ACADIA

PARISH HAZARD MITIGATION UPDATE – 2016

ACADIA PARISH POLICE JURY

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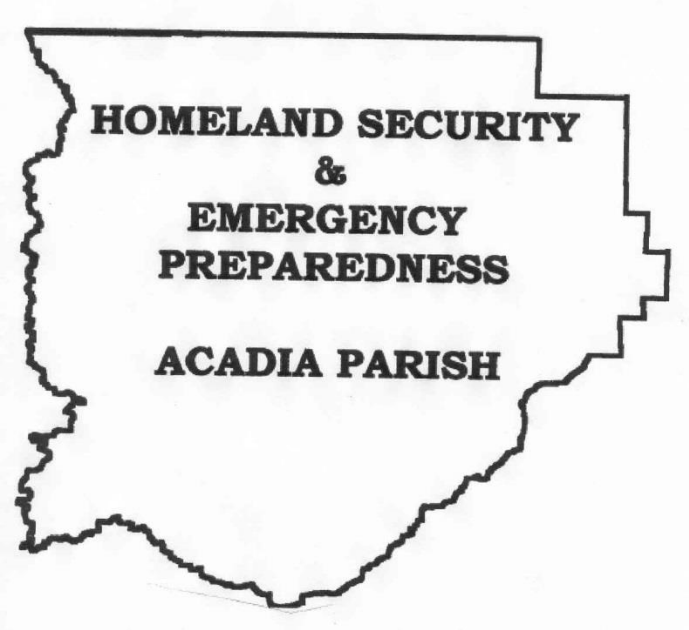
ACADIA PARISH

HAZARD MITIGATION PLAN UPDATE

Prepared for:

Acadia Parish



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ACKNOWLEDGMENTS

This 2016 Acadia Parish Hazard Mitigation Plan Update was coordinated by the Acadia Parish Hazard Mitigation Plan Update Steering Committee, in collaboration with the participating jurisdictions as well as community stakeholders and the general public. The participating jurisdictions are made up of the following communities:

Unincorporated Acadia Parish
Town of Church Point
City of Crowley
Village of Estherwood
Town of Iota
Village of Mermentau
Town of Morse
City of Rayne

Special thanks is directed to all of those who assisted in contributing feedback and expertise on this document, especially the Acadia Parish Office of Homeland Security and Emergency Management. These combined efforts have made this project possible. The Acadia Parish Steering Committee consists of the following individuals, who are credited in the creation of this document:

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Contents

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 Acadia Parish Hazard Mitigation Plan Update process; (b) identifies natural hazards and risks within the parish; and (c) identifies the parish's hazard mitigation strategy to make Acadia Parish less vulnerable and more disaster resistant. It also includes mitigation project scoping to further identify scopes of work, estimated costs, and implementation timing requirements of proposed selected mitigation projects. Information in the plan will be used to help guide and coordinate mitigation activities and local policy decisions affecting future land use.

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

- Unincorporated Acadia Parish
- Town of Church Point
- City of Crowley
- Village of Estherwood
- Town of Iota
- Village of Mermentau
- Town of Morse
- City of Rayne

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 and Rita environment in south Louisiana.

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

Why this plan? 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 or cookbook 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.

Mitigation activities need funding. 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, a program that reduces flood insurance premiums in participating communities. This program is described at the end of this chapter.

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 Community Rating System credit, and provides the parish and its municipalities with a blueprint for reducing the impacts of these natural hazards on people and property.

Location, Demography, and Economy

Location

Acadia Parish is located in southwest Louisiana, west of the city of Lafayette. Lafayette and St. Landry Parishes are located to the east of Acadia Parish. Jefferson Davis Parish is located to the west of Acadia Parish. Evangeline Parish is located to the north, and Vermilion Parish is located to the south of the parish. Acadia Parish is approximately 31.5 miles long and 27 miles wide, and consists of an area of 655 square miles, or 419,400 acres.

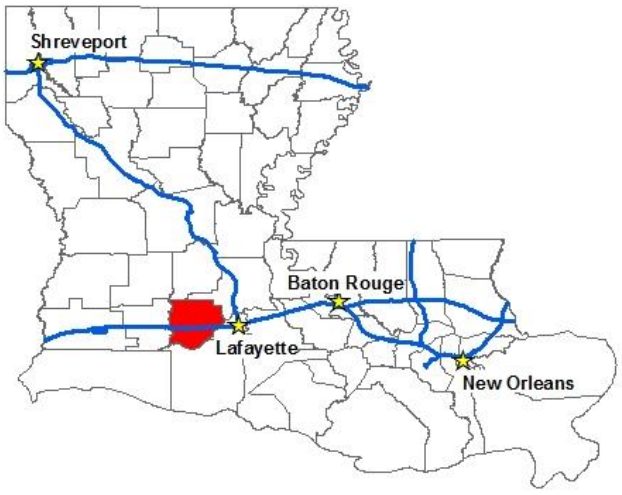

Figure 1-1: Location of Acadia Parish within the State of Louisiana

The main transportation arteries through Acadia Parish are Interstate Highway 10 and U.S. Highways 90 and 190. The State Highways that traverse the parish are 13, 35, 91, 92, 95, 97 and 98. Interstate 10 runs east/west through the southern portion of the parish. U.S. Highway 90, just south of Interstate 10, also runs east/west through the parish. It connects Mermentau, Estherwood, Crowley, and Rayne. LA Highway 13 runs north/south through the parish and connects Crowley to Eunice in St. Landry Parish.

The topography of Acadia Parish is relatively flat. The land is primarily used for agriculture and floods quite frequently. Drainage in the parish is influenced by Gulf tides and southerly winds. The terrain of the parish consists of mostly flat land with elevations that range from 55 feet along the northeastern portion of the parish to 5 feet in the southwest portion.

Acadia Parish is located in Louisiana Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP) Region 4.

As noted above, Acadia Parish is located in the southwest region of Louisiana.

Figure 1-2: Louisiana Homeland Security Regions

Table 1-1: Acadia Parish Population
(Source: U.S. Census Bureau)

	2010 Census	2013 Census	(Current Yr) Estimate	Percent Change 2010 -2013	Percent Change 2010 - (Current Year)
Total Population	61,773	62,169	62,486	0.60%	1.20%
Population Density (Pop/Sq Mi)	94.3	___	___	___	___
Total Households	22,527	22,527	___	___	___

Economy

The economic base of Acadia Parish consists of companies in the agriculture, commercial bags, and metal works industries. Due to the parish being mostly rural in nature, the economy is primarily based on the agricultural industry, specifically the production of rice, soybeans, and crawfish. Its hardworking labor force, excellent transportation network, abundant raw materials, and land for commercial and industrial development make Acadia Parish an ideal prospect for business investment. Industry data for business patterns in Acadia Parish can be found in the table on the following page.

Table 1-2: Business Patterns in Acadia Parish
(Source: http://censtats.census.gov/cgi-bin/cbpnaic/cbpsect.pl)

Business Description	Number of Employees	Number of Establishments	Annual Payroll ($1,000)
Retail Trade	2,549	190	58,384
Manufacturing	1,333	43	48,607
Health Care and Social Assistance	2,446	132	65,138
Mining, Quarrying, Oil and Gas Extraction	783	40	47,962
Transportation and Warehousing	450	56	31,077
Construction	704	111	28,192
Administration and Support and Waste Management and Remediation Services	250-499	31	___
Real Estate and Rental and Leasing	573	41	31,166
Wholesale Trade	766	48	28,866
Other Services (except Public Administration)	614	105	11,398
Accommodation and Food Services	1,144	71	14,245
Financial and Insurance	432	78	16,160
Professional, Scientific, and Technical Services	391	128	18,064
Information	118	13	3,871
Educational Services	218	10	5,176
Arts, Entertainment, and Recreation	76	10	854
Management of Companies and Enterprises	20-99	8	5,067
Agriculture, Forestry, Fishing and Hunting	45	5	2,095
Utilities	20-99	10	3,262

While nature has presented the parish with a variety of hazards, the parish has the human resources that can face those hazards and manage the impact they have on people and property. This plan will discuss hazards affecting Acadia Parish. Hazard Profiles (see Section Two) contain detailed information on the likelihood of occurrence, possible magnitude or intensity, areas of the parish that could be affected, and conditions that could influence the manifestation of the hazard.

Hazard Mitigation

To fully understand hazard mitigation efforts in Acadia 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 before 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 GOHSEP encourages the parishes and the local municipalities 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 2016 Acadia Parish Hazard Mitigation Plan maintains much of the information from the 2006 and 2011 plan versions, but it now reflects the order and methodologies of the 2011 Louisiana State Hazard Mitigation Plan. The sections in the 2011 Acadia Parish Hazard Mitigation Plan were as follows:

- Section One Introduction
- Section Two Parish Profile
- Section Three Planning Process
- Section Four Risk Assessment
- Section Five Mitigation Strategy
- Section Six Plan Maintenance Procedures
- Section Seven Action Plan
- Tables
- Maps
- Appendices

This plan update now 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 Acadia Parish Hazard Mitigation Steering Committee was not ignorant or dismissive of the successful analysis and mitigation planning executed in previous plan updates. This plan update remains coherent with those documents, retaining language and content when needed, deleting it when appropriate, and augmenting it when constructive.

2016 Plan Update

This 2016 plan update proceeds with the previous goals of the Acadia Parish Hazard Mitigation Plan. The current goals are as follows:

- Identify and pursue preventative measures that will reduce future damages from hazards
- Enhance public awareness and understanding of disaster preparedness
- Reduce repetitive flood losses in the parish and municipalities
- Facilitate sound development in the parish and municipalities so as to reduce or eliminate the potential impact 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 Spatial Hazard Events and Losses Database for the United States (SHELDUS) was used as a data source for hazard identification because it incorporates all storm event data

from the National Climatic Data Center (NCDC) Storm Events Database used in previous plans, as well as storm event data from other sources including the NOAA Storm Prediction Center, National Hurricane Center, and U.S. Fire Administration. Furthermore, all of the sections were updated to reflect the most current information and the most current vision of the plan update. Second, instead of eleven, separate sections for numerous tables, maps, and appendices, the present plan update has four sections and five appendices. The most significant changes are the newly developed hazard profiles and risk assessments, as well as the removal of repetition between sections from the previous plan updates. The 2016 plan update is organized generally as follows:

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

Table 1-4: Plan Crosswalk

2011 Plan	Revised Plan (2016)
Section 1: Introduction	Section 1: Introduction
Section 2: Parish Profile	Section 1: Introduction
Section 3: Planning Process	Appendix A: Planning Process
Section 4: Risk Assessment	Section 2: Hazard Identification and Risk Assessment, Section 3: Capability Assessment
Section 5: Mitigation Strategy	Section 4: Mitigation Strategy
Section 6: Plan Maintenance	Appendix B: Plan Maintenance
Section 7: Action Plan	Section 4: Mitigation Strategy
Appendices	Appendices A, B, C, D, E

Despite changes in this plan update, the plan remains consistent in its emphasis on the few types of hazards that pose the most risk to loss of life, injury, and property in Acadia Parish and its municipalities. The extent of this risk is dictated primarily by its geographic location. Most significantly, Acadia Parish remains at high risk of water inundation from various sources, including flooding, tornadoes, and tropical cyclone activity. The entire parish is also at high risk of damages from high winds and wind-borne debris caused by various meteorological phenomena. Other hazards threaten the parish and/or its municipalities, although not to such great degrees and not in such widespread ways. In all cases, the relative social vulnerability of areas threatened and affected plays a significant role in how governmental agencies and their partners (local, parish, state, and federal) prepare for and respond to disasters.

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

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2. Hazard Identification and Parish-Wide Risk Assessment

This section assesses the various hazard risks that Acadia 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 Acadia Parish Hazard Mitigation Plan published in 2011, as well as the hazards that were identified in the state's 2014 Hazard Mitigation Plan that were considered to be of high or medium risk for the parish by the state. Those hazards identified as high or medium risk by the state or previously identified as a risk by the parish, have been determined to provide a risk to the parish and will be profiled in this section.

Table 2-1: Hazard Profile Summary

Hazard	Profiled in Last Plan	Considered Medium or High Risk in the State's HM Plan	Profiled in the 2016 Update
Subsidence			
Drought	X		X
Earthquakes			
Expansive Soils			
Fog			
Dam/Levee Failure			
Flooding	X	X	X
Extreme Heat			
Sinkholes			
Thunderstorms (Hail, Lightning, & Wind)	X	X	X
Tornadoes	X	X	X
Tropical Cyclones	X	X	X
Tsunamis			
Wildfires			
Winter Storms	X		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) Flooding (backwater, riverine, localized stormwater event)
b) Tropical Cyclones (flooding and high winds)
c) Tornadoes
d) Thunderstorms (hail, lightning, wind)
e) Drought
f) Winter Storms

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)
- High wind damage most commonly resulting from hurricanes, thunderstorms, and tornadoes
- Property and crop damage resulting from drought.

The potential destructive power of tropical cyclones and flooding were determined to be the most prevalent hazards to the parish. Fifteen of the seventeen Presidential Declarations that Acadia Parish has received resulted from either tropical cyclones (10 declarations) or flooding (5 declarations), which validates these as the most significant hazards. Therefore, the issues of hurricanes and floods will both serve as the main focus during the mitigation planning process. Hurricanes present risks from the potential for flooding, primarily resulting from storm surge, and high wind speeds. While storm surge is considered the hazard with the most destructive potential, the risk assessment will also asses 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 fairly 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 Acadia Parish is included in the hurricane risk assessment.

Acadia Parish is also susceptible to tornadoes. Tornadoes can spawn from tropical cyclones or severe weather systems that pass through Acadia 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 Acadia Parish since 1965. Information includes names, dates, and types of disaster.

Table 2-2: Acadia Parish Major Disaster Declarations

Disaster Declaration Number	Date	Type of Disaster
208	9/10/1965	Tropical Cyclone – Hurricane Betsy
315	10/13/1971	Tropical Cyclone – Hurricane Edith
450	11/1/1974	Severe Storms
622	5/21/1980	Severe Storms and Flooding
829	5/20/1989	Severe Storms and Flooding
956	8/26/1992	Tropical Cyclone – Hurricane Andrew
1246	9/23/1998	Tropical Cyclone – Hurricane George / Tropical Storm Frances
1437	10/3/2002	Tropical Cyclone – Hurricane Lili
3172	2/1/2003	Loss of Space Shuttle Columbia
1521	6/8/2004	Severe Storms and Flooding
1603	8/29/2005	Tropical Cyclone – Hurricane Katrina
1607	9/24/2005	Tropical Cyclone – Hurricane Rita
1668	11/2/2006	Severe Storms and Flooding
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 Storms and Flooding

Probability of Future Hazard Events

The probability of a hazard event occurring in Acadia Parish is estimated in the table on the following page. The percent chance of an event happening during any given year was calculated by posting past events and dividing by the time period. Unless otherwise indicated, the time period used to access probability followed the method used in the State of Louisiana's most current Hazard Mitigation Plan. The primary source for historical data used throughout the plan is the Spatial Hazards Events and Losses Database (SHELDUS), which provides historical hazard data from 1960 to 2014. In staying consistent with the state plan, the SHELDUS database was evaluated for the last twenty five years (1990 – 2015) in order to determine future probability of a hazard occurring. While the 25-year record used by the State was adopted for the purpose of determining the overall probability, in order to assist with determining estimated losses, unless otherwise stated, the full 54-year record was used when Hazus-Multi-Hazard (MH) wasn't 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. In addition, the National Climatic Data Center (NCDC) was also used to help identify hazard data specific to the municipalities. This was used due to it containing specific data for cities, whereas the data within SHELDUS is limited to parishes.

The following table shows the annual probability for each hazard occurring across the parish and in separate jurisdictions:

Table 2-3: Probability of Future Hazard Reoccurrence

Hazard	Probability							
	Acadia Parish (Unincorporated)	Church Point	Crowley	Estherwood	Iota	Mermentau	Morse	Rayne
Drought	12%	12%	12%	12%	12%	12%	12%	12%
Flooding	32%	32%	20%	20%	20%	12%	12%	12%
Thunderstorms (Hail)	12%	12%	12%	12%	12%	12%	12%	12%
Thunderstorms (Lightning)	12%	12%	12%	12%	12%	12%	12%	12%
Thunderstorms (Wind)	100%	100%	100%	100%	100%	100%	100%	100%
Tornadoes	100%	100%	100%	100%	100%	100%	100%	100%
Tropical Cyclones	24%	24%	24%	24%	24%	24%	24%	24%
Winter Storms	16%	16%	16%	16%	16%	16%	16%	16%

As shown in *Table 2-3*, thunderstorm winds and tornadoes have the highest annual chance of occurrence in the parish (100%). Flood events for unincorporated areas and the incorporated area of Church Point have an annual chance of occurrence calculated at 32%. Flood events in the remaining incorporated areas have a slightly lower chance of occurring annually. Tropical cyclones have a 24% annual chance of reoccurrence, followed by winter storms at 16%, and drought, hail, and lighting at 12%.

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 $18,611,725,000 in structures throughout the parish. The tables on the following page provides the total estimated value for each type of structure by occupancy.

Table 2-4: Estimated Total of Potential Losses throughout Acadia Parish

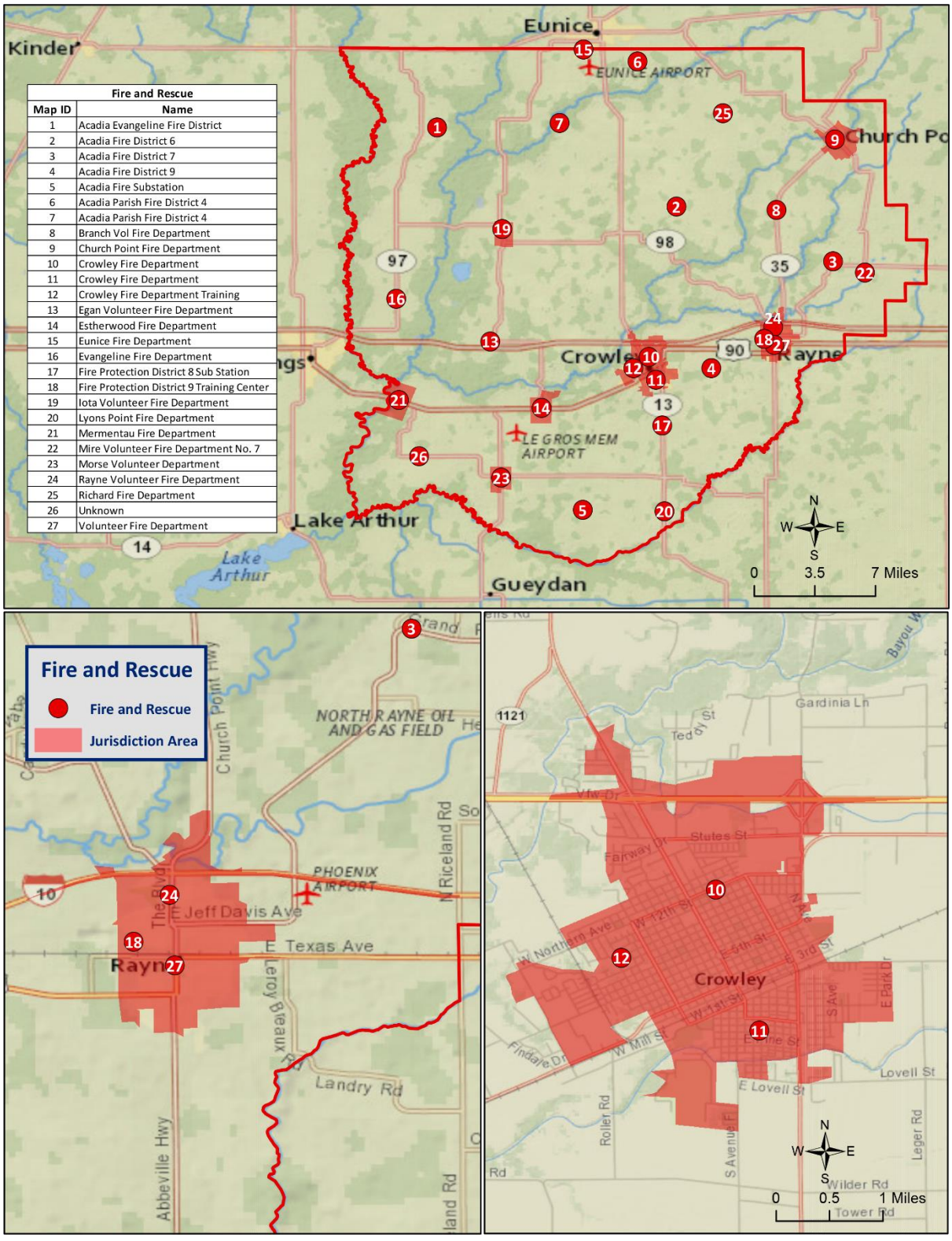
Occupancy	Acadia Parish	Unincorporated Acadia	Church Point	Crowley	Estherwood
Agricultural	$135,026,000	$30,990,000	$2,068,000	$10,540,000	$46,000
Commercial	$1,216,309,000	$407,613,000	$133,535,000	$447,881,000	$5,234,000
Government	$40,937,000	$9,403,000	$610,000	$20,836,000	$840,000
Industrial	$606,150,000	$371,895,000	$16,641,000	$116,470,000	$1,578,000
Religion	$170,236,000	$50,550,000	$18,010,000	$61,424,000	$828,000
Residential	$6,289,548,000	$3,263,418,000	$441,042,000	$1,370,299,000	$104,250,000
Education	$116,424,000	$25,812,000	$15,742,000	$39,428,000	$2,810,000
Total	$8,574,630,000	$4,159,681,000	$627,648,000	$2,066,878,000	$115,586,000

Table 2-4: Estimated Total of Potential Losses (Continued)

Occupancy	Iota	Mermentau	Morse	Rayne
Agricultural	$1,290,000	$0	$176,000	$89,916,000
Commercial	$22,291,000	$4,806,000	$7,723,000	$187,226,000
Government	$892,000	$756,000	$1,224,000	$6,376,000
Industrial	$847,000	$2,087,000	$354,000	$96,278,000
Religion	$3,116,000	$1,656,000	$860,000	$33,792,000
Residential	$146,645,000	$67,095,000	$78,851,000	$817,948,000
Education	$12,100,000	$2,532,000	$432,000	$17,568,000
Total	$187,181,000	$78,932,000	$89,620,000	$1,249,104,000

Essential Facilities of the Parish

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



Fire and Rescue	
Map ID	Name
1	Acadia Evangeline Fire District
2	Acadia Fire District 6
3	Acadia Fire District 7
4	Acadia Fire District 9
5	Acadia Fire Substation
6	Acadia Parish Fire District 4
7	Acadia Parish Fire District 4
8	Branch Vol Fire Department
9	Church Point Fire Department
10	Crowley Fire Department
11	Crowley Fire Department
12	Crowley Fire Department Training
13	Egan Volunteer Fire Department
14	Estherwood Fire Department
15	Eunice Fire Department
16	Evangeline Fire Department
17	Fire Protection District 8 Sub Station
18	Fire Protection District 9 Training Center
19	Iota Volunteer Fire Department
20	Lyons Point Fire Department
21	Mermentau Fire Department
22	Mire Volunteer Fire Department No. 7
23	Morse Volunteer Department
24	Rayne Volunteer Fire Department
25	Richard Fire Department
26	Unknown
27	Volunteer Fire Department

Figure 2-1: Fire and Rescue Buildings in Acadia Parish

Government	
Map ID	Name
1	Acadia Parish Animal Control
2	Acadia Parish Courthouse
3	Acadia Parish Department of Social Services
4	Acadia Parish Maintenance Facility
5	Acadia Parish Recycling Center
6	Acadia Parish Sanitary Landfill
7	Acadia Parish School Board
8	Acadia Police Jury
9	Acadia School Board Education Center
10	Church Point City Hall
11	City of Crowley Animal Shelter
12	Corwley Chamber of Commerce
13	Crowley City Court
14	Crowley City Hall
15	Crowley Maintenance Center
16	Crowley Public Works
17	Department of Motor Vehicles
18	Egan Water Corporation
19	Enterprise Center of Acadia
20	Estherwood Town Hall
21	Federal Programs
22	Iota City Hall
23	LA Department of Agriculture and Forestry
24	LA Department of Social Services
25	LA Department of Veteran Affairs Parish Service Office
26	Mermentau City Hall
27	Morse City Hall
28	Ray Chambers of Commerce
29	Rayne City Court
30	Rayne City Hall
31	US Department of Agriculture
32	UDSA Animal and Plant Health Inspection Station
33	Unknown

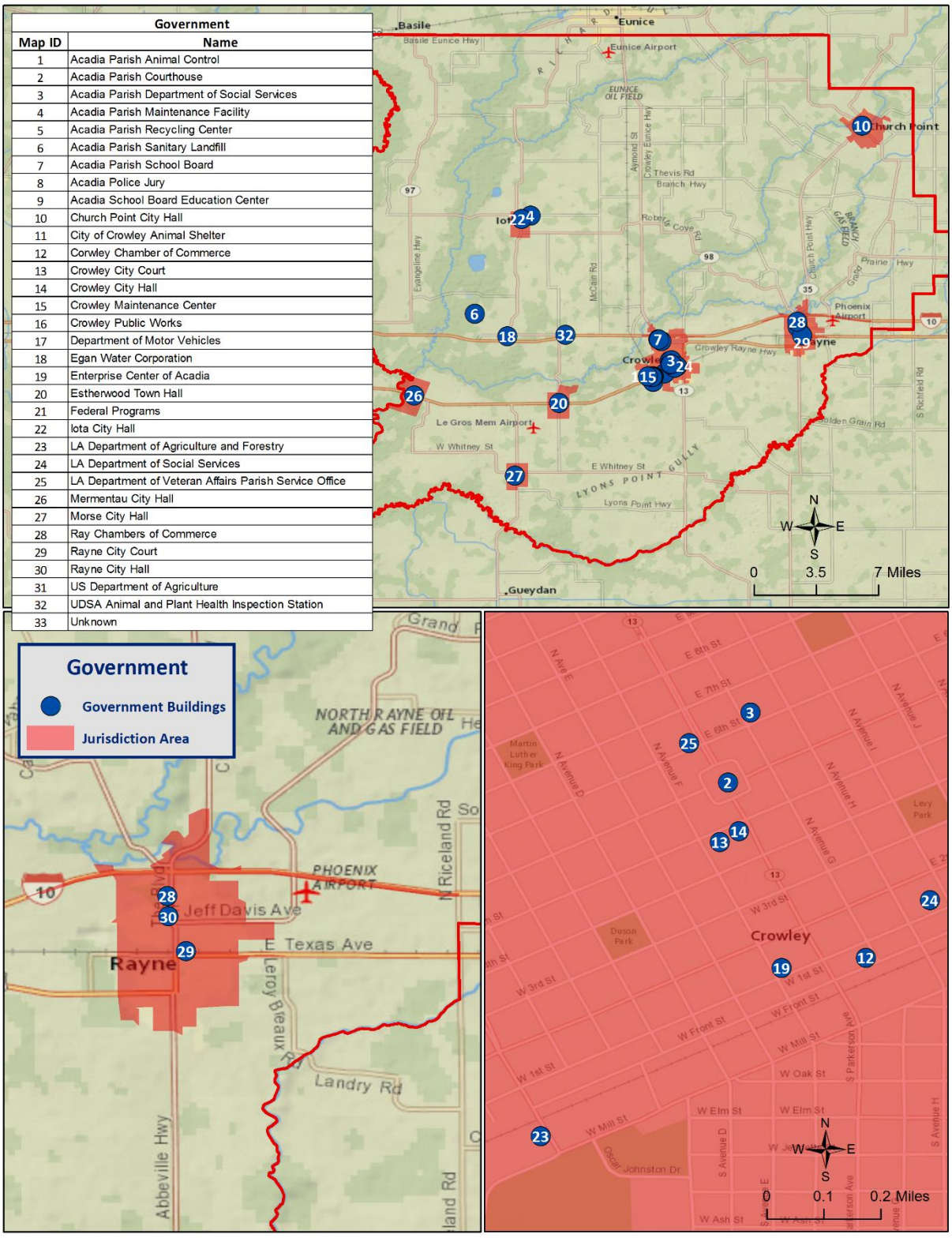


Figure 2-2: Government Buildings in Acadia Parish

Prison and Correction Centers	
Map ID	Name
1	Acadia Detention Center

Law Enforcement	
Map ID	Name
1	Acadia Parish Sheriff's Office
2	Church Point Law Enforcement Center
3	City of Rayne Police Department
4	Crowley Police Department
5	Estherwood Police Department
6	Iota Police Department
7	Mermentau Police Department
8	Morse Police Department

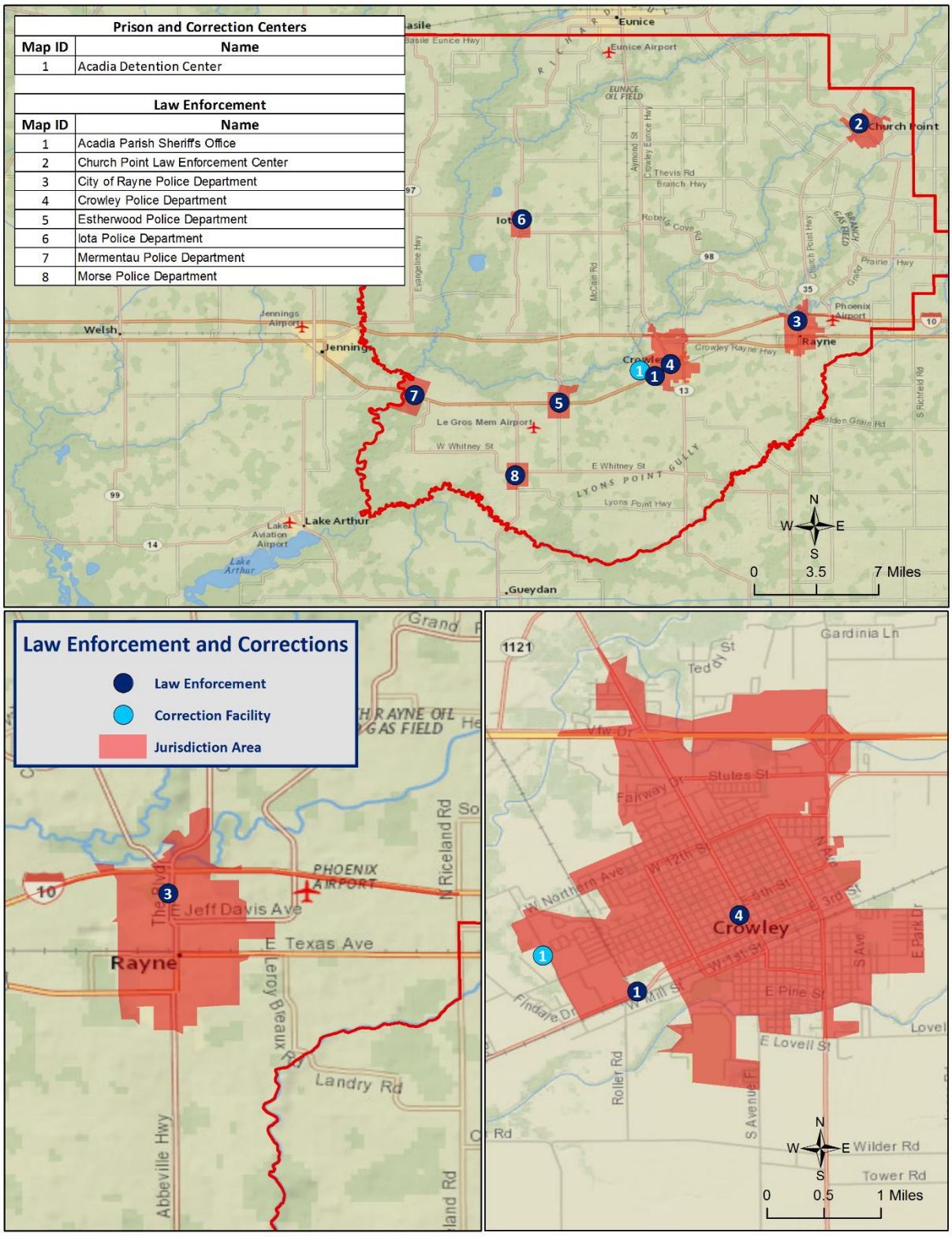


Figure 2-3: Law Enforcement and Correction Facilities in Acadia Parish

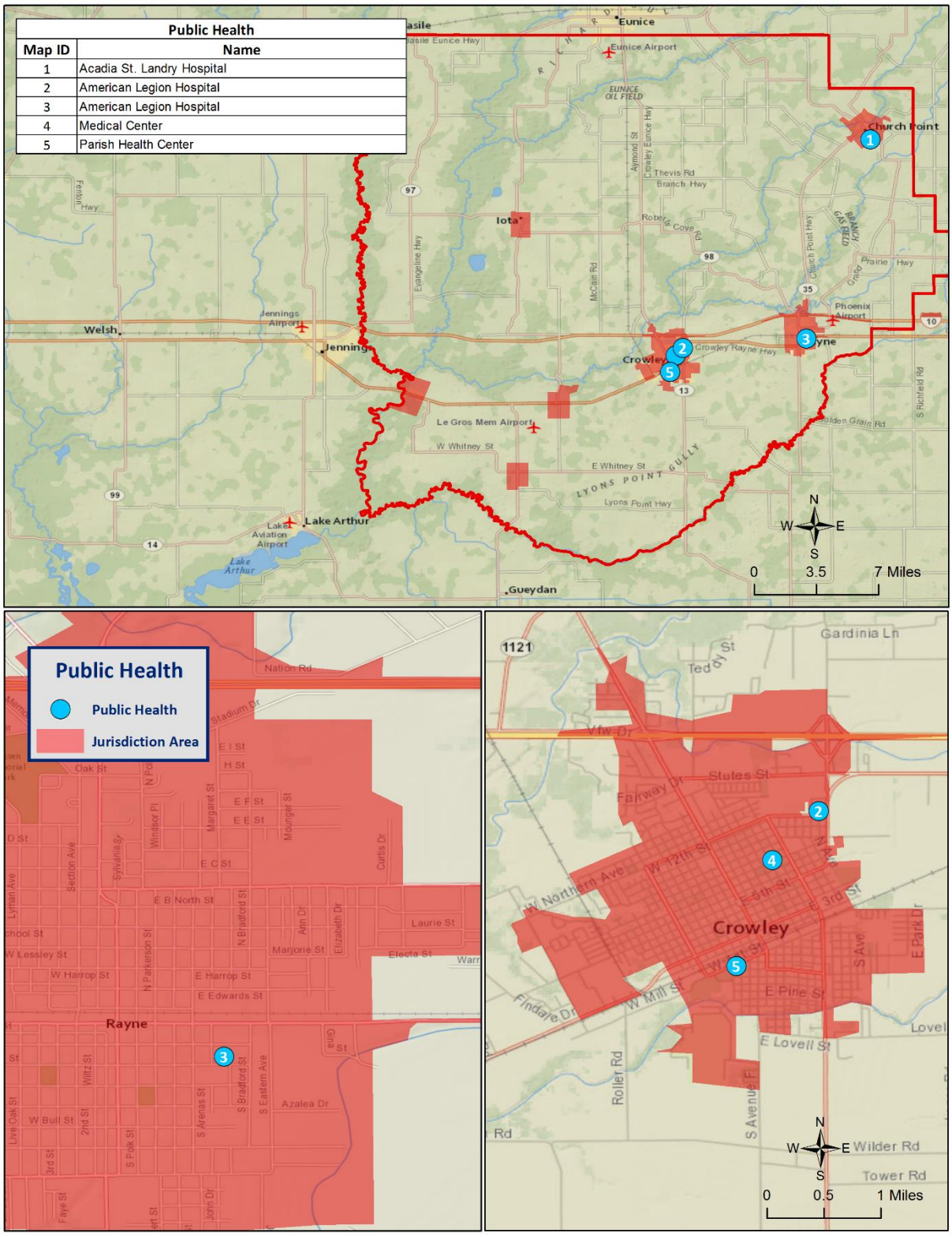


Figure 2-4: Public Health Facilities in Acadia Parish

Acadia Schools	
Map ID	Name
1	Armstrong Middle School
2	Branch Elementary
3	Central Rayne Kindergarten
4	Church Point Elementary
5	Church Point High School
6	Church Point Middle School
7	Crowley High School
8	Crowley Kindergarten
9	Crowley Middle School
10	Egan Elementary
11	Estherwood Elementary
12	Evangeline Elementary
13	Iota Elementary School
14	Iota High School
15	Iota Middle School
16	Martin Petijean Elementary
17	Mermentau Elementary School
18	Midland High School
19	Mire Elementary
20	Morse Elementary School
21	North Crowley Elementary
22	Notre Dame High School
23	Our Mother of Peace Elementary
24	Rayne Catholic Elementary
25	Rayne High School
26	Redemptorist Catholic School
27	Richard Elementary
28	Ross Elementary
29	South Crowley Elementary
30	South Rayne Elementary
31	St. Josephs Edge
32	St. Francis School
33	St. Michaels Catholic School

