g. risk assessment, plan amendments, ordinance revisions, capital improvement projects, etc.).

The members of the Webster Parish Hazard Mitigation Steering Committee will remain charged with ensuring that the goals and strategies of new and updated local planning documents for their communities or agencies are consistent with the goals and actions of the Hazard Mitigation Plan and will not contribute to increased hazard vulnerability in the parish. Existing plans, studies, and technical information were incorporated in the planning process. Examples include flood data from FEMA and the U. S. Geological Survey. Much of this data was incorporated into the Risk Assessment component of the plan relative to plotting historical events and the magnitude of damages that occurred. The parish's 2016 Hazard Mitigation Plan was also used in the planning process. Other existing data and plans used in the planning process include those listed below.

- Parish Emergency Operations Plan
- Flood Insurance Rate Maps
- State of Louisiana Hazard Mitigation Plan

Further information on the plans can be found in *Section 3: Capability Assessment*.

Meeting Documentation and Public Outreach Activities

The following pages contain documentation of the meetings and public outreach activities conducted during this hazard mitigation plan update.

Meeting #1: Hazard Mitigation Plan Update Kick-Off

Date: April 27, 2021
Location: Conference Call
Purpose: Discuss with the Parish OHSEP Director expectations and requirements of the project. Discuss meeting schedules, committee make up, and next steps.
Public Invitation: No
Meeting Invitees:

Webster Parish Hazard Mitigation Planning Committee			
Name	**Title**	**Agency**	**Email**
Brian Williams	Director	Webster Parish OHSEP	webster.ohsep@gmail.com
Chris Rippetoe	HM Program Manager	LSU-SDMI	Crippe2@lsu.edu

Meeting #2: Hazard Mitigation Plan Steering Committee Meeting – Planning Process

Date: June 23, 2021

Location: Minden, Louisiana

Purpose: Discuss the expectations and requirements of the hazard mitigation plan update process and establish an initial project timeline with the Parish's Hazard Mitigation Plan Steering Committee. Assign each individual tasks related to the parish data collection for the plan update.

Public Invitation: No

Meeting Invitees:

Webster Parish Hazard Mitigation Planning Committee			
Name	**Title**	**Agency**	**Email**
Brian Williams	Director	Webster Parish OHSEP	webster.ohsep@gmail.com
Lisa Balkom	Secretary-Treasurer	Webster Parish Police Jury	lbalkom@suddenlinkmail.com
Jim Bonsall	President	Webster Parish Police Jury	bonsallJm@aol.com
Ashley Williams-Jones	Mayor	Town of Cotton Valley	cvmayor@centurytel.net
Terry Hoof	Mayor	Town of Cullen	mayorhoof@outlook.com
Kay Hallmark-Stratton	Mayor	Village of Dixie Inn	mayor@villageofdixieinn.com
Steven Bridwell	Mayor	Village of Doyline	doylinemayor@att.net
W.C. Hirth	Mayor	Village of Dubberly	dubberlytownhall@cebridge.net
Todd Leake	Mayor	Village of Heflin	villageofheflin@suddenlinkmail.com
Terry Gardner	Mayor	City of Minden	mayor@mindenusa.com
Peggy Adkins	Mayor	Town of Sarepta	sareptamayor@gmail.com
Tim L. Mouser	Mayor	Village of Shongaloo	tim.mouser@emailsmc.com
Jimmy Williams	Mayor	Town of Sibley	sibleymayor@bellsouth.net
W. Ray Huddleston	Mayor	City of Springhill	mayor@springhill-la.us

Meeting #3: Risk Assessment Presentation to Steering Committee

Date: August 17, 2021

Location: Zoom VTC

Purpose: Presentation of Risk Assessment hazards and maps to Steering Committee.

Public Invitation: No

Meeting Invitees:

Webster Parish Hazard Mitigation Planning Committee			
Name	**Title**	**Agency**	**Email**
Brian Williams	Director	Webster Parish OHSEP	webster.ohsep@gmail.com
Lisa Balkom	Secretary-Treasurer	Webster Parish Police Jury	lbalkom@suddenlinkmail.com
Jim Bonsall	President	Webster Parish Police Jury	bonsallJm@aol.com
Ashley Williams-Jones	Mayor	Town of Cotton Valley	cvmayor@centurytel.net
Terry Hoof	Mayor	Town of Cullen	mayorhoof@outlook.com
Kay Hallmark-Stratton	Mayor	Village of Dixie Inn	mayor@villageofdixieinn.com
Steven Bridwell	Mayor	Village of Doyline	doylinemayor@att.net
W.C. Hirth	Mayor	Village of Dubberly	dubberlytownhall@cebridge.net
Todd Leake	Mayor	Village of Heflin	villageofheflin@suddenlinkmail.com
Terry Gardner	Mayor	City of Minden	mayor@mindenusa.com
Peggy Adkins	Mayor	Town of Sarepta	sareptamayor@gmail.com
Tim L. Mouser	Mayor	Village of Shongaloo	tim.mouser@emailsmc.com
Jimmy Williams	Mayor	Town of Sibley	sibleymayor@bellsouth.net
W. Ray Huddleston	Mayor	City of Springhill	mayor@springhill-la.us

Meeting #4: Public Meeting

Date: August 17, 2021

Location: Zoom VTC

Purpose: The Public Meeting allowed the public and community stakeholders to participate and provide input into the hazard mitigation planning process.

Public Invitation: Yes

Meeting Invitees:

Webster Parish Hazard Mitigation Planning Committee			
Name	**Title**	**Agency**	**Email**
Brian Williams	Director	Webster Parish OHSEP	webster.ohsep@gmail.com
Lisa Balkom	Secretary-Treasurer	Webster Parish Police Jury	lbalkom@suddenlinkmail.com
Jim Bonsall	President	Webster Parish Police Jury	bonsallJm@aol.com
Ashley Williams-Jones	Mayor	Town of Cotton Valley	cvmayor@centurytel.net
Terry Hoof	Mayor	Town of Cullen	mayorhoof@outlook.com
Kay Hallmark-Stratton	Mayor	Village of Dixie Inn	mayor@villageofdixieinn.com
Steven Bridwell	Mayor	Village of Doyline	doylinemayor@att.net
W.C. Hirth	Mayor	Village of Dubberly	dubberlytownhall@cebridge.net
Todd Leake	Mayor	Village of Heflin	villageofheflin@suddenlinkmail.com
Terry Gardner	Mayor	City of Minden	mayor@mindenusa.com
Peggy Adkins	Mayor	Town of Sarepta	sareptamayor@gmail.com
Tim L. Mouser	Mayor	Village of Shongaloo	tim.mouser@emailsmc.com
Jimmy Williams	Mayor	Town of Sibley	sibleymayor@bellsouth.net
W. Ray Huddleston	Mayor	City of Springhill	mayor@springhill-la.us

Meeting Announcement:

WEBSTER PARISH OFFICE OF HOMELAND SECURITY & EMERGENCY PREPAREDNESS

PUBLIC MEETING ANNOUNCEMENT

Webster Parish and its partners are seeking community input for the 2021 Webster Parish Hazard Mitigation Plan update!

Webster Parish OHSEP, in partnership with The Louisiana Governor's Office of Homeland Security and Emergency Preparedness and the Stephenson Disaster Management Institute at LSU, is leading the process to update the plan. The Webster Parish Multi-Jurisdictional Hazard Mitigation Plan describes the **naturally occurring** risks to the parish and outlines strategies to reduce these risks to save lives, reduce property damage, and lessen the impact of future disasters.

Are you passionate about building a more resilient future for your parish? Do you have questions about the natural hazards your community faces? Please join us for a public meeting to learn more about the plan and share your input on the risks and vulnerabilities that most impact you and your community. Due to the ongoing pandemic, the meeting will be conducted virtually.

Meeting Details:
Tuesday, August 17, 2021: Zoom Meeting, 11:00am – 12:30pm
https://lsu.zoom.us/j/97444990300?pwd=d0tuQ1dDVFR6UTgxaWpFYjFYd1RRQT09

Residents of Webster Parish are asked to participate in a survey about public perceptions and opinions regarding natural hazards in the parish. The survey results will be used in the development of the plan. This short web-based survey can be found at the following link:

https://www.surveymonkey.com/r/WebsterHM2021

The Parish appreciates your input.

If you have questions, please contact: Webster Parish OHSEP Office

Outreach Activity #1: Public Opinion Survey

Date: Ongoing throughout planning process
Location: Web survey
Public Invitation: Yes

As referenced in the Mitigation Strategy section of this document, an online public opinion survey of Livingston Parish residents was conducted between April and October 2021. The survey was designed to capture public perceptions and opinions regarding natural hazards in Webster Parish. In addition, the survey collected information regarding the methods and techniques preferred by the respondents for reducing the risks and losses associated with local hazards. As of November 9, 2021, there have 60 responses to the Webster Parish Hazard Mitigation Public Opinion Survey. survey results can be found here: https://www.surveymonkey.com/results/SM-KNSLHRN29/

Outreach Activity #2: 2021 Webster Parish Hazard Mitigation Plan Public Review

Date: Ongoing
Location: SDMI Hazard Mitigation Website
Public Initiation: Yes

After an initial review by the Webster Parish Planning Committee was completed, the 2021 Webster Parish Hazard Mitigation Plan was made available for public review and comment. The plan was hosted on SDMI's Hazard Mitigation website: https://hmplans.sdmi.lsu.edu/Home/Parish/webster

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Appendix B: Plan Maintenance

Purpose

The section of the Code of Federal Regulations (CFR) pertaining to Local Mitigation Plans lists five required components for each plan: a description of the planning process; risk assessments; mitigation strategies; a method and system for plan maintenance; and documentation of plan adoption. This section details the method and system for plan maintenance, following the CFR's guidelines that the Plan Update must include (1) "a section describing the method and schedule of monitoring, evaluating, and updating the mitigation plan within a five-year cycle," (2) "a process by which local governments incorporated the requirements of the mitigation plan into other planning mechanisms such as comprehensive or capital improvement plans", and (3) "discussion on how the community will continue public participation in the plan maintenance process."

Monitoring, Evaluating, and Updating the Plan

The Webster Parish Hazard Mitigation Steering Committee will be responsible for monitoring, evaluating, and documenting the plan's progress throughout the year. Part of the plan maintenance process should include a system by which local governing bodies incorporate the HMP into the parish's other applicable plans. This process provides for continued public participation through the diverse resources of the parish to help in achieving the goals and objectives of the plan. Public participation will be achieved through availability of copies of HMP in parish public buildings and the SDMI Hazard Mitigation website. This section describes the whole update process which includes the following:

- Responsible parties
- Methods to be used
- Evaluation criteria to be applied
- Scheduling for monitoring and evaluating the plan

Responsible Parties

Webster Parish has developed a method to ensure that a regular review and update of the Hazard Mitigation Plan occurs. This will be the responsibility of the Steering Committee, which consists of representatives from governmental organizations, local businesses, and private citizens, who will be involved in the process of monitoring, evaluating and updating the plan. All committee members in this plan will remain active in the Steering Committee.

Although the people filling the positions may change from year to year, the parish and its stakeholders will have representatives on the steering committee. The future Steering Committee will continue to be comprised of the same job functions as currently evident in the Steering Committee. However, the decision of specific job duties will be left to the Parish OHSEP Director to be assigned as deemed appropriate.

Methods for Monitoring and Evaluating the Plan and Plan Evaluation Criteria

Webster Parish has developed a method to ensure monitoring, evaluating, and updating of the HMP occurs during the five-year cycle of the plan. The steering committee will become a permanent body and will be responsible for monitoring, evaluating, and updating of the plan. The steering committee meeting will be held annually in order to monitor, evaluate, and update the plan. The Webster Parish OHSEP Director will be responsible for conducting the annual Steering Committee meetings.

The lead person of the agency responsible for the implementation of a specific mitigation action will submit a progress report to the Director at least thirty days prior to the planning committee meeting. The progress report will provide project status monitoring to include the following: whether the project has started; if not started, reason for not starting; if started, status of the project; if the project is completed, whether it has eliminated the problem; and any changes recommended to improve the implementation of the project etc. In addition, the progress report will provide status monitoring on the plan evaluation, changes to the hazard profile, changes to the risk assessment, and public input on the Hazard Mitigation Plan updates and reviews.

Progress on the mitigation action items and projects will be reviewed during the annual planning committee meeting. The criteria that would be utilized in the project review will include the following:

1) Whether the action was implemented and reasons, if the action was not implemented

2) What were the results of the implemented action

3) Were the outcomes as expected, and reasons if the outcomes were not as expected

4) Did the results achieve the stated goals and objectives

5) Was the action cost-effective

6) What were the losses avoided after completion of the project

7) In case of a structural project, did it change the hazard profile

In addition to monitoring and evaluating the progress of the mitigation plan actions and projects, the mitigation plan is required to be maintained and monitored annually, and fully updated every five years. The annual maintenance, monitoring and evaluation of the plan will be conducted in the annual Steering Committee meeting. The Steering Committee will review each goal to determine their relevance to changing situations in the parish, as well as changes to state or federal policy, and to ensure that they are addressing current and expected conditions. The Steering Committee will evaluate if any change in hazard profile and risk in the parish occurred during the past year. In addition, the evaluation will include the following criteria in respect of plan implementation:

1) Any local staffing changes that would warrant inviting different members to the planning committee

2) Any new organizations that would be valuable in the planning process or project implementation need to be included in the planning committee

3) Any new or existing procedures that can be done more efficiently

4) Any additional ways to gain more diverse and widespread cooperation

5) Any different or additional funding sources available for mitigation planning and implementation

The HMP will be updated every five years to remain eligible for continued HMGP funding. The Steering Committee will be responsible for updating the HMP. The OHSEP Director will be the lead person for the HMP update. The HMP update process will commence at least one year prior to the expiration of the plan. The HMP will be updated after a major disaster if an annual evaluation of the plan indicates a substantial change in hazard profile and risk assessment in the parish.

