

# 2021 LIVINGSTON PARISH MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

ALBANY, DENHAM  
SPRINGS, FRENCH SETTLEMENT,  
KILLIAN, LIVINGSTON, PORT  
VINCENT, SPRINGFIELD,  
WALKER, UNINCORPORATED  
LIVINGSTON PARISH





# LIVINGSTON PARISH MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

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**Livingston Parish**



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Unincorporated Livingston Parish  
 Town of Albany  
 City of Denham Springs  
 Village of French Settlement  
 Village of Killian  
 Town of Livingston  
 Village of Port Vincent  
 Town of Springfield  
 City of Walker

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

- Unincorporated Livingston Parish
- Town of Albany
- City of Denham Springs
- Village of French Settlement
- Village of Killian
- Town of Livingston
- Village of Port Vincent
- Town of Springfield
- City of Walker

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 south Louisiana.

This Hazard Mitigation Plan is a comprehensive plan for disaster resiliency in Livingston 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.

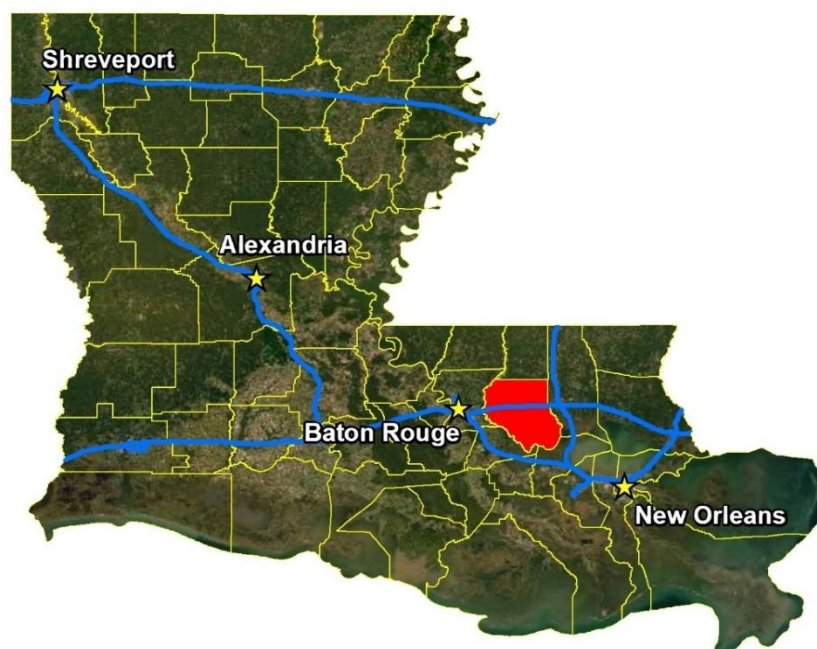
Under the Disaster Mitigation Act of 2000 (42 USC 5165), a mitigation plan is a requirement for Federal mitigation funds. Therefore, a mitigation plan will both guide the best use of mitigation funding and meet the prerequisite for obtaining such funds from FEMA. FEMA also recognizes plans through its 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 Livingston Parish and its communities with a blueprint for reducing the impacts of these natural hazards on people and property.

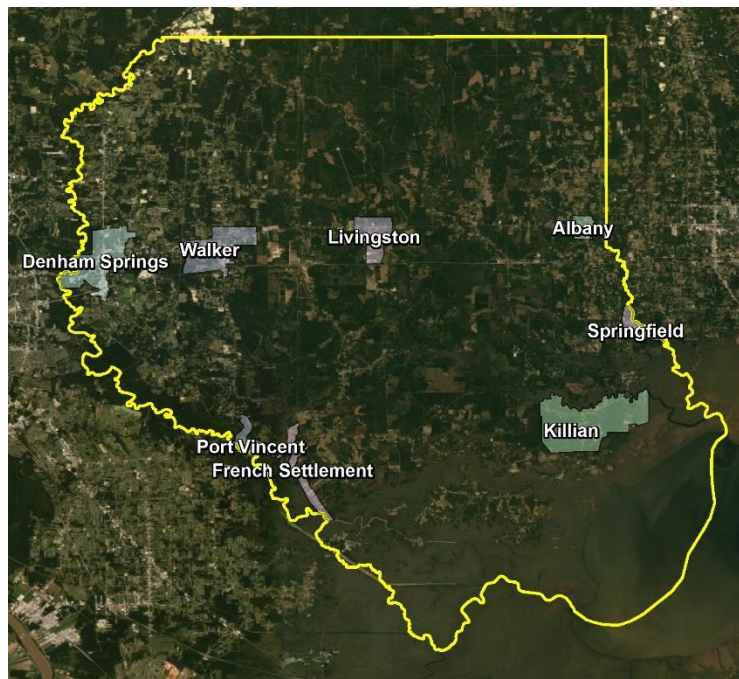
## Geography and Population

### Geography

Livingston Parish is located in the southeast portion of Louisiana, approximately 12 miles east of the City of Baton Rouge. With the exception of the northern and northeastern boundaries, the parish is bound in all directions by bodies of water; the Amite River forms the western border, the Natalbany River forms the southern half of the eastern border, and the Blind River and Lake Maurepas collectively form the southern border. Livingston Parish is bordered to the north by St. Helena Parish, to the east by Tangipahoa Parish, to the west by East Baton Rouge Parish, and to the south by Ascension and St. John the Baptist Parishes. Livingston Parish includes a surface area of approximately 703 square miles, of which 648 square miles (92.2%) is land and 55 square miles (7.8%) is water. Below, [Figure 1-1](#) shows the geographical location of Livingston Parish.



*Figure 1-1: Location of Livingston Parish*



*Figure 1-2: Incorporated Jurisdictions within Livingston Parish*

The topography of Livingston Parish varies significantly from north to south. The northern part of the parish consists of rolling terrain covered by pine and hardwood forests approximately 50 feet above sea level. In the southern end of the parish, the land submerges into rich cypress forests and marshes that border on Lake Maurepas and the Amite River. The largest concentration of urban development is found in the far eastern and northeastern portions of the parish.

Approximately 75% of the total land area of Livingston Parish is located within FEMA's 100-year floodplain. The only significant area outside the 100-year floodplain is the land in the south-central portion of the parish along Hwy 63 between the communities of Frost and Verdun, as well as the area along Hwy 444 from just south of French Settlement to Verdun to the intersection with Hwy 22 north of Killian. There are also portions of Livingston Parish outside of the 100 year floodplain found along the eastern and western parish boundaries.

Livingston Parish weather is typically warm and humid. Variations in daily temperature 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 68°F. January is typically the coldest month for Louisiana, averaging approximately 54°F, while July is typically the warmest at an average of 83°F. Winter months are usually mild with cold spells of short duration. For Livingston Parish in particular, the summer months are usually quite warm, with an average daily maximum temperature in July and August of 92°F. Average annual rainfall for the area is 63 inches. Winters are typically mild. Snowfall for the parish averages less than one inch per year. Livingston Parish is susceptible to the normal weather dangers, such as tornadoes and floods, but due to its location within the state and its proximity to the Gulf of Mexico, the parish is extremely susceptible to tropical cyclones. Hurricane season lasts from June 1st to November 30th, with most hurricanes forming in August, September, and October.

## Population

The population of Livingston Parish is estimated at 140,789 (2019 estimate) with a population percent change from April 1, 2010 – July 1, 2019 of 10.3%.

*Table 1-1: Livingston Parish Population*

*(Source: US Census)*

	2010 Census	2019 Estimate	Percent Change 2010 -2019
<b>Total Population</b>	128,026	140,789	10.30%
<b>Population Density (Pop/Sq. Mi.)</b>	197.5	-----	-----
<b>Total Households</b>	-----	48,410	-----
<b>Persons Per Household</b>	-----	2.85	-----

*Table 1-2: Livingston Parish Business Patterns*

*(Source: US Census, CBP)*

Business Description	Number of Establishments	Number of Employees	Annual Payroll (\$1,000)
<b>Retail Trade</b>	326	5,056	128,388
<b>Manufacturing</b>	55	1,680	84,620
<b>Health Care and Social Assistance</b>	143	2,130	61,179
<b>Mining, Quarrying, Oil and Gas Extraction</b>	10	98	5,590
<b>Transportation and Warehousing</b>	49	430	21,962
<b>Construction</b>	294	3,271	179,695
<b>Administration/Support and Waste Management/Remediation Services</b>	97	721	32,431
<b>Real Estate and Rental and Leasing</b>	83	333	14,656
<b>Wholesale Trade</b>	57	921	54,511
<b>Other Services (except Public Administration)</b>	202	1,190	27,652
<b>Accommodation and Food Services</b>	169	3,331	46,173
<b>Financial and Insurance</b>	121	753	40,788
<b>Professional, Scientific, and Technical Services</b>	137	1,189	60,732
<b>Information</b>	17	164	8,783
<b>Educational Services</b>	10	154	2,546
<b>Arts, Entertainment, and Recreation</b>	21	123	2,256
<b>Agriculture, Forestry, Fishing and Hunting</b>	7	155	9,433
<b>Utilities</b>	8	84	5,105
<b>Management of Companies and Enterprises</b>	5	78	7,754

## Hazard Mitigation

To fully understand hazard mitigation efforts in Livingston 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 1-3* 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 1-3* 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, however, post-disaster revision is a vital component of improving mitigation. Each hazardous event affords an opportunity to reduce the consequences of future occurrences.



*Figure 1-3: The Four Phases of Emergency Management and their Relation to Future Hazard Mitigation (Source: Louisiana State Hazard Mitigation Plan 2014)*

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.

The catastrophic events of 2005 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 Livingston Parish Hazard Mitigation Plan (HMP) maintains much of the information from the 2016 plan version, but it now reflects the order and methodologies of the 2019 Louisiana State Hazard Mitigation Plan.

The sections in the 2016 Livingston HMP were as follows:

- Section One Introduction
- Section Two Hazard Identification and Risk Assessment
- Section Three Capability Assessment
- Section Four Mitigation Strategy
- Appendix A Planning Process
- Appendix B Plan Maintenance
- Appendix C Parish 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 Livingston 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 Livingston Parish Hazard Mitigation Plan. The current goals are as follows:

1. Identify and pursue preventative measures that will reduce future damages from hazards.
2. Enhance public awareness and understanding of disaster preparedness
3. Reduce repetitive flood losses
4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.

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. 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. Aside from the update to the risk assessment and the mitigation strategy sections, there have been no changes made based on community priorities.

The 2021 plan update is organized in the exact same format as the 2016 update as you can see 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 Essential Facilities
- Appendix D Plan Adoption
- Appendix E State Required Worksheets

*Table 1-3: 2021 Plan Update Crosswalk*

Plan Update Crosswalk	
Section 1: Introduction	Section 1: Introduction
Section 2: Hazard Identification and Risk Assessment	Section 2: Hazard Identification and 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: Essential 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 Livingston Parish and its communities. The extent of this risk is dictated primarily by its geographic location. Most significantly, Livingston Parish remains at high risk of water inundation from various sources, including flooding and tropical cyclone activity. 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 all parts of Livingston 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.

## 2. Hazard Identification and Parish-Wide Risk Assessment

This section assesses the various hazard risks that Livingston 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 Livingston 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 pose 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
<b>Coastal Hazards</b>	X		X
<b>Drought</b>	X		X
<b>Flooding</b>	X	X	X
<b>Sinkholes</b>			
<b>Thunderstorms (Hail, Lightning, &amp; Wind)</b>	X	X	X
<b>Tornadoes</b>	X	X	X
<b>Tropical Cyclones</b>	X	X	X
<b>Winter Weather</b>			X

### 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) Coastal Hazards
- b) Drought
- c) Flooding
- d) Thunderstorms (Hail, Lightning, & Wind)
- e) Tornadoes
- f) Tropical Cyclones
- g) Winter Weather

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

- Flooding from rivers and waterways, rain storms, 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 was determined to be the most prevalent hazard to the parish. Eighteen of the thirty-two federal disaster declarations received by Livingston Parish has resulted from tropical cyclones, which validates this as the most significant hazard in terms of impact. While the issue of hurricanes will serve as a main focus during the mitigation planning process, this document will place equal emphasis on flooding events and the effects from those events on the communities. 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 Livingston Parish is included in the hurricane risk assessment.

Livingston Parish is also susceptible to tornadoes. Tornadoes can spawn from tropical cyclones or severe weather systems that pass-through Livingston 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

*Table 2-2* summarizes federal disaster declarations for Livingston Parish since 1965. Information includes names, dates, and types of disaster.

*Table 2-2: Livingston Parish Major Disaster Declarations.*

Disaster Number	Year	Declaration
208	9/10/1965	Tropical Cyclone – Betsy
374	4/27/1973	Severe Storm, Flood
3031	2/22/1977	Drought and Freezing
534	5/2/1977	Severe Storm, Flood
584	5/2/1979	Severe Storm, Flood
679	4/20/1983	Severe Storm, Flood
752	11/1/1985	Tropical Cyclone – Hurricane Juan

Disaster Number	Year	Declaration
833	6/16/1989	Severe Storm, Tornadoes
904	5/3/1991	Severe Storms, Tornadoes & Flooding
956	8/25/1992	Tropical Cyclone – Hurricane Andrew
978	2/2/1993	Severe Storm, Flood
1246	9/23/1998	Tropical Cyclone – Hurricane Georges/Tropical Storm Frances
1380	6/5/2001	Tropical Cyclone – TS Allison
1435	9/27/2002	Tropical Cyclone – Tropical Storm Isidore
1437	10/3/2002	Tropical Cyclone – Hurricane Lili
3172	2/1/2003	Loss of Space Shuttle Columbia
1521	6/8/2004	Severe Storm, Flood
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
1792	9/13/2008	Tropical Cyclone – Hurricane Ike
4080	8/29/2012	Tropical Cyclone – Hurricane Isaac
4102	2/22/2013	Severe Storm, Flood
4263	3/8/2016	Severe Storm, Flood
4277	8/14/2016	Severe Storm, Flood
3392	10/6/2017	Tropical Cyclone – Tropical Storm Nate
4300	2/11/2017	Severe Storm, Tornadoes & Straight-Line Winds
4458	8/27/2019	Tropical Cyclone – Hurricane Barry
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 Livingston Parish is estimated in the table on the following page. The percent chance of an event occurring 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 tables show the annual probability for each hazard occurring across the parish:

*Table 2-3: Probability of Future Hazard Reoccurrence.*

Hazard	Probability				
	Livingston Parish (Unincorporated)	Albany	Denham Springs	French Settlement	Killian
<b>Coastal Hazards</b>	100%	< 1%	< 1%	100%	100%
<b>Drought</b>	13%	13%	13%	13%	13%
<b>Flooding*</b>	37%	33%	30%	30%	33%
<b>Thunderstorms - Hail</b>	100%	100%	100%	100%	100%
<b>Thunderstorms - Lightning</b>	10%	10%	10%	10%	10%
<b>Thunderstorms - Winds</b>	100%	100%	100%	100%	100%
<b>Tornadoes</b>	70%	70%	70%	70%	70%
<b>Tropical Cyclones</b>	79%	79%	79%	79%	79%
<b>Winter Weather</b>	7%	7%	7%	7%	7%

*Table 2-4: Probability of Future Hazard Reoccurrence (cont.).*

Hazard	Probability			
	Livingston	Port Vincent	Springfield	Walker
<b>Coastal Hazards</b>	<1%	100%	100%	< 1%
<b>Drought</b>	13%	13%	13%	13%
<b>Flooding*</b>	40%	40%	40%	40%
<b>Thunderstorms - Hail</b>	100%	100%	100%	100%
<b>Thunderstorms - Lightning</b>	10%	10%	10%	10%
<b>Thunderstorms - Winds</b>	100%	100%	100%	100%
<b>Tornadoes</b>	70%	70%	70%	70%
<b>Tropical Cyclones</b>	79%	79%	79%	79%
<b>Winter Weather</b>	7%	7%	7%	7%

\*The overall annual flooding probability for the entire Livingston Parish Planning Area is 53%

As shown in the above tables, hailstorms, high winds, and coastal hazards for the unincorporated areas of the parish and the incorporated areas of French Settlement, Killian, Port Vincent, and Springfield have the highest chance of occurrence in the parish (100%). These are followed by tropical cyclones (79%), tornadoes (70%), flooding, drought (13%), and lightning (10%). Coastal hazards for the incorporated areas of Albany, Denham Springs, Livingston, and Walker 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 \$10,166,921,000 in structures throughout the parish. The tables below provide the total estimated value for each type of structure by occupancy.

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

*(Source: Hazus)*

Occupancy	Livingston Parish	Unincorporated Area	Albany	Denham Springs	French Settlement
<b>Agricultural</b>	\$13,504,000	\$11,113,000	\$0	\$1,896,000	\$0
<b>Commercial</b>	\$964,181,000	\$699,655,000	\$8,849,000	\$202,614,000	\$2,269,000
<b>Government</b>	\$32,432,000	\$21,407,000	\$513,000	\$2,047,000	\$0
<b>Industrial</b>	\$216,040,000	\$189,880,000	\$529,000	\$14,859,000	\$687,000
<b>Religion</b>	\$159,518,000	\$106,033,000	\$3,650,000	\$36,390,000	\$1,250,000
<b>Residential</b>	\$8,712,239,000	\$7,601,606,000	\$45,195,000	\$601,999,000	\$23,777,000
<b>Education</b>	\$69,007,000	\$36,414,000	\$4,549,000	\$18,106,000	\$2,283,000
<b>Total</b>	<b>\$10,166,921,000</b>	<b>\$8,666,108,000</b>	<b>\$63,285,000</b>	<b>\$877,911,000</b>	<b>\$30,266,000</b>

*Table 2-6: Estimated Total of Potential Losses throughout Livingston Parish (cont.).*

*(Source: Hazus)*

Occupancy	Killian	Livingston	Port Vincent	Springfield	Walker
<b>Agricultural</b>	\$0	\$0	\$65,000	\$0	\$430,000
<b>Commercial</b>	\$2,364,000	\$16,838,000	\$1,095,000	\$2,509,000	\$27,988,000
<b>Government</b>	\$0	\$5,737,000	\$0	\$0	\$2,728,000
<b>Industrial</b>	\$371,000	\$2,091,000	\$0	\$0	\$7,623,000
<b>Religion</b>	\$0	\$7,505,000	\$0	\$628,000	\$4,062,000
<b>Residential</b>	\$49,285,000	\$99,358,000	\$16,398,000	\$17,027,000	\$257,594,000
<b>Education</b>	\$0	\$0	\$0	\$2,574,000	\$5,081,000
<b>Total</b>	<b>\$52,020,000</b>	<b>\$131,529,000</b>	<b>\$17,558,000</b>	<b>\$22,738,000</b>	<b>\$305,506,000</b>

### Critical Facilities of the Parish

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

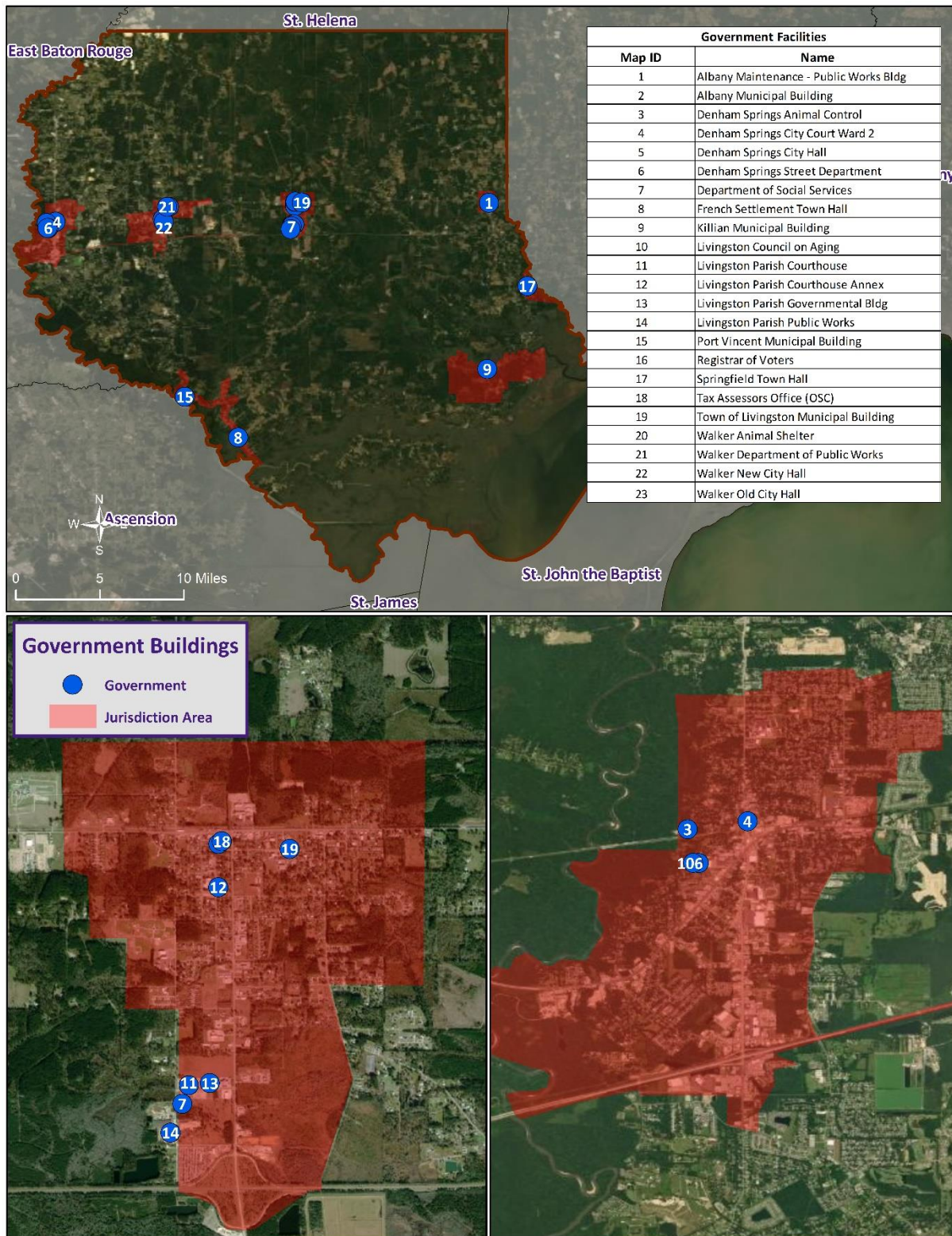


Figure 2-1: Government Buildings in Livingston Parish.



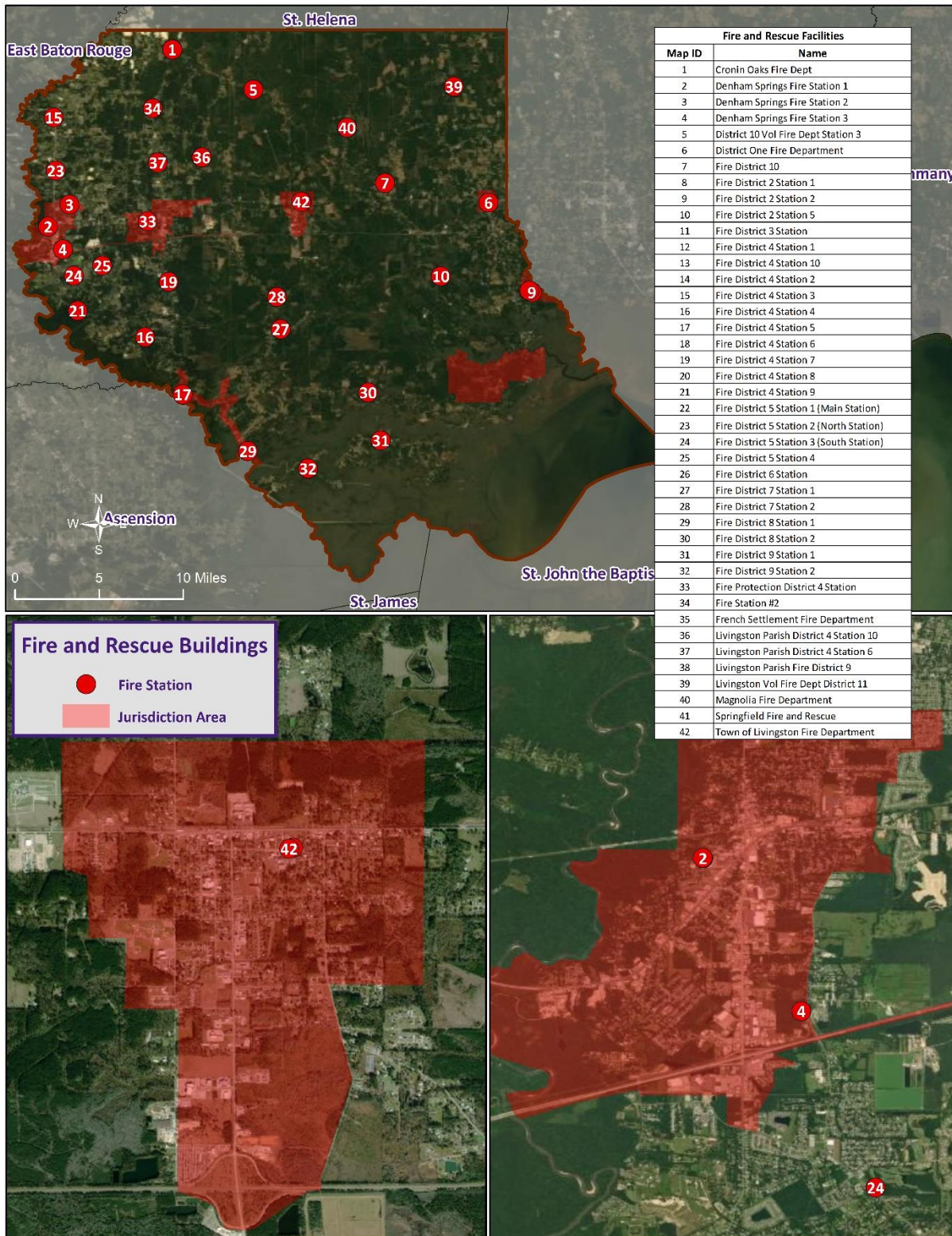


Figure 2-2: Fire and Rescue Facilities in Livingston Parish.

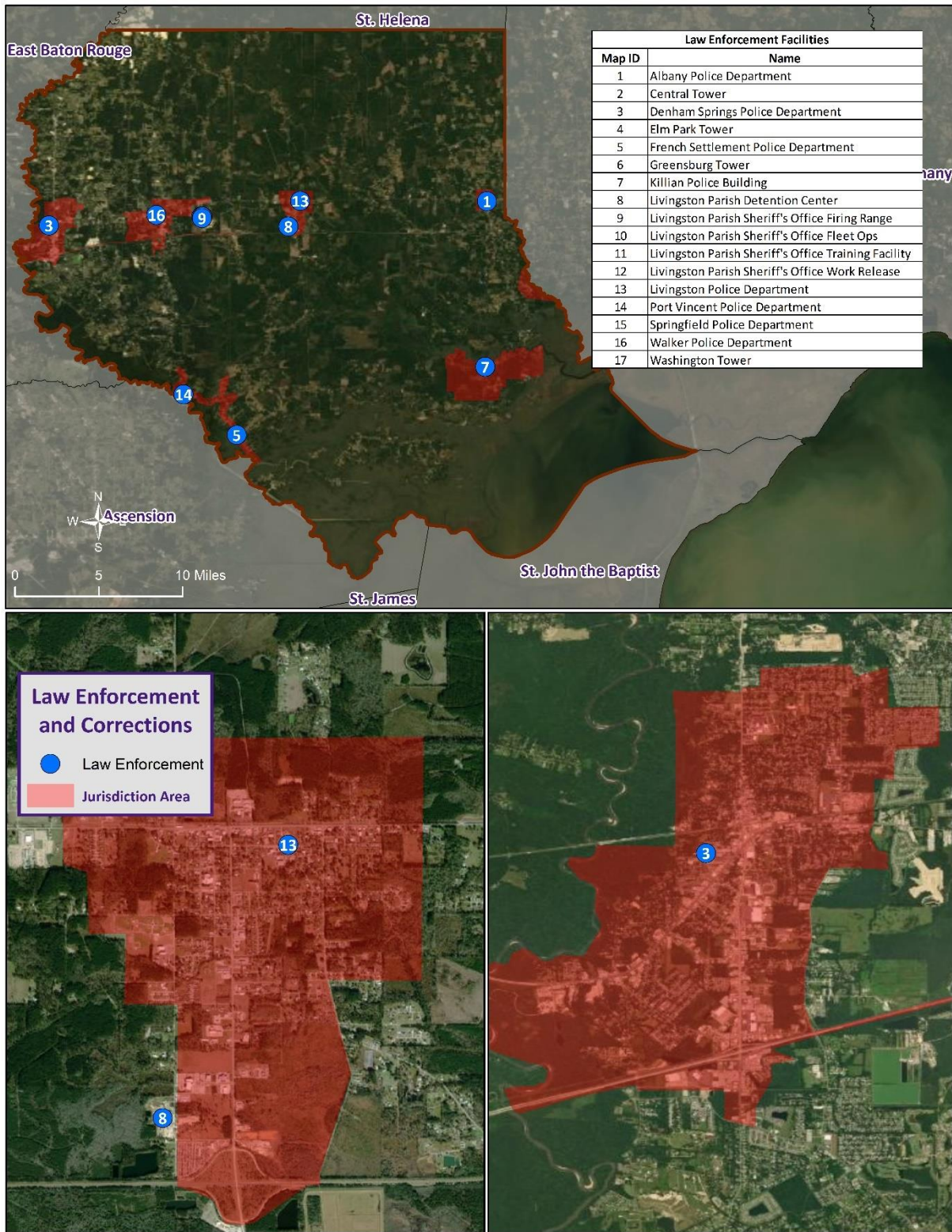


Figure 2-3: Law Enforcement in Livingston Parish.

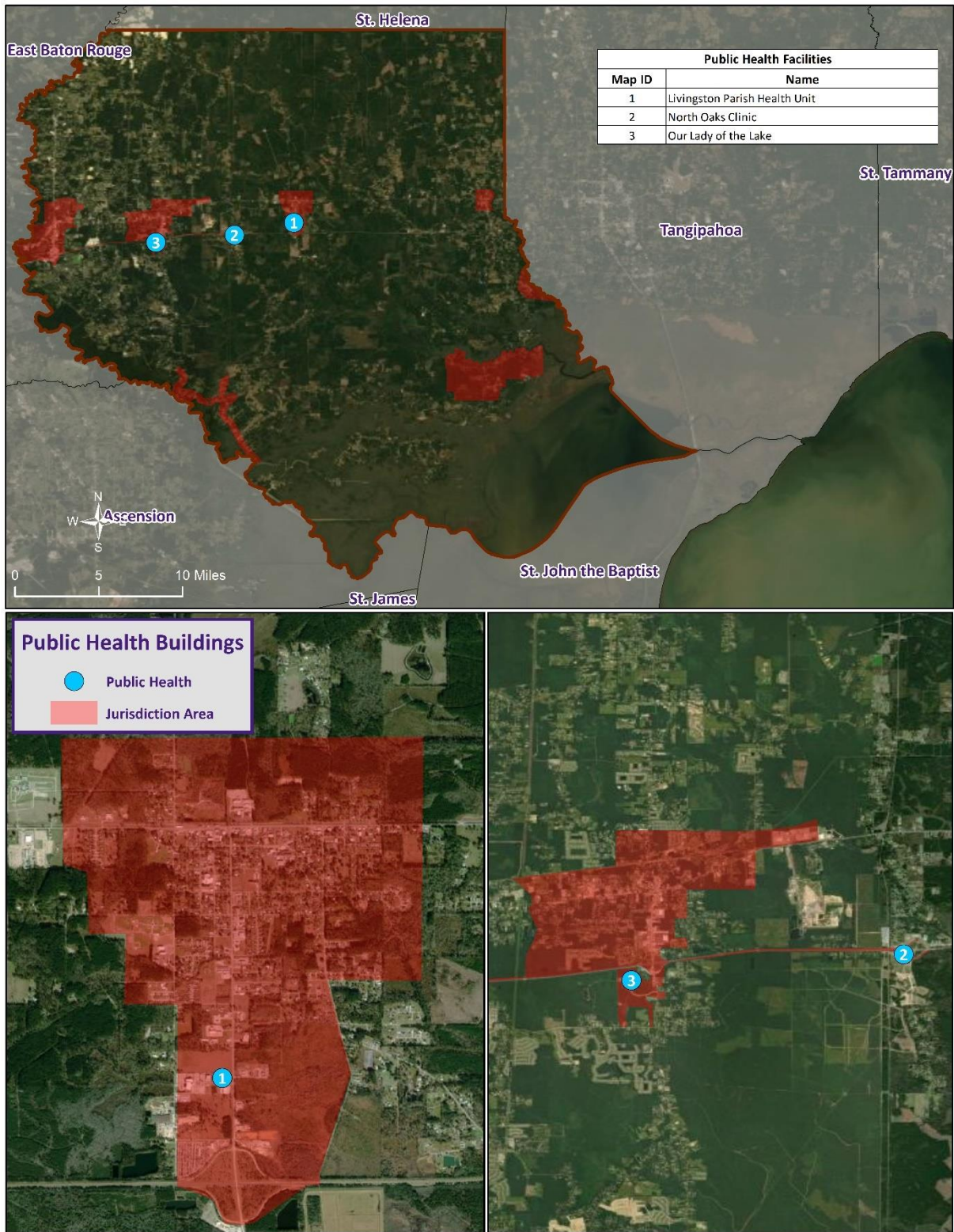


Figure 2-4: Public Health Facilities in Livingston Parish.

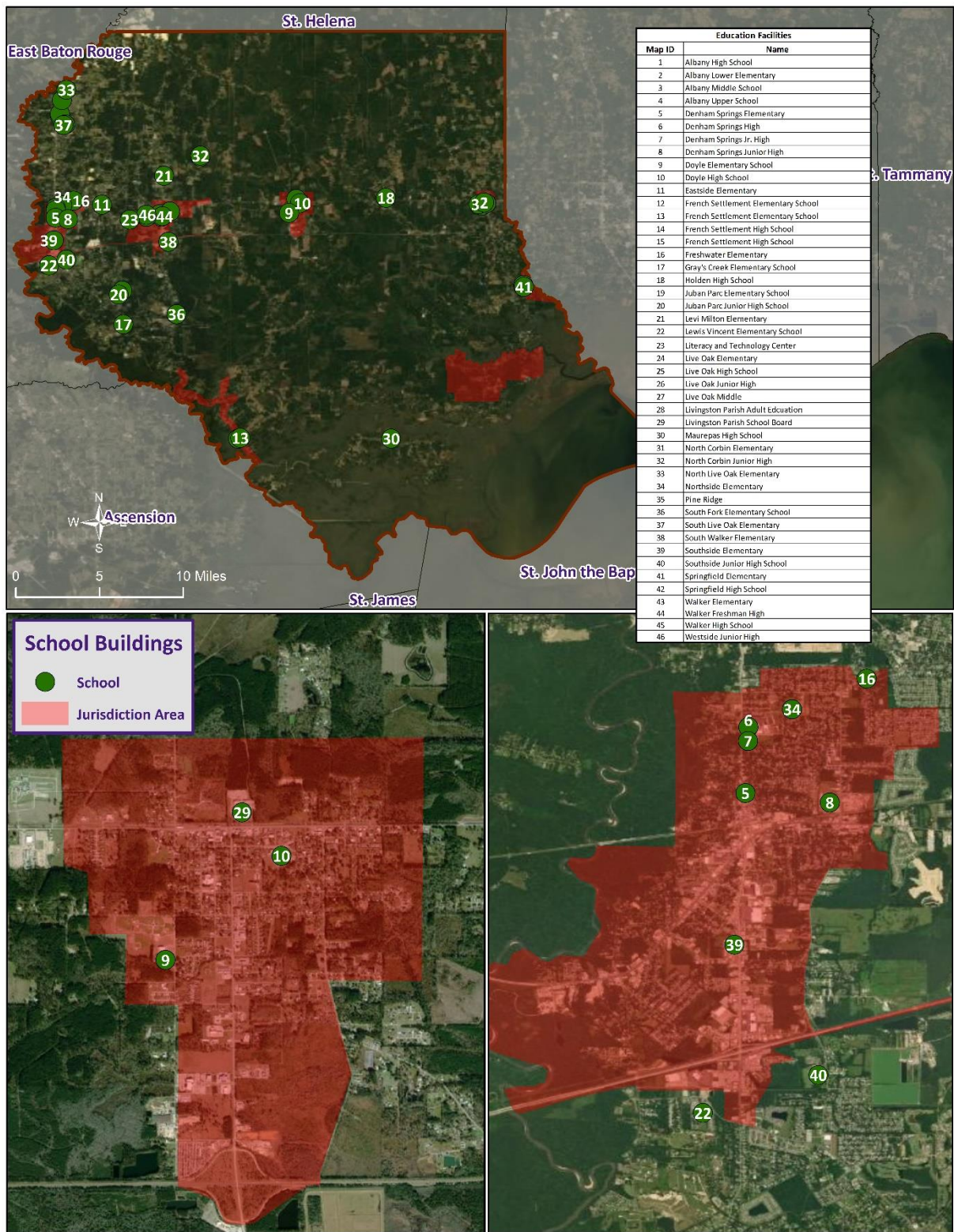


Figure 2-5: Educational Facilities in Livingston Parish.

## Future Development Trends

Livingston Parish experienced a growth in population and housing between the years of 2000 and 2019, increasing in population from 91,814 with 36,212 housing units in the year 2000 to a population of 140,789 with 58,646 housing units in the year 2019. The unincorporated area of Livingston Parish experienced the largest population growth within the parish growing from a populace of 105,266 in 2010 to 117,860 in 2019 (12% overall growth). This is followed by Livingston at 11.6% overall growth, Killian at 9.6% overall growth, Springfield at 8% overall growth, French Settlement at 6.8% overall growth, Albany at 6.5% overall growth, Walker at 2.8% overall growth, and then Port Vincent at 1.9% overall growth from 2010 to 2019. The incorporated area of Denham Springs experienced a decline in population during this same time period.

Albany experienced the largest growth of housing units from 2010 to 2019 growing from 483 in 2010 to 583 in 2019. The unincorporated area of Livingston Parish experienced the second largest growth in housing units during this time period with a 2.1% average annual growth rate, followed by the incorporated area of Killian with a 1.5% average annual growth rate, the incorporated area of Livingston with a 1.1% average annual growth rate, the incorporated area of Walker with a 0.9% average annual growth rate, the incorporated area of French Settlement with a 0.9% average annual growth rate, the incorporated area of Denham Springs with a 0.8% average annual growth rate, and then the incorporated area of Springfield with an average annual growth rate of 0.3%. The incorporated area of Port Vincent experienced a decline in housing units by 1.9% 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 2-7: Population Growth Rate for Livingston Parish.*

Total Population	Livingston Parish	Unincorporated Area	Albany	Denham Springs	French Settlement
<b>1-Apr-00</b>	91,814	73,193	865	8,757	945
<b>1-Apr-10</b>	128,026	105,266	1,088	10,215	1,116
<b>1-Jul-19</b>	140,789	117,860	1,159	9,753	1,192
<b>Population Growth between 2000 – 2010</b>	39.4%	43.8%	25.8%	16.6%	18.1%
<b>Average Annual Growth Rate between 2000 – 2010</b>	3.9%	4.4%	2.6%	1.7%	1.8%
<b>Population Growth between 2010 – 2019</b>	10.0%	12.0%	6.5%	-4.5%	6.8%
<b>Average Annual Growth Rate between 2010 – 2019</b>	1.11%	1.33%	0.73%	-0.50%	0.76%

*Table 2-8: Population Growth Rate for Livingston Parish (cont.).*

Total Population	Killian	Livingston	Port Vincent	Springfield	Walker
1-Apr-00	1,053	1,342	463	395	4,801
1-Apr-10	1,206	1,769	741	487	6,138
1-Jul-19	1,322	1,974	755	526	6,248
Population Growth between 2000 – 2010	14.5%	31.8%	60.0%	23.3%	27.8%
Average Annual Growth Rate between 2000 – 2010	1.5%	3.2%	6.0%	2.3%	2.8%
Population Growth between 2010 – 2019	9.6%	11.6%	1.9%	8.0%	1.8%
Average Annual Growth Rate between 2010 – 2019	1.07%	1.29%	0.21%	0.89%	0.20%

*Table 2-9: Housing Growth Rate for Livingston Parish.*

Total Housing Units	Livingston Parish	Unincorporated Area	Albany	Denham Springs	French Settlement
1-Apr-00	36,212	28,294	409	3,550	436
1-Apr-10	50,170	40,484	483	4,241	472
1-Jul-19	58,646	48,153	583	4,553	509
Housing Growth between 2000 – 2010	38.5%	43.1%	18.1%	19.5%	8.3%
Average Annual Growth Rate between 2000 – 2010	3.9%	4.3%	1.8%	1.9%	0.8%
Housing Growth between 2010 – 2019	16.9%	18.9%	20.7%	7.4%	7.8%
Average Annual Growth Rate between 2010 – 2019	1.9%	2.1%	2.3%	0.8%	0.9%

*Table 2-10: Housing Growth Rate for Livingston Parish (cont.).*

Total Housing Units	Killian	Livingston	Port Vincent	Springfield	Walker
1-Apr-00	590	581	262	185	1,905
1-Apr-10	708	746	385	214	2,437
1-Jul-19	804	821	363	219	2,641
Housing Growth between 2000 – 2010	20.0%	28.4%	46.9%	15.7%	27.9%
Average Annual Growth Rate between 2000 – 2010	2.0%	2.8%	4.7%	1.6%	2.8%
Housing Growth between 2010 – 2019	13.6%	10.1%	-5.7%	2.3%	8.4%
Average Annual Growth Rate between 2010 – 2019	1.5%	1.1%	-0.6%	0.3%	0.9%

## 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 Livingston 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 2-11: Estimated Future Impacts, 2018-2030.*

*(Source: Hazus, US Census Bureau)*

Hazard / Impact	Total in Parish (2018)	Hazard Area (2018)	Hazard Area (2025)	Hazard Area (2030)
<b>Flood Damage</b>				
<b>Structures</b>	58,646	19,290	19,426	19,523
<b>Value of Structures</b>	\$10,166,921,000	\$3,344,158,297.78	\$3,615,571,200.80	\$3,822,822,441
<b># of People</b>	140,930	46,309	46,634	46,868
<b>Tropical Cyclone Damage</b>				
<b>Structures</b>	58,646	58,646	59,058	59,354
<b>Value of Structures</b>	\$10,166,921,000	\$10,166,921,000	\$10,992,071,395.91	\$11,622,157,293
<b># of People</b>	140,789	140,789	141,777	142,488

Population and housing numbers have continued to increase steadily since the last update to the Livingston Parish Hazard Mitigation Plan. However, initiatives such as active floodplain management have regulated the development of flood prone areas to continue supporting and encouraging safer communities within Livingston Parish. Strict enforcement of building codes for all new development is an additional step taken by the parish in its effort to decrease its vulnerability and increase the resiliency of the parish against natural hazards. The development that has occurred since 2016 has not in any knowing way altered the jurisdiction's vulnerability to natural hazards.

## 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 Livingston 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 to 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. 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 Livingston 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.

$$\text{Risk Factor} = [(\text{Probability} * 0.25) + (\text{Impact} * 0.25) + (\text{Spatial Extent} * 0.20) + (\text{Warning Time} * 0.15) + (\text{Duration} * 0.15)]$$

### Priority Risk Index and Hazard Risk

Hazard risk is determined by calculating the Risk Factor for each hazard impacting Livingston 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 2-12: Summary of the Priority Risk Index.

PRI Category	Degree of Risk			Assigned Weighting Factor
	Level	Criteria	Index Value	
<b>Probability</b>	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	
<b>Impact</b>	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	
<b>Spatial Extent</b>	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	
<b>Warning Time</b>	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	
<b>Duration</b>	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 2-13: 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 2-14: Risk Assessment for Livingston Parish.

Hazard	Probability	Impact	Spatial Extent	Warning Time	Duration	Overall Risk
Costal Hazards	4	2	2	1	3	2.5
Drought	2	2	4	2	3	2.55
Flooding	3	3	3	4	3	3.15
Thunderstorms - Hail	4	2	3	3	1	2.7
Thunderstorms - Lightning	2	2	2	3	1	2
Thunderstorms - Wind	4	2	3	3	1	2.7
Tornadoes	3	3	2	4	3	2.95
Tropical Cyclones	3	4	4	1	4	3.3
Winter Weather	1	3	4	1	2	2.25

## Land Use

The Livingston Parish Land Use map is provided on the next page. Residential, commercial, and industrial areas account for only 9% of the parish's land use. At 171,878 acres, land designated as wetlands makes up the largest category, accounting for 38% of land area in the parish. The parish also consists of agricultural land (28%), forest land (16%), and water areas (8%).

Table 2-15: Livingston Parish Land Use.

(Source: USGS Land Use Map)

Land Use	Acres	Percentage
Agricultural Land, Cropland, and Pasture	127,256	28%
Wetlands	171,878	38%
Forest Land (Not including forested wetlands)	72,470	16%
Urban/Development	41,997	9%
Water	36,220	8%

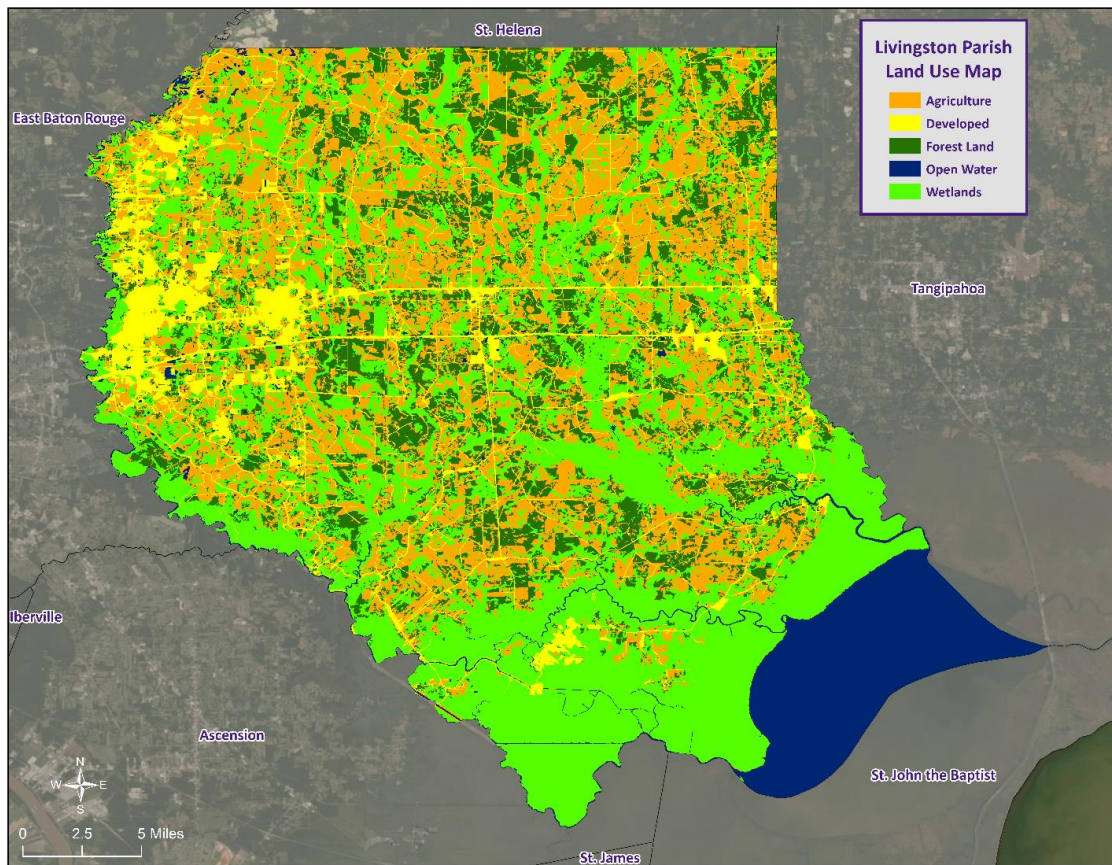


Figure 2-6: Livingston Parish Land Use Map.  
(Source: USGS Land Use Map)

## Hazard Identification

### Coastal Hazards/Subsidence

Coastal land loss is the loss of land (especially beach, shoreline, or dune material) by natural and/or human influences. Coastal land loss occurs through various means, including erosion, subsidence (the sinking of land over time as a result of natural and/or human-caused actions), saltwater intrusion, coastal storms, littoral drift, changing currents, manmade canals, rates of accretion, and sea level rise. The effects of these processes are difficult to differentiate because of their complexity and because they often occur simultaneously, with one influencing each of the others.

Some of the worst recent contributors to coastal land loss in the state are the tropical cyclones of the past two decades. Two storms that stand out in this regard are Hurricanes Katrina and Rita. These powerful cyclones completely covered large tracts of land in a very brief period, permanently altering the landscape. The disastrous legacy of these storms concentrated already ongoing efforts to combat coastal land loss. Consistent with the 2019 State Hazard Mitigation Plan Update, coastal land loss is considered in terms of two of the most dominant factors: sea level rise and subsidence.

Sea level rise and subsidence impact Louisiana in a similar manner—again making it difficult to separate impacts. Together, rising sea level and subsidence—known together as relative sea level rise—can accelerate coastal erosion and wetland loss, exacerbate flooding, and increase the extent and frequency of storm impacts. According to NOAA, global sea level rise refers to the upward trend currently observed in the average global sea level. Local sea level rise is the level that the sea rises relative to a specific location (or, benchmark) at the coastline. The most prominent causes of sea level rise are thermal expansion, tectonic actions (such as sea floor spreading), and the melting of the Earth’s glacial ice caps. The current U.S. Environmental Protection Agency (EPA) estimate of global sea level rise is 10–12 in. per century, while future sea level rise could be within the range of 1–4 ft. by 2100. According to the U.S. Geological Survey (USGS), the Mississippi Delta plain is subject to the highest rate of relative sea level rise of any region in the nation largely due to rapid geologic subsidence.

Subsidence results from a number of factors including:

- Compaction/consolidation of shallow strata caused by the weight of sediment deposits, soil oxidation, and aquifer draw-down (shallow component)
- Gas/oil/resource extraction (shallow & intermediate component)
- Consolidation of deeper strata (intermediate components)
- Tectonic effects (deep component)

For the most part, subsidence is a slow-acting process with effects that are not as evident as hazards associated with discrete events. Although the impacts of subsidence can be readily seen in coastal parishes over the course of decades, subsidence is a “creeping” hazard. The highest rate of subsidence is occurring at the Mississippi River Delta (estimated at greater than 3.5 ft./century). Subsidence rates tend to decrease inland, and they also vary across the coast.

Overall, subsidence creates three distinct problems in Louisiana:

- By lowering elevations in coastal Louisiana, subsidence accelerates the effects of saltwater intrusion and other factors that contribute to land loss.
- By lowering elevations, subsidence may make structures more vulnerable to flooding.
- By destabilizing elevations, subsidence undermines the accuracy of surveying benchmarks (including those affecting levee heights, coastal restoration programs, surge modeling, BFEs, and other engineering inputs), which can contribute to additional flooding problems if construction occurs at lower elevations than anticipated or planned.

Saltwater intrusion is one of the major causes of subsidence and marshland loss. Saltwater intrusion refers to the movement of saltwater into freshwater aquifers, or to the encroachment of saline water into freshwater estuaries. This intrusion flows into streams discharging into the Gulf of Mexico as well as the marsh areas, subsequently into freshwater streams. Intrusion of saltwater causes the loss of fresh and intermediate vegetation, which results in rapid erosion of marsh soils and the ultimate conversion of the area to open water.

#### *Location*

Historic areas of coastal land loss and gain (*Figure 2-7*) and subsidence rates (*Figure 2-8*) have been quantified for Livingston Parish using data from the U.S. Geologic Survey and Louisiana Coastal Protection and Restoration Authority (CPRA). Since 1932, the average annual land loss in Louisiana is 35 mi<sup>2</sup>, while the average annual land gain has been 3 mi<sup>2</sup>, resulting in a net loss of 32 mi<sup>2</sup> per year. Land loss is primarily occurring on the southeastern coastline along Lake Maurepas in unincorporated Livingston Parish, and also along the banks of the Tickfaw River, Amite River, and Natalbany River. These rivers run adjacent to several incorporated areas in Livingston Parish, making them susceptible to land loss. The Natalbany River runs adjacent to Springfield, the Tickfaw River travels along the border of Killian, and the Amite River travels in the proximity of French Settlement and Port Vincent (*Figure 2-7*). Additionally, subsidence is also occurring in the southern portions of the parish, impacting mostly the unincorporated areas and the southern portion of Killian (*Figure 2-8*).

#### *Previous Occurrences / Extent*

Coastal land loss is an ongoing process, including discrete (hurricanes) and continuous (subsidence, sea level rise) processes. While historic flood loss data undoubtedly include the effects of coastal land loss, specific previous occurrences have not been identified as a source of direct disaster damage in Louisiana. Rather, the effects of the underlying flood or hurricane storm surge hazard are recorded. Land loss is a significant hazard, however, and assessment of the added flood impacts caused by land loss is quantified in the following sections. The southern portion of the unincorporated area of the parish and the incorporated area of Killian can expect to experience subsidence rates of approximately 6 mm annually. The incorporated areas of Albany, Denham Springs, French Settlement, Livingston, Port Vincent, Springfield, and Walker are not at risk to subsidence at this time. However, the unincorporated Livingston Parish, Killian, Livingston, French Settlement, Port Vincent, and Springfield are all susceptible to coastal land loss which may not be due to subsidence, but rather other factors such as global sea level rise.

#### *Frequency / Probability*

Subsidence, sea level rise, and coastal land loss are ongoing hazards. Based on historical subsidence rates and land loss/gain trends, the probability of future land loss in Louisiana is 100% certain, but actual rates of subsidence and land loss/gain vary along the coast based on various meteorological, geological, and

human-influenced dynamics (e.g., water/resource extraction, canal dredging, saltwater intrusion, marsh restoration projects, etc.).

Table 2-16: Estimated Annual Probability of Subsidence in Livingston Parish.

Annual Probability of Coastal Land Loss in Livingston Parish				
Livingston Parish (Unincorporated Area)	Albany	Denham Springs	French Settlement	Killian
100%	< 1%	< 1%	< 1%	100%

Table 2-17: Estimated Annual Probability of Subsidence in Livingston Parish (cont).

Annual Probability of Coastal Land Loss in Livingston Parish			
Livingston	Port Vincent	Springfield	Walker
< 1%	< 1%	< 1%	< 1%

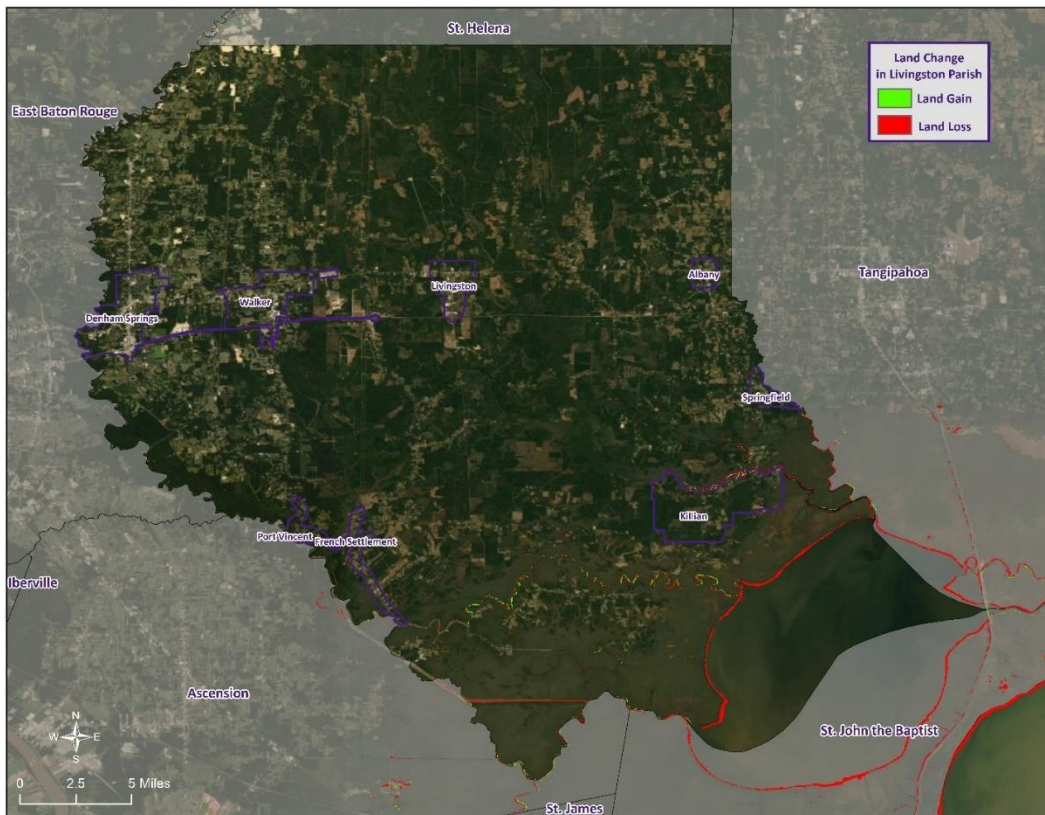


Figure 2-7: Historical Areas of Land Loss and Gain between 1932 and 2010. (Source: State of Louisiana Hazard Mitigation Plan)

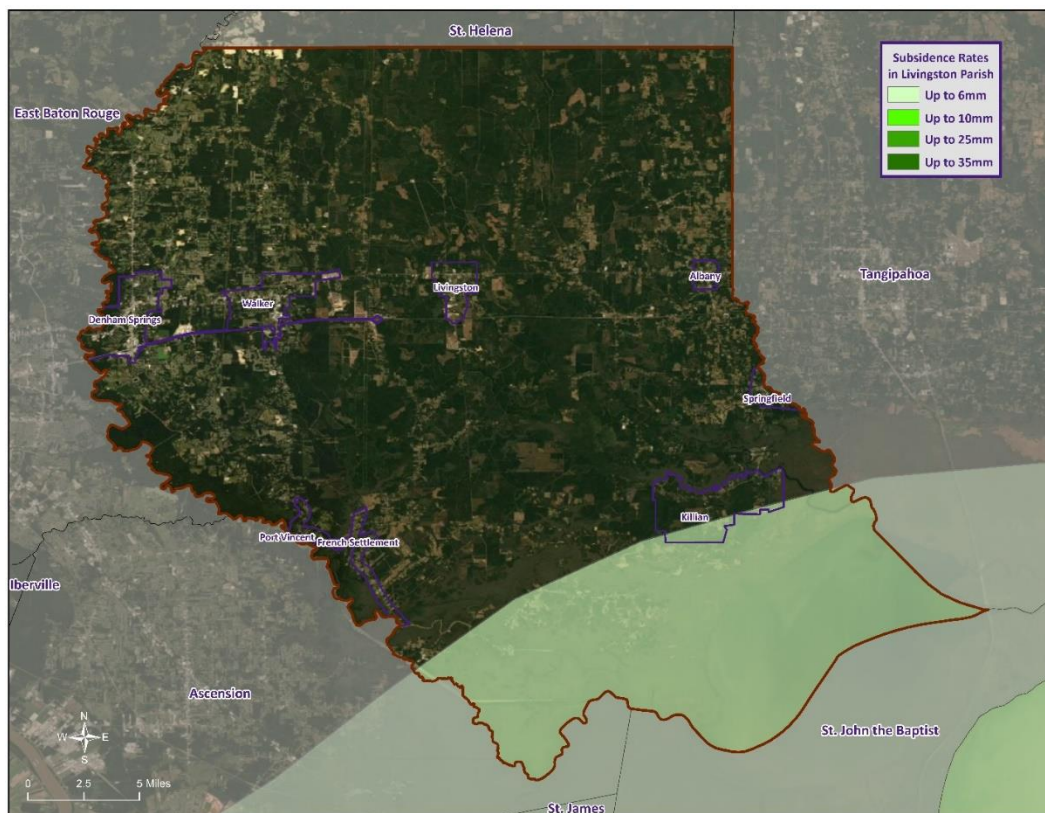


Figure 2-8: Maximum Annual Subsidence Rates Based on Subsidence Zones in Coastal Louisiana.  
(Source: State of Louisiana Hazard Mitigation Plan)

### Estimated Potential Losses

To determine the estimated potential losses, the methodology implemented in the 2019 Louisiana State Plan Update was used. In the state plan, two parameters were considered to estimate the projected increase in coastal flood losses from storm surge scenarios – global sea level rise and subsidence. A timeframe of 10 years was used for evaluation of future effects of sea level rise and subsidence for comparison with current conditions. The NOAA Sea, Lake and Overland Surges from Hurricanes (SLOSH) model was used to estimate the maximum of maximum (MOM) storm surge elevations for a Category 1 hurricane at mean tide along the coast of Louisiana. The MOM scenario is not designed to describe the storm surge that would result from a particular event, but rather evaluates the impacts of multiple hurricane scenarios with varying forward speeds and storm track trajectories to create the maximum storm surge elevation surface that would occur given the simultaneous occurrence of all hurricane events for a given category.