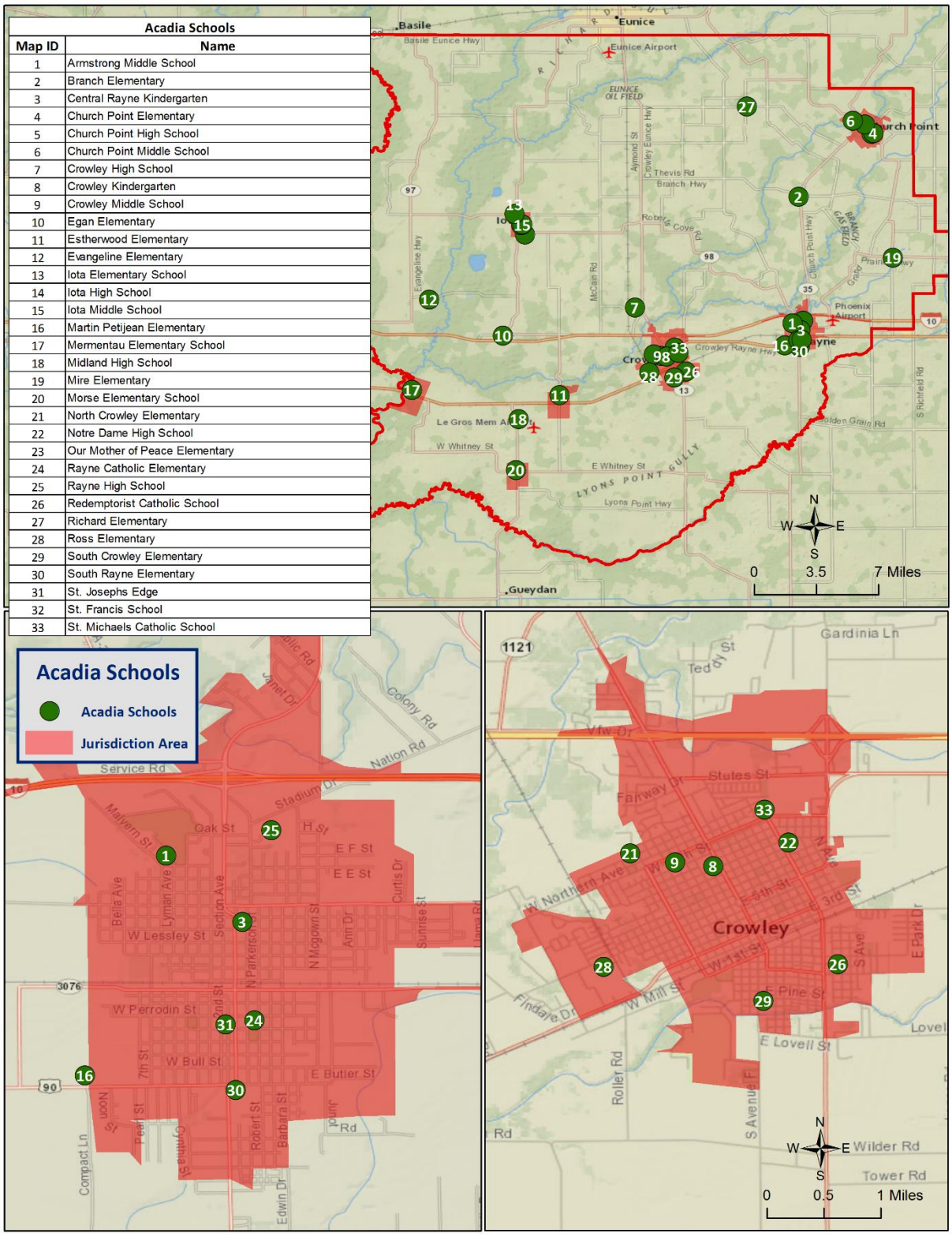


Figure 2-5: School Facilities in Acadia Parish

Future Development Trends

Acadia Parish experienced a growth in population and housing between the years of 2000 and 2014, growing from a population of 58,795 with 23,211 housing units in 2000 to a population of 62,031 with 25,634 housing units in 2014. This growth was largely in the unincorporated areas of Acadia Parish, and in the incorporated area of Morse from the years 2000 to 2010 and the incorporated area of Iota had the largest increase from 2010 to 2014. The incorporated areas of Church Point, Crowley, Mermentau, and Rayne experienced a decline in population from the years of 2000 to 2010. This decline continued during the period of 2010 to 2014 for Church Point, Crowley, and Mermentau while Rayne experienced a slight increase. 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 2014:

Table 2-5: Population Growth Rate for Acadia Parish

Total Population	Acadia Parish	Acadia (Unincorporated)	Church Point	Crowley	Estherwood	Iota	Mermentau	Morse	Rayne
1-Apr-00	58,795	27,585	4,759	14,290	839	1,384	702	744	8,492
1-Apr-10	61,844	32,170	4,565	13,280	890	1,502	662	813	7,962
1-Jul-13	62,031	32,014	4,529	13,219	846	1,790	725	924	7,984
Population Growth between 2000 – 2010	5.2%	16.6%	-4.1%	-7.1%	6.1%	8.5%	-5.7%	9.3%	-6.2%
Average Annual Growth Rate between 2000 – 2010	0.5%	1.7%	-0.4%	-0.7%	0.6%	0.9%	-0.6%	0.9%	-0.6%
Population Growth between 2010 – 2014	0.3%	-0.5%	-0.8%	-0.5%	-4.9%	19.2%	9.5%	13.7%	0.3%
Average Annual Growth Rate between 2010 – 2014	0.08%	-0.12%	-0.20%	-0.11%	-1.24%	4.79%	2.38%	3.41%	0.07%

Table 2-6: Housing Growth Rate for Acadia Parish

Total Housing Units	Acadia Parish	Acadia (Unincorporated)	Church Point	Crowley	Estherwood	Iota	Mermentau	Morse	Rayne
1-Apr-00	23,211	10,408	1,863	5,906	314	583	344	313	3,480
1-Apr-10	25,387	12,374	1,948	5,852	345	667	323	347	3,531
1-Jul-13	25,634	12,585	1,875	5,654	325	873	361	376	3,585
Housing Growth between 2000 – 2010	9.4%	18.9%	4.6%	-0.9%	9.9%	14.4%	-6.1%	10.9%	1.5%
Average Annual Growth Rate between 2000 – 2010	0.9%	1.9%	0.5%	-0.1%	1.0%	1.4%	-0.6%	1.1%	0.1%
Housing Growth between 2010 – 2013	1.0%	1.7%	-3.7%	-3.4%	-5.8%	30.9%	11.8%	8.4%	1.5%
Average Annual Growth Rate between 2010 – 2013	0.2%	0.4%	-0.9%	-0.8%	-1.4%	7.7%	2.9%	2.1%	0.4%

As shown in previous tables, Acadia Parish has experienced growth in both population and housing units. Housing growth rates grew at 0.9% annually from 2000 to 2010, and at 0.2% annually from 2010 to 2014. Population growth rates for the parish were slightly lower at 0.5% annually from 2000 to 2010, and 0.08% annually from 2010 to 2014. From 2000 to 2010, the unincorporated area of Acadia Parish had the largest increase in population with an overall rate of 16.6%, followed by the incorporated area of Morse at 9.3%. The incorporated area of Crowley had the largest decrease in population during this time period at -7.1%. From 2010 to 2014, Iota experienced the largest growth in population at 19.2%, followed by Morse at 13.7%.

The unincorporated area of Acadia Parish experienced the largest increase in housing units from 2000 to 2010 at 18.9%, followed by the incorporated area of Iota at 14.4%. The incorporated areas of Mermentau and Crowley experienced a decline in population during this time period. From 2010 to 2014, Crowley's decline in housing units continued at an annual rate of -0.8%. The incorporated area of Church Point also began to decline at an annual rate of -0.9%. From 2010 to 2014, the incorporated area of Iota experienced the largest increase in housing units with an overall increase of 30.9%.

Future Hazard Impacts

Hazard impacts were estimated for five years and ten years in the future (2019 and 2024). 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 continue to grow slightly within Acadia Parish from the present until 2024. 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%. No changes in development have impacted the community's vulnerability since the plans last update.

Table 2-7: Estimated Future Impacts, 2019-2024
(Source: Hazus, US Census Bureau)

Hazard / Impact	Total in Parish (2014)	Hazard Area (2014)	Hazard Area (2019)	Hazard Area (2024)
Flood Damage				
Structures	25,634	16,338	16,538	16,740
Value of Structures	$8,574,630,000	5465176248	5819911155	6197671276
# of People	62,031	39,536	39,686	39,836
Tropical Cyclones				
Structures	25,634	25,634	25,947	26,264
Value of Structures	$8,574,630,000	$8,574,630,000	$9,131,194,041	$9,723,883,667
# of People	62,031	62,031	62,266	62,502

Land Use

The Acadia Parish Land Use table is provided below. Residential, commercial, and industrial areas account for only 9% of the parish's land use. Agricultural land is the largest category at 295,648 acres, accounting for 71% of parish land. At 65,522 acres, wetlands account for 16% of parish lands, while 13,158 acres of forested areas account for 3% of parish lands. The parish also consists of 2,788 acres of water areas, accounting for 1% of all parish lands.

Table 2-8: Acadia Parish Land Use
(Source: USGS Land Use Map)

Land Use	Acres	Percentage
Agricultural Land, Cropland, and Pasture	295,648	71%
Wetlands	65,522	16%
Forest Land (not including forested wetlands)	13,158	3%
Urban/Development	37,469	9%
Water	2,788	1%

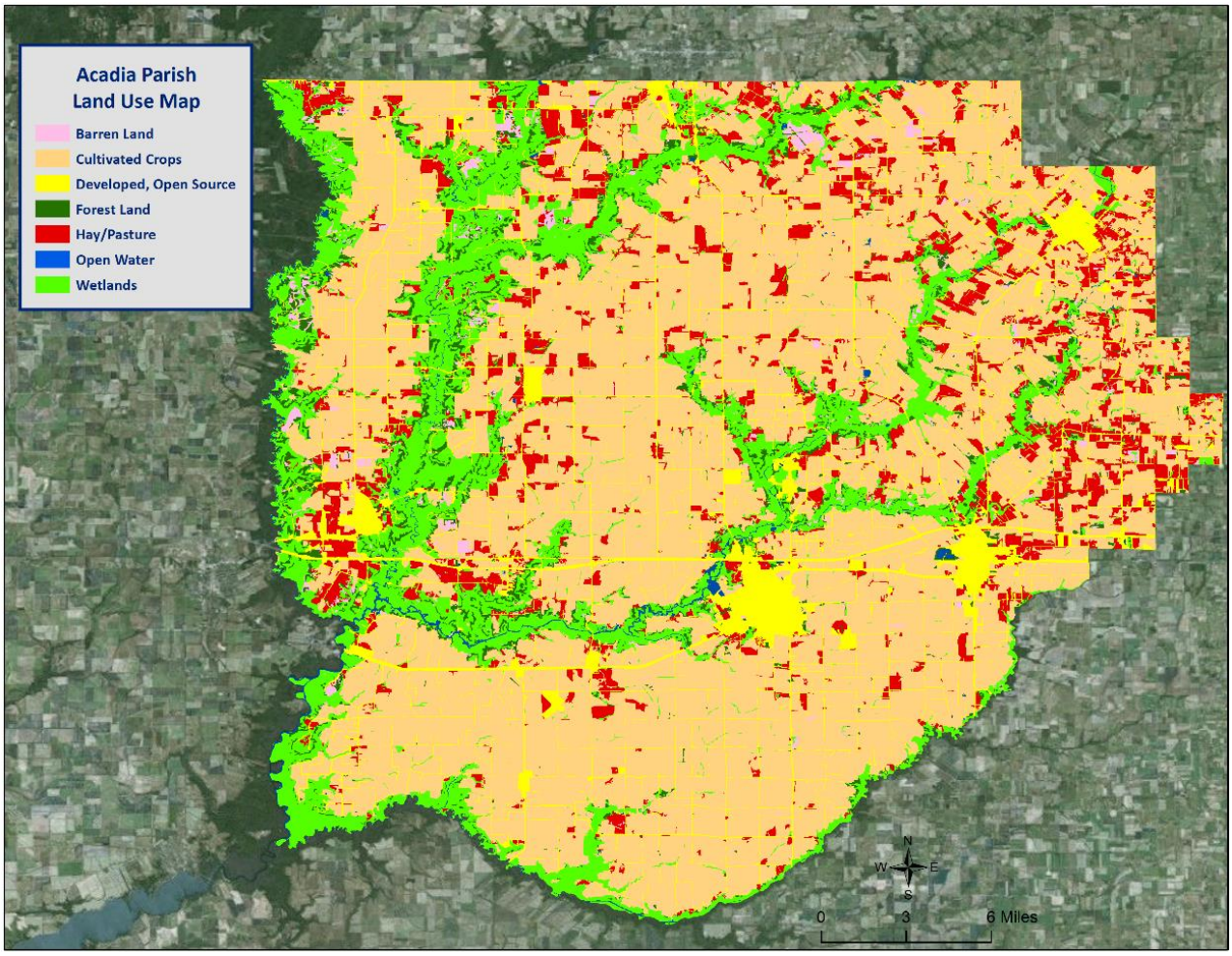


Figure 2-6: Acadia Parish Land Use Map
(Source: USGS Land Use Map)

Hazard Identification

Drought

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

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

This hazard is often measured using the Palmer Drought Severity Index (PDSI, also known operationally as the Palmer Drought Index). The PDSI, first developed by Wayne Palmer in a 1965 paper for the U.S. Weather Bureau, measures drought through recent precipitation and temperature data with regard to a basic supply-and-demand model of soil moisture. It is most effective in long-term calculations. Three other indices used to measure drought are the Palmer Hydrologic Drought Index (PHDI), the Crop Moisture Index (CMI), which is derived from the PDSI, and the Keetch-Byram Drought Index (KBDI), created by John Keetch and George Byram in 1968 for the U.S. Forest Service. The KBDI is used mainly for predicting the likelihood of wildfire outbreaks. As a compromise, the PDSI is used most often for droughts since it is a medium-response drought indicator. The objective of the PDSI is to provide measurements of moisture conditions that are standardized so that comparisons using the index can be made between locations and between months. *Table 2-9* displays the range and Palmer classifications of the PDSI index. *Figure 2-7* displays the current drought monitor for the state of Louisiana and its parishes.

Table 2-9: 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 exist in Acadia Parish at the time this plan went to publication (*Figure 2-7*).

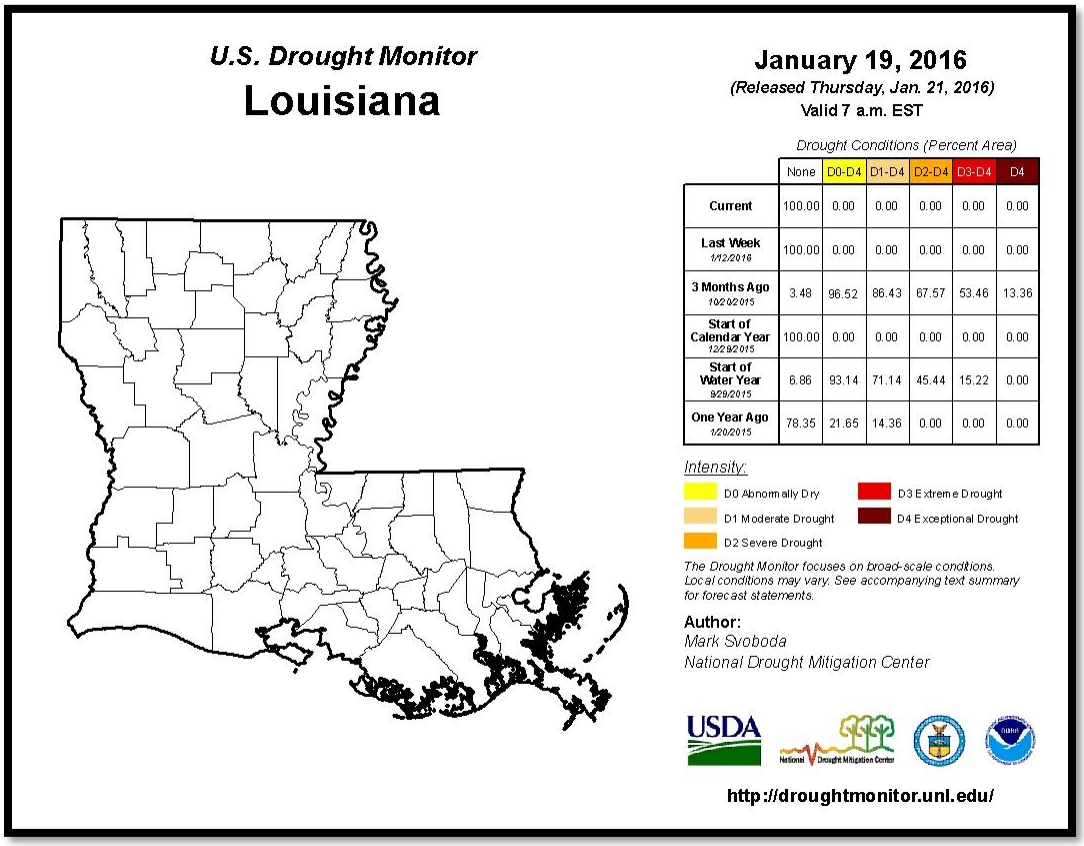


Figure 2-7: United States Drought Monitor for the State of Louisiana and its Parishes (Source: The National Drought Mitigation Center)

Location

Drought typically impacts a region and not one specific parish or jurisdiction. While the entire planning area can experience drought, the major impact of a drought event in Acadia Parish is on the agricultural community.

Previous Occurrences / Extents

The SHELDUS database reports a total of three drought events occurring within the boundaries of Acadia Parish between the years of 1990 to 2015. *Table 2-10* identifies the date of occurrence, estimated crop damage, and severity of the events that have occurred in Acadia Parish. Based on previous occurrences, and in accordance with the Palmer Drought Index, the worst case scenario for drought in Acadia Parish would be a severe drought event.

Table 2-10: Drought Events with Crop Damage Totals for Acadia Parish (Source: SHELDUS)

Date	Crop Damage	Palmer Classification
May 1996	$92,797	Moderate Drought
August 1998	$15,160,345	Severe Drought
December 2000	$14,339,978	Severe Drought

Frequency / Probability

Based on previous occurrences of three drought events in 25 years, the probability of drought occurrence in the planning area in any given year is 12%.

Estimated Potential Losses

According to the SHELDUS database, there have been three drought events that have caused some level of crop damage. The total agricultural damage from these events is $29,593,119, with an average cost of $9,864,373 per drought event. When annualizing the total cost over the 25-year record, total annual losses based on drought is estimated to be $1,183,725. *Table 2-11* presents an analysis of agricultural exposure that is susceptible to drought by major crop type for Acadia Parish.

Table 2-11: Agricultural Exposure by Crop Type for Droughts in Acadia Parish (Source: LSU Ag Center 2014 Parish Totals)

Agricultural Exposure by Type for Drought						
Rice	Soybeans	Sweet Potatoes	Sugarcane	Forestry	Hay	Total
$100,892,324	$19,709,994	$10,981,082	$3,055,510	$2,478,509	$1,428,000	$138,545,419

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

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.

For purposes of this assessment, ponding, flash flood, and urban flooding are considered to be flooding as a result of storm water from heavy precipitation thunderstorms

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

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

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

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

Floods are measured mainly by probability of occurrence. A 10-year flood event, for example, is an event of small magnitude (in terms of stream flow or precipitation) but with a relatively high annual probability of recurrence (10%). A 100-year flood event is larger in magnitude, but it has a smaller chance of recurrence (1%). A 500-year flood is significantly larger than both a 100-year event and a 10-year event, but it has a lower probability than both to occur in any given year (0.2%). It is important to understand that an X-year flood event does not mean an event of that magnitude occurs only once in X years. Instead, it means that on average, we can expect a flood event of that magnitude to occur once every X years. Given that such statistical probability terms are inherently difficult for the general population to understand, the Association of State Floodplain Managers (ASFPM) promotes the use of more tangible expressions of flood probability. As such, the ASFPM also expresses the 100-year flood event as having a 25% chance of occurring over the life of a 30-year mortgage.

It is essential to understand that the magnitude of an X-year flood event for a particular area depends on the source of flooding and the area's location. The size of a specific flood event is defined through historic data of precipitation, flow, and discharge rates. Consequently, different 100-year flood events can have very different impacts. The 100-year flood event in two separate locations have the same likelihood to occur, but they do not necessarily have the same magnitude. For example, a 100-year event for the Mississippi River means something completely different in terms of discharge values (ft^3/s) than for the Amite River. Not only are the magnitudes of 100-year events different between rivers, they can be different along any given river. A 100-year event upstream is different from one downstream due to the variation of river characteristics (volume, discharge, and topography). As a result, the definition of what constitutes a 100-year flood event is specific to each location, river, and time, since floodplain and river characteristics temporally fluctuate. 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 2-8*.

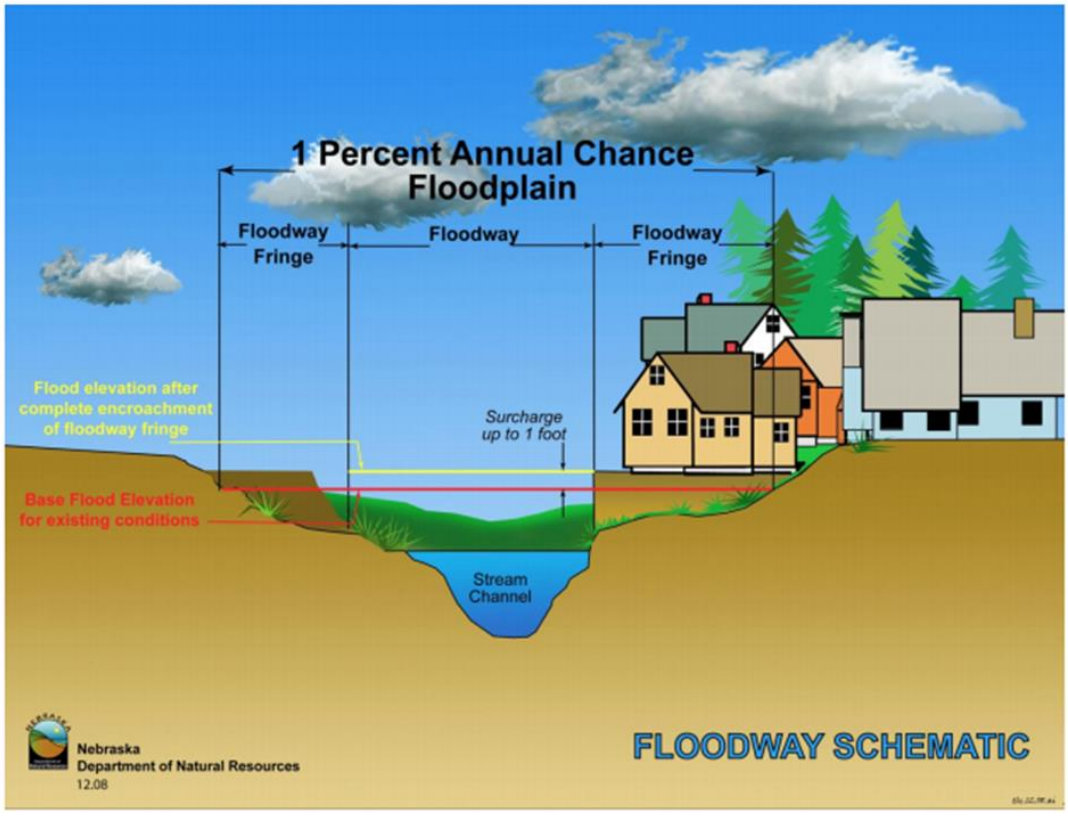


Figure 2-8: Schematic of 100-Year Floodplain. The Special Flood Hazard Area (SFHA) extends to the end of the floodway fringe.
(Source: Nebraska Department of Natural Resources)

A SFHA is the land area covered by the floodwaters of the base flood (red line in *Figure 2-8*), 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 are usually 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 Acadia Parish are provided in the table below:

Table 2-12: Repetitive Loss Structures for Acadia Parish

Jurisdiction	Number of Structures	Residential	Commercial	Government	Total Claims	Total Claims Paid	Average Claim Paid
Acadia Parish (Unincorporated)	35	34	1	0	89	1,665,930	$18,718
Church Point	8	8	0	0	29	$628,818	$21,683
Crowley	9	9	0	0	24	$334,311	$13,930
Estherwood	1	1	0	0	3	$40,628	$13,543
Iota	1	1	0	0	2	$109,132	$54,566
Mermentau	0	0	0	0	0	$0	$0
Morse	0	0	0	0	0	$0	$0
Rayne	3	3	0	0	8	$44,087	$5,511
Total	57	56	1	0	155	$2,822,906	$18,212

Of the 57 repetitive loss structures, 41 were able to be geocoded in order to provide an overview of where the repetitive loss structures were located throughout the parish. *Figure 2-9* shows the approximate location of the 41 structures, while *Figure 2-10* shows where the highest concentration of repetitive loss structures are located. Through the repetitive loss map, it is clear that the primary concentrated area of repetitive loss structures is focused in and around the incorporated areas of Church Point, Crowley, and Rayne.

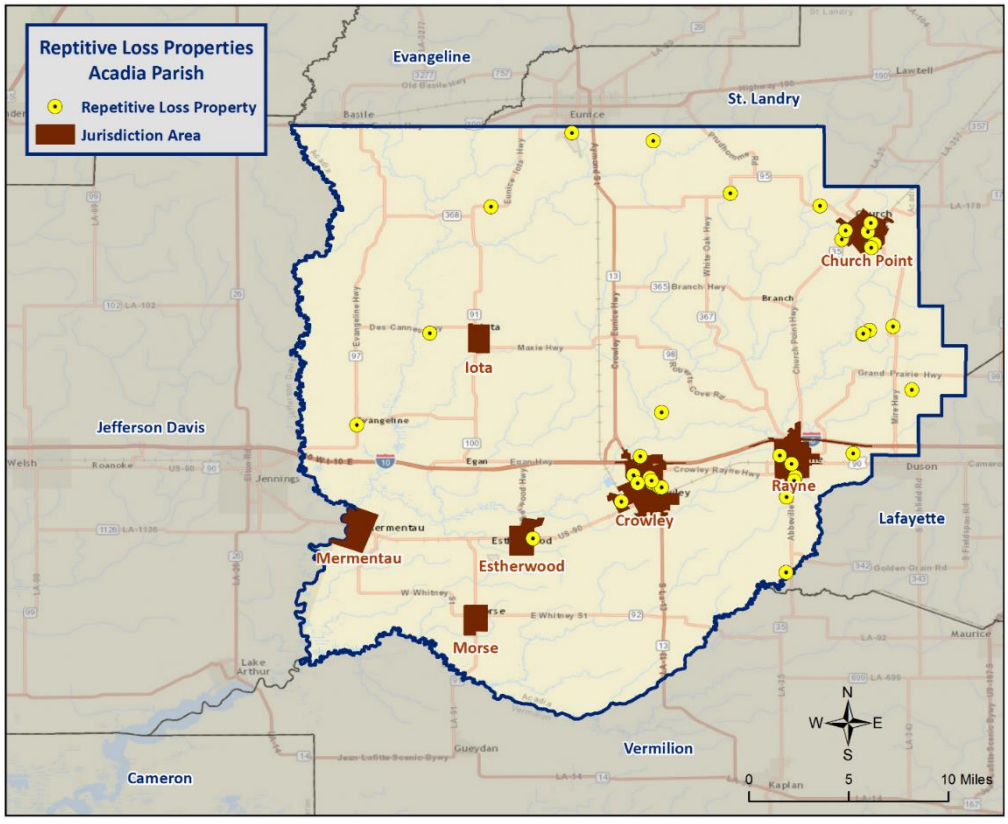


Figure 2-9: Repetitive Loss Properties in Acadia Parish

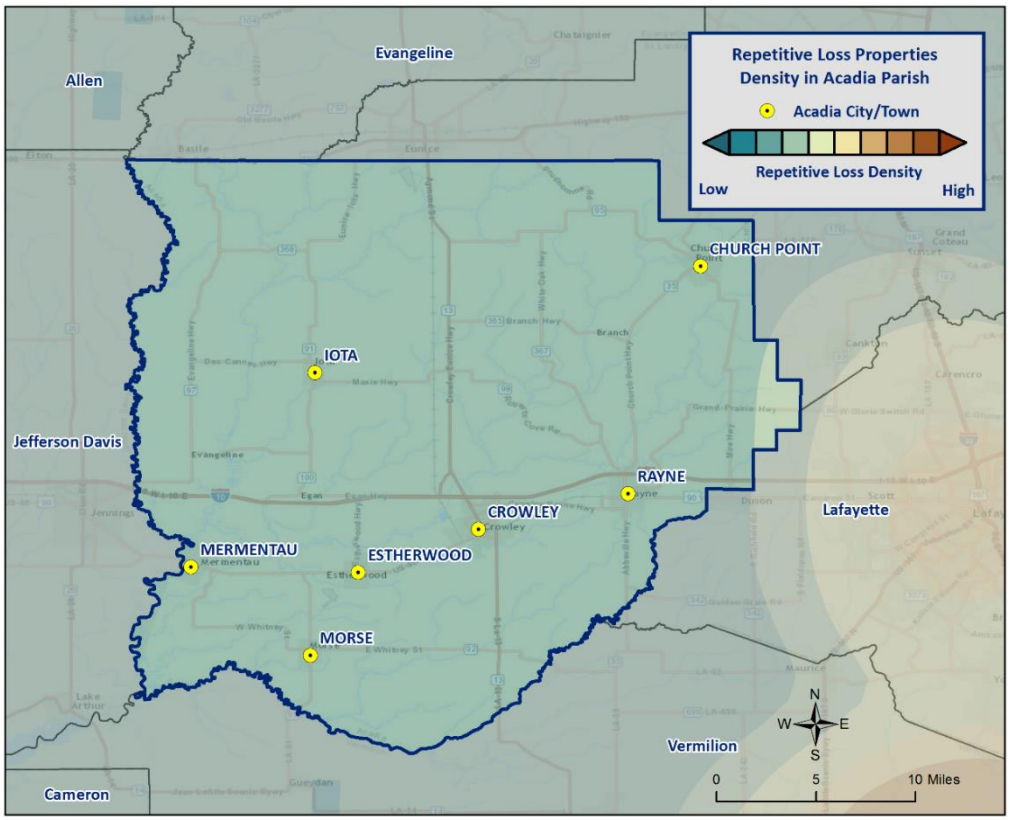


Figure 2-10: Repetitive Loss Property Densities in Acadia Parish

National Flood Insurance Program

Flood insurance statistics indicate that Acadia Parish has 2,736 flood insurance policies with the NFIP, with total annual premiums of $1,755,152. Acadia Parish and the incorporated areas of Church Point, Crowley, Estherwood, Iota, Mermentau, Morse, and Rayne are all participants in the NFIP. Acadia Parish and each of the incorporated 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 Acadia Parish are provided in the tables on the following page.