Additionally, the public will be canvassed to solicit public input to continue Webster Parish's dedication to involving the public directly in review and updates of the Hazard Mitigation Plan. Meetings will be scheduled as needed by the plan administrator to provide a forum for which the public can express their concerns, opinions, and/or ideas about the plan. The plan administrator will be responsible for using parish resources to publicize the annual public meetings and maintain public involvement through the newspapers, radio, and public access television channels. Copies of the plan will be catalogued and kept at all appropriate agencies in the city government.

The review by the Steering Committee and input from the public will determine whether a plan update is needed prior to the required five-year update.

Annual reports on the progress of actions, plan maintenance, monitoring, evaluation, incorporation into existing planning programs, and continued public involvement will be documented at each annual meeting of the committee and kept by the Parish OHSEP Director. The Steering Committee will work together as a team, with each member sharing responsibility for completing the monitoring, evaluation and updates. It is the responsibility of the Parish OHSEP Director for contacting committee members, organizing the meeting and providing public noticing for the meeting to solicit public input.

2021 Plan Version Plan Method and Schedule Evaluation

For the current plan update, the previously approved plan's method and schedule were evaluated to determine if the elements and processes involved in the required 2021 update. Based on this analysis, the method and schedule were deemed to be acceptable, and nothing was changed for this update.

Incorporation into Existing Planning Programs

It is and has been the responsibility of the Webster Parish Hazard Mitigation Plan Steering Committee and participating jurisdictions to determine additional implementation procedures when appropriate. This may include integrating the requirements of the Webster Parish Hazard Mitigation Plan into each jurisdiction's planning documents, processes, or mechanisms as follows:

- Ordinances, Resolutions, Regulations
- Floodplain Ordinances
- Capital Improvement Plans
- Economic Development Plans
- Emergency Operations Plans
- Community Wildfire Protection Plan

Opportunities to integrate the requirements of this plan into other local planning mechanisms will continue to be identified through future meetings of the Webster Parish Hazard Mitigation Steering Committee and through the five-year review process described herein. The primary means for integrating mitigation strategies into other local planning mechanisms will be through the revision, update and implementation of each jurisdiction's individual plans that require specific planning and administrative tasks (e.g. risk assessment, plan amendments, ordinance revisions, capital improvement projects, etc.). While there have been no instances of the mitigation strategy being incorporated into other planning documents since the adoption of the 2016 Webster Parish Hazard Mitigation Plan, the committee members recognize the importance of a holistic approach across all planning efforts and will use their standing to integrate the mitigation strategy outlined in the 2021 Webster Hazard Mitigation Plan into other planning documents when appropriate.

During the planning process for new and updated local planning documents at the parish and jurisdiction level, such as a risk assessment, comprehensive plan, capital improvements plan, or emergency operations plan, the jurisdictions will provide a copy of the Parish Hazard Mitigation Plan to the appropriate parties and recommend that all goals and strategies of new and updated local planning documents are consistent with and support the goals of the Parish Hazard Mitigation Plan and will not contribute to increased hazards.

Although it is recognized that there are many possible benefits to integrating components of this plan into other parish and jurisdiction planning mechanisms, the development and maintenance of this stand-alone Hazard Mitigation Plan is deemed by the steering committee to be the most effective and appropriate method to ensure implementation of Parish and local hazard mitigation actions.

On behalf of the Town of Cotton Valley, Town of Cullen, Village of Dixie Inn, Village of Doyline, Village of Dubberly, Village of Heflin, City of Minden, Town of Sarepta, Village of Shongaloo, Town of Sibley, and City of Springhill, Webster Parish Police Jury has the authority to incorporate the contents of the Hazard Mitigation Plan into the parish's existing regulatory mechanisms. Agreements are currently in place with jurisdictions to allow for the parish incorporation mechanisms to take place.

The following parish and local plans incorporate requirements of this HMP Update as follows through steering committee member and jurisdiction representation throughout the planning process as described above:

Webster Parish

Local Emergency Operations Plan	Updated as needed	Webster Parish OHSEP	✓

Town of Cotton Valley

There are no local plans to incorporate for the Town of Cotton Valley

Town of Cullen

Local Emergency Operations Plan	Updated as needed	Webster Parish OHSEP and Mayor of Cullen	✓

Village of Dixie Inn

Capital Improvements Plan	Updated as needed	Mayor's Office of Dixie Inn	✓

Village of Doyline

There are no local plans to incorporate for the Village of Doyline

Village of Dubberly

There are no local plans to incorporate for the Village of Dubberly

Village of Heflin

There are no local plans to incorporate for the Village of Heflin

City of Minden

Capital Improvements Plan	Updated as needed	Mayor's Office of Minden	✓
Economic Development Plan	Updated as needed	Minden Economic Development Department	✓
Local Emergency Operations Plan	Updated as needed	Webster Parish OHSEP and Mayor of Minden	✓

Town of Sarepta

Capital Improvements Plan	Updated as needed	Mayor's Office of Sarepta	✓
Local Emergency Operations Plan	Updated as needed	Webster Parish OHSEP and Mayor of Sarepta	✓

Village of Shongaloo

There are no local plans to incorporate for the Village of Shongaloo

Town of Sibley

There are no local plans to incorporate for the Town of Sibley

City of Springhill

Economic Development Plan	Updated as needed	Springhill Chamber of Commerce	✓

Continued Public Participation

Public participation is an integral component of the mitigation planning process and will continue to be essential as this plan evolves over time. Significant changes or amendments to the plan require a public hearing prior to any adoption procedures. Other efforts to involve the public in the maintenance, evaluation, and revision process will be made as necessary. These efforts may include:

- Advertising meetings of the Mitigation Committee in the local newspaper, public bulletin boards, and/or city and county office buildings
- Designating willing and voluntary citizens and private sector representatives as official members of the Mitigation Committee
- Utilizing local media to update the public of any maintenance and/or periodic review activities taking place
- Utilizing city and Parish web sites to advertise any maintenance and/or periodic review activities taking place
- Keeping copies of the plan in appropriate public locations.

Appendix C: Critical Facilities

Critical Facilities within the Webster Parish Planning Area

Webster Parish Planning Area Critical Facilities										
Type	Name	Drought	Excessive Heat	Flooding	Sinkholes	Thunderstorms	Tornadoes	Tropical Cyclones	Wildfires	Winter Weather
Government	Webster Parish Courthouse					X	X	X		X
	Webster Parish Courthouse					X	X	X	X	X
	Webster Parish Public Works					X	X	X	X	X
	Cotton Valley Town Hall					X	X	X	X	X
	Cullen Town Hall					X	X	X	X	X
	Dixie Inn Village Hall					X	X	X	X	X
	Doyline City Hall					X	X	X	X	X
	Dubberly Town Hall					X	X	X	X	X
	Heflin Village Hall					X	X	X		X
	Minden City Hall					X	X	X		X
	Sarepta Municipal Building					X	X	X	X	X
	Shongaloo Civic Center					X	X	X	X	X
	Sibley Town Hall					X	X	X	X	X
	Springhill City Hall					X	X	X		X

Fire & SAR	Cotton Valley Fire District 8					X	X	X	X	X
	Central Fire Station					X	X	X		X
	Webster Fire District 7					X	X	X		X
	Webster Fire District 3 Station 3					X	X	X	X	X
	Webster Parish Fire District No. 3 - Doyline Volunteer Fire Dept.					X	X	X	X	X
	Webster Parish Fire District 3 Station No. 2					X	X	X	X	X
	Dubberly Volunteer Fire Department					X	X	X		X
	Heflin Fire Dept. Station No. 2					X	X	X		X
	Heflin Fire Dept. Station No. 1					X	X	X	X	X
	Minden Central Fire Station					X	X	X	X	X
	Minden Fire Station 2					X	X	X	X	X
	Minden Fire Station 3					X	X	X	X	X
	Sarepta Fire District 5 Station 1					X	X	X	X	X
	Shongaloo Fire Department					X	X	X	X	X
	Shongaloo Fire District 9 Station No. 2					X	X	X	X	X
	Shongaloo Fire District 9					X	X	X	X	X
	Sibley Volunteer Fire Dept.					X	X	X	X	X
	Springhill Fire Department					X	X	X		X
	Springhill Fire Department No. 2					X	X	X	X	X

Law Enforcement	Webster Parish Sheriff's Office					X	X	X		X
	Cotton Valley Police Department					X	X	X	X	X
	Cullen Police Department					X	X	X		X
	Dixie Inn Police Department					X	X	X	X	X
	Doyline Police Department					X	X	X	X	X
	Dubberly Police Department					X	X	X	X	X
	Heflin Police Department					X	X	X		X
	Minden Police Department & Marshal's Office					X	X	X		X
	Sarepta Police Department					X	X	X	X	X
	Sibley Police Department					X	X	X	X	X
	Springhill Police Department					X	X	X		X
	Bayou Dorcheat Correctional Center					X	X	X		X

Public Health	Webster Parish Public Health Unit					X	X	X		X
	Webster Parish Public Health Unit					X	X	X		X
	Minden Medical Center					X	X	X	X	X
	Springhill Medical Center					X	X	X	X	X

Schools	Brown Upper Elementary					X	X	X	X	X
	Browning Elementary					X	X	X	X	X
	Central Elementary					X	X	X		X
	Doyline High					X	X	X	X	X
	J.L. Jones Elementary					X	X	X	X	X
	Lakeside Junior/Senior High					X	X	X		X
	Minden High					X	X	X	X	X
	J.A. Phillips Elementary					X	X	X	X	X
	E.S. Richardson Elementary					X	X	X	X	X
	North Webster Lower Elementary					X	X	X	X	X
	North Webster Upper Elementary					X	X	X	X	X
	North Webster Junior High					X	X	X	X	X
	North Webster High School					X	X	X		X
	Webster Jr. High					X	X	X	X	X

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Appendix D: Plan Adoption

Webster Parish

WEBSTER PARISH POLICE JURY

LOUISIANA

RESOLUTION NO. 004-2022

A RESOLUTION OF THE WEBSTER PARISH POLICE JURY

2021 Webster Parish Multi-Jurisdictional Hazard Mitigation Plan

WHEREAS the WEBSTER PARISH POLICE JURY recognizes the threat that natural hazards pose to people and property within Webster Parish and

WHEREAS the Webster Parish has prepared a multi-hazard mitigation plan, hereby known as 2021 Webster Parish Multi-Jurisdictional Hazard Mitigation Plan in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS 2021 Webster Parish Multi-Jurisdictional Hazard Mitigation Plan identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in Webster Parish from the impacts of future hazards and disasters; and

WHEREAS adoption by the WEBSTER PARISH POLICE JURY demonstrates their commitment to the hazard mitigation and achieving the goals outlined in the 2021 Webster Parish Multi-Jurisdictional Hazard Mitigation Plan.

NOW THEREFORE, BE IT RESOLVED BY the Webster Parish, LOUISIANA, THAT:

Section 1. In accordance with the majority vote by THE WEBSTER PARISH POLICE JURY adopts the 2021 Webster Parish Multi-Jurisdictional Hazard Mitigation Plan.

ADOPTED by a vote of 11 in favor and 0 against, and 1 absent and 0 abstaining,

this 4th day of January, 2022.

By: Jim Bonsall

Jim Bonsall, President

ATTEST:

By: Lisa C. Balkom

Lisa C. Balkom

APPROVED AS TO FORM:

By: Alicia Owens

Alicia Owens

Town of Cotton Valley

COTTON VALLEY

LOUISIANA

RESOLUTION NO. 1

A RESOLUTION OF THE TOWN OF COTTON VALLEY

Webster Parish Hazard Mitigation Plan JANUARY 11, 2022

WHEREAS the BOARD OF ALDERMEN recognizes the threat that natural hazards pose to people and property withinTHE TOWN OF COTTON VALLEY ; and

WHEREAS the THE TOWN OF COTTON VALLEY has prepared a multi-hazard mitigation plan, hereby known as Webster Parish Hazard Mitigation Plan JANUARY 11, 2022 in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS Webster Parish Hazard Mitigation Plan, JANUARY 11, 2022

identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in THE TOWN OF COTTON VALLEY from the impacts of future hazards and disasters; and

WHEREAS adoption by the BOARD OF ALDERMEN demonstrates their commitment to the hazard mitigation and achieving the goals outlined in the Webster Parish Hazard Mitigation Plan JANUARY 11, 2022.

NOW THEREFORE, BE IT RESOLVED BY THE TOWN OF COTTON VALLEY, LOUISIANA, THAT:

Section 1. In accordance with [ENTER LOCAL RULE FOR ADOPTING RESOLUTIONS], THE BOARD OF ALDERMAN adopts the Webster Parish Hazard Mitigation Plan, JANUARY 11, 2022

.

ADOPTED by a vote of 5 in favor and 0 against, and 0 abstaining, this Tuesday day of January, 2022.

By: Tiffany M. Parish

(print name)

ATTEST:

By: Ashley Williams

(print name)

APPROVED AS TO FORM:

By: _____

(print name)

Res. to Adopt Updated Parish Hazard Mitigation Plan.

Town of Cotton Valley

Monthly Meeting

January 11, 2022

6:00 p.m.