There are many global sea level rise scenarios from which to select; however, within a 10-year timeframe, methods that predict accelerating sea level rise rates do not deviate significantly from straight line methods. Therefore, a linear sea level rise projection for the sea level rise occurring in 10 years (SLR<sub>2024</sub>) using a linear global sea level rise rate of 3.1 mm/year was used (IPCC, 2007), which is also in accordance with the CPRA Coastal Master Plan. This resulted in an increase of 0.1 feet, which was applied to the NOAA MOM storm surge elevation results over the model output domain.

$$SLR_{2024} = 0.0031 \frac{m}{year} \times 10 \text{ years}$$

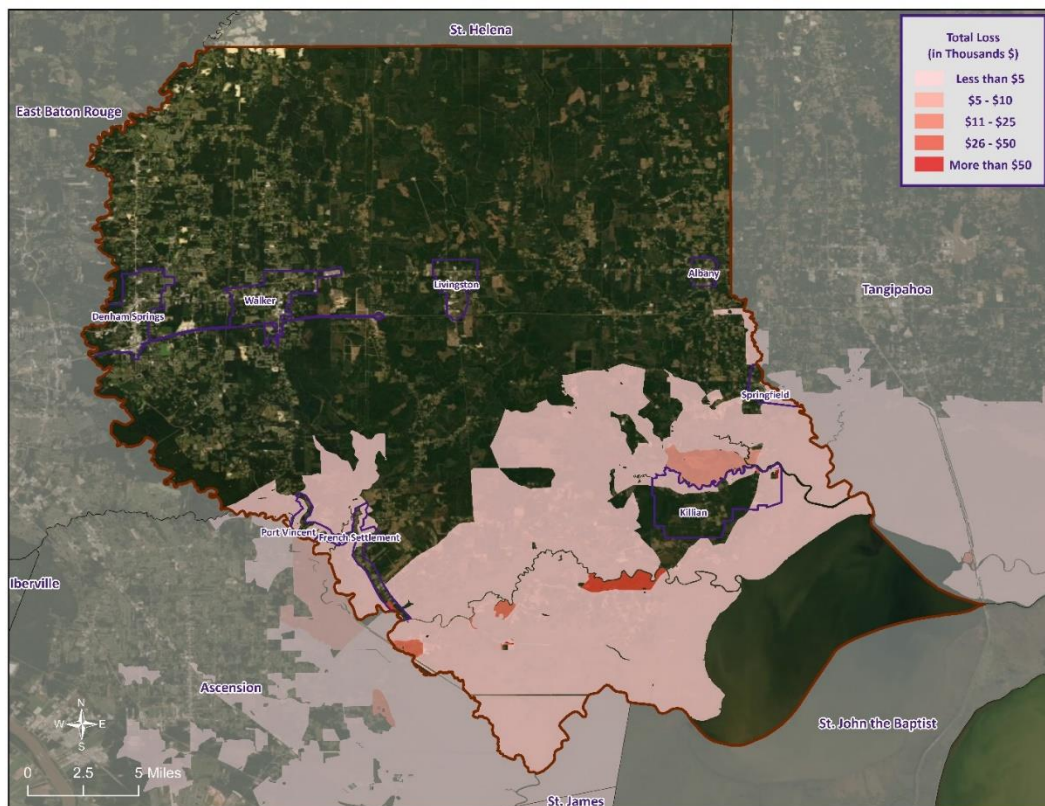
$$SLR_{2024} = 0.031 \text{ meters} = 0.10 \text{ ft in 2024}$$

To estimate the effects of subsidence, the elevation profile for southern Louisiana was separated into sections based on subsidence zones. The 20th percentile values for subsidence were used, in accordance with the CPRA Master Plan, and subtracted from the digital elevation model (DEM) for each zone and re-joined to create a final subsided ground elevation layer.

To perform the economic loss assessment, depth grids were created for current conditions (SLOSH MOM Results – Current Land Elevation) and for projected 2024 conditions ([SLOSH MOM Results + 0.1 ft sea level rise] – [Current Land Elevation – Subsidence]). Hazus was used to calculate economic loss for the current and future depth grids.

*Figure 2-9* shows the projected increase in total flood loss resulting from a SLOSH Category 1 MOM in the year 2014, with many areas expecting increase in losses. Some areas that would be currently unaffected by a SLOSH Category 1 MOM would be impacted in ten years based on subsidence and sea level rise projections (*Figure 2-10*).

To determine annual potential loss estimates for coastal land loss, increased exposure estimates over the next 10 years calculated using Hazus were annualized at the parish level (*Figure 2-11*). To provide an annual estimated potential loss per jurisdiction, the total loss for the census block groups within each jurisdiction were calculated. Based on hazard exposure, *Table 2-18* provides an estimate of annual potential losses for Livingston Parish.



*Figure 2-9: Increase in Total Loss Estimates in 2024 by Census Block Group Based on the Hazus Flood Model and NOAA SLOSH Model.*

*(Source: State of Louisiana Hazard Mitigation Plan)*



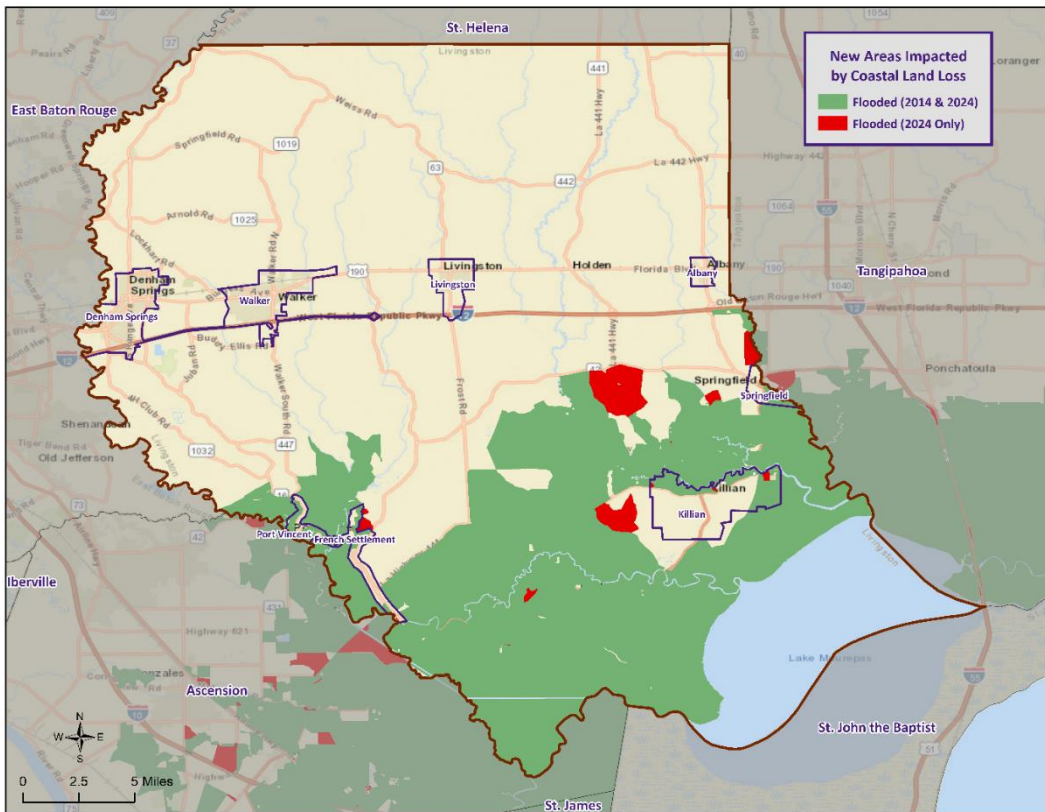


Figure 2-10: Census Block Groups not Currently Impacted by Category 1 Hurricane Storm Surge but Expected to be Impacted in 2024 are Shown in Red. (Source: State of Louisiana Hazard Mitigation Plan)

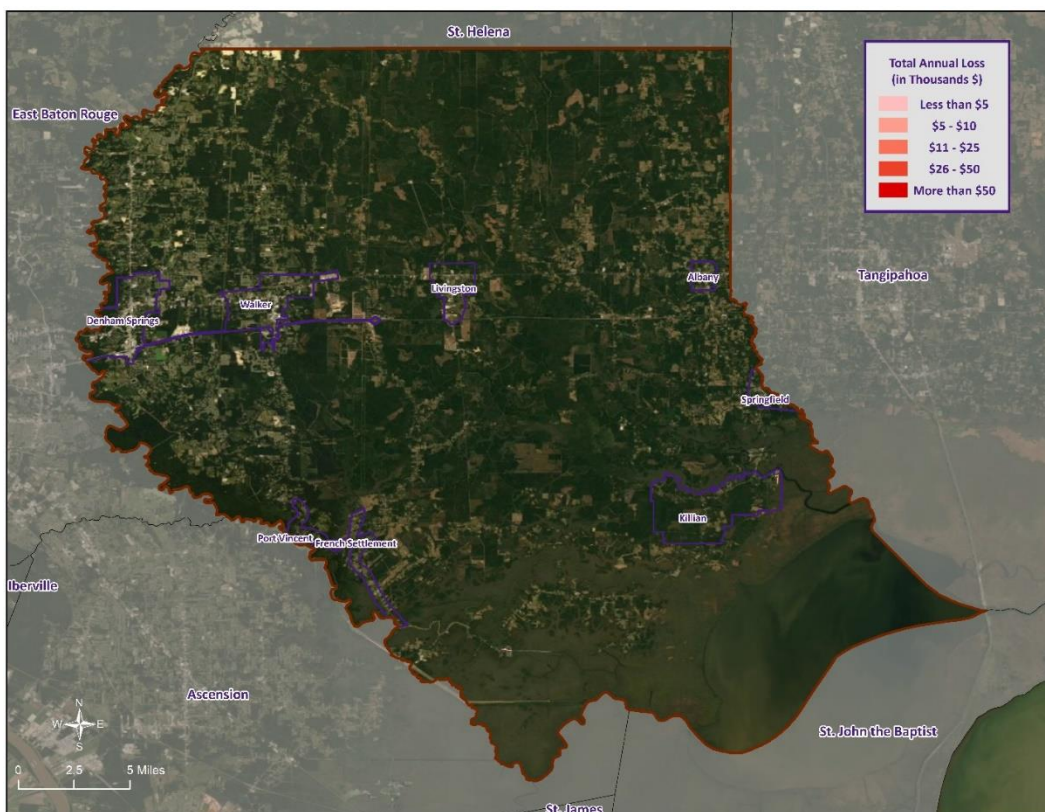


Figure 2-11: Estimated Annual Losses for Coastal Land Loss by Census Block Group.

The following tables show the current and future exposure potential based on the Hazus inventory database.

*Table 2-18: Estimated Annual Losses for Coastal Land Loss in Livingston Parish.*

*(Source: Hazus)*

Estimated Annual Losses for Coastal Land Loss in Livingston Parish				
Livingston Parish (Unincorporated Area)	Albany	Denham Springs	French Settlement	Killian
\$36,900	\$0	\$0	\$3,200	\$5,800

*Table 2-19: Estimated Annual Losses for Coastal Land Loss in Livingston Parish (cont.).*

*(Source: Hazus)*

Estimated Annual Losses for Coastal Land Loss in Livingston Parish				
Livingston Parish (Unincorporated Area)	Livingston	Port Vincent	Springfield	Walker
\$36,900	\$0	\$0	\$0	\$0

#### Threat to People

Coastal land loss can impact all demographics and age groups. Buildings located within highly vulnerable coastal land loss areas could be eventually permanently shut down and forced to re-locate. Long-term sheltering and permanent relocation could be a concern for communities that are at the highest risk for future coastal land loss. The total population within the parish that is susceptible to the effects of coastal land loss are shown in the following table.

*Table 2-20: Number of People Susceptible to Coastal Land Loss in Livingston Parish.*

Number of People Exposed to Coastal Land Loss Hazards			
Location	# in Community	# in Hazard Area	% in Hazard Area
<b>Livingston Parish (Unincorporated Area)</b>	105,266	7,954	7.6%
<b>Albany</b>	1,088	0	0%
<b>Denham Springs</b>	10,215	0	0%
<b>French Settlement</b>	1,116	132	11.8%
<b>Killian</b>	1,206	0	0%
<b>Livingston</b>	1,769	0	0%
<b>Port Vincent</b>	741	0	0%
<b>Springfield</b>	1,206	69	5.7%
<b>Walker</b>	6,138	0	0%
<b>Total</b>	<b>128,026</b>	<b>8,155</b>	<b>6.8%</b>

The Hazus multi-hazard model was used to identify populations vulnerable to coastal land loss throughout the jurisdictions in the following tables:

*Table 2-21: Population Vulnerable to Coastal Land Loss in Unincorporated Livingston Parish.*

Livingston Parish (Unincorporated)		
Category	Total Numbers	Percentage of People in Hazard Area
<b>Number in Hazard Area</b>	7,954	7.6%
<b>Persons Under 5 years</b>	601	7.6%
<b>Persons Under 18 years</b>	1,594	20.0%
<b>Persons 65 Years and Over</b>	787	9.9%
<b>White</b>	7,307	91.9%
<b>Minority</b>	647	8.1%

*Table 2-22: Population Vulnerable to Coastal Land Loss in French Settlement.*

French Settlement		
Category	Total Numbers	Percentage of People in Hazard Area
<b>Number in Hazard Area</b>	132	11.8%
<b>Persons Under 5 years</b>	9	6.7%
<b>Persons Under 18 years</b>	25	19.2%
<b>Persons 65 Years and Over</b>	16	11.8%
<b>White</b>	127	96.4%
<b>Minority</b>	5	3.6%

*Table 2-23: Population Vulnerable to Coastal Land Loss in Springfield.*

Springfield		
Category	Total Numbers	Percentage of People in Hazard Area
<b>Number in Hazard Area</b>	69	14.2%
<b>Persons Under 5 years</b>	5	7.2%
<b>Persons Under 18 years</b>	10	15.2%
<b>Persons 65 Years and Over</b>	12	17.0%
<b>White</b>	65	94.3%
<b>Minority</b>	4	5.8%

#### *Vulnerability*

See [Appendix C: Critical Facilities](#) for parish and municipality buildings that are susceptible to coastal land loss and subsidence.

## 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 relief) of agricultural drought is quick, as crops need water every few days; once they get rainfall, they improve. Conversely, 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.

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), drought 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. [Table 2-24](#) displays the range and Palmer classifications of the PDSI index while [Figure 2-12](#) displays the current drought monitor for the state of Louisiana and its parishes.

Table 2-24: 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 exist within Livingston Parish.

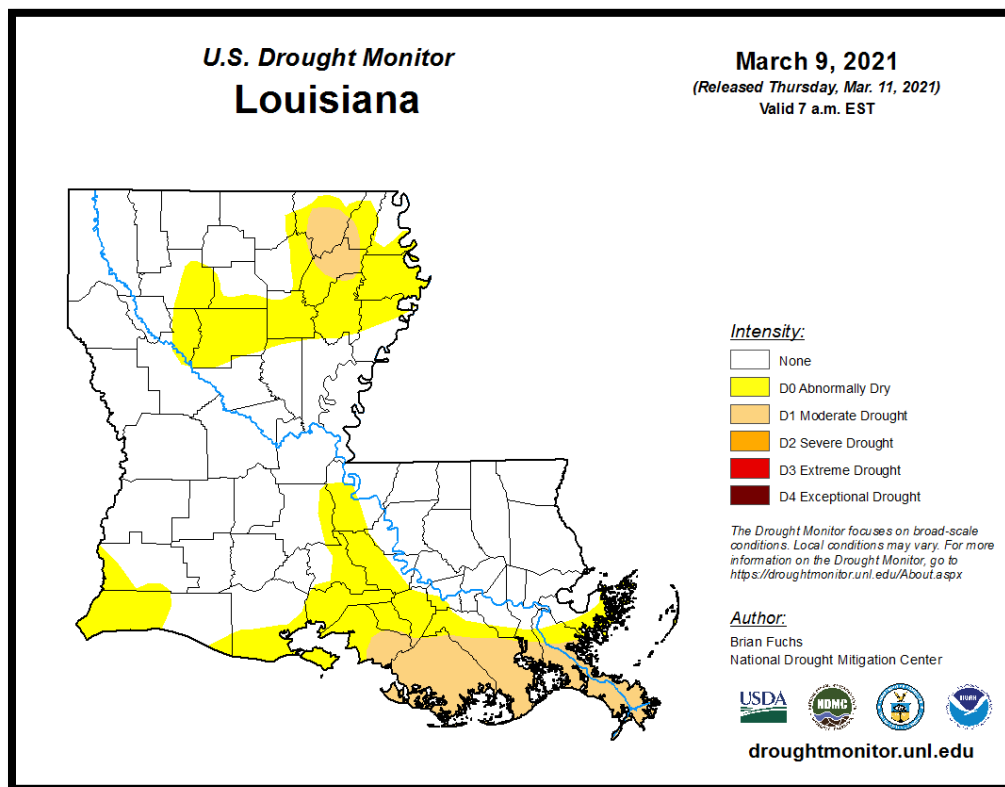


Figure 2-12: United States Drought Monitor for the State of Louisiana and its Parishes.  
(Source: The National Drought Mitigation Center)

### *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 Livingston Parish is on the agricultural community. The worst-case drought scenario for Livingston Parish would be a severe drought (D2).

### *Previous Occurrences / Extent*

Historically, there have been four drought incidents in Livingston Parish. Drought events have ranged from Mild to Moderate per the National Climatic Data Center. Since the last update in 2016, there have been no drought events within the boundaries of Livingston Parish.

### *Frequency / Probability*

Based on the four drought events since 1990, the annual chance of occurrence of a drought event occurring within a given year is calculated at 13% for Livingston Parish.

### *Estimated Potential Loses*

According to the NCEI Storm Events Database, there have been four drought events which have impacted Livingston Parish, resulting in limited 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 Livingston Parish.

*Table 2-25: Agricultural Exposure by Crop Type for Drought in Livingston Parish.  
(Source: LSU AG Center 2018 Parish Totals)*

Agricultural Exposure by Type for Drought			
Blueberries	Forestry	Hay	Home Gardens
\$257,113	\$21,567,628	\$2,243,170	\$2,613,000

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

### *Vulnerability*

See [Appendix C: Critical Facilities](#) for parish and municipality buildings that are susceptible to drought.

## 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 Livingston Parish, all six types of flooding events have historically been observed. For purposes of this assessment, ponding, flash flood, and urban flooding are considered to be flooding as a result of storm water from heavy thunderstorm precipitation.

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.

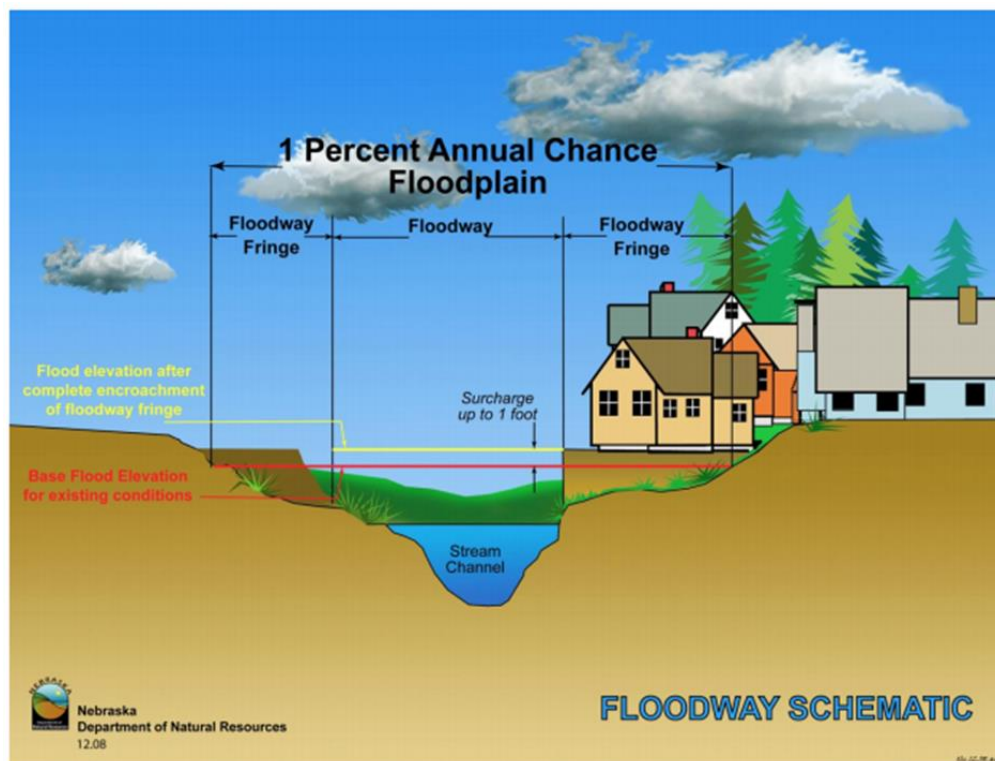
Floods are measured mainly by probability of occurrence. A 10-year flood event, for example, is an event of small magnitude (in terms of stream flow or precipitation) but with a relatively high annual probability of recurrence (10%). A 100-year flood event is larger in magnitude, but it has a smaller 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 ( $\text{ft}^3/\text{s}$ ) 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 stretch of a 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, waterway, 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 2-13*.



*Figure 2-13: 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 2-13](#)), 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:

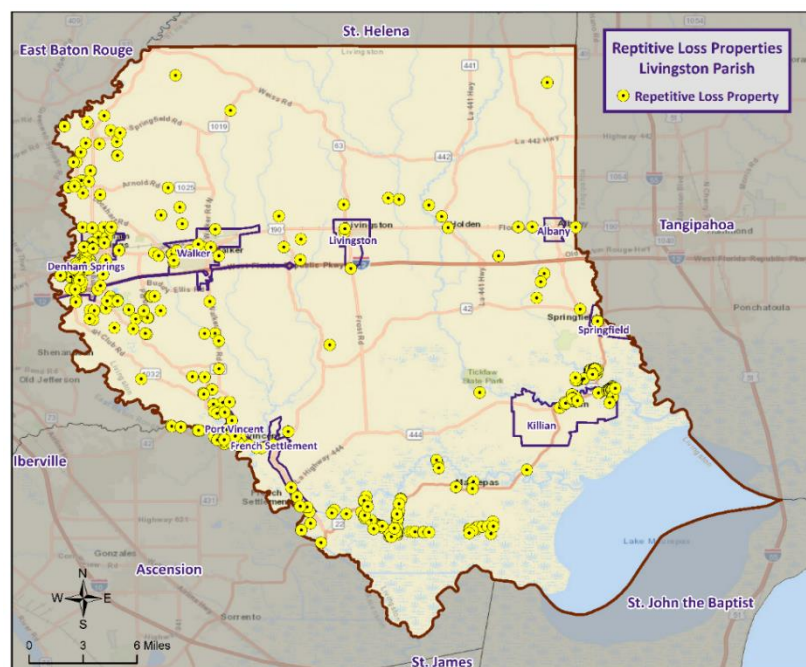
- a. It is covered under a contract for flood insurance made available under the NFIP; and
- b. It has incurred flood related damage –
  - 1) For which four or more separate claims payments have been made under flood insurance coverage with the amount of each claim exceeding \$5,000 and with the cumulative 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 Livingston Parish are provided in the table below:

*Table 2-26: Repetitive Loss Structures for Livingston Parish.*

Jurisdiction	Number of Structures	Residential	Commercial	Government	Total Claims	Total Claims Paid	Average Claim Paid
<b>Livingston Parish (Unincorporated)</b>	229	222	7	0	714	\$11,298,529	\$15,824
<b>Albany</b>	1	1	0	0	2	\$45,601	\$22,800
<b>Denham Springs</b>	340	326	14	0	1,006	\$17,380,265	\$17,277
<b>French Settlement</b>	44	41	3	0	130	\$1,471,729	\$11,321
<b>Killian</b>	8	8	0	0	29	\$441,831	\$15,236
<b>Livingston</b>	17	15	2	0	51	\$1,067,379	\$20,929
<b>Port Vincent</b>	40	38	2	0	146	\$1,519,081	\$10,405
<b>Springfield</b>	225	224	1	0	895	\$18,690,226	\$20,883
<b>Walker</b>	26	25	1	0	71	\$992,008	\$13,972
<b>TOTAL</b>	<b>930</b>	<b>900</b>	<b>30</b>	<b>0</b>	<b>3,044</b>	<b>\$52,906,650</b>	<b>\$17,381</b>

All 930 repetitive loss structures were geocoded in order to provide an overview of where the repetitive loss structures are located throughout the parish. *Figure 2-14* shows the approximate location of the structures, while *Figure 2-15* 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 and around the western border of the parish, mainly in and around the incorporated area of Denham Springs. There is also a relatively high density of repetitive loss structures in and around the incorporated areas of Port Vincent, French Settlement, Killian, and Springfield.



*Figure 2-14: Repetitive Loss Properties in Livingston Parish.*

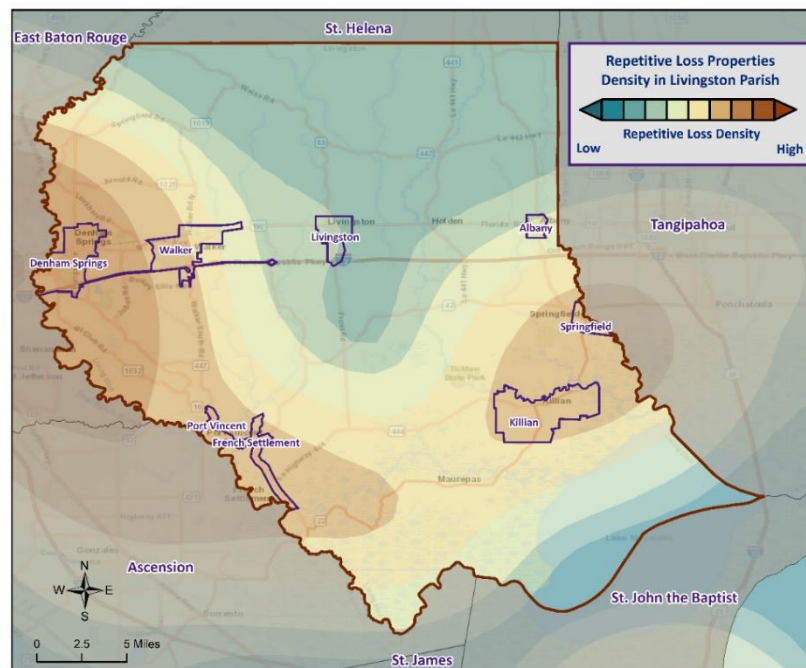


Figure 2-15: Repetitive Loss Property Densities in Livingston Parish.

#### National Flood Insurance Program

Flood insurance statistics indicate that Livingston Parish has 18,396 flood insurance policies with the NFIP, with total annual premiums of \$16,966,463. Livingston Parish and the jurisdictions of Albany, Denham Springs, French Settlement, Killian, Livingston, Port Vincent, Springfield, and Walker are all participants in the NFIP. Livingston 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 Livingston Parish and its jurisdictions is provided in the tables to follow.

Table 2-27: Summary of NFIP Policies for Livingston Parish.

Location	No. of Insured Structures	Total Insurance Coverage Value	Annual Premiums Paid
<b>Livingston Parish</b>	14,196	\$3,679,679,200	\$11,789,101
<b>Albany</b>	140	\$47,067,200	\$119,566
<b>Denham Springs</b>	2,103	\$474,242,300	\$3,097,712
<b>French Settlement</b>	177	\$42,870,500	\$196,081
<b>Killian</b>	248	\$59,989,700	\$182,611
<b>Livingston</b>	174	\$55,972,400	\$158,802
<b>Port Vincent</b>	130	\$26,689,900	\$103,625
<b>Springfield</b>	65	\$30,394,100	\$80,066
<b>Walker</b>	1,163	\$302,450,800	\$1,238,899
<b>Total</b>	<b>18,396</b>	<b>\$4,719,356,100</b>	<b>\$16,966,463</b>

Table 2-28: Summary of Community Flood Maps for Livingston Parish.

CID	Community Name	Initial FHBM Identified	Initial FIRM Identified	Current Effective Map Date	Date Joined the NFIP	Tribal
220113	Livingston Parish	7/12/1977	9/30/1988	4/3/2012	9/30/1988	No
220114	Albany	4/12/1974	12/2/1980	4/3/2012	10/14/1983	No
220116	Denham Springs	3/15/1974	10/15/1981	4/3/2012	10/15/1981	No
220117	French Settlement	10/25/1974	10/15/1985	4/13/12 (M)	10/15/1985	No
220355	Killian	6/25/1976	8/1/1987	4/3/2012	8/1/1987	No
220118	Livingston	9/19/1975	8/23/2001	4/3/2012	4/15/1979	No
220119	Port Vincent	8/13/1976	8/16/1988	4/3/2012	8/16/1988	No
220120	Springfield	2/4/1977	8/23/2001	4/3/12 (M)	3/24/1998	No
220121	Walker	10/1/1976	2/17/1982	4/3/2012	2/17/1982	No

According to the Community Rating System (CRS) list of eligible communities dated April 1, 2021, Livingston Parish and the jurisdictions of Denham Springs, French Settlement, Port Vincent, and Walker all participate in the CRS program. The incorporated areas of Albany, Killian, Livingston, and Springfield do not participate in the CRS program.

Table 2-29: List of Areas within Livingston Parish that Participate in the Community Rating System.

Community Number	Name	CRS Entry Date	Current Effective Date	Current Class	% Discount for SFHA	% Discount for Non-SFHA	Status
220116	Denham Springs	10/1/1991	5/1/2020	8	10%	5%	C
220117	French Settlement	10/1/1992	5/1/2019	10		0%	R
220113	Livingston Parish	10/1/1992	5/1/2019	10		0%	C
220119	Port Vincent	10/1/1992	10/1/1997	10		0%	R
220121	Walker	10/1/1992	10/1/2013	8	10%	5%	C

### 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.

One major flood-related impact on public health comes in the form of mold. During and immediately after a flooding event, many people are displaced from their homes and businesses. If residents are unable to access their homes and businesses for an extended period of time, mold can quickly begin to grow. If the damp conditions are compounded by the lack of electricity and residents are unable to dry out these flooded structures, mold will spread extremely quickly throughout the structure. This mold has been linked to numerous respiratory conditions, including asthma and allergies.

Another key concern related to flooding in Livingston Parish and its communities is the evacuation of residents during a flooding event and the impact that flooding may have on evacuation routes. Generally, the larger the road, the less likely it is to flood, although that is not always the case. In addition, a bridge does not have to be underwater to be damaged, thereby cutting off an evacuation route. In some cases, the bridge might be at a high point, but the access road on either side may be flooded. In other cases, the bridge or culvert can be washed out entirely. This is especially dangerous if a person drives on a flooded roadway assuming that a bridge is still in place and structurally sound.

Residents of Livingston Parish are urged to check the Livingston Parish Public Safety and Emergency Information website (<https://www.livingstonparishla.gov/public-safety>) during major emergency or disaster events. Residents should also tune to local and regional radio and television stations for up to the minute emergency information from the Livingston Parish Sheriff's Office and the Livingston Parish Office of Homeland Security and Emergency Preparedness. Traffic and road conditions/closures will be reported as they become available.

#### *Impacts of Future Flooding*

Many of the areas are at risk to future flooding as a result of increased floodplain and watershed development, as well as sea level rise.

Development within the floodplain and watershed will reduce the amount of permeable surface area that flood waters typically use for infiltration into the ground. This, in turn, will create conditions wherein additional volumes of water are "trapped" on the surface, resulting in increased flooding to people and property within Livingston Parish.

Sea level rise will contribute to worsening future flood conditions as this will effectively raise the water level within susceptible areas such that lesser volumes of rainfall will cause similar flooding effects experienced by communities in the past. With a higher baseline water table, less precipitation will be allowed to absorb into the ground, resulting in greater impacts to people and property from smaller storm events.

The fluctuation of water levels in area wetlands, especially flood waters, supports the bio-diversity of low-lying areas by releasing nutrients into the soil and germinating wetland flora. Flooding also offers some control of invasive water weeds. Most features of the environment have come to adapt to the effects of a flood event and adjust quickly to events, although it is possible that some species may not be resilient enough to survive.

Areas that have been modified by human activity such as the modification of stream banks or removal of riverside vegetation tend to suffer more negative consequences from flooding. When these alterations occur, flooding can cause unnatural erosion of sediment into the waterway, creating an imbalance of nutrients in the water which may harm ecosystems and have a negative impact on downstream water quality.

Each of these conditions may contribute to worsening of flooding impacts on the community's people, property, and the natural functions of the floodplain. In addition, personal property such as homes and businesses that have been impacted by past flooding events are a major concern in future flooding events. Although a great deal of effort has been undertaken to reduce the number of properties at risk through the use of improved risk assessment, mitigation techniques, and floodplain management regulations, there are still a significant number of structures within the parish and communities' flood zones which have not been properly mitigated to reduce risk.

#### *Flooding in Livingston 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 Livingston 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 crest at flood stage levels, causing extensive flooding in low-lying areas.

The Livingston Parish digital elevation model (DEM) in the figure on the next page is instructive in visualizing where the low-lying and high-risk areas are for the parish. Elevations in Livingston Parish range from near sea level to 110 feet. The highest elevations in the parish are approximately 110 feet, located in the northern unincorporated areas of the parish. These higher elevations are sporadic throughout the parish and are not common for the majority of the area. The lowest elevations of the parish are located in the southern unincorporated portions of the parish and the incorporated areas of Port Vincent, French Settlement, Killian, and Springfield.

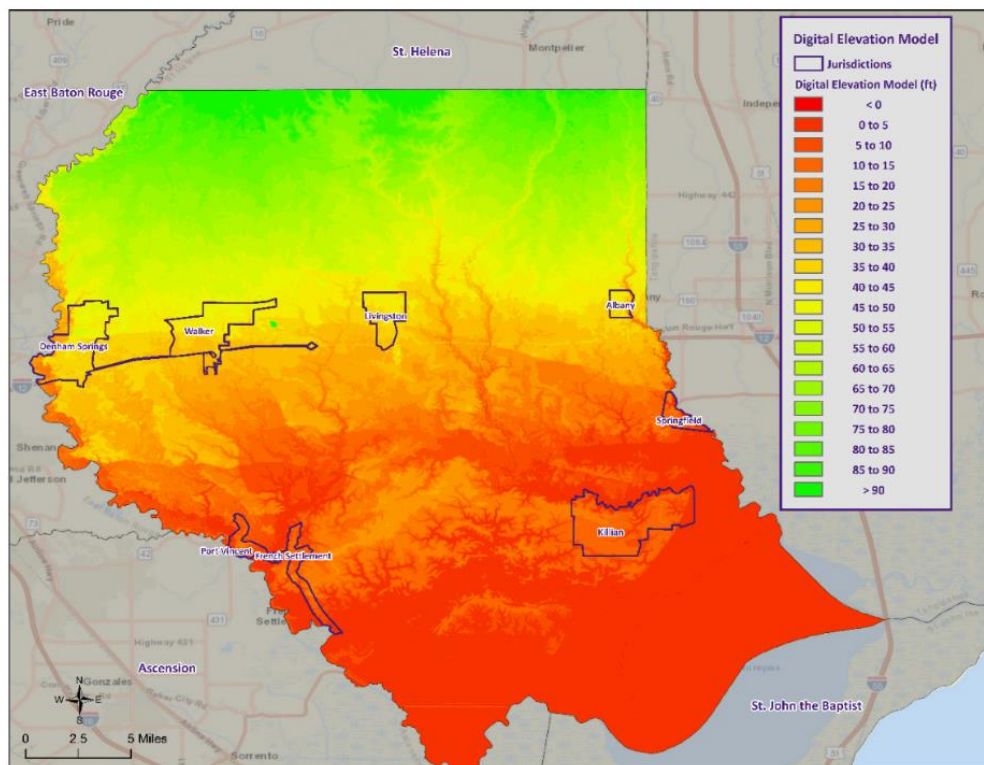


Figure 2-16: Elevation throughout Livingston Parish.

### Location

Livingston Parish has experienced significant flooding in its history and can expect more in the future. Many parts of the parish are located in the 100-year floodplain. The best indication of areas that are at risk of flooding can be found in the 100-year floodplain maps for Livingston Parish and the eight incorporated areas as shown in the figures on the following pages.

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 five feet can be expected in the unincorporated areas of the parish. The incorporated areas of Denham Springs, Walker, Livingston, Port Vincent, and French Settlement can expect flood depths from three to five feet, while the incorporated areas of Albany, Killian, and Springfield can expect flooding levels of approximately one to three feet.

The following pages contain flood zone maps displaying 100- and 500-year flood zones for Livingston Parish and its incorporated jurisdictions:



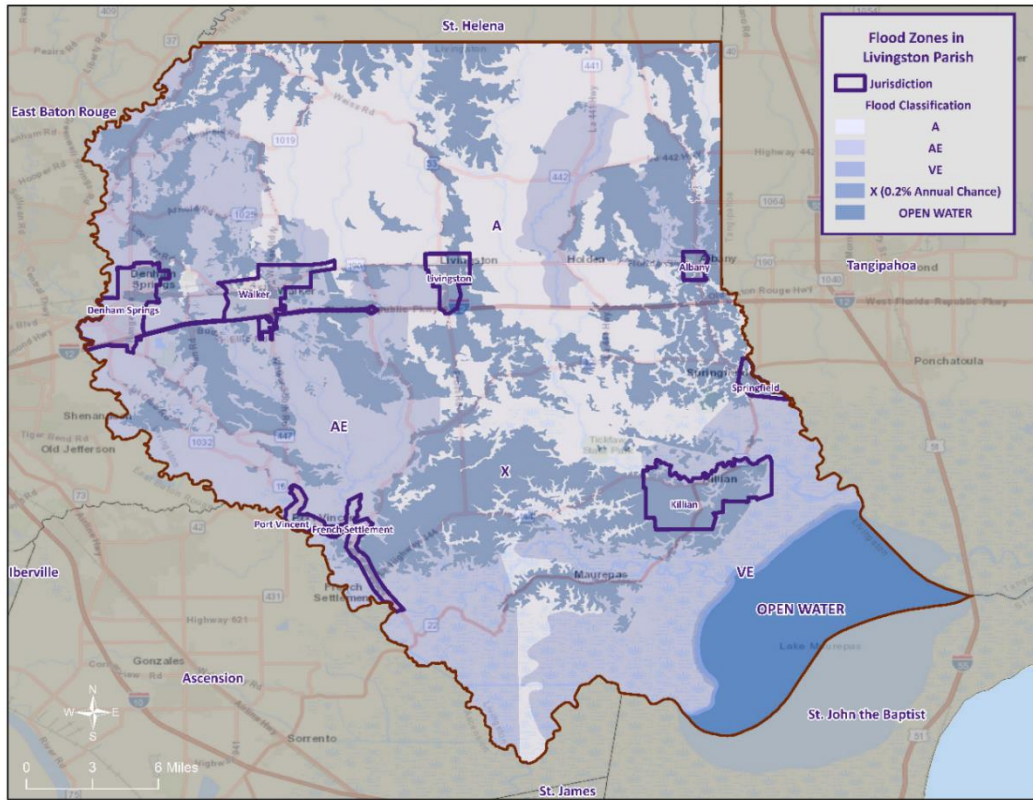


Figure 2-17: Livingston Parish Areas within the Flood Zones.

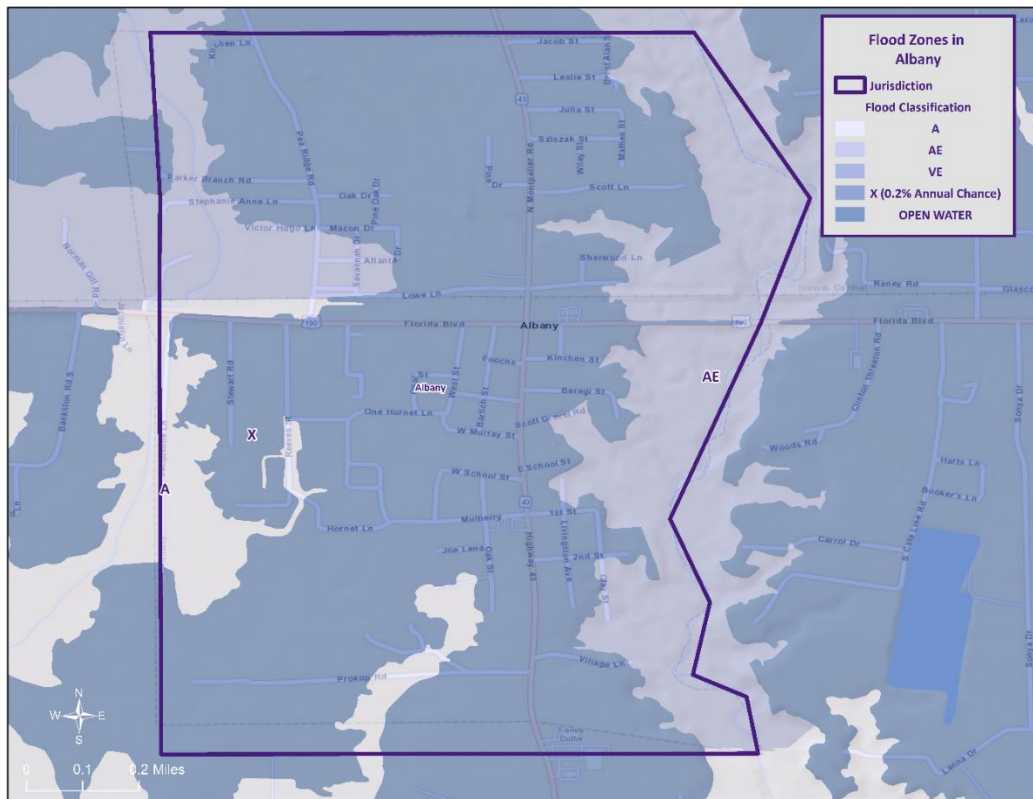


Figure 2-18: Flood Zones within the Albany area.

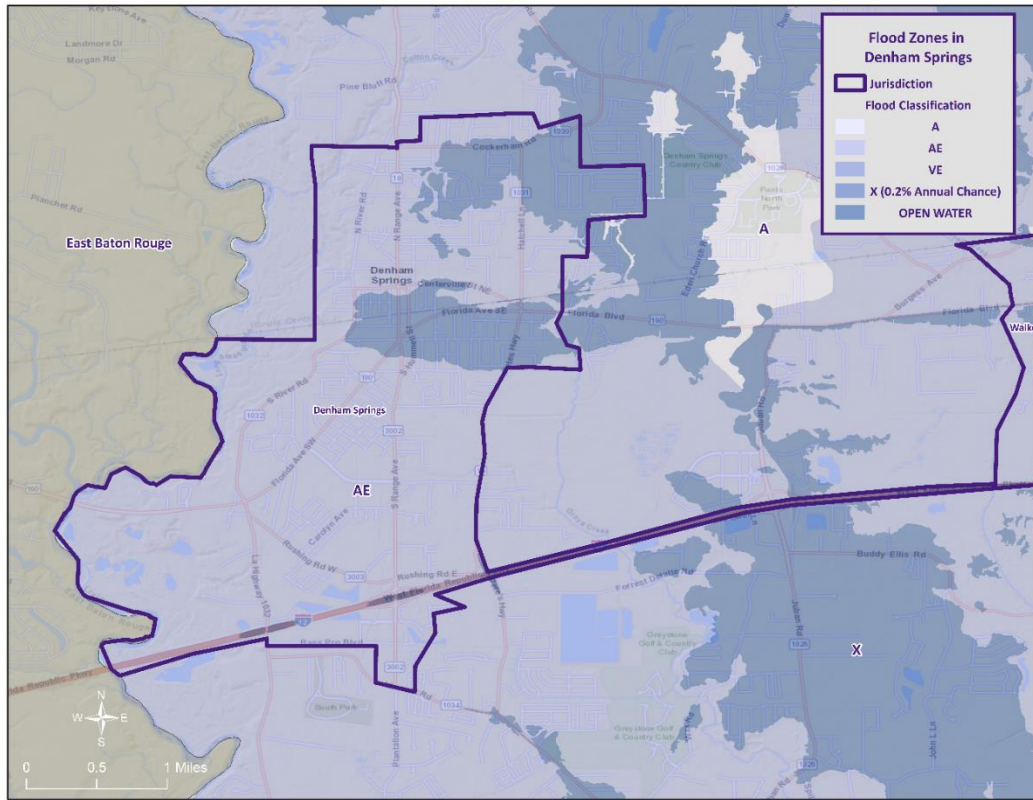


Figure 2-19: Flood Zones within the Denham Springs Area.

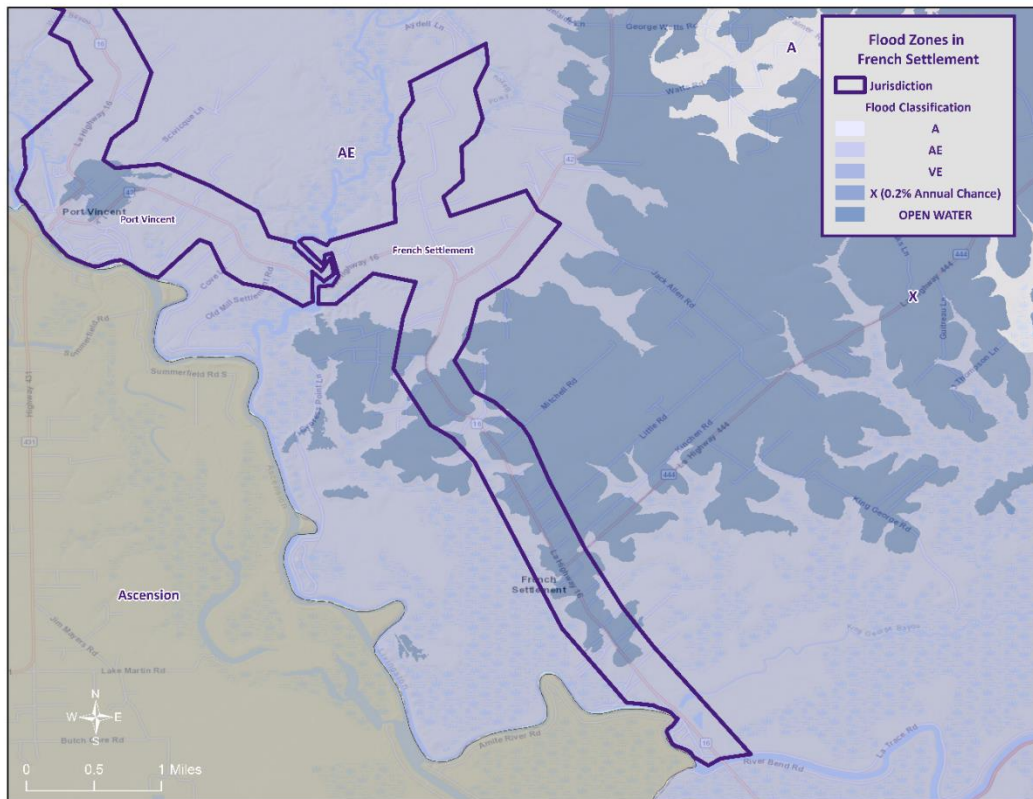


Figure 2-20: Flood Zones within the French Settlement Area.

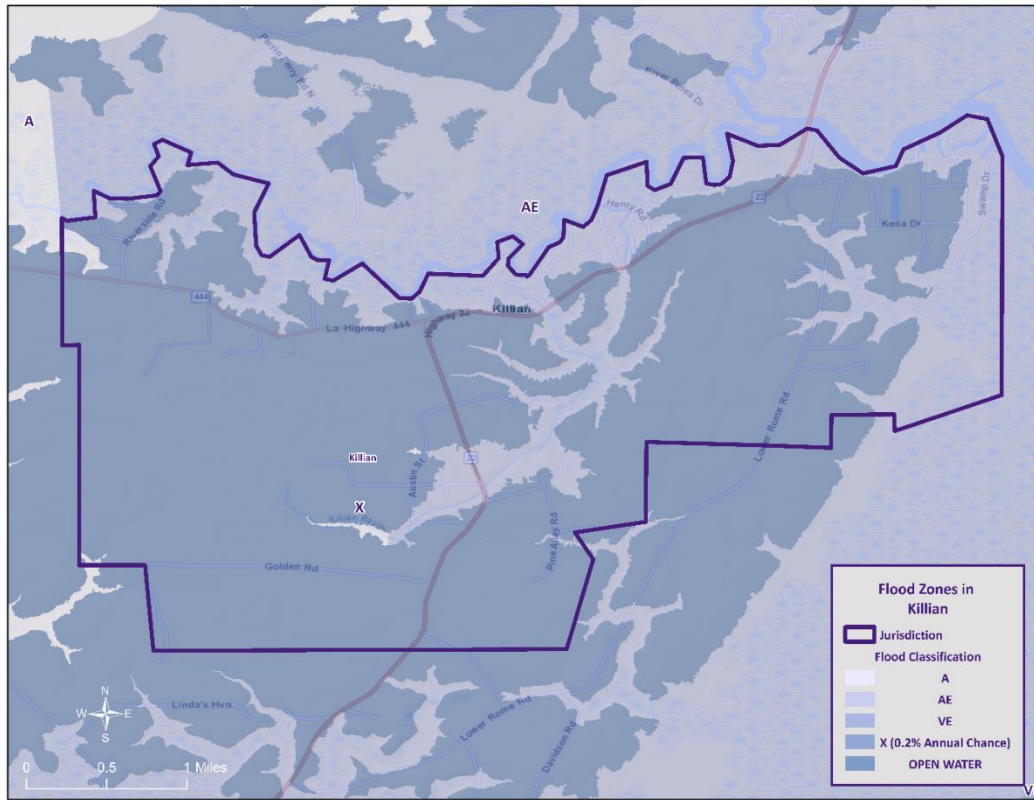


Figure 2-21: Flood Zones within the Killian Area.

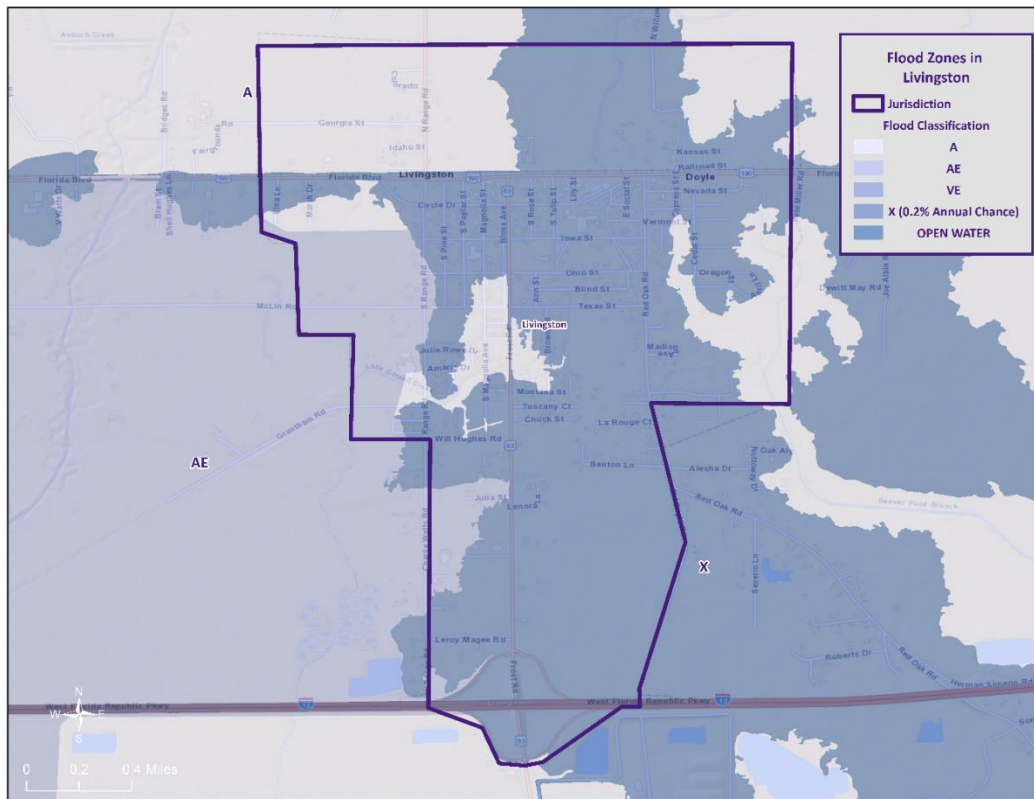


Figure 2-22: Flood Zones within the Livingston Area.

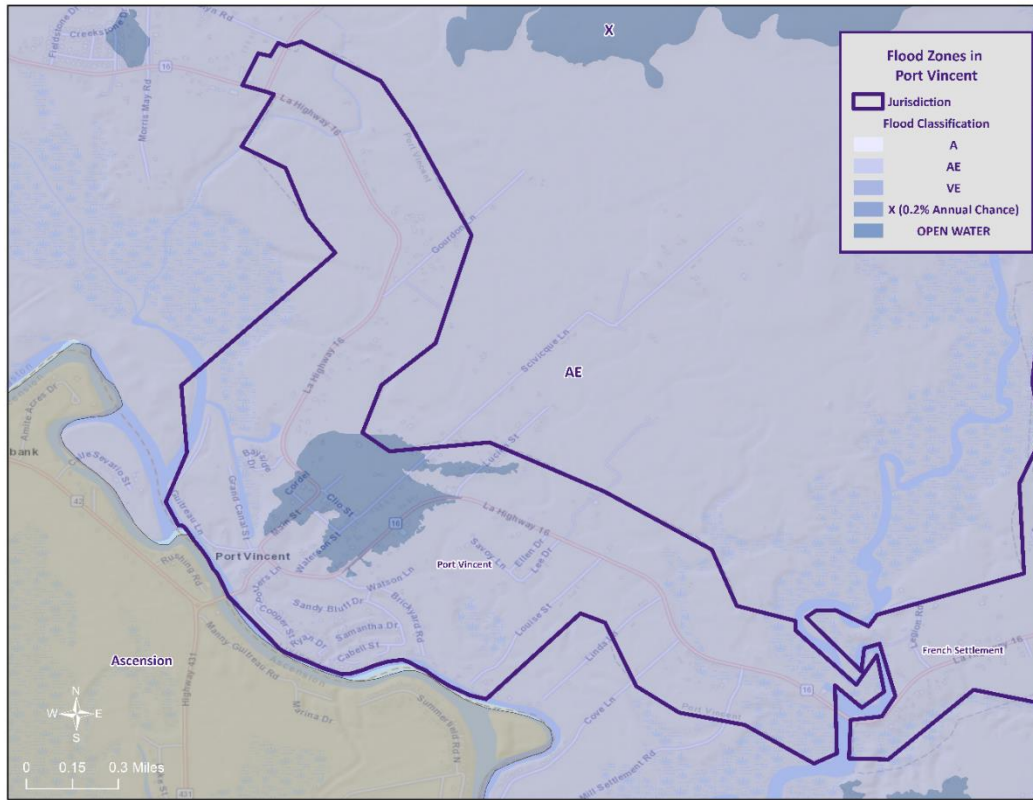


Figure 2-23: Flood Zones within the Port Vincent Area.

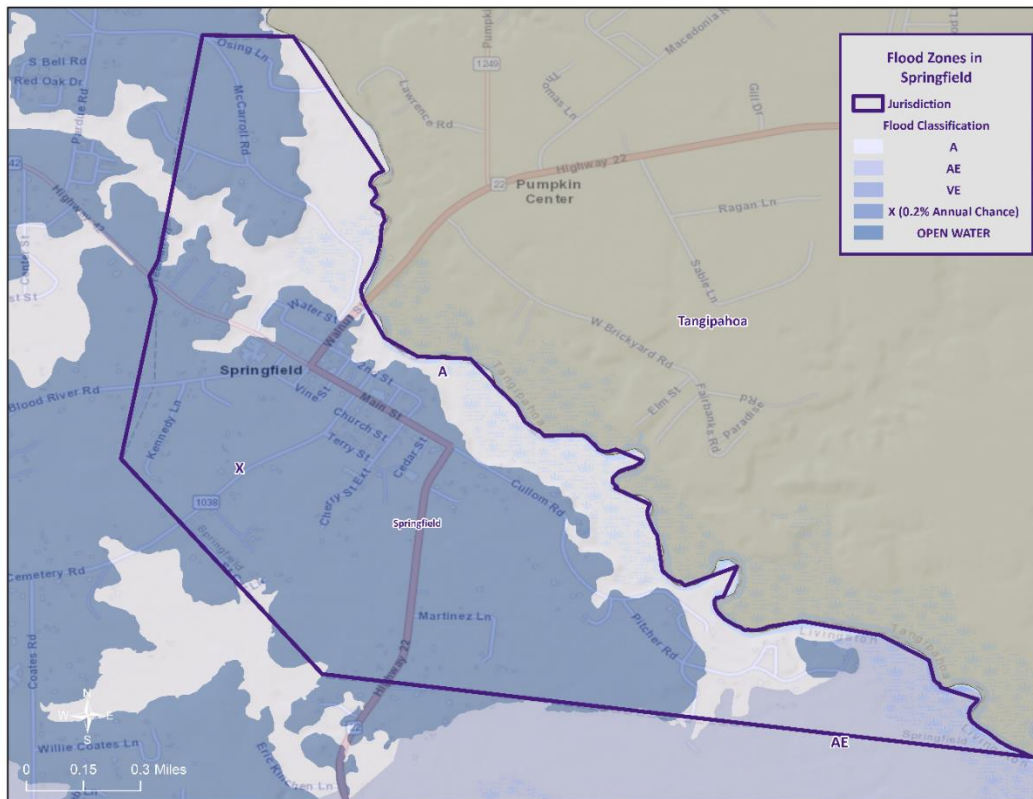


Figure 2-24: Flood Zones within the Springfield Area.

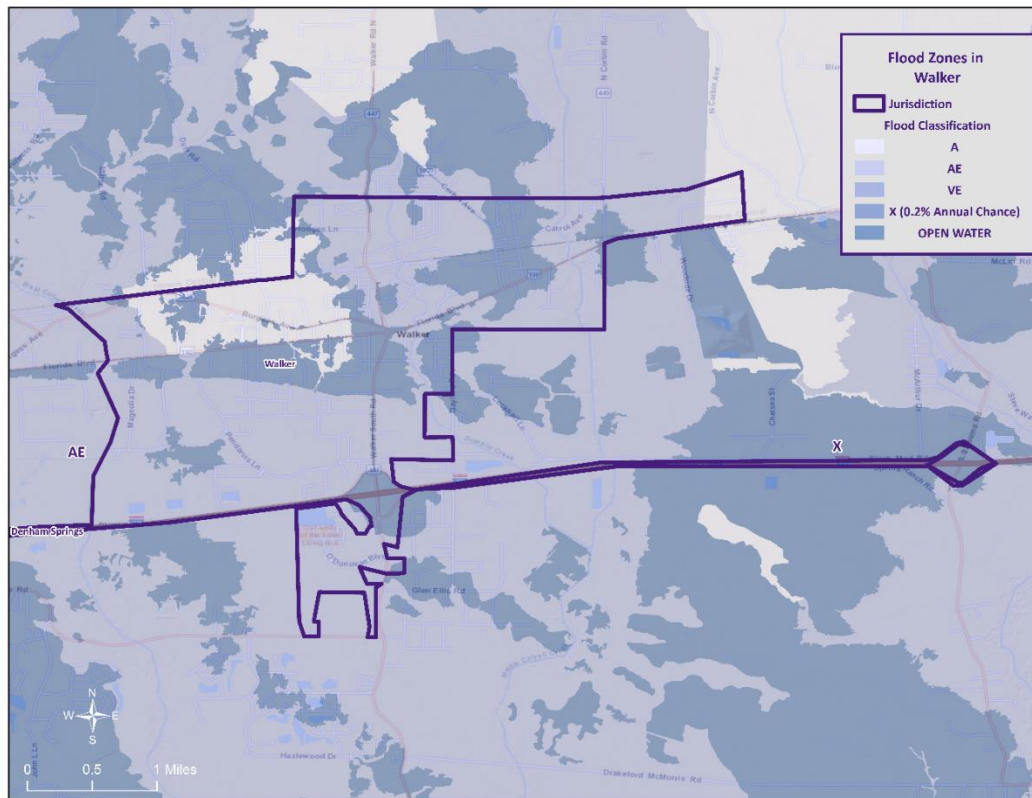


Figure 2-25: Flood Zones within the Walker Area.

Flooding in Livingston Parish is generally caused by headwater overflow of the Amite River, Colyell Creek, Middle Colyell Creek, Grays Creek, Millers Canal, Blind River and the Blood River. Backwater overflows occur along the lower portions of Colton Creek, Grays Creek, Long Slash Branch, Beavery Creek, Bayou Barbary, Allen Bayou, Colyell Creek, Blood River, and Blind River.