Acadia Parish and the communities listed above will continue their active participation in the NFIP through various education and outreach activities. These activities will include community outreach on the availability of flood insurance within the parish and incorporated municipalities, as well as flood safe building initiatives throughout the parish. The Parish Floodplain Manager will continue to work in coordination with each community to ensure floodplain management regulations are adopted and enforced. The Parish Floodplain Manager and community floodplain managers will continue to seek and attend floodplain management and NFIP continuing education.

Table 2-13: Summary of NFIP Policies for Acadia Parish

Location	No. of Insured Structures	Total Insurance Coverage Value	Annual Premiums Paid	No. of Insurance Claims Filed Since 1978	Total Loss Payments
Acadia Parish (Unincorporated)	1,191	$222,955,000	$728,895	254	$5,016,116
Church Point	66	$12,604,800	$36,170	53	$10,161,385
Crowley	1,034	$134,303,800	$746,639	314	$1,797,549
Estherwood	71	$7,399,300	$55,638	8	$129,638
Iota	18	$2,712,300	$8,977	8	$148,471
Mermentau	66	$7,147,600	$51,847	8	$54,965
Morse	38	$3,932,200	$15,783	5	$350,547
Rayne	252	$44,848,800	$111,203	84	$523,687
Total	2,736	$435,903,800	$1,755,152	734	$18,182,358

*While all jurisdictions and the unincorporated areas of Acadia Parish have active NFIP policies, these jurisdictions and unincorporated areas will continue to promote NFIP participation through continued education and outreach.

Table 2-14: Summary of Community Flood Maps for Acadia Parish

CID	Community Name	Initial FHBM Identified	Initial FIRM Identified	Current Effective Map Date	Date Joined the NFIP	Tribal
220001#	Acadia Parish	1/10/1978	7/16/1981	11/26/2010	7/16/1981	No
220002#	Church Point	11/16/1973	11/5/1980	11/26/2010	11/5/1980	No
225195#	Crowley	8/28/1971	7/27/1982	11/26/2010	6/30/1972	No
220004#	Estherwood	11/23/1973	2/4/1981	11/26/2010	2/4/1981	No
220005#	Iota	1/9/1974	7/18/1985	11/26/10 (M)	7/18/1985	No
220006#	Mermentau	11/23/1973	3/2/1981	11/26/2010	3/2/1981	No
220007#	Morse	11/23/1973	4/15/1981	11/26/2010	4/15/1981	No
220008#	Rayne	3/29/1974	3/2/1981	11/26/2010	3/2/1981	No

According to the Community Rating System (CRS) list of eligible communities dated June 1, 2014, the incorporated area of Rayne is the only area in Acadia Parish that participates in the CRS.

Table 2-15: List of Areas within Acadia 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
220008	Rayne	10/1/1991	10/1/1991	9	5%	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 flooding have often put themselves in perilous situations by entering flood waters that they believe to be safe, or by ignoring travel advisories.

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

Flooding in Acadia 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 Acadia Parish experiences.

Flash Flooding: Flash flooding is characterized by a rapid rise in water level, high velocity, and large amounts of debris. It is 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 is, by definition, river-based. Most of the riverine flooding problems occur when the Mermentau River crests at flood stage levels, causing extensive flooding in low-lying areas.

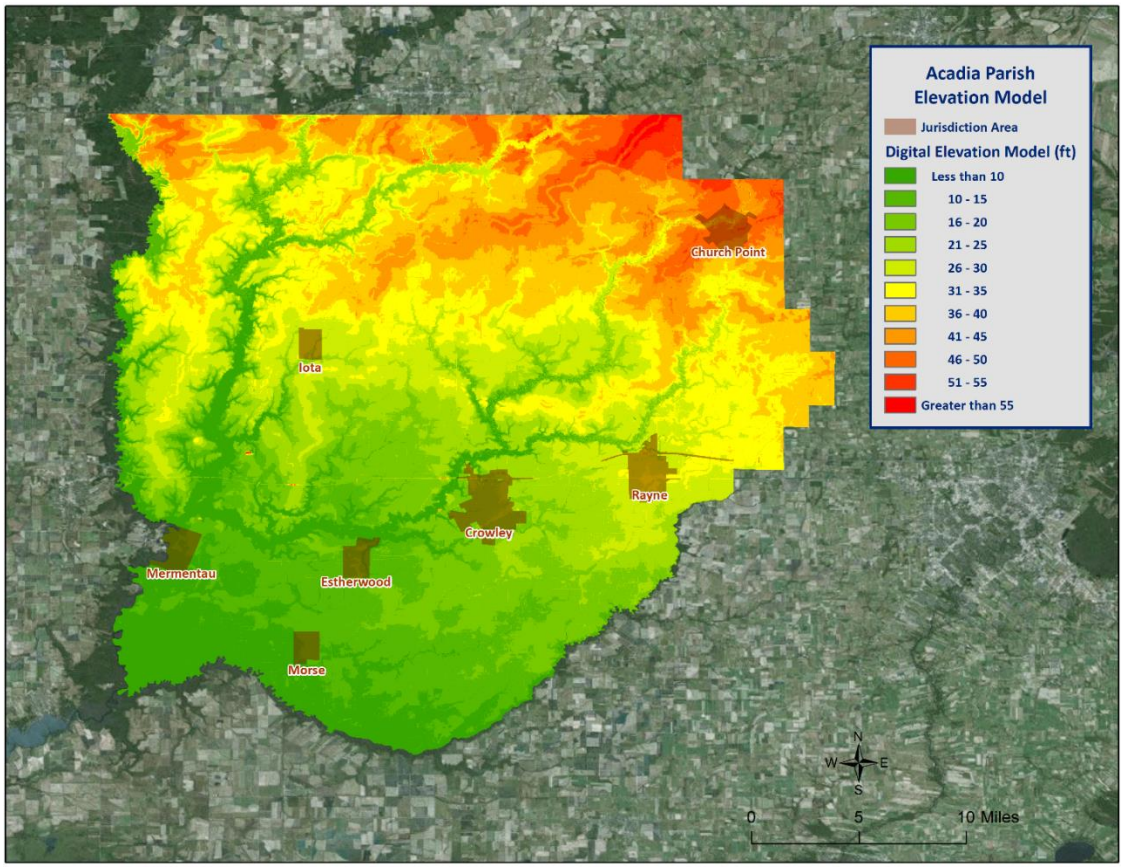


Figure 2-11: Elevation throughout Acadia Parish

Looking at the digital elevation model (DEM) in the figure above for Acadia Parish is instructive in visualizing where the low lying and high risk areas are for the parish. Elevations in the parish range from less than 10 feet to approximately 57 feet. The highest elevations in the parish are approximately 57 feet, located in the unincorporated area of the parish. These higher elevations are located in the northern portions of the parish in and around the Church Point area. The incorporated areas range in elevation from 7 to 46 feet, with incorporated area of Mermentau averaging 7 feet, Morse averaging 10 feet, Estherwood averaging 16 feet, Crowley averaging 20 feet, Rayne averaging 36 feet, and Church Point averaging 46 feet.

Location

Acadia Parish has experienced significant flooding in its history and can expect more in the future. Approximately 20% of the parish is located in the 100-year floodplain. Acadia Parish lies wholly within the Calcasieu – Mermentau Basin. The major flooding problems are inadequate drainage and backwater flooding from Bayou Plaquemine Brule, Bayou Queue de Tortue, and the Mermentau River. The southwestern area of the parish is prone to backwater flooding from the Mermentau River. The streams draining three large watersheds, Bayou Nezpique, Bayou des Cannes, and Bayou Plaquemine Brule, converge above the Village of Mermentau at the head of the Mermentau River.

The following are enlarged maps of the incorporated areas showing the areas within each jurisdiction that are at risk of flooding:

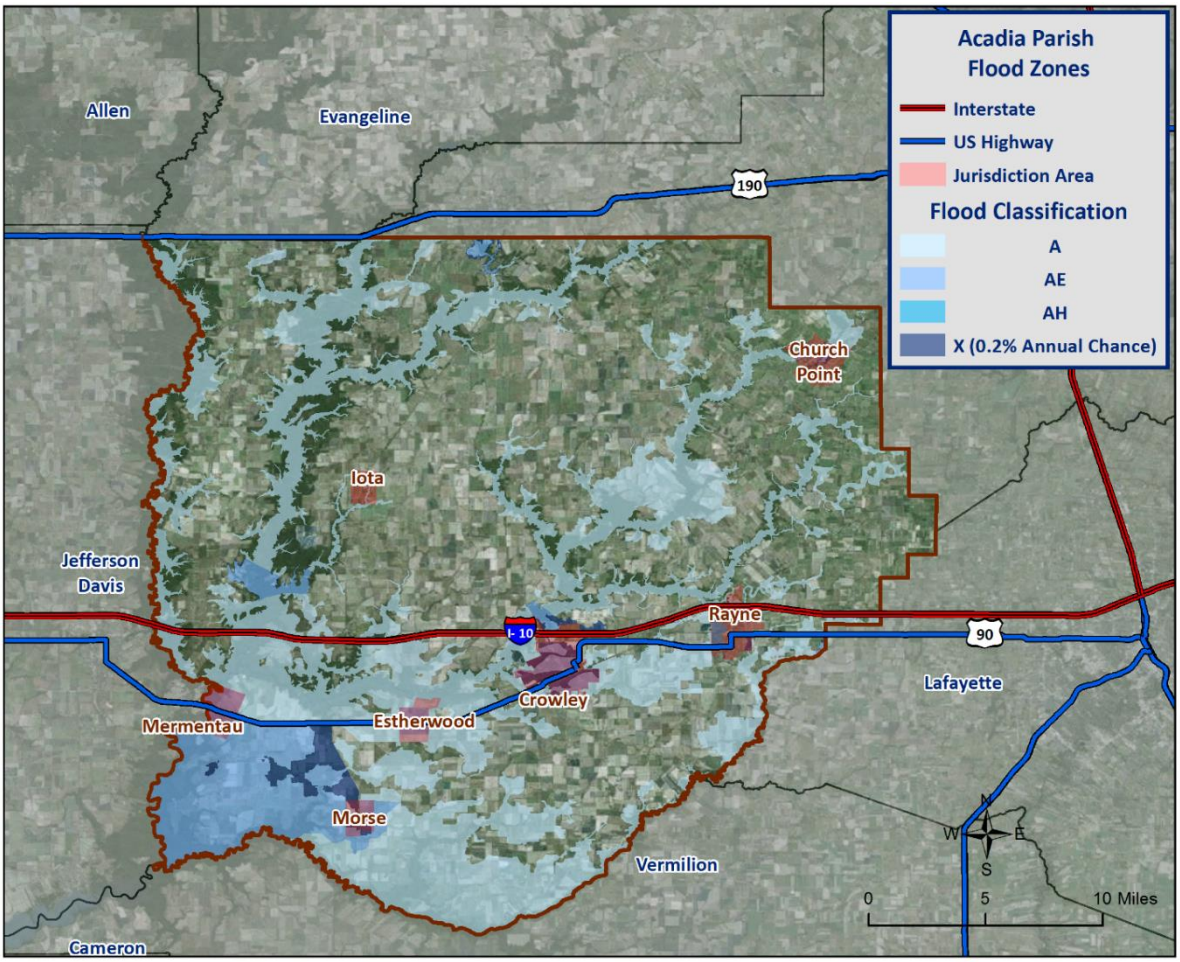


Figure 2-12: Acadia Parish Areas within the Flood Zones

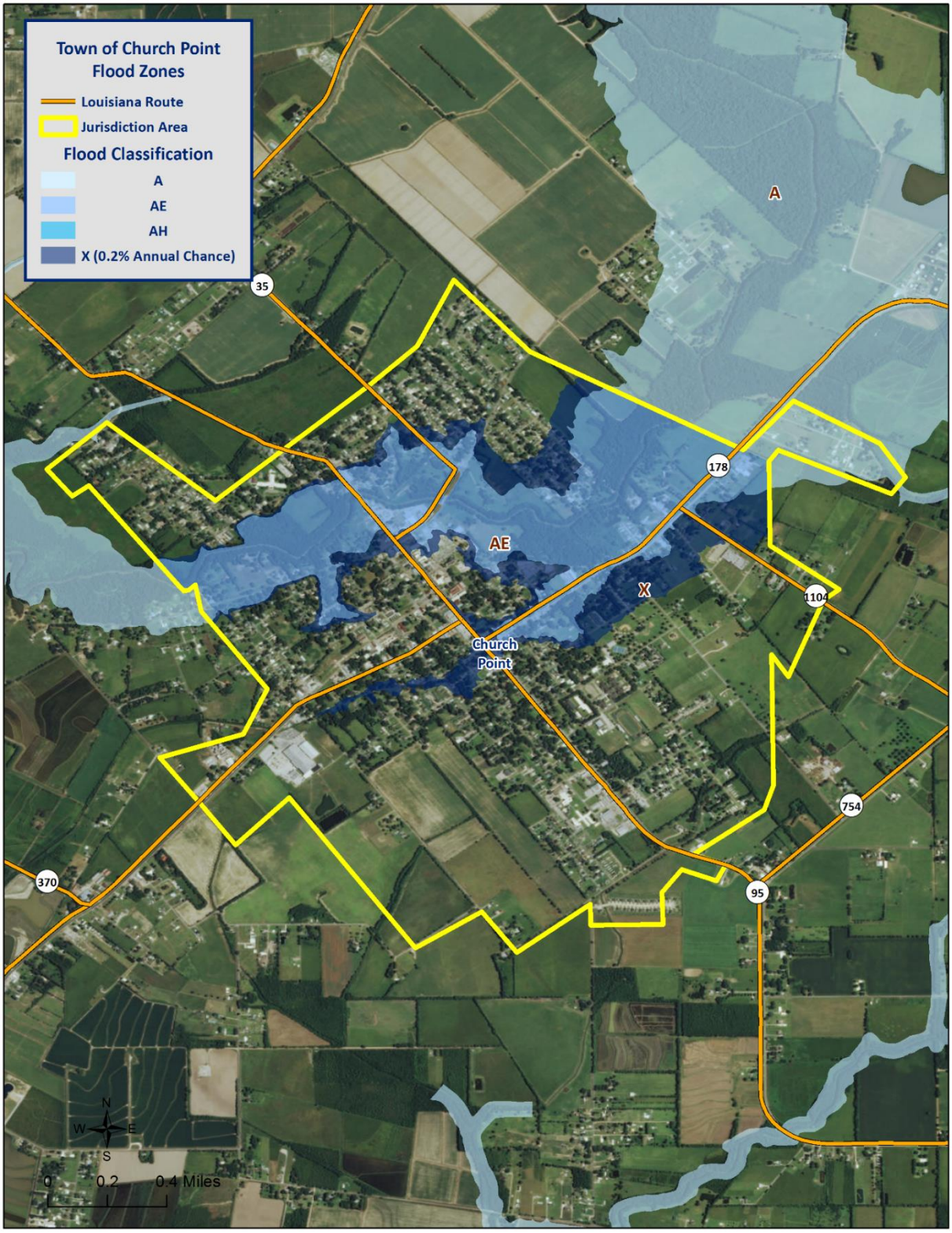


Figure 2-13: Town of Church Point Areas within the Flood Zones

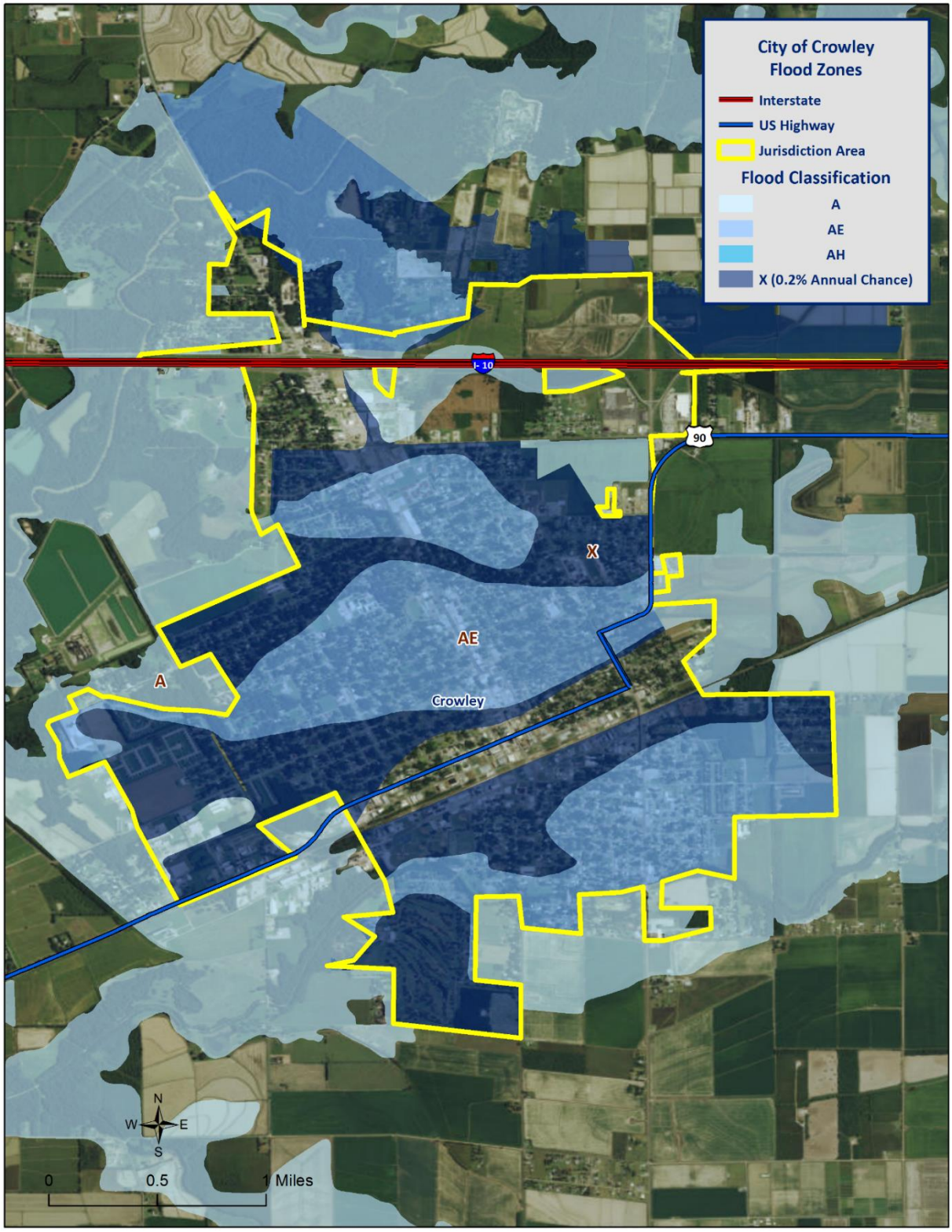


Figure 2-14: City of Crowley Areas within the Flood Zones

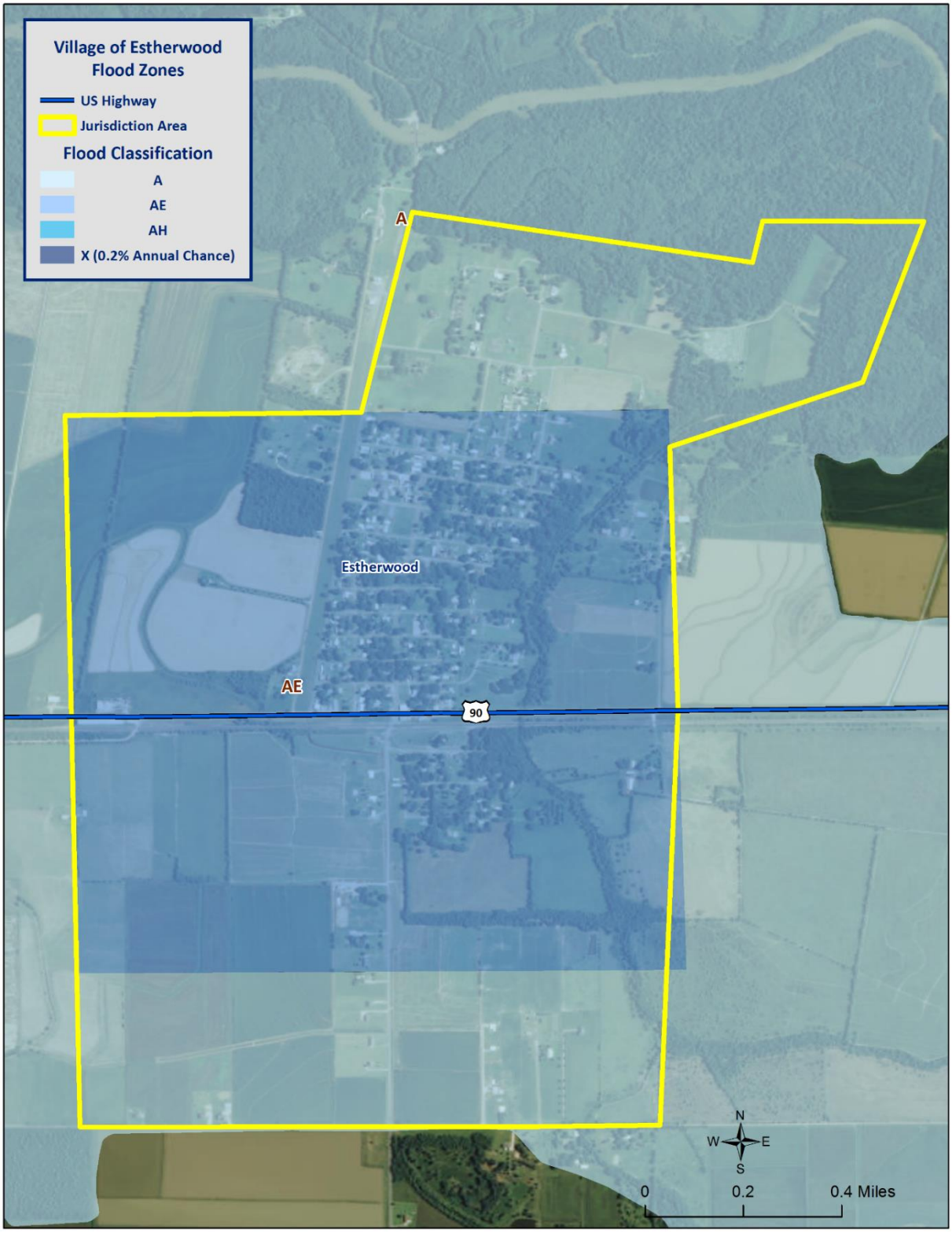


Figure 2-15: Village of Estherwood within the Flood Zones

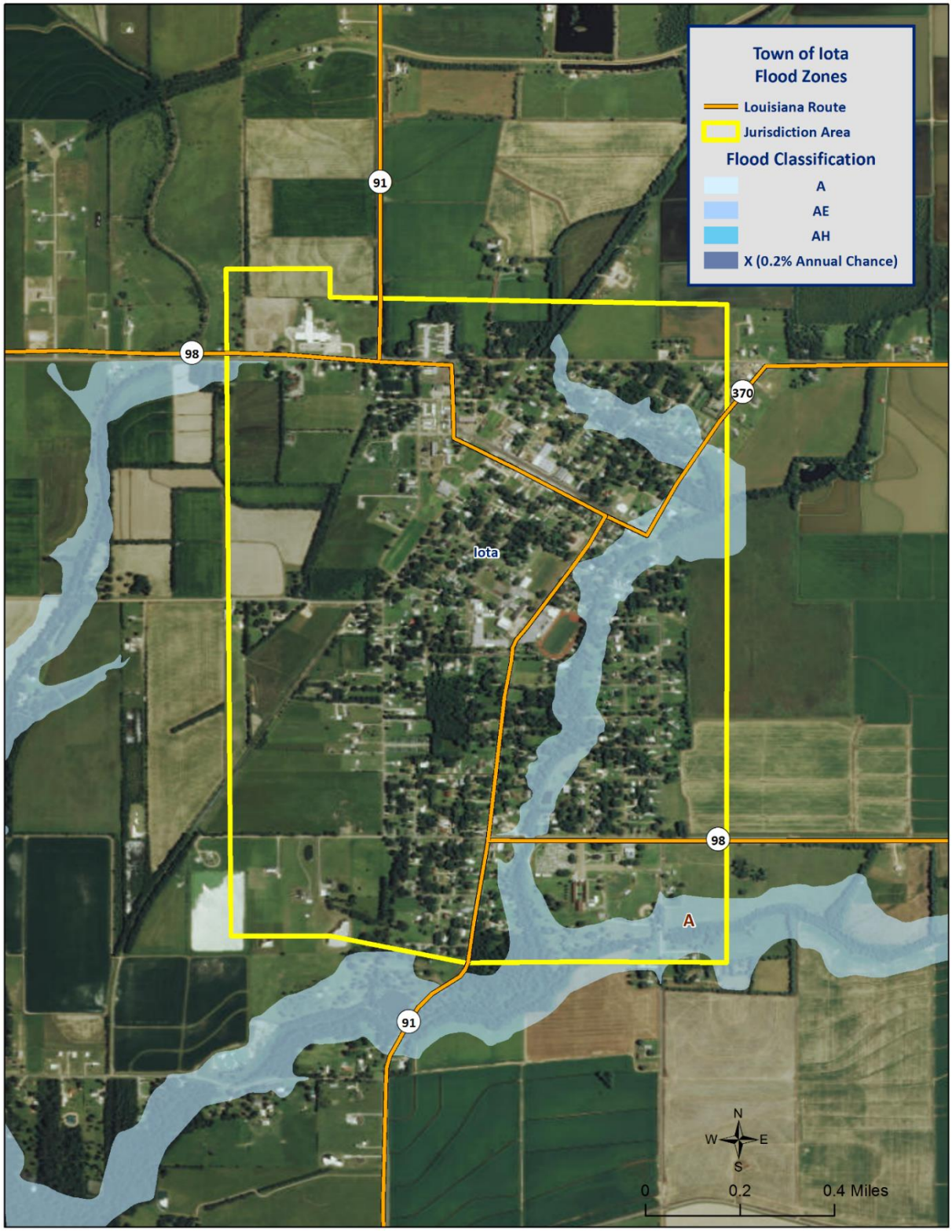


Figure 2-16: Town of Iota Areas within the Flood Zones

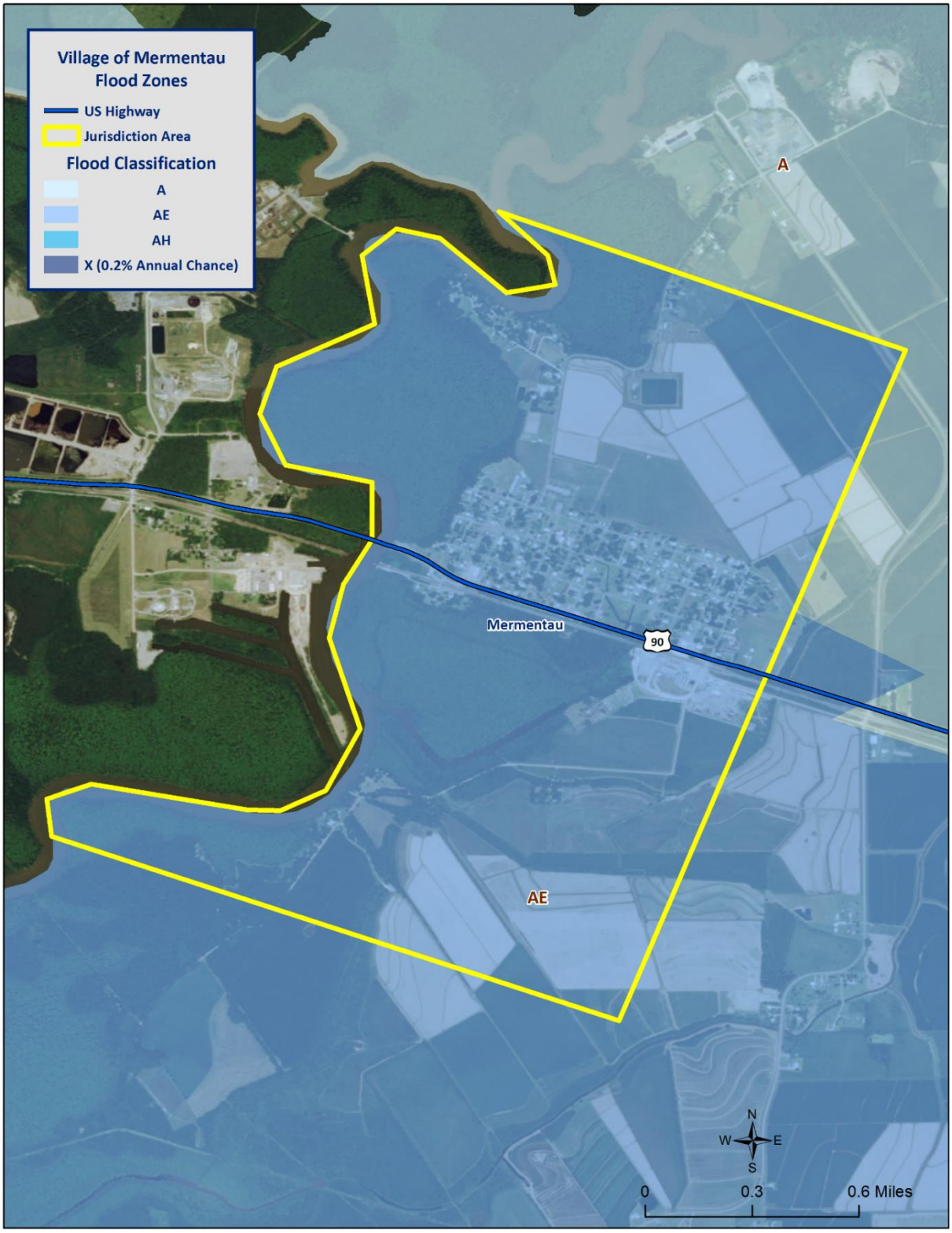


Figure 2-17: Village of Mermentau Areas within the Flood Zones

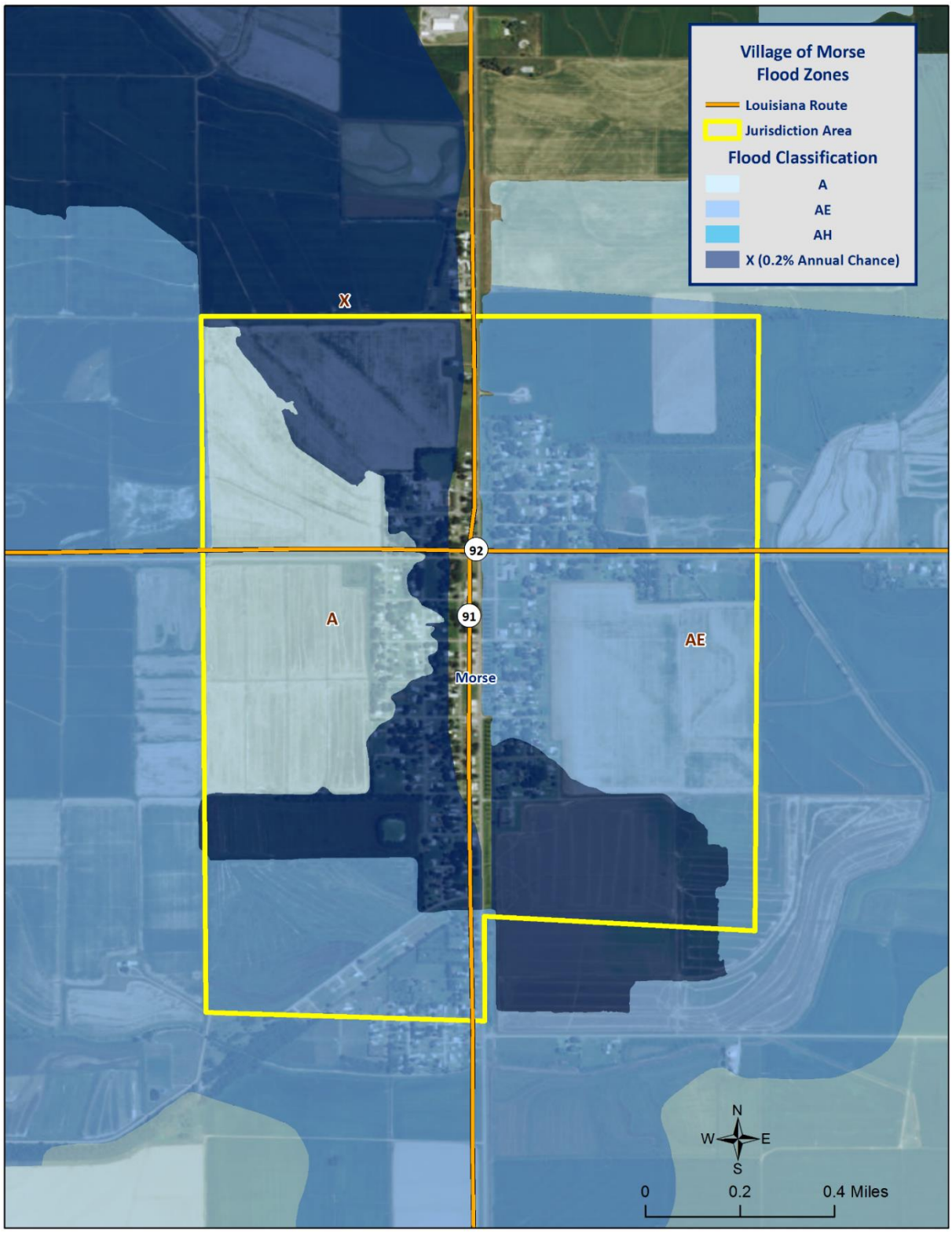


Figure 2-18: Village of Morse Areas within the Flood Zones

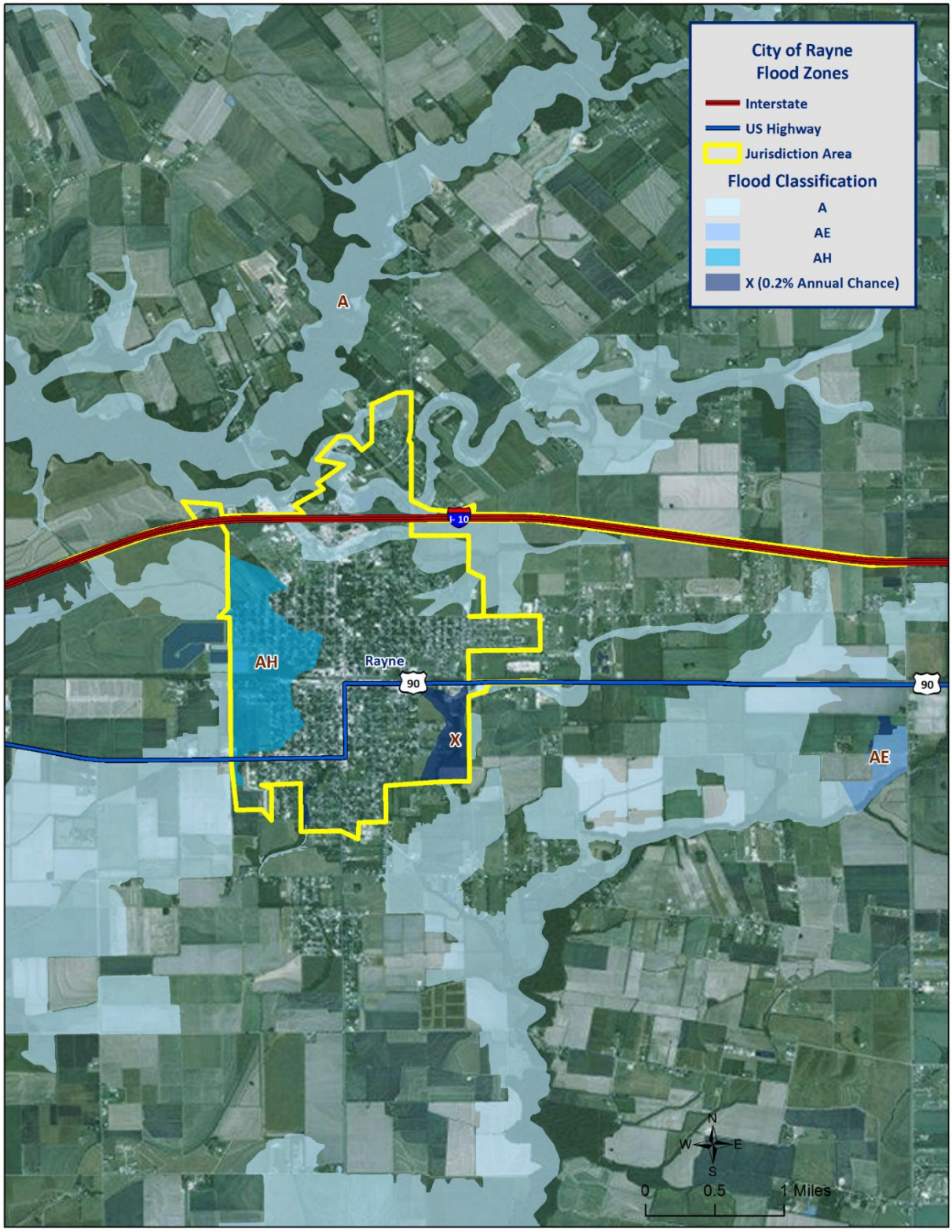


Figure 2-19: City of Rayne Areas within the Flood Zones

Previous Occurrences / Extents

Historically, there have been 21 flooding events that have created significant flooding in Acadia Parish between 1990 and 2015. Below is a brief synopsis of the five flooding events that have occurred since 2010, including flooding events that have occurred since the parish's last planning update. Since 2010, there have been no significant flooding events in Estherwood, Mermentau, and Morse.

Table 2-16: Historical Floods in Acadia Parish with Locations from 2010 - 2015

Date	Extents	Type of Flooding	Estimated Damages	Location
September 3, 2011	Heavy rainfall from remnants of Tropical Storm Lee caused extensive flooding in Egan. One home reported having several inches of water enter the building.	Flash Flood	$5,000	EGAN
January 10, 2012	Heavy rains caused several roads to close in the parish including Acorn Hill just south of Eunice. Some Bayous in the area overflowed across roadways and bridges. In Rayne, a school bus route was cancelled due to high water.	Flash Flood	$1,000	UNINCORPORATED AREAS, RAYNE, CROWLEY, AND IOTA
March 12, 2012	Flash flooding was reported across Church Point. Several homes were inundated with flood waters.	Flash Flood	$450,000	CHURCH PT
January 9, 2013	Heavy rain from thunderstorms fell on saturated ground caused flash flooding across the parish. Roads became impassable during the event and several homes were flooded.	Flash Flood	$1,000,000	UNINCORPORATED AREA, CROWLEY, AND CHURCH POINT
May 28, 2014	Slow moving thunderstorms caused flooding in the Church Point area. Roadways in the area received several inches of rain within a few hours.	Flash Flood	$0	CHURCH POINT

The worst-case scenarios are based on several different types of flooding events. Storm water excesses and riverine flooding primarily affect the low-lying areas of the parish, and flood depths of up to six feet can be expected in the unincorporated areas of the parish and in the incorporated areas of Mermentau and Estherwood. The incorporated areas of Church Point, Morse, and Crowley can expect flood depths of three to five feet, while the incorporated areas of Rayne and Iota can expect levels of one to two feet.

Frequency / Probability

While other parts of this plan, along with the State Hazard Mitigation Plan, have relied on the SHELDUS database to provide the annual probability, due to Acadia Parish having multiple jurisdictions, it was necessary to assess the historical data found in the National Climatic Data Center for Acadia Parish and its jurisdictions to properly determine probability for future flood events. The table below shows the probability and return frequency for each jurisdiction.

Table 2-17: Annual Flood Probabilities for Acadia Parish

Jurisdiction	Annual Probability	Return Frequency
Acadia Parish (Unincorporated)	32%	3 – 4 years
Church Point	32%	3 – 4 years
Crowley	20%	5 years
Estherwood	20%	5 years
Iota	20%	5 years
Mermentau	12%	8 – 9 years
Morse	12%	8 – 9 years
Rayne	12%	8 – 9 years

Based on historical record, the overall flooding probability for the entire Acadia Parish planning area is 84%, with 21 events occurring over a 25-year period.

Estimated Potential Losses

Using the Hazus 2.2 Flood Model, along with the Parish DFIRM, the 100-year flood scenario was analyzed to determine losses from this worst-case scenario. Below, *Table 2-22* shows the total economic losses that would result from this occurrence.

Table 2-18: Estimated Losses in Acadia Parish from a 100-Year Flood Event (Source: Hazus 2.2)

Jurisdiction	Estimated Total Losses from 100-Year Flood Event
Acadia Parish (Unincorporated)	$807,390,000
Church Point	$40,370,000
Crowley	$483,166,000
Estherwood	$51,931,000
Iota	$10,810,000
Mermentau	$40,848,000
Morse	$17,450,000
Rayne	$180,222,000
Total	$1,632,187,000

The Hazus 2.2 Flood Model also provides a breakdown by jurisdiction for seven primary sectors (Hazus occupancy) throughout the parish. The losses for each jurisdiction by sector are listed in the following tables:

Table 2-19: Estimated 100-Year Flood Losses for Acadia Parish by Sector (Source: Hazus 2.2)

Acadia Parish (Unincorporated)	Estimated Total Losses from 100-Year Flood Event
Agricultural	$8,816,000
Commercial	$91,031,000
Government	$6,902,000
Industrial	$132,220,000
Religious / Non-Profit	$15,153,000
Residential	$542,611,000
Schools	$10,657,000
Total	$807,390,000

Table 2-20: Estimated 100-Year Flood Losses for Church Point by Sector (Source: Hazus 2.2)

Church Point	Estimated Total Losses from 100-Year Flood Event
Agricultural	$283,000
Commercial	$8,072,000
Government	$0
Industrial	$6,206,000
Religious / Non-Profit	$1,998,000
Residential	$22,376,000
Schools	$1,435,000
Total	$40,370,000

Table 2-21: Estimated 100-Year Flood Losses for Crowley by Sector (Source: Hazus 2.2)

Crowley	Estimated Total Losses from 100-Year Flood Event
Agricultural	$2,381,000
Commercial	$108,214,000
Government	$6,250,000
Industrial	$15,226,000
Religious / Non-Profit	$20,149,000
Residential	$323,993,000
Schools	$6,953,000
Total	$483,166,000

Table 2-22: Estimated 100-Year Flood Losses for Estherwood by Sector (Source: Hazus 2.2)

Estherwood	Estimated Total Losses from 100-Year Flood Event
Agricultural	$13,000
Commercial	$1,432,000
Government	$294,000
Industrial	$966,000
Religious / Non-Profit	$301,000
Residential	$48,213,000
Schools	$712,000
Total	$51,931,000

Table 2-23: Estimated 100-Year Flood Losses for Iota by Sector (Source: Hazus 2.2)

Iota	Estimated Total Losses from 100-Year Flood Event
Agricultural	$0
Commercial	$718,000
Government	$0
Industrial	$0
Religious / Non-Profit	$121,000
Residential	$9,897,000
Schools	$74,000
Total	$10,810,000

Table 2-24: Estimated 100-Year Flood Losses for Mermentau by Sector (Source: Hazus 2.2)

Mermentau	Estimated Total Losses from 100-Year Flood Event
Agricultural	$0
Commercial	$3,248,000
Government	$685,000
Industrial	$1,207,000
Religious / Non-Profit	$971,000
Residential	$32,483,000
Schools	$2,254,000
Total	$40,848,000

Table 2-25: Estimated 100-Year Flood Losses for Morse by Sector (Source: Hazus 2.2)

Morse	Estimated Total Losses from 100-Year Flood Event
Agricultural	$0
Commercial	$1,436,000
Government	$753,000
Industrial	$0
Religious / Non-Profit	$435,000
Residential	$14,824,000
Schools	$2,000
Total	$17,450,000

Table 2-26: Estimated 100-Year Flood Losses for Rayne by Sector (Source: Hazus 2.2)

Rayne	Estimated Total Losses from 100-Year Flood Event
Agricultural	$44,001,000
Commercial	$23,247,000
Government	$74,000
Industrial	$5,567,000
Religious / Non-Profit	$7,543,000
Residential	$99,678,000
Schools	$112,000
Total	$180,222,000

Threat to People

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

Table 2-27: Vulnerable Populations Susceptible to a 100-Year Flood Event (Source: Hazus 2.2)

Number of People Exposed to Flood Hazards			
Location	**# in Community**	**# in Hazard Area**	**% in Hazard Area**
Acadia Parish (Unincorporated)	**32,133**	**22,581**	**70.3%**
Church Point	**4,560**	**1,556**	**34.1%**
Crowley	**13,265**	**9,618**	**72.5%**
Estherwood	**889**	**870**	**97.9%**
Iota	**1,500**	**611**	**40.7%**
Mermentau	**661**	**647**	**97.9%**
Morse	**812**	**618**	**76.1%**
Rayne	**7,953**	**2,871**	**36.1%**
Total	**61,773**	**39,372**	**63.7%**

The Hazus 2.2 Flood Model was also extrapolated to provide an overview of vulnerable populations throughout the jurisdictions in the following tables:

Table 2-28: Vulnerable Populations Susceptible to a 100-Year Flood Event in Unincorporated Acadia Parish (Source: Hazus 2.2)

Acadia Parish (Unincorporated)		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	22,581	70.3%
Persons Under 5 Years	1,716	7.6%
Persons Under 18 Years	8,423	37.3%
Persons 65 Years and Over	2,890	12.8%
White	17,952	79.5%
Minority	4,629	20.5%

Table 2-29: Vulnerable Populations Susceptible to a 100-Year Flood Event in Church Point (Source: Hazus 2.2)

Church Point		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	1,556	34.1%
Persons Under 5 Years	128	8.2%
Persons Under 18 Years	409	26.3%
Persons 65 Years and Over	227	14.6%
White	948	60.9%
Minority	608	39.1%

Table 2-30: Vulnerable Populations Susceptible to a 100-Year Flood Event in Crowley (Source: Hazus 2.2)

Crowley		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	9,618	72.5%
Persons Under 5 Years	760	7.9%
Persons Under 18 Years	2,606	27.1%
Persons 65 Years and Over	1,481	15.4%
White	6,213	64.6%
Minority	3,405	35.4%

Table 2-31: Vulnerable Populations Susceptible to a 100-Year Flood Event in Estherwood (Source: Hazus 2.2)

Estherwood		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	870	97.9%
Persons Under 5 Years	70	8.1%
Persons Under 18 Years	232	26.7%
Persons 65 Years and Over	98	11.3%
White	818	94.0%
Minority	52	6.0%

Table 2-32: Vulnerable Populations Susceptible to a 100-Year Flood Event in Iota (Source: Hazus 2.2)

Iota		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	611	40.7%
Persons Under 5 Years	52	8.5%
Persons Under 18 Years	186	30.4%
Persons 65 Years and Over	69	11.3%
White	559	91.5%
Minority	52	8.5%

Table 2-33: Vulnerable Populations Susceptible to a 100-Year Flood Event in Mermentau (Source: Hazus 2.2)

Mermentau		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	647	97.9%
Persons Under 5 Years	42	6.5%
Persons Under 18 Years	171	26.4%
Persons 65 Years and Over	88	13.6%
White	569	87.9%
Minority	78	12.1%

Table 2-34: Vulnerable Populations Susceptible to a 100-Year Flood Event in Morse (Source: Hazus 2.2)

Morse		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	618	76.1%
Persons Under 5 Years	48	7.8%
Persons Under 18 Years	166	26.9%
Persons 65 Years and Over	70	11.3%
White	615	99.5%
Minority	3	0.5%

Table 2-35: Vulnerable Populations Susceptible to a 100-Year Flood Event in Rayne (Source: Hazus 2.2)

Rayne		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	2,871	36.1%
Persons Under 5 Years	207	7.2%
Persons Under 18 Years	752	26.2%
Persons 65 Years and Over	428	14.9%
White	1,794	62.5%
Minority	1,077	37.5%

Vulnerability

See Appendix C 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. Consequently, the air masses 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, multi-cell, 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 multi-cell 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, which warms 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), has the ability to issue advisory messages based on forecasts and observations. The following are the advisory messages that may be issued, along 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 parishes (counties).

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

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

Table 2-36: 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 2-37: 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 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 the following table.

Table 2-38: High Winds Categorized by Source, Frequency, and Duration
(Source: Making Critical Facilities Safe from High Wind, FEMA)

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

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

The following table 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 2-39: 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	N/A
12	74+	Hurricane	N/A

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 2-40: 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

Because hailstorms are a climatological based hazard, the entire planning area for Acadia Parish is equally at risk for hailstorms.

Previous Occurrences / Extents

The SHELDUS database reports three significant hailstorm events occurring within the boundaries of Acadia Parish between the years of 1990-2015. According to the National Climatic Data Center, hailstorm diameters experienced in Acadia Parish have ranged from 0.75 inches to 1.75 inches since 1990. The most frequently recorded hail size has been 0.75 inch diameters. *Figure 2-20* displays the density of hailstorms in Acadia Parish and adjacent parishes. Based on the National Climatic Data Center dataset, *Table 2-41* provides an overview of hailstorms that have impacted the Acadia Parish planning area since 2010. Acadia Parish can expect to experience hail up to 1.75 inches in diameter for future events. Since 2010, there have been no significant hailstorm events in the incorporated areas of Church Point, Crowley, Estherwood, Iota, Mermentau, Morse, and Rayne.

Table 2-41: Previous Occurrences of Hailstorms in Acadia Parish (Source: NCDC)

Date	Recorded Hail Size (inches)	Location
December 23, 2014	0.75	UNINCORPORATED AREA

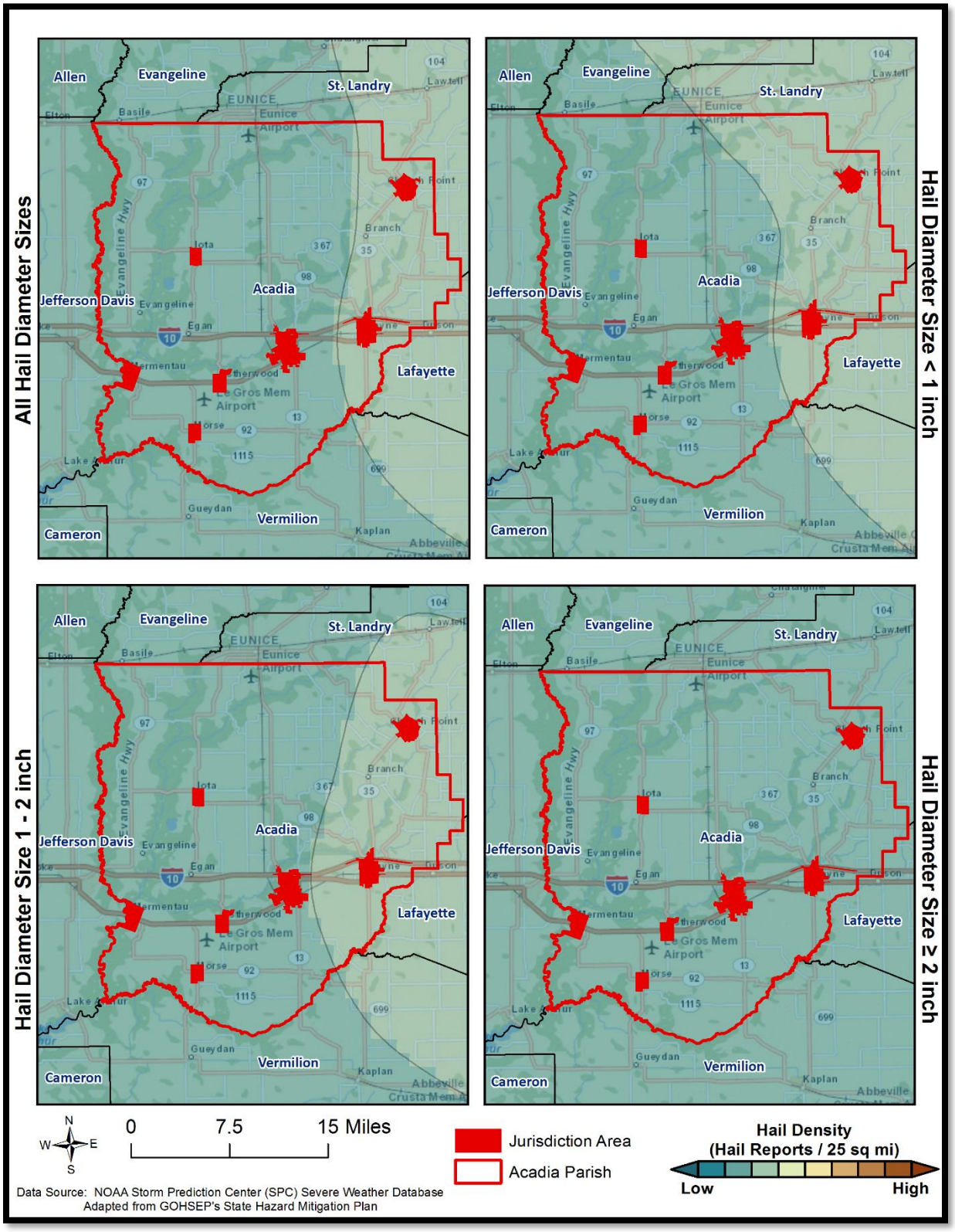


Figure 2-20: Density of Hailstorms in Acadia Parish by Diameter from 1950-2012 (Source: State of Louisiana Hazard Mitigation Plan 2014)

Frequency

Based on historical data from SHELDUS for the past 25 years, it is estimated the probability of occurrence for a significant hailstorm event is approximately 12%. The probability was determined based on a review of significant hail data that has caused damages in the last 25 years, in which Acadia Parish has had three recorded events.

Estimated Potential Losses

According to the SHELDUS database, property damage due to hailstorms in Acadia Parish have totaled approximately $855 since 1990. To estimate the potential losses of a hail event on an annual basis, the total damages recorded for hail events was divided by the total number of years of available hail data in SHELDUS (1990 – 2015). This provides an annual estimated potential loss of $34. *Table 2-42* provides an estimate of potential property losses for Acadia Parish.

Table 2-42: Estimated Annual Property Losses in Acadia Parish from Hailstorms

Estimated Annual Potential Losses from Hailstorms for Acadia Parish							
Unincorporated Acadia Parish (52.0% of Population)	**Church Point (7.4% of Population)**	**Crowley (21.5% of Population)**	**Estherwood (1.4% of Population)**	**Iota (2.4% of Population)**	**Mermentau (1.1% of Population)**	**Morse (1.3% of Population)**	**Rayne (12.9% of Population)**
$18	$3	$7	$0	$1	$0	$0	$4

There have been no deaths or injuries due to hailstorms from 1990 – 2015 in Acadia Parish.

Vulnerability

See Appendix C for parish and municipality buildings that are susceptible to hailstorms.

High Winds

Location

Because high winds are a climatological based hazard, the entire planning area for Acadia Parish is equally at risk for high winds.

Previous Occurrences / Extents

The SHELDUS database reports a total of 72 thunderstorm wind events occurring within the boundaries of Acadia Parish between the years of 1990 to 2015. The significant thunderstorm wind events experienced in Acadia Parish have ranged in wind speed from 52 mph to 70 mph. Acadia Parish can expect to receive thunderstorm winds up to 70 mph for future high wind events. The table on the following page provides an overview of significant high wind events over the last five years.

Table 2-43: Previous Occurrences for Thunderstorm High Wind Events

Location	Date	Recorded Wind Speeds (mph)	Property Damage	Crop Damage
IOTA	March 25, 2010	70	$26,708	$0
MIRE	May 26, 2010	60	$1,068	$0
LYONS PT	February 1, 2011	60	$2,589	$0
RAYNE	March 5, 2011	70	$5,178	$0
MOWATA	June 4, 2011	58	$2,589	$0
TEPETATE	June 4, 2011	58	$1,036	$0
LYONS PT	February 18, 2012	58	$5,073	$0
IOTA	April 4, 2014	58	$2,000	$0
EVANGELINE	August 11, 2014	52	$1,000	$0
CROWLEY	November 16, 2014	58	$2,000	$0
MIRE	November 16, 2014	58	$1,000	$0
MIRE	November 16, 2014	58	$1,000	$0
CROWLEY	April 27, 2015	64	$4,000	$0
BRANCH	August 11, 2015	58	$1,000	$0

Since 2010, there have been no significant thunderstorm wind events in the incorporated areas of Church Point, Estherwood, Mermentau, Morse, and Rayne.

Frequency

High winds are a fairly common occurrence within Acadia Parish, with an annual chance of occurrence calculated at 100%.

Estimated Potential Losses

Since 1990, there have been 72 significant wind events that have resulted in property damages according to the SHELDUS database. The total property damages associated with those storms have totaled $682,560. 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 SHELDUS (1990 – 2015). This provides an annual estimated potential loss of $27,302. The table below provides an estimate of potential property losses for Acadia Parish.

Table 2-44: Estimated Annual Property Losses in Acadia Parish Resulting from High Winds

Estimated Annual Potential Losses from Thunderstorm Winds for Acadia Parish							
Unincorporated Acadia Parish (52.0% of Population)	Church Point (7.4% of Population)	Crowley (21.5% of Population)	Estherwood (1.4% of Population)	Iota (2.4% of Population)	Mermentau (1.1% of Population)	Morse (1.3% of Population)	Rayne (12.9% of Population)
$14,202	$2,015	$5,863	$393	$663	$292	$359	$3,515

There have been four reported injuries and no fatalities as a result of a thunderstorm wind event over the 25-year record.

Vulnerability

See Appendix C for parish and municipality buildings that are susceptible to high winds.

Lightning

Location

Like hail and high winds, lightning is a climatological based hazard and has the same probability of occurring throughout the entire planning area for Acadia Parish.

Previous Occurrences / Extents

The SHELDUS database reports a total of three lightning events occurring within the boundaries of Acadia Parish between the years of 1990-2015. The SHELDUS database only records lightning events that cause death, injuries, crop damage, and/or property damage, so these numbers do not accurately reflect the number of lightning events in Acadia Parish, which occur on a nearly monthly basis. The planning area can expect to have a lightning density of 11-12 flashes per sq. mile per year. The table below provides an overview of significant lightning strikes over the last 25 years:

Table 2-45: Previous Occurrences of Significant Lightning Strikes in Acadia Parish from 1990 – 2015 (Source: NCDC and SHELDUS)

Location	Date	Summary	Property Damage
RAYNE	January 12, 1998	Lightning struck a man working on top of a treatment tank at the waste water plant during a thunderstorm.	$0
EVANGELINE	July 30, 2000	Two missionaries lost their home due to a lightning strike.	$67,641
BRANCH	May 24, 2009	Lightning struck an outdoor kitchen in Branch and set the kitchen on fire.	$3,258

Since 2010, there have been no lightning events that have caused property damage or loss of life in the unincorporated areas of Acadia Parish and the incorporated areas of Church Point, Crowley, Estherwood, Iota, Mermentau, Morse, and Rayne.

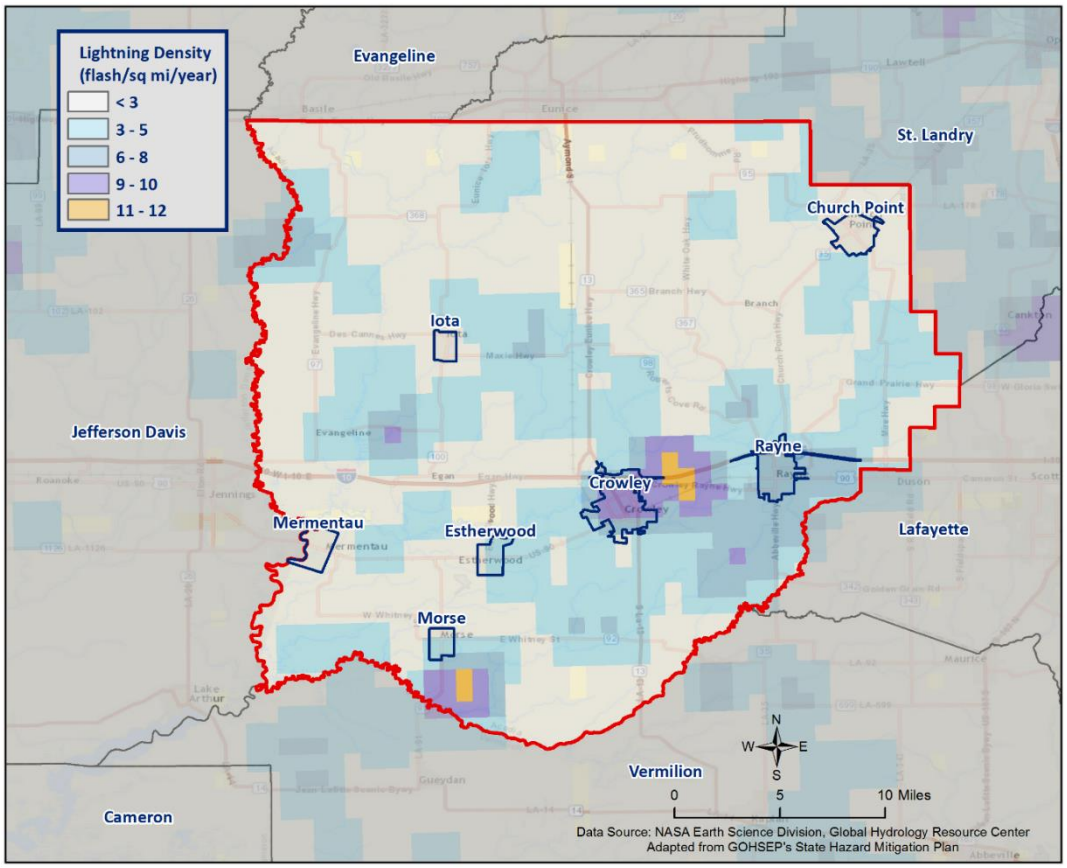


Figure 2-21: Lightning Density Reports for Acadia Parish

Frequency

Lightning can strike anywhere and is produced by every thunderstorm, so the chance of lightning occurring in Acadia Parish is high. However, lightning that meets the definition that is used by SHELDUS and the NCDC that actually results in damages to property and injury or death is a less likely event. According to SHELDUS, there have been three lightning events that have caused property damages or injuries over the last 25 years, establishing an annual probability of 12%.

Estimated Potential Losses

Since 1990, there have been three significant lightning events that have resulted in property damages according to the SHELDUS database. The total property damages associated with lightning events totaled $73,586. 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 major lightning strike data in SHELDUS (1990 – 2015). This provides an annual estimated potential loss of $2,943. The table on the following page provides an estimate of potential property losses for Acadia Parish.

Table 2-46: Estimated Annual Property Losses in Acadia Parish from Lightning

Estimated Annual Potential Losses from Lightning for Acadia Parish							
Unincorporated Acadia Parish (52.0% of Population)	Church Point (7.4% of Population)	Crowley (21.5% of Population)	Estherwood (1.4% of Population)	Iota (2.4% of Population)	Mermentau (1.1% of Population)	Morse (1.3% of Population)	Rayne (12.9% of Population)
$1,531	$217	$632	$42	$71	$31	$39	$379

There has been one reported injuries and no fatalities in Acadia Parish as a result of a lightning strikes over the 25-year record.

Vulnerability

See Appendix C for parish and municipality building exposure to lightning hazards.