Roll Call

1. Alderman Reginald Shaw ✓
2. Alderman Jailena Carter ✓
3. Alderman Evelyn Parish ✓
4. Alderman Charlene Lewis ✓
5. Alderman Delvin Hawkins ✓

MP

Quorum YES ___ NO ___

Present 5
Absent___

Motioned by- J.C
Seconded by- C L
Motion Carried Yes

Town of Cullen

THE TOWN OF CULLEN

OFFICE OF THE MAYOR

P.O. Box 679
Cullen, Louisiana 71021

Terry Hoof (318) 994-2263 Fax (318) 994-2189

Denise Epps Daryl Ford Barbara Green Floydean White Jimmy Thomas

TOWN OF CULLEN
LOUISIANA
RESOLUTION NO. _____

A RESOLUTION OF THE TOWN OF CULLEN
2021 WEBSTER PARISH MULTY-JURISDICTIONAL HAZARD MITIGATON PLAN

WHEREAS the TOWN OF CULLEN recognizes the threat that natural hazards pose to people and property within TOWN OF CULLEN; and

WHEREAS the TOWN OF CULLEN has prepared a multi-hazard mitigation plan, hereby known as 2021 WEBSTER PARISH MULTY-JURISDICTIONAL HAZARD MITIGATON PLAN in accordance with the Disaster Mitigation Act of 2000;
and

WHEREAS 2021 WEBSTER PARISH MULTY-JURISDICTIONAL HAZARD MITIGATON PLAN identifies mitigation goals and actions to
reduce or eliminate long-term risk to people and property in TOWN OF CULLEN from the impacts of future hazards and disasters; and

WHEREAS adoption by the TOWN OF CULLEN demonstrates their commitment to the hazard mitigation and achieving the goals outlined in the 2021 WEBSTER PARISH MULTY-JURISDICTIONAL HAZARD MITIGATON PLAN NOW THEREFORE, BE IT RESOLVED BY THE TOWN OF CULLEN, LOUISIANA, THAT:

Section 1. In accordance with IN ACCORDANCE WITH THE TOWN OF CULLEN CHARTER, THE TOWN OF CULLEN adopts the 2021 WEBSTER PARISH MULTY-JURISDICTIONAL HAZARD MITIGATON PLAN.
ADOPTED by a vote of 4 in favor and 1 against, and 0 abstaining, this 28th day of March, 2022

By: Terry Hoof
MAYOR TERRY HOOF

ATTEST:
By: Dominique Parish
DOMINIQUE PARISH

Village of Dixie Inn

VILLAGE OF DIXIE INN LOUISIANA

RESOLUTION NO. 01-01112022

A RESOLUTION OF THE VILLAGE OF DIXIE INN

2021 WEBSTER MULTI-JUDISDICTIONAL HAZARD MITIGATION PLAN

WHEREAS THE VILLAGE OF DIXIE INN GOVERNING BODY recognizes the threat that natural hazards pose to people and property within DIXIE INN; and

WHEREAS THE VILLAGE OF DIXIE INN has prepared a multi-hazard mitigation plan, hereby known as 2021 WEBSTER MULTI-JUDISDICTIONAL HAZARD MITIGATION PLAN in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS THE 2021 WEBSTER MULTI-JUDISDICTIONAL HAZARD MITIGATION PLAN identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in DIXIE INN LOUISIANA from the impacts of future hazards and disasters; and

WHEREAS ADOPTION BY THE VILLAGE OF DIXIE INN BOARD OF ALDERMEN demonstrates their commitment to the hazard mitigation and achieving the goals outlined in the 2021 WEBSTER MULTI-JUDISDICTIONAL HAZARD MITIGATION PLAN

NOW THEREFORE, BE IT RESOLVED BY THE VILLAGE OF DIXIE INN, LOUISIANA, THAT:

Section 1. In accordance with LA. R.S. 33.406(A)(2), THE DIXIE INN BOARD OF ALDERMEN adopts the 2021 WEBSTER MULTI-JUDISDICTIONAL HAZARD MITIGATION PLAN

On a motion of Judy McKenzie, seconded by Lance Milligan, the resolution was adopted by the following vote this 11th day of January 2022:

YEAS: 3 (Donna Hoffoss, Judy McKenzie, Lance Milligan), NAYS: 0 , ABSENT: 0, ABSTAIN: 0,

By: Kay Hallmark-Stratton

Kay Hallmark-Stratton, Mayor

ATTEST:

By: Dana James

Dana James, Clerk

Village of Doyline

VILLAGE OF DOYLINE

624 College St., Doyline, La 71023 • 318-745-2625 • Fax: 318-745-2658

VILLAGE OF DOYLINE

LOUISIANA

RESOLUTION NO. 2022-3

A RESOLUTION OF THE VILLAGE OF DOYLINE

2021 WEBSTER PARISH MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

WHEREAS the VILLAGE OF DOYLINE recognizes the threat that natural hazards pose to people and property within Doyline; and

WHEREAS the VILLAGE OF DOYLINE has prepared a multi-hazard mitigation plan, hereby known as 2021 WEBSTER PARISH MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN, in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS 2021 WEBSTER PARISH MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN, identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in DOYLINE from the impacts of future hazards and disasters; and

WHEREAS adoption by THE VILLAGE OF DOYLINE demonstrates their commitment to the hazard mitigation and achieving the goals outlined in the 2021 WEBSTER PARISH MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN.

NOW THEREFORE, BE IT RESOLVED BY THE VILLAGE OF DOYLINE, LOUISIANA, THAT:

Section 1. In accordance with COUNCIL MEMBERS, THE VILLAGE OF DOYLINE adopts 2021 WEBSTER PARISH MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN.

ADOPTED by a vote of 2 in favor and 0 against, and 0 abstaining, this 7th day of February, 20 22.

By: Steven Bridwell

(Print name)

ATTEST:

By: Shane Jones

(Print name)

APPROVED AS TO FORM:

By: Steven Bridwell

(Print name)

Village of Dubberly

Village of Dubberly

RESOLUTION

A RESOLUTION ADOPTING THE
WEBSTER PARISH HAZARD MITIGATION PLAN 2022

WHEREAS the Village of Dubberly recognizes the threat that natural hazards pose to people and property within Dubberly; and

WHEREAS the Village of Dubberly has prepared a multi-hazard mitigation plan, hereby known as the Webster Parish Hazard Mitigation Plan 2022 in accordance with the Disaster Mitigation Act of 2000 and

WHEREAS The Webster Hazard Mitigation Plan identifiers mitigation goals and action to reduce or eliminate long-term risk to people and property in Dubberly from the impacts of future hazards and disasters; and

WHEREAS adoption by the Village of Dubberly demonstrates their commitment to the hazard mitigation and achieving the goals outlined in the Webster Parish Hazard Mitigation Plan 2022.

Therefore, the Village of Dubberly does hereby adopt the WEBSTER Parish Hazard Mitigation Plan Update 2016.

ADOPTED by a vote of 2 in favor and 0 against, and 1 absent, on this the 10th day of January, 2022.

Yeas:2 Nay: 0 Absent: 1

(Culpepper, Cooley) (Brown)

Dianne Futch, Clerk

W. C. Hirth, Mayor

Village of Heflin

VILLAGE OF HEFLIN

LOUISIANA

RESOLUTION NO. 2022-1

A RESOLUTION OF THE VILLAGE OF HEFLIN

2021 WEBSTER PARISH MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

WHEREAS the WEBSTER PARISH OFFICE OF HOMELAND SECURITY & EMERGENCY PREPAREDNESS recognizes the threat that natural hazards pose to people and property within VILLAGE OF HEFLIN; and

WHEREAS the VILLAGE OF HEFLIN has prepared a multi-hazard mitigation plan, hereby known as 2021 WEBSTER PARISH MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS 2021 WEBSTER PARISH MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in VILLAGE OF HEFLIN from the impacts of future hazards and disasters; and

WHEREAS adoption by the WEBSTER PARISH OFFICE OF HOMELAND SECURITY &EMERGENCY PREPAREDNESS demonstrates their commitment to the hazard mitigation and achieving the goals outlined in the 2021 WEBSTER PARISH MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN.

NOW THEREFORE, BE IT RESOLVED BY THE VILLAGE OF HEFLIN, LOUISIANA, THAT:

Section 1. In accordance with VILLAGE OF HEFLIN APPROVAL FOR ADOPTING RESOLUTIONS, THE WEBSTER PARISH OFFICE OF HOMELAND SECURITY & EMERGENCY PREPAREDNESS adopts the 2021 WEBSTER PARISH MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN.

ADOPTED by a vote of MATT AUSTIN & HALLIE DeMoss in favor and 0 against, and 0 abstaining, this 6TH day of JANUARY, 2022.

ATTEST:

By: _____

SHERRY LIMOSNERO, CLERK, LCMC

APPROVED AS TO FORM:

By: _____

TODD LEAKE, MAYOR

City of Minden

CITY OF MINDEN

LOUISIANA

RESOLUTION NO. _____N/A_____

A RESOLUTION OF THE CITY OF MINDEN

2021 WEBSTER PARISH MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

WHEREAS the MINDEN CITY COUNCIL recognizes the threat that natural hazards pose to people and property within CITY OF MINDEN; and

WHEREAS the CITY OF MINDEN has prepared a multi-hazard mitigation plan, hereby known as the 2021 WEBSTER PARISH MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS the 2021 WEBSTER PARISH MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the CITY OF MINDEN from the impacts of future hazards and disasters; and

WHEREAS adoption by the MINDEN CITY COUNCIL demonstrates their commitment to the hazard mitigation and achieving the goals outlined in the 2021 WEBSTER PARISH MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN.

NOW THEREFORE, BE IT RESOLVED BY THE CITY OF MINDEN, LOUISIANA, THAT:

Section 1. In accordance with the SPECIAL LEGISLATIVE CHARTER FOR THE CITY OF MINDEN, THE MINDEN CITY COUNCIL adopts the 2021 WEBSTER PARISH MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN.

ADOPTED by a vote of __5__ in favor and __0__ against, and __0__ abstaining, this 7th day of Feb., 2022.

By: _____

TERRY L. GARDNER, MAYOR

ATTEST:

By: _____

MICHAEL FLUHR, ACTING CITY CLERK

APPROVED AS TO FORM:

By: _____

JIMBO YOCOM, CITY ATTORNEY

Town of Sarepta

Town Of Sarepta

LOUISIANA

RESOLUTION NO. _____

A RESOLUTION OF THE Town of Sarepta

2021 Webster Parish Multi-Jurisdictional Hazard Mitigation Plan

WHEREAS the Town council recognizes the threat that natural hazards pose to people and property within Sarepta; and

WHEREAS the Mayor and Board of Aldermen of the Town of Sarepta has prepared a multi-hazard mitigation plan, hereby known as the 2021 Webster Parish Multi-Jurisdictional Hazard Mitigation Plan in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS the 2021 Webster Parish Multi-Jurisdictional Hazard Mitigation Plan identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in Sarepta from the impacts of future hazards and disasters; and

WHEREAS adoption by the Mayor and Board of Aldermen of the Town of Sarepta demonstrates their commitment to the hazard mitigation and achieving the goals outlined in the 2021 Webster Parish Multi-Jurisdictional Hazard Mitigation Plan.

NOW THEREFORE, BE IT RESOLVED BY THE Town of Sarepta, LOUISIANA, THAT:

Section 1. In accordance with Sarepta Louisiana, THE Mayor and Board of Aldermen of the Town of Sarepta adopts the 2021 Webster Parish Multi-Jurisdictional Hazard Mitigation Plan.

ADOPTED by a vote of 5 in favor and 0 against, and 0 abstaining, this 12th day of May, 20 22.

By: Peggy Adkins

(print name)

ATTEST:

By: _____

(print name)

APPROVED AS TO FORM:

By: _____

(print name)

Village of Shongaloo

Village of Shongaloo

Shongaloo Louisiana

RESOLUTION NO. _____

A RESOLUTION OF THE Village of Shongaloo

2021 Webster Parish Multi-Jurisdictional Hazard Mitigation Plan

WHEREAS the Village of Shongaloo recognizes the threat that natural hazards pose to people and property within Village of Shongaloo; and

WHEREAS the Village of Shongaloo has prepared a multi-hazard mitigation plan, hereby known as 2021 Webster Parish Multi-Jurisdictional Hazard Mitigation Plan in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS 2021 Webster Parish Multi-Jurisdictional Hazard Mitigation Plan identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in Village of Shongaloo from the impacts of future hazards and disasters; and

WHEREAS adoption by the Village of Shongaloo demonstrates their commitment to the hazard mitigation and achieving the goals outlined in the 2021 Webster Parish Multi-Jurisdictional Hazard Mitigation Plan.

NOW THEREFORE, BE IT RESOLVED BY THE Village of Shongaloo, LOUISIANA, THAT:

Section 1. In accordance with THE Village of Shongaloo adopts the 2021 Webster Parish Multi-Jurisdictional Hazard Mitigation Plan.

ADOPTED by a vote of __4____ in favor and __0____ against, and __0____ abstaining, this__14_____ day of _February_____, 20_22__.

By: Tim Mouser

Tim Mouser

By: _____

(print name)

APPROVED AS TO FORM:

By: _____

(print name)

Town of Sibley

Town Of Sibley
P.O. Box 128
345 N Main Street
Sibley, Louisiana 71073
Phone (318) 377-0345 Fax (318) 377-0361

MAYOR
Jimmy Williams

TOWN CLERK
Sherry McCann, LMMC

ALDERMEN
Wayne Bolton
Helen Chanler
Richard Davis
Alan Myers
Robert Smart

RESOLUTION No. 2022-01

2021 WEBSTER PARISH MULTI-JURISDICTION MITIGATION PLAN

WHEREAS the Town of Sibley recognizes the threat that natural hazards pose to people and property within the Town of Sibley; and

WHEREAS the Town of Sibley has prepared a multi-hazard mitigation plan, hereby known as 2021 Webster Parish Multi-Jurisdiction Mitigation Plan in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS 2021 Webster Parish Multi-Jurisdiction Mitigation Plan identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the Town of Sibley from the impacts of future hazards and disasters; and

WHEREAS adoption by the Town of Sibley demonstrates their commitment to the hazard mitigation and achieving the goals outlined in the 2021 Webster Parish Multi-Jurisdiction Mitigation Plan.