The history of flooding in the Town of Albany suggests that flooding may occur during the spring and summer seasons. The majority of the flooding happened during this time and is most often the result of spring rains. Storms during the summer are often associated with tropical cyclones moving inland from the Gulf of Mexico.

Flooding in Denham Springs is caused by general heavy rainfall from tropical cyclones. Intense summer thunderstorms sometimes result in localized flooding as well. Flooding from the Amite River and backwater on Millers Canal also occasionally impact Denham Springs.

Areas adjacent to the Tickfaw River in the Village of Killian experience flooding to a severity directly related to the intensity of the event. The area is also vulnerable to storm surge flooding from the Gulf of Mexico.

Flooding in the Village of Port Vincent is caused by head water overflow of the Amite River. Flooding along the lower portions of Colyell Bay and Grays Creek are actually interbasin overflows from the Amite River.

Backwater flooding along Colyell Creek, Dumplin Creek, Middle Colyell Creek, and their tributaries occasionally cause flood problems for the Town of Walker.

*Previous Occurrences / Extents*

Historically, there have been 16 flooding events that have caused significant flooding in Livingston Parish and its jurisdictions between 1990 and 2020. Below is a brief synopsis of the flooding events which occurred since the last Livingston Parish HMP Update in 2016.

*Table 2-30: Historical Floods in Livingston Parish with Locations since the 2016 Livingston Parish HMP Update.*

Date	Extents	Type of Flooding	Estimated Damages	Location
March 10 & 11, 2016	A closed upper low over Texas sent multiple disturbances through the area resulting in heavy rainfall and widespread flooding across southeast Louisiana and southern Mississippi. Major flooding occurred on several rivers, with a few records broken. Over 100 roads were flooded.	Flash Flood / Heavy Rain	\$1,800,000	PARISHWIDE
August 13, 2016	Twenty to 30 inches of rainfall over a 2-day period led to widespread flash flooding in the parish. As water drained into the local rivers, record levels of flooding were recorded. Hundreds of high-water rescues were necessary across the parish. More than 20,000 homes and businesses suffered various degrees of flooding.	Flash Flood	\$576,000,000	PARISHWIDE
April 3, 2017	Numerous road closures due to heavy rain were reported across Livingston Parish.	Flash Flood	\$0	PARISHWIDE
June 6, 2019	Heavy rainfall of 4 to 7 inches fell across the southern half of Livingston Parish during the morning hours producing extensive street flooding in a number of communities. Water entered a few buildings in Denham Springs and Walker.	Flash Flood	\$0	PARISHWIDE

### Frequency / Probability

The NCEI Storm Events Database identified 16 flooding events within the Livingston Parish planning area since 1990. The table below shows the probability and return frequency for each jurisdiction.

*Table 2-31: Annual Flood Probabilities for Livingston Parish.*

Jurisdiction	Annual Probability	Return Frequency
<b>Livingston Parish (Unincorporated)</b>	37%	One event every 2 to 3 years
<b>Albany</b>	33%	One event every 2 to 3 years
<b>Denham Springs</b>	30%	One event every 2 to 3 years
<b>French Settlement</b>	30%	One event every 2 to 3 years
<b>Killian</b>	33%	One event every 2 to 3 years
<b>Livingston</b>	40%	One event every 2 to 3 years
<b>Port Vincent</b>	40%	One event every 2 to 3 years
<b>Springfield</b>	40%	One event every 2 to 3 years
<b>Walker</b>	40%	One event every 2 to 3 years

Based on the historical record, the overall flooding probability for the entire Livingston Parish Planning Area is 53%, with 16 events having occurred over a 30-year period.

### Estimated Potential Losses

Using the Hazus Flood Model along with the Parish DFIRM, the 100-year flood scenario was analyzed to determine losses associated with the event. *Table 2-32* shows the total economic losses that would result from this occurrence.

*Table 2-32: Estimated Losses in Livingston Parish from a 100-year Flood Event.  
(Source: Hazus)*

Jurisdiction	Estimated Total Losses from 100-Year Flood Event
<b>Livingston Parish (Unincorporated Area)</b>	\$738,313,030
<b>Albany</b>	\$3,164,250
<b>Denham Springs</b>	\$43,895,550
<b>French Settlement</b>	\$1,513,300
<b>Killian</b>	\$2,601,000
<b>Livingston</b>	\$6,576,450
<b>Port Vincent</b>	\$877,900
<b>Springfield</b>	\$1,136,900
<b>Walker</b>	\$15,275,300
<b>Total</b>	<b>\$813,353,680</b>

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

*Table 2-33: Estimated 100-year Flood Losses for Livingston Parish by Sector.*

*(Source: Hazus)*

Livingston Parish (Unincorporated)	Estimated Total Losses from 100-Year Flood Event
Agricultural	\$960,770
Commercial	\$63,908,180
Government	\$2,043,310
Industrial	\$15,975,200
Religious / Non-Profit	\$10,087,190
Residential	\$641,447,470
Schools	\$3,890,910
<b>Total</b>	<b>\$738,313,030</b>

*Table 2-34: Estimated 100-year Flood Losses for Albany by Sector.*

*(Source: Hazus)*

Albany	Estimated Total Losses from 100-Year Flood Event
Agricultural	\$0
Commercial	\$442,450
Government	\$25,650
Industrial	\$26,450
Religious / Non-Profit	\$182,500
Residential	\$2,259,750
Schools	\$227,450
<b>Total</b>	<b>\$3,164,250</b>

*Table 2-35: Estimated 100-year Flood Losses for Denham Springs by Sector.*

*(Source: Hazus)*

Denham Springs	Estimated Total Losses from 100-Year Flood Event
Agricultural	\$94,800
Commercial	\$10,130,700
Government	\$102,350
Industrial	\$742,950
Religious / Non-Profit	\$1,819,500
Residential	\$30,099,950
Schools	\$905,300
<b>Total</b>	<b>\$43,895,550</b>



*Table 2-36: Estimated 100-year Flood Losses for French Settlement by Sector.  
(Source: Hazus)*

French Settlement	Estimated Total Losses from 100-Year Flood Event
Agricultural	\$0
Commercial	\$113,450
Government	\$0
Industrial	\$34,350
Religious / Non-Profit	\$62,500
Residential	\$1,188,850
Schools	\$114,150
<b>Total</b>	<b>\$1,513,300</b>

*Table 2-37: Estimated 100-year Flood Losses for Killian by Sector.  
(Source: Hazus)*

Killian	Estimated Total Losses from 100-Year Flood Event
Agricultural	\$0
Commercial	\$118,200
Government	\$0
Industrial	\$18,550
Religious / Non-Profit	\$0
Residential	\$2,464,250
Schools	\$0
<b>Total</b>	<b>\$2,601,000</b>

*Table 2-38: Estimated 100-year Flood Losses for Livingston by Sector.  
(Source: Hazus)*

Livingston	Estimated Total Losses from 100-Year Flood Event
Agricultural	\$0
Commercial	\$841,900
Government	\$286,850
Industrial	\$104,550
Religious / Non-Profit	\$375,250
Residential	\$4,967,900
Schools	\$0
<b>Total</b>	<b>\$6,576,450</b>

*Table 2-39: Estimated 100-year Flood Losses for Port Vincent by Sector.  
(Source: Hazus)*

Port Vincent	Estimated Total Losses from 100-Year Flood Event
Agricultural	\$3,250
Commercial	\$54,750
Government	\$0
Industrial	\$0
Religious / Non-Profit	\$0
Residential	\$819,900
Schools	\$0
<b>Total</b>	<b>\$877,900</b>

*Table 2-40: Estimated 100-year Flood Losses for Springfield by Sector.  
(Source: Hazus)*

Springfield	Estimated Total Losses from 100-Year Flood Event
Agricultural	\$0
Commercial	\$125,450
Government	\$0
Industrial	\$0
Religious / Non-Profit	\$31,400
Residential	\$851,350
Schools	\$128,700
<b>Total</b>	<b>\$1,136,900</b>

*Table 2-41: Estimated 100-year Flood Losses for Walker by Sector.  
(Source: Hazus)*

Walker	Estimated Total Losses from 100-Year Flood Event
Agricultural	\$21,500
Commercial	\$1,399,400
Government	\$136,400
Industrial	\$381,150
Religious / Non-Profit	\$203,100
Residential	\$12,879,700
Schools	\$254,050
<b>Total</b>	<b>\$15,275,300</b>

## Threat to People

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

*Table 2-42: 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
<b>Livingston Parish (Unincorporated)</b>	105,266	36,834	35.0%
<b>Albany</b>	1,088	278	25.6%
<b>Denham Springs</b>	10,215	2,478	24.3%
<b>French Settlement</b>	1,116	412	36.9%
<b>Killian</b>	1,206	299	24.8%
<b>Livingston</b>	1,769	487	27.5%
<b>Port Vincent</b>	741	211	28.5%
<b>Springfield</b>	487	95	19.5%
<b>Walker</b>	6,138	1,017	16.6%
<b>Total</b>	<b>128,026</b>	<b>42,111</b>	<b>32.9%</b>

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

*Table 2-43: Vulnerable Populations Susceptible to a 100-year Flood Event in Livingston Parish.*

*(Source: Hazus)*

Livingston Parish (Unincorporated)		
Category	Total Numbers	Percentage of People in Hazard Area
<b>Number in Hazard Area</b>	36,834	35.0%
<b>Persons Under 5 Years</b>	2,781	7.6%
<b>Persons Under 18 Years</b>	7,382	20.0%
<b>Persons 65 Years and Over</b>	3,647	9.9%
<b>White</b>	33,836	91.9%
<b>Minority</b>	2,998	8.1%

*Table 2-44: Vulnerable Populations Susceptible to a 100-year Flood Event in Albany.  
(Source: Hazus)*

Albany		
Category	Total Numbers	Percentage of People in Hazard Area
<b>Number in Hazard Area</b>	278	25.6%
<b>Persons Under 5 Years</b>	20	7.2%
<b>Persons Under 18 Years</b>	55	19.9%
<b>Persons 65 Years and Over</b>	47	16.8%
<b>White</b>	264	95.0%
<b>Minority</b>	14	5.0%

*Table 2-45: Vulnerable Populations Susceptible to a 100-year Flood Event in Denham Springs.  
(Source: Hazus)*

Denham Springs		
Category	Total Numbers	Percentage of People in Hazard Area
<b>Number in Hazard Area</b>	2,478	24.3%
<b>Persons Under 5 Years</b>	173	7.0%
<b>Persons Under 18 Years</b>	459	18.5%
<b>Persons 65 Years and Over</b>	314	12.7%
<b>White</b>	2,015	81.3%
<b>Minority</b>	463	18.7%

*Table 2-46: Vulnerable Populations Susceptible to a 100-year Flood Event in French Settlement.  
(Source: Hazus)*

French Settlement		
Category	Total Numbers	Percentage of People in Hazard Area
<b>Number in Hazard Area</b>	412	36.9%
<b>Persons Under 5 Years</b>	28	6.7%
<b>Persons Under 18 Years</b>	79	19.2%
<b>Persons 65 Years and Over</b>	49	11.8%
<b>White</b>	397	96.4%
<b>Minority</b>	15	3.6%

*Table 2-47: Vulnerable Populations Susceptible to a 100-year Flood Event in Killian.  
(Source: Hazus)*

Killian		
Category	Total Numbers	Percentage of People in Hazard Area
<b>Number in Hazard Area</b>	299	24.8%
<b>Persons Under 5 Years</b>	14	4.8%
<b>Persons Under 18 Years</b>	52	17.3%
<b>Persons 65 Years and Over</b>	42	14.2%
<b>White</b>	265	88.5%
<b>Minority</b>	34	11.5%

*Table 2-48: Vulnerable Populations Susceptible to a 100-year Flood Event in Livingston.  
(Source: Hazus)*

Livingston		
Category	Total Numbers	Percentage of People in Hazard Area
<b>Number in Hazard Area</b>	487	27.5%
<b>Persons Under 5 Years</b>	38	7.7%
<b>Persons Under 18 Years</b>	97	19.8%
<b>Persons 65 Years and Over</b>	67	13.9%
<b>White</b>	458	94.1%
<b>Minority</b>	29	5.9%

*Table 2-49: Vulnerable Populations Susceptible to a 100-year Flood Event in Port Vincent.  
(Source: Hazus)*

Port Vincent		
Category	Total Numbers	Percentage of People in Hazard Area
<b>Number in Hazard Area</b>	211	28.5%
<b>Persons Under 5 Years</b>	13	5.9%
<b>Persons Under 18 Years</b>	32	15.3%
<b>Persons 65 Years and Over</b>	30	14.2%
<b>White</b>	208	98.7%
<b>Minority</b>	3	1.4%

*Table 2-50: Vulnerable Populations Susceptible to a 100-year Flood Event in Springfield.  
(Source: Hazus)*

Springfield		
Category	Total Numbers	Percentage of People in Hazard Area
<b>Number in Hazard Area</b>	95	19.5%
<b>Persons Under 5 Years</b>	7	7.2%
<b>Persons Under 18 Years</b>	14	15.2%
<b>Persons 65 Years and Over</b>	16	17.0%
<b>White</b>	90	94.3%
<b>Minority</b>	5	5.8%

*Table 2-51: Vulnerable Populations Susceptible to a 100-year Flood Event in Walker.  
(Source: Hazus)*

Walker		
Category	Total Numbers	Percentage of People in Hazard Area
<b>Number in Hazard Area</b>	1,017	16.6%
<b>Persons Under 5 Years</b>	70	6.9%
<b>Persons Under 18 Years</b>	206	20.3%
<b>Persons 65 Years and Over</b>	109	10.7%
<b>White</b>	867	85.2%
<b>Minority</b>	150	14.8%

#### Vulnerability

See [Appendix C: Critical Facilities](#) for parish and municipality buildings that are susceptible to flooding due to proximity within the 100-year floodplain.

## 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 2-52: 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 2-53: 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 2-54*.

*Table 2-54: 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 in the mountainous areas of the United States but are relatively insignificant in Louisiana. 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 2-55* 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 2-55: 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 2-56: 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 Livingston 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 53 hail incidents in Livingston Parish. Hailstorm diameters have ranged from 0.75 inches to 1.75 inches per the National Climatic Data Center since 1990. The most frequently recorded hail sizes have been 1.75-inch in diameter. There have been five significant hailstorm events in Livingston Parish since the 2016 Livingston Parish HMP update. The table on the next page contains a brief synopsis of those events.

Table 2-57: Previous Occurrences of Hailstorm Events since the 2016 Hazard Mitigation Plan Update.  
 (Source: NCEI Storm Events Database)

Date	Hail Size (inches)	Property Damage	Crop Damage
May 12, 2017	1	\$0	\$0
January 19, 2019	1.75	\$0	\$0
February 5, 2020	1	\$0	\$0
February 6, 2020	1	\$0	\$0
April 23, 2020	1	\$0	\$0

Frequency

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

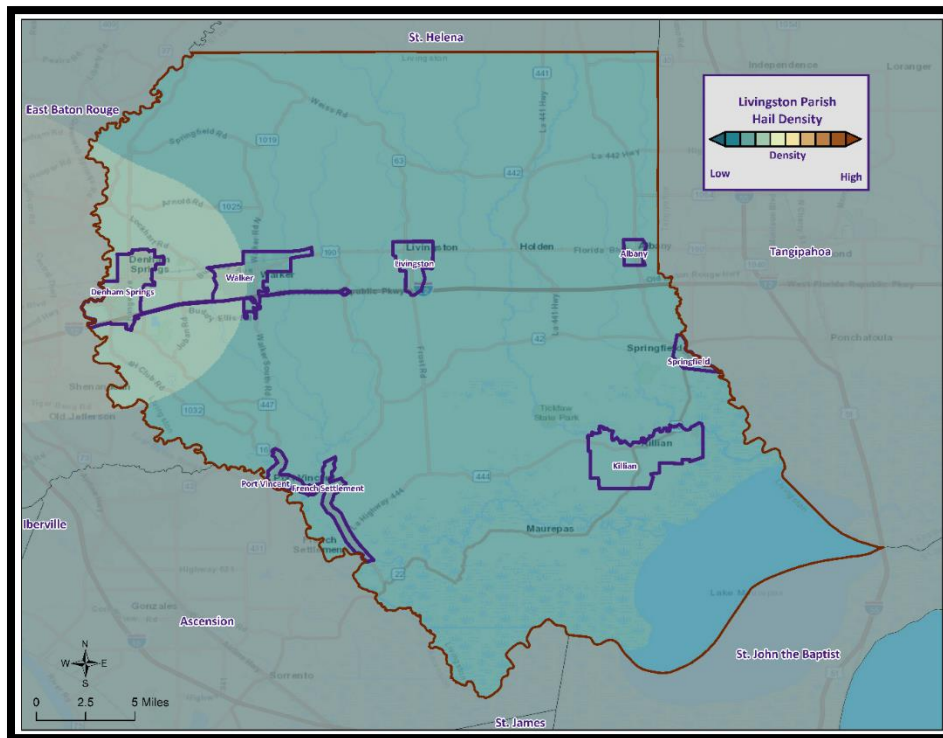


Figure 2-26: Density of Hailstorms by Diameter from 1950-2019.

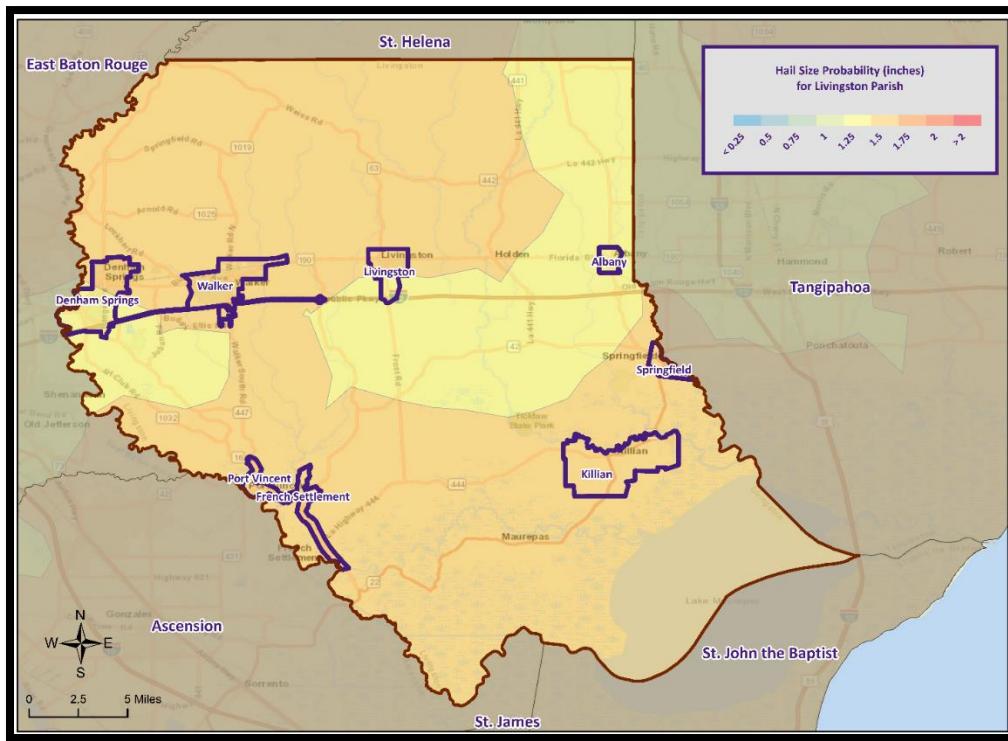


Figure 2-27: Hail Size Probability in Inches for Livingston Parish.

Estimated Potential Losses

Since 1990, there have been 53 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 \$2,000. 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 \$67 and \$38 per event. The following table provides an estimate of potential property losses for Livingston Parish:

Table 2-58: Estimated Annual Losses Resulting from Hailstorms in Livingston Parish and its Jurisdictions.

Estimated Potential Annual Losses from Hailstorms								
Unincorporated Livingston	Albany	Denham Springs	French Settlement	Killian	Livingston	Port Vincent	Springfield	Walker
\$55	\$1	\$5	\$1	\$1	\$1	\$1	\$1	\$3

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 Livingston Parish is equally at risk from high winds. The worst-case scenario for thunderstorm high wind is wind speeds of approximately 100 mph.

### Previous Occurrences / Extents

Since 1990, there have been 150 thunderstorm high wind events in Livingston Parish. The high wind events have ranged in wind speeds from 58 mph to 100 mph per the National Climatic Data Center. There have been nine high wind speeds events which impacted the Livingston Parish Planning area since the 2016 Livingston Parish HMP update. Below is a brief synopsis of those events.

*Table 2-59: Previous Occurrences of High Wind Events since the 2016 Hazard Mitigation Plan Update.*

*(Source: NCEI Storm Events Database)*

Date	Wind Speed (mph)	Property Damage	Crop Damage
April 3, 2017	63	\$0	\$0
May 12, 2017	100	\$0	\$0
June 18, 2017	60	\$0	\$0
April 14, 2018	63	\$0	\$0
April 7, 2019	64	\$15,000	\$0
May 19, 2019	63	\$0	\$0
June 27, 2019	63	\$0	\$0
April 12, 2020	60	\$0	\$0
April 28, 2020	60	\$500	\$0
May 23, 2020	60	\$5,000	\$0
June 25, 2020	58	\$2,000	\$0

### Frequency

High winds are a common occurrence within Livingston Parish and its jurisdictions 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 2-28](#) displays the thunderstorm wind speed probability for Livingston Parish and its jurisdictions.

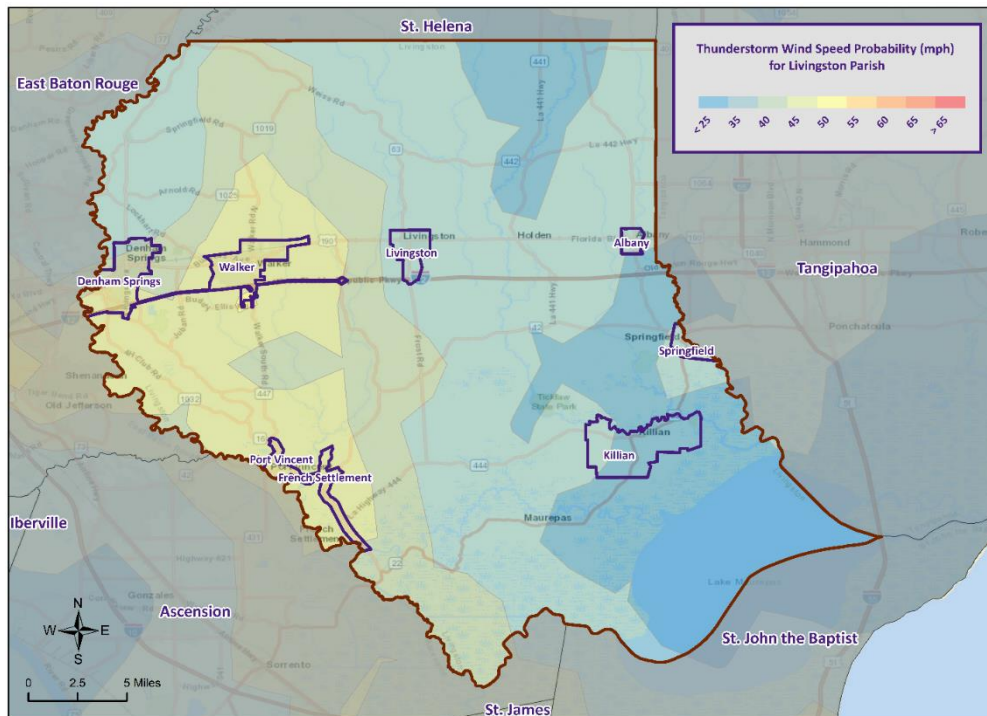


Figure 2-28: Thunderstorm High Wind Speed Probability in Miles Per Hour for Livingston Parish.

Estimated Potential Losses

Since 1990, there have been 150 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 \$1,378,000. 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 \$45,933 and \$9,187 per event. The following table provides an estimate of potential property losses for Livingston Parish:

Table 2-60: Estimated Annual Losses Resulting from High Winds in Livingston Parish and its Jurisdictions.

Estimated Potential Annual Losses from High Winds								
Unincorporated Livingston	Albany	Denham Springs	French Settlement	Killian	Livingston	Port Vincent	Springfield	Walker
\$37,767	\$390	\$3,665	\$400	\$433	\$635	\$266	\$175	\$2,202

There have been four injuries and no fatalities as a result of a thunderstorm high wind events 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 Livingston 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 three lightning events in Livingston Parish and its jurisdictions between the years 1990 and 2020. Since the last HMP update, there has been no significant lightning events within the boundaries of Livingston Parish.

### Frequency

Lightning can strike anywhere and is produced by every thunderstorm, so the chance of lightning occurring in Livingston 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. Livingston Parish experienced three significant lightning events between the years 1990 and 2020, resulting in a 10% annual chance of occurrence.

### Estimated Potential Losses

Since 1990, there have been three significant lightning events that have resulted in property damages according to NCEI Storm Events Database. The total property damages associated with those storms have totaled approximately \$235,000. 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 \$7,833 and \$78,333 per event. The following tables provide an estimate of potential property losses for Livingston Parish:

*Table 2-61: Estimated Annual Losses Resulting from Lightning in Livingston Parish and its Jurisdictions.*

Estimated Potential Annual Losses from Lightning								
Unincorporated Livingston	Albany	Denham Springs	French Settlement	Killian	Livingston	Port Vincent	Springfield	Walker
\$6,441	\$67	\$625	\$68	\$74	\$108	\$45	\$30	\$376

Per the NCEI Storm Events Database, there have been no fatalities or injuries as a result of lightning in Livingston 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 2-62* 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 2-62: Comparison of the Enhanced Fujita (EF) Scale to the Fujita (F) Scale.*

Wind Speed (mph)	Enhanced Fujita Scale					
	EF0	EF1	EF2	EF3	EF4	EF5
	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 2-63: Fujita and Enhanced Fujita Tornado Damage Scales.*

Scale	Typical Damage
<b>F0/EF0</b>	Light damage. Some damage to chimneys; branches broken off trees; shallow-rooted trees pushed over; sign boards damaged.
<b>F1/EF1</b>	Moderate damage. Peels surface off roofs; mobile homes pushed off foundations or overturned; moving autos blown off roads.
<b>F2/EF2</b>	Considerable damage. Roofs torn off frame houses; mobile homes demolished; boxcars overturned; light-object missiles generated; cars lifted off ground.
<b>F3/EF3</b>	Severe damage. Roofs and some walls torn off well-constructed houses; trains overturned; most trees in forest uprooted; heavy cars lifted off the ground and thrown.
<b>F4/EF4</b>	Devastating damage. Well-constructed houses leveled; structures with weak foundations blown away some distance; cars thrown and large missiles generated.
<b>F5/EF5</b>	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 Livingston Parish with specific locations, tornadoes in general are a climatological based hazard and have the same approximate probability of occurring throughout the entirety of the Livingston Parish planning area. Because a tornado has a similar probability of striking anywhere within the planning area for Livingston Parish, all areas in the parish are equally at risk for tornadoes.

#### *Previous Occurrences / Extent*

The NCEI Storm Events Database reports a total of 21 tornadoes or waterspouts occurring within the boundaries of Livingston Parish since 1990, ranging in extent from F0 to F3 under the Fujita Scale and EF0 to EF3 on the Enhanced Fujita Scale. Based off these events, Livingston Parish can expect future tornadoes up to an EF3 under the Enhanced Fujita Scale as a worst-case scenario.

The most destructive and deadliest tornado to impact Livingston Parish was a F3 tornado which occurred on February 6, 1953. The tornado was responsible for over two million dollars in damages, two fatalities, and 21 injuries. Since the 2016 HMP Update, five tornadoes have occurred within the boundaries of Livingston Parish. Below is a list and brief description of the impact for these events.

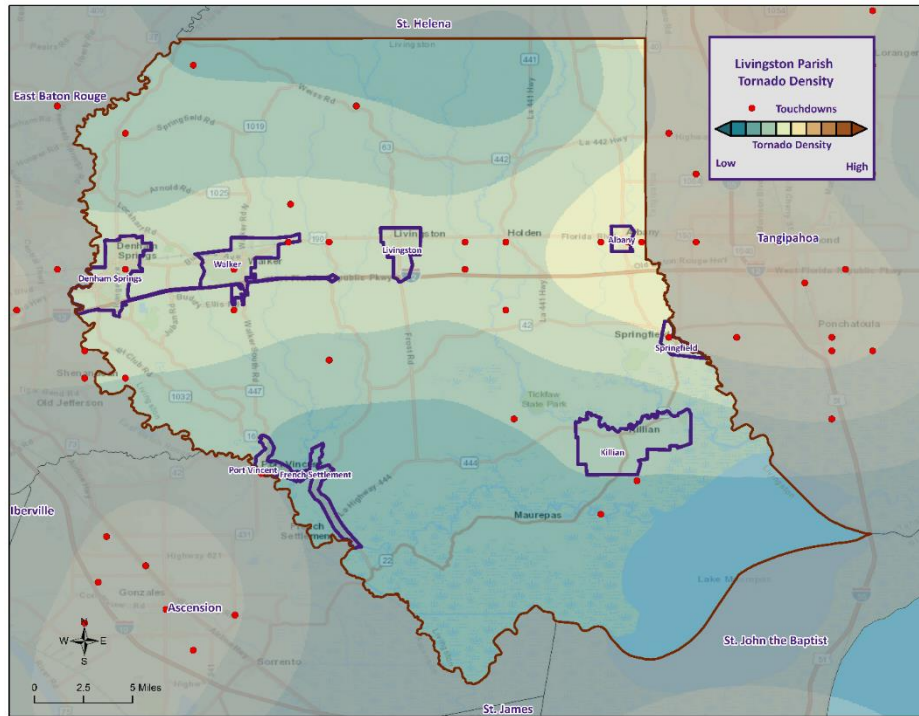
Table 2-64: Historical Tornadoes in Livingston Parish with Locations since the 2016 Update.

Date	Impacts	Property Damage	Location	Magnitude
February 7, 2017	7.08-mile path with a 500 yard path. A tornado touched down near the intersection of Carthage Bluff Road and Carthage Lane on the south side of Killian causing minor damage to a home and some trees. As it moved east-northeast along Carthage Bluff Road, it strengthened and snapped or uprooted numerous trees. It continued to strengthen further as it approached Davidson Road. In this area, it is estimated to have reached its peak intensity with winds near 120 mph. It destroyed three barns and destroyed a single family home that had been built on a cinder block foundation. The maximum estimated wind speed is based on this destroyed home which was not secured to the foundation, and also supported by snapped telephone poles in the area. The tornado then moved into a marshy area and continued to snap and uproot numerous trees as it moved into Tangipahoa Parish. Two people were seriously injured in the home that was destroyed on Davidson Road.	\$0	Clio	EF2
February 7, 2017	6.43-mile path with a 350 yard path. The tornado touched down northeast of Watson near the intersection of Little Woods Drive and Percy Easterly Road. It moved in a general easterly direction. It rapidly strengthened as it approached Nan Wesley Road, where it collapsed a metal truss tower holding up high tension power lines. In this area, the tornado is estimated to have reached its peak intensity of near 140 mph. It continued moving east, causing damage consistent with that of an EF-2 tornado, completely destroying three manufactured homes, and causing significant roof damage to two single family homes. It also snapped or uprooted numerous trees. The tornado continued moving east, causing damage primarily to the roofs of homes and trees. It lifted as it reached John Lanier Road.	\$0	Weiss	EF2
February 7, 2017	0.26-mile path with a 50 yard width. A brief tornado touched down near the intersection of Hwy 442 and Greer Lane in far northeastern Livingston Parish. It moved generally east-southeast causing damage snapping numerous trees and causing power poles to lean. It also caused minor roof damage to a home and tore off a metal carport. Maximum wind speeds were estimated around 100 mph.	\$0	Albany	EF1

Date	Impacts	Property Damage	Location	Magnitude
June 6, 2019	<p>1.61-mile path with a 75 yard width. A NWS storm survey indicated an EF-1 tornado touched down just southwest of Colyell, just near and west of South Satsuma Road. Most noticeable damage was mainly snapped or uprooted hardwood trees, with some power lines down as well. The tornado continued to the northeast, crossing near the intersection of Hood Road and South Satsuma Road. Flooded roads caused areas farther north along South Satsuma Road to be inaccessible for the survey. However, media reports of tree damage along Taylor Road supported a continuation of the tornado track to the northeast before dissipating. Estimated peak wind 95 mph, path length 1.61 miles, path width 75 yards.</p>	\$0	Frost	EF1
June 6, 2019	<p>0.62-mile path with a 50 yard width. A NWS storm survey found damage consistent with an EF1 tornado south of Killian, near Austin Street. The tornado touched down southwest of Austin Street, snapping and uprooting numerous trees. The storm continued northeastward, snapping a line of softwood and hardwood trees. The trees landed in crossed directions indicating rotation. The tornado progressed northeast, uprooting a tree in a cemetery, before it lifted as it approached Louisiana Highway 22. Estimated peak wind 105 mph, path length 0.62 miles, path width 50 yards.</p>	\$0	Killian	EF1

*Frequency / Probability*

Tornadoes occur frequently within Livingston Parish and its jurisdictions, with an annual chance of occurrence calculated at 70% based on the records for the past 30 years (1990-2020). *Figure 2-29* displays the density of tornado touchdowns in Livingston Parish and neighboring parishes.



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

*Estimated Potential Losses*

According to the NCEI Storm Events Database, there have been 21 tornadoes that have caused some level of property damage since 1990. The total damage from the actual claims for property is approximately \$192,000, with an average cost of \$9,143 per tornado event. When annualizing the total cost over the 30-year record, total annual losses based on tornadoes are estimated to be \$6,400. The following table provides an annual estimate of potential losses for Livingston Parish.

*Table 2-65: Estimated Annual Losses Resulting from Tornadoes in Livingston Parish and its Jurisdictions.*

Estimated Potential Annual Losses from Tornadoes								
Unincorporated Livingston	Albany	Denham Springs	French Settlement	Killian	Livingston	Port Vincent	Springfield	Walker
\$5,262	\$54	\$511	\$56	\$60	\$88	\$37	\$24	\$307

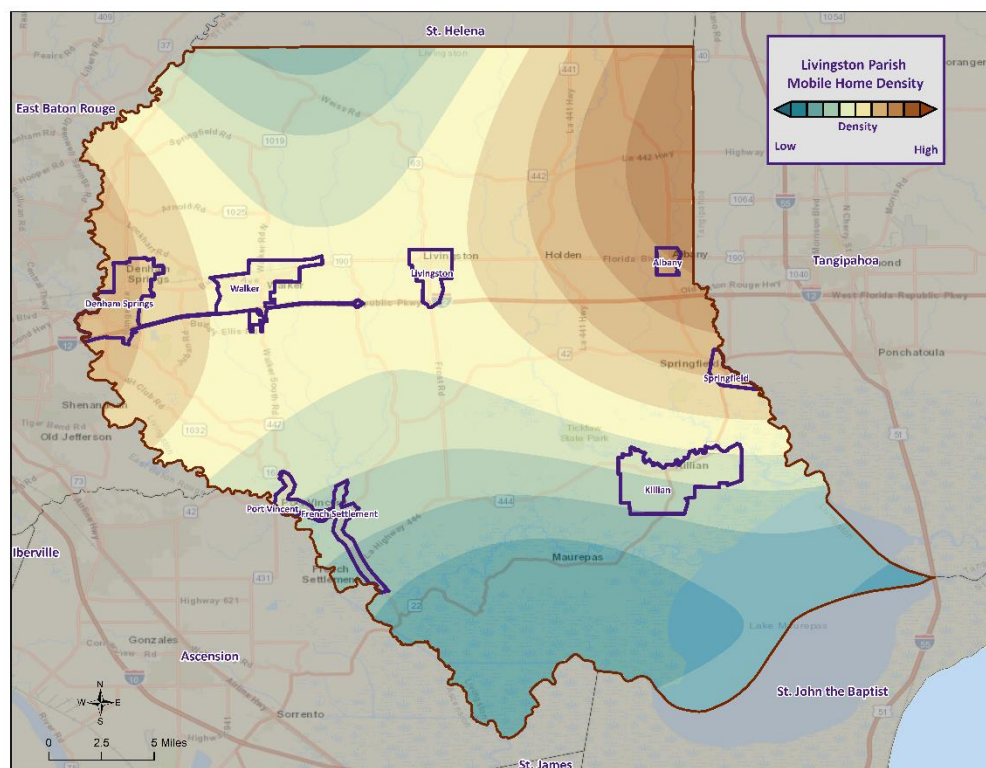
*Table 2-66* presents an analysis of building exposure that are susceptible to tornadoes by general occupancy type for Livingston Parish along with the percentage of building stock that are mobile homes.

*Table 2-66: Building Exposure by General Occupancy Type for Tornadoes in Livingston Parish.  
(Source: Hazus)*

Building Exposure by General Occupancy Type for Tornadoes (\$1,000)							
Residential	Commercial	Industrial	Agricultural	Religion	Government	Education	Mobile Homes (%)
8,712,239	964,181	216,040	13,504	159,518	32,432	69,007	17.8%

The parish has suffered through a total of 21 events in which tornadoes or waterspouts have accounted for six injuries and no fatalities during this 30-year period.

In assessing the overall risk to population, the most vulnerable population throughout the parish are those residing in manufacturing housing. Approximately 17.8% of all housing in Livingston Parish is comprised of manufactured housing. The location and density of manufactured houses can be seen in *Figure 2-30*.



*Figure 2-30: Density of Manufactured Housing throughout Livingston Parish.*

### Vulnerability

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

### Tropical Cyclones

Tropical cyclones are among the worst hazards faced by the state of Louisiana. 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 2-67: 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 all of South 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 Livingston Parish planning area. The worst-case scenario for a tropical cyclone event in Livingston Parish is a Category 5 Hurricane.

#### *Previous Occurrences / Extents*

Livingston Parish has experienced 15 major tropical cyclone events since 2002. The table on the next page provides a list of the tropical cyclones which have impacted Livingston Parish since 2002.

*Table 2-68: Historical Tropical Cyclone Events in Livingston Parish from 2002 – 2020.*

Date	Name	Storm Type at Time of Impact
2002	Isidore	Tropical Storm
2002	Lili	Hurricane
2003	Bill	Tropical Storm
2004	Matthew	Tropical Storm
2005	Cindy	Hurricane
2005	Rita	Hurricane
2008	Fay	Tropical Depression
2008	Gustav	Hurricane
2008	Ike	Tropical Storm
2011	Lee	Tropical Storm
2012	Isaac	Hurricane
2019	Barry	Tropical Storm
2020	Delta	Tropical Storm
2020	Zeta	Tropical Storm

Since the last Livingston Parish HMP update in 2016, there have been three tropical cyclone events which have impacted the parish. Below is a brief description of the events and the impact they had on Livingston Parish.

#### [Tropical Storm Barry \(2019\)](#)

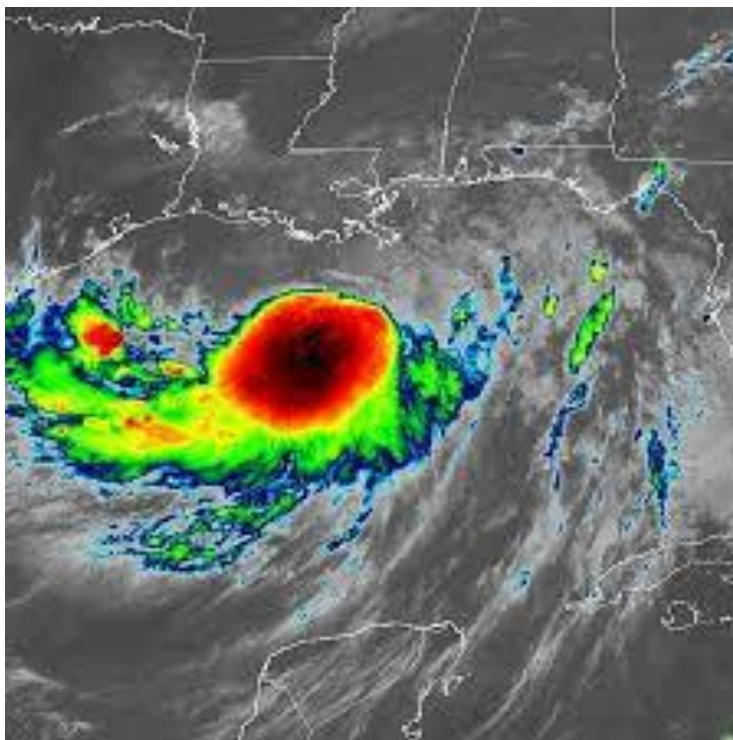
Hurricane Barry initial developed from a disturbance that moved from Georgia southwest to the northeast Gulf of Mexico on July 8-9, 2019. The weak low-pressure system continued to move west-southwest and strengthen and was eventually classified as Tropical Storm Barry on the morning of July 11<sup>th</sup>, 95 miles south-southeast of the mouth of the Mississippi River. Barry continued to move slowly west then northwest and briefly reached hurricane strength on the morning of July 13<sup>th</sup> before landfall in south-central Louisiana near Intracoastal City, Louisiana in Vermillion Parish. Tropical storm force winds reached the southeast Louisiana coast by midday on Friday, July 12<sup>th</sup> and spread slowly northwest reaching the Baton Rouge area during the evening of the 12<sup>th</sup>. Tropical storm wind impacts had ended across all of southeast Louisiana by midday on July 14<sup>th</sup>. Tropical storm force winds were primarily measured in gusts across southeast Louisiana. The exception was in Terrebonne and Assumption Parishes, close to the landfall location, where sustained tropical storm force winds and frequent gusts caused more significant power line and tree damage. A few tropical storm wind gusts were recorded in the metro New Orleans area but were not very impactful. No hurricane force wind gusts were recorded in southeast Louisiana.

Mostly minor to moderate storm surge flooding occurred across coastal southeast Louisiana, including Lake Pontchartrain, and a small part of the Mississippi Coast. Terrebonne Parish had significant storm surge flooding in the lower portion of the parish with storm tides of five to eight feet, locally up to nine feet. Several local levees were overtopped on the morning of July 13<sup>th</sup> flooding roads and a few homes. The highest storm tide reading was 9.11 feet NAVD88 at a USGS tide gauge at Caillou Lake near Dulac, Louisiana.

Storm total rainfall was generally between four and eight inches with a maximum rainfall of 8.83 inches recorded northeast of Denham Springs, Louisiana in Livingston Parish. Isolated flash flooding of streets and secondary roadways occurred on July 13<sup>th</sup> in the greater Baton Rouge area, but flash flooding was not

widespread or significant. The lower Mississippi River was at unusually high stages from late August with the state at the New Orleans Carrollton gauge near 16.5 feet. The combination of storm surge entering the lower Mississippi River with very high river stages prompted concern of potential overtopping of levees along the Mississippi River in lower Plaquemines Parish prompting some evacuations of the area.

In Livingston Parish, storm surge resulted in minor flooding along several roads in the southern portion of the parish near Lake Maurepas. Additional street flooding was reported on the 14<sup>th</sup> in the Denham Springs area due to heavy rainfall. Strong winds also downed a tree in Denham Springs which caused roof damage to a vacant home. Rainfall totals varied significantly across the parish with the northeast portion of the parish receiving approximately 2 inches, while northwestern sections received 8 inches or more.



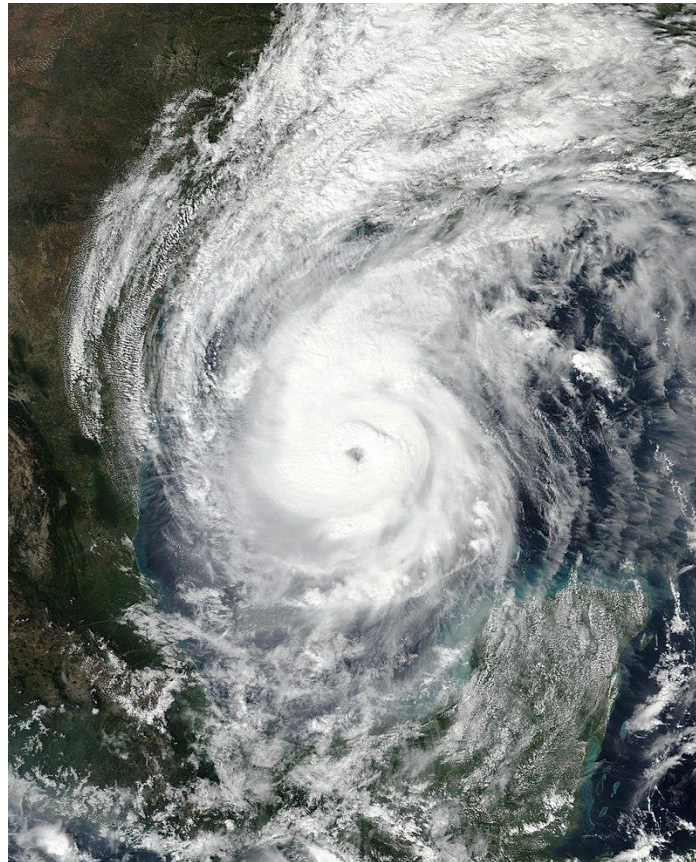
*Figure 2-31: Hurricane Barry Rain Bands in the Gulf Coast Area.  
(Source: NOAA)*

#### [Tropical Storm Delta \(2020\)](#)

Hurricane Delta was the record-tying fourth named storm to strike Louisiana in 2020, as well as the record-breaking tenth named storm to strike the United States in that year. The twenty-sixth tropical cyclone, twenty-fifth named storm, ninth hurricane, and third major hurricane of the record breaking 2020 Atlantic hurricane season, Delta formed from a tropical wave first monitored by the National Hurricane Center on October 1. As it tracked across the western Caribbean, it rapidly intensified into a Category 4 hurricane. In fact, intensifying from tropical depression to Category 4 strength in 40 hours is the fastest rate of intensification of any storm on record in the Atlantic Basin and accomplished by Delta. Delta quickly weakened to a category 1 hurricane after making its first landfall on the Yucatan Peninsula. It gradually recurved north towards the Louisiana coastline, fluctuating in intensity between category 2 and 3.

Hurricane Delta made landfall around 5 pm as a Category 2 storm east of Cameron, Louisiana or about 15 miles east of where Category 4 Hurricane Laura made landfall just a couple of months earlier. Local impacts included 50 to 70 mph wind gusts across the area, storm surge of 2 to 3 feet above ground, and widespread

tree and structural damage. There were six injuries due to Hurricane Delta. In addition, outer bands of Delta produced a significant amount of rainfall on the north side of Baton Rouge Metro. Upwards of five to 10 inches of rain fell, causing street flooding in Baton Rouge and moderate river flooding in the region. Delta caused approximately \$100 million worth of damage across southeast Louisiana.



*Figure 2-32: Hurricane Delta in the Gulf Coast Area.*

*(Source: NOAA)*

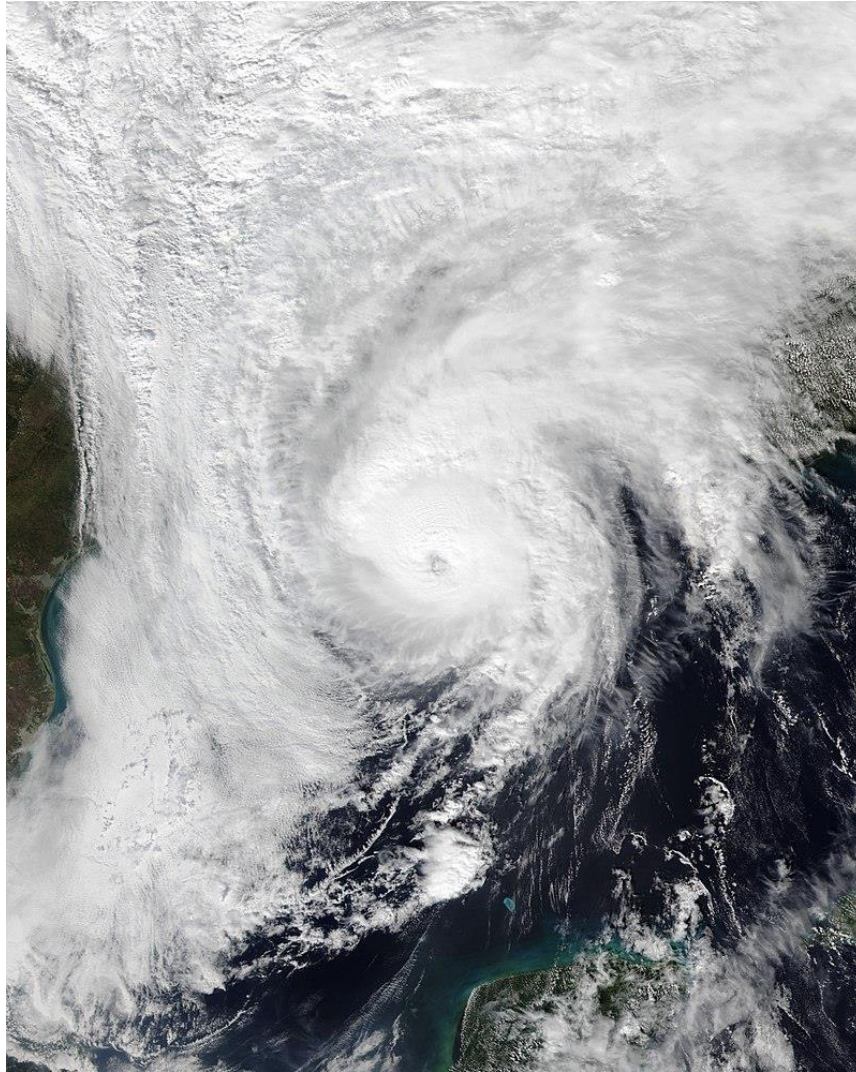
In Livingston Parish, Delta had minor to moderate impacts from tropical storm force winds. Peak gusts in the parish were estimated in the 50 to 60 mph range. Numerous trees and some power poles were downed with the worst damage on the west side of the parish. One tree fell on a home in Watson, severely injuring the man who lived there. His wife also suffered minor injuries. At its peak, around 30 percent of the parish was without power. The towns of French Settlement and Port Vincent experienced a prolonged power outage as a result of the major power lines between the two communities being damaged.

#### [Tropical Storm Zeta \(2020\)](#)

A tropical depression formed in the northwestern Caribbean on the afternoon of October 24<sup>th</sup>. Nine hours later, it became the twenty-seventh named storm and eleventh hurricane of the exceptionally active 2020 Atlantic hurricane season. After meandering virtually in the same place, Zeta finally began moving northwest and slowly strengthening before making its first landfall on the Yucatan Peninsula on October 26<sup>th</sup>. Zeta exited the Yucatan Peninsula weaker but still a strong tropical storm. The path of the storm began shifting from the northwest to northeast, heading straight towards the state of Louisiana. In terms of intensity, Zeta slowly but steadily strengthened from this point all the way up until landfall. It reached

the highest wind speed possible of a Category 2 storm, 110 mph. Zeta produced extensive wind damage across southeast Louisiana with measured sustained winds up to 87 mph and gusts up to 110 mph. Thousands of power poles were downed and thousands of homes experienced minor damage. Storm surge ranged from a few feet to several feet. There were a total of one fatality and one injury. Hurricane Zeta caused approximately \$1 billion worth of damage. Zeta was the record-tying sixth hurricane to make landfall in the United States and the record fifth named storm to strike Louisiana in 2020.

In Livingston Parish, Zeta produced tropical storm force wind gusts which resulted in isolated power outages across the parish.



*Figure 2-33: Hurricane Zeta in the Gulf Coast Area.  
(Source: NOAA)*

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

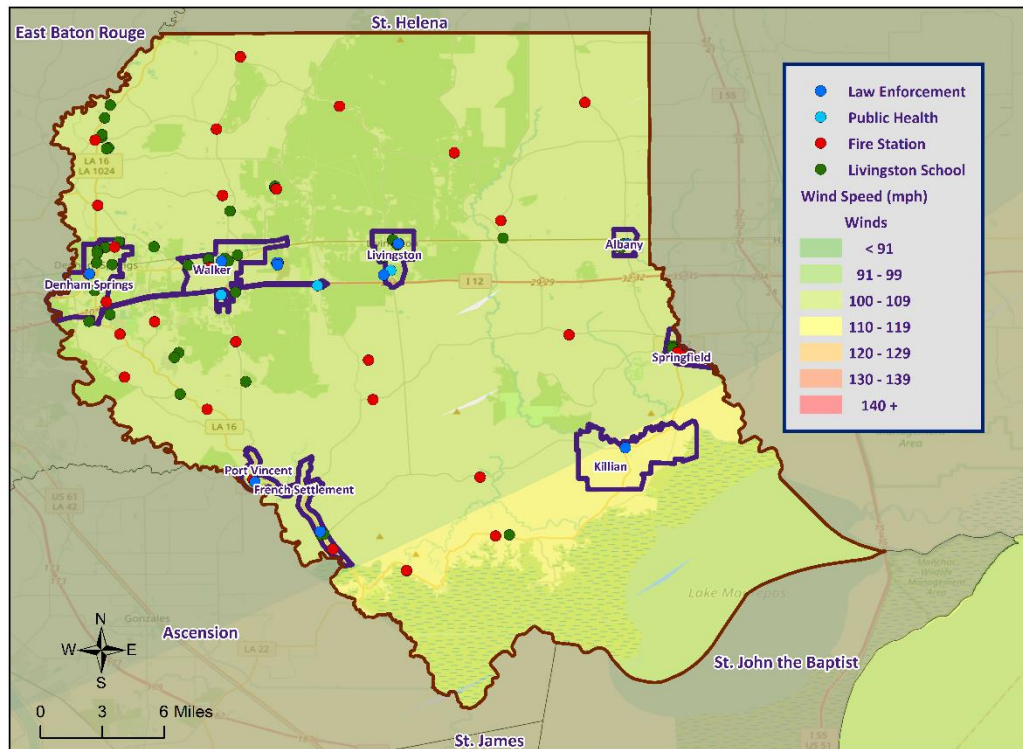


Figure 2-34: Winds Zones for Livingston Parish in Relation to Critical Facilities

#### Frequency / Probability

Tropical cyclones are large natural hazard events that regularly impact Livingston Parish. The annual chance of occurrence for a tropical cyclone is estimated at 79% for Livingston Parish with 15 events having occurred within the last 18 years (2002 to 2020). The tropical cyclone season for the Atlantic Basin is from June 1st through November 30<sup>th</sup>, 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, Livingston 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 2-69: Total Estimated Losses for a 100-Year Hurricane Event  
(Source: Hazus)*

Jurisdiction	Estimated Total Losses from 100-Year Hurricane Event
<b>Livingston Parish (Unincorporated)</b>	\$146,388,243
<b>Albany</b>	\$1,513,028
<b>Denham Springs</b>	\$14,205,497
<b>French Settlement</b>	\$1,551,966
<b>Killian</b>	\$1,677,125
<b>Livingston</b>	\$2,460,061
<b>Port Vincent</b>	\$1,030,472
<b>Springfield</b>	\$677,247
<b>Walker</b>	\$8,535,814
<b>Total</b>	<b>\$178,039,454</b>

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

*Table 2-70: Ratio of Total Losses to Total Estimated Value of Assets for Livingston Parish  
(Source: Hazus)*

Jurisdiction	Estimated Total Losses from 100-Year Hurricane Event	Total Estimated Value of Assets	Ratio of Estimated Losses to Total Value
<b>Livingston Parish (Unincorporated)</b>	\$146,388,243	\$8,666,108,000	1.7%
<b>Albany</b>	\$1,513,028	\$63,285,000	2.4%
<b>Denham Springs</b>	\$14,205,497	\$877,911,000	1.6%
<b>French Settlement</b>	\$1,551,966	\$30,266,000	5.1%
<b>Killian</b>	\$1,677,125	\$52,020,000	3.2%
<b>Livingston</b>	\$2,460,061	\$131,529,000	1.9%
<b>Port Vincent</b>	\$1,030,472	\$17,558,000	5.9%
<b>Springfield</b>	\$677,247	\$22,738,000	3.0%
<b>Walker</b>	\$8,535,814	\$305,506,000	2.8%

Based on the Hazus Hurricane Model, estimated total losses for Livingston Parish and its jurisdictions ranged from 1.6% to 5.9% of the total estimated value of all assets.

The Hazus Hurricane Model also provides a breakdown for seven primary sectors (Hanus occupancy) throughout the parish. The losses for Livingston Parish and its jurisdictions by sector are listed in the tables on the next page.



*Table 2-71: Estimated Losses in Unincorporated Livingston Parish for a 100-Year Hurricane Event  
(Source: Hazus)*

Livingston Parish (Unincorporated)	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	\$162,148
Commercial	\$4,650,413
Government	\$176,431
Industrial	\$539,438
Religious / Non-Profit	\$535,513
Residential	\$140,146,447
Schools	\$215,173
<b>Total</b>	<b>\$146,388,243</b>

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

Albany	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	\$0
Commercial	\$48,065
Government	\$1,764
Industrial	\$5,511
Religious / Non-Profit	\$5,434
Residential	\$1,448,515
Schools	\$2,148
<b>Total</b>	<b>\$1,513,028</b>

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

Denham Springs	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	\$14,931
Commercial	\$451,276
Government	\$16,562
Industrial	\$51,743
Religious / Non-Profit	\$51,022
Residential	\$13,599,794
Schools	\$20,168
<b>Total</b>	<b>\$14,205,497</b>

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

French Settlement	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	\$0
Commercial	\$49,302
Government	\$0
Industrial	\$5,653
Religious / Non-Profit	\$5,574
Residential	\$1,485,793
Schools	\$2,203
<b>Total</b>	<b>\$1,551,966</b>

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

Killian	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	\$0
Commercial	\$53,278
Government	\$0
Industrial	\$6,109
Religious / Non-Profit	\$0
Residential	\$1,605,614
Schools	\$0
<b>Total</b>	<b>\$1,677,125</b>

*Table 2-76: Estimated Losses in Livingston for a 100-Year Hurricane Event  
(Source: Hazus)*

Livingston	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	\$0
Commercial	\$78,150
Government	\$2,868
Industrial	\$8,961
Religious / Non-Profit	\$8,836
Residential	\$2,355,168
Schools	\$0
<b>Total</b>	<b>\$2,460,061</b>

*Table 2-77: Estimated Losses in Port Vincent for a 100-Year Hurricane Event  
(Source: Hazus)*

Port Vincent	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	\$1,083
Commercial	\$32,736
Government	\$0
Industrial	\$0
Religious / Non-Profit	\$0
Residential	\$986,534
Schools	\$0
<b>Total</b>	<b>\$1,030,472</b>

*Table 2-78: Estimated Losses in Springfield for a 100-Year Hurricane Event  
(Source: Hazus)*

Springfield	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	\$0
Commercial	\$21,515
Government	\$0
Industrial	\$0
Religious / Non-Profit	\$2,432
Residential	\$648,370
Schools	\$962
<b>Total</b>	<b>\$677,247</b>

*Table 2-79: Estimated Losses in Walker for a 100-Year Hurricane Event  
(Source: Hazus)*

Walker	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	\$8,972
Commercial	\$271,163
Government	\$9,952
Industrial	\$31,092
Religious / Non-Profit	\$30,658
Residential	\$8,171,859
Schools	\$12,119
<b>Total</b>	<b>\$8,535,814</b>

*Threat to People*

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

*Table 2-80: Number of People Susceptible to a 100-Year Hurricane Event in Livingston Parish  
(Source: Hazus)*

Number of People Exposed to Hurricane Hazards			
Location	# in Community	# in Hazard Area	% in Hazard Area
<b>Livingston Parish (Unincorporated)</b>	105,266	105,266	100%
<b>Albany</b>	1,088	1,088	100%
<b>Denham Springs</b>	10,215	10,215	100%
<b>French Settlement</b>	1,116	1,116	100%
<b>Killian</b>	1,206	1,206	100%
<b>Livingston</b>	1,769	1,769	100%
<b>Port Vincent</b>	741	741	100%
<b>Springfield</b>	487	487	100%
<b>Walker</b>	6,138	6,138	100%
<b>Total</b>	<b>128,026</b>	<b>128,026</b>	<b>100%</b>

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

*Table 2-81: Vulnerable Populations in Unincorporated Livingston Parish for a 100-Year Hurricane Event  
(Source: Hazus)*

Livingston Parish (Unincorporated)		
Category	Total Numbers	Percentage of People in Hazard Area
<b>Number in Hazard Area</b>	105,266	100.0%
<b>Persons Under 5 Years</b>	7,948	7.6%
<b>Persons Under 18 Years</b>	21,095	20.0%
<b>Persons 65 Years and Over</b>	10,421	9.9%
<b>White</b>	96,697	91.9%
<b>Minority</b>	8,569	8.1%

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

Albany		
Category	Total Numbers	Percentage of People in Hazard Area
<b>Number in Hazard Area</b>	1,088	100.0%
<b>Persons Under 5 Years</b>	78	7.2%
<b>Persons Under 18 Years</b>	216	19.9%
<b>Persons 65 Years and Over</b>	183	16.8%
<b>White</b>	1,034	95.0%
<b>Minority</b>	54	5.0%

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

Denham Springs		
Category	Total Numbers	Percentage of People in Hazard Area
<b>Number in Hazard Area</b>	10,215	100.0%
<b>Persons Under 5 Years</b>	712	7.0%
<b>Persons Under 18 Years</b>	1,892	18.5%
<b>Persons 65 Years and Over</b>	1,295	12.7%
<b>White</b>	8,306	81.3%
<b>Minority</b>	1,909	18.7%

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

French Settlement		
Category	Total Numbers	Percentage of People in Hazard Area
<b>Number in Hazard Area</b>	1,116	100.0%
<b>Persons Under 5 Years</b>	75	6.7%
<b>Persons Under 18 Years</b>	214	19.2%
<b>Persons 65 Years and Over</b>	132	11.8%
<b>White</b>	1,076	96.4%
<b>Minority</b>	40	3.6%

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

Killian		
Category	Total Numbers	Percentage of People in Hazard Area
<b>Number in Hazard Area</b>	1,206	100.0%
<b>Persons Under 5 Years</b>	58	4.8%
<b>Persons Under 18 Years</b>	209	17.3%
<b>Persons 65 Years and Over</b>	171	14.2%
<b>White</b>	1,067	88.5%
<b>Minority</b>	139	11.5%

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

Livingston		
Category	Total Numbers	Percentage of People in Hazard Area
<b>Number in Hazard Area</b>	1,769	100.0%
<b>Persons Under 5 Years</b>	137	7.7%
<b>Persons Under 18 Years</b>	351	19.8%
<b>Persons 65 Years and Over</b>	245	13.9%
<b>White</b>	1,664	94.1%
<b>Minority</b>	105	5.9%

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

Port Vincent		
Category	Total Numbers	Percentage of People in Hazard Area
<b>Number in Hazard Area</b>	741	100.0%
<b>Persons Under 5 Years</b>	44	5.9%
<b>Persons Under 18 Years</b>	113	15.3%
<b>Persons 65 Years and Over</b>	105	14.2%
<b>White</b>	731	98.7%
<b>Minority</b>	10	1.4%

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

Port Vincent		
Category	Total Numbers	Percentage of People in Hazard Area
<b>Number in Hazard Area</b>	487	100.0%
<b>Persons Under 5 Years</b>	35	7.2%
<b>Persons Under 18 Years</b>	74	15.2%
<b>Persons 65 Years and Over</b>	83	17.0%
<b>White</b>	459	94.3%
<b>Minority</b>	28	5.8%

*Table 2-89: Vulnerable Populations in Walker for a 100-Year Hurricane Event  
(Source: Hazus)*

Port Vincent		
Category	Total Numbers	Percentage of People in Hazard Area
<b>Number in Hazard Area</b>	6,138	100.0%
<b>Persons Under 5 Years</b>	425	6.9%
<b>Persons Under 18 Years</b>	1,244	20.3%
<b>Persons 65 Years and Over</b>	655	10.7%
<b>White</b>	5,231	85.2%
<b>Minority</b>	907	14.8%

#### *Vulnerability*

See [Appendix C: Critical Facilities](#) for parish and municipality buildings that are susceptible to tropical cyclones.