Tornadoes

Tornadoes (also called twisters or 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. This usually results in a counterclockwise rotation 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 2-47* 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 2-47: Comparison of the Enhanced Fujita (EF) Scale to the Fujita (F) Scale

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

Table 2-48: Fujita and Enhanced Fujita Tornado Damage Scale

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

The National Weather Service (NWS) has the ability to issue advisory messages based on forecasts and observations. The following are the advisory messages that may be issued, along 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 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 with 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 projectiles 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 Acadia Parish with actual locations, tornadoes in general are a climatological based hazard and have the same approximate probability of occurring in Acadia Parish as all of its jurisdictions. Because a tornado has a similar probability of striking anywhere within the planning area for Acadia Parish, all jurisdictions are equally at risk for tornadoes.

Previous Occurrences / Extents

SHELDUS reports a total of 40 tornadoes or waterspouts occurring within the boundaries of Acadia Parish between the years of 1990-2015. The tornadoes experienced in Acadia Parish have from ranged EF0 to EF2 on the EF scale, and ranged from F0 to F2 on the F scale. The worst case scenario Acadia Parish can expect in the future is an EF2 tornado.

The tornado that caused the most damage to property occurred on March 5, 2011. The tornado struck the Rayne Water Treatment Plant, completely destroying three metal buildings and blowing debris over 200 yards to the east and northeast. The tornado then entered the residential section of the city and demolished two mobile homes. One woman was killed on Bella Avenue when a large tree fell onto and flattened her small home. The tornado then intensified as it crossed Martin Luther King Boulevard where two small homes and an abandoned two story building were leveled and several duplexes lost their entire roofs. After the

tornado crossed Highway 35, another duplex lost much of its roof as did an auto parts store. The City of Rayne Police Department confirmed a total of 1 fatality and 11 injuries. The Louisiana State Fire Marshal's Office reported 42 houses were destroyed, 48 sustained major damage, 79 suffered moderate damage, and another 514 received minor damage, for a total of 683 damaged homes.

Table 2-49: Historical Tornadoes in Acadia Parish with Locations from 1990-2015

Date	Impacts	Property Damage	Location	Magnitude
January 24, 1990	0.1 mile path with a width of 25 yards. A tornado touched down near a school causing minor damage to the roof.	$891	RICHARD	F0
February 15, 1990	0.8 mile path with a width of 40 yards. One mobile home was rolled over and its five occupants received minor injuries. Two other mobile homes received damage along with a nearby house.	$89,119	RAYNE	F1
March 29, 1990	0.3 mile path with a width of 25 yards. Houses were unroofed and a bard was heavily damaged.	$8,912	UNINCORPORATED AREA	F1
March 4, 1992	18.0 mile path with a width of 175 yards. The tornado destroyed four mobile homes and heavily damaged six single family homes. 20 windows were blown out of the Iota City Hall; the nearby post office lost its roof; and the Iota Junior High School gym lost its roof and one of its walls. Five parked crop duster airplanes and an airplane hangar were also damaged.	$2,490,631	UNINCORPORATED AREA	F2
June 25, 1992	7 mile path with a width of 30 yards. Moved mostly in open country but did damage the roof of a building.	$415	UNINCORPORATED AREA	F1
August 10, 1992	0.1 mile path with a width of 13 yards. A tornado took the roof off a mobile home.	$830	UNINCORPORATED AREA	F1
October 24, 1997	2 mile path with a width of 10 yards. Several homes received roof and window damage. In Basile, the high school and a rice drier received minor damage when light poles were blown down.	$58,058	IOTA	F1
September 11, 1998	2 mile path with a width of 10 yards. Extensive damage was done to the high school with the gymnasium, cafeteria, and library receiving the most damage.	$7,145,920	MIDLAND	F0
November 10, 1998	0.2 mile path with a width of 20 yards. A tornado damaged the roof of one home and knocked another off its pilings.	$71,459	MORSE	F0

Date	Impacts	Property Damage	Location	Magnitude
December 29, 1998	0.5 mile path with a width of 10 yards. Tin was lifted from the roof of a barn and tossed in a nearby field. Fencing around a livestock field and an oak tree was also blown down.	$7,146	MORSE	F0
January 2, 1999	10 mile path with a width of 400 yards. One house was nearly destroyed and 6 received minor damage. A small airplane was picked up and moved 100 yards.	$699,151	EVANGELINE	F2
April 3, 2000	7 mile path with a width of 20 yards. Several mobile homes were damaged; a half-dozen bards were destroyed.	$135,283	IOTA	F0
October 13, 2001	0.5 mile path with a width of 10 yards. A tornado destroyed a mobile home and damaged several other homes and barns.	$164,425	RAYNE	F1
October 3, 2002	1 mile path with a width of 20 yards. A tornado ripped through the Ebenezer community, damaging or destroying around 20 mobile homes.	$647,462	CROWLEY	F1
October 3, 2002	1 mile path with a width of 20 yards. A tornado associated with Hurricane Lili damaged several homes in the Roberts Cove community.	$32,373	RAYNE	F0
October 3, 2002	1 mile path with a width of 10 yards. A small tornado touched down near Estherwood, damaging several homes when trees fell on them.	$32,373	ESTHERWOOD	F0
October 3, 2002	1 mile path with a width of 10 yards. Trees were blown down, damaging several homes and barns in the Mowata community.	$32,373	MOWATA	F0
October 3, 2002	1 mile path with a width of 10 yards. A small tornado touched down, damaging barns and knocking trees down.	$19,424	RICHARD	F0
October 29, 2002	1 mile path with a width of 20 yards. A tornado originated in northern Acadia Parish, remaining in rural areas and blowing down trees and power lines, and damaging a few barns.	$12,949	RICHARD	F0
November 22, 2004	1 mile path with a width of 10 yards. The roof was blown off a tin building.	$12,332	IOTA	F0
October 16, 2006	0.5 mile path with a width of 10 yards. One home was pushed off its pilings and had severe structural damage. A house across the street had windows broken, vinyl sidings ripped off, and roof damage.	$173,331	IOTA	F1

Date	Impacts	Property Damage	Location	Magnitude
December 30, 2006	1.93 mile path with a width of 100 yards. Ten homes were damaged. Most of the damage was to roofs, blown out windows, destroyed sheds, and trees downed. One mobile home overturned.	$115,554	MIRE	F1
September 3, 2008	0.39 mile path with a width of 25 yards. A tornado briefly touched down near the sheriff department in Crowley. The primary damage was blown down trees and some garbage cans thrown around.	$10,820	CROWLEY	EF0
December 24, 2009	6.64 mile path with a width of 100 yards. Several well-constructed home received major damage. Roofs were blown off and walls were blown down. An oil storage tank was blown down east of the Rifle Lane intersection.	$4,343,437	CROWLEY	EF2
December 24, 2009	2.08 mile path with a width of 25 yards. Blew down several trees and destroyed a small outbuilding.	$3,258	MAXIE	EF0
December 24, 2009	2.92 mile path with a width of 25 yards. Several trees were blown down and damaged. A barn and adjacent mobile home were moderately damaged.	$5,429	MOWATA	EF0
December 24, 2009	1.72 mile path with a width of 25 yards. Damaged the roofs of two mobile homes and destroyed a barn along Highway 91.	$21,717	IOTA	EF1
December 24, 2009	1.53 mile path with a width of 25 yards. A home and two mobile homes were struck and damaged with debris blown across the highway into adjacent fields.	$21,717	RICHARD	EF1
December 24, 2009	0.72 mile path with a width of 25 yards. Several trees and power lines were blown down.	$2,172	RICHARD	EF0
December 24, 2009	3.11 mile path with a width of 25 yards. Several outbuildings were destroyed and numerous trees were blown down.	$54,293	MORSE	EF1
November 25, 2010	0.34 mile path with a width of 25 yards. The roof of a barn was partially blown off, and a small RV was blown onto its side.	$10,683	EVANGELINE	EF0
November 25, 2010	2.37 mile path with a width of 100 yards. Four homes were damaged including an abandoned home that suffered moderate damage. A carport was blown hundreds of yards.	$133,543	IOTA	EF1
November 25, 2010	4.99 mile path with a width of 50 yards. Several homes received roof damage. A	$80,126	MOWATA	EF1

Date	Impacts	Property Damage	Location	Magnitude
	barn was completely destroyed and an adjacent home received moderate damage to the roof and exterior.			
November 25, 2010	3.74 mile path with a width of 200 yards. Six homes received roof damage and several outbuildings were damaged or destroyed. Debris was deposited as far as 300 yards from the source.	$106,834	RICHARD	EF1
March 5, 2011	1.05 mile path with a width of 25 yards. A Waffle House restaurant suffered minor damage to the roof, signage, and windows, with three injuries from broken glass. A nearby storage building at a car was collapsed.	$51,782	CROWLEY	EF0
March 5, 2011	6.99 mile path with a width of 250 yards. 683 houses were damaged by the tornado, and several other businesses received damage as well.	$15,534,678	RAYNE	EF2
March 11, 2012	1.62 mile path with a width of 20 yards. One home received minor roof damage. An open air barn had one wall blown out, and an unsecured storage building was flipped and destroyed.	$81,172	EVANGELINE	EF1
October 31, 2013	0.5 mile path with a width of 70 yards. An above ground pool was damaged when a branch fell. A few other trees were damaged.	$1,000	EVANGELINE	EF0
April 4, 2014	0.81 mile path with a width of 50 yards. A short lived tornado blew part of a tree onto a house and tore portion of a roof off a barn north of Iota.	$2,000	IOTA	EF0
May 11, 2015	0.01 mile path with a width of 10 yards. A weak and short lived tornado developed near Iota.	$0	TEPETATE	EF0

The incorporated areas of Church Point, Estherwood, Mermentau, and Morse have not experienced a tornado event from 2010 to the present. Since 2010, the year in which the last update to this hazard mitigation plan was written, Acadia Parish has had ten tornadoes touch down in the unincorporated areas of the parish as well as in Iota, Crowley, and Rayne. The following is a brief synopsis of these events:

November 25, 2010 – EF0 Tornado in Evangeline

NWS Storm Survey confirmed an EF0 tornado along Simeo Road northwest of Evangeline. The roof of a barn was partially blown off, and a small RV was blown onto its side. Several trees were blown down, with one falling onto Simeo Road.

November 25, 2010 – EF1 Tornado in Iota

NWS Storm Survey confirmed a strong EF1 tornado touched down south of Iota. Four homes were damaged along Henderson Lane, including an abandoned home that suffered moderate damage. The mobile home next door was damaged on its south side, and the attached carport was blown hundreds of yards to the northeast. Several trees were also blown down along Henderson Lane. Along Highway 91, one home was knocked off its blocks and had much of its roof blown off, and a mobile home lost most of its skirting. A carport was also destroyed and another lost much of its roof. Debris from all of these structures was blown up to one mile to the northeast across fields, with some debris landing on Howard Lane. On Howard Lane, one home suffered minor exterior damage, and several trees were blown down in the area. A few trees limbs were blown down along Highway 98 before the tornado lifted.

November 25, 2010 – EF1 Tornado in Mowata

NWS Storm Survey found an EF1 tornado began in Mowata, damaging a home at the intersection of Highway 13 and Cole Gully Road. Another home received roof damage on Henry Bieber Road, and several tree limbs were blown down. Upon reaching Gum Point Road, a barn was completely destroyed and the adjacent home received moderate damage to the roof and exterior. Debris from the home was blown over 200 yards away. Another home received heavy damage from falling trees on Atteberry Road, and several fences were blown down. Three mobile homes were damaged at the intersection of Degregory Road and Academy Road, and debris from a carport was blown into fields north of the roadway. More trees were blown down along and west of Young Drive before the tornado lifted.

November 25, 2010 – EF1 Tornado in Richard

NWS Storm Survey found an EF1 tornado began southeast of the Highway 367/St. Henry Drive intersection and moved northeast, damaging numerous homes around the St. Henry Drive/Highway 1105 intersection. Six homes received roof damage, several outbuildings were damaged or destroyed, and many trees were blown down. The tornado crossed crawfish ponds along Highway 95 and Parish Road 326, before creating a very evident cyclonic pattern in tall marsh grass along Pamela Drive. The roof of a shed south of Wagon Road was blown off, with debris deposited in trees nearly 300 yards to the northeast. Several trees were blown down near the Becket Drive and Wagon Road intersection before the tornado dissipated.

March 5, 2011 – EF0 Tornado in Crowley

NWS Storm Survey confirmed an EF0 Tornado struck along Interstate 10 in Crowley. A Waffle House restaurant suffered minor damage to the roof, signage, and windows, with 3 injuries from broken glass. A nearby storage building at a car wash collapsed, and several other buildings in the area suffered minor roof damage. A few trees and tree limbs were also blown down.

March 5, 2011 – EF2 Tornado in Rayne

NWS Storm Survey confirmed an EF2 Tornado touched down northwest of the Ebenezer Road/Standard Mill Road intersection southwest of Rayne and moved across the northern portion of the city, before ending near the community of Castille. A few outbuildings were destroyed in a small subdivision on Ebenezer Road and a few trees were blown down. The tornado crossed Highway 90 with no visible damage before striking the Rayne Water Treatment Plant west of town, completely destroying three metal buildings (EF2) and blowing debris over 200 yards to the east and northeast. The tornado then entered the main residential section of the city of Rayne at Marie Avenue and Lessley Street, demolishing two mobile homes and damaging several others (EF2). A patchwork of EF0/EF1 damage was noted to homes and trees as the storm moved across the northwestern part of

Rayne. One woman was killed on Bella Avenue just north of West a School Street when a large tree fell onto and flattened her small home. The tornado intensified as it neared and crossed Martin Luther King Boulevard, where two small homes and an abandoned two story building were leveled, and several duplexes lost their entire roofs (EF2). Crossing Highway 35, another duplex lost much of its roof as did an auto parts store. Several security cameras from nearby buildings filmed the tornado in this area. The storm weakened as it moved into northeastern Rayne, causing generally minor roof and exterior damage to the high school and adjacent stadium (EF1). EF0 damage was noted as the tornado crossed Interstate 10, with several pine trees snapped and minor damage to buildings. Minor damage continued to a few buildings on Nation Road and Highway 98 (EF0), with the final damage noted to a mobile home on Charlie Arceneaux Road.

The City of Rayne Police Department confirmed a total of 1 fatality and 11 injuries. The Louisiana State Fire Marshal's Office reported that 42 houses were destroyed, 48 sustained major damage, 79 houses suffered moderate damage, and another 514 houses received minor damage, for a total of 683 damaged homes. Another unknown number of businesses were also damaged.

March 11, 2012 – EF1 Tornado in Evangeline

A tornado touched down near the Jeff Davis - Acadia Parish line, a few miles north of I-10. The most significant damage occurred near the intersection of Riverside and Simeo Roads, where several hardwood trees were uprooted, several pine trees were snapped, and one home received minor roof damage. An open air barn had one wall blown out, and an unsecured storage building was flipped and destroyed.

October 31, 2013 – EF0 Tornado in Evangeline

A video sent to the NWS via Facebook showed a tornado briefly touching down in a rural area of Acadia Parish. A NWS survey team traveled out to the site and found a short path of a weak tornado that damaged a few trees and one above ground pool when a branch fell. The tornado path began along the south end of Ray Lejeune Road and went northeast dissipating before reaching Highway 97.

April 4, 2014 – EF0 Tornado in Iota

A short lived tornado blew part of a tree onto a house and tore portion of a roof off a barn north of Iota.

May 11, 2011 – EF0 Tornado in Tepetate

A weak tornado that developed over a field near Iota. No damage was caused by the tornado as it dissipated quickly in the same field.

Frequency / Probability

Tornadoes are a sporadic occurrence within Acadia Parish, with an annual chance of occurrence calculated at approximately 100% based on the records for the past 25 years (1990-2015). The following figure displays the density of tornado touch downs in Acadia Parish and neighboring parishes.

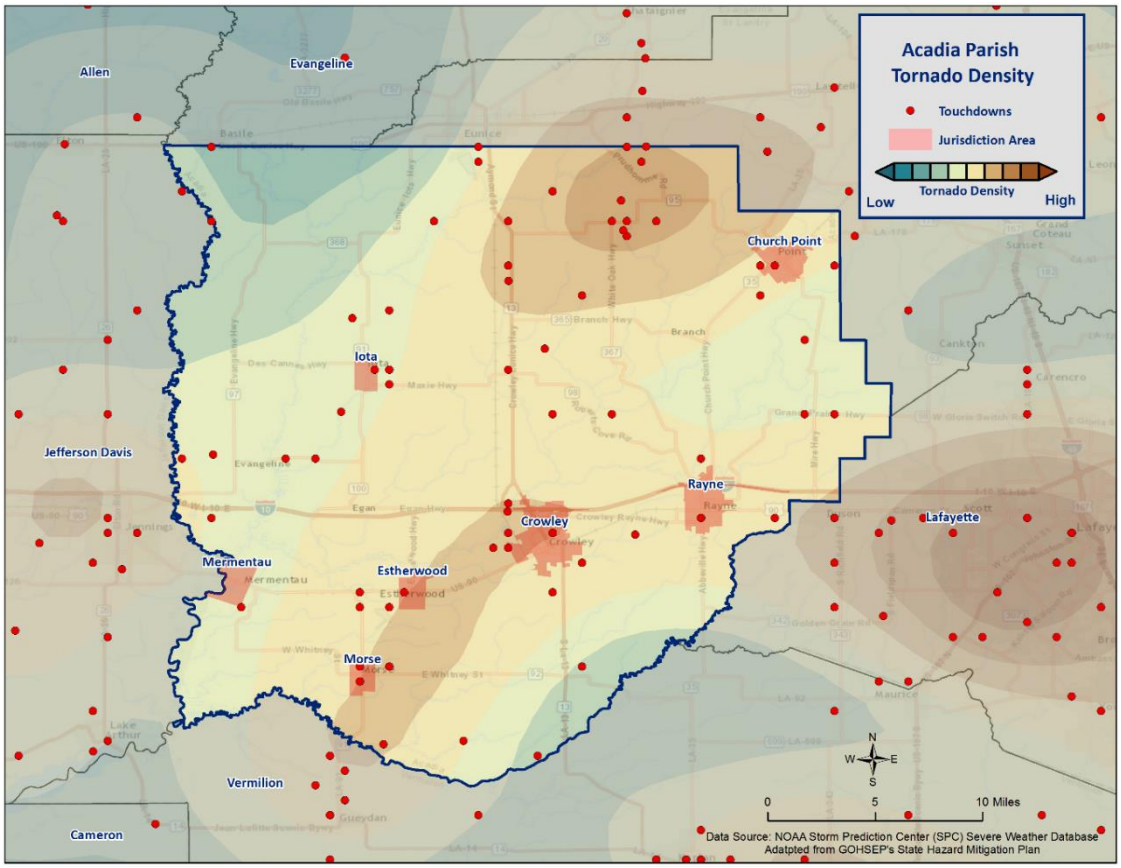


Figure 2-22: Location and Density of Tornadoes to Touch Down in Acadia Parish (Source: NOAA/SPC Severe Weather Database)

Estimated Potential Losses

According to the SHELDUS database, there have been 40 tornadoes that have caused some level of property damage. The total damage from the actual claims for property is $32,415,072, with an average cost of $810,377 per tornado strike. When annualizing the total cost over the 25-year record, total annual loses based on tornadoes are estimated to be $1,296,603. To provide an estimated annual estimated potential loss per jurisdiction, the 2010 Census population was used to assign the estimated potential losses proportionally across the jurisdictions. Based on the 2010 Census data, the *Table 2-50* provides an annual estimate of potential losses for Acadia Parish.

Table 2-50: Estimated Annual Losses from Tornadoes in Acadia Parish

Estimated Annual Potential Losses from Tornadoes for Acadia Parish							
Unincorporated Acadia Parish (58.7% of Population)	Church Point (0.7% of Population)	Crowley (21.5% of Population)	Estherwood (1.4% of Population)	Iota (2.4% of Population)	Mermentau (1.1% of Population)	Morse (1.3% of Population)	Rayne (12.9% of Population)
$674,465	$95,713	$278,430	$18,660	$31,485	$13,874	$17,044	$166,932

Table 2-51 presents an analysis of building exposure that is susceptible to tornadoes by general occupancy type for Acadia Parish, along with the percentage of building stock that are mobile homes.

Table 2-51: Building Exposure by General Occupancy Type for Tornadoes in Acadia Parish (Source: FEMA's Hazus 2.2)

Building Exposure by General Occupancy Type for Tornadoes Exposure Types ($1,000)							
Residential	**Commercial**	**Industrial**	**Agricultural**	**Religion**	**Government**	**Education**	**Mobile Homes (%)**
6,289,548	1,216,309	606,150	135,026	170,236	40,937	116,424	18.9%

The parish has suffered through a total of five days in which tornadoes or waterspouts have accounted for 26 injuries and one fatality during this 25-year period (*Table 2-52*). The average number of injuries per event for Acadia Parish is 0.65 per tornado, with an average of 1.04 per year for the 25-year period.

Table 2-52: Tornadoes in Acadia Parish by Magnitude that Caused Injuries or Deaths

Date	Magnitude	Deaths	Injuries
February 15, 1990	F1	0	5
March 4, 1992	F2	0	1
September 11, 1998	F0	0	2
December 24, 2009	EF2	0	4
March 5, 2011	EF2	1	14

In assessing the overall risk to population, the most vulnerable population throughout the parish are those residing in manufacturing housing. Approximately 18.9% of all housing in Acadia Parish consists of manufactured housing. Based on location data collected in a previous hazard mitigation project, there are 40 known locations where manufactured housing is concentrated. Each of those 40 locations have an overall number of manufactured houses ranging from one to 106. The location and density of manufactured houses can be seen in *Figure 2-23*.

Manufactured housing is more likely to sustain damage from a tornado than any other residential structure. The highest concentration of manufactured home parks is located in the unincorporated area of Acadia Parish (*Table 2-53*). However, this does not influence the risk associated with a tornado event since they strike at random, making all structures and population within the planning area equally vulnerable.

Table 2-53: Manufactured Home Distribution throughout Acadia Parish

Location	Number of Manufactured Home Parks	% of Manufactured Home Parks
Unincorporated Area	32	77.5%
Church Point	4	10.0%
Crowley	2	5.0%
Estherwood	0	0.0%
Iota	1	2.5%
Mermentau	0	0.0%
Morse	0	0.0%
Rayne	2	5.0%

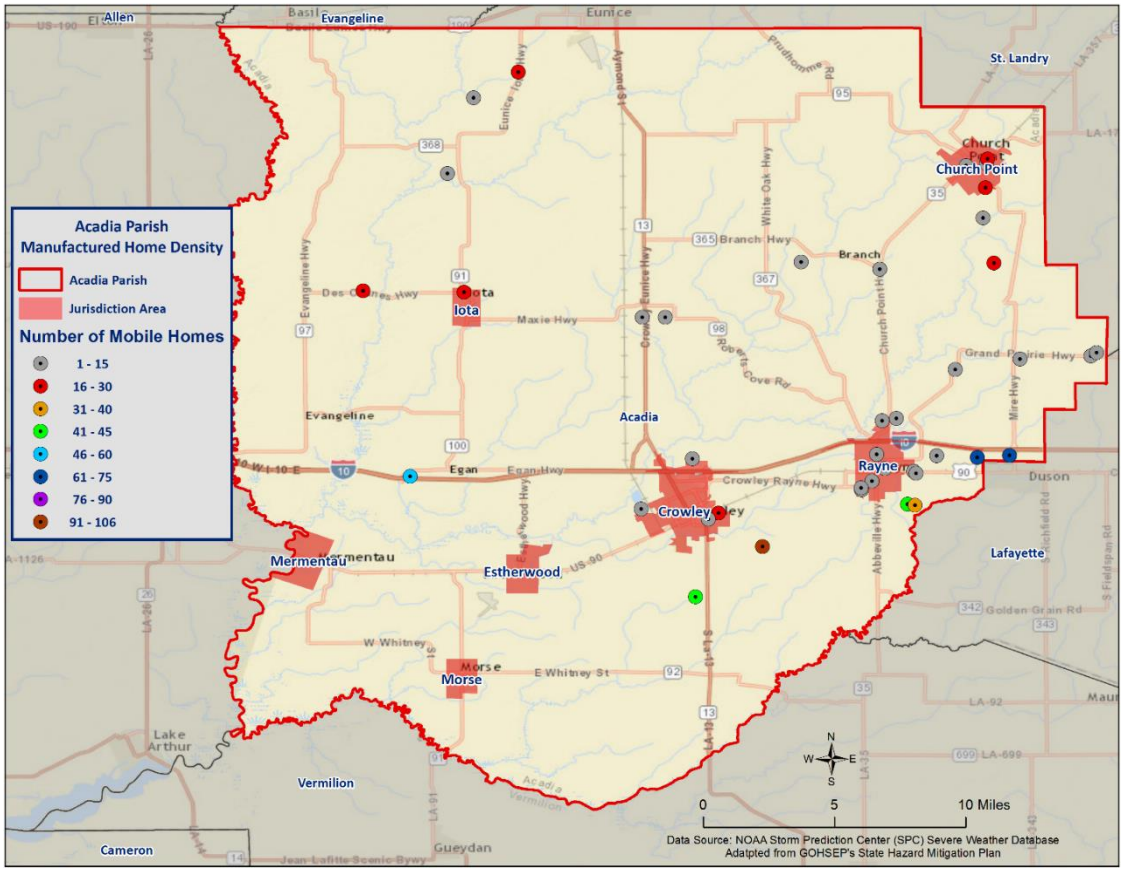


Figure 2-23: Location and Approximate Number of Units in Manufactured Housing Locations throughout Acadia Parish

Vulnerability

See Appendix C for parish and municipality building exposure to tornado hazards.

Tropical Cyclones

Tropical cyclones are among the worst hazards that Louisiana faces. These spinning, low-pressure air masses draw surface air into their centers and attain strength ranging from weak tropical waves to the most intense hurricanes. Usually, these storms begin as clusters of oceanic thunderstorms off the western coast of Africa, moving westward in the trade wind flow. The spinning of these thunderstorm clusters begins because of the formation of low pressure in a perturbation in the westerly motion of the storms associated with differential impacts of the Earth's rotation. The west-moving, counterclockwise-spinning collection of storms, now called a tropical disturbance, may then gather strength as it draws humid air toward its low-pressure center. This results in the formation of a tropical depression (defined when the maximum sustained surface wind speed is 38 mph or less), then a Tropical Cyclone (when the maximum sustained surface wind ranges from 39 mph to 73 mph), and finally a hurricane (when the maximum sustained surface wind speeds exceed 73 mph). On the next page, *Table 2-54* presents the Saffir-Simpson Hurricane Wind Scale, which categorizes tropical cyclones based on sustained winds.

Table 2-54: 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 fresh water 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 hurricane having the potential to devastate multiple parishes at once, the risk of a tropical cyclone has the probability of impacting anywhere within the planning area for Acadia Parish. As such, all jurisdictions are equally at risk for tropical cyclones.

Previous Occurrences / Extents

The central Gulf of Mexico coastline is among the most hurricane-prone locations in the United States, and hurricanes can affect every part of the state. The SHELDUS database reports a total of six tropical cyclone events occurring within the boundaries of Acadia Parish between the years 2002 and 2014 (*Table 2-55*). The tropical cyclone events experienced in Acadia Parish include depressions, storms, and hurricanes. As a worst case scenario, Acadia Parish can expect to experience hurricanes at the category 3 level in the future.

Table 2-55: Historical Tropical Cyclone Events in Acadia Parish from 2002- 2014 (Source: SHELDUS)

Date	Name	Storm Type At Time of Impact
October 3, 2002	Lili	Hurricane – Category 1
September 23, 2005	Rita	Hurricane – Category 3
September 1, 2008	Gustav	Hurricane – Category 2
September 12, 2008	Ike	Tropical Storm
September 3, 2011	Lee	Tropical Storm
August 28, 2012	Isaac	Tropical Storm

Hurricane Lili (2002)

Hurricane Lili made landfall on the Louisiana coast on October 3, 2002, with an estimated intensity of 80 knots. Although Lili weakened considerably before making landfall on the central Louisiana coast, it caused significant wind and flood damage in the area. Strong winds toppled trees onto houses and into roadways, stripped shingles from roofs, and blew out windows. The wind and driving rain flattened sugarcane fields throughout southern Louisiana. A combination of storm surge and rain caused levees to fail in Montegut and Franklin, Louisiana. Lili also temporarily curtailed oil production in the Gulf of Mexico.

Wind gusts associated with Hurricane Lili reach upwards of 100 mph in parts of Acadia Parish. One direct fatality resulted from Hurricane Lili when an elderly woman died from carbon monoxide poisoning from her generator. Two city employees in Rayne were injured after a brick façade collapsed at the water plant. Two city vehicles were damaged by the collapse. Preliminary estimates suggest that 85 homes and businesses were destroyed across the parish with another 2,540 homes and businesses receiving major damage. In Crowley and Rayne, many homes and businesses were damaged by flying debris or falling trees.

Hurricane Rita (2005)

While Hurricane Katrina and resulting levee failures captured headlines worldwide, lesser known (but just as destructive) Hurricane Rita wreaked havoc on southwestern Louisiana less than a month later. The storm made landfall as a Category 3 hurricane in Cameron Parish. Across southeast Louisiana, the main effect from Hurricane Rita was the substantial storm surge flooding that occurred in low lying communities across coastal areas of southern Terrebonne, southern Lafourche, and southern Jefferson Parishes, where numerous homes and businesses were flooded. Some of the most substantial damage occurred in southern Terrebonne Parish, where storm surge of five to seven feet above normal overtopped or breached local drainage levees, inundating many small communities. Newspaper accounts indicated that approximately 10,000 structures were flooded in Terrebonne Parish. Lafitte and other communities in lower Jefferson Parish also suffered extensive storm surge flooding. Storm surge flooding also occurred in areas adjacent to Lake Pontchartrain and Lake Maurepas, affecting homes and businesses from Slidell to Mandeville and Madisonville. Approximately 1,500 structures were reported as flooded in Livingston Parish near Lake Maurepas. Repaired levees damaged by Hurricane Katrina in late August were overtopped or breached along the Industrial Canal in New Orleans, resulting in renewed flooding in adjacent portions of New Orleans and St. Bernard Parish. However, the flooding was much more limited in scope than during Hurricane Katrina.

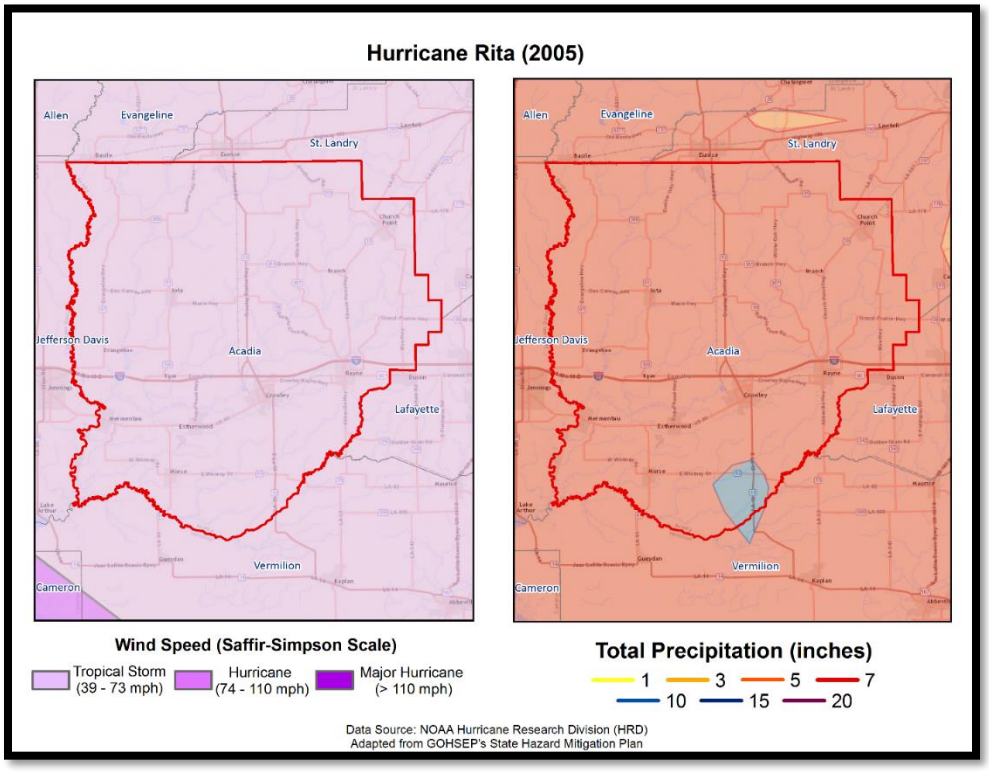


Figure 2-24: Wind Speed and Precipitation Totals in Acadia Parish for Hurricane Rita

Hurricane Rita was the most powerful hurricane to impact southwestern Louisiana since Hurricane Audrey in 1957. Estimated damages in southwest Louisiana totaled near $4 billion, with the majority of those losses occurring in Cameron and Calcasieu Parishes. Entire towns were destroyed in Cameron Parish, including downtown Cameron, Creole, Holly Beach, and Grand Chenier. An estimated 90 to 95 percent of the homes in the parish were severely damaged or destroyed. Storm surge values were estimated around 15 feet in parts of Cameron Parish.