NOW THEREFORE, BE IT RESOLVED BY THE TOWN OF SIBLEY, THAT:
Section 1. In accordance with the vote from the Town of Sibley Board of Aldermen, the Town of Sibley adopts the 2021 Webster Parish Multi-Jurisdiction Plan.

On a motion of Richard Davis, seconded by Robert Smart, Resolution No. 2022-01 is adopted on this 10th day of January, 2022.

YEAS: 5 NAYS: 0 ABSTAIN: 0 ABSENT: 0

Attest:

Jimmy Williams
Mayor

Linda Christy
Linda Christy
Deputy Town Clerk

This institution is an equal opportunity provider and employer.

City of Springhill

CITY OF SPRINGHILL

W. RAY HUDDLESTON
MAYOR
101 MACHEN DRIVE P.O. BOX 398
SPRINGHILL, LOUISIANA 71075
PHONE (318) 539-5681 FAX (318) 539-5683

CITY OF SPRINGHILL

LOUISIANA

RESOLUTION NO. 1-10-2022

A RESOLUTION OF THE CITY OF SPRINGHILL

2021 WEBSTER PARISH MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

WHEREAS the CITY OF SPRINGHILL recognizes the threat that natural hazards pose to people and property within SPRINGHILL, LA; and

WHEREAS the THE CITY OF SPRINGHILL has prepared a multi-hazard mitigation plan, hereby known as 2021 WEBSTER PARISH MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS 2021 WEBSTER PARISH MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in SPRINGHILL, LA from the impacts of future hazards and disasters; and

WHEREAS adoption by the CITY OF SPRINGHILL demonstrates their commitment to the hazard mitigation and achieving the goals outlined in the 2021 WEBSTER PARISH MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN.

NOW THEREFORE, BE IT RESOLVED BY THE CITY OF SPRINGHILL, LOUISIANA, THAT:

Section 1. THE CITY OF SPRINGHILL adopts the 2021 WEBSTER PARISH MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN.

ADOPTED by a vote of 4 in favor and 0 against, and 1absent, this 10th day of January, 2022.

By: W. Ray Huddleston

W. Ray Huddleston, Mayor

ATTEST:

By: Shelli Malone

Shelli Malone, LMMC, City Clerk

AN EQUAL OPPORTUNITY EMPLOYER

Appendix E: State Required Worksheets

During the planning process (Appendix A: Planning Process), the Hazard Mitigation Plan Update Steering Committee was provided state-required plan update process worksheets to be filled out. The worksheets were presented at the Initial Planning Meeting by SDMI as tools for assisting in the update of the Hazard Mitigation Plan, but also as a state requirement for the update. The plan update worksheets allowed for collection of information such as planning team members, community capabilities, community infrastructure, vulnerable populations and NFIP information. The following pages contain documentation of the state required worksheets.

Mitigation Planning Team

Webster Parish Hazard Mitigation Planning Committee			
Name	**Title**	**Agency**	**Email**
Brian Williams	Director	Webster Parish OHSEP	webster.ohsep@gmail.com
Lisa Balkom	Secretary-Treasurer	Webster Parish Police Jury	lbalkom@suddenlinkmail.com
Jim Bonsall	President	Webster Parish Police Jury	bonsallJm@aol.com
Ashley Williams-Jones	Mayor	Town of Cotton Valley	cvmayor@centurytel.net
Terry Hoof	Mayor	Town of Cullen	mayorhoof@outlook.com
Kay Hallmark-Stratton	Mayor	Village of Dixie Inn	mayor@villageofdixieinn.com
Steven Bridwell	Mayor	Village of Doyline	doylinemayor@att.net
W.C. Hirth	Mayor	Village of Dubberly	dubberlytownhall@cebridge.net
Todd Leake	Mayor	Village of Heflin	villageofheflin@suddenlinkmail.com
Terry Gardner	Mayor	City of Minden	mayor@mindenusa.com
Peggy Adkins	Mayor	Town of Sarepta	sareptamayor@gmail.com
Tim L. Mouser	Mayor	Village of Shongaloo	tim.mouser@emailsmc.com
Jimmy Williams	Mayor	Town of Sibley	sibleymayor@bellsouth.net
W. Ray Huddleston	Mayor	City of Springhill	mayor@springhill-la.us

Capability Assessment

Unincorporated Webster Parish

Capability Assessment Worksheet – Unincorporated Webster Parish		
Local mitigation capabilities are existing authorities, polices and resources that reduce hazard impacts or that could be used to implement hazard mitigation activities. Please complete the tables and questions in the worksheet as completely as possible.		
Planning and Regulatory		
Please indicate which of the following plans and regulatory capabilities your jurisdiction has in place.		
Plans	**Yes / No**	**Comments**
Comprehensive / Master Plan	No	
Capital Improvements Plan	No	
Economic Development Plan	No	
Local Emergency Operations Plan	Yes	
Continuity of Operations Plan	No	
Transportation Plan	No	
Stormwater Management Plan	No	
Community Wildfire Protection Plan	No	
Other plans (redevelopment, recovery, coastal zone management)	No	
Building Code, Permitting and Inspections	**Yes / No**	**Comments**
Building Code	Yes	
Building Code Effectiveness Grading Schedule (BCEGS) Score	No	
Fire Department ISO/PIAL rating	Yes	per district
Site plan review requirements	No	
Land Use Planning and Ordinances	**Yes / No**	**Comments**
Zoning Ordinance	No	
Subdivision Ordinance	No	
Floodplain Ordinance	Yes	
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	No	
Flood Insurance Rate Maps	Yes	
Acquisition of land for open space and public recreation uses	No	
Other	No	

Administration and Technical		
Identify whether your community has the following administrative and technical capabilities. For smaller jurisdictions without local staff resources, if there are public resources at the next higher level government that can provide technical assistance, indicate so in your comments.		
Administration	**Yes / No**	**Comments**
Planning Commission	No	
Mitigation Planning Committee	Yes	
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	Yes	
Staff	**Yes / No**	**Comments**
Chief Building Official	No	
Floodplain Administrator	Yes	
Emergency Manager	Yes	
Community Planner	No	
Civil Engineer	Yes	
GIS Coordinator	Yes	
Grant Writer	Yes	
Other	No	
Technical	**Yes / No**	**Comments**
Warning Systems / Service (Reverse 911, outdoor warning signals)	No	
Hazard Data & Information	Yes	
Grant Writing	Yes	
Hazus Analysis	Yes	
Other	No	

Financial		
Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.		
Funding Resource	**Yes / No**	**Comments**
Capital Improvements project funding	No	
Authority to levy taxes for specific purposes	Yes	
Fees for water, sewer, gas, or electric services	No	
Impact fees for new development	No	
Stormwater Utility Fee	No	
Community Development Block Grant (CDBG)	Yes	
Other Funding Programs	Yes	

Education and Outreach		
Identify education and outreach programs and methods, already in place that could be used to implement mitigation activities and communicate hazard-related information.		
Program / Organization	**Yes / No**	**Comments**
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	No	
Ongoing public education or information program (responsible water use, fire safety, household preparedness, environmental education)	No	
Natural Disaster or safety related school program	Yes	
Storm Ready certification	No	
Firewise Communities certification	No	
Public/Private partnership initiatives addressing disaster-related issues	No	
Other	No	

Town of Cotton Valley

Capability Assessment Worksheet – Town of Cotton Valley		
Local mitigation capabilities are existing authorities, polices and resources that reduce hazard impacts or that could be used to implement hazard mitigation activities. Please complete the tables and questions in the worksheet as completely as possible.		
Planning and Regulatory		
Please indicate which of the following plans and regulatory capabilities your jurisdiction has in place.		
Plans	**Yes / No**	**Comments**
Comprehensive / Master Plan	No	
Capital Improvements Plan	No	
Economic Development Plan	No	
Local Emergency Operations Plan	No	
Continuity of Operations Plan	No	
Transportation Plan	No	
Stormwater Management Plan	No	
Community Wildfire Protection Plan	No	
Other plans (redevelopment, recovery, coastal zone management)	No	
Building Code, Permitting and Inspections	**Yes / No**	**Comments**
Building Code	No	
Building Code Effectiveness Grading Schedule (BCEGS) Score	No	
Fire Department ISO/PIAL rating	Yes	
Site plan review requirements	No	
Land Use Planning and Ordinances	**Yes / No**	**Comments**
Zoning Ordinance	No	
Subdivision Ordinance	No	
Floodplain Ordinance	Yes	
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	No	
Flood Insurance Rate Maps	Yes	
Acquisition of land for open space and public recreation uses	Yes	
Other	No	

Administration and Technical		
Identify whether your community has the following administrative and technical capabilities. For smaller jurisdictions without local staff resources, if there are public resources at the next higher level government that can provide technical assistance, indicate so in your comments.		
Administration	**Yes / No**	**Comments**
Planning Commission	No	
Mitigation Planning Committee	No	
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	No	
Staff	**Yes / No**	**Comments**
Chief Building Official	No	
Floodplain Administrator	Yes	
Emergency Manager	No	
Community Planner	No	
Civil Engineer	No	
GIS Coordinator	No	
Grant Writer	No	
Other		
Technical	**Yes / No**	**Comments**
Warning Systems / Service (Reverse 911, outdoor warning signals)	No	
Hazard Data & Information	No	
Grant Writing	No	
Hazus Analysis	No	
Other		

Financial		
Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.		
Funding Resource	**Yes / No**	**Comments**
Capital Improvements project funding	Yes	
Authority to levy taxes for specific purposes	Yes	
Fees for water, sewer, gas, or electric services	Yes	
Impact fees for new development	No	
Stormwater Utility Fee	No	
Community Development Block Grant (CDBG)	Yes	
Other Funding Programs	Yes	

Education and Outreach		
Identify education and outreach programs and methods, already in place that could be used to implement mitigation activities and communicate hazard-related information.		
Program / Organization	**Yes / No**	**Comments**
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	No	
Ongoing public education or information program (responsible water use, fire safety, household preparedness, environmental education)	No	
Natural Disaster or safety related school program	No	
Storm Ready certification	No	
Firewise Communities certification	No	
Public/Private partnership initiatives addressing disaster-related issues	No	
Other	No	

Town of Cullen

Capability Assessment Worksheet – Town of Cullen		
Local mitigation capabilities are existing authorities, polices and resources that reduce hazard impacts or that could be used to implement hazard mitigation activities. Please complete the tables and questions in the worksheet as completely as possible.		
Planning and Regulatory		
Please indicate which of the following plans and regulatory capabilities your jurisdiction has in place.		
Plans	**Yes / No**	**Comments**
Comprehensive / Master Plan	No	
Capital Improvements Plan	No	
Economic Development Plan	No	
Local Emergency Operations Plan	Yes	
Continuity of Operations Plan	No	
Transportation Plan	No	
Stormwater Management Plan	No	
Community Wildfire Protection Plan	No	
Other plans (redevelopment, recovery, coastal zone management)	No	
Building Code, Permitting and Inspections	**Yes / No**	**Comments**
Building Code	Yes	
Building Code Effectiveness Grading Schedule (BCEGS) Score	No	
Fire Department ISO/PIAL rating	Yes	
Site plan review requirements	No	
Land Use Planning and Ordinances	**Yes / No**	**Comments**
Zoning Ordinance	No	
Subdivision Ordinance	No	
Floodplain Ordinance	Yes	
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	No	
Flood Insurance Rate Maps	Yes	
Acquisition of land for open space and public recreation uses	No	
Other	No	

Administration and Technical		
Identify whether your community has the following administrative and technical capabilities. For smaller jurisdictions without local staff resources, if there are public resources at the next higher level government that can provide technical assistance, indicate so in your comments.		
Administration	**Yes / No**	**Comments**
Planning Commission	No	
Mitigation Planning Committee	No	
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	No	
Staff	**Yes / No**	**Comments**
Chief Building Official	No	
Floodplain Administrator	Yes	
Emergency Manager	No	
Community Planner	No	
Civil Engineer	No	
GIS Coordinator	No	
Grant Writer	No	
Other		
Technical	**Yes / No**	**Comments**
Warning Systems / Service (Reverse 911, outdoor warning signals)	No	
Hazard Data & Information	No	
Grant Writing	No	
Hazus Analysis	No	
Other	No	

Financial		
Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.		
Funding Resource	**Yes / No**	**Comments**
Capital Improvements project funding	Yes	
Authority to levy taxes for specific purposes	Yes	
Fees for water, sewer, gas, or electric services	Yes	
Impact fees for new development	No	
Stormwater Utility Fee	No	
Community Development Block Grant (CDBG)	Yes	
Other Funding Programs	LGAP GWEF	

Education and Outreach		
Identify education and outreach programs and methods, already in place that could be used to implement mitigation activities and communicate hazard-related information.		
Program / Organization	**Yes / No**	**Comments**
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	No	
Ongoing public education or information program (responsible water use, fire safety, household preparedness, environmental education)	No	
Natural Disaster or safety related school program	No	
Storm Ready certification	No	
Firewise Communities certification	No	
Public/Private partnership initiatives addressing disaster-related issues	No	
Other	No	