## 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 following table 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 2-90: 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 Livingston Parish as all of the adjacent parishes, the entire planning area for Livingston Parish is equally at risk for winter storms. The worse-case scenario for Livingston Parish and all of its jurisdictions is a level 2 on the Sperry-Piltz Ice Accumulation Index.

*Previous Occurrences / Extents*

The NCEI Storm Events Database reports two winter weather events occurring within the boundaries of Livingston Parish between the years 1990 and 2020. Since the last Livingston Parish HMP Update, there have been no winter weather events within the boundaries of the parish.

*Frequency / Probability*

Based on historical records, there have been two significant winter weather events within the boundaries of Livingston Parish and the jurisdictions of Albany, Denham Springs, French Settlement, Killian, Livingston, Springfield, and Walker; therefore, the annual chance of occurrence for winter weather is estimated at 7%.

*Estimated Potential Losses*

Since 1990, there have been two winter weather events that have resulted in property damages according to NCEI Storm Events Database. The total property damages associated with those storms have totaled approximately \$5,000. To estimate the potential losses of a winter weather event 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 \$167 and \$2,500 per event. The following table provides an estimate of potential property losses for Livingston Parish:

*Table 2-91: Estimated Annual Losses Livingston Parish and its Jurisdictions Resulting from Winter Weather.*

Estimated Annual Potential Losses from Winter Weather								
Unincorporated Livingston	Albany	Denham Springs	French Settlement	Killian	Livingston	Port Vincent	Springfield	Walker
\$137	\$1	\$13	\$1	\$2	\$2	\$1	\$1	\$8

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.

### 3. Capability Assessment

This section summarizes the results of Livingston Parish jurisdictions and other agency efforts 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, Livingston Parish and the participating 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

Livingston Parish capabilities are unique to the parish, 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 Livingston Parish 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: Administration and Technical Capabilities*

Planning and Regulatory											
Please indicate which of the following plans and regulatory capabilities your jurisdiction has in place.											
	Livingston Parish	Town of Albany	City of Denham Springs	Village of French Settlement	Town of Killian	Town of Livingston	Village of Port Vincent	Town of Springfield	City of Walker	Comments	
<b>Plans</b>											
	Yes / No										
Comprehensive / Master Plan	Yes	No	No	Yes	No	Yes	No	No	Yes		
Capital Improvements Plan	No	No	No	Yes	Yes	No	No	No	Yes		
Economic Development Plan	Yes	No	No	Yes	No	No	No	No	Yes		
Local Emergency Operations Plan	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes		
Continuity of Operations Plan	No	Yes	No	Yes	Yes	No	No	Yes	Yes		
Transportation Plan	No	No	No	Yes	No	No	No	No	Yes		
Stormwater Management Plan	Yes	No	No	Yes	No	No	No	No	Yes		
Community Wildfire Protection Plan	Yes	No	No	Yes	No	No	No	No	No		
Other plans (redevelopment, recovery, coastal zone management)		No	No	Yes	No	No	No	No	Yes		
<b>Building Code, Permitting and Inspections</b>											
	Yes / No										
Building Code	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Score	No	No	No	Yes	No	No	No	No	No		
Fire Department ISO/PIAL rating	9	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes		
Site plan review requirements	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
<b>Land Use Planning and Ordinances</b>											
	Yes / No										
Zoning Ordinance	No	Yes	Yes	No	Yes	Yes	No	No	Yes		
Subdivision Ordinance	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes		
Floodplain Ordinance	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	Yes	No	No	Yes	Yes	Yes	No	No	Yes		
Flood Insurance Rate Maps	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes		
uses	Yes	Yes	Yes	Yes	No	Yes	No	No	Yes		
Other		No	No	No	No	No		No	No		

Livingston Parish and its jurisdictions 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 commitment 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 Livingston Parish Government provides oversight for building permits and codes, land use planning, and all parish ordinances where applicable.

As of the 2021 update, Livingston Parish and its jurisdictions 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 Livingston Parish Government is also responsible for enforcing the parish ordinances related to health and safety, property maintenance standards, and condemnation of unsafe structures.

The Livingston Parish Government 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, Livingston Parish as a whole has 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

As a community, Livingston Parish has 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 in Livingston Parish.

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.										
	Livingston Parish	Town of Abbeville	City of Darham Springs	Village of French Settlement	Town of Kilbuck	Town of Livingston	Village of Port Vincent	Town of Springfield	City of Walker	Comments
<b>Administration</b>										
Planning Commission	Yes	No	Yes	Yes	Yes	No	Yes	Yes		
Mitigation Planning Committee	Yes	No	No	Yes	Yes	No	No	Yes	Yes	
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes		
<b>Staff</b>										
Chief Building Official	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	
Floodplain Administrator	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Emergency Manager	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	
Community Planner	Yes	Yes	No	Yes	Yes	No	No	No	Yes	
Civil Engineer	Yes	No	Yes	Yes	No	Yes	No	Yes	Yes	
GIS Coordinator	Yes	No	Yes	Yes	No	No	No	Yes	Yes	
Grant Writer	Yes	No	Yes	Yes	Yes	No	No	Yes	Yes	
Other	Yes	No	No	No	No	No	No	No	No	
<b>Technical</b>										
Warning Systems / Service (Reverse 911, outdoor warning signals)	Yes	No	Yes	Yes	No	No	No	Yes	Yes	
Hazard Data & Information	Yes	No	Yes	Yes	No	No	Yes	No	No	
Grant Writing	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	
Hazus Analysis	Yes	No	Yes	Yes	No	No	No	No	No	
Other		No	No	No	No	No		No	No	

Financial capabilities are the resources that Livingston Parish has 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 Livingston Parish:

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.										
	Livingston Parish	Town of Abbeville	City of Darham Springs	Village of French Settlement	Town of Kilbuck	Town of Livingston	Village of Port Vincent	Town of Springfield	City of Walker	Comments
<b>Funding Resource</b>										
Capital Improvements project funding	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	
Authority to levy taxes for specific purposes	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	
Fees for water, sewer, gas, or electric services	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	
Impact fees for new development	No	Yes	Yes	No	No	No	No	No	Yes	
Stormwater Utility Fee	Yes	No	No	No	No	No	No	No	No	
Community Development Block Grant (CDBG)	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	
Other Funding Programs		No	No	Yes	Yes	No		Yes	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.

Livingston Parish has existing education and outreach programs to implement mitigation activities, as well as communicate risk and hazard related information to its communities. Specifically, focusing on advising

repetitive loss property owners of ways they can reduce their exposure to damage by repetitive flooding remains a priority for the entire parish. The existing programs are as follows:

*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.										
Program / Organization	Livingston Parish	Town of Albany	City of Denham Springs	Village of French Settlement	Town of Killian	Town of Livingston	Village of Port Vincent	Town of Springfield	City of Walker	Comments
	Yes / No									
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	
Ongoing public education or information program (responsible water use, fire safety, household preparedness, environmental education)	Yes	No	No	Yes	No	Yes	No	Yes	Yes	
Natural Disaster or safety related school program	Yes	No	Yes	Yes	No	No	No	No	No	
Storm Ready certification	Yes	No	No	Yes	No	No	No	No	No	
Firewise Communities certification	No	No	No	Yes	No	No	No	No	No	
Public/Private partnership initiatives addressing disaster-related issues	Yes	No	Yes	Yes	Yes	No	No	Yes	Yes	
Other		No	No	No	No	No		No	No	

The communities within Livingston Parish rely on Livingston OHSEP and/or Livingston Parish Government agencies for the above listed planning and regulatory, administrative and technical, financial, and education and outreach capabilities.

As reflected with above existing regulatory mechanisms, programs and resources within the parish, Livingston Parish remains committed to expanding and improving on the existing capabilities within the parish. Communities will work along with Livingston 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 all enhance and expand risk reduction for all of Livingston 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 April 1, 2021, there are two communities that actively participate in the CRS Program: the City of Denham Springs and the Town of Walker, both of which are currently Class 8 communities.

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<sup>1</sup>, 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.

<sup>1</sup> <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.

\*\*More information on the Community Rating System can be found at <https://www.fema.gov/national-flood-insurance-program-community-rating-system>\*\*



## Review of Existing Flood Mitigation Activities

### Review of Preventative Activities

Government, administrative or regulatory actions influence the way land and buildings are developed to reduce hazard losses. This includes planning and zoning, capital improvement programs, drainage system maintenance, building code regulations, open space preservation, and stormwater management regulations.

On September 9, 2013, the City of Walker adopted the Unified Development Code for the purpose of providing an orderly and efficient development and redevelopment of the City of Walker using a comprehensive development code that is fairly and effectively administered by the city. This ordinance has been made stronger in 2019 with a fill placement regulation and requirements for drainage impact studies on developments to prove that no adverse effects to the watershed will occur because of the development. The City of Walker contracted Forte and Tablada to do comprehensive drainage study in the City to come up with a plan of action to prevent future flooding.

On August 14, 2017, the City of Walker Council amended an ordinance (Ordinance No. 08-2017-01, 8-14-17), to adopt the following codes: (1.) International Building Code 2015 (2.) International Residential Code 2015 (3.) International existing Building Code 2015 (4.) National Electrical Code 2014 (5.) International Mechanical Code 2015 (6.) International Plumbing Code 2015 (7.) International Fuel/Gas Code 2015. The ordinance also included an automatic adoption clause for future code updates.

While Capital Projects are ongoing, the Department of Public Works continues to manage our day-to-day drainage maintenance needs, including roadside ditches, storm drains, and flushing out culverts. In 2020, they were responsible for: 29,116 Linear Feet of Roadside Ditch Excavation, 4,301 linear feet of flushing or rodded out, 946 feet of damaged culverts replaced. Gravity Drainage District 5 is responsible for numerous drainage channels that are not roadside.

In 1987, the City of Denham Springs adopted building codes in order to construct safer structures with more consistently applied standards to withstand local hazards. These codes are now continuously updated as required by the Louisiana State Uniform Construction Code Council and state legislature. On July 3, 1990, the City of Denham Springs adopted zoning regulations to better control development within the City. On August 27, 2007, the City of Denham Springs adopted its stormwater management ordinance. In addition to protecting waterways and floodplains by requiring erosion and sediment control measures for construction activities and post-construction stormwater runoff control measures for new developments, it provides enforceable language requiring waterways be maintained from debris and other deleterious materials that slow runoff and potentially increase flooding conditions.

The City of Denham Springs requires developers of all non-residential construction to submit civil construction drawings to an approved engineer to review the project and ensure there are no adverse impacts to properties upstream or downstream of the project site. Development permits are not issued until the reviewing engineer releases the project.

In early 2017, The City of Denham Springs began clearing stormwater infrastructure throughout the city. The City's Street Department coordinated efforts with Gravity Drainage District 1 to ensure all elements of the drainage system were cleared and maintained. The City of Denham Springs added a recurring line item to the 2021-2022 budget for dedicated funds that add personnel and equipment strictly for the purpose of drainage maintenance.

### Review of Floodplain Management Regulatory Standards

Related to preventative activities, although while FEMA has minimum floodplain management standards for communities participating in the National Flood Insurance Program (NFIP), adopting higher standards will lead to safer, stronger, more resilient communities. This includes floodplain mapping, future conditions mapping, freeboard, prohibition of fill & compensatory storage.

Higher Regulatory Standards are required in the City of Walker, which requires the finished floor of all new construction and substantial improvements and all machinery to be elevated at least 1' foot above the Base Flood Elevation.

Similar to the City of Walker, Higher Regulatory Standards are also required in the City of Denham Springs. These standards require the finished floor of all new construction and substantially improved residential and non-residential structures to be at or above the highest elevation of the following: lowest of sewer manholes either upstream or downstream of service – plus 1.0 ft., average street centerline elevation in front of lot – plus 1.0 ft., or Base Flood Elevation (in Zone AE). The City of Denham Springs is currently working on ordinance language adding two feet of freeboard to all new and substantially improved construction, as well as fill mitigation for new construction.

### Review of Property Protection Activities

Modification of buildings or structures to protect them from a hazard or removal of structures from a hazard area. Includes acquisition, elevation, relocation, structural retrofit, storm shutters, and shatter-resistant glass.

The City of Walker started to utilize Hazard Mitigation Assistance-FMA funds to address repetitively flooded properties through residential elevations and acquisitions. The elevation and acquisition grant application that the city submitted under the FY18 FMA Notice of Funding Opportunity has been approved and homeowner Kickoff Meetings are pending the update to the Hazard Mitigation Plan for construction activities for the 4 (four) properties included in the grant. Construction is expected to begin in 2021. City of Walker submitted 3 (three) applications under FY 19 FMA NOFO to elevate structures and submitted 2 (two) grant applications under FY 20 FMA NOFO.

The City of Denham Springs began accepting applications for elevations and acquisitions of residential and non-residential structures in 2018. Of those applications, ten were accepted (eight elevations and two acquisitions). Four of the eight elevations are complete, one of the elevations is underway, and one of the acquisitions nears completion. Twelve of the 2019 applications were accepted. This round had ten elevations and two acquisitions. Two elevations were accepted from the 2020 applications. The City anticipates swift completion of the projects upon the finalization of the update to this Hazard Mitigation Plan.

### Review of Natural Resource Protection Activities

Actions that minimize hazard loss and preserve or restore the functions of natural systems. Includes sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.

The City of Walker seeks to maintain any current open spaces for flood conveyance in the natural form. Our plan is to acquire future open space in support of natural floodplain functions, which aid in conveyance and risk reduction.

The City of Denham Springs is actively working to acquire repetitive loss and severe repetitive loss properties through multiple grant programs and/or other funding sources in an effort to return these spaces to open space; thereby allowing the natural floodplain to serve its primary functions – conveying river and stream waters when they overflow their banks, and storing floodwaters during storm events. The City of Denham Springs currently receives points through the CRS for the Open Space Preservation activity.

Additionally, The City of Denham Springs' stormwater management ordinance seeks to protect our natural resources by regulating non-stormwater discharges to the city's municipal separate storm sewer system, and requiring erosion and sediment control measures for construction activities and post-construction stormwater runoff control measures for new developments.

### Review of Emergency Services Activities

Actions that protect people and property during and immediately after a hazard event. Includes warning systems, emergency response services, and the protection of essential facilities.

Residents of City of Walker and Livingston Parish are urged to check the Livingston Parish Public Safety and Emergency Information website (<https://www.livingstonparishla.gov/public-safety>) during major emergency or disaster events. Residents should also tune to local and regional radio and television stations for up to the minute emergency information from the Livingston Parish Sheriff's Office and the Livingston Parish Office of Homeland Security and Emergency Preparedness. Traffic and road conditions/closures will be reported as they become available. The City of Walker also utilizes City of Walker Web Page, Facebook, and Email Newsletters.

The City of Walker alerts citizens where they can get sandbags throughout the city before a storm approaches so they will be prepared when the storm arrives. The City of Walker has built a Safe House to be utilized by emergency personnel during major emergency or disaster events.

The City of Denham Springs utilizes DSAAlerts, powered by Everbridge, to alert registered users, as well as all smart devices within the city limits, of emergency events and potential hazards. In addition, the City of Denham Springs utilizes its web page and Facebook account to advise citizens of critical actions necessary for public safety, including traffic conditions and road closure reports as they become available. Similar to The City of Walker, The City of Denham Springs urges its residents to check the Livingston Parish Public Safety and Emergency Information website (<https://www.livingstonparishla.gov/public-safety>) during major emergency or disaster events.

### Review of Structural Projects

Actions that involve the construction of structures to reduce the impact of a hazard. Includes Channel modifications, detention/retention basins, levees/floodwalls, channel diversions, and other storm drain improvements.

The City of Walker continues to design and construct projects that protect structures from flood damage by structural flood control projects. These projects provide benefits for existing developments through mitigation of existing flooding challenges and prevention by design of structural features in newly developed areas. It is our plan to continue to seek opportunities to lead and partner on structural projects that benefit both individual lots and the entire parish.

The City of Walker contracted Forte and Tablada to do comprehensive drainage study in the City to come up with a plan of action to prevent future flooding. Our plan is to Implement the required activities in the study to prevent future flooding.

The City of Denham Springs works with local engineering firms and Gravity Drainage District No. 1 to determine areas in need of drainage improvement and establishes funding for the improvements through multiple grant programs and/or other funding sources. The City of Denham Springs continues working with Louisiana State University civil engineering and landscape architect students to develop project plans designed to mitigate storm- and floodwater impacts to low lying areas sensitive to heavy rain/storm events for grant submittals.

### Review of Public Information Activities

Actions to inform citizens and elected officials about flood hazards and ways to mitigate them. Includes outreach projects, real estate disclosure, hazard information centers, and school-age and adult education.

The City of Walker will continue to have flood insurance flyers in the main lobby and at city hall. Also, bring flyers to real estate offices to set out in lobby. Continue to provide FIRM and preliminary FIRM information to citizens, local libraries, and the City of Walker website. We use a local TV channel to run a video of the Mayor of Walker giving a speech about purchasing flood insurance, and we use social media to promote the purchase of flood insurance. The City of Walker also utilizes the utility billing system to mail out to all the citizens twice a year information on flood insurance purchase requirements and benefits along with floodplain management information. The City of Walker is part of a Multi-Jurisdiction Program for Public Information (PPI) that includes many outreach projects.

The City of Walker maintains a web page to educate the community regarding basic floodplain terms, including illustrations showing the encroachment of a 100-year floodplain and provides links to sites like NFIP and FEMA. City of Walker continues to make use of the Realtors Association to inform lenders, insurance agents and real estate offices about the availability of flood zone information and elevation certificates.

The City of Denham Springs is an active member of a local CRS users group (named Capital Region Area Floodplain Taskforce, or CRAFT) and its multi-jurisdiction Program for Public Information (PPI) that focuses on educational outreach projects for the public. The City of Denham Springs also provides information brochures in the City Hall lobby, adds city-specific flood and stormwater informational brochures into its utility bills that are mailed to citizens annually, mails letters to real estate and insurance agencies within the city reminding them of disclosure and flood insurance purchase requirements, and provides informational brochures to the local library. The City's website contains a webpage with links to flood and stormwater related websites such as FEMA, NOAA, USGS, etc.

### NFIP Worksheets

Parish NFIP worksheets can be found in [Appendix E: State Required Worksheets](#).

## 4. Mitigation Strategy

### Introduction

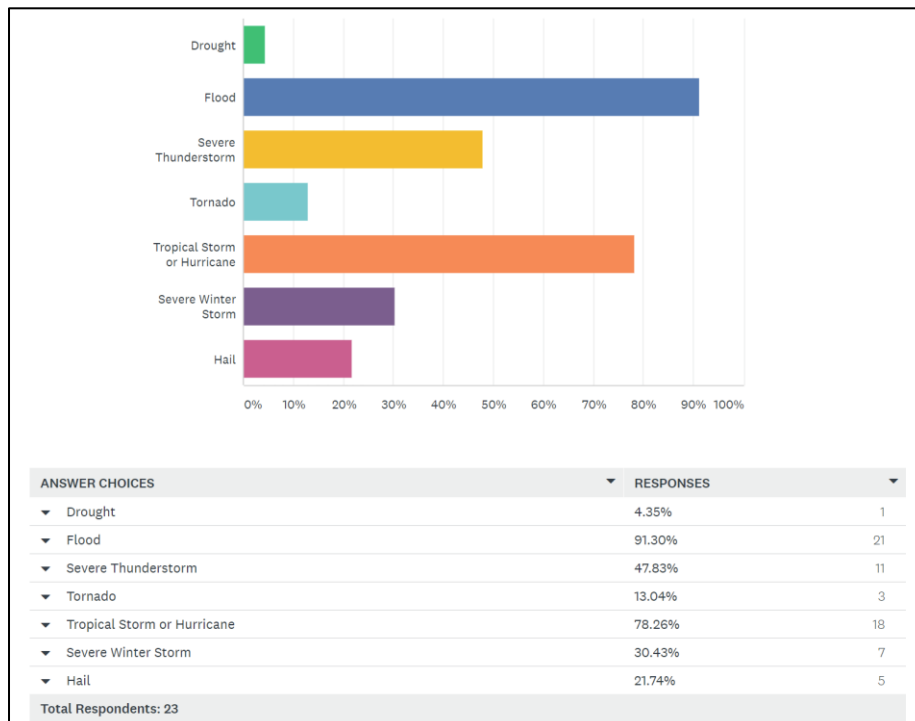
The Hazard Mitigation Strategy for Livingston Parish and its jurisdictions has a common guiding principle and is the demonstration of the parish's commitment to reduce risks from hazards. The strategy also serves as a guide for parish and local decision makers as they commit resources to reducing the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

Officials from all jurisdictions within Livingston Parish 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 Livingston Parish Hazard Mitigation Plan Steering Committee under the coordination of the Livingston 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 February – March 2021.

An online public opinion survey of Livingston Parish residents was conducted between January and April 2021. The survey was designed to capture public perceptions and opinions regarding natural hazards in Livingston 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. The survey could be found at the following URL: <https://www.surveymonkey.com/r/LivingstonHM2021>

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

1. Flood
2. Tropical Storm/Hurricane
3. Severe Thunderstorm

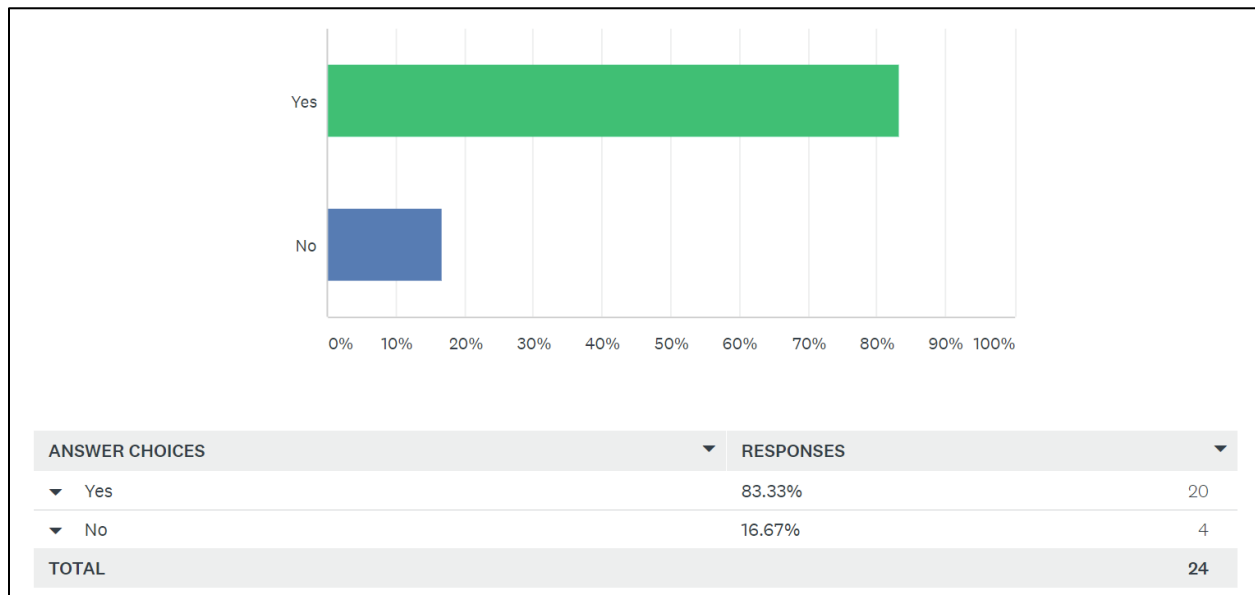


The survey results also indicated which natural disasters citizens were *concerned* with being affected by in Livingston Parish. The top three natural disasters selected for “very concerned” were:

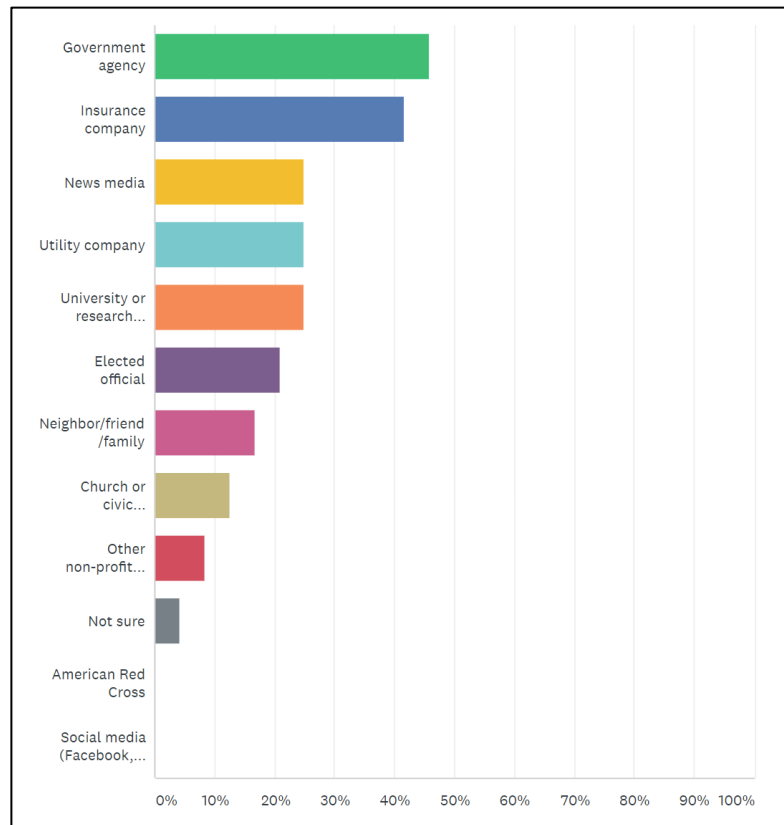
1. Flooding
2. Tropical Storm or Hurricane
3. Severe Thunderstorm

	NOT CONCERNED	NOT VERY CONCERNED	NEUTRAL	SOMEWHAT CONCERNED	VERY CONCERNED	TOTAL	WEIGHTED AVERAGE
▼ Drought	39.13% 9	26.09% 6	21.74% 5	4.35% 1	8.70% 2	23	2.17
▼ Flood	0.00% 0	0.00% 0	0.00% 0	12.50% 3	87.50% 21	24	4.88
▼ Severe Thunderstorm	0.00% 0	4.17% 1	25.00% 6	33.33% 8	37.50% 9	24	4.04
▼ Tornado	0.00% 0	8.33% 2	29.17% 7	29.17% 7	33.33% 8	24	3.88
▼ Tropical Storm or Hurricane	0.00% 0	0.00% 0	8.33% 2	29.17% 7	62.50% 15	24	4.54
▼ Severe Winter Storm	8.33% 2	16.67% 4	29.17% 7	37.50% 9	8.33% 2	24	3.21
▼ Hail	8.33% 2	25.00% 6	20.83% 5	33.33% 8	12.50% 3	24	3.17

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



Always important to decision makers is how citizens best receive emergency information. According to the survey, the citizens of Livingston Parish 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 Livingston 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-RPSLF5XL9/>

## 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 Livingston 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, Livingston 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 Livingston 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. Identify and pursue preventative measures that will reduce future damages from hazards.
2. Enhance public awareness and understanding of disaster preparedness
3. Reduce repetitive flood losses
4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.

The Mitigation Action Plan focuses on actions to be taken by Livingston Parish and its jurisdictions. 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 Livingston Parish Hazard Mitigation Plan, large portions of South Louisiana were impacted by a flooding event whose ramifications are still being felt by the population. Because of this event, Livingston 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 Livingston Parish Hazard Mitigation Plan Steering Committee identified new actions that would reduce and/or prevent future damage within Livingston Parish and its communities. In that effort, the parish 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 Livingston 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.
- **Preparedness and Response Actions** – These are actions taken to prepare for or respond to hazard events. Mitigation activities lessen or eliminate the need for preparedness or response resources in the future.

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.

## Livingston Parish Mitigation Actions

### Previous Action Update

Action	Description	Funding Source	Timeframe	Responsible Party	Hazard(s)	Status
1	Wind harden structures using shutters, screens, window film, and/or roof straps	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Tropical Cyclone, High Wind, Hail, Tornado	Ongoing
2	Install safe rooms in critical facilities	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Tropical Cyclone, High Wind, Hail, Tornado	In Progress
3	Install a hazard early warning system	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, Hail, High Wind, Lightning, Tornado	In Progress
4	Construct new shelters	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, High Wind, Tornado, Tropical Cyclone	Ongoing
5	Upgrade current shelters to include food pantries, kitchens and climate control systems	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, High Wind, Tornado, Tropical Cyclone, Winter Weather	Not Started – Carried Over
6	Purchase generators for critical facilities to ensure operation during and after a hazard event	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, High Wind, Hail, Lightning, Tornado, Tropical Cyclone	Ongoing
7	Upgrade drainage ways by concrete lining, widening and/or enlarging culverts and catch basins.	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, Coastal Land Loss, Tropical Cyclone	Ongoing

8	Upgrade capacity of storm water retention and detention areas, thereby protecting both existing structures and future development	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, Coastal Land Loss, Tropical Cyclone	Ongoing
9	Upgrade sewer system to ensure stormwater infiltration does not cause a service interruption	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, Coastal Land Loss, Tropical Cyclone	Ongoing
10	Continue to advertise public meetings during the hazard mitigation planning process	HMGP, local, regional, and federal	3-5 yrs	Existing parish and municipal administration	Drought, Flooding, Coastal Land Loss, Hail, High Wind, Lightning, Tornado, Tropical Cyclone	Ongoing
11	Sponsor a "Multi-Hazard Awareness Week"	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Drought, Flooding, Coastal Land Loss, Hail, High Wind, Lightning, Tornado, Tropical Cyclone	Ongoing
12	Elevate, acquire or pilot reconstruct all Repetitive Loss and Severe Repetitive Loss structures	HMGP, local, regional, and federal	1-10 yrs	Existing parish and municipal administration	Flooding, Coastal Land Loss, Tropical Cyclone	Ongoing
<b>Comment on Status:</b> Future properties to be acquired/elevated will be prioritized in the following order: 1. Substantial Damage Properties, 2. Severe Repetitive Loss Properties, 3. Repetitive Loss Properties, 4. all others.						
13	Flood proof all public buildings vulnerable to flood damage	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, Coastal Land Loss, Tropical Cyclone	Not Started – Carried Over
14	Pursue upgrading of parking lots to pervious concrete	HMGP, local, regional, and federal	1-10 yrs	Existing parish and municipal administration	Flooding, Coastal Land Loss, Tropical Cyclone	Not Started – Carried Over
15	Ensure all municipalities and parish work together to produce a cohesive drainage plan	HMGP, local, regional, and federal	1-10 yrs	Existing parish and municipal administration	Flooding, Coastal Land Loss, Tropical Cyclone	Ongoing
16	Ensure future development does not increase hazard losses by enforcing building codes, introducing new codes or modifying existing building codes.	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Drought, Flooding, Coastal Land Loss, Hail, High Wind, Lightning, Tornado, Tropical Cyclone	Ongoing
17	Guide future development away from hazard areas using zoning regulations while maintaining other parish goals such as economic development and improving the quality of life.	No additional funds required	1-5 yrs	Existing parish and municipal administration	Drought, Flooding, Coastal Land Loss, Hail, High Wind, Lightning, Tornado, Tropical Cyclone	Ongoing

18	Determine what new regulations could be passed to reduce the effects of hazards on new buildings and infrastructure.	No additional funds required	Ongoing	Existing parish and municipal administration	Drought, Flooding, Coastal Land Loss, Hail, High Wind, Lightning, Tornado, Tropical Cyclone	Ongoing
19	Participate in existing programs at the state and federal levels oriented to environmental enhancement and conservation.	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Drought, Flooding, Coastal Land Loss, Hail, High Wind, Lightning, Tornado, Tropical Cyclone	Ongoing
20	Continue to participate in the NFIP	No additional funds required	Ongoing	Existing parish and municipal administration	Flooding, Coastal Land Loss, Tropical Cyclone	Ongoing
21	Establish a public outreach campaign to ensure all homeowners in floodplains are aware of the various types of coverage options under the NFIP	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Flooding, Coastal Land Loss, Tropical Cyclone	Ongoing
22	Establish homeowner education program on flood mitigation measures.	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Flooding, Coastal Land Loss, Tropical Cyclone	Ongoing
23	Evaluate ways to improve CRS ratings to reduce the flood insurance premiums	No additional funds required	Ongoing	Existing parish and municipal administration	Flooding, Coastal Land Loss, Tropical Cyclone	Ongoing
24	Evaluate future participation in the CRS	No additional funds required	Ongoing	Existing parish and municipal administration	Flooding, Coastal Land Loss, Tropical Cyclone	Ongoing
25	Adopt ordinance requiring water- saving measures in time of drought.	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Drought	Not Started – Carried Over
26	Installation of Lightning rods and surge protectors to facilities	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Lightning	Not Started – Carried Over
27	Purchase weather radios for public, to be used for emergency notification	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Drought, Flooding, Coastal Land Loss, Hail, High Wind, Lightning, Tornado, Tropical Cyclone, Winter Weather	Not Started – Carried Over

*New Mitigation Actions*

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS UNINCORPORATED LIVINGSTON PARISH	
	DESCRIPTION
MITIGATION ACTION	Preventing erosion with proper bank stabilization, sloping or grading techniques, planting vegetation on slopes, terracing hillsides, or installing rip-rap boulders, or geo-tech style fabric
LEAD AGENCY	Livingston Parish Government/Council
SUPPORTING AGENCIES	Mayor of Denham Springs, Mayor of Livingston, Mayor of Springfield, Mayor of Walker, Mayor of Albany, Mayor of French Settlement, Mayor of Killian, and Mayor of Port Vincent
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards.
PRIORITY	High
Action Description	Engineer and construct erosion mitigation measures, such as bank stabilization, installation of rip-rap, etc.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Prevents further loss of property and stabilizing erosion hazard areas
Current Status of Action	New
Hazard Addressed	Coastal Hazards; Tropical Cyclones

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS UNINCORPORATED LIVINGSTON PARISH	
	DESCRIPTION
MITIGATION ACTION	Stabilizing cliffs with terracing, or plantings of grasses or other plants to hold soil together
LEAD AGENCY	Livingston Parish Government/Council
SUPPORTING AGENCIES	Mayor of Denham Springs, Mayor of Livingston, Mayor of Springfield, Mayor of Walker, Mayor of Albany, Mayor of French Settlement, Mayor of Killian, and Mayor of Port Vincent
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards.
PRIORITY	Low
Action Description	Oversee the planting of grasses or other plants to hold soil together in high-risk erosion areas
Type of Mitigation Action	Natural System Protection
How Action Aligns with Risk Reduction	Prevents further loss of property and stabilizing erosion hazard areas
Current Status of Action	New
Hazard Addressed	Coastal Hazards; Tropical Cyclones

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS UNINCORPORATED LIVINGSTON PARISH	
	DESCRIPTION
MITIGATION ACTION	Developing a drought emergency plan
LEAD AGENCY	Livingston Parish Government/Council
SUPPORTING AGENCIES	Mayor of Denham Springs, Mayor of Livingston, Mayor of Springfield, Mayor of Walker, Mayor of Albany, Mayor of French Settlement, Mayor of Killian, and Mayor of Port Vincent
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards. 4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Low
Action Description	Develop, maintain and implement the emergency plan in case of a drought
Type of Mitigation Action	Local Plans and Regulations Preparedness and Response
How Action Aligns with Risk Reduction	With an emergency plan in place, we potentially reduce the risk of further damages
Current Status of Action	New
Hazard Addressed	Drought

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS UNINCORPORATED LIVINGSTON PARISH	
	DESCRIPTION
MITGATION ACTION	Work with NWS to develop local criteria or triggers for drought related action
LEAD AGENCY	Livingston Parish Government/Council
SUPPORTING AGENCIES	National Weather Service, Mayor of Denham Springs, Mayor of Livingston, Mayor of Springfield, Mayor of Walker, Mayor of Albany, Mayor of French Settlement, Mayor of Killian, and Mayor of Port Vincent
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	<ol style="list-style-type: none"> <li>1. Identify and pursue preventative measures that will reduce future damages from hazards.</li> <li>2. Enhance public awareness and understanding of disaster preparedness.</li> <li>4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.</li> </ol>
PRIORITY	Low
Action Description	Create and implement procedures for preventing drought
Type of Mitigation Action	Local Plans and Regulations Education and Awareness Programs Preparedness and Response Actions
How Action Aligns with Risk Reduction	Identifying triggers for drought related actions will significantly reduce drought related damages
Current Status of Action	New
Hazard Addressed	Drought

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS UNINCORPORATED LIVINGSTON PARISH	
	DESCRIPTION
MITGATION ACTION	Develop a floodplain management plan
LEAD AGENCY	Livingston Parish Government/Council
SUPPORTING AGENCIES	Mayor of Denham Springs, Mayor of Livingston, Mayor of Springfield, Mayor of Walker, Mayor of Albany, Mayor of French Settlement, Mayor of Killian, and Mayor of Port Vincent
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	<ol style="list-style-type: none"> <li>1. Identify and pursue preventative measures that will reduce future damages from hazards.</li> <li>3. Reduce repetitive flood losses.</li> <li>4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.</li> </ol>
PRIORITY	Medium
Action Description	To create, implement and update regularly a floodplain management plan to reduce future flood risk
Type of Mitigation Actions	Local Plans and Regulations Natural System Protection
How Action Aligns with Risk Reduction	Identifying flood prone risks and mitigating such risks to reduce flood related damages
Current Status of Action	New
Hazard Addressed	Flooding; Tropical Cyclones

**Additional Supporting Information:**



IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS UNINCORPORATED LIVINGSTON PARISH	
	DESCRIPTION
MITGATION ACTION	Form a regional watershed council to help bring together resources for comprehensive analysis, planning, decision-making, and cooperation
LEAD AGENCY	Livingston Parish Government/Council
SUPPORTING AGENCIES	Mayor of Denham Springs, Mayor of Livingston, Mayor of Springfield, Mayor of Walker, Mayor of Albany, Mayor of French Settlement, Mayor of Killian, and Mayor of Port Vincent
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	<ol style="list-style-type: none"> <li>1. Identify and pursue preventative measures that will reduce future damages from hazards.</li> <li>3. Reduce repetitive flood losses.</li> <li>4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.</li> </ol>
PRIORITY	Medium
Action Description	Form a council and meet regularly to discuss floodplain management related issues
Type of Mitigation Action	Local Plans and Regulations
How Action Aligns with Risk Reduction	Multiple jurisdictions can significantly reduce flood within the Parish and surrounding areas when working cohesively
Current Status of Action	New
Hazard Addressed	Flooding; Tropical Cyclones

#### Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS UNINCORPORATED LIVINGSTON PARISH	
	DESCRIPTION
MITIGATION ACTION	Contact the insurance Institute for Business and Home Safety (IBHS) to learn more about the most appropriate type of roof covering for our geographic region
LEAD AGENCY	Livingston Parish Government/Council
SUPPORTING AGENCIES	Mayor of Denham Springs, Mayor of Livingston, Mayor of Springfield, Mayor of Walker, Mayor of Albany, Mayor of French Settlement, Mayor of Killian, and Mayor of Port Vincent
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	<ol style="list-style-type: none"> <li>1. Identify and pursue preventative measures that will reduce future damages from hazards.</li> <li>2. Enhance public awareness and understanding of disaster preparedness.</li> <li>4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.</li> </ol>
PRIORITY	Low
Action Description	Further research on appropriate roof coverings for the region and share this information with the public
Type of Mitigation Action	Public Information Local Plans and Regulations
How Action Aligns with Risk Reduction	To increase awareness of hail rated roof coverings and reduce the amount of damage associated with hail related weather events
Current Status of Action	New
Hazard Addressed	Thunderstorms; Tornadoes; Tropical Cyclones

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS UNINCORPORATED LIVINGSTON PARISH	
	DESCRIPTION
MITGATION ACTION	Establish an interactive website for educating the public on Hazard Mitigation and preparedness measures
LEAD AGENCY	Livingston Parish Government/Council
SUPPORTING AGENCIES	Mayor of Denham Springs, Mayor of Livingston, Mayor of Springfield, Mayor of Walker, Mayor of Albany, Mayor of French Settlement, Mayor of Killian, and Mayor of Port Vincent
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	<ol style="list-style-type: none"> <li>1. Identify and pursue preventative measures that will reduce future damages from hazards.</li> <li>2. Enhance public awareness and understanding of disaster preparedness.</li> <li>4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.</li> </ol>
PRIORITY	Low
Action Description	Further notify the public of emergency preparedness in relation to hazardous weather events
Type of Mitigation Action	Education and Awareness Programs
How Action Aligns with Risk Reduction	Creates awareness to reduce potential hail related damages
Current Status of Action	New
Hazard Addressed	Coastal Hazards; Drought; Flooding; Thunderstorms; Tornadoes; Tropical Cyclones; Winter Weather

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS UNINCORPORATED LIVINGSTON PARISH	
	DESCRIPTION
MITIGATION ACTION	Adopt the International Building Code (IBC) and International Residential Code (IRC)
LEAD AGENCY	Livingston Parish Government/Council
SUPPORTING AGENCIES	Mayor of Denham Springs, Mayor of Livingston, Mayor of Springfield, Mayor of Walker, Mayor of Albany, Mayor of French Settlement, Mayor of Killian, and Mayor of Port Vincent
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	High
Action Description	Adopt both codes through council approval for parish-wide enforcement
Type of Mitigation Action	Local Plans and Regulations Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Regulating building construction to prevent high wind related damages
Current Status of Action	New
Hazard Addressed	Flooding; Thunderstorms; Tornadoes; Tropical Cyclones

#### Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS UNINCORPORATED LIVINGSTON PARISH	
	DESCRIPTION
MITIGATION ACTION	Require tie-downs with anchors and ground anchors appropriate for the soil type for manufactured homes
LEAD AGENCY	Livingston Parish Government/Council
SUPPORTING AGENCIES	Mayor of Denham Springs, Mayor of Livingston, Mayor of Springfield, Mayor of Walker, Mayor of Albany, Mayor of French Settlement, Mayor of Killian, and Mayor of Port Vincent
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Low
Action Description	Requiring tie-downs through building compliance for manufactured homes
Type of Mitigation Action	Local Plans and Regulations Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Proper anchoring of at-risk manufactured homes reduces the risk of wind related damage
Current Status of Action	New
Hazard Addressed	Thunderstorms, Tornadoes, Tropical Cyclones

#### Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS UNINCORPORATED LIVINGSTON PARISH	
	DESCRIPTION
MITIGATION ACTION	Install surge protection on all critical equipment parish-wide
LEAD AGENCY	Livingston Parish Government/Council
SUPPORTING AGENCIES	Mayor of Denham Springs, Mayor of Livingston, Mayor of Springfield, Mayor of Walker, Mayor of Albany, Mayor of French Settlement, Mayor of Killian, and Mayor of Port Vincent
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards. 4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Low
Action Description	Install surge protection on all critical equipment parish-wide
Type of Mitigation Action	Structure and Infrastructure Projects Preparedness and Response Actions
How Action Aligns with Risk Reduction	With this surge protection lightning poses little risk to equipment installed and to be purchased in the future
Current Status of Action	New
Hazard Addressed	Thunderstorms; Tornadoes; Tropical Cyclones

#### Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS UNINCORPORATED LIVINGSTON PARISH	
	DESCRIPTION
MITIGATION ACTION	Installing quick-connect emergency generator hook-ups for critical facilities
LEAD AGENCY	Livingston Parish Government/Council
SUPPORTING AGENCIES	Mayor of Denham Springs, Mayor of Livingston, Mayor of Springfield, Mayor of Walker, Mayor of Albany, Mayor of French Settlement, Mayor of Killian, and Mayor of Port Vincent
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards. 4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Medium
Action Description	Purchase and install quick-connects for critical infrastructure within the Parish
Type of Mitigation Action	Structure and Infrastructure Projects Preparedness and Response Actions
How Action Aligns with Risk Reduction	Quick-connects provide another method of emergency back-up power when other methods have failed
Current Status of Action	New
Hazard Addressed	Flooding; Thunderstorms; Tornadoes; Tropical Cyclones

#### Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS UNINCORPORATED LIVINGSTON PARISH	
	DESCRIPTION
MITIGATION ACTION	Encouraging the construction and use of safe rooms in homes and shelter areas of manufactured home parks, fairgrounds, shopping malls, or other vulnerable public structures
LEAD AGENCY	Livingston Parish Government/Council
SUPPORTING AGENCIES	Mayor of Denham Springs, Mayor of Livingston, Mayor of Springfield, Mayor of Walker, Mayor of Albany, Mayor of French Settlement, Mayor of Killian, and Mayor of Port Vincent
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards. 4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Low
Action Description	Construction using high wind rated materials for maximum protection
Type of Mitigation Action	Structure and Infrastructure Projects Preparedness and Response Actions
How Action Aligns with Risk Reduction	Decreases loss of life and property and serves as protection against tornado related weather
Current Status of Action	New
Hazard Addressed	Thunderstorms; Tornadoes; Tropical Cyclones

#### Additional Supporting Information:



IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS UNINCORPORATED LIVINGSTON PARISH	
	DESCRIPTION
MITIGATION ACTION	Using 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.
LEAD AGENCY	Livingston Parish Government/Council
SUPPORTING AGENCIES	Mayor of Denham Springs, Mayor of Livingston, Mayor of Springfield, Mayor of Walker, Mayor of Albany, Mayor of French Settlement, Mayor of Killian, and Mayor of Port Vincent
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards. 4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Low
Action Description	Construct and install design-failure mode power lines.
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	Winter Weather

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS UNINCORPORATED LIVINGSTON PARISH	
	DESCRIPTION
MITGATION ACTION	Planning for and maintaining adequate road and debris clearing capabilities
LEAD AGENCY	Livingston Parish Government/Council
SUPPORTING AGENCIES	Mayor of Denham Springs, Mayor of Livingston, Mayor of Springfield, Mayor of Walker, Mayor of Albany, Mayor of French Settlement, Mayor of Killian, and Mayor of Port Vincent
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards.
PRIORITY	Low
<b>Action Description</b>	Create and implement a plan and procedure for clearing parish roads and weather related debris. Preventing road closures and damage to parish roadways will reduce the risk of road hazards for essential personnel and residents.
<b>Type of Mitigation Action</b>	Local Plans and Regulations Preparedness and Response Actions
<b>How Action Aligns with Risk Reduction</b>	Reduce the risk of road damage, vehicle damage and increase essential personnel productivity.
<b>Current Status of Action</b>	New
<b>Hazard Addressed</b>	Winter Weather

## Town of Albany Mitigation Actions

*Previous Action Update*

Action	Description	Funding Source	Timeframe	Responsible Party	Hazard(s)	Status
1	Wind harden structures using shutters, screens, window film, and/or roof straps	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Tropical Cyclone, High Wind, Hail, Tornado	Ongoing
2	Install safe rooms in critical facilities	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Tropical Cyclone, High Wind, Hail, Tornado	In Progress
3	Install a hazard early warning system	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, Hail, High Wind, Lightning, Tornado	In Progress
4	Construct new shelters	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, High Wind, Tornado, Tropical Cyclone	Ongoing
5	Upgrade current shelters to include food pantries, kitchens and climate control systems	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, High Wind, Tornado, Tropical Cyclone, Winter Weather	Not Started – Carried Over
6	Purchase generators for critical facilities to ensure operation during and after a hazard event	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, High Wind, Hail, Lightning, Tornado, Tropical Cyclone	Ongoing
7	Upgrade drainage ways by concrete lining, widening and/or enlarging culverts and catch basins.	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing
8	Upgrade capacity of storm water retention and detention areas, thereby protecting both existing structures and future development	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing
9	Upgrade sewer system to ensure stormwater infiltration does not cause a service interruption	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing
10	Continue to advertise public meetings during the hazard mitigation planning process	HMGP, local, regional, and federal	3-5 yrs	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornado, Tropical Cyclone	Ongoing
11	Sponsor a "Multi-Hazard Awareness Week"	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornado, Tropical Cyclone	Ongoing

12	Elevate, acquire or pilot reconstruct all Repetitive Loss and Severe Repetitive Loss structures	HMGP, local, regional, and federal	1-10 yrs	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing
<b>Comment on Status:</b> Future properties to be acquired/elevated will be prioritized in the following order: 1. Substantial Damage Properties, 2. Severe Repetitive Loss Properties, 3. Repetitive Loss Properties, 4. all others.						
13	Flood proof all public buildings vulnerable to flood damage	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, Tropical Cyclone	Not Started – Carried Over
14	Pursue upgrading of parking lots to pervious concrete	HMGP, local, regional, and federal	1-10 yrs	Existing parish and municipal administration	Flooding, Tropical Cyclone	Not Started – Carried Over
15	Ensure all municipalities and parish work together to produce a cohesive drainage plan	HMGP, local, regional, and federal	1-10 yrs	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing
16	Ensure future development does not increase hazard losses by enforcing building codes, introducing new codes or modifying existing building codes.	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornado, Tropical Cyclone	Ongoing
17	Guide future development away from hazard areas using zoning regulations while maintaining other parish goals such as economic development and improving the quality of life.	No additional funds required	1-5 yrs	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornado, Tropical Cyclone	Ongoing
18	Determine what new regulations could be passed to reduce the effects of hazards on new buildings and infrastructure.	No additional funds required	Ongoing	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornado, Tropical Cyclone	Ongoing
19	Participate in existing programs at the state and federal levels oriented to environmental enhancement and conservation.	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornado, Tropical Cyclone	Ongoing
20	Continue to participate in the NFIP	No additional funds required	Ongoing	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing
21	Establish a public outreach campaign to ensure all homeowners in floodplains are aware of the various types of coverage options under the NFIP	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing

22	Establish homeowner education program on flood mitigation measures.	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing
23	Evaluate ways to improve CRS ratings to reduce the flood insurance premiums	No additional funds required	Ongoing	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing
24	Evaluate future participation in the CRS	No additional funds required	Ongoing	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing
25	Adopt ordinance requiring water- saving measures in time of drought.	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Drought	Not Started – Carried Over
26	Installation of Lightning rods and surge protectors to facilities	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Lightning	Not Started – Carried Over
27	Purchase weather radios for public, to be used for emergency notification	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornado, Tropical Cyclone, Winter Weather	Not Started – Carried Over

*New Mitigation Actions*

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF ALBANY	
	DESCRIPTION
MITIGATION ACTION	Developing a drought emergency plan
LEAD AGENCY	Mayor of Albany
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards. 4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Low
Action Description	Develop, maintain and implement the emergency plan in case of a drought
Type of Mitigation Action	Local Plans and Regulations Preparedness and Response
How Action Aligns with Risk Reduction	With an emergency plan in place, we potentially reduce the risk of further damages
Current Status of Action	New
Hazard Addressed	Drought

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF ALBANY	
	DESCRIPTION
MITIGATION ACTION	Work with NWS to develop local criteria or triggers for drought related action
LEAD AGENCY	Mayor of Albany
SUPPORTING AGENCIES	National Weather Service, Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	<ol style="list-style-type: none"> <li>1. Identify and pursue preventative measures that will reduce future damages from hazards.</li> <li>2. Enhance public awareness and understanding of disaster preparedness.</li> <li>4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.</li> </ol>
PRIORITY	Low
Action Description	Create and implement procedures for preventing drought
Type of Mitigation Action	Local Plans and Regulations Education and Awareness Programs Preparedness and Response Actions
How Action Aligns with Risk Reduction	Identifying triggers for drought related actions will significantly reduce drought related damages
Current Status of Action	New
Hazard Addressed	Drought

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF ALBANY	
	DESCRIPTION
MITIGATION ACTION	Develop a floodplain management plan
LEAD AGENCY	Mayor of Albany
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	<ol style="list-style-type: none"> <li>1. Identify and pursue preventative measures that will reduce future damages from hazards.</li> <li>3. Reduce repetitive flood losses.</li> <li>4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.</li> </ol>
PRIORITY	Medium
Action Description	To create, implement and update regularly a floodplain management plan to reduce future flood risk
Type of Mitigation Actions	Local Plans and Regulations Natural System Protection
How Action Aligns with Risk Reduction	Identifying flood prone risks and mitigating such risks to reduce flood related damages
Current Status of Action	New
Hazard Addressed	Flooding; Tropical Cyclones

#### Additional Supporting Information:



IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF ALBANY	
	DESCRIPTION
MITIGATION ACTION	Form a regional watershed council to help bring together resources for comprehensive analysis, planning, decision-making, and cooperation
LEAD AGENCY	Mayor of Albany
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	<ol style="list-style-type: none"> <li>1. Identify and pursue preventative measures that will reduce future damages from hazards.</li> <li>3. Reduce repetitive flood losses.</li> <li>4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.</li> </ol>
PRIORITY	Medium
Action Description	Form a council and meet regularly to discuss floodplain management related issues
Type of Mitigation Action	Local Plans and Regulations
How Action Aligns with Risk Reduction	Multiple jurisdictions can significantly reduce flood within the Parish and surrounding areas when working cohesively
Current Status of Action	New
Hazard Addressed	Flooding; Tropical Cyclones

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF ALBANY	
	DESCRIPTION
MITIGATION ACTION	Contact the insurance Institute for Business and Home Safety (IBHS) to learn more about the most appropriate type of roof covering for our geographic region
LEAD AGENCY	Mayor of Albany
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	<ol style="list-style-type: none"> <li>1. Identify and pursue preventative measures that will reduce future damages from hazards.</li> <li>2. Enhance public awareness and understanding of disaster preparedness.</li> <li>4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.</li> </ol>
PRIORITY	Low
Action Description	Further research on appropriate roof coverings for the region and share this information with the public
Type of Mitigation Action	Public Information Local Plans and Regulations
How Action Aligns with Risk Reduction	To increase awareness of hail rated roof coverings and reduce the amount of damage associated with hail related weather events
Current Status of Action	New
Hazard Addressed	Thunderstorms; Tornadoes; Tropical Cyclones

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF ALBANY	
	DESCRIPTION
MITIGATION ACTION	Establish an interactive website for educating the public on Hazard Mitigation and preparedness measures
LEAD AGENCY	Mayor of Albany
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards. 2. Enhance public awareness and understanding of disaster preparedness. 4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Low
Action Description	Further notify the public of emergency preparedness in relation to hazardous weather events
Type of Mitigation Action	Education and Awareness Programs
How Action Aligns with Risk Reduction	Creates awareness to reduce potential hail related damages
Current Status of Action	New
Hazard Addressed	Drought; Flooding; Thunderstorms; Tornadoes; Tropical Cyclones; Winter Weather

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF ALBANY	
	DESCRIPTION
MITIGATION ACTION	Adopt the International Building Code (IBC) and International Residential Code (IRC)
LEAD AGENCY	Mayor of Albany
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	High
Action Description	Adopt both codes through council approval for parish-wide enforcement
Type of Mitigation Action	Local Plans and Regulations Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Regulating building construction to prevent high wind related damages
Current Status of Action	New
Hazard Addressed	Flooding; Thunderstorms; Tornadoes; Tropical Cyclones

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF ALBANY	
	DESCRIPTION
MITIGATION ACTION	Require tie-downs with anchors and ground anchors appropriate for the soil type for manufactured homes
LEAD AGENCY	Mayor of Albany
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Low
Action Description	Requiring tie-downs through building compliance for manufactured homes
Type of Mitigation Action	Local Plans and Regulations Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Proper anchoring of at-risk manufactured homes reduces the risk of wind related damage
Current Status of Action	New
Hazard Addressed	Thunderstorms, Tornadoes, Tropical Cyclones

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF ALBANY	
	DESCRIPTION
MITGATION ACTION	Install surge protection on all critical equipment parish-wide
LEAD AGENCY	Mayor of Albany
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards. 4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Low
Action Description	Install surge protection on all critical equipment parish-wide
Type of Mitigation Action	Structure and Infrastructure Projects Preparedness and Response Actions
How Action Aligns with Risk Reduction	With this surge protection lightning poses little risk to equipment installed and to be purchased in the future
Current Status of Action	New
Hazard Addressed	Thunderstorms; Tornadoes; Tropical Cyclones

#### Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF ALBANY	
	DESCRIPTION
MITGATION ACTION	Installing quick-connect emergency generator hook-ups for critical facilities
LEAD AGENCY	Mayor of Albany
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards. 4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Medium
Action Description	Purchase and install quick-connects for critical infrastructure within the Parish
Type of Mitigation Action	Structure and Infrastructure Projects Preparedness and Response Actions
How Action Aligns with Risk Reduction	Quick-connects provide another method of emergency back-up power when other methods have failed
Current Status of Action	New
Hazard Addressed	Flooding; Thunderstorms; Tornadoes; Tropical Cyclones

#### Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF ALBANY	
	DESCRIPTION
MITIGATION ACTION	Encouraging the construction and use of safe rooms in homes and shelter areas of manufactured home parks, fairgrounds, shopping malls, or other vulnerable public structures
LEAD AGENCY	Mayor of Albany
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards. 4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Low
Action Description	Construction using high wind rated materials for maximum protection
Type of Mitigation Action	Structure and Infrastructure Projects Preparedness and Response Actions
How Action Aligns with Risk Reduction	Decreases loss of life and property and serves as protection against tornado related weather
Current Status of Action	New
Hazard Addressed	Thunderstorms; Tornadoes; Tropical Cyclones

**Additional Supporting Information:**



IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF ALBANY	
	DESCRIPTION
MITIGATION ACTION	Using 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.
LEAD AGENCY	Mayor of Albany
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards. 4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Low
Action Description	Construct and install design-failure mode power lines.
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 community.
Current Status of Action	New
Hazard Addressed	Winter Weather

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF ALBANY	
	DESCRIPTION
MITGATION ACTION	Planning for and maintaining adequate road and debris clearing capabilities
LEAD AGENCY	Mayor of Albany
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards.
PRIORITY	Low
Action Description	Create and implement a plan and procedure for clearing parish roads and weather related debris. Preventing road closures and damage to parish roadways will reduce the risk of road hazards for essential personnel and residents.
Type of Mitigation Action	Local Plans and Regulations Preparedness and Response Actions
How Action Aligns with Risk Reduction	Reduce the risk of road damage, vehicle damage and increase essential personnel productivity.
Current Status of Action	New
Hazard Addressed	Winter Weather