Acadia Parish residents were suggested to evacuate ahead of Hurricane Rita. Wind damage was widespread with power outages across the parish. Heavy damage affected structures and buildings, while localized street flooding prevented travel. Rayne Catholic Elementary school was completely submerged while other homes and businesses experienced heavy damage to roofs, walls, and windows. The parish experienced upwards of eight inches of rainfall from Hurricane Rita.

Hurricane Gustav (2008)

Hurricane Gustav entered the southeast Gulf of Mexico as a major Category 3 hurricane on August 31, 2008, after developing in the Caribbean Sea and moving across western Cuba. Gustav tracked northwestward across the Gulf toward Louisiana and made landfall as a Category 2 hurricane near Cocodrie, Louisiana, during the morning of September 1st. Gustav continued to move northwest across south Louisiana and weakened to a Category 1 storm over south central Louisiana later that day. The storm diminished to a tropical depression over northwestern Louisiana on September 2nd.

The highest wind gust recorded was 117 mph (102 kts) at a USGS site at the Houma Navigational Canal and at the Pilot Station East C-MAN near the Southwest Pass of the Mississippi River. The highest sustained wind of 91 mph was recorded at the Pilot's Station East C-MAN site. However, due to the failure of equipment at

some observation sites during the storm, higher winds may have occurred. The minimum sea level pressure measured was 951.6 millibars at a USGS site at Caillou Lake, southwest of Dulac, and 954.5 millibars at the LUMCON facility near Dulac. Rainfall varied considerably across southeast Louisiana, ranging from around four inches to just over 11 inches.

Gustav produced widespread wind damage across southeast Louisiana, especially in the area from Houma and Thibodaux through the greater Baton Rouge area. Hurricane force wind gusts occurred also across the inland areas, including the Baton Rouge area and surrounding parishes. A peak wind gust of 91 mph was recorded at the Baton Rouge (Ryan Field) Airport at 1:12 PM CST. This was only one mph less than the highest wind gust recorded during Hurricane Betsy in 1965. After the storm, the electric utility serving most of southeast Louisiana reported 75 to 100 percent of utility customers were without power, in areas ranging from Lafourche and Terrebonne Parishes northwest through the Baton Rouge area to central Louisiana and southwest Mississippi. Considerable damage occurred to many houses and structures as large tree limbs and trees were toppled by the hurricane force winds. Preliminary estimates from the American Red Cross indicated that around 13,000 single family dwellings were damaged by the hurricane in southeast Louisiana, and several thousand more apartments and mobile homes were also damaged. Early estimates from Louisiana Economic Development indicated that Gustav caused at least $4.5 billion in property damage in Louisiana, including insured and uninsured losses.

Hurricane Gustav moved across northeastern Acadia Parish, causing widespread wind damage with trees and power lines blown down. Post storm assessments indicate that the Church Point region was the hardest hit area of the parish. Mandatory evacuations were ordered prior to the storm's landfall, so no reliable co-op records exist. Most property damage associated with Hurricane Gustav was to the roofs. Roof damage was caused by trees falling on homes or shingles being pulled off.

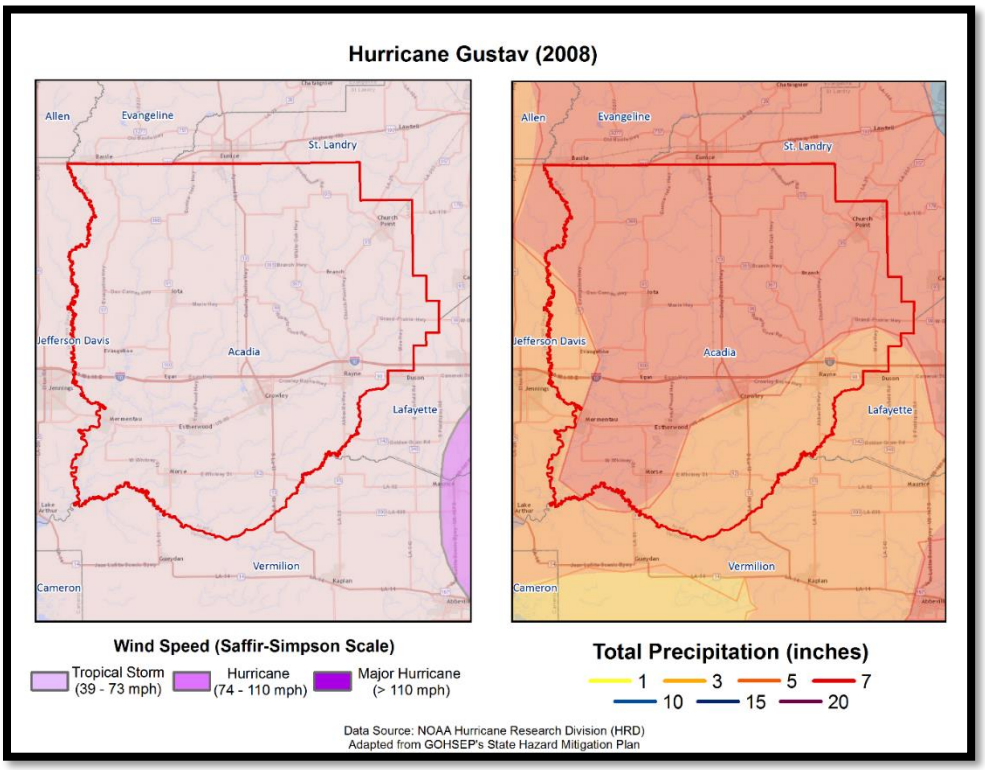


Figure 2-25: Wind Speed and Precipitation Totals in Acadia Parish for Hurricane Gustav

Hurricane Ike (2008)

Hurricane Ike caused wind damage, storm surge flooding, and tornadoes across southwest Louisiana. Ike made landfall near Galveston, TX early in the morning on September 13, 2008, as a strong Category 2 hurricane. Sustained hurricane force winds were confined to extreme western Cameron Parish. The highest recorded winds in southwest Louisiana were experienced at Lake Charles Regional Airport, with sustained winds of 53 mph (46 kts) and gusts of 77 mph (67 kts). The lowest pressure reading occurred at Southland Field near Sulphur, LA, with a low of 994.6 millibars. Several tornadoes were reported across southwest Louisiana. The most significant one was near Mamou, where ten to fifteen homes were damaged, including one that lost its roof. Storm surge was a significant event. Water levels ranged from 14 feet in western Cameron Parish, to eight feet in St. Mary Parish. This resulted in widespread flooding of the same areas that flooded during Hurricane Rita in 2005. Most of Cameron Parish was under water. Over 3,000 homes were flooded. This extended north into Calcasieu Parish, where another 1,000 homes flooded in Lake Charles, Westlake, and Sulphur. In Vermilion Parish, at least 1,000 homes flooded in Pecan Island, Forked Island, Intracoastal City, and Henry. This extended east into Iberia Parish, where another 1,000 homes flooded south of Highway 14 and Highway 90. In St. Mary Parish, some of the worst flooding occurred in Franklin, where a man-made levee failed, flooding over 450 homes. Maximum storm total rainfall ranged from six to eight inches across Cameron, Calcasieu, and Beauregard Parishes. No fatalities were reported in southwest Louisiana. Total property damages, however, were high. Losses were estimated to be almost $420 million across southwest Louisiana. Agricultural losses were over $225 million.

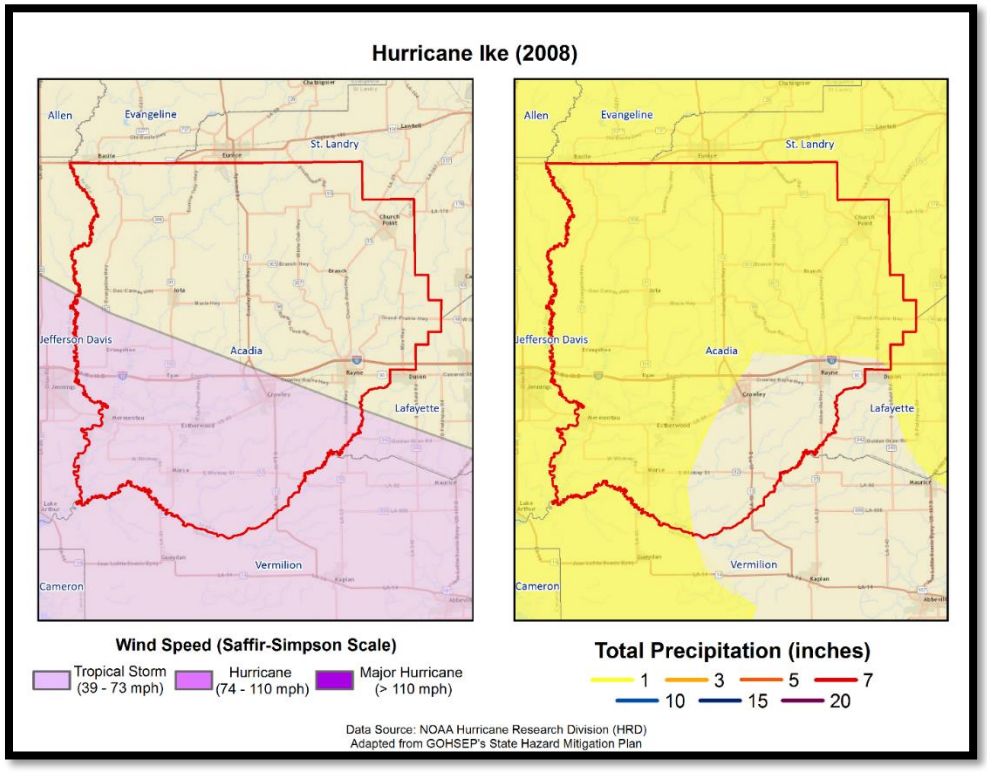


Figure 2-26: Wind Speed and Precipitation Totals in Acadia Parish for Hurricane Ike

Hurricane Ike caused tropical storm wind gusts of 50 to 60 mph, resulting in minor wind damage across Acadia Parish. Rainfall totals were estimated at around two to three inches. Minor flooding occurred in southern portions of the parish from storm surge. Isolated wind damage was reported.

Tropical Storm Lee (2011)

Tropical Storm Lee initially developed as Tropical Depression Thirteen in the middle of the Gulf of Mexico on the evening of Thursday, September 1, 2011. The depression moved slowly north and gradually strengthened, eventually reaching Tropical Storm strength just south of the Louisiana coast on Friday afternoon September 2, 2011. Tropical Storm Lee made only slow and haltingly northward progress over the next 24 hours, eventually moving onshore at the Louisiana coast Saturday night, September 3, 2011, with a maximum sustained wind estimated around 60 mph. Lee moved slowly inland to the north of Baton Rouge late Sunday September 4, 2011, and eventually weakened to a tropical depression Sunday evening. Tropical Depression Lee then moved steadily northeast throughout Monday, September 5, 2011, taking on extra-tropical characteristics over the next 24 hours as it interacted with an upper level disturbance moving through the region. The maximum winds observed in Louisiana were a southerly wind of 46 mph (40 kts) sustained, with a 58 mph (50 kts) gust at New Orleans Lakefront Airport on September 4, 2012, at 0528CST. The lowest minimum central pressure was 993.2 millibars, recorded at Baton Rouge Ryan Field on September 4, 2012, at 0959CST. As Tropical Depression Lee was moving northeast and taking on mid-latitude characteristics, strong northerly winds were experienced across the region, occasionally gusting to higher levels than experienced when Lee was characterized as a tropical cyclone. No fatalities or injuries were associated with any Tropical Storm Lee hazards.

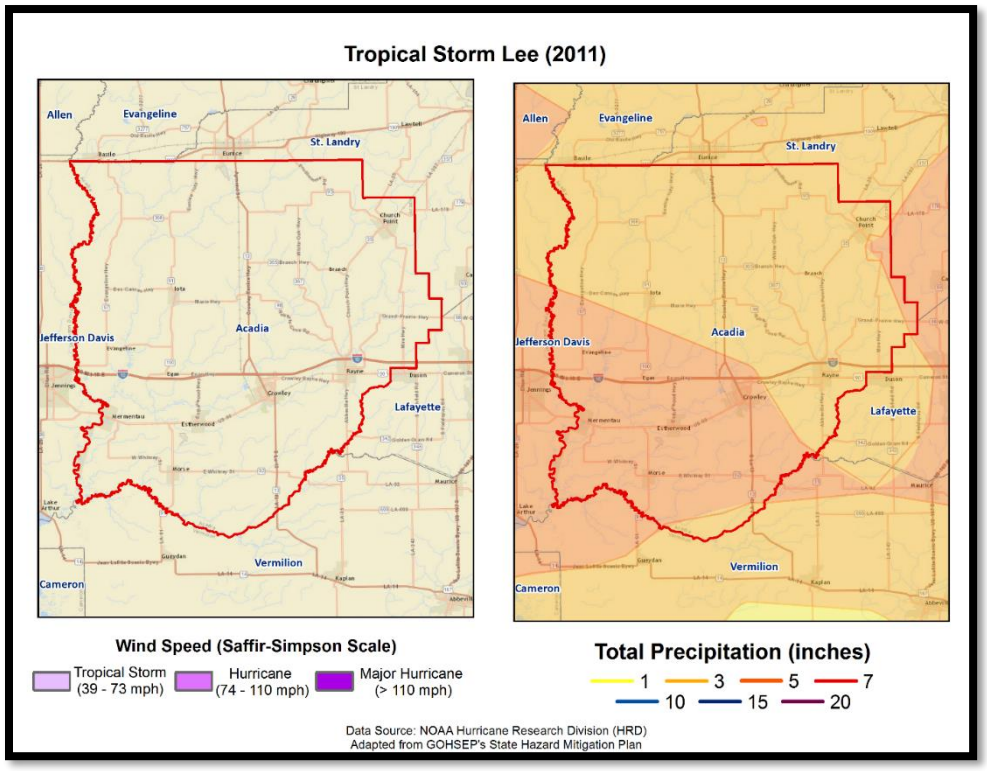


Figure 2-27: Wind Speed and Precipitation Totals in Acadia Parish for Tropical Storm Lee

The main impacts associated with Tropical Storm Lee were storm surge and rainfall. Both of these impacts were related to its slow speed as it crossed the region, which allowed the circulation to linger over the area for several days. Storm surge associated with Lee caused storm tides three to five feet above normal, resulting in lowland flooding. Additional detailed information about Tropical Storm Lee's storm surge is contained in the separate storm surge report. Four day rainfall totals ranged from seven to 15 inches across the area. A maximum of 15.48 inches was recorded near Holden in Livingston Parish. Due to dry antecedent

conditions, river flooding was minimal for the amount of rainfall that occurred. Wind impacts were generally minimal due to only tropical cyclone strength winds being recorded, resulting in tree limbs being blown down and weak trees toppling, causing power outages.

In Acadia Parish, isolated power outages were reported due to a few trees blown down. One home had water enter it. Rainfall totals within Acadia Parish generally ranged from five to six inches.

Hurricane Isaac (2012)

Hurricane Isaac made landfall in Southeast sections of Louisiana, however tropical storm conditions were felt well to the west of the center. No injuries or deaths were reported. Scattered power outages and downed trees occurred. As the system lifted north of the area flash flooding occurred in Rapides Parish as rain bands sat over the same location. The highest surge occurred at Amerada Pass were a storm tide rose to 3.46 feet resulting in a surge of 2.18 feet. Tides were actually pushed out at most coastal locations while the hurricane was making landfall resulting in tides at some locations 1 to 3 feet below normal and boats being stranded for several hours.

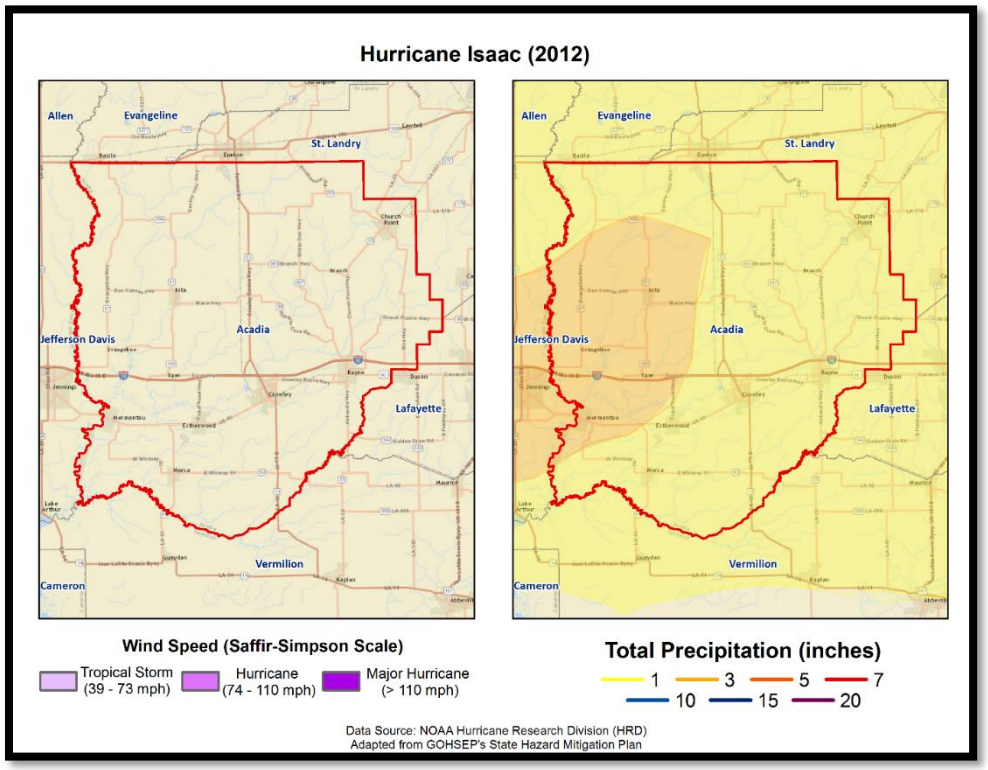


Figure 2-28: Wind Speed and Precipitation Totals in Acadia Parish for Hurricane Isaac

In Acadia Parish, a few trees and power lines were blown down. Maximum power outages were around 2200 customers. A tree fell on a house in Crowley during the storm. Rainfall totals were generally minimal with most reporters claiming less than an inch of rainfall from the storm.

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

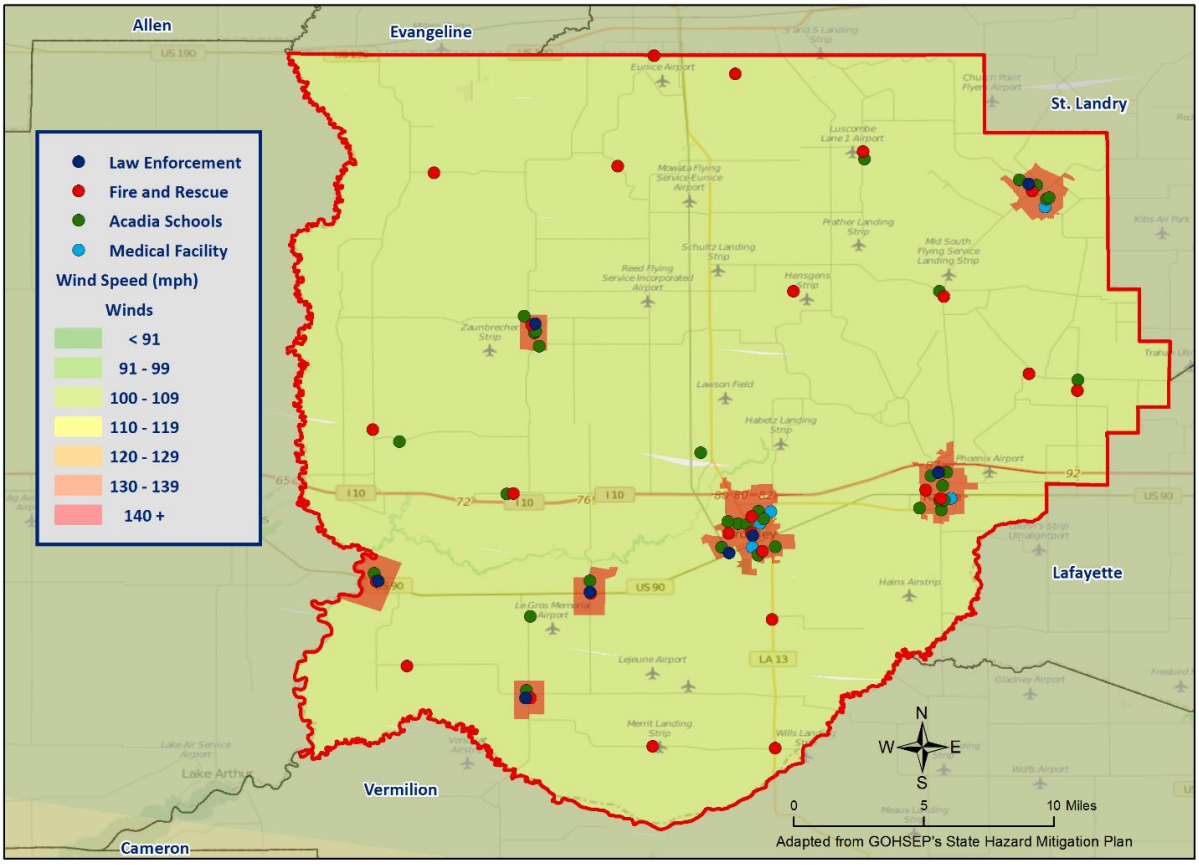


Figure 2-29: Winds Zones for Acadia Parish in Relation to Critical Facilities

Frequency / Probability

Tropical cyclones are large natural hazard events that regularly impact Acadia Parish. The annual chance of occurrence for a tropical cyclone is estimated at 24% for Acadia Parish and its municipalities, with six events occurring within 25 years. The tropical cyclone season for the Atlantic Basin is from June 1st through November 30th, with most of the major hurricanes (Saffir-Simpson Categories 3, 4, & 5) occurring between the months of August and October.

Estimated Potential Losses

Using Hazus 2.2 100-Year Hurricane Model, the 100-year hurricane scenario was analyzed to determine losses from this worst-case scenario. The table on the following page shows the total economic losses that would result from this occurrence.

Table 2-56: Total Estimated Losses for a 100-Year Hurricane Event (Source: Hazus 2.2)

Jurisdiction	Estimated Total Losses from 100-Year Hurricane Event
Acadia Parish (Unincorporated)	$65,977,094
Church Point	$9,362,822
Crowley	$27,236,366
Estherwood	$1,825,340
Iota	$3,079,876
Mermentau	$1,357,198
Morse	$1,667,239
Rayne	$16,329,500
Total	$126,835,435

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

Table 2-57: Ratio of Total Losses to Total Estimated Value of Assets for each Jurisdiction in Acadia Parish (Source: Hazus 2.2)

Jurisdiction	Estimated Total Losses from 100-Year Hurricane Event	Total Estimated Value of Assets	Ratio of Estimated Losses to Total Value
Unincorporated Acadia	$65,977,094	$4,159,681,000	1.6%
Church Point	$9,362,822	$627,648,000	1.5%
Crowley	$27,236,366	$2,066,878,000	1.3%
Estherwood	$1,825,340	$115,586,000	1.6%
Iota	$3,079,876	$187,181,000	1.6%
Mermentau	$1,357,198	$78,932,000	1.7%
Morse	$1,667,239	$89,620,000	1.9%
Rayne	$16,329,500	$1,249,104,000	1.3%

Based on the Hazus 2.2 Hurricane Model, estimated total losses range from 1.3% to 1.9% of the total estimated value of all assets for the unincorporated area of Acadia Parish, and the incorporated areas of Church Point, Crowley, Estherwood, Iota, Mermentau, Morse, and Rayne.

The Hazus 2.2 Hurricane Model also provides a breakdown by jurisdiction for seven primary sectors (Hazus occupancy) throughout the parish. The losses for each jurisdiction by sector are listed in the tables on the following pages.

Table 2-58: Estimated Losses in Unincorporated Acadia Parish for a 100-Year Hurricane Event (Source: Hazus 2.2)

Acadia Parish (Unincorporated)	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	$1,328,567
Commercial	$6,429,120
Government	$386,729
Industrial	$4,347,423
Religious / Non-Profit	$691,975
Residential	$74,619,548
Schools	$607,546
Total	$65,977,094

Table 2-59: Estimated Losses in Church Point for a 100-Year Hurricane Event (Source: Hazus 2.2)

Church Point	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	$140,697
Commercial	$680,852
Government	$40,955
Industrial	$460,397
Religious / Non-Profit	$73,281
Residential	$7,902,300
Schools	$64,340
Total	$9,362,822

Table 2-60: *Estimated Losses in Crowley for a 100-Year Hurricane Event (Source: Hazus 2.2)*

Crowley	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	$409,286
Commercial	$1,980,591
Government	$119,138
Industrial	$1,339,292
Religious / Non-Profit	$213,174
Residential	$22,987,722
Schools	$187,164
Total	$27,236,366

Table 2-61: *Estimated Losses in Estherwood for a 100-Year Hurricane Event (Source: Hazus 2.2)*

Estherwood	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	$27,430
Commercial	$132,736
Government	$7,984
Industrial	$89,757
Religious / Non-Profit	$14,287
Residential	$1,540,602
Schools	$12,543
Total	$1,825,340

Table 2-62: *Estimated Losses in Iota for a 100-Year Hurricane Event (Source: Hazus 2.2)*

Iota	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	$46,282
Commercial	$223,964
Government	$13,472
Industrial	$151,446
Religious / Non-Profit	$24,106
Residential	$2,599,441
Schools	$21,164
Total	$3,079,876

Table 2-63: *Estimated Losses in Mermentau for a 100-Year Hurricane Event (Source: Hazus 2.2)*

Mermentau	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	$20,395
Commercial	$98,694
Government	$5,937
Industrial	$66,737
Religious / Non-Profit	$10,623
Residential	$1,145,487
Schools	$9,326
Total	$1,357,198

Table 2-64: *Estimated Losses in Morse for a 100-Year Hurricane Event (Source: Hazus 2.2)*

Morse	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	$25,054
Commercial	$121,239
Government	$7,293
Industrial	$81,983
Religious / Non-Profit	$13,049
Residential	$1,407,164
Schools	$11,457
Total	$1,667,239

Table 2-65: *Estimated Losses in Rayne for a 100-Year Hurricane Event (Source: Hazus 2.2)*

Rayne	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	$245,386
Commercial	$1,187,459
Government	$71,429
Industrial	$802,969
Religious / Non-Profit	$127,808
Residential	$13,782,235
Schools	$112,214
Total	$16,329,500

Threat to People

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

Table 2-66: Number of People Susceptible to a 100-Year Hurricane Event in Acadia Parish (Source: Hazus 2.2)

Number of People Exposed to Hurricane Hazards			
Location	**# in Community**	**# in Hazard Area**	**% in Hazard Area**
Acadia (Unincorporated)	**32,133**	**32,133**	**100.0%**
Church Point	**4,560**	**4,560**	**100.0%**
Crowley	**13,265**	**13,265**	**100.0%**
Estherwood	**889**	**889**	**100.0%**
Iota	**1,500**	**1,500**	**100.0%**
Mermentau	**661**	**661**	**100.0%**
Morse	**812**	**812**	**100.0%**
Rayne	**7,953**	**7,953**	**100.0%**
Total	**61,773**	**61,773**	**100.0%**

The HAZUS-MH Hurricane Model was also extrapolated to provide an overview of vulnerable populations throughout the jurisdictions. These populations are illustrated in the following tables:

Table 2-67: Vulnerable Populations in Unincorporated Acadia Parish for a 100-Year Hurricane Event (Source: Hazus 2.2)

Acadia Parish (Unincorporated)		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	32,133	100.0%
Persons Under 5 Years	2,442	7.6%
Persons Under 18 Years	11,986	37.3%
Persons 65 Years and Over	4,113	12.8%
White	25,546	79.5%
Minority	6,587	20.5%

Table 2-68: Vulnerable Populations in Church Point for a 100-Year Hurricane Event (Source: Hazus 2.2)

Church Point		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	4,560	100.0%
Persons Under 5 Years	374	8.2%
Persons Under 18 Years	1,199	26.3%
Persons 65 Years and Over	666	14.6%
White	2,777	60.9%
Minority	1,783	39.1%

Table 2-69: Vulnerable Populations in Crowley for a 100-Year Hurricane Event (Source: Hazus 2.2)

Crowley		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	13,265	100.0%
Persons Under 5 Years	1,048	7.9%
Persons Under 18 Years	3,595	27.1%
Persons 65 Years and Over	2,043	15.4%
White	8,569	64.6%
Minority	4,696	35.4%

Table 2-70: Vulnerable Populations in Estherwood for a 100-Year Hurricane Event (Source: Hazus 2.2)

Estherwood		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	889	100.0%
Persons Under 5 Years	72	8.1%
Persons Under 18 Years	237	26.7%
Persons 65 Years and Over	100	11.3%
White	836	94.0%
Minority	53	6.0%

Table 2-71: Vulnerable Populations in Iota for a 100-Year Hurricane Event (Source: Hazus 2.2)

Iota		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	1,500	100.0%
Persons Under 5 Years	128	8.5%
Persons Under 18 Years	456	30.4%
Persons 65 Years and Over	170	11.3%
White	1,373	91.5%
Minority	128	8.5%

Table 2-72: Vulnerable Populations in Mermentau for a 100-Year Hurricane Event (Source: Hazus 2.2)

Mermentau		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	661	100.0%
Persons Under 5 Years	43	6.5%
Persons Under 18 Years	175	26.4%
Persons 65 Years and Over	90	13.6%
White	581	87.9%
Minority	80	12.1%

Table 2-73: Vulnerable Populations in Morse for a 100-Year Hurricane Event (Source: Hazus 2.2)

Morse		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	812	100.0%
Persons Under 5 Years	63	7.8%
Persons Under 18 Years	218	26.9%
Persons 65 Years and Over	92	11.3%
White	808	99.5%
Minority	4	0.5%

Table 2-74: Vulnerable Populations in Rayne for a 100-Year Hurricane Event (Source: Hazus 2.2)

Rayne		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	7,953	100.0%
Persons Under 5 Years	573	7.2%
Persons Under 18 Years	2,084	26.2%
Persons 65 Years and Over	1,185	14.9%
White	4,971	62.5%
Minority	2,982	37.5%

Vulnerability

See Appendix C for parish and municipality buildings that are susceptible to tropical cyclones.

Winter Storms

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

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

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

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

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

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

Table 2-75: 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 Acadia Parish as all of the adjacent parishes, the entire planning area for Acadia Parish is equally at risk for winter storms.

Previous Occurrences / Extents

According to SHELDUS, there have been four reported winter storm events that have occurred within the boundaries of Acadia Parish between the years of 1990 and 2015. The following table provides a brief synopsis of each event. Based on historic data, Acadia Parish can expect an ice damage index of 2 on the Sperry-Piltz Ice Accumulation Index.

Table 2-76: Previous Occurrences for Winter Storm Events in Acadia Parish

Date	Synopsis	Property Damage	Crop Damage
March 14, 1993	A widespread, damaging freeze occurred as temperatures fell into the upper teens and 20s. Due to the relatively mild winter, many crops were in early bloom. Severe damage occurred to the strawberry, peach, blueberry, citrus, tomato, and ryegrass crops.	$0	$224,191
February 3, 2011	A mix of freezing rain, sleet, and snow spread across south central Louisiana during the late morning hours of February 3rd. Most of central Louisiana received over one quarter of an inch of ice accumulation with some areas seeing up to one half inch of ice. Scattered power outages occurred with the most across Acadia Parish.	$103,565	$0
January 23, 2014	A strong ridge of arctic high pressure produced sleet and snow flurries in Northern Louisiana. Snow came down moderately heavy at times reducing visibilities to near one mile. Ice accumulations ranged from around one tenth to one quarter of an inch with sleet and snow accumulations ranging from one half to one inch.	$0	$0

Date	Synopsis	Property Damage	Crop Damage
January 28, 2014	A winter weather event began on Tuesday, January 28th and lasted through Wednesday, January 29th. The parish saw several closures of government and business offices, as well as schools, during this time period. The parish instituted a curfew on Tuesday from dusk to dawn in an effort to reduce the number of vehicle accidents.	N/A	N/A
March 4, 2014	Freezing rain began early in the morning across the area with portions of the parish reaching to near two tenths of an inch by the end of the event in the afternoon. A few Mardi Gras events were affected in the parish.	$0	$0

Based on previous winter storm events, the worst-case scenario for the unincorporated area of Acadia Parish and the incorporated areas of Church Point, Crowley, Estherwood, Iota, Mermentau, Morse, and Rayne is approximately one inch of snow accumulation and approximately one quarter to one half inch of ice accumulation

Frequency / Probability

With four recorded events in 25 years, winter storm events within the boundaries of Acadia Parish have an annual chance of occurrence calculated at 16% based on the SHELDUS dataset.