Village of Dixie Inn

Capability Assessment Worksheet – Village of Dixie Inn		
Local mitigation capabilities are existing authorities, polices and resources that reduce hazard impacts or that could be used to implement hazard mitigation activities. Please complete the tables and questions in the worksheet as completely as possible.		
Planning and Regulatory		
Please indicate which of the following plans and regulatory capabilities your jurisdiction has in place.		
Plans	**Yes / No**	**Comments**
Comprehensive / Master Plan	No	
Capital Improvements Plan	Yes	Infrastructure
Economic Development Plan	No	
Local Emergency Operations Plan	No	
Continuity of Operations Plan	No	
Transportation Plan	No	
Stormwater Management Plan	No	
Community Wildfire Protection Plan	No	
Other plans (redevelopment, recovery, coastal zone management)	No	
Building Code, Permitting and Inspections	**Yes / No**	**Comments**
Building Code	Yes	Ord. #105 and #106
Building Code Effectiveness Grading Schedule (BCEGS) Score	No	
Fire Department ISO/PIAL rating	Yes	
Site plan review requirements	Yes	Ord. #105 and #106
Land Use Planning and Ordinances	**Yes / No**	**Comments**
Zoning Ordinance	No	
Subdivision Ordinance	No	
Floodplain Ordinance	Yes	Ord. #113
Natural Hazard Specific Ord (stormwater, steep slope, wildfire	No	
Flood Insurance Rate Maps	Yes	In File Cabinet - Historical Files
Acquisition of land for open space and public recreation uses	No	
Other	No	

Administration and Technical		
Identify whether your community has the following administrative and technical capabilities. For smaller jurisdictions without local staff resources, if there are public resources at the next higher level government that can provide technical assistance, indicate so in your comments.		
Administration	**Yes / No**	**Comments**
Planning Commission	No	Relies on parish
Mitigation Planning Committee	No	Relies on parish
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	Yes	Hire contractors and parish/state
Staff	**Yes / No**	**Comments**
Chief Building Official	No	Relies on parish
Floodplain Administrator	Yes	Relies on parish
Emergency Manager	Yes	Relies on parish
Community Planner	No	ire firm
Civil Engineer	No	Hire firm
GIS Coordinator	No	Relies on parish
Grant Writer	No	In house or hire firm
Other	No	
Technical	**Yes / No**	**Comments**
Warning Systems / Service (Reverse 911, outdoor warning signals)	No	
Hazard Data & Information	No	Relies on parish
Grant Writing	Yes	Hire firm /in house
Hazus Analysis	No	Relies on parish
Other	No	

Financial		
Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.		
Funding Resource	**Yes / No**	**Comments**
Capital Improvements project funding	Yes	
Authority to levy taxes for specific purposes	Yes	Up to 7 mils w/o voter approval
Fees for water, sewer, gas, or electric services	Yes	Water, sewer, trash service
Impact fees for new development	No	
Stormwater Utility Fee	No	
Community Development Block Grant (CDBG)	Yes	
Other Funding Programs	Yes	LGAP, CWEG, DRA, FP&C

Education and Outreach		
Identify education and outreach programs and methods, already in place that could be used to implement mitigation activities and communicate hazard-related information.		
Program / Organization	**Yes / No**	**Comments**
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	No	
Ongoing public education or information program (responsible water use, fire safety, household preparedness, environmental education)	No	
Natural Disaster or safety related school program	No	
Storm Ready certification	No	
Firewise Communities certification	No	
Public/Private partnership initiatives addressing disaster-related issues	No	
Other	No	

Village of Doyline

Capability Assessment Worksheet – Village of Doyline		
Local mitigation capabilities are existing authorities, polices and resources that reduce hazard impacts or that could be used to implement hazard mitigation activities. Please complete the tables and questions in the worksheet as completely as possible.		
Planning and Regulatory		
Please indicate which of the following plans and regulatory capabilities your jurisdiction has in place.		
Plans	**Yes / No**	**Comments**
Comprehensive / Master Plan	No	
Capital Improvements Plan	No	
Economic Development Plan	No	
Local Emergency Operations Plan	No	
Continuity of Operations Plan	No	
Transportation Plan	No	
Stormwater Management Plan	No	
Community Wildfire Protection Plan	No	
Other plans (redevelopment, recovery, coastal zone management)	No	
Building Code, Permitting and Inspections	**Yes / No**	**Comments**
Building Code	Yes	
Building Code Effectiveness Grading Schedule (BCEGS) Score	No	
Fire Department ISO/PIAL rating	Yes	
Site plan review requirements	No	
Land Use Planning and Ordinances	**Yes / No**	**Comments**
Zoning Ordinance	No	
Subdivision Ordinance	No	
Floodplain Ordinance	Yes	
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	No	
Flood Insurance Rate Maps	Yes	
Acquisition of land for open space and public recreation uses	No	
Other	No	

Administration and Technical		
Identify whether your community has the following administrative and technical capabilities. For smaller jurisdictions without local staff resources, if there are public resources at the next higher level government that can provide technical assistance, indicate so in your comments.		
Administration	**Yes / No**	**Comments**
Planning Commission	No	
Mitigation Planning Committee	No	
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	No	
Staff	**Yes / No**	**Comments**
Chief Building Official	No	
Floodplain Administrator	Yes	
Emergency Manager	Yes	
Community Planner	No	
Civil Engineer	No	
GIS Coordinator	No	
Grant Writer	No	
Other	No	
Technical	**Yes / No**	**Comments**
Warning Systems / Service (Reverse 911, outdoor warning signals)	No	
Hazard Data & Information	No	
Grant Writing	No	
Hazus Analysis	No	
Other	No	

Financial		
Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.		
Funding Resource	**Yes / No**	**Comments**
Capital Improvements project funding	Yes	
Authority to levy taxes for specific purposes	Yes	
Fees for water, sewer, gas, or electric services	Yes	
Impact fees for new development	No	
Stormwater Utility Fee	No	
Community Development Block Grant (CDBG)	Yes	
Other Funding Programs	No	

Education and Outreach		
Identify education and outreach programs and methods, already in place that could be used to implement mitigation activities and communicate hazard-related information.		
Program / Organization	**Yes / No**	**Comments**
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	No	
Ongoing public education or information program (responsible water use, fire safety, household preparedness, environmental education)	No	
Natural Disaster or safety related school program	No	
Storm Ready certification	No	
Firewise Communities certification	No	
Public/Private partnership initiatives addressing disaster-related issues	No	
Other	No	

Village of Dubberly

Capability Assessment Worksheet – Village of Dubberly		
Local mitigation capabilities are existing authorities, polices and resources that reduce hazard impacts or that could be used to implement hazard mitigation activities. Please complete the tables and questions in the worksheet as completely as possible.		
Planning and Regulatory		
Please indicate which of the following plans and regulatory capabilities your jurisdiction has in place.		
Plans	**Yes / No**	**Comments**
Comprehensive / Master Plan	No	
Capital Improvements Plan	No	
Economic Development Plan	No	
Local Emergency Operations Plan	No	
Continuity of Operations Plan	No	
Transportation Plan	No	
Stormwater Management Plan	No	
Community Wildfire Protection Plan	No	
Other plans (redevelopment, recovery, coastal zone management)	No	
Building Code, Permitting and Inspections	**Yes / No**	**Comments**
Building Code	Yes	
Building Code Effectiveness Grading Schedule (BCEGS) Score	No	
Fire Department ISO/PIAL rating	Yes	
Site plan review requirements	No	
Land Use Planning and Ordinances	**Yes / No**	**Comments**
Zoning Ordinance	No	
Subdivision Ordinance	No	
Floodplain Ordinance	No	
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	No	
Flood Insurance Rate Maps	No	
Acquisition of land for open space and public recreation uses	No	
Other	No	

Administration and Technical		
Identify whether your community has the following administrative and technical capabilities. For smaller jurisdictions without local staff resources, if there are public resources at the next higher level government that can provide technical assistance, indicate so in your comments.		
Administration	**Yes / No**	**Comments**
Planning Commission	No	
Mitigation Planning Committee	No	
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	No	
Staff	**Yes / No**	**Comments**
Chief Building Official	No	
Floodplain Administrator	No	
Emergency Manager	Yes	
Community Planner	No	
Civil Engineer	No	
GIS Coordinator	No	
Grant Writer	No	
Other	No	
Technical	**Yes / No**	**Comments**
Warning Systems / Service (Reverse 911, outdoor warning signals)	No	
Hazard Data & Information	No	
Grant Writing	No	
Hazus Analysis	No	
Other	No	

Financial		
Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.		
Funding Resource	**Yes / No**	**Comments**
Capital Improvements project funding	Yes	
Authority to levy taxes for specific purposes	Yes	
Fees for water, sewer, gas, or electric services	Yes	
Impact fees for new development	No	
Stormwater Utility Fee	No	
Community Development Block Grant (CDBG)	Yes	
Other Funding Programs	Yes	

Education and Outreach		
Identify education and outreach programs and methods, already in place that could be used to implement mitigation activities and communicate hazard-related information.		
Program / Organization	**Yes / No**	**Comments**
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	No	
Ongoing public education or information program (responsible water use, fire safety, household preparedness, environmental education)	No	
Natural Disaster or safety related school program	No	
Storm Ready certification	No	
Firewise Communities certification	No	
Public/Private partnership initiatives addressing disaster-related issues	No	
Other	No	

Village of Heflin

Capability Assessment Worksheet – Village of Heflin		
Local mitigation capabilities are existing authorities, polices and resources that reduce hazard impacts or that could be used to implement hazard mitigation activities. Please complete the tables and questions in the worksheet as completely as possible.		
Planning and Regulatory		
Please indicate which of the following plans and regulatory capabilities your jurisdiction has in place.		
Plans	**Yes / No**	**Comments**
Comprehensive / Master Plan	No	
Capital Improvements Plan	No	
Economic Development Plan	No	
Local Emergency Operations Plan	No	
Continuity of Operations Plan	No	
Transportation Plan	No	
Stormwater Management Plan	No	
Community Wildfire Protection Plan	No	
Other plans (redevelopment, recovery, coastal zone management)	No	
Building Code, Permitting and Inspections	**Yes / No**	**Comments**
Building Code	No	
Building Code Effectiveness Grading Schedule (BCEGS) Score	No	
Fire Department ISO/PIAL rating	Yes	
Site plan review requirements	No	
Land Use Planning and Ordinances	**Yes / No**	**Comments**
Zoning Ordinance	No	
Subdivision Ordinance	Yes	
Floodplain Ordinance	No	
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	No	
Flood Insurance Rate Maps	No	
Acquisition of land for open space and public recreation uses	No	
Other	No	

Administration and Technical		
Identify whether your community has the following administrative and technical capabilities. For smaller jurisdictions without local staff resources, if there are public resources at the next higher level government that can provide technical assistance, indicate so in your comments.		
Administration	**Yes / No**	**Comments**
Planning Commission	No	
Mitigation Planning Committee	No	
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	No	
Staff	**Yes / No**	**Comments**
Chief Building Official	No	
Floodplain Administrator	No	
Emergency Manager	No	
Community Planner	No	
Civil Engineer	No	
GIS Coordinator	No	
Grant Writer	No	
Other	No	
Technical	**Yes / No**	**Comments**
Warning Systems / Service (Reverse 911, outdoor warning signals)	No	
Hazard Data & Information	No	
Grant Writing	No	
Hazus Analysis	No	
Other	No	

Financial		
Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.		
Funding Resource	**Yes / No**	**Comments**
Capital Improvements project funding	Yes	
Authority to levy taxes for specific purposes	Yes	
Fees for water, sewer, gas, or electric services	No	
Impact fees for new development	No	
Stormwater Utility Fee	No	
Community Development Block Grant (CDBG)	Yes	
Other Funding Programs		

Education and Outreach		
Identify education and outreach programs and methods, already in place that could be used to implement mitigation activities and communicate hazard-related information.		
Program / Organization	**Yes / No**	**Comments**
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	No	
Ongoing public education or information program (responsible water use, fire safety, household preparedness, environmental education)	No	
Natural Disaster or safety related school program	No	
Storm Ready certification	No	
Firewise Communities certification	No	
Public/Private partnership initiatives addressing disaster-related issues	No	
Other	No	

City of Minden

Capability Assessment Worksheet – City of Minden		
Local mitigation capabilities are existing authorities, polices and resources that reduce hazard impacts or that could be used to implement hazard mitigation activities. Please complete the tables and questions in the worksheet as completely as possible.		
Planning and Regulatory		
Please indicate which of the following plans and regulatory capabilities your jurisdiction has in place.		
Plans	**Yes / No**	**Comments**
Comprehensive / Master Plan	No	
Capital Improvements Plan	Yes	
Economic Development Plan	Yes	
Local Emergency Operations Plan	Yes	
Continuity of Operations Plan	No	
Transportation Plan	No	
Stormwater Management Plan	No	
Community Wildfire Protection Plan	Yes	
Other plans (redevelopment, recovery, coastal zone management)	No	
Building Code, Permitting and Inspections	**Yes / No**	**Comments**
Building Code	Yes	
Building Code Effectiveness Grading Schedule (BCEGS) Score	No	
Fire Department ISO/PIAL rating	Yes	
Site plan review requirements	Yes	
Land Use Planning and Ordinances	**Yes / No**	**Comments**
Zoning Ordinance	Yes	
Subdivision Ordinance	Yes	
Floodplain Ordinance	Yes	
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	Yes	
Flood Insurance Rate Maps	Yes	
Acquisition of land for open space and public recreation uses	No	
Other	No	