## City of Denham Springs Mitigation Actions

*Previous Action Update*

Action	Description	Funding Source	Timeframe	Responsible Party	Hazard(s) Addressed	Goals	Priority	Status
1	Wind harden structures using shutters, screens, window film, and/or roof straps	HMGP, local, regional, and federal	1-5 yrs.	Existing parish and municipal administration	Tropical Cyclones, High Wind, Hail, Tornadoes	1, 4	LOW	Not Started – Carried Over
2	Install safe rooms in critical facilities	HMGP, local, regional, and federal	1-5 yrs.	Existing parish and municipal administration	Tropical Cyclones, High Wind, Hail, Tornadoes	1, 4	LOW	Not Started – Carried Over
3	Install a hazard early warning system	HMGP, local, regional, and federal	1-5 yrs.	Existing parish and municipal administration	Flooding, Hail, High Wind, Lightning, Tornadoes	1, 4	HIGH	Complete
4	Construct new shelters	HMGP, local, regional, and federal	1-5 yrs.	Existing parish and municipal administration	Flooding, High Wind, Tornadoes, Tropical Cyclones, Winter Weather	1, 4	MEDIUM	Not Started – Carried Over
5	Upgrade current shelters to include food pantries, kitchens and climate control systems	HMGP, local, regional, and federal	1-5 yrs.	Existing parish and municipal administration	Flooding, High Wind, Tornadoes, Tropical Cyclones, Winter Weather	1, 4	MEDIUM	Not Started – Carried Over
6	Purchase generators for critical facilities to ensure operation during and after a hazard event	HMGP, local, regional, and federal	1-5 yrs.	Existing parish and municipal administration	Flooding, High Wind, Hail, Lightning, Tornadoes, Tropical Cyclones	1, 4	HIGH	In Progress
7	Upgrade drainage ways by concrete lining, widening and/or enlarging culverts and catch basins.	HMGP, local, regional, and federal	1-5 yrs.	Existing parish and municipal administration	Flooding, Tropical Cyclones	1, 3, 4	MEDIUM	In Progress
8	Upgrade capacity of storm water retention and detention areas, thereby protecting both existing structures and future development	HMGP, local, regional, and federal	1-5 yrs.	Existing parish and municipal administration	Flooding, Tropical Cyclones	1, 3, 4	MEDIUM	In Progress

9	Upgrade sewer system to ensure stormwater infiltration does not cause a service interruption	HMGP, local, regional, and federal	1-5 yrs.	Existing parish and municipal administration	Flooding, Tropical Cyclones	1, 3, 4	HIGH	In Progress
10	Continue to advertise public meetings during the hazard mitigation planning process	HMGP, local, regional, and federal	3-5 yrs.	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornadoes, Tropical Cyclones	2	MEDIUM	In Progress
11	Sponsor a "Multi-Hazard Awareness Week"	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornadoes, Tropical Cyclones, Winter Weather	2	MEDIUM	Not Started – Carried Over
12	Elevate, acquire or pilot reconstruct all Repetitive Loss and Severe Repetitive Loss structures	HMGP, local, regional, and federal	1-10 yrs.	Existing parish and municipal administration	Flooding, Tropical Cyclones	1, 3, 4	MEDIUM	In Progress
13	Flood proof all public buildings vulnerable to flood damage	HMGP, local, regional, and federal	1-5 yrs.	Existing parish and municipal administration	Flooding, Tropical Cyclones	1, 3, 4	MEDIUM	In Progress
14	Pursue upgrading of parking lots to pervious concrete	HMGP, local, regional, and federal	1-10 yrs.	Existing parish and municipal administration	Flooding, Tropical Cyclones	1, 4	LOW	Not Started – Carried Over
15	Ensure all municipalities and parish work together to produce a cohesive drainage plan	HMGP, local, regional, and federal	1-10 yrs.	Existing parish and municipal administration	Flooding, , Tropical Cyclones	1, 3, 4	MEDIUM	In Progress
16	Ensure future development does not increase hazard losses by enforcing building codes, introducing new codes or modifying existing building codes.	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornadoes, Tropical Cyclones	1,4	HIGH	In Progress

17	Guide future development away from hazard areas using zoning regulations while maintaining other parish goals such as economic development and improving the quality of life.	No additional funds required	1-5 yrs.	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornadoes, Tropical Cyclones	1, 4	MEDIUM	In Progress
18	Determine what new regulations could be passed to reduce the effects of hazards on new buildings and infrastructure.	No additional funds required	Ongoing	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornadoes, Tropical Cyclones	1, 4	HIGH	In Progress
19	Participate in existing programs at the state and federal levels oriented to environmental enhancement and conservation.	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornadoes, Tropical Cyclones	1, 4	MEDIUM	In Progress
20	Continue to participate in the NFIP	No additional funds required	Ongoing	Existing parish and municipal administration	Flooding, Tropical Cyclones	1, 2, 3, 4	HIGH	In Progress
21	Establish a public outreach campaign to ensure all homeowners in floodplains are aware of the various types of coverage options under the NFIP	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Flooding, Tropical Cyclones	2	HIGH	In Progress
22	Establish homeowner education program on flood mitigation measures.	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Flooding, Tropical Cyclones	2, 4	HIGH	In Progress
23	Evaluate ways to improve CRS ratings to reduce the flood insurance premiums	No additional funds required	Ongoing	Existing parish and municipal administration	Flooding, Tropical Cyclones	1, 4	HIGH	In Progress
24	Evaluate future participation in the CRS	No additional funds required	Ongoing	Existing parish and municipal administration	Flooding, Tropical Cyclones	1, 4	HIGH	In Progress

25	Adopt ordinance requiring water-saving measures in time of drought.	HMGP, local, regional, and federal	1-5 yrs.	Existing parish and municipal administration	Drought	1, 4	LOW	Not Started – Carried Over
26	Installation of Lightning rods and surge protectors to facilities	HMGP, local, regional, and federal	1-5 yrs.	Existing parish and municipal administration	Lightning	1, 4	LOW	Not Started – Carried Over
27	Purchase weather radios for public, to be used for emergency notification	HMGP, local, regional, and federal	1-5 yrs.	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornadoes, Tropical Cyclones, Winter Weather	1, 2	LOW	Not Started – Carried Over

*New Mitigation Actions*

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF DENHAM SPRINGS	
	DESCRIPTION
MITIGATION ACTION	Develop/provide GIS capability
LEAD AGENCY	City of Denham Springs Mayor's Office
SUPPORTING AGENCIES	City of Denham Springs Office of Planning & Development
TIMELINE	1-5 yrs.
COST ESTIMATE	\$50k - \$150k
POSSIBLE FUNDING SOURCE(S)	HMGP, local, regional, and federal
ASSOCIATED GOALS	<ol style="list-style-type: none"> <li>1. Identify and pursue preventative measures that will reduce future damages from hazards.</li> <li>2. Enhance public awareness and understanding of disaster preparedness.</li> <li>3. Reduce repetitive flood losses</li> <li>4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.</li> </ol>
PRIORITY	High
<b>Action Description</b>	Develop/provide GIS to provide depth grid data, D-FIRMS, digital floodplain and topographic data enabling municipal employees and general public to identify areas that are at risk of flooding.
<b>Type of Mitigation Action</b>	Local Plans and Regulations Education and Awareness Program Preventative (CRS) Emergency Services (CRS) Public Information (CRS)
<b>How Action Aligns with Risk Reduction</b>	This will be used to determine flood risks (location, elevation, and base flood elevation, etc.) by all users (municipal and public).
<b>Current Status of Action</b>	New
<b>Hazard Addressed</b>	Flooding, Tropical Cyclone

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF DENHAM SPRINGS	
	DESCRIPTION
MITIGATION ACTION	Develop open space plan
LEAD AGENCY	City of Denham Springs Mayor's Office
SUPPORTING AGENCIES	City of Denham Springs Office of Planning & Development
TIMELINE	1-5 yrs.
COST ESTIMATE	Unknown
POSSIBLE FUNDING SOURCE(S)	HMGP, local, regional, and federal
ASSOCIATED GOALS	<ol style="list-style-type: none"> <li>1. Identify and pursue preventative measures that will reduce future damages from hazards.</li> <li>3. Reduce repetitive flood losses</li> <li>4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.</li> </ol>
PRIORITY	Medium
Action Description	Develop an open space acquisition, reuse, and preservation plan targeting hazard areas.
Type of Mitigation Action	Local Plans and Regulations Natural System Protection Preventative (CRS) Property Protection (CRS) Natural Resource Protection (CRS) Public Information (CRS)
How Action Aligns with Risk Reduction	With potential properties and risks identified, and a plan in place, the acquisition process should proceed more efficiently.
Current Status of Action	New
Hazard Addressed	Flooding

#### Additional Supporting Information:



IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF DENHAM SPRINGS	
	DESCRIPTION
MITIGATION ACTION	Verification Study of Repetitive Loss Properties
LEAD AGENCY	City of Denham Springs Mayor's Office
SUPPORTING AGENCIES	Office of Planning & Development
TIMELINE	1-5 yrs.
COST ESTIMATE	Unknown
POSSIBLE FUNDING SOURCE(S)	HMGP, local, regional, and federal
ASSOCIATED GOALS	<ol style="list-style-type: none"> <li>1. Identify and pursue preventative measures that will reduce future damages from hazards.</li> <li>3. Reduce repetitive flood losses</li> <li>4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.</li> </ol>
PRIORITY	High
Action Description	Conduct a verification study of FEMA's repetitive loss inventory and develop an associate tracking database (including market value)
Type of Mitigation Action	Local Plans and Regulations Natural System Protection Preventative (CRS) Property Protection (CRS) Natural Resource Protection (CRS)
How Action Aligns with Risk Reduction	This action will aid the OPD in identifying non-mitigated repetitive loss properties to provide a better mitigation strategy for each property and the overall community.
Current Status of Action	New
Hazard Addressed	Flooding, Tropical Cyclones

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF DENHAM SPRINGS	
	DESCRIPTION
MITGATION ACTION	New and/or upgraded municipal water service
LEAD AGENCY	City of Denham Springs Mayor's Office
SUPPORTING AGENCIES	City of Denham Springs Water Department
TIMELINE	1-5 yrs.
COST ESTIMATE	Unknown
POSSIBLE FUNDING SOURCE(S)	HMGP, local, regional, and federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards. 4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Low
Action Description	Develop new or upgrade existing water delivery systems to eliminate breaks and leaks.
Type of Mitigation Action	Structure and Infrastructure Projects
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

#### Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF DENHAM SPRINGS	
	DESCRIPTION
MITIGATION ACTION	Incentivize use of permeable driveways and other surfaces
LEAD AGENCY	City of Denham Springs Mayor's Office
SUPPORTING AGENCIES	City of Denham Springs Office of Planning & Development
TIMELINE	1-5 yrs.
COST ESTIMATE	Unknown
POSSIBLE FUNDING SOURCE(S)	HMGP, local, regional, and federal
ASSOCIATED GOALS	<ol style="list-style-type: none"> <li>1. Identify and pursue preventative measures that will reduce future damages from hazards.</li> <li>2. Enhance public awareness and understanding of disaster preparedness.</li> <li>4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.</li> </ol>
PRIORITY	Low
Action Description	Encourage using permeable driveways and surfaces to reduce runoff and promote groundwater recharge.
Type of Mitigation Action	Education and Awareness Property Protection (CRS) Public Information (CRS)
How Action Aligns with Risk Reduction	By using permeable materials, rain/storm water runoff is reduced and allowed to seep back into the ground, recharging groundwater supplies.
Current Status of Action	New
Hazard Addressed	Drought; Flooding

#### Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF DENHAM SPRINGS	
	DESCRIPTION
MITGATION ACTION	Adopt ordinance incorporating drought tolerant practices to future development
LEAD AGENCY	City of Denham Springs Mayor's Office
SUPPORTING AGENCIES	City of Denham Springs Office of Planning & Development
TIMELINE	1-5 yrs.
COST ESTIMATE	Unknown
POSSIBLE FUNDING SOURCE(S)	HMGP, local, regional, and federal
ASSOCIATED GOALS	<ol style="list-style-type: none"> <li>1. Identify and pursue preventative measures that will reduce future damages from hazards.</li> <li>2. Enhance public awareness and understanding of disaster preparedness.</li> <li>4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.</li> </ol>
PRIORITY	Low
Action Description	Adopt ordinance incorporating drought tolerant or xeriscape practices to reduce dependence on irrigation.
Type of Mitigation Action	Local Plans and Regulations Education and Awareness
How Action Aligns with Risk Reduction	Development and adoption of an ordinance to encourage drought tolerant practices should reduce the need for irrigation, thereby conserving strained water supplies.
Current Status of Action	New
Hazard Addressed	Drought

#### Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF DENHAM SPRINGS	
	DESCRIPTION
MITGATION ACTION	Construction of Kitchen in support of Emergency Operations Center
LEAD AGENCY	City of Denham Springs Mayor's Office
SUPPORTING AGENCIES	City of Denham Springs Administration
TIMELINE	1-5 years
COST ESTIMATE	\$50,000
POSSIBLE FUNDING SOURCE(S)	HMGP, local, regional, and federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards. 4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	High
Action Description	Construct and equip fully functional kitchen within Denham Springs City Hall to support EOC operations during times of activation.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	With kitchen all personnel supporting City of Denham Springs during adverse event will have ability to be nourished with proper meals to maintain physical integrity throughout mission.
Current Status of Action	New
Hazard(s) Addressed	Drought, Flooding, Thunderstorms, Tornadoes, Tropical Cyclones, Winter Weather

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF DENHAM SPRINGS	
	DESCRIPTION
MITIGATION ACTION	Using 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.
LEAD AGENCY	City of Denham Springs Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards. 4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Low
Action Description	Construct and install design-failure mode power lines.
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 community.
Current Status of Action	New
Hazard Addressed	Winter Weather

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF DENHAM SPRINGS	
	DESCRIPTION
MITIGATION ACTION	Planning for and maintaining adequate road and debris clearing capabilities
LEAD AGENCY	City of Denham Springs Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards.
PRIORITY	Low
Action Description	Create and implement a plan and procedure for clearing parish roads and weather-related debris. Preventing road closures and damage to parish roadways will reduce the risk of road hazards for essential personnel and residents.
Type of Mitigation Action	Local Plans and Regulations Preparedness and Response Actions
How Action Aligns with Risk Reduction	Reduce the risk of road damage, vehicle damage and increase essential personnel productivity.
Current Status of Action	New
Hazard Addressed	Winter Weather

## Village of French Settlement Mitigation Actions

### Previous Action Update

Action	Description	Funding Source	Timeframe	Responsible Party	Hazard(s)	Status
1	Wind harden structures using shutters, screens, window film, and/or roof straps	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Tropical Cyclone, High Wind, Hail, Tornado	Ongoing
<p><b>Comment on Status:</b> French Settlement is regulated under the Livingston Parish Permit office. French Settlement will parallel with the Parish Grant office for potential funding to harden residential and business structures.</p>						
2	Install safe rooms in critical facilities	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Tropical Cyclone, High Wind, Hail, Tornado	In Progress
<p><b>Comment on Status:</b> While these are not compliance regulations through the permit office of Livingston Parish, we will work with Livingston Parish Grant Department in parallel for safe rooms for our critical facilities for our Police Department and Town Hall.</p>						
3	Install a hazard early warning system	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, Hail, High Wind, Lightning, Tornado	In Progress
<p><b>Comment on Status:</b> French Settlement is part of the Amite River Basins early warning system. We house critical river gauge on the Amite River at the French Settlement Amite River Bridge. This is part of the USGS early warning gauging system that is integrated into the river forecast centers, river prediction models that are issued daily. This is accessed through the web and is available through GOHSEP and LOHSEP. Additionally, we partner with our local media and cable provider to broadcast applicable warnings for severe weather, flooding and hurricanes through the hurricane forecast center. These warnings are transmitted through all weather radios and mobile weather apps by USGS for river gauge/flood warnings, lightening, severe thunderstorm, flash flooding and hurricane warnings.</p>						
4	Construct new shelters	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, High Wind, Tornado, Tropical Cyclone	Ongoing
<p><b>Comment on Status:</b> At present, Red Cross and FEMA do not recognize shelters below South I-12. However, French Settlement has partnered with area churches to offer protection from storm events until evacuation is possible and can safely be evacuated.</p>						
5	Upgrade current shelters to include food pantries, kitchens and climate control systems	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, High Wind, Tornado, Tropical Cyclone, Winter Weather	Not Started – Carried Over
<p><b>Comment on Status:</b> At present, French Settlement has set aside a small storage of MRE's, bottled water and COVID PPE for 2021 in partnership with LOHSEP. In partnership with St. Joseph Catholic Church, there is a food pantry and an available facility to prepare and serve meals in an air-conditioned hall with stand-by generators. We are also prepared to host a pod site.</p>						
6	Purchase generators for critical facilities to ensure operation during and after a hazard event	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, High Wind, Hail, Lightning, Tornado, Tropical Cyclone	Ongoing
<p><b>Comment on Status:</b> French Settlement has RFQ's for two generators for both the Town Hall and the Police Department. We expect to execute a contract at the April 14, 2021 monthly public meeting. The funds for these generators were secured from an LGAP Grant that previous administration failed to complete.</p>						
7	Upgrade drainage ways by concrete lining, widening and/or enlarging culverts and catch basins.	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing



**Comment on Status:** French Settlement drains 90% of the Amite River Basin, five Parishes, plus two counties in Mississippi. We are working with Livingston Parish for the improvement of the weir at the Diversion Canal and Amite River channels with hazard mitigation funding from the 2016 flood event. The statistical study of the land in French Settlement is fundamentally flat with a ridge line that extends North and South through the Village where most homes are located. We have listed in this plan, some locations that are currently impeded in drainage over the years through either regulated or natural sedimentation. These potential projects, plus maintenance dredging of the old Amite River channel and mouth will improve local drainage. Bearing in mind, that we drain all of this land and cannot do anything about it, with the exception of the listed local draining projects along Highway 16 and La Trace. All are presently funded by the 2016 hazard mitigation funding from the 2016 flood. French Settlement does not have a tax base, but since 2001 has paid taxes into the Comite Diversion Canal and is expected to be completed in 2023. This could reduce flooding by up to 4 inches. As of today, March 23, 2021, the Highway 22 project to relieve high water along the Diversion Canal will enhance French Settlement drainage. This 42M project is funded through the approval of Gov. Edwards, Senator Cassidy and Congressman Graves from the post 2016 flood mitigation dollars. The proposed Darlington Reservoir project, if constructed, will have the most positive impact on the Amite River Basin. It is currently being reviewed by the USACE and DOTD. Additionally, French Settlement is a true coastal community experiencing a high/low tide daily from the Gulf of Mexico.

8	Upgrade capacity of storm water retention and detention areas, thereby protecting both existing structures and future development	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing
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**Comment on Status:** Floodplain management is currently in law for the State of Louisiana. It should dictate future construction both permeable and impermeable surfaces in French Settlement. Our swamps and low lands are the reserves for holding surges along the Amite River until they can drain out from Lake Maurepas. Salt water intrusion into the swamps will have a major impact on our ability to store water, thus the New Hope project in the Blind River Swamp will introduce fresh water into those areas to keep the Cypress and Tupelo Gum swamps healthy. Retention floodplain management should not allow digging of ponds to raise home sites and land that are too low to build on. Under floodplain management, pond construction is not accredited as a flood control measure, unless that pond remains empty until rain/flood waters enter it.

9	Upgrade sewer system to ensure stormwater infiltration does not cause a service interruption	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing
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**Comment on Status:** Livingston Parish Permit office regulates all sewer and treatment plants, in compliance with the EPA Clean Water Acts. All upgrades will be in compliance with Livingston Parish Permit Office.

10	Continue to advertise public meetings during the hazard mitigation planning process	HMGP, local, regional, and federal	3-5 yrs	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornado, Tropical Cyclone	Ongoing
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**Comment on Status:** French Settlement will continue to have public comments on hazard mitigation as well as recognize Flood Awareness Month of March, as proclaimed by the Mayor.

11	Sponsor a "Multi-Hazard Awareness Week"	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornado, Tropical Cyclone	Ongoing
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**Comment on Status:** French Settlement is in the planning stage of sponsoring Get a Game Plan per GOHSEP to kick off start of hurricane season.

12	Elevate, acquire or pilot reconstruct all Repetitive Loss and Severe Repetitive Loss structures	HMGP, local, regional, and federal	1-10 yrs	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing
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<b>Comment on Status:</b> French Settlement has a history of complying with and purchasing repetitive loss structures. In addition to raising structures since 2016 flood, we have worked with our partners at GOHSEP, LOHSEP and FEMA for a buy-out of Amies Automotive on Highway 16 and a two-story home on King George that were both repetitive loss structures. Those two structures have been remediated and land reclaimed. French Settlement will work with Livingston Parish Grant Department for any available funds to offer purchases for repetitive loss structures or elevation of said repetitive loss structures.						
13	Flood proof all public buildings vulnerable to flood damage	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, Tropical Cyclone	Not Started – Carried Over
<b>Comment on Status:</b> French Settlement will work with the Livingston Parish Grant Department and LOHSEP to encourage flood proofing, whether through cofferdam or similar constructive practices that will allow these homes not to be impacted by flood waters.						
14	Pursue upgrading of parking lots to pervious concrete	HMGP, local, regional, and federal	1-10 yrs	Existing parish and municipal administration	Flooding, Tropical Cyclone	Not Started – Carried Over
<b>Comment on Status:</b> French Settlement will work with Livingston Parish Permit Office and Livingston Parish Grant Office to seek attractive credits and tax breaks to construct pervious structures, parking lots, driveways and sidewalks. At present, we still encourage limestone as pervious structures and the French Settlement Town Hall parking lot is a permeable limestone parking lot at present.						
15	Ensure all municipalities and parish work together to produce a cohesive drainage plan	HMGP, local, regional, and federal	1-10 yrs	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing
<b>Comment on Status:</b> French Settlement has partnered with Livingston Parish and Parishes throughout the Amite River Basin to collectively work on and enhance drainage and floodplain management under Louisiana statutes. As a critical point at the bottom of the basin, French Settlement is always vigil and constantly mindful of all projects upstream that could potentially effect our floodplain.						
16	Ensure future development does not increase hazard losses by enforcing building codes, introducing new codes or modifying existing building codes.	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornado, Tropical Cyclone	Ongoing
<b>Comment on Status:</b> French Settlement has turned over all of its permitting regulations to the Livingston Parish Permit Office. The Louisiana statute for floodplain management has dictated a commission to be formed to ensure that any future development along the entire Amite River Basin corridor does not negatively impact any communities, including French Settlement upstream or downstream.						
17	Guide future development away from hazard areas using zoning regulations while maintaining other parish goals such as economic development and improving the quality of life.	No additional funds required	1-5 yrs	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornado, Tropical Cyclone	Ongoing
<b>Comment on Status:</b> French Settlement is amicable and open to working with the Chamber of Commerce of Livingston Parish in new endeavors that would improve the quality of life in our Village. We will support zoning, as it applies to quality of life issues and floodplain management.						

18	Determine what new regulations could be passed to reduce the effects of hazards on new buildings and infrastructure.	No additional funds required	Ongoing	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornado, Tropical Cyclone	Ongoing
<b>Comment on Status:</b> Floodplain management act passed by the Louisiana Legislators. Once the commission is formed, and under the Louisiana Law, should prevent violations that would mitigate any impacts if future projects are reviewed under the law and by the Livingston Parish Permit Office.						
19	Participate in existing programs at the state and federal levels oriented to environmental enhancement and conservation.	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornado, Tropical Cyclone	Ongoing
<b>Comment on Status:</b> French Settlement supports CPRA in their efforts to prevent further habitat loss in our critical swamps from salt water intrusion. French Settlement has a historical record of supporting CRS and now that it resides in the Livingston Parish Permit Office, we continue our strong support of this program. We additionally support the Clean Water Act that enhances our way of life along the Amite River and associated water ways.						
20	Continue to participate in the NFIP	No additional funds required	Ongoing	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing
<b>Comment on Status:</b> French Settlement will continue and participate in the NFIP, working with the Livingston Parish Permit Office and LOHSEP.						
21	Establish a public outreach campaign to ensure all homeowners in floodplains are aware of the various types of coverage options under the NFIP	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing
<b>Comment on Status:</b> With the recent changes in leadership in the Village of French Settlement, we are in the process of developing a webpage of all activities within our Village as well as this program with this information. We expect to be completed with this project by May 2021.						
22	Establish homeowner education program on flood mitigation measures.	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing
<b>Comment on Status:</b> Again, we will continue to inform our residents through our web-based information platform, monthly Town Hall meetings and news media.						
23	Evaluate ways to improve CRS ratings to reduce the flood insurance premiums	No additional funds required	Ongoing	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing
<b>Comment on Status:</b> French Settlement is presently working with Livingston Parish Permit Office, who houses the CRS program in order to follow their guidance to reduce insurance premiums and flood risk.						
24	Evaluate future participation in the CRS	No additional funds required	Ongoing	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing
<b>Comment on Status:</b> We have determined future CRS and will continue with the Livingston Parish Permit Office.						

25	Adopt ordinance requiring water- saving measures in time of drought.	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Drought	Not Started – Carried Over
<b>Comment on Status:</b> French Settlement will review guidance from LOHSEP, GOHSEP and Department of Agriculture to formulate potential ordinances in times of drought.						
26	Installation of Lightning rods and surge protectors to facilities	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Lightning	Not Started – Carried Over
<b>Comment on Status:</b> French Settlement will work with Livingston Parish Grant Department, LOHSEP, GOHSEP and National Weather Service to research potential grants for the enhancement and construction of new and existing buildings.						
27	Purchase weather radios for public, to be used for emergency notification	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornado, Tropical Cyclone, Winter Weather	Not Started – Carried Over
<b>Comment on Status:</b> French Settlement has no tax base and is dependent on grants for such radios, but have partnered with local news media for emergency notification. Along with free local weather apps and government weather apps, our citizens are both knowledgeable and alerted to flooding, lightning, hail, thunderstorms and hurricanes through mobile devices, cable services and home computers.						

*New Mitigation Actions*

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF FRENCH SETTLEMENT	
	DESCRIPTION
MITIGATION ACTION	Developing a drought emergency plan
LEAD AGENCY	Village of French Settlement's Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards. 4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Low
Action Description	Develop, maintain and implement the emergency plan in case of a drought
Type of Mitigation Action	Local Plans and Regulations Preparedness and Response
How Action Aligns with Risk Reduction	With an emergency plan in place, we potentially reduce the risk of further damages
Current Status of Action	New
Hazard Addressed	Drought

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF FRENCH SETTLEMENT	
	DESCRIPTION
MITIGATION ACTION	Work with NWS to develop local criteria or triggers for drought related action
LEAD AGENCY	Village of French Settlement's Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards. 2. Enhance public awareness and understanding of disaster preparedness. 4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Low
Action Description	Create and implement procedures for preventing drought
Type of Mitigation Action	Local Plans and Regulations Education and Awareness Programs Preparedness and Response Actions
How Action Aligns with Risk Reduction	Identifying triggers for drought related actions will significantly reduce drought related damages
Current Status of Action	New
Hazard Addressed	Drought

#### Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF FRENCH SETTLEMENT	
	DESCRIPTION
MITIGATION ACTION	Develop a floodplain management plan
LEAD AGENCY	Village of French Settlement's Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	<ol style="list-style-type: none"> <li>1. Identify and pursue preventative measures that will reduce future damages from hazards.</li> <li>3. Reduce repetitive flood losses.</li> <li>4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.</li> </ol>
PRIORITY	Medium
Action Description	To create, implement and update regularly a floodplain management plan to reduce future flood risk
Type of Mitigation Actions	Local Plans and Regulations Natural System Protection
How Action Aligns with Risk Reduction	Identifying flood prone risks and mitigating such risks to reduce flood related damages
Current Status of Action	New
Hazard Addressed	Flooding; Tropical Cyclones

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF FRENCH SETTLEMENT	
	DESCRIPTION
MITIGATION ACTION	Form a regional watershed council to help bring together resources for comprehensive analysis, planning, decision-making, and cooperation
LEAD AGENCY	Village of French Settlement's Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	<ol style="list-style-type: none"> <li>1. Identify and pursue preventative measures that will reduce future damages from hazards.</li> <li>3. Reduce repetitive flood losses.</li> <li>4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.</li> </ol>
PRIORITY	Medium
Action Description	Form a council and meet regularly to discuss floodplain management related issues
Type of Mitigation Action	Local Plans and Regulations
How Action Aligns with Risk Reduction	Multiple jurisdictions can significantly reduce flood within the Parish and surrounding areas when working cohesively
Current Status of Action	New
Hazard Addressed	Flooding; Tropical Cyclones

**Additional Supporting Information:**



IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF FRENCH SETTLEMENT	
	DESCRIPTION
MITIGATION ACTION	Contact the insurance Institute for Business and Home Safety (IBHS) to learn more about the most appropriate type of roof covering for our geographic region
LEAD AGENCY	Village of French Settlement's Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	<ol style="list-style-type: none"> <li>1. Identify and pursue preventative measures that will reduce future damages from hazards.</li> <li>2. Enhance public awareness and understanding of disaster preparedness.</li> <li>4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.</li> </ol>
PRIORITY	Low
Action Description	Further research on appropriate roof coverings for the region and share this information with the public
Type of Mitigation Action	Public Information Local Plans and Regulations
How Action Aligns with Risk Reduction	To increase awareness of hail rated roof coverings and reduce the amount of damage associated with hail related weather events
Current Status of Action	New
Hazard Addressed	Thunderstorms; Tornadoes; Tropical Cyclones

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF FRENCH SETTLEMENT	
	DESCRIPTION
MITIGATION ACTION	Establish an interactive website for educating the public on Hazard Mitigation and preparedness measures
LEAD AGENCY	Village of French Settlement's Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards. 2. Enhance public awareness and understanding of disaster preparedness. 4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Low
Action Description	Further notify the public of emergency preparedness in relation to hazardous weather events
Type of Mitigation Action	Education and Awareness Programs
How Action Aligns with Risk Reduction	Creates awareness to reduce potential hail related damages
Current Status of Action	New
Hazard Addressed	Drought; Flooding; Thunderstorms; Tornadoes; Tropical Cyclones, Winter Weather

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF FRENCH SETTLEMENT	
	DESCRIPTION
MITIGATION ACTION	Adopt the International Building Code (IBC) and International Residential Code (IRC)
LEAD AGENCY	Village of French Settlement's Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	High
Action Description	Adopt both codes through council approval for parish-wide enforcement
Type of Mitigation Action	Local Plans and Regulations Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Regulating building construction to prevent high wind related damages
Current Status of Action	New
Hazard Addressed	Flooding; Thunderstorms; Tornadoes; Tropical Cyclones

#### Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF FRENCH SETTLEMENT	
	DESCRIPTION
MITIGATION ACTION	Require tie-downs with anchors and ground anchors appropriate for the soil type for manufactured homes
LEAD AGENCY	Village of French Settlement's Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Low
Action Description	Requiring tie-downs through building compliance for manufactured homes
Type of Mitigation Action	Local Plans and Regulations Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Proper anchoring of at-risk manufactured homes reduces the risk of wind related damage
Current Status of Action	New
Hazard Addressed	Thunderstorms, Tornadoes, Tropical Cyclones

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF FRENCH SETTLEMENT	
	DESCRIPTION
MITGATION ACTION	Install surge protection on all critical equipment parish-wide
LEAD AGENCY	Village of French Settlement's Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards. 4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Low
Action Description	Install surge protection on all critical equipment parish-wide
Type of Mitigation Action	Structure and Infrastructure Projects Preparedness and Response Actions
How Action Aligns with Risk Reduction	With this surge protection lightning poses little risk to equipment installed and to be purchased in the future
Current Status of Action	New
Hazard Addressed	Thunderstorms; Tornadoes; Tropical Cyclones

#### Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF FRENCH SETTLEMENT	
	DESCRIPTION
MITGATION ACTION	Installing quick-connect emergency generator hook-ups for critical facilities
LEAD AGENCY	Village of French Settlement's Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards. 4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Medium
Action Description	Purchase and install quick-connects for critical infrastructure within the Parish
Type of Mitigation Action	Structure and Infrastructure Projects Preparedness and Response Actions
How Action Aligns with Risk Reduction	Quick-connects provide another method of emergency back-up power when other methods have failed
Current Status of Action	New
Hazard Addressed	Flooding; Thunderstorms; Tornadoes; Tropical Cyclones

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF FRENCH SETTLEMENT	
	DESCRIPTION
MITIGATION ACTION	Encouraging the construction and use of safe rooms in homes and shelter areas of manufactured home parks, fairgrounds, shopping malls, or other vulnerable public structures
LEAD AGENCY	Village of French Settlement's Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards. 4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Low
Action Description	Construction using high wind rated materials for maximum protection
Type of Mitigation Action	Structure and Infrastructure Projects Preparedness and Response Actions
How Action Aligns with Risk Reduction	Decreases loss of life and property and serves as protection against tornado related weather
Current Status of Action	New
Hazard Addressed	Thunderstorms; Tornadoes; Tropical Cyclones

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF FRENCH SETTLEMENT	
	DESCRIPTION
MITIGATION ACTION	Using 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.
LEAD AGENCY	Village of French Settlement Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards. 4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Low
Action Description	Construct and install design-failure mode power lines.
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 community.
Current Status of Action	New
Hazard Addressed	Winter Weather



IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF FRENCH SETTLEMENT	
	DESCRIPTION
MITGATION ACTION	Planning for and maintaining adequate road and debris clearing capabilities
LEAD AGENCY	Village of French Settlement Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards.
PRIORITY	Low
Action Description	Create and implement a plan and procedure for clearing parish roads and weather related debris. Preventing road closures and damage to parish roadways will reduce the risk of road hazards for essential personnel and residents.
Type of Mitigation Action	Local Plans and Regulations Preparedness and Response Actions
How Action Aligns with Risk Reduction	Reduce the risk of road damage, vehicle damage and increase essential personnel productivity.
Current Status of Action	New
Hazard Addressed	Winter Weather

*Additional Flood Prevention Project Areas**Village of French Settlement*

16015 La Highway 16 \* P.O. Box 3  
 French Settlement, LA 70733  
 T: (225) 698-6100 / F: (225) 698-3007



## PROPOSED FLOOD PREVENTION PROJECT AREAS

### PROJECT SUMMARY

REPORT DATE	PROJECT NAME	PREPARED BY
February 21, 2021	2021- Village of French Settlement Identifying Drainage/Flooding Project Areas	Haley T. Unbehagen, Mayor Lawrence Callender, Asst. Chief – FSPD

### PROJECT OVERVIEW

Identification of project areas in and around the Village of French Settlement order to obtain federal government funds which requires submission of a specific list of proposals to FEMA. Once approved, the funds would be put in place to commence projects to protect homes of Village residents.

### RISK AND ISSUE HISTORY/AREAS

DESCRIPTION	ISSUE	LATITUDE	LONGITUDE	COMMENTS
DOTD Culvert S. of 1 <sup>st</sup> Baptist Church	Drainage impeded to river	30.317943	-90.810929	Impacting erosion of surrounding property and flooding of homes
Pipeline pond over flow	Drainage impeded to river	30.311831	-90.805886	Impacting homes and surrounding livestock
Hwy 42 - Unlawful Mobile Home Park	Drainage impeded and causing natural water contamination	30.327537	-90.805929	Impacting homes and surrounding livestock. Possible violation of National Pollutant Discharge Elimination System (NPDES)
Colyell Bay/Aydell Ln	Drainage impediment	30.354983	-90.811925	Impacting erosion of surrounding property and flooding of homes
French Settlement/Amite River Bridge, LA Trace Rd.	Drainage impediment	30.275843	-90.779234	Impacting erosion of surrounding property and flooding of homes
Weir/Amite River Diversion Canal	Drainage impediment	30.275539	-90.811725	Impacting erosion of surrounding property and flooding of homes
Old Amite River Channel & Diversion Canal	Drainage impeded contributing to flooding	30.291697	-90.823723	Impacting erosion of surrounding property

Hwy 444/FSE School	Drainage impediment contributing to flooding	30.297961	-90.793775	Impacting surrounding homes, church property and burial sites

### CONCLUSION

Certain areas within the Village have raised serious concerns over drainage. These identifying project areas are necessary for project applications for a significant amount of money intended to ensure the safety of residents, livestock and for the preservation of property and wetland.

## Town of Killian Mitigation Actions

*Previous Action Update*

Action	Description	Funding Source	Timeframe	Responsible Party	Hazard(s)	Status
1	Wind harden structures using shutters, screens, window film, and/or roof straps	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Tropical Cyclone, High Wind, Hail, Tornado	Ongoing
2	Install safe rooms in critical facilities	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Tropical Cyclone, High Wind, Hail, Tornado	In Progress
3	Install a hazard early warning system	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, Hail, High Wind, Lightning, Tornado	In Progress
4	Construct new shelters	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, High Wind, Tornado, Tropical Cyclone	Ongoing
5	Upgrade current shelters to include food pantries, kitchens and climate control systems	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, High Wind, Tornado, Tropical Cyclone, Winter Weather	Not Started – Carried Over
6	Purchase generators for critical facilities to ensure operation during and after a hazard event	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, High Wind, Hail, Lightning, Tornado, Tropical Cyclone	Ongoing
7	Upgrade drainage ways by concrete lining, widening and/or enlarging culverts and catch basins.	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, Coastal Land Loss, Tropical Cyclone	Ongoing
8	Upgrade capacity of storm water retention and detention areas, thereby protecting both existing structures and future development	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, Coastal Land Loss, Tropical Cyclone	Ongoing
9	Upgrade sewer system to ensure stormwater infiltration does not cause a service interruption	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, Coastal Land Loss, Tropical Cyclone	Ongoing
10	Continue to advertise public meetings during the hazard mitigation planning process	HMGP, local, regional, and federal	3-5 yrs	Existing parish and municipal administration	Drought, Flooding, Coastal Land Loss, Hail, High Wind, Lightning, Tornado, Tropical Cyclone	Ongoing
11	Sponsor a "Multi-Hazard Awareness Week"	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Drought, Flooding, Coastal Land Loss, Hail, High Wind, Lightning, Tornado, Tropical Cyclone	Ongoing

12	Elevate, acquire or pilot reconstruct all Repetitive Loss and Severe Repetitive Loss structures	HMGP, local, regional, and federal	1-10 yrs	Existing parish and municipal administration	Flooding, Coastal Land Loss, Tropical Cyclone	Ongoing
<b>Comment on Status:</b> Future properties to be acquired/elevated will be prioritized in the following order: 1. Substantial Damage Properties, 2. Severe Repetitive Loss Properties, 3. Repetitive Loss Properties, 4. all others						
13	Flood proof all public buildings vulnerable to flood damage	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, Coastal Land Loss, Tropical Cyclone	Not Started – Carried Over
14	Pursue upgrading of parking lots to pervious concrete	HMGP, local, regional, and federal	1-10 yrs	Existing parish and municipal administration	Flooding, Coastal Land Loss, Tropical Cyclone	Not Started – Carried Over
15	Ensure all municipalities and parish work together to produce a cohesive drainage plan	HMGP, local, regional, and federal	1-10 yrs	Existing parish and municipal administration	Flooding, Coastal Land Loss, Tropical Cyclone	Ongoing
16	Ensure future development does not increase hazard losses by enforcing building codes, introducing new codes or modifying existing building codes.	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Drought, Flooding, Coastal Land Loss, Hail, High Wind, Lightning, Tornado, Tropical Cyclone	Ongoing
17	Guide future development away from hazard areas using zoning regulations while maintaining other parish goals such as economic development and improving the quality of life.	No additional funds required	1-5 yrs	Existing parish and municipal administration	Drought, Flooding, Coastal Land Loss, Hail, High Wind, Lightning, Tornado, Tropical Cyclone	Ongoing
18	Determine what new regulations could be passed to reduce the effects of hazards on new buildings and infrastructure.	No additional funds required	Ongoing	Existing parish and municipal administration	Drought, Flooding, Coastal Land Loss, Hail, High Wind, Lightning, Tornado, Tropical Cyclone	Ongoing
19	Participate in existing programs at the state and federal levels oriented to environmental enhancement and conservation.	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Drought, Flooding, Coastal Land Loss, Hail, High Wind, Lightning, Tornado, Tropical Cyclone	Ongoing
20	Continue to participate in the NFIP	No additional funds required	Ongoing	Existing parish and municipal administration	Flooding, Coastal Land Loss, Tropical Cyclone	Ongoing
21	Establish a public outreach campaign to ensure all homeowners in floodplains are aware of the various types of coverage options under the NFIP	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Flooding, Coastal Land Loss, Tropical Cyclone	Ongoing

22	Establish homeowner education program on flood mitigation measures.	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Flooding, Coastal Land Loss, Tropical Cyclone	Ongoing
23	Evaluate ways to improve CRS ratings to reduce the flood insurance premiums	No additional funds required	Ongoing	Existing parish and municipal administration	Flooding, Coastal Land Loss, Tropical Cyclone	Ongoing
24	Evaluate future participation in the CRS	No additional funds required	Ongoing	Existing parish and municipal administration	Flooding, Coastal Land Loss, Tropical Cyclone	Ongoing
25	Adopt ordinance requiring water- saving measures in time of drought.	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Drought	Not Started – Carried Over
26	Installation of Lightning rods and surge protectors to facilities	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Lightning	Not Started – Carried Over
27	Purchase weather radios for public, to be used for emergency notification	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Drought, Flooding, Coastal Land Loss, Hail, High Wind, Lightning, Tornado, Tropical Cyclone, Winter Weather	Not Started – Carried Over

*New Mitigation Actions*

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF KILLIAN	
	DESCRIPTION
MITIGATION ACTION	Preventing erosion with proper bank stabilization, sloping or grading techniques, planting vegetation on slopes, terracing hillsides, or installing rip-rap boulders, or geo-tech style fabric
LEAD AGENCY	Town of Killian's Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	2. Identify and pursue preventative measures that will reduce future damages from hazards.
PRIORITY	High
Action Description	Engineer and construct erosion mitigation measures, such as bank stabilization, installation of rip-rap, etc.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Prevents further loss of property and stabilizing erosion hazard areas
Current Status of Action	New
Hazard Addressed	Coastal Hazards; Tropical Cyclones

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF KILLIAN	
	DESCRIPTION
MITIGATION ACTION	Stabilizing cliffs with terracing, or plantings of grasses or other plants to hold soil together
LEAD AGENCY	Town of Killian's Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards.
PRIORITY	Low
Action Description	Oversee the planting of grasses or other plants to hold soil together in high-risk erosion areas
Type of Mitigation Action	Natural System Protection
How Action Aligns with Risk Reduction	Prevents further loss of property and stabilizing erosion hazard areas
Current Status of Action	New
Hazard Addressed	Coastal Hazards; Tropical Cyclones

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF KILLIAN	
	DESCRIPTION
MITIGATION ACTION	Developing a drought emergency plan
LEAD AGENCY	Town of Killian's Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards. 4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Low
Action Description	Develop, maintain and implement the emergency plan in case of a drought
Type of Mitigation Action	Local Plans and Regulations Preparedness and Response
How Action Aligns with Risk Reduction	With an emergency plan in place, we potentially reduce the risk of further damages
Current Status of Action	New
Hazard Addressed	Drought

**Additional Supporting Information:**



IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF KILLIAN	
	DESCRIPTION
MITIGATION ACTION	Work with NWS to develop local criteria or triggers for drought related action
LEAD AGENCY	Town of Killian's Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	<ol style="list-style-type: none"> <li>1. Identify and pursue preventative measures that will reduce future damages from hazards.</li> <li>2. Enhance public awareness and understanding of disaster preparedness.</li> <li>4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.</li> </ol>
PRIORITY	Low
Action Description	Create and implement procedures for preventing drought
Type of Mitigation Action	Local Plans and Regulations Education and Awareness Programs Preparedness and Response Actions
How Action Aligns with Risk Reduction	Identifying triggers for drought related actions will significantly reduce drought related damages
Current Status of Action	New
Hazard Addressed	Drought

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF KILLIAN	
	DESCRIPTION
MITIGATION ACTION	Develop a floodplain management plan
LEAD AGENCY	Town of Killian's Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	<ol style="list-style-type: none"> <li>1. Identify and pursue preventative measures that will reduce future damages from hazards.</li> <li>3. Reduce repetitive flood losses.</li> <li>4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.</li> </ol>
PRIORITY	Medium
Action Description	To create, implement and update regularly a floodplain management plan to reduce future flood risk
Type of Mitigation Actions	Local Plans and Regulations Natural System Protection
How Action Aligns with Risk Reduction	Identifying flood prone risks and mitigating such risks to reduce flood related damages
Current Status of Action	New
Hazard Addressed	Flooding; Tropical Cyclones

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF KILLIAN	
	DESCRIPTION
MITGATION ACTION	Form a regional watershed council to help bring together resources for comprehensive analysis, planning, decision-making, and cooperation
LEAD AGENCY	Town of Killian's Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	<ol style="list-style-type: none"> <li>1. Identify and pursue preventative measures that will reduce future damages from hazards.</li> <li>3. Reduce repetitive flood losses.</li> <li>4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.</li> </ol>
PRIORITY	Medium
Action Description	Form a council and meet regularly to discuss floodplain management related issues
Type of Mitigation Action	Local Plans and Regulations
How Action Aligns with Risk Reduction	Multiple jurisdictions can significantly reduce flood within the Parish and surrounding areas when working cohesively
Current Status of Action	New
Hazard Addressed	Flooding; Tropical Cyclones

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF KILLIAN	
	DESCRIPTION
MITGATION ACTION	Contact the insurance Institute for Business and Home Safety (IBHS) to learn more about the most appropriate type of roof covering for our geographic region
LEAD AGENCY	Town of Killian's Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	<ol style="list-style-type: none"> <li>1. Identify and pursue preventative measures that will reduce future damages from hazards.</li> <li>2. Enhance public awareness and understanding of disaster preparedness.</li> <li>4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.</li> </ol>
PRIORITY	Low
Action Description	Further research on appropriate roof coverings for the region and share this information with the public
Type of Mitigation Action	Public Information Local Plans and Regulations
How Action Aligns with Risk Reduction	To increase awareness of hail rated roof coverings and reduce the amount of damage associated with hail related weather events
Current Status of Action	New
Hazard Addressed	Thunderstorms; Tornadoes; Tropical Cyclones

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF KILLIAN	
	DESCRIPTION
MITIGATION ACTION	Establish an interactive website for educating the public on Hazard Mitigation and preparedness measures
LEAD AGENCY	Town of Killian's Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards. 2. Enhance public awareness and understanding of disaster preparedness. 4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Low
Action Description	Further notify the public of emergency preparedness in relation to hazardous weather events
Type of Mitigation Action	Education and Awareness Programs
How Action Aligns with Risk Reduction	Creates awareness to reduce potential hail related damages
Current Status of Action	New
Hazard Addressed	Coastal Hazards; Drought; Flooding; Thunderstorms; Tornadoes; Tropical Cyclones, Winter Weather

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF KILLIAN	
	DESCRIPTION
MITIGATION ACTION	Adopt the International Building Code (IBC) and International Residential Code (IRC)
LEAD AGENCY	Town of Killian's Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	High
Action Description	Adopt both codes through council approval for parish-wide enforcement
Type of Mitigation Action	Local Plans and Regulations Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Regulating building construction to prevent high wind related damages
Current Status of Action	New
Hazard Addressed	Flooding; Thunderstorms; Tornadoes; Tropical Cyclones

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF KILLIAN	
	DESCRIPTION
MITIGATION ACTION	Require tie-downs with anchors and ground anchors appropriate for the soil type for manufactured homes
LEAD AGENCY	Town of Killian's Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Low
Action Description	Requiring tie-downs through building compliance for manufactured homes
Type of Mitigation Action	Local Plans and Regulations Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Proper anchoring of at-risk manufactured homes reduces the risk of wind related damage
Current Status of Action	New
Hazard Addressed	Thunderstorms, Tornadoes, Tropical Cyclones

#### Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF KILLIAN	
	DESCRIPTION
MITGATION ACTION	Install surge protection on all critical equipment parish-wide
LEAD AGENCY	Town of Killian's Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards. 4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Low
Action Description	Install surge protection on all critical equipment parish-wide
Type of Mitigation Action	Structure and Infrastructure Projects Preparedness and Response Actions
How Action Aligns with Risk Reduction	With this surge protection lightning poses little risk to equipment installed and to be purchased in the future
Current Status of Action	New
Hazard Addressed	Thunderstorms; Tornadoes; Tropical Cyclones

#### Additional Supporting Information:



IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF KILLIAN	
	DESCRIPTION
MITGATION ACTION	Installing quick-connect emergency generator hook-ups for critical facilities
LEAD AGENCY	Town of Killian's Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards. 4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Medium
Action Description	Purchase and install quick-connects for critical infrastructure within the Parish
Type of Mitigation Action	Structure and Infrastructure Projects Preparedness and Response Actions
How Action Aligns with Risk Reduction	Quick-connects provide another method of emergency back-up power when other methods have failed
Current Status of Action	New
Hazard Addressed	Flooding; Thunderstorms; Tornadoes; Tropical Cyclones

#### Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF KILLIAN	
	DESCRIPTION
MITIGATION ACTION	Encouraging the construction and use of safe rooms in homes and shelter areas of manufactured home parks, fairgrounds, shopping malls, or other vulnerable public structures
LEAD AGENCY	Town of Killian's Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards. 4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Low
Action Description	Construction using high wind rated materials for maximum protection
Type of Mitigation Action	Structure and Infrastructure Projects Preparedness and Response Actions
How Action Aligns with Risk Reduction	Decreases loss of life and property and serves as protection against tornado related weather
Current Status of Action	New
Hazard Addressed	Thunderstorms; Tornadoes; Tropical Cyclones

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF KILLIAN	
	DESCRIPTION
MITIGATION ACTION	Using 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.
LEAD AGENCY	Town of Killian Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards. 4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Low
Action Description	Construct and install design-failure mode power lines.
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 community.
Current Status of Action	New
Hazard Addressed	Winter Weather

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF KILLIAN	
	DESCRIPTION
MITGATION ACTION	Planning for and maintaining adequate road and debris clearing capabilities
LEAD AGENCY	Town of Killian Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards.
PRIORITY	Low
Action Description	Create and implement a plan and procedure for clearing parish roads and weather related debris. Preventing road closures and damage to parish roadways will reduce the risk of road hazards for essential personnel and residents.
Type of Mitigation Action	Local Plans and Regulations Preparedness and Response Actions
How Action Aligns with Risk Reduction	Reduce the risk of road damage, vehicle damage and increase essential personnel productivity.
Current Status of Action	New
Hazard Addressed	Winter Weather

## Town of Livingston Mitigation Actions

*Previous Action Update*

Action	Description	Funding Source	Timeframe	Responsible Party	Hazard(s)	Status
1	Wind harden structures using shutters, screens, window film, and/or roof straps	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Tropical Cyclone, High Wind, Hail, Tornado	Ongoing
2	Install saferooms in critical facilities	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Tropical Cyclone, High Wind, Hail, Tornado	In Progress
3	Install a hazard early warning system	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, Hail, High Wind, Lightning, Tornado	In Progress
4	Construct new shelters	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, High Wind, Tornado, Tropical Cyclone	Ongoing
5	Upgrade current shelters to include food pantries, kitchens and climate control systems	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, High Wind, Tornado, Tropical Cyclone, Winter Weather	Not Started – Carried Over
6	Purchase generators for critical facilities to ensure operation during and after a hazard event	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, High Wind, Hail, Lightning, Tornado, Tropical Cyclone	Ongoing
7	Upgrade drainage ways by concrete lining, widening and/or enlarging culverts and catch basins.	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing
8	Upgrade capacity of storm water retention and detention areas, thereby protecting both existing structures and future development	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing
9	Upgrade sewer system to ensure stormwater infiltration does not cause a service interruption	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing
10	Continue to advertise public meetings during the hazard mitigation planning process	HMGP, local, regional, and federal	3-5 yrs	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornado, Tropical Cyclone	Ongoing
11	Sponsor a "Multi-Hazard Awareness Week"	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornado, Tropical Cyclone	Ongoing

12	Elevate, acquire or pilot reconstruct all Repetitive Loss and Severe Repetitive Loss structures	HMGP, local, regional, and federal	1-10 yrs	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing
<b>Comment on Status:</b> Future properties to be acquired/elevated will be prioritized in the following order: 1. Substantial Damage Properties, 2. Severe Repetitive Loss Properties, 3. Repetitive Loss Properties, 4. all others						
13	Flood proof all public buildings vulnerable to flood damage	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, Tropical Cyclone	Not Started – Carried Over
14	Pursue upgrading of parking lots to pervious concrete	HMGP, local, regional, and federal	1-10 yrs	Existing parish and municipal administration	Flooding, Tropical Cyclone	Not Started – Carried Over
15	Ensure all municipalities and parish work together to produce a cohesive drainage plan	HMGP, local, regional, and federal	1-10 yrs	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing
16	Ensure future development does not increase hazard losses by enforcing building codes, introducing new codes or modifying existing building codes.	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornado, Tropical Cyclone	Ongoing
17	Guide future development away from hazard areas using zoning regulations while maintaining other parish goals such as economic development and improving the quality of life.	No additional funds required	1-5 yrs	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornado, Tropical Cyclone	Ongoing
18	Determine what new regulations could be passed to reduce the effects of hazards on new buildings and infrastructure.	No additional funds required	Ongoing	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornado, Tropical Cyclone	Ongoing
19	Participate in existing programs at the state and federal levels oriented to environmental enhancement and conservation.	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornado, Tropical Cyclone	Ongoing
20	Continue to participate in the NFIP	No additional funds required	Ongoing	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing
21	Establish a public outreach campaign to ensure all homeowners in floodplains are aware of the various types of coverage options under the NFIP	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing

22	Establish homeowner education program on flood mitigation measures.	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing
23	Evaluate ways to improve CRS ratings to reduce the flood insurance premiums	No additional funds required	Ongoing	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing
24	Evaluate future participation in the CRS	No additional funds required	Ongoing	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing
25	Adopt ordinance requiring water- saving measures in time of drought.	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Drought	Not Started – Carried Over
26	Installation of Lightning rods and surge protectors to facilities	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Lightning	Not Started – Carried Over
27	Purchase weather radios for public, to be used for emergency notification	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornado, Tropical Cyclones, Winter Weather	Not Started – Carried Over

*New Mitigation Actions*

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF LIVINGSTON	
	DESCRIPTION
MITIGATION ACTION	Developing a drought emergency plan
LEAD AGENCY	Mayor of Livingston
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards. 4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Low
Action Description	Develop, maintain and implement the emergency plan in case of a drought
Type of Mitigation Action	Local Plans and Regulations Preparedness and Response
How Action Aligns with Risk Reduction	With an emergency plan in place, we potentially reduce the risk of further damages
Current Status of Action	New
Hazard Addressed	Drought

**Additional Supporting Information:**



IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF LIVINGSTON	
	DESCRIPTION
MITGATION ACTION	Work with NWS to develop local criteria or triggers for drought related action
LEAD AGENCY	Mayor of Livingston
SUPPORTING AGENCIES	National Weather Service, Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards. 2. Enhance public awareness and understanding of disaster preparedness. 4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Low
Action Description	Create and implement procedures for preventing drought
Type of Mitigation Action	Local Plans and Regulations Education and Awareness Programs Preparedness and Response Actions
How Action Aligns with Risk Reduction	Identifying triggers for drought related actions will significantly reduce drought related damages
Current Status of Action	New
Hazard Addressed	Drought

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF LIVINGSTON	
	DESCRIPTION
MITIGATION ACTION	Develop a floodplain management plan
LEAD AGENCY	Mayor of Livingston
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	<ol style="list-style-type: none"> <li>1. Identify and pursue preventative measures that will reduce future damages from hazards.</li> <li>3. Reduce repetitive flood losses.</li> <li>4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.</li> </ol>
PRIORITY	Medium
Action Description	To create, implement and update regularly a floodplain management plan to reduce future flood risk
Type of Mitigation Actions	Local Plans and Regulations Natural System Protection
How Action Aligns with Risk Reduction	Identifying flood prone risks and mitigating such risks to reduce flood related damages
Current Status of Action	New
Hazard Addressed	Flooding; Tropical Cyclones

#### Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF LIVINGSTON	
	DESCRIPTION
MITIGATION ACTION	Form a regional watershed council to help bring together resources for comprehensive analysis, planning, decision-making, and cooperation
LEAD AGENCY	Mayor of Livingston
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	<ol style="list-style-type: none"> <li>1. Identify and pursue preventative measures that will reduce future damages from hazards.</li> <li>3. Reduce repetitive flood losses.</li> <li>4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.</li> </ol>
PRIORITY	Medium
Action Description	Form a council and meet regularly to discuss floodplain management related issues
Type of Mitigation Action	Local Plans and Regulations
How Action Aligns with Risk Reduction	Multiple jurisdictions can significantly reduce flood within the Parish and surrounding areas when working cohesively
Current Status of Action	New
Hazard Addressed	Flooding; Tropical Cyclones

#### Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF LIVINGSTON	
	DESCRIPTION
MITIGATION ACTION	Contact the insurance Institute for Business and Home Safety (IBHS) to learn more about the most appropriate type of roof covering for our geographic region
LEAD AGENCY	Mayor of Livingston
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	<ol style="list-style-type: none"> <li>1. Identify and pursue preventative measures that will reduce future damages from hazards.</li> <li>2. Enhance public awareness and understanding of disaster preparedness.</li> <li>4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.</li> </ol>
PRIORITY	Low
Action Description	Further research on appropriate roof coverings for the region and share this information with the public
Type of Mitigation Action	Public Information Local Plans and Regulations
How Action Aligns with Risk Reduction	To increase awareness of hail rated roof coverings and reduce the amount of damage associated with hail related weather events
Current Status of Action	New
Hazard Addressed	Thunderstorms; Tornadoes; Tropical Cyclones

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF LIVINGSTON	
	DESCRIPTION
MITIGATION ACTION	Establish an interactive website for educating the public on Hazard Mitigation and preparedness measures
LEAD AGENCY	Mayor of Livingston
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards. 2. Enhance public awareness and understanding of disaster preparedness. 4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Low
Action Description	Further notify the public of emergency preparedness in relation to hazardous weather events
Type of Mitigation Action	Education and Awareness Programs
How Action Aligns with Risk Reduction	Creates awareness to reduce potential hail related damages
Current Status of Action	New
Hazard Addressed	Drought; Flooding; Thunderstorms; Tornadoes; Tropical Cyclones, Winter Weather

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF LIVINGSTON	
	DESCRIPTION
MITIGATION ACTION	Adopt the International Building Code (IBC) and International Residential Code (IRC)
LEAD AGENCY	Mayor of Livingston
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	High
Action Description	Adopt both codes through council approval for parish-wide enforcement
Type of Mitigation Action	Local Plans and Regulations Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Regulating building construction to prevent high wind related damages
Current Status of Action	New
Hazard Addressed	Flooding; Thunderstorms; Tornadoes; Tropical Cyclones

#### Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF LIVINGSTON	
	DESCRIPTION
MITIGATION ACTION	Require tie-downs with anchors and ground anchors appropriate for the soil type for manufactured homes
LEAD AGENCY	Mayor of Livingston
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Low
Action Description	Requiring tie-downs through building compliance for manufactured homes
Type of Mitigation Action	Local Plans and Regulations Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Proper anchoring of at-risk manufactured homes reduces the risk of wind related damage
Current Status of Action	New
Hazard Addressed	Thunderstorms, Tornadoes, Tropical Cyclones

#### Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF LIVINGSTON	
	DESCRIPTION
MITGATION ACTION	Install surge protection on all critical equipment parish-wide
LEAD AGENCY	Mayor of Livingston
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards. 4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Low
<b>Action Description</b>	Install surge protection on all critical equipment parish-wide
<b>Type of Mitigation Action</b>	Structure and Infrastructure Projects Preparedness and Response Actions
<b>How Action Aligns with Risk Reduction</b>	With this surge protection lightning poses little risk to equipment installed and to be purchased in the future
<b>Current Status of Action</b>	New
<b>Hazard Addressed</b>	Thunderstorms; Tornadoes; Tropical Cyclones

**Additional Supporting Information:**



IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF LIVINGSTON	
	DESCRIPTION
MITGATION ACTION	Installing quick-connect emergency generator hook-ups for critical facilities
LEAD AGENCY	Mayor of Livingston
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards. 4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Medium
Action Description	Purchase and install quick-connects for critical infrastructure within the Parish
Type of Mitigation Action	Structure and Infrastructure Projects Preparedness and Response Actions
How Action Aligns with Risk Reduction	Quick-connects provide another method of emergency back-up power when other methods have failed
Current Status of Action	New
Hazard Addressed	Flooding; Thunderstorms; Tornadoes; Tropical Cyclones

#### Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF LIVINGSTON	
	DESCRIPTION
MITIGATION ACTION	Encouraging the construction and use of safe rooms in homes and shelter areas of manufactured home parks, fairgrounds, shopping malls, or other vulnerable public structures
LEAD AGENCY	Mayor of Livingston
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards. 4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Low
Action Description	Construction using high wind rated materials for maximum protection
Type of Mitigation Action	Structure and Infrastructure Projects Preparedness and Response Actions
How Action Aligns with Risk Reduction	Decreases loss of life and property and serves as protection against tornado related weather
Current Status of Action	New
Hazard Addressed	Thunderstorms; Tornadoes; Tropical Cyclones

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF LIVINGSTON	
	DESCRIPTION
MITIGATION ACTION	Using 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.
LEAD AGENCY	Town of Livingston Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards. 4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Low
Action Description	Construct and install design-failure mode power lines.
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 community.
Current Status of Action	New
Hazard Addressed	Winter Weather

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF LIVINGSTON	
	DESCRIPTION
MITGATION ACTION	Planning for and maintaining adequate road and debris clearing capabilities
LEAD AGENCY	Town of Livingston Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards.
PRIORITY	Low
Action Description	Create and implement a plan and procedure for clearing parish roads and weather related debris. Preventing road closures and damage to parish roadways will reduce the risk of road hazards for essential personnel and residents.
Type of Mitigation Action	Local Plans and Regulations Preparedness and Response Actions
How Action Aligns with Risk Reduction	Reduce the risk of road damage, vehicle damage and increase essential personnel productivity.
Current Status of Action	New
Hazard Addressed	Winter Weather

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF LIVINGSTON	
	DESCRIPTION
MITGATION ACTION	Building Hardening and Renovation for the Old Parish Courthouse
LEAD AGENCY	Mayor of Livingston
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards. 4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Medium
Action Description	Renovate and harden the old Parish Courthouse for consideration of use as the site of a new Livingston Town Hall.
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	The vacant old Parish Courthouse could be considered for use as the new Livingston Town Hall but would need to be hardened and updated appropriately to accommodate that use. It could also potentially be used as a storm shelter/staging area for essential workers before, during, an after an event, resulting in quicker response to and recovery from event-related issues.
Current Status of Action	New
Hazard Addressed	Drought; Flooding; Thunderstorms; Tornadoes; Tropical Cyclones; Winter Weather

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF LIVINGSTON	
	DESCRIPTION
MITGATION ACTION	Procurement and installation of generator and electrical controls for water well and water storage facility
LEAD AGENCY	Mayor of Livingston
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards. 4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Medium
Action Description	Procure and install a 150KW generator and electrical controls for the main water well and water storage facility in the Town of Livingston
Type of Mitigation Action	Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	This generator is essential for maintaining water pressure within the Town of Livingston at a high enough level to serve the residents and businesses with potable water.
Current Status of Action	New
Hazard Addressed	Flooding; Thunderstorms; Tornadoes; Tropical Cyclones; Winter Weather

## Village of Port Vincent Mitigation Actions

*Previous Action Update*

Action	Description	Funding Source	Timeframe	Responsible Party	Hazard(s)	Status
1	Wind harden structures using shutters, screens, window film, and/or roof straps	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Tropical Cyclone, High Wind, Hail, Tornado	Ongoing
2	Install safe rooms in critical facilities	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Tropical Cyclone, High Wind, Hail, Tornado	In Progress
3	Install a hazard early warning system	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, Hail, High Wind, Lightning, Tornado	In Progress
4	Construct new shelters	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, High Wind, Tornado, Tropical Cyclone	Ongoing
5	Upgrade current shelters to include food pantries, kitchens and climate control systems	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, High Wind, Tornado, Tropical Cyclone, Winter Weather	Not Started – Carried Over
6	Purchase generators for critical facilities to ensure operation during and after a hazard event	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, High Wind, Hail, Lightning, Tornado, Tropical Cyclone	Ongoing
7	Upgrade drainage ways by concrete lining, widening and/or enlarging culverts and catch basins.	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing
8	Upgrade capacity of storm water retention and detention areas, thereby protecting both existing structures and future development	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing
9	Upgrade sewer system to ensure stormwater infiltration does not cause a service interruption	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing
10	Continue to advertise public meetings during the hazard mitigation planning process	HMGP, local, regional, and federal	3-5 yrs	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornado, Tropical Cyclone	Ongoing
11	Sponsor a "Multi-Hazard Awareness Week"	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornado, Tropical Cyclone	Ongoing

12	Elevate, acquire or pilot reconstruct all Repetitive Loss and Severe Repetitive Loss structures	HMGP, local, regional, and federal	1-10 yrs	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing
<b>Comment on Status:</b> Future properties to be acquired/elevated will be prioritized in the following order: 1. Substantial Damage Properties, 2. Severe Repetitive Loss Properties, 3. Repetitive Loss Properties, 4. all others						
13	Flood proof all public buildings vulnerable to flood damage	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, Tropical Cyclone	Not Started – Carried Over
14	Pursue upgrading of parking lots to pervious concrete	HMGP, local, regional, and federal	1-10 yrs	Existing parish and municipal administration	Flooding, Tropical Cyclone	Not Started – Carried Over
15	Ensure all municipalities and parish work together to produce a cohesive drainage plan	HMGP, local, regional, and federal	1-10 yrs	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing
16	Ensure future development does not increase hazard losses by enforcing building codes, introducing new codes or modifying existing building codes.	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornado, Tropical Cyclone	Ongoing
17	Guide future development away from hazard areas using zoning regulations while maintaining other parish goals such as economic development and improving the quality of life.	No additional funds required	1-5 yrs	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornado, Tropical Cyclone	Ongoing
18	Determine what new regulations could be passed to reduce the effects of hazards on new buildings and infrastructure.	No additional funds required	Ongoing	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornado, Tropical Cyclone	Ongoing
19	Participate in existing programs at the state and federal levels oriented to environmental enhancement and conservation.	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornado, Tropical Cyclone	Ongoing
20	Continue to participate in the NFIP	No additional funds required	Ongoing	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing
21	Establish a public outreach campaign to ensure all homeowners in floodplains are aware of the various types of coverage options under the NFIP	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing



22	Establish homeowner education program on flood mitigation measures.	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing
23	Evaluate ways to improve CRS ratings to reduce the flood insurance premiums	No additional funds required	Ongoing	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing
24	Evaluate future participation in the CRS	No additional funds required	Ongoing	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing
25	Adopt ordinance requiring water- saving measures in time of drought.	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Drought	Not Started – Carried Over
26	Installation of Lightning rods and surge protectors to facilities	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Lightning	Not Started – Carried Over
27	Purchase weather radios for public, to be used for emergency notification	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornado, Tropical Cyclones, Winter Weather	Not Started – Carried Over

*New Mitigation Actions*

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF PORT VINCENT	
	DESCRIPTION
MITGATION ACTION	Developing a drought emergency plan
LEAD AGENCY	Village of Port Vincent's Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards. 4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Low
Action Description	Develop, maintain and implement the emergency plan in case of a drought
Type of Mitigation Action	Local Plans and Regulations Preparedness and Response
How Action Aligns with Risk Reduction	With an emergency plan in place, we potentially reduce the risk of further damages
Current Status of Action	New
Hazard Addressed	Drought

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF PORT VINCENT	
	DESCRIPTION
MITIGATION ACTION	Work with NWS to develop local criteria or triggers for drought related action
LEAD AGENCY	Village of Port Vincent's Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	<ol style="list-style-type: none"> <li>1. Identify and pursue preventative measures that will reduce future damages from hazards.</li> <li>2. Enhance public awareness and understanding of disaster preparedness.</li> <li>4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.</li> </ol>
PRIORITY	Low
Action Description	Create and implement procedures for preventing drought
Type of Mitigation Action	Local Plans and Regulations Education and Awareness Programs Preparedness and Response Actions
How Action Aligns with Risk Reduction	Identifying triggers for drought related actions will significantly reduce drought related damages
Current Status of Action	New
Hazard Addressed	Drought

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF PORT VINCENT	
	DESCRIPTION
MITIGATION ACTION	Develop a floodplain management plan
LEAD AGENCY	Village of Port Vincent's Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	<ol style="list-style-type: none"> <li>1. Identify and pursue preventative measures that will reduce future damages from hazards.</li> <li>3. Reduce repetitive flood losses.</li> <li>4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.</li> </ol>
PRIORITY	Medium
Action Description	To create, implement and update regularly a floodplain management plan to reduce future flood risk
Type of Mitigation Actions	Local Plans and Regulations Natural System Protection
How Action Aligns with Risk Reduction	Identifying flood prone risks and mitigating such risks to reduce flood related damages
Current Status of Action	New
Hazard Addressed	Flooding; Tropical Cyclones

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF PORT VINCENT	
	DESCRIPTION
MITIGATION ACTION	Form a regional watershed council to help bring together resources for comprehensive analysis, planning, decision-making, and cooperation
LEAD AGENCY	Village of Port Vincent's Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	<ol style="list-style-type: none"> <li>1. Identify and pursue preventative measures that will reduce future damages from hazards.</li> <li>3. Reduce repetitive flood losses.</li> <li>4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.</li> </ol>
PRIORITY	Medium
Action Description	Form a council and meet regularly to discuss floodplain management related issues
Type of Mitigation Action	Local Plans and Regulations
How Action Aligns with Risk Reduction	Multiple jurisdictions can significantly reduce flood within the Parish and surrounding areas when working cohesively
Current Status of Action	New
Hazard Addressed	Flooding; Tropical Cyclones

#### Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF PORT VINCENT	
	DESCRIPTION
MITIGATION ACTION	Contact the insurance Institute for Business and Home Safety (IBHS) to learn more about the most appropriate type of roof covering for our geographic region
LEAD AGENCY	Village of Port Vincent's Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	<ol style="list-style-type: none"> <li>1. Identify and pursue preventative measures that will reduce future damages from hazards.</li> <li>2. Enhance public awareness and understanding of disaster preparedness.</li> <li>4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.</li> </ol>
PRIORITY	Low
Action Description	Further research on appropriate roof coverings for the region and share this information with the public
Type of Mitigation Action	Public Information Local Plans and Regulations
How Action Aligns with Risk Reduction	To increase awareness of hail rated roof coverings and reduce the amount of damage associated with hail related weather events
Current Status of Action	New
Hazard Addressed	Thunderstorms; Tornadoes; Tropical Cyclones

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF PORT VINCENT	
	DESCRIPTION
MITIGATION ACTION	Establish an interactive website for educating the public on Hazard Mitigation and preparedness measures
LEAD AGENCY	Village of Port Vincent's Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards. 2. Enhance public awareness and understanding of disaster preparedness. 4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Low
Action Description	Further notify the public of emergency preparedness in relation to hazardous weather events
Type of Mitigation Action	Education and Awareness Programs
How Action Aligns with Risk Reduction	Creates awareness to reduce potential hail related damages
Current Status of Action	New
Hazard Addressed	Drought; Flooding; Thunderstorms; Tornadoes; Tropical Cyclones; Winter Weather

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF PORT VINCENT	
	DESCRIPTION
MITIGATION ACTION	Adopt the International Building Code (IBC) and International Residential Code (IRC)
LEAD AGENCY	Village of Port Vincent's Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	High
Action Description	Adopt both codes through council approval for parish-wide enforcement
Type of Mitigation Action	Local Plans and Regulations Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Regulating building construction to prevent high wind related damages
Current Status of Action	New
Hazard Addressed	Flooding; Thunderstorms; Tornadoes; Tropical Cyclones

#### Additional Supporting Information:



IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF PORT VINCENT	
	DESCRIPTION
MITIGATION ACTION	Require tie-downs with anchors and ground anchors appropriate for the soil type for manufactured homes
LEAD AGENCY	Village of Port Vincent's Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Low
Action Description	Requiring tie-downs through building compliance for manufactured homes
Type of Mitigation Action	Local Plans and Regulations Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	Proper anchoring of at-risk manufactured homes reduces the risk of wind related damage
Current Status of Action	New
Hazard Addressed	Thunderstorms, Tornadoes, Tropical Cyclones

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF PORT VINCENT	
	DESCRIPTION
MITGATION ACTION	Install surge protection on all critical equipment parish-wide
LEAD AGENCY	Village of Port Vincent's Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards. 4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Low
Action Description	Install surge protection on all critical equipment parish-wide
Type of Mitigation Action	Structure and Infrastructure Projects Preparedness and Response Actions
How Action Aligns with Risk Reduction	With this surge protection lightning poses little risk to equipment installed and to be purchased in the future
Current Status of Action	New
Hazard Addressed	Thunderstorms; Tornadoes; Tropical Cyclones

#### Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF PORT VINCENT	
	DESCRIPTION
MITGATION ACTION	Installing quick-connect emergency generator hook-ups for critical facilities
LEAD AGENCY	Village of Port Vincent's Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards. 4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Medium
Action Description	Purchase and install quick-connects for critical infrastructure within the Parish
Type of Mitigation Action	Structure and Infrastructure Projects Preparedness and Response Actions
How Action Aligns with Risk Reduction	Quick-connects provide another method of emergency back-up power when other methods have failed
Current Status of Action	New
Hazard Addressed	Flooding; Thunderstorms; Tornadoes; Tropical Cyclones

#### Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF PORT VINCENT	
	DESCRIPTION
MITIGATION ACTION	Encouraging the construction and use of safe rooms in homes and shelter areas of manufactured home parks, fairgrounds, shopping malls, or other vulnerable public structures
LEAD AGENCY	Village of Port Vincent's Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards. 4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Low
Action Description	Construction using high wind rated materials for maximum protection
Type of Mitigation Action	Structure and Infrastructure Projects Preparedness and Response Actions
How Action Aligns with Risk Reduction	Decreases loss of life and property and serves as protection against tornado related weather
Current Status of Action	New
Hazard Addressed	Thunderstorms; Tornadoes; Tropical Cyclones

#### Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF PORT VINCENT	
	DESCRIPTION
MITIGATION ACTION	Using 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.
LEAD AGENCY	Village of Port Vincent Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards. 4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Low
Action Description	Construct and install design-failure mode power lines.
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 community.
Current Status of Action	New
Hazard Addressed	Winter Weather

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS VILLAGE OF PORT VINCENT	
	DESCRIPTION
MITIGATION ACTION	Planning for and maintaining adequate road and debris clearing capabilities
LEAD AGENCY	Village of Port Vincent Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards.
PRIORITY	Low
Action Description	Create and implement a plan and procedure for clearing parish roads and weather related debris. Preventing road closures and damage to parish roadways will reduce the risk of road hazards for essential personnel and residents.
Type of Mitigation Action	Local Plans and Regulations Preparedness and Response Actions
How Action Aligns with Risk Reduction	Reduce the risk of road damage, vehicle damage and increase essential personnel productivity.
Current Status of Action	New
Hazard Addressed	Winter Weather

## Town of Springfield Mitigation Actions

*Previous Action Update*

Action	Description	Funding Source	Timeframe	Responsible Party	Hazard(s)	Status
1	Wind harden structures using shutters, screens, window film, and/or roof straps	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Tropical Cyclone, High Wind, Hail, Tornado	Ongoing
2	Install saferooms in critical facilities	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Tropical Cyclone, High Wind, Hail, Tornado	Not Started - Carried Over
3	Install a hazard early warning system	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, Hail, High Wind, Lightning, Tornado	Not Started - Carried Over
4	Construct new shelters	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, High Wind, Tornado, Tropical Cyclone	Ongoing
5	Upgrade current shelters to include food pantries, kitchens and climate control systems	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, High Wind, Tornado, Tropical Cyclone, Winter Weather	Not Started - Carried Over
6	Purchase generators for critical facilities to ensure operation during and after a hazard event	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, High Wind, Hail, Lightning, Tornado, Tropical Cyclone	Ongoing
7	Upgrade drainage ways by concrete lining, widening and/or enlarging culverts and catch basins.	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing
8	Upgrade capacity of storm water retention and detention areas, thereby protecting both existing structures and future development	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing
9	Upgrade sewer system to ensure stormwater infiltration does not cause a service interruption	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing
10	Continue to advertise public meetings during the hazard mitigation planning process	HMGP, local, regional, and federal	3-5 yrs	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornado, Tropical Cyclone	Ongoing
11	Sponsor a "Multi-Hazard Awareness Week"	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornado, Tropical Cyclone	Ongoing
12	Elevate, acquire or pilot reconstruct all Repetitive Loss and Severe Repetitive Loss structures	HMGP, local, regional, and federal	1-10 yrs	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing

**Comment on Status:** Future properties to be acquired/elevated will be prioritized in the following order: 1. Substantial Damage Properties, 2. Severe Repetitive Loss Properties, 3. Repetitive Loss Properties, 4. all others

13	Flood proof all public buildings vulnerable to flood damage	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Flooding, Tropical Cyclone	Not Started - Carried Over
14	Pursue upgrading of parking lots to pervious concrete	HMGP, local, regional, and federal	1-10 yrs	Existing parish and municipal administration	Flooding, Tropical Cyclone	Not Started - Carried Over
15	Ensure all municipalities and parish work together to produce a cohesive drainage plan	HMGP, local, regional, and federal	1-10 yrs	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing
16	Ensure future development does not increase hazard losses by enforcing building codes, introducing new codes or modifying existing building codes.	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornado, Tropical Cyclone	Ongoing
17	Guide future development away from hazard areas using zoning regulations while maintaining other parish goals such as economic development and improving the quality of life.	No additional funds required	1-5 yrs	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornado, Tropical Cyclone	Ongoing
18	Determine what new regulations could be passed to reduce the effects of hazards on new buildings and infrastructure.	No additional funds required	Ongoing	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornado, Tropical Cyclone	Ongoing
19	Participate in existing programs at the state and federal levels oriented to environmental enhancement and conservation.	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornado, Tropical Cyclone	Ongoing
20	Continue to participate in the NFIP	No additional funds required	Ongoing	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing
21	Establish a public outreach campaign to ensure all homeowners in floodplains are aware of the various types of coverage options under the NFIP	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing
22	Establish homeowner education program on flood mitigation measures.	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing
24	Evaluate future participation in the CRS	No additional funds required	Ongoing	Existing parish and municipal administration	Flooding, Tropical Cyclone	Ongoing
25	Adopt ordinance requiring water- saving measures in time of drought.	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Drought	Ongoing



26	Installation of Lightning rods and surge protectors to facilities	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Lightning	Ongoing
27	Purchase weather radios for public, to be used for emergency notification	HMGP, local, regional, and federal	1-5 yrs	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornado, Tropical Cyclone, Winter Weather	Not Started - Carried Over

*New Mitigation Actions*

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF SPRINGFIELD	
	DESCRIPTION
MITIGATION ACTION	Create Ordinance For Water Rationing
LEAD AGENCY	Town of Springfield Mayor's Office
SUPPORTING AGENCIES	Louisiana Rural Water, French Settlement Water Company
TIMELINE	1-5 Years
COST ESTIMATE	\$0.00-100,000
POSSIBLE FUNDING SOURCE(S)	Town of Springfield, HMGP
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards
PRIORITY	Medium
Action Description	Create municipal ordinance restricting usage of water during periods of drought.
Type of Mitigation Action	Local Plans and Regulations
How Action Aligns with Risk Reduction	Ration and reuse water to preserve as much as possible for human and plant life in times of drought
Current Status of Action	New
Hazard Addressed	Drought

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF SPRINGFIELD	
	DESCRIPTION
MITIGATION ACTION	Using 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.
LEAD AGENCY	Town of Springfield Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards. 4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Low
Action Description	Construct and install design-failure mode power lines.
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 community.
Current Status of Action	New
Hazard Addressed	Winter Weather

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF SPRINGFIELD	
	DESCRIPTION
MITGATION ACTION	Establish an interactive website for educating the public on Hazard Mitigation and preparedness measures
LEAD AGENCY	Town of Springfield Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	<ol style="list-style-type: none"> <li>1. Identify and pursue preventative measures that will reduce future damages from hazards.</li> <li>2. Enhance public awareness and understanding of disaster preparedness.</li> <li>4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.</li> </ol>
PRIORITY	Low
Action Description	Further notify the public of emergency preparedness in relation to hazardous weather events
Type of Mitigation Action	Education and Awareness Programs
How Action Aligns with Risk Reduction	Creates awareness to reduce potential hail related damages
Current Status of Action	New
Hazard Addressed	Drought; Flooding; Thunderstorms; Tornadoes; Tropical Cyclones; Winter Weather

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS TOWN OF SPRINGFIELD	
	DESCRIPTION
MITGATION ACTION	Planning for and maintaining adequate road and debris clearing capabilities
LEAD AGENCY	Town of Springfield Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards.
PRIORITY	Low
Action Description	Create and implement a plan and procedure for clearing parish roads and weather-related debris. Preventing road closures and damage to parish roadways will reduce the risk of road hazards for essential personnel and residents.
Type of Mitigation Action	Local Plans and Regulations Preparedness and Response Actions
How Action Aligns with Risk Reduction	Reduce the risk of road damage, vehicle damage and increase essential personnel productivity.
Current Status of Action	New
Hazard Addressed	Winter Weather

## City of Walker Mitigation Actions

## Previous Action Update

Action	Description	Funding Source	Timeframe	Responsible Party	Hazard(s) Addressed	Goals	Priority	Status
1	Wind harden structures using shutters, screens, window film, and/or roof straps	HMGP, local, regional, and federal	1-5 yrs.	Existing parish and municipal administration	Tropical Cyclones, High Wind, Hail, Tornadoes	1	Medium	In Progress
<p><b>Type of Mitigation Action:</b> Property Protection</p> <p><b>Comment on Status:</b> The City of Walker has waterproofed the east side of the Walker Police Department due to Hurricane Isaac . And one of the C-Can storage containers was elevated also. The Police Depart will be moving out of this building with in the next year out of the flood zone. If this building is used in the future, we plan to install shutters and windows and doors also brace the existing roof to provide protection form 140 mph winds. Benefits: Ensure existing public structures are structurally sound to endure to endure damage for hurricanes, tropical storms, and tornadoes.</p>								
2	Install safe rooms in critical facilities	HMGP, local, regional, and federal	1-5 yrs.	Existing parish and municipal administration	Tropical Cyclones, High Wind, Hail, Tornadoes	1	Low	Not Started – Carried Over
<p><b>Type of Mitigation Action:</b> Property Protection; Emergency Services</p> <p><b>Comments on Status:</b> This action has not been started. We will work with Livingston Parish Grant Department to add safe rooms to our Critical Facilities. Benefits: To protect and minimize the impact of the facility's Critical operations and Emergency Staff and occupants. See Worksheet.</p>								
3	Install a hazard early warning system	HMGP, local, regional, and federal	1-5 yrs.	Existing parish and municipal administration	Flooding, Hail, High Wind, Lightning, Tornadoes, Tropical Cyclones	1	High	In Progress
<p><b>Type of Mitigation Action:</b> Emergency Services</p> <p><b>Comment on Status:</b> The City of Walker is part of the Amite River Basin early warning system. This is part of their USGS early warning gauging system that is integrated into the river forecast centers, river prediction models that are issued daily. This is accessed through the web and is available through GOHSEP and LOHSEP. Additionally, we partner with our local media and cable provider to broadcast applicable warnings for sever weather, flooding and Hurricanes through the Hurricane forecast center. These warnings are transmitted through all-weather radios and mobile weather apps by USGS for river gauge/flood warnings, lightening, severe thunderstorms, flash flooding, hurricane and tornado warnings. Benefits: Ensure all Citizens of Walker are safe from flooding, hurricanes, high winds, lightning and tornados.</p>								
4	Construct new shelters	HMGP, local, regional, and federal	1-5 yrs.	Existing parish and municipal administration	Flooding, High Wind, Tornadoes, Tropical Cyclones	1	Medium	In Progress
<p><b>Type of Mitigation Action:</b> Emergency Services</p> <p><b>Comment on Status:</b> The City of Walker built a Community Safe Room with a grant and City of Walker coast share program. This will provide the community and emergency personnel with a safe shelter at times of disaster including but not limited to flooding, hurricanes, severe weather events , etc. our goal is to possibly build more. Benefits: Ensure all citizens and emergence personnel a safe shelter at time of severe hazards events.</p>								

5	Upgrade current shelters to include food pantries, kitchens and climate control systems	HMGP, local, regional, and federal	1-5 yrs.	Existing parish and municipal administration	Flooding, High Wind, Tornadoes, Tropical Cyclones, Winter Weather	1, 4	Medium	Delete
6	Purchase generators for critical facilities to ensure operation during and after a hazard event	HMGP, local, regional, and federal	1-5 yrs.	Existing parish and municipal administration	Flooding, High Wind, Hail, Lightning, Tornadoes, Tropical Cyclones	1	High	In Progress
<p><b>Type of Mitigation Action:</b> Emergency Services  <b>Comments on Status:</b> The City of Walker has purchased and installed adequate generators to fully power the Walker Waste Treatment Plant and 21 sewer lift stations throughout the City. Others will be added when funds become available. Benefits: Provide source of electric power during power outages to essential operations.</p>								
7	Upgrade drainage ways by concrete lining, widening and/or enlarging culverts and catch basins.	HMGP, local, regional, and federal	1-5 yrs.	Existing parish and municipal administration	Flooding, Tropical Cyclones	1, 3, 4	High	In Progress
<p><b>Type of Mitigation Action:</b> Structural Project  <b>Comments on Status:</b> The City of Walker is improving drainage ways along West Colyell Creek, Middle Colyell Creek and Dumplin Creek by enlarging any inferior culverts and concrete lining of channels city wide. This project is ongoing. Benefits: To ensure water flows freely with in drainage system, which will protect the surrounding area.</p>								
8	Upgrade capacity of storm water retention and detention areas, thereby protecting both existing structures and future development	HMGP, local, regional, and federal	1-5 yrs.	Existing parish and municipal administration	Flooding, Tropical Cyclones	1, 3, 4	Medium	In Progress
<p><b>Type of Mitigation Action:</b> Structural Project  <b>Comments on Status:</b> The City of Walker has an ordinance that requires all developments to have a drainage impact study. Based upon the drainage study when a development is required a storm water detention basin and storm drainage system, the system shall be designed such that the peak post-development storm water flow does not exceed the peak pre-development storm water flow. The ordinance also requires ongoing maintenance. Benefits: Preventative measures that will reduce existing and future flood damages and facilitate sound development in the city to reduce or eliminate potential impacts.</p>								
9	Upgrade sewer system to ensure stormwater infiltration does not cause a service interruption	HMGP, local, regional, and federal	1-5 yrs.	Existing parish and municipal administration	Flooding, Tropical Cyclones	1, 4	High	In Progress

<b>Type of Mitigation Action: Structural Project</b>								
<b>Comment of Status:</b> The City of Walker has received a grant that has been secured to purchase new manhole covers that will allow less storm water infiltration into the sewer system. This will greatly reduce the run times for the lift stations and allow the system to operate at optimal capacity. Benefits: Preventative measure that will reduce future damages from sewer backups.								
10	Continue to advertise public meetings during the hazard mitigation planning process	HMGP, local, regional, and federal	3-5 yrs.	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornadoes, Tropical Cyclones	1, 2	High	In Progress
<b>Type of Mitigation Action: Public Information</b>								
<b>Comment on Status:</b> The City of Walker will continue to have public comments on hazard mitigation as well as recognize Flood Awareness Month as March, as proclaimed by the Mayor. Benefits: Enhance public awareness and understanding of disaster preparedness.								
11	Sponsor a "Multi-Hazard Awareness Week"	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornadoes, Tropical Cyclones	1, 2	Medium	In Progress
<b>Type of Mitigation Action: Public Information</b>								
<b>Comments on Status:</b> The City of Walker is working with Livingston Parish to prepare a Multi-Hazard Awareness Week. We also have Multi-Hazard Awareness information in our parish Libraries. Benefits: Enhance public awareness and understanding of disasters preparedness.								
12	Elevate, acquire or pilot reconstruct all Repetitive Loss and Severe Repetitive Loss structures	HMGP, local, regional, and federal	1-10 yrs.	Existing parish and municipal administration	Flooding, Tropical Cyclones	1, 3, 4	High	In Progress
<b>Type of Mitigation Action: Property Protection</b>								
<b>Comments on Status:</b> The City of Walker has 22 Repetitive Loss structures. And has applied for FMA grant money to elevate 8 structures. We have not received any money yet. Benefits: Reduce Repetitive Loss and Substantial Damage Structures								
13	Flood proof all public buildings vulnerable to flood damage	HMGP, local, regional, and federal	1-5 yrs.	Existing parish and municipal administration	Flooding, Tropical Cyclones	1, 3, 4	Medium	Not Started – Carried Over
<b>Type of Mitigation Action: Property Protection</b>								
<b>Comments on Status:</b> The City of Walker will work with the Livingston Parish Grant Department and LOHSEP to help flood proofing public facilities. Benefits: Reduce future flood loss. See worksheet.								
14	Pursue upgrading of parking lots to pervious concrete	HMGP, local, regional, and federal	1-10 yrs.	Existing parish and municipal administration	Flooding, Tropical Cyclones	1, 4	LOW	Delete



15	Ensure all municipalities and parish work together to produce a cohesive drainage plan	HMGP, local, regional, and federal	1-10 yrs.	Existing parish and municipal administration	Flooding, Tropical Cyclones	1, 3, 4	Medium	In Progress
<p><b>Type of Mitigation Action:</b> Preventative; Structural Projects</p> <p><b>Comments on Status:</b> The City of Walker has been working with Livingston Parish and the Parish Gravity Drainage District No. 5 in addressing the major channels that drain through the Parish and the City of Walker. As a community we are prepared to participate and facilitate a Parish wide drainage plan. Benefits: Preventative measures that reduces future damages.</p>								
16	Ensure future development does not increase hazard losses by enforcing building codes, introducing new codes or modifying existing building codes.	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornadoes, Tropical Cyclones	1, 4	High	In Progress
<p><b>Type of Mitigation Action:</b> Preventative</p> <p><b>Comment on Status:</b> The City of Walker has adopted building codes which has impact on all-natural hazards and a flood damage prevention ordinance. These have hazard protection standards for all new, improved or repaired buildings. Including but not limited to lowest floor being at 1' above the BFE, restriction on fill, requirements for drainage studies, and environmental protection measures etc... We enforce the regulations by requiring Building permits, Elevation Certificates and have adequate inspections. Benefits: Facilitate sound development in the City to reduce or eliminate the future impacts on hazards.</p>								
17	Guide future development away from hazard areas using zoning regulations while maintaining other parish goals such as economic development and improving the quality of life.	No additional funds required	1-5 yrs.	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornadoes, Tropical Cyclones	1, 4	High	In Progress
<p><b>Type of Mitigation Action:</b> Preventative</p> <p><b>Comments on Status:</b> City of Walker has a Zoning ordinance which regulates development by dividing the community into zones and setting development criteria for each zone. Benefits: Zoning addresses future development to help reduces future damages.</p>								
18	Determine what new regulations could be passed to reduce the effects of hazards on new buildings and infrastructure.	No additional funds required	Ongoing	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornadoes, Tropical Cyclones	1, 4	Medium	In Progress

<b>Type of Mitigation Action:</b> Preventative <b>Comments on Status:</b> The City of Walker has buildings codes and a flood damage prevention ordinance that goes above and beyond the NFIP. They are reviewed frequently to see if they are doing what we expect and could be changed when we see inadequacy. We will also adopt any new State Legislation that is passed. Benefits: Facilitate sound development in the city to reduce or eliminate the potential impact of hazards.								
19	Participate in existing programs at the state and federal levels oriented to environmental enhancement and conservation.	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornadoes, Tropical Cyclones	1, 4	Medium	In Progress
<b>Type of Mitigation Action:</b> Natural Resource Protection <b>Comments on Status:</b> The City of Walker supports CPRA in their efforts to prevent further habitat loss in our critical swamps from saltwater intrusion. We additionally support the Clean Water Act. That enhances our way of life along the Amite River and associated water ways. Benefits: Protection of our natural resources.								
20	Continue to participate in the NFIP	No additional funds required	Ongoing	Existing parish and municipal administration	Flooding, Tropical Cyclones	1, 2, 3, 4	High	In Progress
<b>Type of Mitigation Action:</b> Preventative <b>Comments on Status:</b> The City of Walker will continue to enforce the NFIP regulation along with the city's own flood damage prevention ordinance. Benefits: Facilitate sound development to reduce or eliminate future flood damages.								
21	Establish a public outreach campaign to ensure all homeowners in floodplains are aware of the various types of coverage options under the NFIP	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Flooding, Tropical Cyclones	2	High	In Progress
<b>Type of Mitigation Action:</b> Public Information; Property Protection <b>Comment on Status:</b> The City of Walker has introduced Council Resolutions on Flood Awareness Month for the past 10 yr. or longer. Information has been provided to the citizens of the city by meetings to the Parish Library and providing public information about safety and being prepared during emergency weather conditions, the importance of flood insurance and flood mitigation measure. The City web site has a link to it which allows the public to be informed about all weather conditions and the need for flood insurance. Benefits: Reduce the loss of life and property by having an educated citizenry.								
22	Establish homeowner education program on flood mitigation measures.	HMGP, local, regional, and federal	Ongoing	Existing parish and municipal administration	Flooding, Tropical Cyclones	2, 4	High	In Progress
<b>Type of Mitigation Action:</b> Public Information <b>Comments on Status:</b> We will continue to inform our citizens through our web site, library, and other types of media on the different flood mitigation measure. Benefits: Reduce damage to property by having educated citizenry.								
23	Evaluate ways to improve CRS ratings to reduce the flood insurance premiums	No additional funds required	Ongoing	Existing parish and municipal administration	Flooding, Tropical Cyclones	1, 2, 3, 4	High	In Progress

<p><b>Type of Mitigation Action:</b> Preventative; Property Protection  <b>Comments on Status:</b> The City of Walker is always working on improving our CRS rating to reduce flood insurance premiums for our citizens. Benefits: When insurance is more affordable, citizens are more likely to obtain it.</p>								
24	Evaluate future participation in the CRS	No additional funds required	Ongoing	Existing parish and municipal administration	Flooding, Tropical Cyclones	1, 4	High	Delete
25	Adopt ordinance requiring water- saving measures in time of drought.	HMGP, local, regional, and federal	1-5 yrs.	Existing parish and municipal administration	Drought	1, 4	Low	Not Started – Carried Over
<p><b>Type of Mitigation Action:</b> Preventative  <b>Comments on Status:</b> The City of Walker will review guidance from LOHSEP, GOHSEP and Department of Agriculture to formulate potential regulation in the time of drought. Benefits: Reduce or eliminate the potential impact of hazard. See worksheet.</p>								
26	Installation of Lightning rods and surge protectors to facilities	HMGP, local, regional, and federal	1-5 yrs.	Existing parish and municipal administration	Lightning	1, 4	Low	Not Started – Carried Over
<p><b>Type of Mitigation Action:</b> Property Protection  <b>Comments on Status:</b> The City of Walker will work with the Livingston Parish Grant Department to Install Lighting rods and surge protectors on public buildings. Benefits: Prevent lighting strikes form damaging communication equipment and hamper emergency response. See worksheet.</p>								
27	Purchase weather radios for public, to be used for emergency notification	HMGP, local, regional, and federal	1-5 yrs.	Existing parish and municipal administration	Drought, Flooding, Hail, High Wind, Lightning, Tornadoes, Tropical Cyclones, Winter Weather	1, 2	Low	Not Started – Carried Over
<p><b>Type of Mitigation Action:</b> Emergency Services  <b>Comments on Status:</b> With free local weather apps and government weather apps, our citizens are both knowledgeable and alerted to flooding, lighting, hail, thunderstorms and hurricanes through mobile devices, cable services and home computer. Benefits: Prevent loss of life, health and safety measures.</p>								

*New Mitigation Actions*

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF WALKER	
	DESCRIPTION
MITGATION ACTION	Floodproof public buildings vulnerable to flood damage
LEAD AGENCY	City of Walker Mayor Office, Public Works Department, Building Department
SUPPORTING AGENCIES	LOHSEP, GOHSEP, FEMA
TIMELINE	1-10 Yrs. As funding permits
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	City budget, HMGP, FMA, BRIC and other grants
ASSOCIATED GOALS	Goal # 1 – Identify and pursue preventative measures that will reduce future damages from hazards
PRIORITY	Medium
Action Description	Move critical facility operations out of flood prone structures. Dry flood proof structures by strengthening wall, sealing openings with waterproof compounds, close doors, and windows permanently or with removable shields to keep out water.
Type of Mitigation Action	Property Protection
How Action Aligns with Risk Reduction	To reduce flood damage to public buildings
Current Status of Action	New
Hazard Addressed	Flooding, Tropical Cyclones, High Wind, Tornadoes

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF WALKER	
	DESCRIPTION
MITIGATION ACTION	Install lightning rods and surge protectors to public facilities
LEAD AGENCY	City of Walker Mayor Office, Public Works Department, Building Department
SUPPORTING AGENCIES	LOHSEP, GOHSEP, FEMA
TIMELINE	1-5 Yrs. As funding permits
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	City budget, HMGP, FMA, BRIC, other grants
ASSOCIATED GOALS	Goal #1 – Identify and pursue preventable measures that will reduce future damage from the hazard
PRIORITY	Medium
<b>Action Description</b>	Installation of lightning rods and surge protectors to public facilities
<b>Type of Mitigation Action</b>	Preventative
<b>How Action Aligns with Risk Reduction</b>	Prevent lightning strikes from damaging communication equipment and hamper emergency response. And prevent lightning from damaging critical facilities.
<b>Current Status of Action</b>	New
<b>Hazard Addressed</b>	Thunderstorms

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF WALKER	
	DESCRIPTION
MITGATION ACTION	Install safe rooms in Critical Facilities
LEAD AGENCY	City of Walker Mayor Office, Public Works Department, Building Department
SUPPORTING AGENCIES	LOHSEP, GOHSEP, FEMA
TIMELINE	1-10 Yrs. As funding permits
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	City budget, HMGP, FMA, BRIC, other grants
ASSOCIATED GOALS	Goal # 1 – Identify and pursue preventative measures that will reduce future damages from hazards Goal #4 – Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Medium
Action Description	Construct safe rooms specifically designed to meet FEMA criteria.
Type of Mitigation Action	Preventative Emergency Services
How Action Aligns with Risk Reduction	To protect and minimize the impact of the facility's critical operations and emergency staff and occupants.
Current Status of Action	New
Hazard Addressed	Flooding, Thunderstorms, Tornadoes, Tropical Cyclones

**Additional Supporting Information:**

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF WALKER	
	DESCRIPTION
MITGATION ACTION	Develop a program to acquire environmentally sensitive lands and flood prone property in conjunction with storm water management projects
LEAD AGENCY	City of Walker Mayor Office, Public Works Department, Contractor Engineer
SUPPORTING AGENCIES	LOHSEP, GOHSEP, FEMA
TIMELINE	1-5 Yrs. As funding permits
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	City budget, HMGP, FMA, BRIC and other grants
ASSOCIATED GOALS	Goal # 1 – Identify and pursue preventative measures that will reduce future damages from hazards; Goal # 4 – Facilitate sound development in the parish to reduce or eliminate potential impacts of hazards
PRIORITY	Medium
Action Description	Acquire vacant land to be left in natural state or to be use as storm water retention and detention areas for storm water projects
Type of Mitigation Action	Preventative Natural Resource Protection
How Action Aligns with Risk Reduction	To reduce existing and future flood damage and promote preservation and/or conservation of flood prone areas for general floodplain management
Current Status of Action	New
Hazard Addressed	Flooding, Tropical Cyclones

#### Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF WALKER	
	DESCRIPTION
MITIGATION ACTION	Produce a City-Wide comprehensive drainage study
LEAD AGENCY	City of Walker Mayor Office, Public Works Dept, City of Walker Engineering Contractor
SUPPORTING AGENCIES	LOHSEP, GOHSEP, FEMA
TIMELINE	1-5 Yrs. As funding permits
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	City budget, HMGP, FMA, BRIC and other grants
ASSOCIATED GOALS	Goal #3 – Reduce repetitive flood losses; Goal #4 – Facilitate sound development in the parish to reduce or eliminate potential impacts of hazards
PRIORITY	High
Action Description	City of Walker Engineering Contractor is developing a city-wide drainage study
Type of Mitigation Action	Preventative Structure and Infrastructure Projects
How Action Aligns with Risk Reduction	To reduce future flood damage.
Current Status of Action	New
Hazard Addressed	Flooding, Tropical Cyclones

#### Additional Supporting Information:



IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF WALKER	
	DESCRIPTION
MITIGATION ACTION	Purchase NOAA weather radios for schools, government building, parks, and the public
LEAD AGENCY	City of Walker Mayor Office, Emergency Manager
SUPPORTING AGENCIES	LOHSEP, GOHSEP, FEMA
TIMELINE	1-5 Yrs. As funding permits
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	City budget, HMGP, FMA, BRIC and other grants
ASSOCIATED GOALS	Goal #2 – Enhance public awareness on understanding of disasters preparedness
PRIORITY	Low
<b>Action Description</b>	Purchase NOAA weather radios for schools, government building, parks and public.
<b>Type of Mitigation Action</b>	Emergency Services
<b>How Action Aligns with Risk Reduction</b>	Prevent loss of life, health, and safety measures.
<b>Current Status of Action</b>	New
<b>Hazard Addressed</b>	Flooding, Tropical Cyclones, Tornadoes, Lightning, Thunderstorms, Winter Weather

#### Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF WALKER	
	DESCRIPTION
MITIGATION ACTION	Encourage private mitigation efforts that address multiple hazards
LEAD AGENCY	City of Walker Mayor Office
SUPPORTING AGENCIES	LOHSEP, GOHSEP, FEMA
TIMELINE	1-5 Yrs. As funding permits
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	City budget, HMGP, FMA, BRIC and other grants
ASSOCIATED GOALS	Goal #2 – Enhance public awareness on understanding of disasters preparedness
PRIORITY	Low
Action Description	Establishing, maintain and publicizing a library section on hazard mitigation techniques for residents
Type of Mitigation Action	Public Information
How Action Aligns with Risk Reduction	Using outreach programs to advise homeowners of risk to life, health, and safety.
Current Status of Action	New
Hazard Addressed	Flooding, Tropical Cyclones, Thunderstorms, Tornadoes, Drought, Winter Weather

#### Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF WALKER	
	DESCRIPTION
MITIGATION ACTION	Educate residents on water saving techniques
LEAD AGENCY	City of Walker Mayor Office, Emergency Manager
SUPPORTING AGENCIES	LOHSEP, GOHSEP, FEMA
TIMELINE	1-5 Yrs. As funding permits
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	City budget, HMGP, FMA, BRIC, other grants
ASSOCIATED GOALS	Goal #2 – Enhance public awareness and understanding of disaster preparedness
PRIORITY	Low
Action Description	Outreach to encourage citizens to take water-saving measures, such as checking for leaks in plumbing, installing low-flow shower heads and toilets.
Type of Mitigation Action	Public Information
How Action Aligns with Risk Reduction	Reduce water consumption during a drought.
Current Status of Action	New
Hazard Addressed	Drought

#### Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF WALKER	
	DESCRIPTION
MITIGATION ACTION	Preserve or restore flood prone property
LEAD AGENCY	City of Walker Mayor Office, Building Department
SUPPORTING AGENCIES	LOHSEP, GOHSEP, FEMA
TIMELINE	1-10 Yrs. As funding permits
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	City budget, HMGP, FMA, BRIC, other grants
ASSOCIATED GOALS	Goal #1 – Identify and pursue prevention measures that will reduce future damages from hazards; Goal #3 – Reduce repetitive flood losses
PRIORITY	Low
Action Description	Acquire flood prone land aimed at preserving or to use as open space or recreation for flood protection
Type of Mitigation Action	Preventative Natural Resource Protection
How Action Aligns with Risk Reduction	To reduce future flood damage and repetitive losses and promote preservation and/or conservation of flood prone areas for parks, recreation, and general floodplain management
Current Status of Action	New
Hazard Addressed	Flooding, Tropical Cyclones

#### Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF WALKER	
	DESCRIPTION
MITGATION ACTION	Identify structural projects where appropriate that minimizes flood losses including storm water, drainage, and retention projects.
LEAD AGENCY	City of Walker Mayor Office, Department of Public Works, Engineering Contractor
SUPPORTING AGENCIES	LOHSEP, GOHSEP, FEMA
TIMELINE	1-5 Yrs. As funding permits
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	City budget, HMGP, FMA, BRIC, other grants
ASSOCIATED GOALS	Goal #1 – Identify and pursue prevention measures that will reduce future damages from hazards. Goal #4 – Facilitate sound development in the parish to reduce or eliminate potential impacts of hazards
PRIORITY	High
Action Description	Improvements along Taylor Bayou, West Colyell, Middle Colyell, Dumplin Creek and tributaries including culvert replacement and channel widening and other improvements
Type of Mitigation Action	Structure and Infrastructure Project
How Action Contributes to Risk Reduction	To reduce existing and future flood damage
Current Status of Action	New
Hazard Addressed	Flooding

#### Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF WALKER	
	DESCRIPTION
MITGATION ACTION	Develop/Provide GIS Capability to Map Community Risk
LEAD AGENCY	City of Walker Mayor Office, GIS Department, Floodplain Manager
SUPPORTING AGENCIES	LOHSEP, GOHSEP, FEMA
TIMELINE	1-5 Yrs. As funding permits
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	City budget, HMGP, FMA, BRIC, other grants
ASSOCIATED GOALS	Goal #1, Identify and pursue preventative measures that will reduce future damages for the hazards
PRIORITY	Medium
<b>Action Description</b>	Develop GIS capabilities and training to map the community's risk and identify problem areas using D-FIRMs, topographic data etc. This capability will be used for assessment and public outreach
<b>Type of Mitigation Action</b>	Preventative Public Information Emergency Services
<b>How Action Aligns with Risk Reduction</b>	To reduces losses from hazards
<b>Current Status of Action</b>	New
<b>Hazard Addressed</b>	Flooding, Thunderstorms Tornadoes, Tropical Cyclones, Winter Weather

#### Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF WALKER	
	DESCRIPTION
MITIGATION ACTION	Monitor the City Water Supply
LEAD AGENCY	City of Walker Mayor Office, Water Department
SUPPORTING AGENCIES	LOHSEP, GOHSEP, FEMA
TIMELINE	1-5 Yrs. As funding permits
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	City budget, HMGP, FMA, BRIC, other grants
ASSOCIATED GOALS	Goal #1 – Identify and pursue preventative measures that will reduce future damages for the hazards
PRIORITY	Low
Action Description	Have a system in place to regularly check for leaks in the city water system to minimize water supply losses
Type of Mitigation Action	Preventative
How Action Aligns with Risk Reduction	Keep water supply losses at a minimum
Current Status of Action	New
Hazard Addressed	Drought

#### Additional Supporting Information:

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF WALKER	
	DESCRIPTION
MITIGATION ACTION	Elevation of structures on the Repetitive and Severe Repetitive loss list
LEAD AGENCY	City of Walker Mayor Office, Floodplain Administrator, Building Department
SUPPORTING AGENCIES	LOHSEP, GOHSEP, FEMA
TIMELINE	1-5 Yrs. As funding permits
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	City budget, HMGP, FMA, BRIC, other grants
ASSOCIATED GOALS	Goal #3 – Reduce repetitive flood loss
PRIORITY	High
<b>Action Description</b>	Elevate RL and SRL structures within the City of Walker. We have applied to FMA for grant to elevate repetitive loss homes
<b>Type of Mitigation Action</b>	Property Protection
<b>How Action Aligns with Risk Reduction</b>	Reduce repetitive losses
<b>Current Status of Action</b>	New
<b>Hazard Addressed</b>	Flooding, Tropical Cyclones

**Additional Supporting Information:**



IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF WALKER	
	DESCRIPTION
MITIGATION ACTION	Using 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.
LEAD AGENCY	City of Walker Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards. 4. Facilitate sound development in the parish and municipalities to reduce or eliminate the potential impacts of hazards.
PRIORITY	Low
Action Description	Construct and install design-failure mode power lines.
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 community.
Current Status of Action	New
Hazard Addressed	Winter Weather

IMPLEMENTATION KEY FOR POTENTIAL HAZARD MITIGATION ACTIONS CITY OF WALKER	
	DESCRIPTION
MITGATION ACTION	Planning for and maintaining adequate road and debris clearing capabilities
LEAD AGENCY	City of Walker Mayor's Office
SUPPORTING AGENCIES	Livingston Parish Government/Council
TIMELINE	1-5 Years
COST ESTIMATE	TBD
POSSIBLE FUNDING SOURCE(S)	HMGP, Local, Regional and Federal
ASSOCIATED GOALS	1. Identify and pursue preventative measures that will reduce future damages from hazards.
PRIORITY	Low
Action Description	Create and implement a plan and procedure for clearing parish roads and weather related debris. Preventing road closures and damage to parish roadways will reduce the risk of road hazards for essential personnel and residents.
Type of Mitigation Action	Local Plans and Regulations Preparedness and Response Actions
How Action Aligns with Risk Reduction	Reduce the risk of road damage, vehicle damage and increase essential personnel productivity.
Current Status of Action	New
Hazard Addressed	Winter Weather

## 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. Throughout the identification and assessment of potential mitigation actions, the STAPLEE method was employed to guide the prioritization process. This method helped the steering committee consider potential action items in a systematic way and helped to analyze the pros and cons of different alternative actions for each of the identified objectives and strategies. The action items were prioritized based on the STAPLEE criteria and their potential to reduce risk to the parish, including its citizens, operations, and physical assets. The highest priority actions are those that would be most effective in reducing risks to multiple assets simultaneously. The results were items that address the major hazards, are appropriate for those hazards, are cost-effective, and are affordable. The steering committee had internal meetings and discussions to review and approve mitigation actions for Livingston Parish and its incorporated communities.

STAPLEE	Criteria Explanation
<b>S – Social</b>	Mitigation actions are acceptable to the community if they do not adversely affect a particular segment of the population, do not cause relocation of lower income people, and if they are compatible with the community's social and cultural values.
<b>T – Technical</b>	Mitigation actions are technically most effective if they provide long- term reduction of losses and have minimal secondary adverse impacts.
<b>A – Administrative</b>	Mitigation actions are easier to implement if the jurisdiction has the necessary staffing and funding.
<b>P – Political</b>	Mitigation actions can truly be successful if all stakeholders have been offered an opportunity to participate in the planning process and if there is public support for the action.
<b>L – Legal</b>	It is critical that the jurisdiction or implementing agency have the legal authority to implement and enforce a mitigation action.
<b>E – Economic</b>	Budget constraints can significantly deter the implementation of mitigation actions. Hence, it is important to evaluate whether an action is cost-effective, as determined by a cost benefit review, and possible to fund.
<b>E - Environmental</b>	Sustainable mitigation actions that do not have an adverse effect on the environment, that comply with Federal, State, and local environmental regulations, and that are consistent with the community's environmental goals, have mitigation benefits while being environmentally sound.

Livingston Parish 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, such as changing regulations. 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 Livingston Parish Hazard Mitigation Plan Update

The Livingston Parish Hazard Mitigation Plan Update process began in January 2021 with a series of meetings and collaborations between the contractor (SDMI) and the participating agencies. Update activities were intended to give each participating agency the opportunity to shape the plan to best fit their community's 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
1/13/2021	Kick Off Meeting	Conference Call	No	Discuss with Parish HM Director the expectations and requirements of the project.
2/4/2021	Initial Planning Meeting	Livingston, LA	No	Discuss with the Steering Committee the expectations and requirements of the project. Assign plan worksheets to Parish.
2/22/2021	Mitigation Action Workshop	Livingston, LA	No	Discuss with the Steering Committee updates to actions from previous HM plan and potential new actions for the 2021 plan update.
3/24/2021	Risk Assessment Overview	Livingston, LA	No	Discuss and review the Risk Assessment with the Steering Committee. Discuss and review expectations for Public Meeting.
3/24/2021	Public Meeting	Livingston, LA	Yes	The Public Meeting allowed the public and community stakeholders to participate and provide input into the hazard mitigation planning process. Maps of the Livingston Parish communities were provided for the meeting attendees to identify specific areas where localized hazards occur.
Ongoing	Public Survey Tool	Online	Yes	This survey asked participants about public perceptions and opinions regarding natural hazards in Livingston Parish. In addition, questions covered the methods and techniques preferred for reducing the risks and losses associated with these hazards. Survey Results: <a href="https://www.surveymonkey.com/results/SM-RPSLF5XL9/">https://www.surveymonkey.com/results/SM-RPSLF5XL9/</a>
2 Week Period	Public Plan Review (Digital)		Yes	Parish Website or other locations determined by Steering Committee

## Planning

The plan update process consisted of several phases:

	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7
<b>Plan Revision</b>	█						
<b>Data Collection</b>	█						
<b>Risk Assessment</b>	█						
<b>Public Input</b>	█						
<b>Mitigation Strategy and Actions</b>		█					
<b>Plan Review by GOHSEP and FEMA</b>					█		
<b>FEMA APA Issued</b>						█	
<b>Plan Adoption</b>							█
<b>Plan Approval</b>							█

## Coordination

The Livingston 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 and SDMI were jointly responsible for inviting the steering committees and key stakeholders to planned meetings and activities. 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 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 Team meetings at the local and parish level
- Sharing local data and information
- Action item development
- Plan document draft review
- Formal adoption of the Hazard Mitigation Plan document following provisional approval by the State of Louisiana and FEMA

The 2021 Hazard Mitigation Plan Update Steering Committee consisted of representatives from the following parish, municipal or community stakeholders:

- Livingston Parish Government
- Livingston Office of Homeland Security and Emergency Preparedness
- Town of Albany
- City of Denham Springs
- Village of French Settlement
- Town of Killian
- Town of Livingston
- Village of Port Vincent
- Town of Springfield
- City of Walker
- Ascension Parish Office of Homeland Security and Emergency Preparedness

The OHSEP Directors from Ascension Parish, Iberville Parish, St. Helena Parish, Tangipahoa Parish, West Baton Rouge Parish, and East Feliciana Parish were asked to provide input on the hazard mitigation plan update for Livingston Parish in an effort to coordinate mitigation efforts where possible as neighboring communities. SDMI assisted Livingston Parish with encouraging the collaboration with these neighboring communities via email by extending an invitation to the Livingston 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.

Below is a detailed list of the 2021 HMPU Steering Committee:

Livingston Parish Hazard Mitigation Planning Committee				
Name	Title	Agency	Email	Phone Number
Steve Kistler	Grant Manager	Livingston Parish Government	<a href="mailto:skistler@lpgov.com">skistler@lpgov.com</a>	225-686-4412
Sarah Allen	Grant Coordinator	Livingston Parish Government	<a href="mailto:sallen@lpgov.com">sallen@lpgov.com</a>	225-686-4415
Brandi Janes	Director	LOHSEP	<a href="mailto:lohsep1@lpgov.com">lohsep1@lpgov.com</a>	225-686-3066
Dee Dee Delatte	Permit Director	Livingston Parish Government	<a href="mailto:ddalatte@lpgov.com">ddalatte@lpgov.com</a>	225-686-3021
Wendy Bouilly	Floodplain Manager	Livingston Parish Government	<a href="mailto:wbouilly@lpgov.com">wbouilly@lpgov.com</a>	225-686-3021
Jimmy Jones	Police Chief	Town of Springfield	<a href="mailto:springpd38@yahoo.com">springpd38@yahoo.com</a>	225-620-5122

Marie Kreutzer	Town Clerk	Town of Springfield	<a href="mailto:springfdlaclerk@yahoo.com">springfdlaclerk@yahoo.com</a>	225-294-3150
Gillis Windham	Mayor	Town of Killian	<a href="mailto:gilliswindham@yahoo.com">gilliswindham@yahoo.com</a>	225-695-6785
Cathy Posey	Town Clerk	Town of Killian	<a href="mailto:killiantownhall@eatel.net">killiantownhall@eatel.net</a>	225-695-6785
J.T. Taylor	Mayor	Town of Livingston	<a href="mailto:jt@townoflivingston.com">jt@townoflivingston.com</a>	225-686-7153
Lea McDonald	Town Clerk	Town of Livingston	<a href="mailto:lmcdonald@townoflivingston.com">lmcdonald@townoflivingston.com</a>	225-686-7153
Jason Populus	Emergency Manager	City of Denham Springs	<a href="mailto:jpopulus@cityofdenhamsprings.com">jpopulus@cityofdenhamsprings.com</a>	225-665-8121
Rick Foster	Building Official	City of Denham Springs	<a href="mailto:rfoster@cityofdenhamsprings.com">rfoster@cityofdenhamsprings.com</a>	225-665-8121
Nancy Kimble	Building Official	City of Walker	<a href="mailto:nancy.kimble@walker-la.gov">nancy.kimble@walker-la.gov</a>	225-665-8893
Lynette Richardson	Floodplain Manager	City of Walker	<a href="mailto:Lynette.Richardson@Walker-LA.gov">Lynette.Richardson@Walker-LA.gov</a>	225-665-8893
Mary Gourdon	Admin. Assistant	Village of Port Vincent	<a href="mailto:Admin@portvincent-la.gov">Admin@portvincent-la.gov</a>	225-698-9891
Angela Elmore	Mayor	Village of Port Vincent	<a href="mailto:Admin@portvincent-la.gov">Admin@portvincent-la.gov</a>	225-698-9891
Haley Unbehagen	Mayor	Town of French Settlement	<a href="mailto:hunbehagen@eatel.net">hunbehagen@eatel.net</a>	225-698-6100
Lawrence Callender	Emergency Manager	Town of French Settlement	<a href="mailto:callenderfspd@hotmail.com">callenderfspd@hotmail.com</a>	225-698-6100
Eileen McCarroll	Mayor	Town of Albany	<a href="mailto:mayor@townofalbanyla.com">mayor@townofalbanyla.com</a>	225-567-1101
Alisha Staggs	Admin. Assistant	Town of Albany	<a href="mailto:alisha.staggs@townofalbanyla.com">alisha.staggs@townofalbanyla.com</a>	225-567-1101

Additionally, the following agencies were contacted via email in an effort to involve them in the plan update and draft review process:

Assisting Agencies in Livingston Parish Hazard Mitigation Plan Update		
Name	Agency	Email
Rachael Wilkinson	Ascension Parish OHSEP	<a href="mailto:rwilkinson@apgov.us">rwilkinson@apgov.us</a>
Joseph Moreau	East Feliciana Parish OHSEP	<a href="mailto:efeoc@outlook.com">efeoc@outlook.com</a>
Clint Moore	Iberville Parish OHSEP	<a href="mailto:cmoore@ibervilleparish.com">cmoore@ibervilleparish.com</a>
Roderick Matthews	St. Helena Parish OHSEP	<a href="mailto:rmatthews@sthelenaparish.la.gov">rmatthews@sthelenaparish.la.gov</a>
Dawson Primes	Tangipahoa Parish OHSEP	<a href="mailto:dawson.primes@tangipahoa.org">dawson.primes@tangipahoa.org</a>
Deano Moran	West Baton Rouge Parish OHSEP	<a href="mailto:deano.moran@wbr council.org">deano.moran@wbr council.org</a>

### 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 Livingston 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), parish planning and zoning and building code enforcement.



Livingston 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 the Plan Maintenance section. The primary means for integrating mitigation strategies into other local planning mechanisms will be through the revision, update and implementation of any individual city/town plans that require specific planning and administrative tasks (e.g. risk assessment, plan amendments, ordinance revisions, capital improvement projects, etc.).

The members of the Livingston 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.

- Louisiana Coastal Master Plan
- Parish Emergency Operations Plan
- State of Louisiana Hazard Mitigation Plan
- Flood Insurance Rate Maps
- CRS Coordinators Manual

Further information on the plans can be found in the Capabilities Assessment, Section 3.

### 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 for Livingston Parish.

#### Meeting #1: Hazard Mitigation Plan Update Kick-Off

**Date:** January 13, 2021

**Location:** Conference Call

**Purpose:** Discuss the expectations and requirements of the hazard mitigation plan update process and establish an initial project timeline with the Parish's OHSEP Director and any additional personnel.

**Public Invitation:** No

**Meeting Invitees:**

Livingston Parish Hazard Mitigation Planning Committee		
Name	Title	Agency
Steve Kistler	Grant Manager	Livingston Parish Government
Brandi Janes	Director	LOHSEP
Lauren Morgan	Associate Director	LSU-SDMI
Chris Rippetoe	Hazard Mitigation Program Manager	LSU-SDMI

## Meeting #2: Hazard Mitigation Plan Update Initial Planning Meeting

**Date:** February 4, 2021

**Location:** Livingston, 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 the parish data collection for the plan update.