Estimated Potential Losses

Since 1990, there have been four reported winter weather events that have resulted in property and/or crop damages according to the SHELDUS database. The total property damages associated with these storms have totaled $103,565. To estimate the potential losses of a winter weather event on an annual basis, the total damage recorded for winter weather events was divided by the total number of years of available winter weather data in SHELDUS (1990 – 2015). This provides an annual estimated potential loss of $4,143. To assess potential losses to the participating jurisdictions, the 2010 Census population was used to assign the estimated potential losses proportionally across the jurisdictions. The following table provides an estimate of potential property losses for Acadia Parish based on the 2010 Census data:

Table 2-77: Estimated Annual Losses for Winter Weather Events in Acadia Parish

Estimated Annual Potential Losses from Winter Storms for Acadia Parish							
Unincorporated Acadia Parish (52.0% of Population)	Church Point (7.4% of Population)	Crowley (21.5% of Population)	Estherwood (1.4% of Population)	Iota (2.4% of Population)	Mermentau (1.1% of Population)	Morse (1.3% of Population)	Rayne (12.9% of Population)
$2,155	$306	$890	$60	$101	$44	$54	$533

From 1990 - 2015, there have been no injuries or fatalities as a result of winter weather in Acadia Parish.

Vulnerability

See Appendix C for parish and municipality building exposure to winter weather hazards.

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3. Capability Assessment

This section summarizes the results of the Acadia 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, Acadia Parish and the participating jurisdictions are able to identify strengths that could be used to reduce losses and reduce risk throughout the community. 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

Acadia 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. They take an integrated and strategic look holistically at hazard mitigation in Acadia 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 in Acadia Parish and its jurisdictions are shown in the table on the following page.

Table 3-1: Acadia Parish Planning and Regulatory Capabilities

	Acadia Parish	Church Point	Crowley	Estherwood	Iota	Mermentau	Morse	Rayne	
Plans	Yes / No								
Comprehensive / Master Plan	No	Yes	Yes	No	No	No	Yes	No	
Capital Improvements Plan	Yes	Yes	Yes	No	No	No	No	Yes	
Economic Development Plan	Yes	Yes	No	No	Yes	No	No	Yes	
Local Emergency Operations Plan	Yes	No	Yes	No	Yes	No	Yes	Yes	
Continuity of Operations Plan	No	Yes	Yes	No	No	No	Yes	No	
Transportation Plan	No	Yes	Yes	No	No	No	No	No	
Stormwater Management Plan	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	
Community Wildfire Protection Plan	No	No	No	No	No	No	No	No	
Other plans (redevelopment, recovery, coastal zone management)									
Building Code, Permitting and Inspections	Yes / No								
Building Code	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Building Code Effectiveness Grading Schedule (BCEGS) Score	No	No	No	No	No	No	No	No	
Fire Department ISO/PIAL rating	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Site plan review requirements	No	Yes	Yes	No	Yes	Yes	Yes	Yes	
Land Use Planning and Ordinances	Yes / No								
Zoning Ordinance	Yes	Yes	Yes	No	No	Yes	No	Yes	
Subdivision Ordinance	Yes	Yes	Yes	Yes	No	No	Yes	Yes	
Floodplain Ordinance	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	No	No	Yes	No	No	No	No	No	
Flood Insurance Rate Maps	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Acquisition of land for open space and public recreation uses	Yes	Yes	No	No	No	No	No	Yes	
Other									

Building Codes, Permitting, Land Use Planning and Ordinances

The Acadia Parish Police Jury provides oversight for building permits/codes and land use planning in the Unincorporated areas of the parish, as well as the jurisdictions of Church Point, Crowley, Mermentau, and Rayne, and all other parish ordinances where applicable.

As of the 2016 update, Acadia 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. These are obtained at the Acadia Parish Police Jury Permit Office.

The Acadia Parish Police Jury is also responsible for enforcing the Parish Ordinances relating to health and safety, property maintenance standards, condemnation of unsafe structures, and zoning compliance. Meetings are regularly held 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, Acadia Parish as a whole has a system in place to coordinate and share these capabilities through Acadia Parish Government 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, Acadia 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 below shows examples of resources in place in Acadia Parish and its jurisdictions.

Table 3-2: Acadia Parish Administrative and Technical Capabilities

Administration and Technical	Acadia Parish	Church Point	Crowley	Estherwood	Iota	Mermentau	Morse	Rayne
Administration	Yes / No							
Planning Commission	Yes	Yes	Yes	No	No	No	Yes	Yes
Mitigation Planning Committee	Yes	Yes	No	No	No	No	No	No
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mutual Aid Agreements								
Staff	Yes / No; FT/PT; % Hazard Mitigation							
Chief Building Official	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
Floodplain Administrator	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Emergency Manager	Yes	Yes	Yes	No	No	No	Yes	No
Community Planner	No	Yes	No	No	No	No	Yes	Yes
Civil Engineer	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
GIS Coordinator	Yes	Yes	No	No	No	No	No	Yes
Grant Writer	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Other								
Technical	Yes / No							
Warning Systems / Service (Reverse 911, outdoor warning signals)	No	Yes	No	No	No	No	No	Yes
Hazard Data & Information	No	Yes	Yes		Yes	Yes	Yes	No
Grant Writing	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Hazus Analysis	No	Yes	No		No	No	No	No
Other								

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

The following resources are available to fund mitigation actions in Acadia Parish and its jurisdictions:

Table 3-3: Acadia Parish Financial Capabilities

Financial	Acadia Parish	Church Point	Crowley	Estherwood	Iota	Mermentau	Morse	Rayne
Funding Resource	Yes / No							
Capital Improvements project funding	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Authority to levy taxes for specific purposes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fees for water, sewer, gas, or electric services	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Impact fees for new development	Yes	Yes	Yes	No	No	No	Yes	No
Stormwater Utility Fee	No	Yes	No	No	No	No	No	No
Community Development Block Grant (CDBG)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Other Funding Programs								

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 jurisdictions and parish as a whole to maximize opportunities for implementation of activities through greater acceptance and consensus of the community.

Acadia Parish and its jurisdictions have existing education and outreach programs to implement mitigation activities, as well as to communicate risk and hazard related information to its communities. The existing programs are as follows:

Table 3-4: Acadia Parish Education and Outreach Capabilities

Education and Outreach	Acadia Parish	Church Point	Crowley	Estherwood	Iota	Mermentau	Morse	Rayne
Program / Organization	Yes / No							
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	Yes	Yes	No	No	No	No	No	Yes
Ongoing public education or information program (responsible water use, fire safety, household preparedness, environmental education)	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Natural Disaster or safety related school program	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Storm Ready certification	Yes	No	No	No	No	No	No	No
Firewise Communities certification	No	No	No	No	No	No	No	No
Public/Private partnership initiatives addressing disaster-related issues	Yes	No	Yes	No	No	No	No	No
Other								

In some cases, the jurisdictions rely on Acadia Parish OHSEP and/or Acadia Parish Government Agencies for the above listed planning and regulatory, administrative and technical, financial, and education and outreach capabilities. Comments regarding the jurisdictions utilization or intentions to utilize and leverage the capabilities of the parish government can be found in Appendix E in the jurisdictional specific worksheets.

As reflected in the aforementioned existing regulatory mechanisms, programs, and resources within each jurisdiction, Acadia Parish and its jurisdiction remains committed to expanding and improving on the existing capabilities within the parish. Each participating jurisdiction will work 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 jurisdictions, will help to enhance and expand risk reduction measures within the parish.

With the sharing of these capabilities, the following municipalities and entities are recognized by the Parish of Acadia under the Hazard Mitigation Plan, allowing them to apply for available hazard mitigation funding for as long as these municipalities and entities notify the parish of their intentions and the parish concurs:

- Town of Church Point
- City of Crowley
- Village of Estherwood
- Town of Iota
- Village of Mermentau
- Town of Morse
- City of Rayne

Flood Insurance and Community Rating System

The City of Rayne is the only jurisdiction in Acadia Parish that participates in the Community Rating System (CRS). Obtaining the CRS rating for the parish and participating jurisdictions is recognized as an eventual goal by the Hazard Mitigation Steering Committee. Participation in the CRS strengthens local capabilities by lowering flood insurance premiums for jurisdictions that exceed NFIP minimum requirements.

Under the Federal Emergency Management Agency (FEMA), the National Flood Insurance Program (NFIP) administers the Community Rating System. 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.

During the last update, 38 Louisiana communities participated, including the City of Rayne (class 9). Mandeville, Shreveport, and Jefferson and East Baton Rouge Parishes had the best classifications in the state, class 7. As of the 2016 update, Jefferson, East Baton Rouge, and Terrebonne Parishes all lead the state with best classifications, class 6.

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.

* In determining CRS Premium Discounts, all AR and A99 Zones are treated as non-SFHAs.

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

As of May 2012, 310 communities in the State of Louisiana participate in the Federal Emergency Management Agency's NFIP. Of these communities, 41 (or 13%) participate in the Community Rating System (CRS).

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.

First, the jurisdiction 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 1st of each year. That report must be made available to the media and the public.

Second, the jurisdiction must annually recertify to FEMA that it is continuing to implement its CRS credited activities. Failure to maintain the same level of involvement in flood protection can result in a loss of CRS credit points and a resulting increase in flood insurance rates to residents.

In 2011[1], the National Flood Insurance Program (NFIP) completed a comprehensive review of the Community Rating System that will result 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 in order to evaluate the CRS and refine the program to meet its stated goals.

The upcoming changes will 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.

The 2013 CRS Coordinator's Manual changes will impact each CRS community differently. Some communities will see an increase in the points they receive since points for certain activities have increased (e.g., Activity 420 Open Space Preservation). Other communities will 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 will have to identify new CRS credits in order to remain in the CRS.

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 2013 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 and when the 2013 manual will impact their community.

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

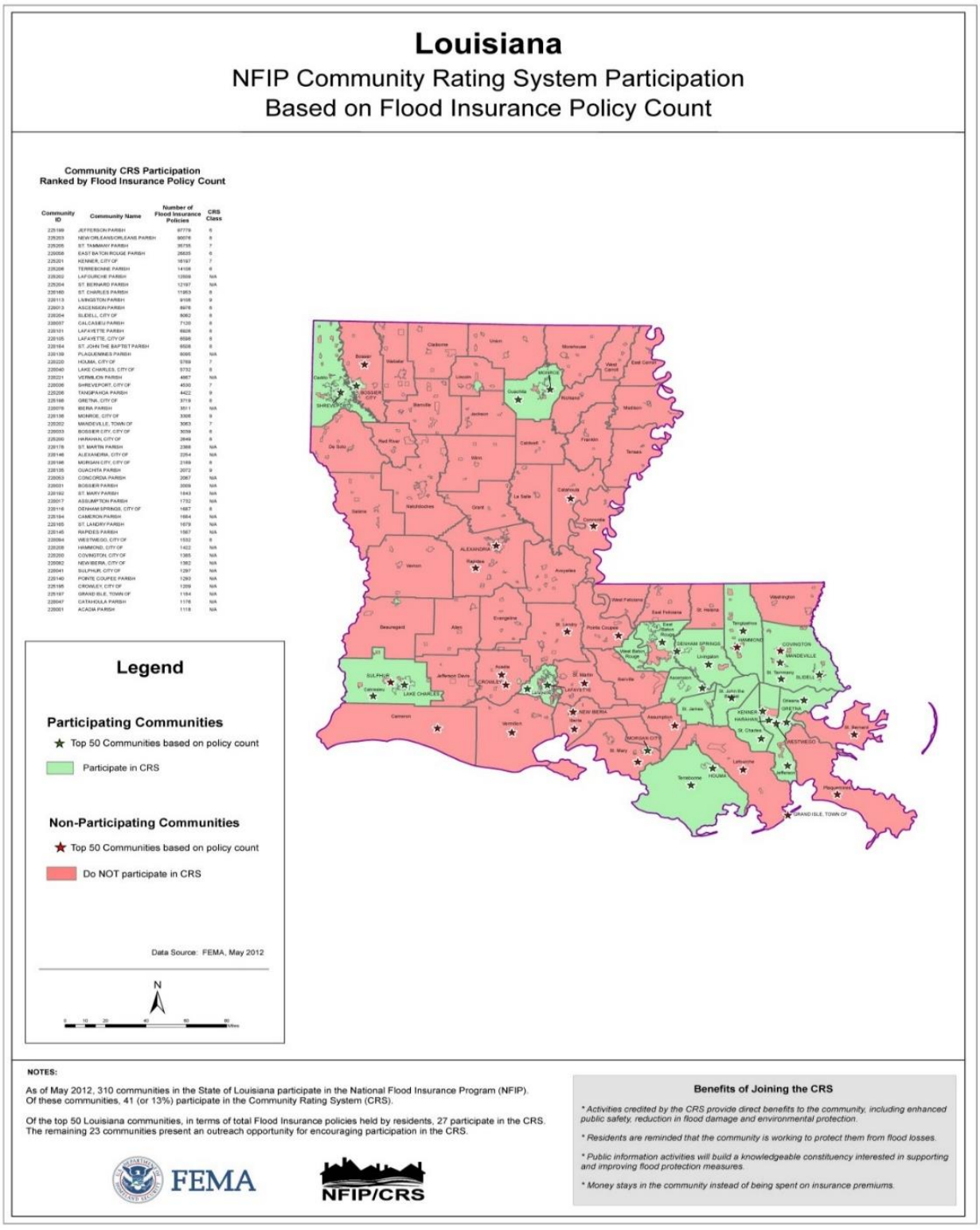

Figure 3-2: Louisiana CRS NFIP Participation
(Source: FEMA[2])

[2] http://www.fema.gov/media-library-data/20130726-2128-31471-9581/ks_ky_la_crs_may_2012_508.zip

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 programs 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 www.fema.gov/nfip/crs.shtm

NFIP Worksheets

Parish and participating jurisdiction NFIP worksheets can be found in Appendix E: State Required Worksheets

4. Mitigation Strategy

Introduction

Acadia Parish's Hazard Mitigation Strategy has a common guiding principle and is the demonstration of the parish's and participating jurisdictions' 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.

Acadia 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 2016 update are a product of analysis and review of the Acadia Parish Hazard Mitigation Plan Steering Committee, under the coordination of the Acadia Parish Office of Homeland Security and Emergency Preparedness. The committee was presented a list of projects and actions, new and from the 2011 plan, for review from September 2015 – March 2016.

An online public opinion survey was conducted of Acadia Parish residents between January and March 2016. The survey was designed to capture public perceptions and opinions regarding natural hazards in Acadia Parish. In addition, the survey sought to collect information regarding the methods and techniques preferred by the respondents for reducing the risks and losses associated with local hazards.

This activity was created in an effort to confirm that the goals and action items developed by the Acadia Parish Hazard Mitigation Plan Steering Committee are representative of the outlook of the community at large. However, because there were no responses to the survey, this public feedback could not be incorporated into the plan. The full Acadia Parish survey can be found at the following link:

https://www.surveymonkey.com/r/AcadiaParish

During the public meeting in March, the committee provided a status of the projects from 2011 and the proposed actions for the 2016 update. Committee members then agreed on the submission of each project based on feasibility for funding, ease of completion and other community specific factors. The actions were later prioritized.

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 Acadia 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, Acadia Parish and its jurisdictions 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 Acadia Parish Hazard Mitigation Plan Update Steering Committee represent long-term commitments by the parish and its jurisdictions. After assessing these goals, the committee decided that the current four goals remain valid.

The goals are as follows:

- Identify and pursue preventative measures that will reduce future damages from hazards
- Enhance public awareness and understanding of disaster preparedness
- Reduce repetitive flood losses in the parish and municipalities
- Facilitate sound development in the parish and municipalities so as to reduce or eliminate the potential impact of hazards

The Mitigation Action Plan focuses on actions to be taken by Acadia Parish and its jurisdictions. All of the activities in the Mitigation Action Plan will be focused on helping the parish and its municipalities 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.

The Hazard Mitigation Plan Steering Committee and each jurisdiction 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.

2016 Mitigation Actions and Update on Previous Plan Actions

The Acadia Parish Hazard Mitigation Plan Steering Committee and participating jurisdictions each identified actions that would reduce and/or prevent future damage within Acadia Parish and their respective communities. In that effort, each jurisdiction focused on a comprehensive range of specific mitigation actions. These actions were identified in thorough fashion by the consultant team, the committee, and the individual jurisdictions by way of frequent and open communications and meetings held throughout the planning process.

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.

The established and agreed upon parish and jurisdiction actions relative to the parish-wide goals are below. Additionally, action updates from the previous plan updates can be found in the first table below.

Acadia Parish 2011 Hazard Mitigation Action Update

Acadia Parish- Unincorporated Areas					
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Responsible Party, Agency, or Department**	**Hazard**	**Status**
A1: Drainage Improvement	Improve drainage ways by adding new drainage pumps with flood gates and enlarging any inferior culverts and replacing any substandard bridges where necessary.	Parish Budget	Parish Engineer and/or Parish Department of Public Works	Hurricanes / Severe Storms (Thunderstorms with Lightning and High Winds) / Floods	Carried Over
A2: Master Drainage Plan	Develop a master drainage plan which will evaluate drainage projects at major drainage laterals to determine the best method of increasing drainage capacity. Implement recommended projects resulting from drainage plans.	Parish and/or Drainage Board Budget	Parish Engineer and/or Parish Department of Public Works	Hurricanes / Severe Storms (Thunderstorms with Lightning and High Winds) / Floods	Carried Over
A3: Critical Facility Hardening	Harden critical facilities by utilizing applicable floodproofing techniques, wind retrofitting and add backup power supply/generators at these locations.	Parish Budget	OHLS/EP Director	Hurricanes / Severe Storms (Thunderstorms with Lightning and High Winds) / Floods / Tornadoes / Winter Storms	Multiple Retrofits Completed; Carried over

Acadia Parish- Unincorporated Areas					
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Responsible Party, Agency, or Department**	**Hazard**	**Status**
A4: Warning System	Install a warning system around the community.	Parish Budget	OHLS/EP Director	Hurricanes / Severe Storms (Thunderstorms with Lightning and High Winds) / Floods / Tornadoes / Winter Storms	Carried Over
A5: Flood Insurance	Promote the purchase of flood insurance. Advertise the availability, cost, and coverage of flood insurance through the National Flood Insurance Program (NFIP).	Parish Budget	Parish Emergency Manager	Hurricanes / Severe Storms (Thunderstorms with Lightning and High Winds) / Floods	Ongoing
A6: Public Awareness	Increase public awareness of hazards and hazardous areas. Distribute public awareness information regarding flood hazards, SFHA's, and potential mitigation measures using the local newspaper, utility bill inserts, inserts in the phone book, and parish hazards awareness website, and an educational program for school age children or "how to" classes in retrofitting by local merchants. Integrate "Disaster Resistance Education" into the public school curriculum. Provide public education on the importance of maintaining the ditches. Implement a public notification system, such as sirens or a call down system with a backup communication system.	Parish Budget, Acadia Funding	Parish School Board and Parish Emergency Manager	Hurricanes / Severe Storms (Thunderstorms with Lightning and High Winds) / Floods / Tornadoes / Winter Storms	Ongoing
A7: American Red Cross Coordination	Continue to seek ways to coordinate with the American Red Cross for educational outreach opportunities.	Parish Budget	Parish Emergency Manager	Hurricanes / Severe Storms (Thunderstorms with Lightning and High Winds) / Floods / Tornadoes / Winter Storms	Ongoing

Acadia Parish- Unincorporated Areas					
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Responsible Party, Agency, or Department**	**Hazard**	**Status**
A8: Multi-Hazard Awareness Week	Sponsor a "Multi-Hazard Awareness Week", to educate the public on tornadoes, severe storms, and hurricanes (sheltering in place, evacuation, emergency preparedness, and structural retrofitting), flooding (evacuation, emergency preparedness, retrofitting, and flood insurance), thunderstorms and lightning (emergency preparedness).	Parish and Town Budgets, Business and Industry	Mayors and Parish Emergency Manager	Hurricanes / Severe Storms (Thunderstorms with Lightning and High Winds) / Floods / Tornadoes / Winter Storms	Ongoing
A9: Repetitive Loss Structure Improvement	Pursue elevation/ acquisition/ floodproofing/ reconstruction projects and structural solutions to flooding using available grant funding for repetitive loss structures and severe repetitive loss structures. Annually review and correct the Repetitive Loss List by submitting correction worksheets to FEMA.	Parish Budget	Floodplain Manager	Hurricanes / Severe Storms (Thunderstorms with Lightning and High Winds) / Floods	Completed
A10: Localized Interior Drainage Projects	Investigate and implement a localized interior drainage projects and reduce flood potential where necessary.	Community Development Block Grant (CDBG), Flood Mitigation Assistance (FMA) Project Funds, Hazard Mitigation Grant Program (HMGP) Funds, Small Business Administration (SBA), U.S. Army Corps of Engineers - Section 205, and State Capital Outlay, Local Drainage Funds	Parish and Town Floodplain Managers / Public Works Director	Hurricanes / Severe Storms (Thunderstorms with Lightning and High Winds) / Floods	Carried Over

Acadia Parish- Unincorporated Areas					
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Responsible Party, Agency, or Department**	**Hazard**	**Status**
A11: Community Rating System	Participate in the "Community Rating system (CRS)" of the NFIP. Inform the public about the CRS program and the fact that it could result in a discount in Flood Insurance Premiums. Review the existing floodplain ordinance and see how it could be augmented to increase CRS potential and further reduce the flood insurance premiums.	Parish Budget	Floodplain Manager	Hurricanes / Severe Storms (Thunderstorms with Lightning and High Winds) / Floods	Ongoing
A12: International Building Codes	Adopt the current International Building Codes by ordinance, which would result in additional techniques to harden structures.	Parish Budget	Parish Police Jury	Hurricanes / Severe Storms (Thunderstorms with Lightning and High Winds) / Floods / Tornadoes / Winter Storms	Ongoing
A13: New Development Regulation	Develop and pass ordinances to help regulate new development in the Parish, such as requiring proper drainage with adequate sloping; stormwater retention ponds; dikes; berms; levees and floodwalls if appropriate, and requiring freeboard above the Base Flood Elevation (BFE) in flood prone areas. Encourage new subdivision developments to install underground utilities, which would help reduce the chances of power outages.	Parish Budget	Planning Director	Hurricanes / Severe Storms (Thunderstorms with Lightning and High Winds) / Floods / Tornadoes / Winter Storms	Ongoing
A14: Safe Room Projects	Construction of safe room at Rayne Public Works Facility, Crowley Public Works Facility, Church Point Public Works Facility to house essential public service/public works employees.	Parish/HMPG	Planning Director	Hurricanes / Severe Storms (Thunderstorms with Lightning and High Winds) / Floods / Tornadoes / Winter Storms	Completed

Unincorporated Acadia New Mitigation Actions

Acadia Unincorporated - New Mitigation Actions							
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Target Completion Date**	**Responsible Party, Agency, or Department**	**Hazard**	**Goal**	**Status**
A1: Building Retrofits	Retrofit public buildings exterior shell to maintain use during and after storm events. Benefits: Reduces damage from high winds, and helps assure that the public buildings can be used, occupied and operable during or after storms.	FEMA HMGP, Local	1-5 years	Acadia Parish OHSEP	High Winds, Hail, Tropical Cyclones, Tornadoes	1,2	New
A2: Drainage Improvement	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation. Benefits: Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.	FEMA HMGP, Local	1-5 years	Acadia Parish OHSEP	Flooding, High Winds, Tropical Cyclones	1,2,3,4	New
A3: Mitigation of repetitive loss and severe repetitive loss properties and other hazard prone structures	Elevation, acquisition-demolition/relocation, and reconstruction of repetitive loss or flooding or other hazard prone properties.	FEMA HMGP, Local	1-5 years	Acadia Parish OHSEP	Flooding, Tropical Cyclones	1,2,3,4	New
A4: Safe Room Projects	Construction of a safe room for first responders located in Acadia Parish. Other locations will be identified based on funding availability.	FEMA HMGP, Local	1-5 years	Acadia Parish OHSEP	Tornadoes, High Winds, Tropical Cyclones	1	New

Acadia Unincorporated - New Mitigation Actions							
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Target Completion Date**	**Responsible Party, Agency, or Department**	**Hazard**	**Goal**	**Status**
A5: Education and Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for flooding, tropical cyclones, tornadoes, thunderstorms (lightning, high wind, hail), drought, and winter storm hazards, as well as providing information on high risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.	FEMA HMGP, Local	1-5 years	Acadia Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes, Thunderstorms (Lightning, High Winds, Hail), Winter Storms, Drought	1,2,3	New
A6: Generators for continuity of operations and government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA HMGP, Local	1-5 years	Acadia Parish OHSEP	Tornadoes, Winter Storms, Tropical Cyclones, Thunderstorms (Lightning, High Wind, Hail)	1	New
A7: Lightning Mitigation	Procurement and Installation of lightning rods and surge protectors for public buildings to preserve life and property	FEMA HMGP, Local	1-5 years	Acadia Parish OHSEP	Lightning	1	New
A8: Warning Systems	Update/upgrade public warning system components throughout Acadia Parish as necessary. Install audible and/or reverse 911 warning system(s)	FEMA HMGP, Local	1-5 years	Acadia Parish OHSEP	Winter Storms, Tornadoes, Tropical Cyclones	1,2	New

Acadia Unincorporated - New Mitigation Actions							
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Target Completion Date**	**Responsible Party, Agency, or Department**	**Hazard**	**Goal**	**Status**
A9: Potable Water	Create redundancy of potable water supply to critical facilities, especially hospitals in Acadia Parish, and provide protection of potable water supply by acquisition/installation of backflow preventers at appropriate critical locations.	FEMA HMGP, Local	1-5 years	Acadia Parish OHSEP	Tropical Cyclones, Thunderstorms (Lightning, High Winds, Hail), Tornadoes	1,2	New
A10: Promote Flood Insurance	Promote the purchase of flood insurance. Advertise the availability, cost, and coverage of flood insurance through the National Flood Insurance Program (NFIP).	FEMA HMGP, Local	1-5 years	Acadia Parish OHSEP	Tropical Cyclones, Flooding	1,2,3,4	New
A11: Drought Ordinances	Adopt ordinances requiring water-saving measures in time of drought.	FEMA HMGP, Local	1-5 Years	Acadia Parish OHSEP	Drought	1,2	New

Town of Church Point - New Mitigation Actions

Town of Church Point							
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Target Completion Date**	**Responsible Party, Agency, or Department**	**Hazard**	**Goal**	**Status**
C1: Building Retrofits	Retrofit public buildings exterior shell to maintain use during and after storm events. Benefits: Reduces damage from high winds, and helps assure that the public buildings can be used, occupied and operable during or after storms.	FEMA HMGP, Local	1-5 years	Town of Church Point Mayor's Office/Acadia Parish OHSEP	High Winds, Hail, Tropical Cyclones, Tornadoes	1,2	New
C2: Drainage Improvement	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation. Benefits: Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.	FEMA HMGP, Local	1-5 years	Town of Church Point Mayor's Office/Acadia Parish OHSEP	Flooding, High Winds, Tropical Cyclones	1,2,3,4	New
C3: Mitigation of repetitive loss and severe repetitive loss properties and other hazard prone structures	Elevation, acquisition-demolition/relocation, and reconstruction of repetitive loss or flooding or other hazard prone properties. .	FEMA HMGP, Local	1-5 years	Town of Church Point Mayor's Office/Acadia Parish OHSEP	Flooding, Tropical Cyclones	1,2,3,4	New
C4: Safe Room Projects	Construction of a safe room for first responders located in Church Point. Other locations will be identified based on funding availability.	FEMA HMGP, Local	1-5 years	Town of Church Point Mayor's Office/Acadia Parish OHSEP	Tornadoes, High Winds, Tropical Cyclones	1	New

Town of Church Point							
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Target Completion Date**	**Responsible Party, Agency, or Department**	**Hazard**	**Goal**	**Status**
C5: Education and Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for flooding, tropical cyclones, tornadoes, thunderstorms (lightning, high winds, hail), drought, and winter storm hazards, as well as providing information on high risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.	FEMA HMGP, Local	1-5 years	Town of Church Point Mayor's Office/Acadia Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes, Thunderstorms (Lightning, High Winds, Hail), Winter Storms, Drought	1,2,3	New
C6: Generators for continuity of operations and government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA HMGP, Local	1-5 years	Town of Church Point Mayor's Office/Acadia Parish OHSEP	Tornadoes, Winter Storms, Tropical Cyclones, Thunderstorms (Lightning, High Winds, Hail)	1	New
C7: Lightning Mitigation	Procurement and Installation of lightning rods and surge protectors for public buildings to preserve life and property	FEMA HMGP, Local	1-5 years	Town of Church Point Mayor's Office/Acadia Parish OHSEP	Lightning	1	New
C8: Warning Systems	Update/upgrade public warning system components throughout Church Point as necessary. Install audible and/or reverse 911 warning system(s)	FEMA HMGP, Local	1-5 years	Town of Church Point Mayor's Office/Acadia Parish OHSEP	Winter Storms, Tornadoes, Tropical Cyclones	1,2	New

Town of Church Point							
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Target Completion Date**	**Responsible Party, Agency, or Department**	**Hazard**	**Goal**	**Status**
C9: Potable Water	Create redundancy of potable water supply to critical facilities, especially hospitals in Parish, and provide protection of potable water supply by acquisition/installation of backflow preventers at appropriate critical locations.	FEMA HMGP, Local	1-5 years	Town of Church Point Mayor's Office/Acadia Parish OHSEP	Tropical Cyclones, Thunderstorms (Lightning, High Winds, Hail), Tornadoes	1,2	New
C10: Promote Flood Insurance	Promote the purchase of flood insurance. Advertise the availability, cost, and coverage of flood insurance through the National Flood Insurance Program (NFIP).	FEMA HMGP, Local	1-5 years	Town of Church Point Mayor's Office/Acadia Parish OHSEP	Tropical Cyclones, Flooding	1,2,3,4	New
C11: Drought Ordinances	Adopt ordinances requiring water-saving measures in time of drought.	FEMA HMGP, Local	1-5 Years	Town of Church Point Mayor's Office/Acadia Parish OHSEP	Drought	1,2	New

City of Crowley – New Mitigation Actions

City of Crowley							
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Target Completion Date**	**Responsible Party, Agency, or Department**	**Hazard**	**Goal**	**Status**
C1: Building Retrofits	Retrofit public buildings exterior shell to maintain use during and after storm events. Benefits: Reduces damage from high winds, and helps assure that the public buildings can be used, occupied and operable during or after storms.	FEMA HMGP, Local	1-5 years	City of Crowley Mayor's Office/Acadia Parish OHSEP	High Winds, Hail, Tropical Cyclones, Tornadoes	1,2	New
C2: Drainage Improvement	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation. Benefits: Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.	FEMA HMGP, Local	1-5 years	City of Crowley Mayor's Office/Acadia Parish OHSEP	Flooding, High Winds, Tropical Cyclones	1,2,3,4	New
C3: Mitigation of repetitive loss and severe repetitive loss properties and other hazard prone structures	Elevation, acquisition-demolition/relocation, and reconstruction of repetitive loss or flooding or other hazard prone properties. .	FEMA HMGP, Local	1-5 years	City of Crowley Mayor's Office/Acadia Parish OHSEP	Flooding, Tropical Cyclones	1,2,3,4	New
C4: Safe Room Projects	Construction of a safe room for first responders located in Crowley. Other locations will be identified based on funding availability.	FEMA HMGP, Local	1-5 years	City of Crowley Mayor's Office/Acadia Parish OHSEP	Tornadoes, High Winds, Tropical Cyclones	1	New

City of Crowley							
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Target Completion Date**	**Responsible Party, Agency, or Department**	**Hazard**	**Goal**	**Status**
C5: Education and Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for flooding, tropical cyclones, tornadoes, thunderstorms (lightning, high wind, hail), drought, and winter storm hazards, as well as providing information on high risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.	FEMA HMGP, Local	1-5 years	City of Crowley Mayor's Office/Acadia Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes, Thunderstorms (Lightning, High Wind, Hail), Winter Storms, Drought	1,2,3	New
C6: Generators for continuity of operations and government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA HMGP, Local	1-5 years	City of Crowley Mayor's Office/Acadia Parish OHSEP	Tornadoes, Winter Storms, Tropical Cyclones, Thunderstorms (Lightning, High Winds, Hail)	1	New
C7: Lightning Mitigation	Procurement and Installation of lightning rods and surge protectors for public buildings to preserve life and property	FEMA HMGP, Local	1-5 years	City of Crowley Mayor's Office/Acadia Parish OHSEP	Lightning	1	New
C8: Warning Systems	Update/upgrade public warning system components throughout Crowley as necessary. Install audible and/or reverse 911 warning system(s)	FEMA HMGP, Local	1-5 years	City of Crowley Mayor's Office/Acadia Parish OHSEP	Winter Storms, Tornadoes, Tropical Cyclones	1,2	New