Administration and Technical		
Identify whether your community has the following administrative and technical capabilities. For smaller jurisdictions without local staff resources, if there are public resources at the next higher level government that can provide technical assistance, indicate so in your comments.		
Administration	**Yes / No**	**Comments**
Planning Commission	Yes	
Mitigation Planning Committee	No	
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	Yes	
Staff	**Yes / No**	**Comments**
Chief Building Official	Yes	
Floodplain Administrator	Yes	
Emergency Manager	Yes	
Community Planner	No	
Civil Engineer	No	
GIS Coordinator	Yes	
Grant Writer	No	
Other	No	
Technical	**Yes / No**	**Comments**
Warning Systems / Service (Reverse 911, outdoor warning signals)	No	
Hazard Data & Information	No	
Grant Writing	No	
Hazus Analysis	No	
Other	No	

Financial		
Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.		
Funding Resource	**Yes / No**	**Comments**
Capital Improvements project funding	Yes	
Authority to levy taxes for specific purposes	Yes	
Fees for water, sewer, gas, or electric services	Yes	
Impact fees for new development	No	
Stormwater Utility Fee	No	
Community Development Block Grant (CDBG)	Yes	
Other Funding Programs	Yes	

Education and Outreach		
Identify education and outreach programs and methods, already in place that could be used to implement mitigation activities and communicate hazard-related information.		
Program / Organization	**Yes / No**	**Comments**
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	No	
Ongoing public education or information program (responsible water use, fire safety, household preparedness, environmental education)	Yes	
Natural Disaster or safety related school program	No	
Storm Ready certification	No	
Firewise Communities certification	No	
Public/Private partnership initiatives addressing disaster-related issues	No	
Other	No	

Town of Sarepta

Capability Assessment Worksheet – Town of Sarepta		
Local mitigation capabilities are existing authorities, polices and resources that reduce hazard impacts or that could be used to implement hazard mitigation activities. Please complete the tables and questions in the worksheet as completely as possible.		
Planning and Regulatory		
Please indicate which of the following plans and regulatory capabilities your jurisdiction has in place.		
Plans	**Yes / No**	**Comments**
Comprehensive / Master Plan	No	
Capital Improvements Plan	Yes	
Economic Development Plan	No	
Local Emergency Operations Plan	Yes	
Continuity of Operations Plan	No	
Transportation Plan	No	
Stormwater Management Plan	No	
Community Wildfire Protection Plan	No	
Other plans (redevelopment, recovery, coastal zone management)	No	
Building Code, Permitting and Inspections	**Yes / No**	**Comments**
Building Code	Yes	
Building Code Effectiveness Grading Schedule (BCEGS) Score	No	
Fire Department ISO/PIAL rating	Yes	
Site plan review requirements	No	
Land Use Planning and Ordinances	**Yes / No**	**Comments**
Zoning Ordinance	No	
Subdivision Ordinance	No	
Floodplain Ordinance	Yes	
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	No	
Flood Insurance Rate Maps	Yes	
Acquisition of land for open space and public recreation uses	No	
Other	No	

Administration and Technical		
Identify whether your community has the following administrative and technical capabilities. For smaller jurisdictions without local staff resources, if there are public resources at the next higher level government that can provide technical assistance, indicate so in your comments.		
Administration	**Yes / No**	**Comments**
Planning Commission	No	
Mitigation Planning Committee	No	
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	No	
Staff	**Yes / No**	**Comments**
Chief Building Official	No	
Floodplain Administrator	Yes	
Emergency Manager	Yes	
Community Planner	No	
Civil Engineer	No	
GIS Coordinator	No	
Grant Writer	Yes	
Other	No	
Technical	**Yes / No**	**Comments**
Warning Systems / Service (Reverse 911, outdoor warning signals)	No	
Hazard Data & Information	No	
Grant Writing	Yes	
Hazus Analysis	No	
Other	No	

Financial		
Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.		
Funding Resource	**Yes / No**	**Comments**
Capital Improvements project funding	Yes	
Authority to levy taxes for specific purposes	Yes	
Fees for water, sewer, gas, or electric services	Yes	
Impact fees for new development	No	
Stormwater Utility Fee	No	
Community Development Block Grant (CDBG)	Yes	
Other Funding Programs	No	

Education and Outreach		
Identify education and outreach programs and methods, already in place that could be used to implement mitigation activities and communicate hazard-related information.		
Program / Organization	**Yes / No**	**Comments**
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	No	
Ongoing public education or information program (responsible water use, fire safety, household preparedness, environmental education)	No	
Natural Disaster or safety related school program	No	
Storm Ready certification	No	
Firewise Communities certification	No	
Public/Private partnership initiatives addressing disaster-related issues	No	
Other	No	

Village of Shongaloo

Capability Assessment Worksheet – Village of Shongaloo		
Local mitigation capabilities are existing authorities, polices and resources that reduce hazard impacts or that could be used to implement hazard mitigation activities. Please complete the tables and questions in the worksheet as completely as possible.		
Planning and Regulatory		
Please indicate which of the following plans and regulatory capabilities your jurisdiction has in place.		
Plans	**Yes / No**	**Comments**
Comprehensive / Master Plan	No	
Capital Improvements Plan	No	
Economic Development Plan	No	
Local Emergency Operations Plan	No	
Continuity of Operations Plan	No	
Transportation Plan	No	
Stormwater Management Plan	No	
Community Wildfire Protection Plan	No	
Other plans (redevelopment, recovery, coastal zone management)	No	
Building Code, Permitting and Inspections	**Yes / No**	**Comments**
Building Code	Yes	
Building Code Effectiveness Grading Schedule (BCEGS) Score	No	
Fire Department ISO/PIAL rating	No	
Site plan review requirements	No	
Land Use Planning and Ordinances	**Yes / No**	**Comments**
Zoning Ordinance	No	
Subdivision Ordinance	No	
Floodplain Ordinance	No	
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	No	
Flood Insurance Rate Maps	No	
Acquisition of land for open space and public recreation uses	No	
Other	No	

Administration and Technical		
Identify whether your community has the following administrative and technical capabilities. For smaller jurisdictions without local staff resources, if there are public resources at the next higher level government that can provide technical assistance, indicate so in your comments.		
Administration	**Yes / No**	**Comments**
Planning Commission	No	
Mitigation Planning Committee	No	Relies on parish
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	No	
Staff	**Yes / No**	**Comments**
Chief Building Official	No	
Floodplain Administrator	No	Relies on parish
Emergency Manager	No	Relies on parish
Community Planner	No	
Civil Engineer	No	Relies on parish
GIS Coordinator	No	Relies on parish
Grant Writer	No	Relies on parish
Other	No	
Technical	**Yes / No**	**Comments**
Warning Systems / Service (Reverse 911, outdoor warning signals)	No	
Hazard Data & Information	No	
Grant Writing	No	
Hazus Analysis	No	
Other	No	

Financial		
Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.		
Funding Resource	**Yes / No**	**Comments**
Capital Improvements project funding	Yes	
Authority to levy taxes for specific purposes	Yes	
Fees for water, sewer, gas, or electric services	No	Relies on parish
Impact fees for new development	No	Relies on parish
Stormwater Utility Fee	No	Relies on parish
Community Development Block Grant (CDBG)	Yes	
Other Funding Programs	No	

Education and Outreach		
Identify education and outreach programs and methods, already in place that could be used to implement mitigation activities and communicate hazard-related information.		
Program / Organization	**Yes / No**	**Comments**
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	No	
Ongoing public education or information program (responsible water use, fire safety, household preparedness, environmental education)	No	
Natural Disaster or safety related school program	No	
Storm Ready certification	No	
Firewise Communities certification	No	
Public/Private partnership initiatives addressing disaster-related issues	No	
Other	No	

Town of Sibley

Capability Assessment Worksheet – Town of Sibley		
Local mitigation capabilities are existing authorities, polices and resources that reduce hazard impacts or that could be used to implement hazard mitigation activities. Please complete the tables and questions in the worksheet as completely as possible.		
Planning and Regulatory		
Please indicate which of the following plans and regulatory capabilities your jurisdiction has in place.		
Plans	**Yes / No**	**Comments**
Comprehensive / Master Plan	No	
Capital Improvements Plan	No	
Economic Development Plan	No	
Local Emergency Operations Plan	No	
Continuity of Operations Plan	No	
Transportation Plan	No	
Stormwater Management Plan	No	
Community Wildfire Protection Plan	No	
Other plans (redevelopment, recovery, coastal zone management)	No	
Building Code, Permitting and Inspections	**Yes / No**	**Comments**
Building Code	Yes	
Building Code Effectiveness Grading Schedule (BCEGS) Score	no	
Fire Department ISO/PIAL rating	Yes	
Site plan review requirements	No	
Land Use Planning and Ordinances	**Yes / No**	**Comments**
Zoning Ordinance	No	
Subdivision Ordinance	No	
Floodplain Ordinance	Yes	
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	No	
Flood Insurance Rate Maps	Yes	
Acquisition of land for open space and public recreation uses	No	
Other	No	

Administration and Technical		
Identify whether your community has the following administrative and technical capabilities. For smaller jurisdictions without local staff resources, if there are public resources at the next higher level government that can provide technical assistance, indicate so in your comments.		
Administration	**Yes / No**	**Comments**
Planning Commission	No	
Mitigation Planning Committee	No	Relies on parish
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	No	Relies on parish
Staff	**Yes / No**	**Comments**
Chief Building Official	No	
Floodplain Administrator	Yes	Relies on parish
Emergency Manager	Yes	Relies on parish
Community Planner	No	
Civil Engineer	No	Relies on parish
GIS Coordinator	No	Relies on parish
Grant Writer	No	Relies on parish
Other	No	
Technical	**Yes / No**	**Comments**
Warning Systems / Service (Reverse 911, outdoor warning signals)	Yes	
Hazard Data & Information	No	Relies on parish
Grant Writing	No	Relies on parish
Hazus Analysis	No	Relies on parish
Other	No	

Financial		
Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.		
Funding Resource	**Yes / No**	**Comments**
Capital Improvements project funding	Yes	
Authority to levy taxes for specific purposes	Yes	
Fees for water, sewer, gas, or electric services	Yes	
Impact fees for new development	No	
Stormwater Utility Fee	No	
Community Development Block Grant (CDBG)	Yes	
Other Funding Programs	No	

Education and Outreach		
Identify education and outreach programs and methods, already in place that could be used to implement mitigation activities and communicate hazard-related information.		
Program / Organization	**Yes / No**	**Comments**
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	No	
Ongoing public education or information program (responsible water use, fire safety, household preparedness, environmental education)	No	
Natural Disaster or safety related school program	No	
Storm Ready certification	No	
Firewise Communities certification	No	
Public/Private partnership initiatives addressing disaster-related issues	No	
Other	No	

City of Springhill

Capability Assessment Worksheet – City of Springhill		
Local mitigation capabilities are existing authorities, polices and resources that reduce hazard impacts or that could be used to implement hazard mitigation activities. Please complete the tables and questions in the worksheet as completely as possible.		
Planning and Regulatory		
Please indicate which of the following plans and regulatory capabilities your jurisdiction has in place.		
Plans	**Yes / No**	**Comments**
Comprehensive / Master Plan	No	
Capital Improvements Plan	No	
Economic Development Plan	Yes	
Local Emergency Operations Plan	No	
Continuity of Operations Plan	No	
Transportation Plan	No	
Stormwater Management Plan	No	
Community Wildfire Protection Plan	No	
Other plans (redevelopment, recovery, coastal zone management)	No	
Building Code, Permitting and Inspections	**Yes / No**	**Comments**
Building Code	Yes	
Building Code Effectiveness Grading Schedule (BCEGS) Score	No	
Fire Department ISO/PIAL rating	Yes	
Site plan review requirements	No	
Land Use Planning and Ordinances	**Yes / No**	**Comments**
Zoning Ordinance	Yes	
Subdivision Ordinance	No	
Floodplain Ordinance	Yes	
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	No	
Flood Insurance Rate Maps	Yes	
Acquisition of land for open space and public recreation uses	Yes	
Other	No	

Administration and Technical		
Identify whether your community has the following administrative and technical capabilities. For smaller jurisdictions without local staff resources, if there are public resources at the next higher level government that can provide technical assistance, indicate so in your comments.		
Administration	**Yes / No**	**Comments**
Planning Commission	No	
Mitigation Planning Committee	No	
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	Yes	
Staff	**Yes / No**	**Comments**
Chief Building Official	No	
Floodplain Administrator	Yes	
Emergency Manager	Yes	
Community Planner	No	
Civil Engineer	No	
GIS Coordinator	No	
Grant Writer	No	
Other	No	
Technical	**Yes / No**	**Comments**
Warning Systems / Service (Reverse 911, outdoor warning signals)	No	
Hazard Data & Information	No	
Grant Writing	No	
Hazus Analysis	No	
Other	No	

Financial		
Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.		
Funding Resource	**Yes / No**	**Comments**
Capital Improvements project funding	Yes	
Authority to levy taxes for specific purposes	Yes	
Fees for water, sewer, gas, or electric services	Yes	
Impact fees for new development	No	
Stormwater Utility Fee	No	
Community Development Block Grant (CDBG)	Yes	
Other Funding Programs	Yes	

Education and Outreach		
Identify education and outreach programs and methods, already in place that could be used to implement mitigation activities and communicate hazard-related information.		
Program / Organization	**Yes / No**	**Comments**
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	No	
Ongoing public education or information program (responsible water use, fire safety, household preparedness, environmental education)	No	
Natural Disaster or safety related school program	No	
Storm Ready certification	No	
Firewise Communities certification	No	
Public/Private partnership initiatives addressing disaster-related issues	Yes	
Other	No	