**Public Invitation:** No

**Meeting Invitees:**

Livingston Parish Hazard Mitigation Planning Committee		
Name	Title	Agency
Steve Kistler	Grant Manager	Livingston Parish Government
Sarah Allen	Grant Coordinator	Livingston Parish Government
Brandi Janes	Director	LOHSEP
Dee Dee Delatte	Permit Director	Livingston Parish Government
Wendy Bouilly	Floodplain Manager	Livingston Parish Government
Jimmy Jones	Police Chief	Town of Springfield
Marie Kreutzer	Town Clerk	Town of Springfield
Gillis Windham	Mayor	Town of Killian
Cathy Posey	Town Clerk	Town of Killian
J.T. Taylor	Mayor	Town of Livingston
Lea McDonald	Town Clerk	Town of Livingston
Jason Populus	Emergency Manager	City of Denham Springs
Rick Foster	Building Official	City of Denham Springs
Nancy Kimble	Building Official	City of Walker
Lynette Richardson	Floodplain Manager	City of Walker
Mary Gourdon	Admin. Assistant	Village of Port Vincent
Angela Elmore	Mayor	Village of Port Vincent
Haley Unbehagen	Mayor	Town of French Settlement
Lawrence Callender	Emergency Manager	Town of French Settlement
Eileen McCarroll	Mayor	Town of Albany
Alisha Staggs	Admin. Assistant	Town of Albany

LIVINGSTON PARISH HAZARD MITIGATION PLAN UPDATE PLANNING COMMITTEE MEETING  
February 4, 2021

Name	Organization	Email
Sandy Ackerman	Village of FS	sackerman@catel.net
Lanoma Callender	Village of FI	callenderfsfd@hotmail.com
Brandi James	Livingston OHSEP	lohsep2@lpgov.com
Mary T. Gourdon	Village of Port Vincent	admin@portvincent-la.gov
Nancy Kimble	City of Walker	Chief Building Official nancy.kimble@walker-la.gov
Lynette Richardson	City of Walker	Lynette.Richardson@walker-la.gov
Missy Magallanes	Town of Livingston	mmagallanes@townoflivingston.com
JT Taylor, Mayor	Town of Livingston	jt@townoflivingston.com
James Jones Chief of Police	Town of Springfield	SpringPD38@yahoo.com
Jason Populus	Denham Springs	jpopulus@cityofdenham-springs.com
Rich Foster	City of Denham Springs	rfoster@cityofdenham-springs.com
Eileen Bates McCarroll	Town of Albany	mayor@townofalbanyla.com
Steve Kistler	Parish of Livingston	skistler@lpgov.com

### Meeting #3: Internal Mitigation Action Workshop

**Date:** February 22, 2021

**Location:** Livingston, Louisiana

**Purpose:** Discuss with the Steering Committee updates to actions from previous HM plan and potential new actions for inclusion in the 2021 plan update. Also discussed CRS requirements and incorporation of associated information into the HM plan.

**Public Invitation:** No

**Meeting Invitees:**

Livingston Parish Hazard Mitigation Planning Committee		
Name	Title	Agency
Steve Kistler	Grant Manager	Livingston Parish Government
Sarah Allen	Grant Coordinator	Livingston Parish Government
Brandi Janes	Director	LOHSEP
Dee Dee Delatte	Permit Director	Livingston Parish Government
Wendy Bouilly	Floodplain Manager	Livingston Parish Government
Jimmy Jones	Police Chief	Town of Springfield
Marie Kreutzer	Town Clerk	Town of Springfield
Gillis Windham	Mayor	Town of Killian
Cathy Posey	Town Clerk	Town of Killian
J.T. Taylor	Mayor	Town of Livingston
Lea McDonald	Town Clerk	Town of Livingston
Jason Populus	Emergency Manager	City of Denham Springs
Rick Foster	Building Official	City of Denham Springs
Nancy Kimble	Building Official	City of Walker
Lynette Richardson	Floodplain Manager	City of Walker
Mary Gourdon	Admin. Assistant	Village of Port Vincent
Angela Elmore	Mayor	Village of Port Vincent
Haley Unbehagen	Mayor	Town of French Settlement
Lawrence Callender	Emergency Manager	Town of French Settlement
Eileen McCarroll	Mayor	Town of Albany
Alisha Staggs	Admin. Assistant	Town of Albany

### Meeting #4: Risk Assessment Overview

**Date:** March 24, 2021

**Location:** Livingston, Louisiana

**Purpose:** Members of the Livingston Parish Hazard Mitigation Plan Update Steering Committee were presented the results of the risk assessment and an overview of the public meeting presentation during this overview. The assessment was conducted based on hazards identified during previous plans and on any newly identified risks.

**Public Invitation:** No

**Meeting Invitees:**

Livingston Parish Hazard Mitigation Planning Committee		
Name	Title	Agency
Steve Kistler	Grant Manager	Livingston Parish Government
Sarah Allen	Grant Coordinator	Livingston Parish Government
Brandi Janes	Director	LOHSEP
Dee Dee Delatte	Permit Director	Livingston Parish Government
Wendy Bouilly	Floodplain Manager	Livingston Parish Government
Jimmy Jones	Police Chief	Town of Springfield
Marie Kreutzer	Town Clerk	Town of Springfield
Gillis Windham	Mayor	Town of Killian
Cathy Posey	Town Clerk	Town of Killian
J.T. Taylor	Mayor	Town of Livingston
Lea McDonald	Town Clerk	Town of Livingston
Jason Populus	Emergency Manager	City of Denham Springs
Rick Foster	Building Official	City of Denham Springs
Nancy Kimble	Building Official	City of Walker
Lynette Richardson	Floodplain Manager	City of Walker
Mary Gourdon	Admin. Assistant	Village of Port Vincent
Angela Elmore	Mayor	Village of Port Vincent
Haley Unbehagen	Mayor	Town of French Settlement
Lawrence Callender	Emergency Manager	Town of French Settlement
Eileen McCarroll	Mayor	Town of Albany
Alisha Staggs	Admin. Assistant	Town of Albany

**LIVINGSTON PARISH HAZARD MITIGATION PLAN UPDATE MEETING  
March 24, 2021**

Name	Organization	Email	Phone
Nancy Kimble	City of Walker	nancy.kimble@walker-la.gov	225-665-8893
Lynette R. Richardson	City of Walker	lynette.richardson-la.gov	225-665-8893 (cell)
Mary T. Gourdon	Village of Port Vincent	admire@portvincent-la.gov	225-938-5296
Anna Daigle	LSU	adaig35@lsu.edu	(225)933-8119
Wendy Bouilly	Livingston Parish Permit	wbouilly@lp.gov.com	225-933-3712
Lawrence Chlendar	Village of French Settlement	chlendar_fspd@hotmail.com	225-698-6100
Dick Foster	City of Denham Springs	dfoster@cityofdenham-springs.com	(225)667-8326
Brandi James	LOHSEP	lohsep2@lp.gov.com	225-921-9124
Steve Kistler	Grants Office	skistler@lp.gov.com	225-686-3018
Jarrah Allen	Grants Office	jallen@lp.gov.com	225-686-3987
Alisha Staggs	Town of Albany	alisha.staggs@townofalbany.com	885-567-1101
Eileen Bates-McCarroll	Town of Albany	mayor@townofalbany.com	225-567-1101
Jason Populus	City of Denham Springs	jpopulus@cityofdenham-springs.com	985-974-4580

**Meeting #5: Public Meeting****Date:** March 24, 2021**Location:** Livingston, Louisiana**Purpose:** The Public Meeting allowed the public and community stakeholders to participate and provide input into the hazard mitigation planning process.**Public Initiation:** Yes**Meeting Invitees:**

Livingston Parish Hazard Mitigation Planning Committee		
Name	Title	Agency
Steve Kistler	Grant Manager	Livingston Parish Government
Sarah Allen	Grant Coordinator	Livingston Parish Government
Brandi Janes	Director	LOHSEP
Dee Dee Delatte	Permit Director	Livingston Parish Government
Wendy Bouilly	Flood Plain Manager	Livingston Parish Government
Jimmy Jones	Police Chief	Town of Springfield
Marie Kreutzer	Town Clerk	Town of Springfield
Gillis Windham	Mayor	Town of Killian
Cathy Posey	Town Clerk	Town of Killian
J.T. Taylor	Mayor	Town of Livingston
Lea McDonald	Town Clerk	Town of Livingston
Jason Populus	Emergency Manager	City of Denham Springs
Rick Foster	Building Official	City of Denham Springs
Nancy Kimble	Building Official	City of Walker
Lynette Richardson	Floodplain Manager	City of Walker
Mary Gourdon	Admin. Assistant	Village of Port Vincent
Angela Elmore	Mayor	Village of Port Vincent
Haley Unbehagen	Mayor	Town of French Settlement
Lawrence Callender	Emergency Manager	Town of French Settlement
Eileen McCarroll	Mayor	Town of Albany
Alisha Staggs	Admin. Assistant	Town of Albany

## LIVINGSTON PARISH OFFICE OF HOMELAND SECURITY &amp; EMERGENCY PREPAREDNESS

## PUBLIC MEETING ANNOUNCEMENT

**Livingston Parish and its partners are seeking community input for the 2021 Livingston Parish Hazard Mitigation Plan update!**

Livingston 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 Livingston Parish Hazard Mitigation Multi-Jurisdictional Plan describes the **naturally occurring** risks to the region 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 is at risk to? Please join us on Wednesday March 24th, for a public meeting from 5:00 p.m. – 6:00 p.m. to learn more about the plan and share your input on the risks and vulnerabilities that most impact you and your community.

**Meeting Location:**

Livingston Parish Health Unit Conference Room  
20399 Government Boulevard Livingston, LA 70754

Residents of Livingston 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/livingstonhm2021>

The Parish appreciates your input.

If you have questions, please contact: Livingston Parish Grants Manager Steve Kistler – 225-686-3018 or via e-mail at [skistler@lpgov.com](mailto:skistler@lpgov.com).

In an effort to comply with the proclamation and order made by Louisiana Governor John Bel Edwards, the parish is requesting:

- Everyone who enters the building must wear a face mask and practice six feet (6') social distancing.
- Please be responsible and use hand sanitizers and wash your hands.



Public Meeting #

LIVINGSTON PARISH HAZARD MITIGATION PLAN UPDATE MEETING

March 24, 2021

Public Meeting #

Name	Organization	Email
Nancy Kimble	City of Walker	nancy.kimble@walker-la.gov
Lynette Richardson	City of Walker	lynette_richardson@walker-la.gov
Mary T. Gourdon	Village of Port Vincent	admin@portvincent-la.gov
Anna Daigle	LSU	adaig35@lsu.edu
Alisha Staggs	Town of Albany	alisha.staggs@townofalbanyla.com
Eileen McCarroll	Town of Albany	mayor@townofalbanyla.com
Jason Populus	City of Denham Springs	JPopulus@cityofdenhamsprings.com
Brandi James	LOHSEP	lohsep2@lpgov.com
Steve Kistler	Grants office	skistler@lpgov.com
Sarah Allen	Grants office	sallen@lpgov.com
Lauren Stevens	LSU	lstevens@lsu.edu

### 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 January and April 2021. The survey was designed to capture public perceptions and opinions regarding natural hazards in Livingston 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 April 26, 2021, there have 30 responses to the Livingston Parish Hazard Mitigation Public Opinion Survey, with a completion rate of approximately 80%. Full survey results can be found here: <https://www.surveymonkey.com/results/SM-RPSLF5XL9/>

### Outreach Activity #2: Incident Questionnaire

**Date:** Public Meeting Activity

**Location:** Public Meeting

**Public Initiation:** Yes

An incident/issue questionnaire was provided at the public meeting in an effort to collect additional information from residents of Livingston Parish regarding hazard events and their localized impacts. While the information collected via the questionnaire was to be integrated into this planning document, there was no public turnout for the meeting, and subsequently no results could be collected. A copy of the incident questionnaire can be found on the next page.

# LIVINGSTON PARISH PUBLIC MEETING

## PUBLIC ACTIVITY: INCIDENT/ISSUE QUESTIONNAIRE

### 1. HAZARD TYPE(S):

- A. FLOODING
  - I. RIVERINE
  - II. STORM SURGE
  - III. STREET
  - IV. OTHER (DESCRIBE):
- B. HIGH WINDS (NOT TROPICAL)
- C. COASTAL
  - I. SALTWATER INTRUSION
  - II. EROSION
  - III. OTHER (DESCRIBE):
- D. TROPICAL SYSTEMS
- E. WINTER WEATHER

### F. OTHER:

### 2. DESCRIBE INCIDENT OR ISSUE:

### 3. LOCATION:

A. CITY:

B. ADDRESS OR AREA:

C. LOCALIZED OR DISPERSED:

### 4. INTENSITY:

A. DEPTH (FLOODING) OR SIZE (HAIL, ETC.):

B. WIND STRENGTH

### 5. RE-OCCURRING OR ONE-TIME

A. IF RE-OCCURRING, HOW OFTEN?

6. WHAT TYPE OF INTERRUPTIONS DOES/DID THE INCIDENT OR ISSUE CAUSE? (BUSINESS CLOSURE, DAMAGE, EVACUATION, ETC.)

7. HOW LONG WAS THE INTERRUPTION (HOURS, DAYS, WEEKS, ETC.)?

8. HOW COULD THIS PROBLEM OR IMPACT BE PREVENTED, FIXED OR ALLEVIATED?

## Outreach Activity #3: 2021 Livingston Parish Hazard Mitigation Plan Public Review

**Date:** Ongoing

**Location:** SDMI Hazard Mitigation Website

**Public Initiation:** Yes

After an initial review by Livingston Parish and its communities was completed, the 2021 Livingston Parish Hazard Mitigation Plan was made available for public review and comment. The plan was hosted on SDMI's Hazard Mitigation website: <http://hmplans.sdmi.lsu.edu/Home/Parish/livingston>. The citizens of Livingston Parish were notified of the plan review via parish and municipal websites, as well as social media accounts. Examples of these notifications can be found below.

The screenshot shows a web browser window with the address bar displaying "walker.la.us". The page content includes a navigation menu on the left with links to various city departments and services. The main content area features a banner for a prayer service on Thursday, May 6, 2021, at 11:00 a.m. at Sidney Hutchinson Park. Below this, there is a section titled "Livingston Parish and its partners are seeking community input for the 2021 Livingston Parish Hazard Mitigation Plan update!". This section contains a paragraph of text explaining that the 2021 Livingston Parish Multi-Jurisdictional Hazard Mitigation Plan draft is now available for public review and comment from Tuesday, May 4 to Friday, May 7. It provides the URL <https://hmplans.sdmi.lsu.edu/Home/Parish/livingston> and describes the website's features, including displaying plan development status, meeting presentations, and a comment submission box. A purple box on the website is mentioned as containing a "Download Draft Plan" link. The right sidebar contains promotional banners for "EMAIL ALERT SIGN UP", "UTILITY PAYMENTS ONLINE", and "OTHER ONLINE PAYMENTS".

The graphic features the City of Walker Louisiana logo at the top, which includes the text "CITY OF WALKER LOUISIANA" and "City Living Country Charm". Below the logo, the text reads: "Livingston Parish and its partners are seeking community input for the 2021 Livingston Parish Hazard Mitigation Plan update!". This is followed by a paragraph: "The 2021 Livingston Parish Multi-Jurisdictional Hazard Mitigation Plan draft is now available for public review and comment. The plan will be open for comment from the morning of Tuesday, May 4 until the COB Friday, May 7. The Livingston Parish Plan Development website can be found at the following URL: <https://hmplans.sdmi.lsu.edu/Home/Parish/livingston>. It displays the plan development status, houses copies of the meeting presentations, and allows for the submission of comments at the bottom of the page. To download a copy of the draft plan for review, click on the purple box containing the text 'Download Draft Plan'."

## 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 Livingston Parish Government, along with the 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 parish 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

Livingston Parish Government and the Hazard Mitigation Steering Committee have developed a method to ensure that a regular review and update of the Hazard Mitigation Plan occurs. This will be the responsibility of the Livingston Parish Government, as well as the Hazard Mitigation 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 Livingston Parish Government to be assigned as deemed appropriate.

### Methods for Monitoring and Evaluating the Plan and Plan Evaluation Criteria

Livingston Parish Government and the Hazard Mitigation Steering Committee have 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 Livingston Parish Government 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 Livingston Parish Government 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. Livingston Parish Government and the Hazard Mitigation Steering Committee will be responsible for updating the

HMP. 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 Livingston 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, as well as at the Livingston Parish Government Website.

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 Livingston Parish Government. 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 Livingston Parish Government 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 Livingston Parish Hazard Mitigation Plan Steering Committee and participating jurisdictions to determine additional implementation procedures when appropriate. This may include integrating the requirements of the Livingston Parish Hazard Mitigation Plan into each jurisdiction's planning documents, processes, or mechanisms as follows:

- Ordinances, Resolutions, Regulations
- Floodplain Ordinances
- Comprehensive/Master Plan
- Economic Development Plan
- Emergency Operations Plans
- Continuity of Operations Plans
- Debris Removal Plan
- Transportation Plan
- Stormwater Management Plan
- 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 Livingston 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 Livingston 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 Livingston Hazard Mitigation Plan into other planning documents when appropriate. The members of the steering committee will remain charged with ensuring that the goals and strategies of new and updated local planning documents for their jurisdictions or agencies are consistent with the goals and actions of the Livingston Parish Hazard Mitigation Plan, and will not contribute to increased hazard vulnerability within the parish. Most notably, Livingston Parish is in the process of updating their Master Plan and will incorporate the mitigation strategy from this FEMA approved hazard mitigation plan into the Master Plan process and document.

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 Albany, City of Denham Springs, Village of French Settlement, Town of Killian, Town of Livingston, Village of Port Vincent, Town of Springfield, and City of Walker, Livingston Parish Government 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 plans incorporate requirements of the Livingston Parish Hazard Mitigation Plan Update as follows:

Livingston Parish Unincorporated			
<i>Comprehensive Master Plan</i>	Updated as needed	Livingston Parish Government	✓
<i>Local Emergency Operations Plan</i>	Updated as needed	Livingston Parish OHSEP	✓
<i>Economic Development Plan</i>	Updated as needed	Livingston Economic Development Council	✓
<i>Stormwater Management Plan</i>	Updated as needed	Livingston Department of Public Works	✓
Community Wildfire Protection Plan	Updated as needed	Livingston Parish OHSEP	✓



## Town of Albany

<i>Local Emergency Operations Plan</i>	Updated as needed	Mayor of Albany and Livingston Parish OHSEP	✓
<i>Continuity of Operations Plan</i>	Updated as needed	Mayor of Albany and Livingston Parish OHSEP	✓

## City of Denham Springs

**\*\*There are no local plans to incorporate in the City of Denham Springs\*\***

## Village of French Settlement

<i>Comprehensive Master Plan</i>	Updated as needed	Mayor of French Settlement and Livingston Parish Government	✓
<i>Capital Improvements Plan</i>	Update as Needed	Mayor of French Settlement and Livingston Parish Government	✓
<i>Economic Development Plan</i>	Updated as needed	Mayor of French Settlement and Livingston Economic Development Council	✓
<i>Local Emergency Operations Plan</i>	Updated as needed	Mayor of French Settlement and Livingston Parish OHSEP	✓
<i>Continuity of Operations Plan</i>	Updated as needed	Mayor of French Settlement and Livingston Parish OHSEP	✓
<i>Transportation Plan</i>	Update as needed	Mayor of French Settlement and Livingston Parish Government	✓
<i>Stormwater Management Plan</i>	Updated as needed	Mayor of French Settlement and Livingston Department of Public Works	✓
<i>Community Wildfire Protection Plan</i>	Updated as needed	Mayor of French Settlement and Livingston Parish OHSEP	✓

## Town of Killian

<i>Capital Improvements Plan</i>	Updated as needed	Mayor of Killian and Livingston Parish Government	✓
<i>Local Emergency Operations Plan</i>	Updated as needed	Mayor of Killian and Livingston Parish OHSEP	✓
<i>Continuity of Operations Plan</i>	Updated as needed	Mayor of French Settlement and Livingston Parish OHSEP	✓

## Town of Livingston

<i>Comprehensive Master Plan</i>	Updated as needed	Mayor of Livingston and Livingston Parish Government	✓
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## Village of Port Vincent

\*\*There are no local plans to incorporate in the Village of Port Vincent\*\*

## Town of Springfield

<i>Local Emergency Operations Plan</i>	Updated as needed	Mayor of Springfield and Livingston Parish OHSEP	✓
<i>Continuity of Operations Plan</i>	Updated as needed	Mayor of Springfield and Livingston Parish OHSEP	✓

## City of Walker

<i>Comprehensive Master Plan</i>	Updated as needed	Mayor of Walker and Livingston Parish Government	✓
<i>Capital Improvements Plan</i>	Update as Needed	Mayor of Walker and Livingston Parish Government	✓
<i>Economic Development Plan</i>	Updated as needed	Mayor of Walker and Livingston Economic Development Council	✓
<i>Local Emergency Operations Plan</i>	Updated as needed	Mayor of Walker and Livingston Parish OHSEP	✓
<i>Continuity of Operations Plan</i>	Updated as needed	Mayor of Walker and Livingston Parish OHSEP	✓
<i>Transportation Plan</i>	Update as needed	Mayor of Walker and Livingston Parish Government	✓
<i>Stormwater Management Plan</i>	Updated as needed	Mayor of Walker and Livingston Department of Public Works	✓

### 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.

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Fire District 10		X		X	X	X	X	X
Livingston Parish Fire District 9		X	X	X	X	X	X	X
Fire District 5 Station 1 (Main Station)		X		X	X	X	X	X
Fire District 5 Station 2 (North Station)		X		X	X	X	X	X
Fire District 5 Station 3 (South Station)		X	X	X	X	X	X	X
Fire District 5 Station 4		X		X	X	X	X	X
Fire District 9 Station 1	X	X		X	X	X	X	X
Fire District 9 Station 2		X	X	X	X	X	X	X
Fire District 8 Station 1		X		X	X	X	X	X
Fire District 8 Station 2		X		X	X	X	X	X
Fire District 7 Station 1		X		X	X	X	X	X
Fire District 7 Station 2		X		X	X	X	X	X
Fire District 6 Station		X		X	X	X	X	X
Fire District 4 Station 1		X		X	X	X	X	X
Fire District 4 Station 2		X		X	X	X	X	X
Fire District 4 Station 3		X		X	X	X	X	X
Fire District 4 Station 4		X	X	X	X	X	X	X
Fire District 4 Station 5		X		X	X	X	X	X
Fire District 4 Station 6		X	X	X	X	X	X	X
Fire District 4 Station 7		X		X	X	X	X	X
Fire District 4 Station 8		X		X	X	X	X	X
Fire District 4 Station 9		X		X	X	X	X	X
Fire District 4 Station 10		X	X	X	X	X	X	X
Fire District 3 Station		X	X	X	X	X	X	X
Fire District 2 Station 1		X		X	X	X	X	X
Fire District 2 Station 2		X		X	X	X	X	X
Fire District 2 Station 3		X		X	X	X	X	X
Fire District 2 Station 4		X		X	X	X	X	X
Fire District 2 Station 5		X		X	X	X	X	X
Springfield Fire & Rescue		X		X	X	X	X	X
Town of Livingston Fire Department		X		X	X	X	X	X
Cronin Oaks Fire Dept		X		X	X	X	X	X
District 10 Vol Fire Dept Station 3		X	X	X	X	X	X	X
Fire Station #2		X		X	X	X	X	X
Livingston Parish District 4 Station 6		X	X	X	X	X	X	X
Livingston Parish District 4 Station 10		X	X	X	X	X	X	X
Fire Protection District 4 Station		X		X	X	X	X	X

Law Enforcement	Albany Police Dept.		X		X	X	X	X	X	
	Denham Springs Police Department		X	X	X	X	X	X	X	
	French Settlement Police Department		X	X	X	X	X	X	X	
	Killian Police Building		X		X	X	X	X	X	
	Livingston Parish Detention Center		X	X	X	X	X	X	X	
	Livingston Parish Sheriff's Office Training Facility		X	X	X	X	X	X	X	
	Livingston Tower	X	X		X	X	X	X	X	
	Central Tower		X		X	X	X	X	X	
	Elm Park Tower		X		X	X	X	X	X	
	Greensburg Tower		X		X	X	X	X	X	
	Washington Tower		X		X	X	X	X	X	
	Livingston Parish Sheriff's Office Work Release		X	X	X	X	X	X	X	
	Livingston Parish Sheriff's Office Fleet Operations		X	X	X	X	X	X	X	
	Livingston Parish Sheriff's Office Firing Range		X	X	X	X	X	X	X	
	Springfield Police Department		X		X	X	X	X	X	
	Livingston Police Department		X		X	X	X	X	X	
Walker Police Department		X	X	X	X	X	X	X		
Port Vincent Police Department		X		X	X	X	X	X		
Public Health	Livingston Parish Health Unit		X		X	X	X	X	X	
	Our Lady of The Lake		X	X	X	X	X	X	X	
	North Oaks Clinic	X	X	X	X	X	X	X	X	
Schools	Albany High School		X		X	X	X	X	X	
	Albany Middle School		X		X	X	X	X	X	
	Albany Upper Elementary		X		X	X	X	X	X	
	Albany Lower Elementary		X		X	X	X	X	X	
	French Settlement Elementary School		X		X	X	X	X	X	
	French Settlement High School		X		X	X	X	X	X	
	Gray's Creek Elementary School		X		X	X	X	X	X	
	Live Oak Jr. High		X		X	X	X	X	X	
	Live Oak Elementary		X	X	X	X	X	X	X	
	Live Oak High School		X		X	X	X	X	X	
	North Live Oak Elementary		X		X	X	X	X	X	
Live Oak Middle		X		X	X	X	X	X		





## Appendix D: Plan Adoption

### Livingston Parish

**STATE OF LOUISIANA****PARISH OF LIVINGSTON****LPR NO. 21-182**

MOTION was made by Randy Delatte and duly seconded by Jeff Ard to adopt the 2021 update of the Livingston Parish Multi-Jurisdictional Hazard Mitigation Plan as follows:

**L.P. RESOLUTION NO. 21-182****A RESOLUTION OF THE PARISH OF LIVINGSTON****2021 LIVINGSTON PARISH MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN**

**WHEREAS**, the Unincorporated Livingston Parish recognizes the threat that natural hazards pose to people and property within Unincorporated Livingston Parish; and

**WHEREAS**, the Unincorporated Livingston Parish has prepared a multi-hazard mitigation plan, hereby known as 2021 LIVINGSTON PARISH MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN in accordance with the Disaster Mitigation Act of 2000; and

**WHEREAS**, 2021 LIVINGSTON PARISH MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in Unincorporated Livingston Parish from the impacts of future hazards and disasters; and

**WHEREAS**, adoption by the Unincorporated Livingston Parish demonstrates their commitment to the hazard mitigation and achieving the goals outlined in the 2021 LIVINGSTON PARISH MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN.

**NOW THEREFORE, BE IT RESOLVED** BY THE Unincorporated Livingston Parish, LOUISIANA, THAT:

**Section 1.** In accordance with the provisions for adopting resolutions set forth in the Livingston Parish Home Rule Charter, THE UNINCORPORATED LIVINGSTON PARISH adopts the 2021 LIVINGSTON PARISH MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN.

Upon being submitted to a vote, the vote thereon was as follows:

YEAS: MR. GIRLINGHOUSE, MR. MACK, MR. KEEN, MR. ARD, MR. TALBERT, MR. HARRIS, MR. MCMORRIS, MR. DELATTE

NAYS: NONE

ABSENT: MR. WASCOM

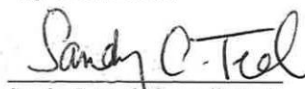
ABSTAIN: NONE

Thereupon the chair declared that the Motion had carried and was adopted.

**CERTIFICATE**

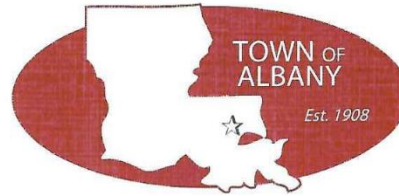
I, Sandy C. Teal, do hereby certify that I am the duly appointed Council Clerk of the Livingston Parish Council, State of Louisiana. I hereby further certify that the above and foregoing is a true and correct copy of a Motion adopted by the Livingston Parish Council at a regular meeting held on June 10, 2021 in which meeting a quorum was present.

WITNESS my official signature and seal of office at Livingston, Louisiana, this the 16<sup>th</sup> day of June 2021.



Sandy C. Teal, Council Clerk  
Livingston Parish Council

## Town of Albany



- MAYOR -  
EILEEN BATES-McCARROLL

- CLERK -  
KIMBERLEE "JOEY"  
COOPER

29816 S. MONTPELIER  
P. O. BOX 1000  
ALBANY, LOUISIANA 70711

- COUNCIL -  
RONNIE GREGOIRE  
LLOYD "BEE" MARTIN  
GERALD STILLEY  
JERRY GLASCOCK  
KIM STEWART

TOWN OF ALBANY

LOUISIANA

RESOLUTION NO. 004-2021

A RESOLUTION OF THE TOWN OF ALBANY

2021 HAZARD MITIGATION PLAN

WHEREAS the MAYOR AND TOWN COUNCIL recognizes the threat that natural hazards pose to people and property within TOWN OF ALBANY; and

WHEREAS the TOWN OF ALBANY has prepared a multi-hazard mitigation plan, hereby known 2021 HAZARD MITIGATION PLAN in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS 2021 HAZARD MITIGATION PLAN identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in TOWN OF ALBANY from the impacts of future hazards and disasters; and

WHEREAS adoption by the MAYOR AND TOWN COUNCIL demonstrates their commitment to the hazard mitigation and achieving the goals outlined in the 2021 HAZARD MITIGATION PLAN.

NOW THEREFORE, BE IT RESOLVED BY THE TOWN OF ALBANY, LOUISIANA, THAT:

I hereby certify that the above and foregoing is true and correct copy of the resolutions adopted at a duly called meeting of the Mayor and Town Council of the Town of Albany held on 14<sup>th</sup> day of June, 2021, after due notice, and at which a quorum was present and voting. Town Council adopts the 2021 HAZARD MITIGATION PLAN.

ADOPTED by a vote of 5 in favor and 0 against, and 0 abstaining, this 14<sup>TH</sup> day of June, 2021.

By: Eileen Bates-McCarroll  
Eileen Bates-McCarroll, Mayor

ATTEST:

By: Joey Cooper  
Joey Cooper, Town Clerk

## City of Denham Springs

DENHAM SPRINGS

LOUISIANA

A RESOLUTION OF THE CITY OF DENHAM SPRINGS

2021 Livingston Parish Multi-Jurisdictional Hazard Mitigation Plan

WHEREAS the City of Denham Springs government recognizes the threat that natural hazards pose to people and property within Denham Springs; and

WHEREAS the City of Denham Springs has prepared a multi-hazard mitigation plan, hereby known as 2021 Livingston Parish Multi-Jurisdictional Hazard Mitigation Plan in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS 2021 Livingston 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 Denham Springs from the impacts of future hazards and disasters; and

WHEREAS adoption by the City of Denham Springs demonstrates their commitment to hazard mitigation and achieving the goals outlined in the 2021 Livingston Parish Multi-Jurisdictional Hazard Mitigation Plan.

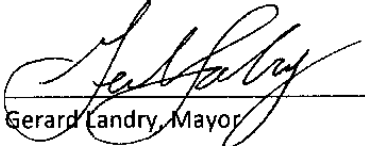
NOW THEREFORE, BE IT RESOLVED BY THE CITY OF DENHAM SPRINGS, LOUISIANA, THAT:

Section 1. In accordance with Lawrason Act, The City of Denham Springs adopts the 2021 Livingston Parish Multi-Jurisdictional Hazard Mitigation Plan.

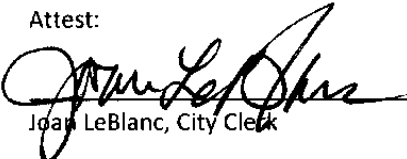
The Resolution was offered by Poole and seconded by Smith.

Yeas:           Dugas  
                  Lamm-Williams  
                  Poole  
                  Smith  
                  Wesley  
Nays:           None  
Absent:        None  
Abstain:       None

The Resolution was adopted on June 8, 2021.

  
Gerard Landry, Mayor

Attest:

  
Joan LeBlanc, City Clerk

## Village of French Settlement

VILLAGE OF FRENCH SETTLEMENT  
LOUISIANA

## RESOLUTION NO. 3 OF 2021

## A RESOLUTION OF THE VILLAGE OF FRENCH SETTLEMENT

## 2021 LIVINGSTON PARISH MULTI JURISDICTIONAL HAZARD MITIGATION PLAN

WHEREAS the VILLAGE OF FRENCH SETTLEMENT recognizes the threat that natural hazards pose to people and property within FRENCH SETTLEMENT, LA and

WHEREAS the VILLAGE OF FRENCH SETTLEMENT has prepared a multi-hazard mitigation plan, hereby known as 2021 LIVINGSTON PARISH MULTI JURISDICTIONAL HAZARD MITIGATION PLAN in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS 2021 LIVINGSTON PARISH MULTI JURISDICTIONAL HAZARD MITIGATION PLAN identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the VILLAGE OF FRENCH SETTLEMENT from the impacts of future hazards and disasters; and

WHEREAS adoption by the VILLAGE OF FRENCH SETTLEMENT demonstrates their commitment to the hazard mitigation and achieving the goals outlined in the 2021 LIVINGSTON PARISH MULTI JURISDICTIONAL HAZARD MITIGATION PLAN

NOW THEREFORE, be it resolved by the Alderman of the Village of French Settlement that the Mayor and Board of Alderman does hereby adopt the overall 2021 LIVINGSTON PARISH MULTI JURISDICTIONAL HAZARD MITIGATION PLAN on this the 17<sup>th</sup> day of June, 2021.

A voice vote was called for and resulted as follows:

YEAS: Alderman Rastridge, Alderman Moran, Alderman Porche

NAYS: none

ABSENT: none

ATTEST:

  
HALEY T. UNBEHAGEN, Mayor

  
AMIE C. GAUTREAU, Clerk

Town of Killian

TOWN OF KILLIAN

STATE OF LOUISIANA

RESOLUTION NO. 2021

A RESOLUTION OF THE TOWN OF KILLIAN

2021 LIVINGSTON PARISH MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

WHEREAS, the Town of Killian recognizes the threat that natural hazards pose to people and property within the Town of Killian; and

WHEREAS, the Town of Killian has prepared a multi-hazard mitigation plan, hereby known as 2021 Livingston Parish Multi-Jurisdictional Hazard Mitigation Plan in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS, 2021 Livingston Parish Multi-Jurisdictional Hazard Mitigation Plan identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the Town of Killian from the impacts of future hazards and disasters; and

WHEREAS, adoption by the Mayor and Council of the Town of Killian demonstrates their commitment to the hazard mitigation and achieving the goals outlined in the 2021 Livingston Parish Multi-Jurisdictional Hazard Mitigation Plan.

NOW THEREFORE, BE IT RESOLVED BY THE TOWN OF KILLIAN, STATE OF LOUISIANA, THAT:

Section 1. In accordance with adopting the 2021 Livingston Parish Multi-Jurisdictional Hazard Mitigation Plan, the Mayor and Council of the Town of Killian adopts the 2021 Livingston Parish Multi-Jurisdictional Hazard Mitigation Plan.

ADOPTED by a vote of 4 in favor and 0 against, and 0 abstaining, this 8<sup>th</sup> day of June, 2021.

By: [Signature]

Gillis Windham, Mayor

ATTEST:

By: [Signature]

Cathy Posey, Clerk

APPROVED AS TO FORM:

By: [Signature]

## Town of Livingston

TOWN OF LIVINGSTON  
STATE OF LOUISIANA

Mr. Joey Sibley made a motion, duly seconded by Mr. Dusty Glascock, to adopt the following resolution:

## RESOLUTION 2021-07

## A RESOLUTION OF THE TOWN OF LIVINGSTON

## LIVINGSTON PARISH MULTI- JURISDICTIONAL HAZARD MITIGATION PLAN 2021-2026.

WHEREAS, the Town of Livingston recognizes the threat that natural hazards pose to people and property within Livingston; and

WHEREAS, the Town of Livingston has prepared a multi-hazard mitigation plan, hereby known as Livingston Parish Multi-Jurisdictional Hazard Mitigation Plan 20021- 2026 in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS, Livingston Parish Multi-Jurisdictional Hazard Mitigation Plan 20021- 2026 identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in Town of Livingston from the impacts of future hazards and disasters; and

WHEREAS adoption by the Town of Livingston demonstrates their commitment to the hazard mitigation and achieving the goals outlined in the Livingston Parish Multi-Jurisdictional Hazard Mitigation Plan 20021- 2026.

NOW THEREFORE, BE IT RESOLVED BY THE TOWN OF LIVINGSTON, LOUISIANA, THAT:  
Section 1. In accordance with Lawson Act, the Town of Livingston adopts the Livingston Parish Multi-Jurisdictional Hazard Mitigation Plan 20021- 2026.

Passed and adopted by the **TOWN OF LIVINGSTON**, State of Louisiana, on this 10<sup>th</sup> day of June, 2021, by the following votes:

Yeas: J. Nesom, J. Sibley, K. Stewart, and D. Glascock.  
Nays: None.  
Absent: R. Stewart.

And the resolution was declared adopted on this 10<sup>th</sup> day of June, 2021.

  
\_\_\_\_\_  
Jonathon Taylor, Mayor

ATTEST:

  
\_\_\_\_\_  
Lea McDonald, Clerk

## Village of Port Vincent

**RESOLUTION****Village of Port Vincent**

The following Resolution was offered by a motion from Kolby Frederick, seconded by Elda Carter:

**RESOLUTION APPROVING  
LIVINGSTON PARISH HAZARD MITIGATION PLAN UPDATE FOR 2021**

**WHEREAS** the Village of Port Vincent recognizes the threat that natural hazards pose to people and property within the Village of Port Vincent; and,

**WHEREAS** the Village of Port Vincent has prepared a multi-hazard plan, hereby known as 2021 Livingston Parish Hazard Mitigation Plan Update in accordance with the Disaster Mitigation Act of 2000; and,

**WHEREAS** the 2021 Livingston Parish Hazard Mitigation Plan Update identifies mitigation goals to reduce or eliminate long-term risk to people and property in the Village of Port Vincent from the impacts of future hazards and disasters; and,

**WHEREAS** adoption by the Village of Port Vincent demonstrates their commitment to the hazard mitigation and achieving the goals outlined in the 2021 Livingston Parish Hazard Mitigation Plan Update.

**NOW THEREFORE**, be it resolved by the Board of Aldermen of the Village of Port Vincent that the mayor and board does hereby adopt the Livingston Parish Hazard Mitigation Plan Update for 2021.

This Resolution shall take effect immediately and having been submitted to a vote, the vote thereon was as follows:

Yeas: Carter, Frederick, Fredericks

Nays: NONE

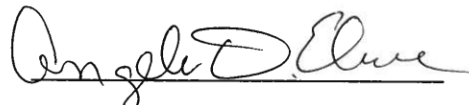
Absent: NONE

**THUS DONE AND ADOPTED**, this the 1<sup>st</sup> day of July, 2021.

ATTEST:



Lacy Karpinski, Clerk



Angela D. Elmore, Mayor

## Town of Springfield

## TOWN OF SPRINGFIELD MULT JURISDICTIONAL

## HAZARD MITIGATION PLAN 2021-2026

TOWN OF SPRINGFIELD

SPRINGFIELD, LOUISIANA

RESOLUTION NO. 06-16-2021

A RESOLUTION OF THE Town Of Springfield

Livingston Parish 2021-2026 Multi-Jurisdictional Hazard Mitigation Plan

WHEREAS the Springfield Mayor and Board of Alderman recognizes the threat that natural hazards pose to the people and property within the Springfield Corporate limits; and

WHEREAS The Town Of Springfield has prepared a hazard mitigation plan, hereby known as the Livingston Parish 2021-2026 Multi-Jurisdictional Hazard Mitigation Plan in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS The Livingston Parish 2021-2026 Multi-Jurisdictional Hazard Mitigation plan identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in Springfield Louisiana from the impacts of future hazards and disasters; and

WHEREAS adoption by the Springfield Board of Alderman demonstrates their commitment to the hazard mitigation and achieving the goals outlined in The Livingston Parish 2021-2026 Multi-Jurisdictional Hazard Mitigation plan

NOW THEREFORE, BE IT RESOLVED BY THE Mayor and Board Of Aldermen SPRINGFIELD LOUISIANA, THAT:

In accordance with Town of Springfield ordinances, The Springfield Board of Alderman adopts the Livingston Parish 2021-2026 Multi-Jurisdictional Hazard Mitigation.

Upon being submitted to a vote, the vote there on was as follows:

YEAS: *Miller, Hill, Martin, Bryson, Starkey*

NAYS: *None*

ABSENT: *None*

THERE UPON, THE MAYOR DECLARED THAT THE MOTION CARRIED AND WAS ADOPTED

WITNESS BY THE APPOINTED CLERK, MARIE KREUTZER AND CERTIFIED THAT THE ABOVE AND FORGOING IS A TRUE AND CORRECT COPY OF A RESOLUTION ADOPTED BY THE SPRINGFIELD BOARD OF ALDERMAN AT THE REGULAR MONTHLY MEETING HELD ON WEDNESDAY, JUNE 16 2021 AT WHICH MEETING A QUORUM WAS PRESENT

WITNESS, MY OFFICAL SIGNATURE AND SEAL OF OFFICE AT SPRINGFIELD LOUISIANA THIS 16<sup>TH</sup> DAY OF JUNE, 2021.



MARIE KREUTZER, CLERK, TOWN OF SPRINGFIELD



## City of Walker

**RESOLUTION OF THE CITY COUNCIL  
CITY OF WALKER, LOUISIANA**

The following Resolution was offered by a motion from Gary Griffin, seconded by Richard Wales:

**RESOLUTION APPROVING  
LIVINGSTON PARISH HAZARD MITIGATION PLAN UPDATE FOR 2021**

WHEREAS the City of Walker recognizes the threat that natural hazards pose to people and property within the City of Walker; and,

WHEREAS the City of Walker has prepared a multi-hazard mitigation plan, hereby known as 2021 Livingston Parish Hazard Mitigation Plan Update in accordance with the Disaster Mitigation Act of 2000; and,

WHEREAS the 2021 Livingston Parish Hazard Mitigation Plan Update identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the City of Walker from the impacts of future hazards and disasters; and,

WHEREAS adoption by the City of Walker demonstrates their commitment to the hazard mitigation and achieving the goals outlined in the 2021 Livingston Parish Hazard Mitigation Plan Update.

This Resolution shall take effect immediately. This Resolution having been submitted to a vote. The vote thereon was as follows:

Yeas:	Cook, Clark, Griffin, Major, Wales
Nays:	NONE
Absent:	NONE

## CERTIFICATE

This is to certify that the above is a true and correct copy of a Resolution adopted on the 8th day of June 14, 2021, by the Council of the City of Walker, Louisiana, at the regular scheduled meeting at the City Hall, Walker, Louisiana, on said date, at which meeting a quorum was present and voted unanimously in favor thereof and this Resolution has not been revoked or rescinded.

  
Tammy Payton, Municipal Clerk

  
Mr. Jimmy Watson, Mayor

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## Appendix E: State Required Worksheets

During the planning process (Appendix A) 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 (Element E) for the update. The plan update worksheets allowed for collection of information such as planning team members, community capabilities, critical infrastructure and vulnerable populations and NFIP information. The following pages contain documentation of the state required worksheets.

### Mitigation Planning Team

Livingston Parish Hazard Mitigation Planning Committee				
Name	Title	Agency	Email	Phone Number
Steve Kistler	Grant Manager	Livingston Parish Government	<a href="mailto:skistler@lpgov.com">skistler@lpgov.com</a>	225-686-4412
Sarah Allen	Grant Coordinator	Livingston Parish Government	<a href="mailto:sallen@lpgov.com">sallen@lpgov.com</a>	225-686-4415
Brandi Janes	Director	LOHSEP	<a href="mailto:lohsep1@lpgov.com">lohsep1@lpgov.com</a>	225-686-3066
Dee Dee Delatte	Permit Director	Livingston Parish Government	<a href="mailto:ddalatte@lpgov.com">ddalatte@lpgov.com</a>	225-686-3021
Wendy Bouilly	Flood Plain Manager	Livingston Parish Government	<a href="mailto:wbouilly@lpgov.com">wbouilly@lpgov.com</a>	225-686-3021
Jimmy Jones	Police Chief	Town of Springfield	<a href="mailto:springpd38@yahoo.com">springpd38@yahoo.com</a>	225-620-5122
Marie Kreutzer	Town Clerk	Town of Springfield	<a href="mailto:springfdlaclerk@yahoo.com">springfdlaclerk@yahoo.com</a>	225-294-3150
Gillis Windham	Mayor	Town of Killian	<a href="mailto:gilliswindham@yahoo.com">gilliswindham@yahoo.com</a>	225-695-6785
Cathy Posey	Town Clerk	Town of Killian	<a href="mailto:killiantownhall@eatel.net">killiantownhall@eatel.net</a>	225-695-6785
J.T. Taylor	Mayor	Town of Livingston	<a href="mailto:jt@townoflivingston.com">jt@townoflivingston.com</a>	225-686-7153
Lea McDonald	Town Clerk	Town of Livingston	<a href="mailto:lmcdonald@townoflivingston.com">lmcdonald@townoflivingston.com</a>	225-686-7153
Jason Populus	Emergency Manager	City of Denham Springs	<a href="mailto:jpopulus@cityofdenhamsprings.com">jpopulus@cityofdenhamsprings.com</a>	225-665-8121
Rick Foster	Building Official	City of Denham Springs	<a href="mailto:rfoster@cityofdenhamsprings.com">rfoster@cityofdenhamsprings.com</a>	225-665-8121
Nancy Kimble	Building Official	City of Walker	<a href="mailto:nancy.kimble@walker-la.gov">nancy.kimble@walker-la.gov</a>	225-665-8893
Lynette Richardson	Floodplain Manager	City of Walker	<a href="mailto:Lynette.Richardson@Walker-LA.gov">Lynette.Richardson@Walker-LA.gov</a>	225-665-8893
Mary Gourdon	Admin. Assistant	Village of Port Vincent	<a href="mailto:Admin@portvincent-la.gov">Admin@portvincent-la.gov</a>	225-698-9891
Angela Elmore	Mayor	Village of Port Vincent	<a href="mailto:Admin@portvincent-la.gov">Admin@portvincent-la.gov</a>	225-698-9891
Haley Unbehagen	Mayor	Town of French Settlement	<a href="mailto:hunbehagen@eatel.net">hunbehagen@eatel.net</a>	225-698-6100
Lawrence Callender	Emergency Manager	Town of French Settlement	<a href="mailto:callenderfspd@hotmail.com">callenderfspd@hotmail.com</a>	225-698-6100
Eileen McCarroll	Mayor	Town of Albany	<a href="mailto:mayor@townofalbanyla.com">mayor@townofalbanyla.com</a>	225-567-1101
Alisha Staggs	Admin. Assistant	Town of Albany	<a href="mailto:alisha.staggs@townofalbanyla.com">alisha.staggs@townofalbanyla.com</a>	225-567-1101

## Capability Assessment

### Unincorporated Livingston Parish

Capability Assessment Worksheet		
Livingston Unincorporated		
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	Yes	
Capital Improvements Plan	No	
Economic Development Plan	Yes	
Local Emergency Operations Plan	Yes	
Continuity of Operations Plan	No	
Transportation Plan	No	
Stormwater Management Plan	Yes	
Community Wildfire Protection Plan	Yes	
Other plans (redevelopment, recovery, coastal zone management)	No	
Building Code, Permitting and Inspections	Yes / No	Comments
Building Code	Yes	Version / Year 2015- IBC/IRC 2015-IBC/IRC
Building Code Effectiveness Grading Schedule (BCEGS) Score	Yes	Score Yes
Fire Department ISO/PIAL rating	Yes	Rating 9 Yes
Site plan review requirements	Yes	
Land Use Planning and Ordinances	Yes / No	Comments
Zoning Ordinance	No	No
Subdivision Ordinance	Yes	Yes
Floodplain Ordinance	Yes	Yes
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	Yes	Yes
Flood Insurance Rate Maps	Yes	Yes
Acquisition of land for open space and public recreation uses	Yes	Yes
Other	No	No

<b>Administration and Technical</b>		
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.		
<b>Administration</b>	<b>Yes / No</b>	<b>Comments</b>
Planning Commission	Yes	
Mitigation Planning Committee	Yes	
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	Yes	DPW
<b>Staff</b>	<b>Yes / No</b>	<b>Comments</b>
Chief Building Official	Yes	20%
Floodplain Administrator	Yes	30%
Emergency Manager	Yes	
Community Planner	Yes	5%
Civil Engineer	Yes	
GIS Coordinator	Yes	Outsourced
Grant Writer	Yes	
Other	Yes	
<b>Technical</b>	<b>Yes / No</b>	<b>Comments</b>
Warning Systems / Service (Reverse 911, outdoor warning signals)	Yes	Livingston Parish Public School, Livingston Parish Sheriff's Office, Social Media
Hazard Data & Information	Yes	
Grant Writing	Yes	
Hazus Analysis	No	
Other	Yes	DOTD, PW

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	No	
Fees for water, sewer, gas, or electric services	Yes	No
Impact fees for new development	No	
Stormwater Utility Fee	Yes	
Community Development Block Grant (CDBG)	Yes	
Other Funding Programs	Yes	Road Program, Bridge Program, (All-System), DOTD, PW

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.	Yes	Social Media, Library, Website
Ongoing public education or information program (responsible water use, fire safety, household preparedness, environmental education)	Yes	
Natural Disaster or safety related school program	Yes	
Storm Ready certification	Yes	
Firewise Communities certification	No	C.E.R.T.
Public/Private partnership initiatives addressing disaster-related issues	Yes	
Other	No	

## Town of Albany

Capability Assessment Worksheet		
Albany		
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	In progress
Continuity of Operations Plan	Yes	In progress
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	Follows Livingston Parish guideline
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	Follows Livingston Parish guideline
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	No	Follows Livingston Parish guideline
Flood Insurance Rate Maps	No	Follows Livingston Parish guideline
Acquisition of land for open space and public recreation uses	Yes	
Other	No	

<b>Administration and Technical</b>		
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.		
<b>Administration</b>	<b>Yes / No</b>	<b>Comments</b>
Planning Commission	No	
Mitigation Planning Committee	No	
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	Yes	
<b>Staff</b>	<b>Yes / No</b>	<b>Comments</b>
Chief Building Official	Yes	Provided by Livingston Parish
Floodplain Administrator	Yes	Provided by Livingston Parish
Emergency Manager	Yes	Mayor and Fire Chief
Community Planner	Yes	Mayor
Civil Engineer	No	
GIS Coordinator	No	
Grant Writer	No	
Other	No	
<b>Technical</b>	<b>Yes / No</b>	<b>Comments</b>
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	Yes	
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 Denham Springs

Capability Assessment Worksheet		
Denham Springs		
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	Bike/Ped Plan
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	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)	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	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	Yes	
GIS Coordinator	Yes	
Grant Writer	Yes	
Other	No	
Technical	Yes / No	Comments
Warning Systems / Service (Reverse 911, outdoor warning signals)	Yes	
Hazard Data & Information	Yes	
Grant Writing	Yes	
Hazus Analysis	Yes	Includes in 2014 O.S. Plan
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	No	Michelle
Fees for water, sewer, gas, or electric services	Yes	
Impact fees for new development	Yes	
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.	Yes	
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	Yes	
Other	No	

## Village of French Settlement

Capability Assessment Worksheet		
French Settlement		
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	Yes	PARISH
Capital Improvements Plan	Yes	Pending
Economic Development Plan	Yes	PARISH
Local Emergency Operations Plan	Yes	PARISH, LOHSEP
Continuity of Operations Plan	Yes	Pending
Transportation Plan	Yes	PARISH
Stormwater Management Plan	Yes	PARISH
Community Wildfire Protection Plan	Yes	PARISH
Other plans (redevelopment, recovery, coastal zone management)	Yes	PARISH/STATE
Building Code, Permitting and Inspections	Yes / No	Comments
Building Code	Yes	Livingston Parish Permit Office
Building Code Effectiveness Grading Schedule (BCEGS) Score	Yes	Livingston Parish Permit Office
Fire Department ISO/PIAL rating	Yes	PARISH/STATE
Site plan review requirements	Yes	PARISH
Land Use Planning and Ordinances	Yes / No	Comments
Zoning Ordinance	No	Livingston Parish Permit Office
Subdivision Ordinance	Yes	Livingston Parish Permit Office
Floodplain Ordinance	Yes	Livingston Parish Permit Office
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	Yes	Livingston Parish Permit Office
Flood Insurance Rate Maps	Yes	Livingston Parish Permit Office
Acquisition of land for open space and public recreation uses	Yes	Public - Town Property
Other	No	

<b>Administration and Technical</b>		
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.		
<b>Administration</b>	<b>Yes / No</b>	<b>Comments</b>
Planning Commission	Yes	PARISH
Mitigation Planning Committee	Yes	PARISH
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	Yes	PARISH/STATE, Entergy & Demco
<b>Staff</b>	<b>Yes / No</b>	<b>Comments</b>
Chief Building Official	Yes	Livingston Parish Permit Office
Floodplain Administrator	Yes	Livingston Parish Permit Office
Emergency Manager	Yes	LOHSEP/FS Mayor
Community Planner	Yes	FS Mayor
Civil Engineer	Yes	PARISH
GIS Coordinator	Yes	PARISH
Grant Writer	Yes	PARISH, FS Mayor
Other	No	
<b>Technical</b>	<b>Yes / No</b>	<b>Comments</b>
Warning Systems / Service (Reverse 911, outdoor warning signals)	Yes	LPSO, LOHSEP
Hazard Data & Information	Yes	PARISH, LOHSEP
Grant Writing	Yes	PARISH, FS Mayor
Hazus Analysis	Yes	PARISH, LOHSEP, GOHSEP, FS Mayor
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	PARISH/STATE Grants, FS not tax based
Authority to levy taxes for specific purposes	Yes	with majority vote of residents
Fees for water, sewer, gas, or electric services	Yes	Quarterly Franchise Fees
Impact fees for new development	No	
Stormwater Utility Fee	No	
Community Development Block Grant (CDBG)	Yes	PARISH/STATE
Other Funding Programs	Yes	LGAP GRANTS

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.	Yes	St. Joseph Catholic Church as a distribution center only in emergency events, high ground - did not flood First Baptist Church of French Settlement also volunteers in the same capacity - did flood in 2016
Ongoing public education or information program (responsible water use, fire safety, household preparedness, environmental education)	Yes	GOHSEP, LOHSEP, French Settlement Elem. School and French Settlement High School
Natural Disaster or safety related school program	Yes	French Settlement Elem. School and French Settlement High School
Storm Ready certification	Yes	PARISH
Firewise Communities certification	Yes	PARISH
Public/Private partnership initiatives addressing disaster-related issues	Yes	St. Joseph Catholic Church, First Baptist Church of French Settlement and Two (2) Best Stop Quick Stops
Other	No	

## Town of Killian

Capability Assessment Worksheet		
Town of Killian		
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	In Progress
Economic Development Plan	No	
Local Emergency Operations Plan	Yes	In Progress
Continuity of Operations Plan	Yes	In Progress
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	Livingston Parish Permit Office
Building Code Effectiveness Grading Schedule (BCEGS) Score	No	
Fire Department ISO/PIAL rating	Yes	Springfield Fire Dist 2
Site plan review requirements	Yes	Parish
Land Use Planning and Ordinances	Yes / No	Comments
Zoning Ordinance	Yes	Livingston Parish Permit Office
Subdivision Ordinance	Yes	Livingston Parish Permit Office
Floodplain Ordinance	Yes	Livingston Parish Permit Office
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	Yes	Livingston Parish Permit Office
Flood Insurance Rate Maps	Yes	Livingston Parish Permit Office
Acquisition of land for open space and public recreation uses	No	
Other	No	



<b>Administration and Technical</b>		
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.		
<b>Administration</b>	<b>Yes / No</b>	<b>Comments</b>
Planning Commission	Yes	Parish
Mitigation Planning Committee	Yes	Parish
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	Yes	Parish/State, Entergy and Demco
<b>Staff</b>	<b>Yes / No</b>	<b>Comments</b>
Chief Building Official	Yes	Livingston Parish Permit Office
Floodplain Administrator	Yes	Provided by Livingston Parish
Emergency Manager	Yes	LOHSEP and Mayor
Community Planner	Yes	Mayor
Civil Engineer	No	
GIS Coordinator	No	
Grant Writer	Yes	Parish and Mayor
Other	No	
<b>Technical</b>	<b>Yes / No</b>	<b>Comments</b>
Warning Systems / Service (Reverse 911, outdoor warning signals)	No	LPSO, LOHSEP
Hazard Data & Information	No	Parish, LOHSEP
Grant Writing	Yes	Parish and Mayor
Hazus Analysis	No	Parish, LOHSEP, GOHSEP
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)	No	
Other Funding Programs	Yes	LGAP,CWEF and other Grants

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.	Yes	
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	

## Town of Livingston

Capability Assessment Worksheet		
Livingston		
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	Yes	
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	Follows Livingston Parish
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	No	
Acquisition of land for open space and public recreation uses	Yes	
Other	No	

<b>Administration and Technical</b>		
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.		
<b>Administration</b>	<b>Yes / No</b>	<b>Comments</b>
Planning Commission	Yes	
Mitigation Planning Committee	No	
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	Yes	
<b>Staff</b>	<b>Yes / No</b>	<b>Comments</b>
Chief Building Official	No	Provided by Livingston Parish
Floodplain Administrator	Yes	
Emergency Manager	Yes	
Community Planner	Yes	
Civil Engineer	Yes	
GIS Coordinator	No	
Grant Writer	No	
Other	No	
<b>Technical</b>	<b>Yes / No</b>	<b>Comments</b>
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	Yes	
Stormwater Utility Fee	No	
Community Development Block Grant (CDBG)	No	We have had in the past
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)	Yes	
Natural Disaster or safety related school program		
Storm Ready certification	No	
Firewise Communities certification	No	
Public/Private partnership initiatives addressing disaster-related issues	No	
Other	No	

## Village of Port Vincent

Capability Assessment Worksheet		
Port Vincent		
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	Through the Parish
Building Code Effectiveness Grading Schedule (BCEGS) Score	No	
Fire Department ISO/PIAL rating	No	
Site plan review requirements	Yes	
Land Use Planning and Ordinances	Yes / No	Comments
Zoning Ordinance	No	
Subdivision Ordinance	Yes	Follows the Parish
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		

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	CEO with Parish
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	Yes	
Grant Writing	Yes	
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	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		

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.	Yes	
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		



## Town of Springfield

Capability Assessment Worksheet		
Springfield		
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	Follow Parish leadership
Continuity of Operations Plan	Yes	Follow Parish leadership
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	Adopted IBC
Building Code Effectiveness Grading Schedule (BCEGS) Score	No	
Fire Department ISO/PIAL rating	Yes	
Site plan review requirements	Yes	Follow Parish guidance
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	

<b>Administration and Technical</b>		
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.		
<b>Administration</b>	<b>Yes / No</b>	<b>Comments</b>
Planning Commission	Yes	Covered by Parish Planning Commission
Mitigation Planning Committee	Yes	Covered by Parish Mitigation Committee
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	Yes	
<b>Staff</b>	<b>Yes / No</b>	<b>Comments</b>
Chief Building Official	Yes	Parish
Floodplain Administrator	Yes	Parish
Emergency Manager	Yes	
Community Planner	No	
Civil Engineer	Yes	PEC (Contractor)
GIS Coordinator	Yes	PEC (Contractor)
Grant Writer	Yes	
Other	No	
<b>Technical</b>	<b>Yes / No</b>	<b>Comments</b>
Warning Systems / Service (Reverse 911, outdoor warning signals)	Yes	Relies on Parish
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	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.	Yes	
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	Yes	
Other	No	

## City of Walker

Capability Assessment Worksheet		
Walker		
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	Yes	City of Walker, updated Nov. 2018
Capital Improvements Plan	Yes	City of Walker , Updated yearly
Economic Development Plan	Yes	City of Walker
Local Emergency Operations Plan	Yes	City of Walker / Parish
Continuity of Operations Plan	Yes	City of Walker Master Plan
Transportation Plan	Yes	City of Walker
Stormwater Management Plan	Yes	City of Walker
Community Wildfire Protection Plan	No	
Other plans (redevelopment, recovery, coastal zone management)	Yes	City of Walker Recovery Disaster Plan
Building Code, Permitting and Inspections	Yes / No	Comments
Building Code	Yes	Version/Year ICC2015
Building Code Effectiveness Grading Schedule (BCEGS) Score	No	Need to work on this
Fire Department ISO/PIAL rating	Yes	Rating 4
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	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	Yes	
Mitigation Planning Committee	Yes	
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	Yes	City ,Parish ,Gravity Drainage,State & Federal
Staff	Yes / No	Comments
Chief Building Official	Yes	
Floodplain Administrator	Yes	
Emergency Manager	Yes	Parish
Community Planner	Yes	
Civil Engineer	Yes	(PT) Contractor
GIS Coordinator	Yes	
Grant Writer	Yes	
Other	No	
Technical	Yes / No	Comments
Warning Systems / Service (Reverse 911, outdoor warning signals)	Yes	Parish/State
Hazard Data & Information	No	
Grant Writing	Yes	City of Walker
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	City of Walker
Authority to levy taxes for specific purposes	Yes	Sales tax for roads , sewer and drainage
Fees for water, sewer, or gas services	Yes	
Impact fees for new development	Yes	Updated 2021
Stormwater Utility Fee	No	
Community Development Block Grant (CDBG)	No	
Other Funding Programs	Yes	Grants

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.	Yes	Local Churches and Business
Ongoing public education or information program (responsible water use, fire safety, household preparedness, environmental education)	Yes	Flood Safety , flood Insurance, Fire Safety , responsible water use and DEQ sewer program
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	Local Business
Other	No	

## Building Inventory

Livingston Unincorporated									
Critical Facility	Name of Building	Purpose of Building	Address	City	Latitude	Longitude	Assessed Value	Date Built	Construction Type
X	911 Facility	911 Emergencies	29129 South Satsuma	Livingston	30.480946	-90.794307			
	Animal Shelter	Animal Rescue	13525 Florida Blvd	Livingston	30.50381477	-90.76038926			
	Bridge Tender Shack	Used by Sheriff	29617 Old La 22	Springfield	30.37578464	-90.55086289			
X	Coroners Building at 911	Coroner Morgue	29126 South Satsuma	Livingston	30.48070866	-90.79466414			
	Old Courthouse	To be Determined	20180 Iowa street	Livingston	30.49890627	-90.75023081			
	Courthouse Annex	Courthouse office	20180 Iowa street	Livingston	30.4987235	-90.74949453			
	Livingston Parish Courthouse	Court	20300 Government Blvd	Livingston	30.48271272	-90.75187567			
X	Livingston Parish Detention Center	Jail	28445 Charlie Watts Road	Livingston	30.47963966	-90.7538898			
	Livingston Parish Health Unit	Public Health	29261 S. Frost Road	Livingston	30.48288895	-90.74905126			
X	LOHSEP Storage Building	Supply Storage	29715 S Magnolia Street	Livingston	30.49813457	-90.74989104			
X	Livingston Parish Governmental Building	Office Space	20355 Government Blvd	Livingston	30.4828802	-90.75017673			
X	Maintenance & Garage (DPW)	Equipment Maintenance	28445 Charlie Watts Road	Livingston	30.48006178	-90.75402919			
X	Maurepas Senior Center	Senior Citizen Use	24259 Highway 22	Maurepas	30.29418386	-90.65579446			
	LOHSEP Warehouse	Vehicle & Chemical Storage	8393 Florida Blvd	Denham Springs	30.48567655	-90.91865453			
	Quad Area Building	Office Facility	29840S. Magnolia Street	Livingston	30.49960677	-90.75114791			
	Registrar of Voters	Voting & Registration	29938 S. Magnolia Street	Livingston	30.50221632	-90.74948623			
	Tax Assessors Office (OSC)	Office Space	29940 Magnolia Street	Livingston	30.50243611	-90.74921123			
	Voting Precinct -6-A & 6-B	Voting	32511 Weiss Road	Holden	30.56951801	-90.75818998			
	Livingston Vol Fire Dep District 11	Fire Search and Rescue	33815 LA 43	Magnolia	30.60098422	-90.61234937			
	Magnolia Fire Dep	Fire Search and Rescue	33002 LA 1036	Magnolia	30.56562228	-90.70427912			
	Fire District 10	Fire Search and Rescue	30928 Highway 441	Holden	30.51792044	-90.6715805			

Livingston Parish Fire District 9	Fire Search and Rescue	21185 LA 22	Maurepas	30.27191953	-90.73777563			
Livingston Parish Library Watson Branch	Library	36581 Outback Road	Watson	30.59783342	-90.94734378			
Department of Social Services	Civil Government	28446 Charlie Watts	Livingston	30.48121037	-90.75239784			
Livingston Parish Public Works	Civil Government	28325 Charlie Watts	Livingston	30.47887412	-90.75335717			
Gray's Creek Elementary School	Education	11400 Louisiana 1033	Denham Springs	30.39602293	-90.89713159			
Live Oak Jr. High	Education	30830 Old LA 16	Denham Springs	30.5767249	-90.95202918			
Live Oak Elementary	Education	35194 Old La Highway 16	Denham Springs	30.57836225	-90.95195296			
Live Oak High School	Education	36079 LA 16	Denham Springs	30.59017166	-90.95015877			
North Live Oak Elementary	Education	36605 Outback Road	Denham Springs	30.59917923	-90.94625025			
Live Oak Middle	Education	8444 Cecil Drive	Denham Springs	30.56914651	-90.94736839			
Freshwater Elementary	Education	1025 Cockerham Road	Denham Springs	30.5030239	-90.94018595			
Eastside Elementary	Education	9735 Lockhart Road	Denham Springs	30.49960593	-90.91547588			
Northside Elementary	Education	1090 Robbie St.	Denham Springs	30.49909287	-90.9497678			
Denham Springs High	Education	1000 North Range Avenue	Denham Springs	30.49680619	-90.95539742			
Denham Springs Jr. High	Education	940 North Range Avenue	Denham Springs	30.49500454	-90.95544032			
Denham Springs Elementary	Education	306 North Range Avenue	Denham Springs	30.48830885	-90.95576564			
Denham Springs Junior High	Education	401 Hatchell Lane	Denham Springs	30.48709242	-90.9449237			
Lewis Vincent Elementary School	Education	7686 Vincent Road	Denham Springs	30.447126	-90.961235			
Southside Elementary	Education	1129 S. Range Ave	Denham Springs	30.46877867	-90.95718452			
Southside Junior High School	Education	26535 LA 16	Denham Springs	30.45200397	-90.9464021			
Juban Parc Elementary School	Education	12555 Brown Road	Denham Springs	30.42515002	-90.89797263			
Juban Parc Junior High School	Education	12470 Brown Road	Denham Springs	30.42177251	-90.90113283			
South Fork Elementary School	Education	23300 Walker South Road	Denham Springs	30.40474945	-90.85101247			
French Settlement High School	Education	15875 LA 16	French Settlement	30.29700337	-90.7978977			



	French Settlement Elementary School	Education	15810 LA	French Settlement	30.29760005	-90.79588462			
	Holden High School	Education	30120 LA 441	Holden	30.50558768	-90.66995574			
	Livingston Parish School Board	Education	13909 Florida Boulevard	Livingston	30.5045	-90.7475			
	Doyle High School	Education	20480 Circle Drive	Livingston	30.500961	-90.744306			
	Doyle Elementary School	Education	29285 S. Range	Livingston	30.49250283	-90.7537013			
	Maurepas High School	Education	23923 Louisiana 22	Maurepas	30.2970502	-90.6655476			
	Springfield High School	Education	27322 Louisiana 42	Springfield	30.42997606	-90.55104807			
	Springfield Elementary	Education	25190 Blood River Road	Springfield	30.42839315	-90.55070904			
	Levi Milton Elementary	Education	31450 Walker Road North	Walker	30.52462694	-90.86196019			
	North Corbin Elementary	Education	32645 N. Corbin Rd	Walker	30.541	-90.83043434			
	North Corbin Jr. High	Education	32725 North Corbin Road	Walker	30.54204668	-90.83043434			
	Walker Elementary	Education	13327 Wildcat Drive	Walker	30.49137532	-90.86568362			
	Pine Ridge	Education	30228 Travis St.	Walker	30.49374209	-90.85666114			
	Livingston Parish Adult Education	Education	13330 Burgess Ave.	Walker	30.48914693	-90.86419272			
	Walker Freshman High	Education	13443 Burgess Avenue	Walker	30.48965057	-90.86333158			
	South Walker Elementary	Education	13745 Milton Lane	Walker	30.46747264	-90.85815381			
	Walker High School	Education	12646 Burgess Avenue	Walker	30.48921003	-90.87693798			
	Westside Junior High	Education	12615 Burgess Avenue	Walker	30.49087148	-90.87719516			
	Literacy & Technology Center	Education	9261 Florida Boulevard	Walker	30.48667612	-90.89141585			
	South Live Oak Elementary	Education	8400 Cecil Drive	Denham Springs	30.56857157	-90.94885277			
	Fire District 5 Station 1 (Main Station)	Fire Search and Rescue	8098 Florida Boulevard	Denham Springs	30.43275722	-90.85799095			
	Fire District 5 Station 2 (North Station)	Fire Search and Rescue	31747 Myers Road	Denham Springs	30.52860153	-90.95508904			
	Fire District 5 Station 3 (South Station)	Fire Search and Rescue	25500 La Highway 16	Denham Springs	30.43819108	-90.93943919			
	Fire District 5 Station 4	Fire Search and Rescue	26178 Juban Road	Denham Springs	30.44687626	-90.91502032			
	Livingston Parish Sheriff's Office Training Facility	Law Enforcement	29340 Woodside Drive	Walker	30.4883421	-90.82819601			

	Livingston Tower	Law Enforcement	26764 Oliver Wheat Road	Livingston	30.272923	-90.441662			
	Central Tower	Law Enforcement	16262 Wax Road	Greenwell Springs	30.322220	-91.03601			
	Elm Park Tower	Law Enforcement			30.512047	-91.172418			
	Greensburg Tower	Law Enforcement			30.501407	-90.405591			
	Washington Tower	Law Enforcement			30.52743	-89.593266			
	Fire District 9 Station 1	Fire Search and Rescue	23634 Highway 22	Maurepas	30.29630916	-90.67520101			
	Fire District 9 Station 2	Fire Search and Rescue	20368 Highway 22	Maurepas	30.27211956	-90.73782392			
	Fire District 8 Station 1	Fire Search and Rescue	15160 Highway 16	French Settlement	30.2870887	-90.78972019			
	Fire District 8 Station 2	Fire Search and Rescue	21760 Highway 444	Livingston	30.33759116	-90.68614394			
	Fire District 7 Station 1	Fire Search and Rescue	19784 Highway 42	Livingston	30.39207955	-90.76143751			
	Fire District 7 Station 2	Fire Search and Rescue	19354 Perrilloux Road	Livingston	30.41985974	-90.76462023			
	Fire District 6 Station	Fire Search and Rescue	20550 Circle Drive	Livingston	30.50189743	-90.74339292			
	Fire District 4 Station 1	Fire Search and Rescue	29758 S Palmetto Street	Walker	30.48503015	-90.8759933			
	Fire District 4 Station 2	Fire Search and Rescue	35455 Walker North Road	Walker	30.58228831	-90.87150789			
	Fire District 4 Station 3	Fire Search and Rescue	34893 Highway 1019	Denham Springs	30.57441626	-90.95687488			
	Fire District 4 Station 4	Fire Search and Rescue	21830 Highway 16	Denham Springs	30.38526074	-90.87810426			
	Fire District 4 Station 5	Fire Search and Rescue	18525 Clio Street	Port Vincent	30.33591598	-90.84580113			
	Fire District 4 Station 6	Fire Search and Rescue	13215 Arnold Road	Denham Springs	30.5357262	-90.86717553			
	Fire District 4 Station 7	Fire Search and Rescue	25110 Walker South Road	Denham Springs	30.43286899	-90.85787756			
	Fire District 4 Station 8	Fire Search and Rescue	36788 Highway 63	Walker	30.63326899	-90.85474605			
	Fire District 4 Station 9	Fire Search and Rescue	9100 Hillion Hood Road	Denham Springs	30.40795352	-90.9361809			
	Fire District 4 Station 10	Fire Search and Rescue	32631 North Corbin Road	Walker	30.54027355	-90.8296224			
	Fire District 3 Station	Fire Search and Rescue	930 Government Drive	Denham Springs	30.4804067	-90.96157627			

Fire District 2 Station 1	Fire Search and Rescue	32280 Terry Street	Springfield	30.42536946	-90.54732833			
Fire District 2 Station 2	Fire Search and Rescue	31447 Highway 22	Springfield	30.42386745	-90.54515606			
Fire District 2 Station 3	Fire Search and Rescue	Highway 1037	Springfield					
Fire District 2 Station 4	Fire Search and Rescue	Gum Swamp Road	Bayou Barbary					
Fire District 2 Station 5	Fire Search and Rescue	25389 Hutchinson Road	Springfield	30.43768329	-90.62349969			
Fire District 1 Station 1 and Training Building	Fire Search and Rescue	29778 S Montpelier Ave	Albany	30.50122725	-90.58255095			
Fire District 1 Station 2	Fire Search and Rescue	32401 Highway 43	Albany	30.57000245	-90.58729819			
Livingston Parish Sheriff's Office Work Release	Law Enforcement	29390 Woodside Drive	Walker	30.4882144	-90.82915122			
Livingston Parish Sheriff's Office Fleet Operations	Law Enforcement	29225 Woodside Drive	Walker	30.48826237	-90.82819915			
Livingston Parish Sheriff's Office Firing Range	Law Enforcement	29225 Woodside Drive	Walker	30.48682912	-90.8285877			
Gravity Drainage District One	Drainage	8098 B Florida Boulevard	Denham Springs	30.48228834	-90.92748823			
Gravity Drainage District Five	Drainage	32032 Avants Road	Walker	30.53217456	-90.86460907			
Gravity Drainage District Two	Drainage	8639 Springfield Road	Watson	30.57584	-90.94455446			
Acadian Trace Sewer Plant "A"	Drainage		Albany	30.478504	-90.582068			
Acadian Trace Lift Station "A-1"	Drainage	28372 Longfellow Lane	Albany	30.478327	-90.582472			
Haynes Settlement Sewer Plant "B"	Drainage	25250 Pardue Road	Springfield	30.436224	-90.556963			
Haynes Settlement Sewer Plant "B-1"	Drainage	25431 Pardue Road	Springfield	30.439823	-90.557647			
Haynes Settlement Sewer Plant "B-2"	Drainage	25953 Haynes Settlement Road	Springfield	30.445705	-90.565237			
Haynes Settlement Sewer Plant "B-3"	Drainage	Byrd Road/26646 Haynes Settlement Road	Springfield	30.455058	-90.565118			
Springfield Terrace Plant "C"	Drainage	31310 4th Street	Springfield	30.431245	-90.561339			

	Springfield Terrace Plant "C-1"	Drainage	31470 East Street	Springfield	30.433637	-90.5595764			
	Warsaw Sewer Plant "D"	Drainage		Springfield	30.380196	-90.551461			
	Warsaw Sewer Plant "D-1"	Drainage	32186 O'Neal Place	Springfield	30.385815	-90.547618			
	Warsaw Sewer Plant "D-2"	Drainage	32058 O'Neal Place	Springfield	30.386207	-90.551958			
	Warsaw Sewer Plant "D-3"	Drainage	31926 Shelly Drive	Springfield	30.387083	-90.552285			
	Warsaw Sewer Plant "D-4" Lift Station	Drainage	31964 Pat's Lane	Springfield	30.387858	-90.55063			
	Warsaw Sewer Plant "D-5" Lift Station	Drainage	32189-32199 Tiboe Plaza	Springfield	30.391146	-90.545644			
	Warsaw Sewer Plant "D-6"	Drainage	32079 Tiboe Plaza	Springfield	30.390116	-90.549287			
	Warsaw Sewer Plant "D-7"	Drainage	31900 Tiboe Plaza	Springfield	30.390697	-90.553601			
	Warsaw Sewer Plant "D-8" Lift Station	Drainage	31782 Shelton Drive	Springfield	30.38877	-90.552004			
	Warsaw Sewer Plant "D-9" Lift Station	Drainage	31720 Shelton Drive	Springfield	30.389452	-90.553892			
	Warsaw Sewer Plant "D- 10" Lift Station	Drainage	30931 La 22- Barnum Road	Springfield	30.409597	-90.547054			
	Warsaw Sewer Plant "D- 11" Lift Station	Drainage	23391 Barnum Road	Springfield	30.409584	-90.558028			
	Juban Parc Sewer Plant "E"	Drainage		Denham Springs	30.426613	-90.899977			
	Juban Parc Sewer Plant "E- 1" Lift Station	Drainage	11301-11435 Rosedale Avenue	Denham Springs	30.426509	-90.897892			
	Juban Parc Sewer Plant "E- 2" Lift Station	Drainage	Villa Way	Denham Springs	30.429031	-90.897064			

Town of Albany									
Critical Facility	Name of Building	Purpose of Building	Address	City	Latitude	Longitude	Assessed Value	Date Built	Construction Type
X	Albany Municipal Building/Police Dept.	Civil Government - Law Enforcement	29816 S. Montpelier	Albany				2019	
	Albany Maintenance-Public Works Building	Civil Government	29816 S. Montpelier	Albany					
X	District One Fire Department	Fire, search and rescue	29778 S. Montpelier	Albany					
	Albany Sewer Treatment Pond/Facility	Wastewater Treatment Facility	Clay and Second Streets	Albany					
	Albany Water Tower-Well	Potable Water	29816 S. Montpelier	Albany					
	Albany Water Tower-Well - Holden	Potable Water	30335 Dan Pierson	Holden					
	Albany Water Well and Tank - Coker Vail	Potable Water	28175 Coker Vail	Holden					
X	Albany High School	Education	29700 One Hornet Lane	Albany					
X	Albany Middle School	Education	29675 Reeves Street	Albany					
X	Albany Upper Elementary	Education	29777 S. Montpelier	Albany					
X	Albany Lower Elementary	Education	30051 West School Street	Albany					

City of Denham Springs									
Critical Facility	Name of Building	Purpose of Building	Address	City	Latitude	Longitude	Assessed Value	Date Built	Construction Type
X	Denham Springs Fire Station 1	Fire Search and Rescue	930 Government Drive	Denham Springs	30.48034656	-90.96153257			
X	Denham Springs Fire Station 2	Fire Search and Rescue	1108 Hatchell Lane	Denham Springs	30.49939287	-90.94313594			
X	Denham Springs Fire Station 3	Fire Search and Rescue	27135 Petes Hwy	Denham Springs	30.46077497	-90.94894476			
X	Denham Springs City Hall	Civil Government	116 North Range Ave	Denham Springs	30.48512192	-90.95585619			
X	Denham Springs City Court Ward 2	Civil Government	116 North Range Ave	Denham Springs	30.48512192	-90.95585619			
X	Denham Springs Police Department	Law Enforcement	447 Lamm Street	Denham Springs	30.48050882	-90.96084531			
X	Denham Springs Animal Control	Civil Government	660 Bowman Street	Denham Springs	30.4840917	-90.96353186			
X	Denham Springs Street Department	Civil Government	940 Government Drive	Denham Springs	30.47975958	-90.96210938			
X	Denham Springs Wastewater Treatment	Wastewater Treatment Plant	9014 Forrest Delatte Road	Denham Springs					
X	Denham Springs Gas Department	Utilities	401 E. Railroad Ave	Denham Springs					
X	Livingston Council on Aging	Civil Government	949 Government Drive	Denham Springs	30.4797708	-90.96282859			

Village of French Settlement									
Critical Facility	Name of Building	Purpose of Building	Address	City	Latitude	Longitude	Assessed Value	Date Built	Construction Type
X	French Settlement Fire Department	Fire Search & Rescue	15160 La Hwy 16	French Settlement	30.287002	-90.78976868			
X	French Settlement Town Hall	Civil Government	16015 La Hwy 16	French Settlement	30.29926144	-90.7985628			
X	French Settlement Police Department	Law Enforcement	16015 La Hwy 16	French Settlement	30.29926144	-90.7985628			
X	French Settlement Elementary School	Education	15810 La Hwy 16	French Settlement	30.29760005	-90.79588462			
X	French Settlement High School	Education	15875 La Hwy 16	French Settlement	30.29700337	-90.7978977			
X	French Settlement Creole House	Museum/Cultural	16021 La Hwy 16	French Settlement	30.2990936	-90.7982372			
X	French Settlement Pavilion	Cultural - used as Emergency Center	16015 La Hwy 16	French Settlement	30.298946	-90.799231			
X	French Settlement Water Co. Well	Water Works	16250 La Hwy 16	French Settlement	30.30527778	-90.80138889			
X	French Settlement Gas Co.	Gas Utilities	16143 La Hwy 16	French Settlement	30.300833	-90.799444			
X	Eatel Exchange Building	Utility Services	16265 La Hwy 16	French Settlement	30.3045405	-90.8012845			
X	St. Joseph Catholic Church	Religious / Offers to serve as Emergency Center	15710 La Hwy 16	French Settlement	30.2952143	-90.7955016			
X	First Baptist Church of French Settlement	Religious / Offers to serve as Emergency Center	16735 La Hwy 16	French Settlement	30.3191381	-90.8115566			

Town of Killian									
Critical Facility	Name of Building	Purpose of Building	Address	City	Latitude	Longitude	Assessed Value	Date Built	Construction Type
	Killian Municipal Building	Government	28284 Hwy 22	Killian				1968	
	Killian Police Building	Government	28284 Hwy 22	Killian				1968	
	Killian Water Well and Tank	Portable Water	28284 Hwy 22	Killian					

Town of Livingston									
Critical Facility	Name of Building	Purpose of Building	Address	City	Latitude	Longitude	Assessed Value	Date Built	Construction Type
X	Town of Livingston Municipal Building	Civil Government-Law Enforcement	20550 Circle Dr.	Livingston	30.50181307	-90.74371654			
X	Town of Livingston Fire Department	Fire, search, and recue	20550 Circle Dr.	Livingston	30.50189858	-90.74338797			
X	Town of Livingston DPW Building	Civil Government	13553 Florida Blvd.	Livingston					
X	Town of Livingston Water Well	Potable Water	13553 Florida Blvd.	Livingston					
X	Town of Livingston Water Well	Potable Water	28341 S. Frost Rd.	Livingston				2017	
X	Town of Livingston Water Well	Potable Water	28815 Dabney Dr.	Livingston					
X	Town of Livingston Suma Crossing Sewer Plant	Wastewater Treatment Facility	28322 S. Satsuma Rd.	Livingston				2013	
X	Town of Livingston Red Oak Rd. Sewer Plant	Wastewater Treatment Facility	29356 Red Oak Rd.	Livingston				2021	
X	Town of Livingston Sewer Lift Station	Wastewater lift stations	30119 N. Range Rd	Livingston					
X	Town of Livingston Sewer Lift Station	Wastewater lift stations	13736 Florida Blvd.	Livingston					
X	Town of Livingston Sewer Lift Station	Wastewater lift stations	14266 Florida Blvd.	Livingston					
X	Town of Livingston Sewer Lift Station	Wastewater lift stations	29842 Cypress St	Livingston					
X	Town of Livingston Sewer Lift Station	Wastewater lift stations	29509 Bloss Ave.	Livingston					
X	Town of Livingston Sewer Lift Station	Wastewater lift stations	20700 Ohio Street	Livingston					
X	Town of Livingston Sewer Lift Station	Wastewater lift stations	20597 Texas Street	Livingston					
X	Town of Livingston Sewer Lift Station	Wastewater lift stations	29283 S. Range Rd	Livingston					
X	Town of Livingston Sewer Lift Station	Wastewater lift stations	28990 Red Oak Rd.	Livingston					
X	Town of Livingston Sewer Lift Station	Wastewater lift stations	29266 Red Oak Rd.	Livingston					
X	Town of Livingston Sewer Lift Station	Wastewater lift stations	13536 Florida Blvd.	Livingston					



X	Town of Livingston Sewer Lift Station	Wastewater lift stations	20809 Madison Ave.	Livingston					
X	Town of Livingston Sewer Lift Station	Wastewater lift stations	28321 Charley Watts Rd.	Livingston					
X	Town of Livingston Sewer Lift Station	Wastewater lift stations	28455 Charley Watts Rd.	Livingston					
X	Town of Livingston Sewer Lift Station	Wastewater lift stations	28899 S. Frost Rd.	Livingston					
X	Town of Livingston Sewer Lift Station	Wastewater lift stations	17201 Black Mud Rd.	Livingston					
	Town of Livingston Parks & Recreation	Recreation Facility	29405 S. Range Rd.	Livingston					
X	Town of Livingston Sewer Lift Station	Wastewater lift station	28341 S. Frost Rd.	Livingston					
X	Town of Livingston Sewer Lift Station	Wastewater lift station	28265 Lake Lery	Livingston					
X	Town of Livingston Sewer Lift Station	Wastewater lift station	17160 David Dr.	Livingston					
X	Town of Livingston Sewer Lift Station	Wastewater lift station	29261 S. Frost Rd	Livingston					
X	Town of Livingston Sewer Lift Station	Wastewater lift station	Julia Street & Frost Rd.	Livingston					
X	Town of Livingston Sewer Lift Station	Wastewater lift station	Montana Street	Livingston					
X	Town of Livingston Sewer Lift Station	Wastewater lift station	Rosedown Dr.	Livingston					
X	Town of Livingston Sewer Lift Station	Wastewater lift station	16975 Blackmud Rd.	Livingston					
X	Town of Livingston Satsuma Sewer Plant	Wastewater Treatment Facility	28685 Corby Dr.	Livingston					

Village of Port Vincent									
Critical Facility	Name of Building	Purpose of Building	Address	City	Latitude	Longitude	Assessed Value	Date Built	Construction Type
	Port Vincent Community Center	Evacuation, Rental Facility, Meetings, Receptions, etc.	18500 Highway 16	Port Vincent	30.33549999	-90.84842448	\$100,000	1900	
X	Port Vincent Municipal Center	Civil Government	18235 Highway 16	Port Vincent	30.33434671	-90.8445857	\$175,000	1988	
X	Port Vincent Police Department	Law Enforcement	18500 Highway 16	Port Vincent	30.33549999	-90.84842448	\$100,000	1900	

Town of Springfield									
Critical Facility	Name of Building	Purpose of Building	Address	City	Latitude	Longitude	Assessed Value	Date Built	Construction Type
X	Springfield Town Hall	Municipal Office	27378 Hwy 42	Springfield	30.429739	-90.549324		1990	
	Springfield Treatment Sewer Facility	Municipal Sewer Treatment	25100 Freeman Lane	Springfield	30.434425	-90.554237		2004	
	Sewer Pump Lift Station A	Municipal Sewer Treatment	24050 Martinez	Springfield	30.419212	-90.544483		2004	
	Sewer Pump Lift Station B	Municipal Sewer Treatment	31403 Hwy 22	Springfield	30.421443	-90.544936		2004	
	Sewer Pump Lift Station C	Municipal Sewer Treatment	31290 2nd St.	Springfield	30.429964	-90.548375		2004	
	Sewer Pump Lift Station D	Municipal Sewer Treatment	27301 Hwy 42	Springfield	30.431441	-90.5536		2004	
	Drinking Water Well	Municipal Drinking Water	25100B Freeman Lane	Springfield					
X	Springfield Police Department	Police Department	27378 Hwy 42	Springfield	30.429739	-90.549324		1990	
X	Springfield Fire & Rescue	Fire & SAR	32280 Terry St.	Springfield	30.42529793	-90.54727117			

City of Walker									
Critical Facility	Name of Building	Purpose of Building	Address	City	Latitude	Longitude	Assessed Value	Date Built	Construction Type
X	Cronin Oaks Fire Dept	Fire Search and Rescue	36788 Weiss Road	Walker	30.63299689	-90.85470954			
x	District 10 Vol Fire Dept Station 3	Fire Search and Rescue	34147 LA 63	Walker	30.59834133	-90.78492436			
x	Fire Station #2	Fire Search and Rescue	35455 Walker Rd	Walker	30.58227235	-90.87155626			
x	Livingston Parish District 4 Station 6	Fire Search and Rescue	13215 LA 1025	Walker	30.5355308	-90.86727485			
x	Livingston Parish District 4 Station 10	Fire Search and Rescue	32631 North Corbin Road	Walker	30.540103	-90.829354			
x	Fire Protection District 4 Station	Fire Search and Rescue	29758 S. Palmetto St	Walker	30.48500535	-90.87584722			
x	Walker Dept. of Public Works	Civil Government	13730 Ball Park Road	Walker	30.49805778	-90.85968999			
x	Walker Police Department	Law Enforcement	13179 Burgess Avenue	Walker	30.4895771	-90.8679532			
x	Town Of Walker Treatment Facility	Potable Water Treatment Plant	Nearby: 29100-29196 Peggy Drive	Walker	30.48094166	-90.87188962			
x	Safe House	Emergency Management	30225 Corbin Ave	Walker					
x	Old City Hall	Civil Government	10136 Florida Blvd.	Walker	30.48756091	-90.86340318			
x	New City Hall	Civil Government	13600 AydeLL Land	Walker	30.48500162	-90.86262011			
x	Animal Shelter	Civil Government	13740 Ball Park Rd.	Walker	30.49810715	-90.85820278			
x	C-Can	Police	13184 Burgess Avenue	Walker					
x	Modular Building	Police	13179-A Burgess Avenue	Walker					
x	Water Well #2, Pendarvis	Water	13187 Pendarvis Lane, Well #2	Walker	30.474202	-90.868016			
x	Water Well #3, Hwy 190	Water	11011 Florida Blvd., Well #3	Walker	30.498453	-90.837800			
x	Water Tower #4, Hwy 190	Water	9483 Florida Blvd., Well #4	Walker	30.488467	-90.882792			
x	Water Well #5, Our Lady of Lake	Water	7000 O'Donavan	Walker	30.460155	-90.870979			
x	Temporary Water Booster Station	Water	14881 Salt Dome	Walker	30.501755	-90.501755			
x	Water Ground Storage Tank	Water	16000 Industry Way	Walker	30.501755	-90.501755			

x	Waste Water Treatment Plant	Sewer	12923 Pleasant Ridge, LS #1	Walker				
x	Lift Station #4	Sewer	10136A Florida Blvd, LS #4	Walker	30.487542	-90.863279		
x	Lift Station #5	Sewer	10344 Florida Blvd., LS #5	Walker	30.489436	-90.856976		
x	Lift Station #6	Sewer	13751 AydeLL Lane, LS #6	Walker	30.484987	-90.858866		
x	Lift Station #7	Sewer	10022 Florida Blvd., LS #7	Walker	30.487524	-90.867198		
x	Lift Station #8	Sewer	13420 Dawn Street, LS #8	Walker	30.495238	-90.434021		
x	Lift Station #9	Sewer	10694 Florida Blvd., LS #9	Walker	30.493438	-90.847349		
x	Lift Station #10	Sewer	30155 Corbin Ave., LS #10	Walker	30.497842	-90.849591		
x	Lift Station #11	Sewer	29680 Aime Street, LS #11	Walker	30.491029	-90.843547		
x	Lift Station #12	Sewer	30199 Sunland Drive, LS #12	Walker	30.502088	-90.828893		
x	Lift Station #13	Sewer	14590 Carrol Avenue, LS #13	Walker	30.499749	-90.843077		
x	Lift Station #14	Sewer	30422 Michelle Street, LS #14	Walker	30.500299	-90.857239		
x	Lift Station #15	Sewer	30022 Corby Circle, LS #15	Walker	30.490198	-90.873476		
x	Lift Station #16	Sewer	12615 Burgess Avenue, LS #16	Walker	30.490494	-90.878145		
x	Lift Station #17	Sewer	12322 Burgess Avenue, LS #17	Walker	30.491321	-90.881929		
x	Lift Station #18	Sewer	28505 Walker South, LS #18	Walker	30.477564	-90.865467		
x	Lift Station #19	Sewer	13299 Pendarvis Lane, LS #19	Walker	30.473929	-90.865493		
x	Lift Station #20	Sewer	12436 Pendarvis Lane, LS #20	Walker	30.477602	-90.879870		
x	Lift Station #21	Sewer	12644 Lakeland Drive, LS #21	Walker	30.473152	-90.877322		
x	Lift Station #22	Sewer	13350 Clint Street, LS #22	Walker	30.483341	-90.865011		
x	Lift Station #23	Sewer	12528 S. Lakeshore Dr., LS #23	Walker	30.468654	-90.880630		
x	Lift Station #24	Sewer	15890 Industry Way, LS #24	Walker	30.502862	-90.822517		
x	Lift Station #25	Sewer	30022 Industrial Drive, LS #25	Walker	30.486897	-90.884848		
x	Lift Station #26	Sewer	9144 CoMar Drive, LS #26	Walker	30.493617	-90.838093		
x	Lift Station #27	Sewer	5100 O'Donovan Blvd.	Walker	30.468964	-90.867898		
x	Lift Station #28	Sewer	11705 Burgess	Walker	30.491634	-90.891519		

x	Life Station #29	Sewer	13602 Hartman Lane	Walker	30.473114	-90.859987			
x	Life Station #30	Sewer	Hwy 190	Walker	30.486912	-90.878460			
x	Life Station # 31	Sewer	Burgess Rd.	Walker	30.489272	-90.893377			
x	Rectifier #2	Gas	NW corner/ of Caraway & Springfield Rd	Walker					
x	Rectifier #3	Gas	NE corner/Cane Market/Lod Stafford	Walker					
x	Rectifier #4	Gas	NW corner of Hughes & Perkins	Walker					
x	Rectifier #5	Gas	Myers Road	Walker					
x	Rectifier #6	Gas	Cynthia Dr across from Amite B.C.	Walker					
x	Rectifier #8	Gas	35194 Old Highway 16	Walker					
x	Rectifier #9	Gas	SE corner of Hwy 16 & Hwy 63	Walker					
x	Rectifier #10	Gas	32465 Walker North Road	Walker					
x	Telemetry System	Gas	NW corner of Hwy 447 & Hwy 1024	Walker					
x	Burgess Ave/Rectifier #1	Gas	12925 Burgess Avenue	Walker					
x	10627 Florida Blvd Reg. Station	Gas	10627 Florida Blvd.	Walker					
x	Rectifier #7	Gas	8899 Florida Blvd.	Denham Springs					

## Vulnerable Populations

Vulnerable Populations Worksheet					
Livingston Parish Planning Area					
All Hospitals (Private or Public)	Address	City	Zip Code	Latitude	Longitude
Our Lady of Lake Medical Center	5000 O' Donovan Blvd.	Walker	70785		
RKM	27124 Hwy 42	Springfield	70462		
North Oaks Clinic	17199 Spring Ranch Road	Livingston	70754	30.47227417	-90.80042945
Nursing Homes (Private or Public)	Address	City	Zip Code	Latitude	Longitude
Rainbow Acres Assisted Living	18916 Florida Blvd.	Albany	70711		
Evergreen Life Services	30199 Julia Street	Albany	70711		
Westminster Assisted Living	29955 West Street	Albany	70711		
Harvest Manor	839 N. Range	Denham Springs	70726		
Maison De Fleur Assisted Living Center	559 Rushing Road West	Denham Springs	70726		
Southern Pines Retirement Community	28450 Walker Rd. South	Walker	70785		
Golden Age Nursing Home	26739 Hwy 1032	Denham Springs	70726	30°27'17.56"N	90°58'17.13"W
La Plantation	26636 Hwy 16	Denham Springs	70726	30°27'02.15" N	90°56'42.71"W
Mobile Home Parks	Address	City	Zip Code	Latitude	Longitude
Livingston Estate Mobile Home	29077 S. Range Rd.	Livingston	70754		
Livingston Mobile Home Park	29963 S. Rose St.	Livingston	70754		
V.R. Properties, LLC	21040 Nevada St.	Livingston	70754		
VMK Enterprises Trailer Park	19915 Colorado	Livingston	70754		
Martin Domingue Trailer Park	29960 Nevada St	Livingston	70754		
Wild Mobile Home Park	29920 Pine Drive	Albany	70711		
Bankston's Trailer Park	29020 Highway 43 South	Albany	70711	30°29'36.41"N	90°39'28.58" W
Molly's Trailer Park	18968 Florida Blvd.	Albany	70711		
Weather Fords	1019 Ceteville NE	Denham Springs	70726		
Evergreen	28609 Petes Hwy	Denham Springs	70726		
Edgewood Mobile Home Park	412 Edgewood	Denham Springs	70726	30°28'28.34"N	90°57'07.08"W
Tate Road Mobile Home Park	422 Tate Road	Denham Springs	70726		
Babins	26572 Hwy 1032	Denham Springs	70726	30°27'08.06"N	90°58'10.77"W
Rainbow Park	2659 Hwy 1032	Denham Springs	70726		
Pinecrest Trailer Park	Milton Drive	French Settlement	70733	30.2903285	-90.7884039
Parvleen Invest, LLC	Hwy 16	French Settlement	70733	30.2884084	-90.7905931
No-Name Subdivision, possibly unlawful trailer park	Oleander Ln	French Settlement	70733	30.326691	-90.8060195

Palmetto Mobile Home Park	29686 South Palmetto Dr.	Walker	70785		
Herring Place Mobile Park	13124 Herring Lane	Walker	70785		
A & D Mobile Home Park	13664 Glenn Ellis Road	Walker	70785	30°27'30.15"N	90°51'31.64"W
A & L South Trailer Park	25801 Walker South Road	Denham Springs	70726	30°26'30.75"N	90°51'35.71"W
AA mobile Home Park	28309 La Hwy 16	Denham Springs	70726	30°28'06.71"N	90°56'51.03"W
Albany Mobile Home Park	30544 Strawberry Lane	Springfield	70462	30°28'27.03"N	90°34'39.26"W
Allison Place Mobile Home Mobile Home Park	20131 Perrillolux Road	Livingston	70754	30°25'38.53"N	90°45'12.04"W
Ashley Heights Trailer Park	12677 Buddy Ellis Road	Denham Springs	70726	30°27'15.01"N	90°52'52.84"W
B & C trailer Park	8561 Florida Blvd	Denham Springs	70726	30°28'58.45"N	90°55'32.32"W
B & V Mobile Home Park	29440 Efferson Road	Holden	70744	30°29'07.24"N	90°40'04.01"W
Bayou Pine Mobile Home Park	25620, 25660, 25650 Hob Hodges Road	Holden	70744	30°29'28.64"N	90°39'28.58" W
Bend Road Mobile Home Park	35583 Bend Road	Denham Springs	70726	30°35'06.10"N	90°58'19.46"W
Blackwells Mobile Home Park	18262 & 18320 Florida Blvd	Albany	70744	30°30'16.03"N	90°36'30.53"W
Blanchards Mobile Home Park	35081 North Corbin Road	Walker	70785	30°34'09.49"N	90°49'29.31"W
Bogan village Mobile Home Park	24477 Walker South Road	Denham Springs	70726	30°25'24.22"N	90°51'19.43"W
Booth Trailer Park	11322 Arnold Road	Denham Springs	70726	30°32'09.29"N	90°53'55.38"W
C & M Trailer Park	20204 Alex broussard Road	Walker	70785	30°31'44.16"N	90°44'58.99"W
C.R. Price Trailer Park	30905 Burgess Road	Denham Springs	70726	30°30'49.06"N	90°54'02.33"W
Carmena Mobile Home Park	30631 La Hwy 16	Denham Springs	70726	30°30'35.47"N	90°57'22.60"W
Carriages Mobile Home Park	23497 Walker South Road	Denham Springs	70726	30°24'30.87"N	90°51'17.17"W
Cassel's Trailer Park	8812 Dave Clark Road	Denham Springs	70726	30°30'37.15"N	90°56'32.96"W
Cedar Crest Trailer Park	24850 Blood river Road	Springfield	70462	30°25'34.24"N	90°33'54.66"W
Circle E Trailer Park	37605 Webb Road	Denham Springs	70706	30°36'50.68"N	90°53'51.65"W
Danni Lane Trailer Park	7367 Robinson Dr	Denham Springs	70706	30°32'30.43"N	90°57'54.71"W
Denham oaks mobile home Park	26188 La Hwy 1032	Denham Springs	70726	30°26'48.70"N	90°58'08.52"W
Denham Place Mobile Home Park	30715 Burgess Road	Denham Springs	70726	30°30'30.62"N	90°54'09.39"W
East Fork Mobile home Park	8618 Springfield Road	Denham Springs	70726	30°34'31.24"N	90°56'42.91"W
Easy Living Traile Park	22821 La Hwy 22	Maurepas	70449	30°16'36.08"N	90°42'33.72"W
Eden Church Road mobile Home Park	30205, 30260, 30263 Eden Church Road	Denham Springs	70726	30°29'21.43"N	90°55.31.81"W
Floyd Hutchinson Trailer Park	17036 Florida Blvd	Holden	70744	30°30'15.27"N	90°37'52.27"W
Four Way Trailer Park	22578 Walker South Road	Denham Springs	70726	30°23'42.98"N	90°51'14.16"W
Gene Ballard Trailer Park	35585, 35607, 35615, 35665, 35675, 35751, 35771, 35835, 35847, 35857, Ballard Road	Denham Springs	70706	30°35'20.51"N	90°53'23.24"W

Grays Creek Mobile Home Park	9108, 9140, 9150, & 9212 Lockhart Road	Denham Springs	70726	30°30'28.13"N	90°55'55.34"W
Green Meadows Trailer Park	30050 Edna Kinchen Road	Springfield	70462	30°30'16.67"N	90°38'04.98"W
Hancock Terrace Trailer Park	28381 La Hwy 16	Denham Springs	70726	30°28'08.99"N	90°56'50.52"W
Hebert's Trailer Park	31559 Main road	Denham Springs	70726	30°31'36.07"N	90°58'07.16"W
Hidden Pines trailer Park	13464 Hammack Road	Denham Springs	70726	30°23'35.16"N	90°51'40.28"W
Highland village Mobile Home Park	32041 Linder Road	Denham Springs	70726	30°31'57.26"N	90°55'50.03"W
Hilltop Mobile Home Park	11559 Kirby Road	Denham Springs	70726	30°24'03.40"N	90°53'45.08"W
Holden Trailer park	13493 Hartman Road	Walker	70785	30°28'23.25"N	90°51'39.26"W
Hutchinson Trailer Park	25179 D Hutchinson Road	Holden	70744	30°32'26.04"N	90°40'31.44"W
Jims Mobile Home Park	29906 La Hwy 22	Springfield	70462	30°19'56.45"N	90°35'08.78"W
Landry's Mobil home Park (A & W mobile Home park)	30050 Wayne Landry Lane	Denham Springs	70726	30°29'02.34"N	90°55'17.99"W
Lazy C trailer Park	37446 Reinninger Road	Denham Springs	70462	30°36'40.50"N	90°52'58.33"W
Linder Road Mobile Home Park	31531 Linder Road	Denham Springs	70726	30°31'31.44"N	90°55'49.97"W
M & L Park	17800 La Hwy 444	Livingston	70754	30°18'09.03"N	90°47'19.52"W
Madeline Heights (West Colyell Acres Mobile Home Park)	24715 Walker South Road	Denham Springs	70706	30°25'37.83"N	90°51'23.64"W
Magnolia trace (Pete's Hwy Trailer Park)	25589 La Hwy 16	Denham Springs	70726	30°26'20.59"N	90°56'28.88"W
McCarroll trailer Park	28671 James Chappel Road	Holden	70744	30°28'25.83"N	90°36'31.12"W
McCullen Road Trailer Park	30355 McCulleem	Holden	70744	30°30'30.59"N	90°37'19.42"W
Miller trailer Park	31994 Burgess Road	Denham Springs	70726	30°31'54.87"N	90°53'49.94"W
Mincey Trailer Park	11071, 11075, 11079, 11081, & 11087 La Hwy 1033	Denham Springs	70726	30°23'39.67"N	90°54'12.82"W
Myrtle Estates	19597 La Hwy 42	Livingston	70754	30°23'32.44"N	90°46'03.74"W
Oak Forest Estates Trailer Park	22137 walker South Road	Denham Springs	70726	30°23'17.92"N	90°51'15.36"W
Oak View Mobile home Park	26384 Wax road	Denham Springs	70726	30°26'49.67"N	90°55'04.44"W
Olivia Rose (James Place Trailer Park)	21265 Walker South Road	Denham Springs	70726	30°22'29.72"N	90°51'15.33"W
Pannu Mobile Home Park	26229 Walker south Road	Denham Springs	70726	30°26'53.70"N	90°51'47.05"W
Pardue Trailer Park	25250 Pardue Road	Springfield	70462	30°26'16.87"N	90°33'28.29"W
Penny's Park	8651 Cook Road	Denham Springs	70726	30°27'43.69"N	90°56'45.50"W
Pine Acres Park	20950 La Hwy 16	Denham Springs	70726	30°22'37.30"N	90°51'48.27"W
Pine Crest Mobile Home Park	13935 Alvin sibley Road	Walker	70785	30°31'03.57"N	90°51'17.70"W
Pinewood Park	34922 Old La hwy 16	Denham Springs	70706	30°34'32.62"N	90°57'12.29"W
Plantation Oaks mobile home park	7450 Vincent Road	Denham Springs	70726	30°26'56.07"N	90°57'54.92"W
Pleasant Oaks Mobile Home Park	11482 Florida Blvd	Walker	70785	30°29'54.99"N	90°49'24.10"W
Ridgecrest Mobile Home Park	23453 Walker South Road	Denham Springs	70726	30°24'33.63"N	90°51'15.26"W
Salem Ridge Mobile Home Park	38526 Salem Cemetart Road	Walker	70785	30°37'34.14"N	90°50'40.98"W
Sammy Hutchinson Rent Trailers	25090 D. Hutchinson Road	Holden	70744	30°32'25.94"N	90°40'23.43"W



Sanders Mobile Home Village	34987 Lotts Lane	Denham Springs	70706	30°34'30.84"N	90°56'29.45"W
Seven Oaks Trailer Park	28760 Juban Road	Denham Springs	70726	30°28'27.01"N	90°55'08.34"W
Sikes Trailer Park	15786 Florida Blvd	Livingston	70754	30°30'11.91"N	90°44'20.13"W
South Park Trailer Park	25641 Walker South Road	Livingston	70726	30°26'22.32"N	90°51'36.03"W
Split Rail mobile Home Park	9293 Springfield Road	Denham Springs	70706	30°34'49.09"N	90°56'01.24"W
St. Marie Mobile Home Park	11040 Burgess Ave	Walker	70785	30°29'11.98"N	90°54'08.10"W
Stable Ridge Mobile Home Park	8830 Henderson Road	Denham Springs	70726	30°25'37.94"N	90°56'28.38"W
Stafford Trailer Park	17495 Mitchell Road	French Settlement	70726	30°19'06.93"N	90°47'31.74"W
Stone Hill Park	7775 Florida Blvd	Denham Springs	70726	30°29'03.02"N	90°56'22.68"W
Svara's Trailer Park	422 Tate Road	Denham Springs	70726	30°28'00.10"N	90°57'01.46"W
Twin Oaks mobile Home Park	30679 Old River Road	Denham Springs	70726	30°30'42.38"N	90°57'30.77"W
Walker South Mobile Home Park	13537 Lakeview Drive	Denham Springs	70726	30°28'16.25"N	90°58'19.10"W
Watson Estates Mobile Home Park	35665 Bonnebelle Drive	Denham Springs	70706	30°35'04.22"N	90°54'57.26"W
Wayne Johnson's Trailer Park	8314 Lockhart Road	Denham Springs	70726	30°31'37.87"N	90°57'13.75"W
Weatherford Trailer Park	8245 Florida Blvd	Denham Springs	70726	30°29'00.82"N	90°55'55.77"W
White Oaks Trailer Park	32123 Linder Road	Denham Springs	70726	30°32'01.86"N	90°55'50.08"W
Willow Spring Mobile Home Park	28026 South Satsuma Road	Livingston	70754	30°27'07.28"N	90°47'43.81"W
Colyell Community Trailer Park	19596 La Highway 42	Livingston	70754	30.39225274	-90.76749907
Country Place MHP	32581 Perkins Road	Denham Springs	70726	30.54093776	-90.91235036
Goodwin RV Park	29219 Goodwin Park Road	Independence	70443		
Grahams Meadow MHP	Suma Hill Road	Livingston	70754	30.47781388	-90.79498675
Sunny Slope MHP	28390 Gaylord Road	Walker	70785	30.47678535	-90.8545165
Stone RV, LLC dba Bayside Marina & Campground	18795 Hwy 16	Port Vincent	70726	30.20N	90.50.W
Total RV Living,	18061 Cooper Street	Port Vincent	70726	30.19N	90.51W

## National Flood Insurance Program (NFIP)

National Flood Insurance Program (NFIP)									
	Livingston Parish	Town of Albany	City of Denham Springs	Village of French Settlement	Town of Killian	Town of Livingston	Village of Port Vincent	Town of Springfield	City of Walker
<b>Insurance Summary</b>									
How many NFIP policies are in the community? What is the total premium and coverage?	Total NFIP Policies- 9,766 (per permitting: obtain from FEMA) Total Premiums- \$6,679,951.00 Total coverage- \$19,926,379.00		Policies: 2,123; Total Premium: \$3,019,129; Total Coverage: \$480,588,300	PIF: 175	PIF: 249	PIF: 178	PIF: 130	65; \$80,066; \$30,394,100	Polices - 1,174; Premiums - \$1,209,014; Coverage; \$306,454,800
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?	Total closed paid claims -3,624(per permitting: obtain from FEMA); Total Amount paid claims- \$52169,169,469.00 Substantial Damage Claims- 420.		Claims paid: 2,931; Paid claims: \$188,099,403; SD claims: 1,106	Claims Paid: 212; Total Amount Paid: \$11,105,603.17	Paid Claims: 454; Total Amount Paid: \$12,658,517.09	Paid Claims: 58; Total Amount Paid: \$2,310,280.18	Paid Claims: 308; Total Amount Paid: \$8,225,754.33	0	Number of claims - 601 Paid Losses - 48,945,195 Substantial Damage 225
How many structures are exposed to flood risk with in the community?	Approx. 7000 (per permitting: obtain from FEMA)	Participant With Parish	Approximately 2,100	Participant With Parish	Participant With Parish	Participant With Parish	Participant With Parish	0 for 100-year flood	SFHA structures 1647
Describe any areas of flood risk with limited NFIP policy coverage.	N/A	Participant With Parish	N/A	Participant With Parish	Participant With Parish	Participant With Parish	Participant With Parish	None	None
<b>Staff Resources</b>									
Is the Community FPA or NFIP Coordinator certified?	Yes	Participant With Parish	Yes	Participant With Parish	Participant With Parish	Participant With Parish	Participant With Parish	Yes	Certified CFM
Is flood plain management an auxiliary function?	No	Participant With Parish	Yes	Participant With Parish	Participant With Parish	Participant With Parish	Participant With Parish	No	No

Provide an explanation of NFIP administration services (e.g., permit review, GIS, education or outreach, inspections, engineering capability)	Plan review, permit review and insurance, inspections	Participant With Parish	(see attached)	Participant With Parish	Participant With Parish	Participant With Parish	Participant With Parish	Participant With Parish	Plan review, permit review and insurance, inspections	We participate in CRS and have Higher Regulatory Standards. We review permits and do inspections have outreach and educational Projects. To reduce flood losses
What are the barriers to running an effective NFIP program in the community, if any?	None	Participant With Parish	Time, staff, funding	Participant With Parish	Participant With Parish	Participant With Parish	Participant With Parish	Participant With Parish	None	None
<b>Compliance History</b>										
Is the community in good standing with the NFIP?	Yes	Participant With Parish	Yes	Participant With Parish	Participant With Parish	Participant With Parish	Participant With Parish	Participant With Parish	Yes	Yes
Are there any outstanding compliance issues(i.e., current violations)?	No	Participant With Parish	No	Participant With Parish	Participant With Parish	Participant With Parish	Participant With Parish	Participant With Parish	No	No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact(CAC)?	Completed 2019	Participant With Parish	2015	Participant With Parish	Participant With Parish	Participant With Parish	Participant With Parish	Participant With Parish	2019	CAV 9/10/2015 CAC 11/18/2016
Is a CAV or CAC scheduled or needed? If so when?	No	Participant With Parish	No	Participant With Parish	Participant With Parish	Participant With Parish	Participant With Parish	Participant With Parish	No	no
<b>Regulation</b>										
When did the community enter the NFIP?	September 30, 1988	E & R 10-14-83	8/24/2001	E: 5-25-83; R: 10-15-85	E: 10-26-77; R- 8-1-87	E: 6-21-78; R: 10-18-12	E: 5-17-77; R: 8-16-88	3/24/1998	Emergency 6/26/1975 Regular 2/17/1982	

Are the FIRMs digital or paper?	Paper	Digital and Paper	Digital	Digital	Digital	Digital	Digital	Both	Digital
Do floodplain development regulations meet or exceed FEMA or State minimum requirements? If so, in what ways?	Yes, by making all development meet 1 foot above base flood elevation.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Exceed
<b>Community Rating System (CRS)</b>									
Does the community participate in CRS?	Yes	No	Yes	Yes	No	No	Yes	No	Yes
What is the community's CRS Class Ranking?	10	N/A	8	10	N/A	N/A	10	N/A	8
Does the plan include CRS planning requirements?	Yes	N/A	Yes	Yes	N/A	N/A	Yes	N/A	Some

## Denham Springs CRS Element 512.a Checklist

	<b>Community:</b> Denham Springs, LA		
<b>510 FLOODPLAIN MANAGEMENT PLANNING</b>			
<b>512.a Floodplain Management Planning (FMP)</b>			
<b>Credit Points:</b> Enter the section or page number in the plan where each credited item can be found. Add notes on AW-510-4.			
CRS Step	Section/Page	Item Score	Step Total
1. Organize to prepare the plan. (15 Max)			
a. Involvement of Office Responsible for Community Planning (4)			
b. Planning committee of department staff (9)	Appendix A, Pages 3-4		
c. Process formally created by the community's governing board (2)			
2. Involve the public. (120 Max)			
a. Planning process conducted through a planning committee (60)			
b. Public meetings held at the beginning of the planning process (15)	Appendix A, Pages 11-13		
c. Public meeting held on draft plan (15)	Appendix A, Page 16		
d. Other public information activities to encourage input (Up to 30)	Appendix A, Pages 14-16		
3. Coordinate with other agencies. (35 Max)			
a. Review of existing studies and plans (required) (5)	Appendix A, Page 6		
b. Coordinating with communities and other agencies (Up to 30)	Appendix A, Page 5		
4. Assess the hazard. (Max 35)			
a. Plan includes an assessment of the flood hazard (REQUIRED) with:			
(1) A map of known flood hazards (5)	Chapter 2, Page 40		
(2) A description of known flood hazard (5)	Chapter 2, Page 30-38		
(3) A discussion of past floods (5)	Chapter 2, Page 44		
b. Plan includes assessment of less frequent floods (10)	Chapter 2, Pages 18-26		
c. Plan includes assessment of areas likely to flood (5)			
d. The plan describes other natural hazards (REQUIRED FOR DMA) (5)	Chapter 2, Pages 18-28; 53-88		

CRS Step	Section/Page	Item Score	Step Total
5. Assess the problem. (Max 52)			
a. Summary of each hazard identified in the hazard assessment and their community impact (REQUIRED) (2)	Chapter 2, Pages 18-88		
b. Description of the impact of the hazards on: (Max 25)			
(1) Life, safety, health, procedures for warning and evacuation (5)	Chapter 2, Pages 35-36		
(2) Public health including health hazards to floodwaters/mold (5)	Chapter 2, Pages 32, 35-36		
(3) Critical facilities and infrastructure (5)	Chapter 2, Pages 6-10; Appendix C		
(4) The community's economy and tax base (5)	Chapter 1, Page 4; Chapter 2, Pages 46-52		
(5) Number and type of affected buildings (5)	Chapter 2, Pages 46-49; Appendix C		
c. Review of all damaged buildings/flood insurance claims (5)	Chapter 2, Pages 33-34; Appendix E, Page 48		
d. Areas the provide natural floodplain functions (5)			
e. Development/redevelopment/Population Trends (7)	Chapter 2, Pages 11-12		
f. Impact of future flooding conditions outline in Step 4, item c (5)			
6. Set goals. (required) (2)	Chapter 4, Page 4		
7. Review possible activities. (Max 35)			
a. Preventive activities (5)	Chapter 3, Page 7		
b. Floodplain Management Regulatory/current & future conditions (5)	Chapter 3, Page 8		
c. Property protection activities (5)	Chapter 3, Page 8		
d. Natural resource protection activities (5)	Chapter 3, Pages 8-9		
e. Emergency services activities (5)	Chapter 3, Page 9		
f. Structural projects (5)	Chapter 3, Page 9-10		
g. Public information activities (5)	Chapter 3, Page 10		
8. Draft an action plan. (Max 60)			
a. Actions must be prioritized (required)			
1. Recommendations for activities from two of the six categories (10)			
2. Recommendations for activities from three of the six categories (20)			
3. Recommendations for activities from four of the six categories (30)			
4. Recommendations for activities from five of the six categories (45)	Chapter 4, Pages 39-51		
b. Post-disaster mitigation policies and procedures (10)			
c. Action items for mitigation of other hazards (5)	Chapter 4, Pages 39-51		

CRS Step	Section/Page	Item Score	Step Total
9. Adopt the plan. (2)	Appendix D, Page 3		
10. Implement, evaluate and revise. (Max 26)			
a. Procedures to monitor and recommend revisions (required) (2)	Appendix B; Pages 1-4		
b. Same planning committee or successor committee that qualifies under Section 511.a.2 (a) does the evaluation (24)	Appendix B; Pages 1-4		
		FMP=	

## Walker CRS Element 512.a Checklist

	<b>Community:</b> Walker, LA		
<b>510 FLOODPLAIN MANAGEMENT PLANNING</b>			
<b>512.a Floodplain Management Planning (FMP)</b>			
<b>Credit Points:</b> Enter the section or page number in the plan where each credited item can be found. Add notes on AW-510-4.			
<b>CRS Step</b>	<b>Section/Page</b>	<b>Item Score</b>	<b>Step Total</b>
1. Organize to prepare the plan. (15 Max)			
a. Involvement of Office Responsible for Community Planning (4)			
b. Planning committee of department staff (9)	Appendix A, Pages 3-4		
c. Process formally created by the community's governing board (2)			
2. Involve the public. (120 Max)			
a. Planning process conducted through a planning committee (60)			
b. Public meetings held at the beginning of the planning process (15)	Appendix A, Pages 11-13		
c. Public meeting held on draft plan (15)	Appendix A, Page 16		
d. Other public information activities to encourage input (Up to 30)	Appendix A, Pages 14-16		
3. Coordinate with other agencies. (35 Max)			
a. Review of existing studies and plans (required) (5)	Appendix A, Page 6		
b. Coordinating with communities and other agencies (Up to 30)	Appendix A, Page 5		
4. Assess the hazard. (Max 35)			
a. Plan includes an assessment of the flood hazard (REQUIRED) with:			
(1) A map of known flood hazards (5)	Chapter 2, Page 43		
(2) A description of known flood hazard (5)	Chapter 2, Page 30-38		
(3) A discussion of past floods (5)	Chapter 2, Page 44		
b. Plan includes assessment of less frequent floods (10)	Chapter 2, Pages 18-26		
c. Plan includes assessment of areas likely to flood (5)			
d. The plan describes other natural hazards (REQUIRED FOR DMA) (5)	Chapter 2, Pages 18-28; 53-88		



CRS Step	Section/Page	Item Score	Step Total
5. Assess the problem. (Max 52)			
a. Summary of each hazard identified in the hazard assessment and their community impact (REQUIRED) (2)	Chapter 2, Pages 18-88		
b. Description of the impact of the hazards on: (Max 25)			
(1) Life, safety, health, procedures for warning and evacuation (5)	Chapter 2, Pages 35-36		
(2) Public health including health hazards to floodwaters/mold (5)	Chapter 2, Pages 32, 35-36		
(3) Critical facilities and infrastructure (5)	Chapter 2, Pages 6-10; Appendix C		
(4) The community's economy and tax base (5)	Chapter 1, Page 4; Chapter 2, Pages 46-52		
(5) Number and type of affected buildings (5)	Chapter 2, Pages 46-49; Appendix C		
c. Review of all damaged buildings/flood insurance claims (5)	Chapter 2, Pages 33-34; Appendix E, Page 48		
d. Areas the provide natural floodplain functions (5)			
e. Development/redevelopment/Population Trends (7)	Chapter 2, Pages 11-12		
f. Impact of future flooding conditions outline in Step 4, item c (5)			
6. Set goals. (required) (2)	Chapter 4, Page 4		
7. Review possible activities. (Max 35)			
a. Preventive activities (5)	Chapter 3, Page 7		
b. Floodplain Management Regulatory/current & future conditions (5)	Chapter 3, Page 8		
c. Property protection activities (5)	Chapter 3, Page 8		
d. Natural resource protection activities (5)	Chapter 3, Pages 8-9		
e. Emergency services activities (5)	Chapter 3, Page 9		
f. Structural projects (5)	Chapter 3, Page 9-10		
g. Public information activities (5)	Chapter 3, Page 10		
8. Draft an action plan. (Max 60)			
a. Actions must be prioritized (required)			
1. Recommendations for activities from two of the six categories (10)			
2. Recommendations for activities from three of the six categories (20)			
3. Recommendations for activities from four of the six categories (30)			
4. Recommendations for activities from five of the six categories (45)	Chapter 4, Pages 130-150		
b. Post-disaster mitigation policies and procedures (10)			
c. Action items for mitigation of other hazards (5)	Chapter 4, Pages 130-150		

CRS Step	Section/Page	Item Score	Step Total
9. Adopt the plan. (2)	Appendix D, Page 9		
10. Implement, evaluate and revise. (Max 26)			
a. Procedures to monitor and recommend revisions (required) (2)	Appendix B; Pages 1-4		
b. Same planning committee or successor committee that qualifies under Section 511.a.2 (a) does the evaluation (24)	Appendix B; Pages 1-4		
		FMP=	