Building Inventory

Webster Unincorporated								
Name of Building	Purpose of Building	Address	City	Latitude	Longitude	Assessed Value	Date Built	Construction Type
Bayou Dorcheat Correctional Center	Law Enforcement	1455 Bravo	Minden	32.566483	-93.411927	$400,062	2003	Concrete
Webster Parish Courthouse	Judicial	410 Main Street	Minden	32.613655	-93.288337	$8,215,000	1953	Concrete
Headstart WPOCS	Education	111 Murrell Street	Minden	32.616302	-93.284097	$753,000	1954	Masonry
Webster Parish Library - Main Branch	Library/Education	521 East & West Street	Minden	32.62164	-93.281135	$4,004,500	1997	Masonry
Webster Parish Community Services - Main Office	Public Transit	200-208 Gleason Street	Minden	32.6158791	-93.2841088	$165,000	1938	Masonry
Webster Parish Community Services - Cullen Office	Public Transit	105 Murria Street	Cullen	32.973195	-93.447317	$1,286,000	1954	Masonry
Webster Parish Health Unit	Public Health	1200 Homer Road	Minden	32.623562	-93.253697	$760,500	1970	Masonry
Webster Parish Public Works - Main Office	Public Works	950 Crichton Road	Minden	32.558112	-93.263255	$376,000	1997	Metal
Webster Parish Public Works - Main Shop	Public Works	950 Crichton Road	Minden	32.557746	-93.263489	$40,500	1997	Metal
Webster Parish Community Services - Bus Barn Office	Public Transit	103 Bayou Avenue	Minden	32.615497	-93.290947	$40,000	1952	Wood Frame
Webster Parish Community Services - Bus Barn	Public Transit	103 Bayou Avenue	Minden	32.615635	-93.290587	$100,000	2013	Pole Barn - Wood
Webster Parish Landfill - Receiving Station	Sanitation	103 Wenks Landing	Sarepta	32.869615	-93.443739	$60,000	1984	Wood Frame
Webster Parish Public Works - Office	Public Works	6137 Highway 2	Sarepta	32.902244	-93.444491	$152,600	1997	Wood Frame
Webster Parish Public Works - Tractor	Public Works	6137 Highway 2	Sarepta	32.902835	-93.444239	$44,000	1948	Wood Frame
Webster Parish Public Works - Shop	Public Works	6137 Highway 2	Sarepta	32.903329	-93.443907	$30,000	1986	Wood Frame
Webster Parish Public Works - Shed	Public Works	6137 Highway 2	Sarepta	32.902454	-93.444167	$30,000	1940	Wood Frame
Webster Parish Landfill - Main Office	Sanitation	493 Landfill Road	Minden	32.63255	-93.389894	$54,000	1984	Metal
Webster Parish Landfill - Main Shop	Sanitation	493 Landfill Road	Minden	32.63282	-93.390452	$42,000	1984	Metal
Webster Parish Library - Heflin Branch	Library/Education	7041 Highway 531	Heflin	32.455958	-93.2640572	$46,000	1995	Masonry
Webster Parish Tax Assessor	Civil Government	103 S. Monroe	Minden	32.6164459	-93.2878283	$332,000	1958	Masonry
Webster Parish Courthouse Annex	Civil Government	401 Main Street	Minden	32.613813	-93.2890015	$3,419,000	1990	Masonry
Webster Parish Library - Cotton Valley Branch	Library/Education	21241 Highway 371	Cotton Valley	32.809469	-93.419482	$120,000	1998	Masonry
Webster Parish Library - Springhill Branch	Library/Education	1000 S. Arkansas	Springhill	32.994147	-93.462739	$1,900,000	2013	Masonry
Webster Parish Library - Maintenance Building	Library/Education	513 Ferguson Street	Minden	32.6221016	-93.2810643	$235,000		Metal

Town of Cotton Valley								
Name of Building	**Purpose of Building**	**Address**	**City**	**Latitude**	**Longitude**	**Assessed Value**	**Date Built**	**Construction Type**
North Webster Upper Elementary	Education	Webster Street	Cotton Valley	32.8185446	-93.4141048	587,000	2010	Reinforced Masonry
Cotton Valley Fire District 8	Fire Search and Rescue	Nearby: 20947 U.S. 371	Cotton Valley	32.8022731	-93.4170249	2,000	N/A	Metal
Cotton Valley Town Hall	Civil Government	478 Resident St	Cotton Valley	32.817262	-93.422608	$8,000	N/A	Unreinforced Masonry

Town of Cullen								
Name of Building	**Purpose of Building**	**Address**	**City**	**Latitude**	**Longitude**	**Assessed Value**	**Date Built**	**Construction Type**
Cullen City Hall	Government	405 Coyle Ave	Cullen	32.968213	-93.454563	23,660	N/A	Unreinforced Masonry
Cullen Police Dept	Law Enforcement	405 Coyle Ave	Cullen	32.968213	-93.454563	price above includes	N/A	Metal
Fire Dept	Fire Search and Rescue	301 Coyle Ave	Cullen	32.966923	-93.454447	price above includes	N/A	Metal

Village of Dixie Inn								
Name of Building	**Purpose of Building**	**Address**	**City**	**Latitude**	**Longitude**	**Assessed Value**	**Date Built**	**Construction Type**
Fire Dept	Fire Search and Rescue		Dixie Inn	32.58651	-93.3681348	$150,000	2009	Metal
Webster Parish Fire District 7 Station No. 1	Fire Search and Rescue		Dixie Inn	32.4237451	-93.397998	above includes price	N/A	N/A
Dixie Inn Police Department	Law Enforcement	Nearby: 62 Shell Street	Dixie Inn	32.5934365	-93.3343274	$8,000	N/A	Metal
Dixie Inn Village Hall	Government	60 Shell Street	Dixie Inn	32.593353	-93.334713	$230,000	1983	Metal

Village of Doyline								
Name of Building	**Purpose of Building**	**Address**	**City**	**Latitude**	**Longitude**	**Assessed Value**	**Date Built**	**Construction Type**
Doyline High School	Education	376 College	Doyline	32.5363839	-93.4069416	$368,000	N/A	Reinforced Masonry
Webster Parish Fire District No. 3 - Doyline Volunteer Fire Dept.	Fire Search and Rescue	Nearby: 261 Main Street	Doyline	32.5363132	-93.4103391	$3,000	N/A	Metal
Webster Parish Fire District 3 Station No. 2	Fire Search and Rescue	Nearby 4400 Harold Montgomery Crossing	Doyline	32.4796424	-93.398882	$500	N/A	Metal
Doyline City Hall	Civil Government	624 College	Doyline	32.535934	-93.4100025	$1,500	N/A	Unreinforced Masonry

Village of Dubberly								
Name of Building	**Purpose of Building**	**Address**	**City**	**Latitude**	**Longitude**	**Assessed Value**	**Date Built**	**Construction Type**
Dubberly Town Hall	Government	3465 Hwy 531	Dubberly	32.537423	-93.242208	$4,990	N/A	Unreinforced Masonry
Dubberly Fire Department	Fire Protection	838 Hwy 532	Dubberly	32.538753	-93.222015	$16,230	2004	Metal

Village of Heflin								
Name of Building	**Purpose of Building**	**Address**	**City**	**Latitude**	**Longitude**	**Assessed Value**	**Date Built**	**Construction Type**
Heflin Fire Dept. Station No. 2	Fire Search and Rescue	2328 Lake Road	Heflin	32.423959	-93.322481	495,499	N/A	Metal
Heflin Fire Dept. Station No. 3	Fire Search and Rescue	190 Memorial Park Drive	Heflin	32.459471	-93.268278		N/A	Metal
Heflin Fire Dept. Station No. 1	Fire Search and Rescue	245 Memorial Park Drive	Heflin	32.458509	-93.267015		N/A	Metal
Heflin Police Department	Law Enforcement	122 North Church St	Heflin	32.457496	-93.26689		N/A	Unreinforced Masonry
Heflin Town Hall	Civil Government	122 North Church St	Heflin	32.457496	-93.26689		N/A	Unreinforced Masonry
Heflin Water Dept.	Water Services	202 Memorial Park Drive	Heflin	32.459457	-93.267778		N/A	Unreinforced Masonry

City of Minden								
Name of Building	Purpose of Building	Address	City	Latitude	Longitude	Assessed Value	Date Built	Construction Type
Northwest Louisiana Technical College	Education	9500 Industrial Dr.	Minden	32.5857585	-93.263022	$698,000	2013	Steel
Webster Jr. High	Education	700 East Union St	Minden	32.611428	-93.2724248	$225,000	N/A	Concrete
J.E. Harper School	Education	Germantown Road	Minden	32.6346769	-93.268628	$150,000	N/A	Concrete
E.S. Richardson Elementary School	Education	West Todd Street	Minden	32.6289763	-93.2809496	$65,000	N/A	Concrete
Minden High School	Education	400 South College St.	Minden	32.6192948	-93.2888705	$710,000	N/A	Concrete
JL Jones Elementary	Education	District Drive	Minden	32.6036098	-93.2813036	$87,000	N/A	Concrete
JA Phillips Middle School	Education	Durwood Drive	Minden	32.600672	-93.2782776	$46,000	N/A	Concrete
Webster Parish Achievement Center	Education	Constable Street	Minden	32.6254848	-93.2912042	$80,000	N/A	Concrete
Webster Parish Office of Communications District One	Emergency Operations Center	Homer Road	Minden	32.621999	-93.2667652	$1,200	N/A	Concrete
City of Minden Central Fire Station	Fire Search and Rescue	1213 Sheppard Street	Minden	32.6153487	-93.2798131	$75,000	N/A	Concrete
MFD Station 3	Fire Department	Nearby: Rosehill Ln.	Minden	32.6319982	-93.2722692	$30,000	N/A	Concrete
MFD Station 2	Fire Department	199 N. Middle Landing Rd.	Minden	32.6079011	-93.3003813	$20,000	N/A	Concrete
Minden Police Department	Law Enforcement	520 Broadway St.	Minden	32.6142494	-93.2865098	$50,970	N/A	Concrete
Extension Service Webster Parish Office	Civil Government	Temple Drive	Minden	32.6234585	-93.2536324	$92,000	N/A	Concrete
Webster Parish Community Services - Head Start Administration Center	Civil Government	Nearby: Chevrolet Street	Minden	32.6162947	-93.2841669	$60,000	N/A	Concrete
USDA Service Center	Civil Government	216 Broadway St.	Minden	32.6116607	-93.289507	$74,000	N/A	Concrete
Minden City Hall	Civil Government	520 Broadway St.	Minden	32.6143992	-93.2862678	$50,970	N/A	Concrete
Webster Parish Office of Family Support	Civil Government	223 Pine St.	Minden	32.6167284	-93.29117	$200,000	N/A	Concrete
Webster Parish Assessor's Office	Civil Government	103 S. Monroe St.	Minden	32.6164044	-93.287845	$60,000	N/A	Concrete
Webster Parish Courthouse	Civil Government	410 Main Street	Minden	32.6136474	-93.2883359	$310,760	N/A	Concrete
26th JDC Public Defender's Office	Civil Government	Nearby: 221 Main St.	Minden	32.6126092	-93.2902072	$8,350	N/A	Concrete
Webster Parish District Attorney's Office - Juveniles Division	Civil Government	Sibley Road	Minden	32.6067266	-93.2892009	$6,180	N/A	Concrete
Webster Parish School Board Offices and Educational Services Center	Civil Government	1442 Sheppard Street	Minden	32.6178912	-93.2719097	$713,660	N/A	Concrete
Webster Parish Sheriff Office	Law Enforcement	401 Main st	Minden	32.613889	-93.288954	$292,530	N/A	Concrete
Minden Airport	Airport	341 Par Road 116	Minden	32.6421767	-93.3004503	$320,000	N/A	Metal
Department of Public Safety and Corrections	Civil Government	Nearby: 100-646 Industrial Drive	Minden	32.5935819	-93.289664	$42,120	N/A	Metal

Town of Sarepta								
Name of Building	**Purpose of Building**	**Address**	**City**	**Latitude**	**Longitude**	**Assessed Value**	**Date Built**	**Construction Type**
North Webster Junior High	Education	6041 LA Hwy 2	Sarepta	32.900305	-93.446664	523,000	2010	Reinforced Masonry
Webster Parish Fire District	Fire Search and Rescue	227 Sexton St.	Sarepta	32.895306	-93.452885	2000	N/A	Metal
Parish Maintenance Barn	Maintenance	6041 Louisiana 2	Sarepta	32.90225	-93.444459	1500	N/A	Metal
Sarepta Municipal Building	Civil Government	24444 Highway 371	Sarepta	32.8934906	-93.4500326	36680	N/A	Unreinforced Masonry

Village of Shongaloo								
Name of Building	**Purpose of Building**	**Address**	**City**	**Latitude**	**Longitude**	**Assessed Value**	**Date Built**	**Construction Type**
North Webster Lower Elementary	Education	229 Louisiana 2 Alternate	Shongaloo	32.9450523	-93.2961836	390,000	2000	Unreinforced Masonry
Shongaloo Fire Department	Fire Department	14745 LA 159	Shongaloo	32.9420664	-93.2975161	3,500	N/A	Metal
Shongaloo Fire District 9 Station No. 2	Fire Department	Nearby: 1385 Hill Top Road	Shongaloo	33.0093519	-93.3647307	1900	N/A	Metal
Shongaloo Fire District 9	Fire Department	14745 Louisiana 159	Shongaloo	32.9991107	-93.3107817	2800	N/A	Metal
Shongaloo Civic Center	Civil Government	Nearby: Civic Center	Shongaloo	32.9420747	-93.2975571	3000	N/A	Unreinforced Masonry

Town of Sibley								
Name of Building	**Purpose of Building**	**Address**	**City**	**Latitude**	**Longitude**	**Assessed Value**	**Date Built**	**Construction Type**
Lakeside Junion-Senior High School	Education	9090 U.S. Highway 371	Sibley	32.5172705	-93.3032722	$378,000	2003	Reinforced Masonry
Sibley Volunteer Fire Dept.	Fire Search and Rescue	Hinton Street	Sibley	32.5346391	-93.2953866	$750	N/A	Metal
Sibley Town Hall	Civil Government	345 North Main	Sibley	32.542732	-93.295674	$99,500	N/A	Unreinforced Masonry
Civic Center	Public Service & Library	163 SE 4th Avenue	Sibley	32.534671	-93.293913	$15,000	N/A	Unreinforced Masonry

City of Springhill								
Name of Building	Purpose of Building	Address	City	Latitude	Longitude	Assessed Value	Date Built	Construction Type
Browning Elementary School	Education	505 Herrington Dr.	Springhill	33.0146015	-93.4690155	$180,000	N/A	Concrete
North Webster High School	Education	101 S. Arkansas St.	Springhill	33.002797	-93.4661231	$601,610	N/A	Concrete
Brown Upper Elementary	Education	804 4th Street	Springhill	32.995853	-93.464959	$201,450	N/A	Concrete
Springhill Fire Department	Fire Search and Rescue	110 S. Main St.	Springhill	33.0013496	-93.4614329	$29,150	N/A	Concrete
Springhill Fire Department No. 2	Fire Search and Rescue	Nearby: 100-538 14th Street Northwest	Springhill	33.0079069	-93.4847314	see above	N/A	
Springhill Police Department	Law Enforcement	Nearby: 1-99 Clinic Street	Springhill	33.0046491	-93.4606646	see above	N/A	
Webster Parish Assessor's Office	Civil Government	1302 S. Arkansas	Springhill	32.957691	-93.45514	$9,900	N/A	Concrete
Springhill Airport	Airports and Airfields	367 Springhill Airport Road	Springhill	32.9885885	-93.4121689	$156,000	N/A	Concrete
Springhill City Hall	Civil Government	101 Machen	Springhill	33.00543	-93.45964	$29,150	N/A	Concrete
Springhill CAC Building	Community Activity Center	301 West Church	Springhill					
Springhill Civic Center	Community Activity Center & Voting Precincts	101 Machen Drive	Springhill					
Springhill Water Tower	Water Tank	211 West Church	Springhill					
Wastewater Treatment Plant	Sewer Plant	1 mile E 800 7th St SE	Springhill					
RV Park Building	Community Center	101 West Church	Springhill					
Springhill Recreation Complex	Recreation Complex	400 Kay Street	Springhill					
Springhill Maintenance Building	Maintenance Shop	802 7th St SE	Springhill					
Old Butler Health Unit	Police Storage/ Training	210 1st St NE	Springhill					
Driver's License Office	TAG Agency	235 North Main	Springhill					
Eastside Recreation Center	Storage	201 Reynolds St.	Springhill					
Westside Recreation Center	Recreation Center	1101 5th St SW	Springhill					

Vulnerable Populations

Vulnerable Populations Worksheet - Webster Parish Planning Area					
All Hospitals (Private or Public)	**Address**	**City**	**Zip Code**	**Latitude**	**Longitude**
Minden Medical Center	1 Medical Plaza	Minden	71055	32.61638244	-93.28610013
Springhill Medical Center	2001 Doctors Drive	Springhill	71075	33.01023471	-93.44377379
Nursing Homes (Private or Public)	**Address**	**City**	**Zip Code**	**Latitude**	**Longitude**
Town and Country Nursing Home	614 Weston St	Minden	71055	32.616591	-93.305284
Meadowview Healthcare	400 Meadowview	Minden	71055	32.619756	-93.272811
Carrington Place	Nearby: 215 1st Street Northeast	Springhill	71075	33.00442524	-93.45986273
Mobile Home Parks	**Address**	**City**	**Zip Code**	**Latitude**	**Longitude**
Culberson Trailer Park	Nearby: 1529 Shreveport Road	Minden	71055	32.607565	-93.312043
Pine Hills Trailer Park	915 Homer Rd	Minden	71055	32.623434	-93.262452
Robertson Trailer Park	Nearby: Robertson Drive	Minden	71055	32.604605	-93.310281
Colby Trailer Park	Nearby: 100-114 Colby Lane	Sibley	71073	32.55168813	-93.29528195
Madden RV Park	8440 U.S. Highway 371	Sibley	71073	32.49913994	-93.30714228
RW's RV Park	294 N.E. 4th St.	Sibley	71073	32.5444099	-93.29286783
Heart of Dixie Mobile Home Village	Nearby: 1-25 East Street	Dixie Inn	71055	32.59220244	
Cinnamon Creek RV Park	12996 U.S. Highway 371	Dixie Inn	71055	32.59487348	-93.3353756
Southfield Mobile Home Village	Nearby: 101-149 Southfield Park Road	Dixie Inn	71055	32.59087106	-93.33967472
Lakeside RV Park	12699 Hwy 80	Dixie Inn	71055	32.60147	-93.3446797
Unknown	Nearby: 22085 State Highway 157	Springhill	71075	33.00878514	-93.48757195
Ratliff Mobile Home Park	Nearby: 101-127 Penny Circle	Springhill	71075	33.01413263	-93.45260937
Ratliff Mobile Home Park & Apartments	Nearby: 2-32 Reiny Circle	Springhill	71075	33.01541691	-93.45117925
Frank Anthony RV Park	301 West Church Street	Springhill	71075	33.00253742	-93.46300152
Carter Mobile Home Park	Buddy Carter Place	Doyline	71023	32.4729299	-93.3988335
Durrett Mobile Home Park	Gifford Hill Road	Dixie Inn	71055	32.607149	-93.347175
Hickory Hollow Mobile Home Park	Hickory Hollow Road	Doyline	71023	32.465725	-93.362506
Little Mobile Home Park	Camp Bistino Road	Doyline	71023	32.417597	-93.429734
Lone Oak Mobile Home Park	Trailer Park Drive	Sibley	71073	32.573809	-93.275936
Mouser Mobile Home Park	Miller Road	Minden	71055	32.646716	-93.228486
Dixie Inn Country Living Mobile Home Park	Country Lane	Dixie Inn	71055	32.624197	-93.358524
Posey Mobile Home Park	Posey Lane	Minden	71055	32.649898	-93.208305
Parish Line Mobile Home Park	Parish Line Park	Dixie Inn	71055	32.572454	-93.4375789

Heart of Dixie Mobile Home Village	East Street	Dixie Inn	71055	32.592293	-93.33706
Southfield Mobile Home Park	Southfield Park Road	Dixie Inn	71055	32.591835	-93.34488
Pattersons Mobile Home Park	Highway 531	Dubberly	71024	32.519248	-93.233843
Thomas Slack Mobile Home Park	Rodney Thomas Lane	Sarepta	71071	32.940289	-93.426866
Four Acres Mobile Home Park	Four Acres Lane	Shongaloo	71072	32.9664452	-93.306166
Hollis Mobile Home Park	Hollis Lane	Minden	71055	32.5950615	-93.2845251
Robertson Mobile Home Park	Robertson Drive	Minden	71055	32.6031358	-93.30845
Silver Cloud Mobile Home Park	Colby Lane	Sibley	71073	32.551568	-93.295884
Merritt Mobile Home Park	Highway 371	Sibley	71073	32.525635	-93.297975
Ratliff Mobile Home Park #1	Spring Branch Road	Springhill	71075	33.014673	-93.450673
Ratliff Mobile Home Park #2	Spring Branch Road	Springhill	71075	33.013387	-93.452586
H & H Mobile Home Park	Mattie Drive	Springhill	71075	33.016523	-93.44789
Cole Mobile Home Park	Spring Branch Road	Springhill	71075	33.015804	-93.448983
Carraway Lane Mobile Home Park	Carraway Lane	Springhill	71075	32.9222279	-93.4058586
Wiggins Lane Mobile Home Park	Wiggins Lane	Minden	71055	32.607391	-93.222171
Leton RV and Trailer Park	Nearby: 9534-9764 Louisiana 2	Shongaloo	71072	32.86782191	-93.25616294
RV Park	NE 4th Avenue	Sibley	71073	32.5447218	-93.2932046
RV Park	McClanahan Street	Dixie Inn	71055	32.5930419	-93.3349111
Sunny Beach RV Park	Sunny Beach Loop	Dixie Inn	71055	32.602129	-93.323478
Shade RV Park	Kings Highway	Dixie Inn	71055	32.625542	-93.359131
Farmers Branch RV Park	Hatten Roberts Road	Dixie Inn	71055	32.588914	-93.379036
Duck Lane RV Park	Wheel Barrow Road	Cotton Valley	71018	32.816688	-93.435716
Mullens RV Park	Highway 2	Sarepta	71071	32.897316	-93.448357
Leton RV Park	Highway 160	Shongaloo	71072	32.867065	-93.256207
Woods Ranch RV Park	Allen Drive	Minden	71055	32.629315	-93.314212
RV Park	5970 Louisiana 2	Cotton Valley	71071	32.80883426	-93.42008792

National Flood Insurance Program (NFIP)

National Flood Insurance Program (NFIP)												
	Webster Parish	Cotton Valley	Cullen	Dixie Inn	Doyline	Dubberly	Heflin	Minden	Sarepta	Shongaloo	Sibley	Springhill
Insurance Summary												
How many NFIP polices are in the community? What is the total premium and coverage?	77; $50,967; $15,823,900	1; $370; $280,000	0; $0; 0	1; $625; $306,600	1; $442; $350,000	N/A	N/A	36; $45,553; $7,001,900	0; $0; 0	N/A	6; $3,958; $1,535,800	28; $83,780; $8,671,400
How many claims have been paid in the community? What is the total amount of paid claims? How many of the claims were for substantial damage?	167; $6,057,336; 59	0; $0; 0	0; $0; 0	0; $0; 0	1; $16,036; 0	N/A	N/A	42; $785,905; 5	0; $0; 0	N/A	1;$1,402; 0	17; $500,065; 0
How many structures are exposed to flood risk within the community?	300	N/A	N/A	Min. 5 homes/ 1 business	N/A	N/A	N/A	40	N/A	N/A	22	30
Describe any areas of flood risk with limited NFIP policy coverage.	N/A	N/A	N/A	Several homes - no coverage - on Bayou Dorcheat	Few areas in need of remapping; many below meander line; many less value than coverage amount	N/A	N/A	Some homes valued less than cost of coverage	N/A	N/A	New flood records have proven new risk	N/A

	Webster Parish	Cotton Valley	Cullen	Dixie Inn	Doyline	Dubberly	Heflin	Minden	Sarepta	Shongaloo	Sibley	Springhill
Staff Resources												
Is the Community FPA or NFIP Coordinator certified?	Yes	Yes	Yes	Yes	Yes	N/A	N/A	Yes	Yes	N/A	Yes	Yes
Is floodplain management an auxiliary function?	Yes	Yes	Yes	Yes	Yes	N/A	N/A	Yes	Yes	N/A	Yes	Yes
Provide an explanation of NFIP administration services (e.g., permit review, GIS, education or outreach, inspections, engineering capability)	Permit review; GIS; Inspections	Permit review is conducted via parish's contractor for floodplain	Parish provided services	Building permits by Webster Parish Police Jury	Parish floodplain management contractor ensures permits are within federal standards	N/A	N/A	GIS	N/A	N/A	Parish permitting	Parish permitting
What are the barriers to running an effective NFIP program in the community, if any?	Staffing	Staffing	Staffing/ Funding	Cost	Staffing/ Funding	Staffing/ Funding	Staffing/ Funding	None	Staffing/ Funding	Staffing/ Funding	Staffing	Staffing

	Webster Parish	Cotton Valley	Cullen	Dixie Inn	Doyline	Dubberly	Heflin	Minden	Sarepta	Shongaloo	Sibley	Springhill
Compliance History												
Is the community in good standing with the NFIP?	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes
Are there any outstanding compliance issues(i.e., current violations)?	No	No	No	No	No	N/A	N/A	No	No	N/A	No	No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact(CAC)?	4/9/2018	2/18/2010	9/10/2007	6/14/2011	2/18/2010	N/A	N/A	5/22/2014	N/A	N/A	2/18/2010	3/29/2011
Is a CAV or CAC scheduled or needed? If so when?	No	No	No	No	No	N/A	N/A	No	N/A	N/A	No	No
Regulation												
When did the community enter the NFIP?	7/15/1988	10/15/1985	2/12/1979	7/23/2010	9/18/1979	7/15/1977	1988	7/18/1985	3/2/2010	7/15/1988	7/18/1985	6/15/1981
Are the FIRMs digital or paper?	Both	Paper	Paper	Paper	Paper	Paper	Paper	Both	Paper	Paper	Paper	Paper
Do floodplain development regulations meet or exceed FEMA or State minimum requirements? If so, in what ways?	Meet	Meet	Meet	Meet	Meet	N/A	N/A	Meet	Meet	N/A	Meet	Meet

	Webster Parish	Cotton Valley	Cullen	Dixie Inn	Doyline	Dubberly	Heflin	Minden	Sarepta	Shongaloo	Sibley	Springhill
Community Rating System (CRS)												
Does the community participate in CRS?	No	No	No	No	No	No	No	No	No	No	No	No
What is the community's CRS Class Ranking?	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Does the plan include CRS planning requirements?	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A