City of Crowley							
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Target Completion Date**	**Responsible Party, Agency, or Department**	**Hazard**	**Goal**	**Status**
C9: Potable Water	Create redundancy of potable water supply to critical facilities, especially hospitals in Acadia Parish, and provide protection of potable water supply by acquisition/installation of backflow preventers at appropriate critical locations.	FEMA HMGP, Local	1-5 years	City of Crowley Mayor's Office/Acadia Parish OHSEP	Tropical Cyclones, Thunderstorms (Lightning, High Winds, Hail), Tornadoes	1,2	New
C10: Promote Flood Insurance	Promote the purchase of flood insurance. Advertise the availability, cost, and coverage of flood insurance through the National Flood Insurance Program (NFIP).	FEMA HMGP, Local	1-5 years	City of Crowley Mayor's Office/Acadia Parish OHSEP	Tropical Cyclones, Flooding	1,2,3,4	New
C11: Drought Ordinances	Adopt ordinances requiring water-saving measures in time of drought.	FEMA HMGP, Local	1-5 years	City of Crowley Mayor's Office/Acadia Parish OHSEP	Drought	1,2	New

Village of Estherwood - New Mitigation Actions

Village of Estherwood							
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Target Completion Date**	**Responsible Party, Agency, or Department**	**Hazard**	**Goal**	**Status**
E1: Building Retrofits	Retrofit public buildings exterior shell to maintain use during and after storm events. Benefits: Reduces damage from high winds, and helps assure that the public buildings can be used, occupied and operable during or after storms.	FEMA HMGP, Local	1-5 years	Village of Estherwood Mayor's Office/Acadia Parish OHSEP	High Winds, Hail, Tropical Cyclones, Tornadoes	1,2	New
E2: Drainage Improvement	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation. Benefits: Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.	FEMA HMGP, Local	1-5 years	Village of Estherwood Mayor's Office/Acadia Parish OHSEP	Flooding, High Winds, Tropical Cyclones	1,2,3,4	New
E3: Mitigation of repetitive loss and severe repetitive loss properties and other hazard prone structures	Elevation, acquisition-demolition/relocation, and reconstruction of repetitive loss or flooding or other hazard prone properties. .	FEMA HMGP, Local	1-5 years	Village of Estherwood Mayor's Office/Acadia Parish OHSEP	Flooding, Tropical Cyclones	1,2,3,4	New
E4: Safe Room Projects	Construction of a safe room for first responders located in Estherwood. Other locations will be identified based on funding availability.	FEMA HMGP, Local	1-5 years	Village of Estherwood Mayor's Office/Acadia Parish OHSEP	Tornadoes, High Winds, Tropical Cyclones	1	New

Village of Estherwood							
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Target Completion Date**	**Responsible Party, Agency, or Department**	**Hazard**	**Goal**	**Status**
E5: Education and Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for flooding, tropical cyclones, tornadoes, thunderstorms (lightning, high wind, hail), drought, and winter storm hazards, as well as providing information on high risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.	FEMA HMGP, Local	1-5 years	Village of Estherwood Mayor's Office/Acadia Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes, Thunderstorms (Lightning, High Winds, Hail), Winter Storms, Drought	1,2,3	New
E6: Generators for continuity of operations and government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA HMGP, Local	1-5 years	Village of Estherwood Mayor's Office/Acadia Parish OHSEP	Tornadoes, Winter Storms, Tropical Cyclones, Thunderstorms (Lightning, High Winds, Hail)	1	New
E7: Lightning Mitigation	Procurement and Installation of lightning rods and surge protectors for public buildings to preserve life and property	FEMA HMGP, Local	1-5 years	Village of Estherwood Mayor's Office/Acadia Parish OHSEP	Lightning	1	New
E8: Warning Systems	Update/upgrade public warning system components throughout Estherwood as necessary. Install audible and/or reverse 911 warning system(s)	FEMA HMGP, Local	1-5 years	Village of Estherwood Mayor's Office/Acadia Parish OHSEP	Winter Storms, Tornadoes, Tropical Cyclones	1,2	New

Village of Estherwood							
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Target Completion Date**	**Responsible Party, Agency, or Department**	**Hazard**	**Goal**	**Status**
E9: Potable Water	Create redundancy of potable water supply to critical facilities, especially hospitals in Parish, and provide protection of potable water supply by acquisition/installation of backflow preventers at appropriate critical locations.	FEMA HMGP, Local	1-5 years	Village of Estherwood Mayor's Office/Acadia Parish OHSEP	Tropical Cyclones, Thunderstorms (Lightning, High Winds, Hail), Tornadoes	1,2	New
E10: Promote Flood Insurance	Promote the purchase of flood insurance. Advertise the availability, cost, and coverage of flood insurance through the National Flood Insurance Program (NFIP).	FEMA HMGP, Local	1-5 years	Village of Estherwood Mayor's Office/Acadia Parish OHSEP	Tropical Cyclones, Flooding	1,2,3,4	New
E11: Drought Ordinances	Adopt ordinances requiring water-saving measures in time of drought.	FEMA HMGP, Local	1-5 years	Village of Estherwood Mayor's Office/Acadia Parish OHSEP	Drought	1,2	New

Town of Iota – New Mitigation Actions

Town of Iota							
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Target Completion Date**	**Responsible Party, Agency, or Department**	**Hazard**	**Goal**	**Status**
I1: Building Retrofits	Retrofit public buildings exterior shell to maintain use during and after storm events. Benefits: Reduces damage from high winds, and helps assure that the public buildings can be used, occupied and operable during or after storms.	FEMA HMGP, Local	1-5 years	Town of Iota Mayor's Office/Acadia Parish OHSEP	High Winds, Hail, Tropical Cyclones, Tornadoes	1,2	New
I2: Drainage Improvement	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation. Benefits: Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.	FEMA HMGP, Local	1-5 years	Town of Iota Mayor's Office/Acadia Parish OHSEP	Flooding, High Winds, Tropical Cyclones	1,2,3,4	New
I3: Mitigation of repetitive loss and severe repetitive loss properties and other hazard prone structures	Elevation, acquisition-demolition/relocation, and reconstruction of repetitive loss or flooding or other hazard prone properties. .	FEMA HMGP, Local	1-5 years	Town of Iota Mayor's Office/Acadia Parish OHSEP	Flooding, Tropical Cyclones	1,2,3,4	New
I4: Safe Room Projects	Construction of a safe room for first responders located in Iota. Other locations will be identified based on funding availability.	FEMA HMGP, Local	1-5 years	Town of Iota Mayor's Office/Acadia Parish OHSEP	Tornadoes, High Winds, Tropical Cyclones	1	New

Town of Iota							
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Target Completion Date**	**Responsible Party, Agency, or Department**	**Hazard**	**Goal**	**Status**
I5: Education and Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for flooding, tropical cyclones, tornadoes, thunderstorms (lightning, high wind, hail), drought, and winter storm hazards, as well as providing information on high risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.	FEMA HMGP, Local	1-5 years	Town of Iota Mayor's Office/Acadia Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes, Thunderstorms (Lightning, High Winds, Hail), Winter Storms, Drought	1,2,3	New
I6: Generators for continuity of operations and government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA HMGP, Local	1-5 years	Town of Iota Mayor's Office/Acadia Parish OHSEP	Tornadoes, Winter Storms, Tropical Cyclones, Thunderstorms (Lightning, High Winds, Hail)	1	New
I7: Lightning Mitigation	Procurement and Installation of lightning rods and surge protectors for public buildings to preserve life and property	FEMA HMGP, Local	1-5 years	Town of Iota Mayor's Office/Acadia Parish OHSEP	Lightning	1	New
I8: Warning Systems	Update/upgrade public warning system components throughout Iota as necessary. Install audible and/or reverse 911 warning system(s)	FEMA HMGP, Local	1-5 years	Town of Iota Mayor's Office/Acadia Parish OHSEP	Winter Storms, Tornadoes, Tropical Cyclones	1,2	New

Town of Iota							
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Target Completion Date**	**Responsible Party, Agency, or Department**	**Hazard**	**Goal**	**Status**
I9: Potable Water	Create redundancy of potable water supply to critical facilities, especially hospitals in Parish, and provide protection of potable water supply by acquisition/installation of backflow preventers at appropriate critical locations.	FEMA HMGP, Local	1-5 years	Town of Iota Mayor's Office/Acadia Parish OHSEP	Tropical Cyclones, Thunderstorms (Lightning, High Winds, Hail), Tornadoes	1,2	New
I10: Promote Flood Insurance	Promote the purchase of flood insurance. Advertise the availability, cost, and coverage of flood insurance through the National Flood Insurance Program (NFIP).	FEMA HMGP, Local	1-5 years	Town of Iota Mayor's Office/Acadia Parish OHSEP	Tropical Cyclones, Flooding	1,2,3,4	New
I11: Drought Ordinances	Adopt ordinances requiring water-saving measures in time of drought.	FEMA HMGP, Local	1-5 years	Town of Iota Mayor's Office/Acadia Parish OHSEP	Drought	1,2	New

Village of Mermentau – New Mitigation Actions

Village of Mermentau							
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Target Completion Date**	**Responsible Party, Agency, or Department**	**Hazard**	**Goal**	**Status**
M1: Building Retrofits	Retrofit public buildings exterior shell to maintain use during and after storm events. Benefits: Reduces damage from high winds, and helps assure that the public buildings can be used, occupied and operable during or after storms.	FEMA HMGP, Local	1-5 years	Village of Mermentau Mayor's Office/Acadia Parish OHSEP	High Winds, Hail, Tropical Cyclones, Tornadoes	1,2	New
M2: Drainage Improvement	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation. Benefits: Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.	FEMA HMGP, Local	1-5 years	Village of Mermentau Mayor's Office/Acadia Parish OHSEP	Flooding, High Winds, Tropical Cyclones	1,2,3,4	New
M3: Mitigation of repetitive loss and severe repetitive loss properties and other hazard prone structures	Elevation, acquisition-demolition/relocation, and reconstruction of repetitive loss or flooding or other hazard prone properties. .	FEMA HMGP, Local	1-5 years	Village of Mermentau Mayor's Office/Acadia Parish OHSEP	Flooding, Tropical Cyclones	1,2,3,4	New
M4: Safe Room Projects	Construction of a safe room for first responders located in Mermentau. Other locations will be identified based on funding availability.	FEMA HMGP, Local	1-5 years	Village of Mermentau Mayor's Office/Acadia Parish OHSEP	Tornadoes, High Winds, Tropical Cyclones	1	New

Village of Mermentau							
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Target Completion Date**	**Responsible Party, Agency, or Department**	**Hazard**	**Goal**	**Status**
M5: Education and Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for flooding, tropical cyclones, tornadoes, thunderstorms (lightning, high wind, hail), drought, and winter storm hazards, as well as providing information on high risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.	FEMA HMGP, Local	1-5 years	Village of Mermentau Mayor's Office/Acadia Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes, Thunderstorms (Lightning, High Winds, Hail), Winter Storms, Drought	1,2,3	New
M6: Generators for continuity of operations and government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA HMGP, Local	1-5 years	Village of Mermentau Mayor's Office/Acadia Parish OHSEP	Tornadoes, Winter Storms, Tropical Cyclones, Thunderstorms (Lightning, High Winds, Hail)	1	New
M7: Lightning Mitigation	Procurement and Installation of lightning rods and surge protectors for public buildings to preserve life and property	FEMA HMGP, Local	1-5 years	Village of Mermentau Mayor's Office/Acadia Parish OHSEP	Lightning	1	New
M8: Warning Systems	Update/upgrade public warning system components throughout Mermentau as necessary. Install audible and/or reverse 911 warning system(s)	FEMA HMGP, Local	1-5 years	Village of Mermentau Mayor's Office/Acadia Parish OHSEP	Winter Storms, Tornadoes, Tropical Cyclones	1,2	New

Village of Mermentau							
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Target Completion Date**	**Responsible Party, Agency, or Department**	**Hazard**	**Goal**	**Status**
M9: Potable Water	Create redundancy of potable water supply to critical facilities, especially hospitals in Parish, and provide protection of potable water supply by acquisition/installation of backflow preventers at appropriate critical locations.	FEMA HMGP, Local	1-5 years	Village of Mermentau Mayor's Office/Acadia Parish OHSEP	Tropical Cyclones, Thunderstorms (Lightning, High Winds, Hail), Tornadoes	1,2	New
M10: Promote Flood Insurance	Promote the purchase of flood insurance. Advertise the availability, cost, and coverage of flood insurance through the National Flood Insurance Program (NFIP).	FEMA HMGP, Local	1-5 years	Village of Mermentau Mayor's Office/Acadia Parish OHSEP	Tropical Cyclones, Flooding	1,2,3,4	New
M11: Drought Ordinances	Adopt ordinances requiring water-saving measures in time of drought.	FEMA HMGP, Local	1-5 years	Village of Mermentau Mayor's Office/Acadia Parish OHSEP	Drought	1,2	New

Village of Morse – New Mitigation Actions

Town of Morse							
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Target Completion Date**	**Responsible Party, Agency, or Department**	**Hazard**	**Goal**	**Status**
M1: Building Retrofits	Retrofit public buildings exterior shell to maintain use during and after storm events. Benefits: Reduces damage from high winds, and helps assure that the public buildings can be used, occupied and operable during or after storms.	FEMA HMGP, Local	1-5 years	Town of Morse/Acadia Parish OHSEP	High Winds, Hail, Tropical Cyclones, Tornadoes	1,2	New
M2: Drainage Improvement	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation. Benefits: Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.	FEMA HMGP, Local	1-5 years	Town of Morse/Acadia Parish OHSEP	Flooding, High Winds, Tropical Cyclones	1,2,3,4	New
M3: Mitigation of repetitive loss and severe repetitive loss properties and other hazard prone structures	Elevation, acquisition-demolition/relocation, and reconstruction of repetitive loss or flooding or other hazard prone properties. .	FEMA HMGP, Local	1-5 years	Town of Morse/Acadia Parish OHSEP	Flooding, Tropical Cyclones	1,2,3,4	New
M4: Safe Room Projects	Construction of a safe room for first responders located in Morse. Other locations will be identified based on funding availability.	FEMA HMGP, Local	1-5 years	Town of Morse/Acadia Parish OHSEP	Tornadoes, High Winds, Tropical Cyclones	1	New

Town of Morse							
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Target Completion Date**	**Responsible Party, Agency, or Department**	**Hazard**	**Goal**	**Status**
M5: Education and Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for flooding, tropical cyclones, tornadoes, thunderstorms (lightning, high wind, hail), drought, and winter storm hazards, as well as providing information on high risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.	FEMA HMGP, Local	1-5 years	Town of Morse/Acadia Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes, Thunderstorms (Lightning, High Winds, Hail), Winter Storms, Drought	1,2,3	New
M6: Generators for continuity of operations and government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA HMGP, Local	1-5 years	Town of Morse/Acadia Parish OHSEP	Tornadoes, Winter Storms, Tropical Cyclones, Thunderstorms (Lightning, High Winds, Hail)	1	New
M7: Lightning Mitigation	Procurement and Installation of Lightning rods and surge protectors for public buildings to preserve life and property	FEMA HMGP, Local	1-5 years	Town of Morse/Acadia Parish OHSEP	Lightning	1	New
M8: Warning Systems	Update/upgrade public warning system components throughout Morse as necessary. Install audible and/or reverse 911 warning system(s)	FEMA HMGP, Local	1-5 years	Town of Morse/Acadia Parish OHSEP	Winter Storms, Tornadoes, Tropical Cyclones	1,2	New

Town of Morse							
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Target Completion Date**	**Responsible Party, Agency, or Department**	**Hazard**	**Goal**	**Status**
M9: Potable Water	Create redundancy of potable water supply to critical facilities, especially hospitals in Parish, and provide protection of potable water supply by acquisition/installation of backflow preventers at appropriate critical locations.	FEMA HMGP, Local	1-5 years	Town of Morse/Acadia Parish OHSEP	Tropical Cyclones, Thunderstorms (Lightning, High Winds, Hail), Tornadoes	1,2	New
M10: Promote Flood Insurance	Promote the purchase of flood insurance. Advertise the availability, cost, and coverage of flood insurance through the National Flood Insurance Program (NFIP).	FEMA HMGP, Local	1-5 years	Town of Morse/Acadia Parish OHSEP	Tropical Cyclones, Flooding	1,2,3,4	New
M11: Drought Ordinances	Adopt ordinances requiring water-saving measures in time of drought.	FEMA HMGP, Local	1-5 years	Town of Morse/Acadia Parish OHSEP	Drought	1,2	New

City of Rayne – New Mitigation Actions

City of Rayne							
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Target Completion Date**	**Responsible Party, Agency, or Department**	**Hazard**	**Goal**	**Status**
R1: Building Retrofits	Retrofit public buildings exterior shell to maintain use during and after storm events. Benefits: Reduces damage from high winds, and helps assure that the public buildings can be used, occupied and operable during or after storms.	FEMA HMGP, Local	1-5 years	City of Rayne/Acadia Parish OHSEP	High Winds, Hail, Tropical Cyclones, Tornadoes	1,2	New
R2: Drainage Improvement	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation. Benefits: Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.	FEMA HMGP, Local	1-5 years	City of Rayne/Acadia Parish OHSEP	Flooding, High Winds, Tropical Cyclones	1,2,3,4	New
R3: Mitigation of repetitive loss and severe repetitive loss properties and other hazard prone structures	Elevation, acquisition-demolition/relocation, and reconstruction of repetitive loss or flooding or other hazard prone properties. .	FEMA HMGP, Local	1-5 years	City of Rayne/Acadia Parish OHSEP	Flooding, Tropical Cyclones	1,2,3,4	New
R4: Safe Room Projects	Construction of a safe room for first responders located in Rayne. Other locations will be identified based on funding availability.	FEMA HMGP, Local	1-5 years	City of Rayne/Acadia Parish OHSEP	Tornadoes, High Winds, Tropical Cyclones	1	New

City of Rayne							
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Target Completion Date**	**Responsible Party, Agency, or Department**	**Hazard**	**Goal**	**Status**
R5: Education and Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for flooding, tropical cyclones, tornadoes, thunderstorms (lightning, high wind, hail), drought, and winter storm hazards, as well as providing information on high risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.	FEMA HMGP, Local	1-5 years	City of Rayne/Acadia Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes, Thunderstorms (Lightning, High Winds, Hail), Winter Storms, Drought	1,2,3	New
R6: Generators for continuity of operations and government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA HMGP, Local	1-5 years	City of Rayne/Acadia Parish OHSEP	Tornadoes, Winter Storms, Tropical Cyclones, Thunderstorms (Lightning, High Winds, Hail)	1	New
R7:Lightning Mitigation	Procurement and Installation of lightning rods and surge protectors for public buildings to preserve life and property	FEMA HMGP, Local	1-5 years	City of Rayne/Acadia Parish OHSEP	Lightning	1	New
R8: Warning Systems	Update/upgrade public warning system components throughout Rayne as necessary. Install audible and/or reverse 911 warning system(s)	FEMA HMGP, Local	1-5 years	City of Rayne/Acadia Parish OHSEP	Winter Storms, Tornadoes, Tropical Cyclones	1,2	New

City of Rayne							
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Target Completion Date**	**Responsible Party, Agency, or Department**	**Hazard**	**Goal**	**Status**
R9: Potable Water	Create redundancy of potable water supply to critical facilities, especially hospitals in Parish, and provide protection of potable water supply by acquisition/installation of backflow preventers at appropriate critical locations.	FEMA HMGP, Local	1-5 years	City of Rayne/Acadia Parish OHSEP	Tropical Cyclones, Thunderstorms (Lightning, High Winds, Hail), Tornadoes	1,2	New
R10: Promote Flood Insurance	Promote the purchase of flood insurance. Advertise the availability, cost, and coverage of flood insurance through the National Flood Insurance Program (NFIP).	FEMA HMGP, Local	1-5 years	City of Rayne/Acadia Parish OHSEP	Tropical Cyclones, Flooding	1,2,3,4	New
R11: Drought Ordinances	Adopt ordinances requiring water-saving measures in time of drought.	FEMA HMGP, Local	1-5 years	City of Rayne/Acadia Parish OHSEP	Drought	1,2	New

Action Prioritization

During the prioritization process, each jurisdiction and 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, many projects were prioritized with these factors in mind.

In all cases, the jurisdictions 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 met internally for mitigation action meetings to review and approve Acadia Parish and the jurisdiction's mitigation actions. On-going actions, as well as actions which can be undertaken by existing parish or local staff without need for additional funding, were given high priority. The actions with high benefit and low cost, political support, and public support but require additional funding from parish or external sources were given medium priority. The actions that require substantial funding from external sources with relatively longer completion time were given low priority. There have been no changes in financial, legal, and political priorities within the past 5 years, with the methodology and prioritization process remaining the same.

Acadia Parish and the participating jurisdictions will implement and administer the identified actions based off the proposed timeframes and priorities for each reflected in the portions of this section where actions are summarized. The inclusion of any specific action item in this document does not commit the parish to implementation. Each action item will be subject to availability of staff and funding. Certain items may require regulatory changes or other decisions that must be implemented through standard processes, such as changing regulations. This plan is intended to offer priorities based on an examination of hazards.

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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 HMGP's hazard mitigation planning process per the FEMA HMGP 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 Acadia Parish Hazard Mitigation Plan Update

The Acadia Parish Hazard Mitigation Plan Update process began in August 2015 with a series of meetings and collaborations between the contractor (SDMI) and the participating jurisdictions. Update activities were intended to give each jurisdiction 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.

Acadia Parish includes seven incorporated municipalities, as well as the unincorporated area, that participated in the plan update process – the Town of Church Point, City of Crowley, Village of Estherwood, Town of Iota, Village of Mermentau, Town of Morse, and City of Rayne. Acadia Parish Office of Homeland Security and Emergency Preparedness (OHSEP) invited communities' representatives to meetings, where they supplied critical infrastructure data and reviewed work-in-progress for the plan update.

Similar to the development of the original Hazard Mitigation Plan, the role of the steering committee members during the plan update was to attend the planning meetings and provide valuable information on the parish, develop parts of the plan update, and review the results of research conducted by SDMI. Tasks completed by the steering committee include:

- Reviewing and revising the list of potential hazards included in the plan update
- Assembling a list of critical facilities, such as hospitals, police stations, and shelters
- Updating mitigation goals and objectives
- Determining prudent mitigation measures
- Prioritization of identified mitigation measures

The table below details the meeting schedule and purpose for the planning process:

Date	Meeting or Outreach	Location	Public Invited	Purpose
8/4/2015	Initial Coordination	Telephone/ Email	No	Discuss with Parish HM coordinator and any Steering Committee members expectations and requirements of the project.
9/22/2015	Kick-Off Meeting	Acadia Parish OHSEP, Crowley, LA	No	Discuss with the plan steering committee expectations and requirements of the project. Assign plan worksheets to jurisdictions.
3/8/2016	Risk Assessment Overview	Acadia Parish OHSEP, Crowley, LA	No	Discuss and review the risk assessment with the steering committee discuss and review expectations for public meeting.
3/8/2016	Public Meeting	Acadia Parish OHSEP, Crowley, 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 Acadia Parish communities were provide 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 Acadia Parish. In addition, we asked about the methods and techniques preferred for reducing the risks and losses associated with these hazards. https://www.surveymonkey.com/r/AcadiaParish
2 Week Period	Public Plan Review (Digital)		Yes	SDMI Louisiana Hazard Mitigation Website and Acadia Parish OHSEP

Planning

The plan update process consisted of several phases

Phase	Month 1	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9
Plan Revision								
Data Collection								
Risk Assessment								
Public Input								
Mitigation Strategy and Actions								
Plan Review by GOHSEP and FEMA HMGP								
Plan Adoption								
Plan Approval								

Coordination

The Acadia Parish OHSEP oversaw the coordination of the 2016 Hazard Mitigation Plan Update Steering Committee during the update process. The Acadia Parish OHSEP and participating jurisdictions were 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 by email invitations and calendar invites. SDMI assisted the Parish Director with meeting notices, website 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 Hazard Mitigation Team encouraged participation from a broad range of jurisdictional 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
- Local action item development
- Plan document draft review
- Formal adoption of the Hazard Mitigation Plan document by each jurisdiction following provisional approval by The State of Louisiana and FEMA HMGP

The 2016 Hazard Mitigation Plan Update Steering Committee consisted of representatives from the following parish, municipal, or community stakeholders:

- Acadia Parish Government
- Acadia Office of Homeland Security and Emergency Preparedness
- Town of Church Point
- City of Crowley
- Village of Estherwood
- Town of Iota
- Village of Mermentau
- Village of Morse
- City of Rayne

The Parishes of Evangeline and Vermillion were invited by the Acadia Parish OHSEP via email invitations to participate in all meetings and activities as well in an effort to collaborate with neighboring communities. In addition, the participation of the GOHSEP Region 4 Coordinator during the process also contributed to neighboring community representation.

As part of the coordination and planning process, each jurisdiction was provided the State Required Hazard Mitigation Plan Update Worksheet. Jurisdictions with the capability to complete and return these worksheets returned them to assist with the 2016 update. The completed worksheets can be found in Appendix E – State Required Plan Update Worksheets.

Below is a detailed list of the 2016 Hazard Mitigation Plan Update Steering Committee:

Member/Title	Jurisdiction/Entity	Address	Phone/Email
Lee Hebert **Director**	Acadia Parish OHSEP	568 Northeast Court Circle Crowley, LA 70526	337-783-4357 lee@apso.org
Russell Stelly **Mayor**	Town of Church Point	102 Church Blvd. Church Point, LA 70527	337-684-5692 mayor@churchpoint-LA.com
Gregory Jones **Mayor**	City of Crowley	P.O. Box 1463 Crowley, LA 70527	337-783-0824 mayor@crowley-LA.com
Anthony Borill **Mayor**	Village of Estherwood	P.O. Box 167 Estherwood, LA 70534	337-783-4063 esth_vil@bellsouth.net
Julie Granger **Mayor**	Town of Iota	P.O. Box 890 Iota, LA 70543	337-779-2597 townofiota@centurytel.net
Darla Istre **Mayor**	Village of Mermentau	P.O. Box 1 Mermentau, LA 70556	337-824-8466 villageofmermentau@gmail.com
Michael Chaisson **Mayor**	Village of Morse	P.O. Box 750 Morse, LA 70559	337-783-7555 Morse_70559@yahoo.com
Charles Robicheaux **Mayor**	City of Rayne	P.O. Box 69 Rayne, LA 70578	337-334-3121 mayor@rayne.org
Richard Latiolais **Sec./Tres.**	Acadia Parish Police Jury	P.O. Box A Crowley, LA 70527	337-788-8800 rlatiolais@appj.org
Elizabeth Myers **Assistant**	Acadia Parish OHSEP	568 Northeast Court Circle Crowley, LA 70526	337-783-4357 emyers@appj.org
Becky Broussard **Director**	Vermilion Parish OHSEP	100 North State St. Suite 211, Abbeville, LA 70510	337-898-4308 vpoep@cox-internet.com
Liz Hill **Director**	Evangeline Parish OHSEP	415 West Cotton St, Ville Platte, LA 70586	337-363-3267 Vangy911@centurytel.net

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 Acadia Parish programs and planning.

A measure of integration and coordination is achieved through the Hazard Mitigation Plan participation of steering committee members and community stakeholders, who administer programs such as floodplain management under the National Flood Insurance Program (NFIP) and parish planning and zoning and building code enforcement.

Opportunities to integrate the requirements of this Hazard Mitigation Plan into other local planning mechanisms will continue to be identified through future meetings of the parish and jurisdictions, 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 each jurisdiction's 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 Acadia Parish Hazard Mitigation 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 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 HMGP, the U.S. Army Corps of Engineers (USACE or Corps), 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 2011 Hazard Mitigation Plan was also used in the planning process. Other existing parish and jurisdiction data and plans reviewed and/or incorporated into the planning process include those listed below:

- Emergency Operations Plans
- State of Louisiana Hazard Mitigation Plan
- Flood Insurance Rate Maps

Further information on other plans and capabilities reviewed can be found in the Capabilities Assessment, Section 3.

Meeting Documentation and Public Outreach Activities

The following pages contain information from the meetings and public outreach activities conducted during this Hazard Mitigation Plan Update for Acadia Parish.

Meeting #1: Initial Coordination Meeting

Date: August 4, 2015

Location: Email and follow up phone conference

Purpose: Discuss with the Hazard Mitigation Lead for the parish (OHSEP Director) the expectations and requirements of the Hazard Mitigation Plan Update process and to establish and initial project timeline.

Public Initiation: No

Invitees Included: Acadia Parish OHSEP, SDMI Staff

Meeting #2: Hazard Mitigation Plan Update Kick-Off

Date: September 22, 2015

Location: Crowley, LA

Purpose: Discuss the expectations and requirements of the Hazard Mitigation Plan Update process and to establish and initial project timeline with the parish's Hazard Mitigation Plan Steering Committee. Assign each individual jurisdiction and the parish data collection for the plan update.

Public Initiation: No

Invitees Included:

Member/Title	Jurisdiction/Entity	Address	Phone/Email
Lee Hebert **Director**	Acadia Parish OHSEP	568 Northeast Court Circle Crowley, LA 70526	337-783-4357 lee@apso.org
Russell Stelly **Mayor**	Town of Church Point	102 Church Blvd. Church Point, LA 70527	337-684-5692 mayor@churchpoint-LA.com
Gregory Jones **Mayor**	City of Crowley	P.O. Box 1463 Crowley, LA 70527	337-783-0824 mayor@crowley-LA.com
Anthony Borill **Mayor**	Village of Estherwood	P.O. Box 167 Estherwood, LA 70534	337-783-4063 esth_vil@bellsouth.net
Julie Granger **Mayor**	Town of Iota	P.O. Box 890 Iota, LA 70543	337-779-2597 townofiota@centurytel.net
Darla Istre **Mayor**	Village of Mermentau	P.O. Box 1 Mermentau, LA 70556	337-824-8466 villageofmermentau@gmail.com
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Richard Latiolais **Sec./Tres.**	Acadia Parish Police Jury	P.O. Box A Crowley, LA 70527	337-788-8800 rlatiolais@appj.org
Elizabeth Myers **Assistant**	Acadia Parish OHSEP	568 Northeast Court Circle Crowley, LA 70526	337-783-4357 emyers@appj.org
Becky Broussard **Director**	Vermilion Parish OHSEP	100 North State St. Suite 211, Abbeville, LA 70510	337-898-4308 vpoep@cox-internet.com
Liz Hill **Director**	Evangeline Parish OHSEP	415 West Cotton St, Ville Platte, LA 70586	337-363-3267 Vangy911@centurytel.net

Meeting #3: Risk Assessment Overview

Date: March 8, 2016

Location: Crowley, LA

Purpose: Members of the Hazard Mitigation Plan Update Steering Committee were invited and were presented the results of the most recent risk assessment and an overview of the public meeting presentation during this overview. The assessment was conducted based on hazards identified during previous plans.

Public Initiation: No

Invitees Included:

Member/Title	Jurisdiction/Entity	Address	Phone/Email
Lee Hebert **Director**	Acadia Parish OHSEP	568 Northeast Court Circle Crowley, LA 70526	337-783-4357 lee@apso.org
Russell Stelly **Mayor**	Town of Church Point	102 Church Blvd. Church Point, LA 70527	337-684-5692 mayor@churchpoint-LA.com
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Michael Chaisson **Mayor**	Village of Morse	P.O. Box 750 Morse, LA 70559	337-783-7555 Morse_70559@yahoo.com
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Liz Hill **Director**	Evangeline Parish OHSEP	415 West Cotton St, Ville Platte, LA 70586	337-363-3267 Vangy911@centurytel.net

Meeting #4: Public Meeting

Date: March 8, 2016

Location: Crowley, LA

Purpose: The public meeting allowed the public and community stakeholders to participate and provide input into the hazard mitigation planning process. Maps of the Acadia Parish communities were provided for the meeting attendees to identify specific areas where localized hazards occur.

Public Initiation: Yes

Invitees Included:

Member/Title	Jurisdiction/Entity	Address	Phone/Email
Lee Hebert **Director**	Acadia Parish OHSEP	568 Northeast Court Circle Crowley, LA 70526	337-783-4357 lee@apso.org
Russell Stelly **Mayor**	Town of Church Point	102 Church Blvd. Church Point, LA 70527	337-684-5692 mayor@churchpoint-LA.com
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Michael Chaisson **Mayor**	Village of Morse	P.O. Box 750 Morse, LA 70559	337-783-7555 Morse_70559@yahoo.com
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Liz Hill **Director**	Evangeline Parish OHSEP	415 West Cotton St, Ville Platte, LA 70586	337-363-3267 Vangy911@centurytel.net

****Subject Matter Experts from parish government were present to answer specific questions about proposed projects from any citizens****

Meeting Public Notice

ACADIA PARISH OFFICE OF HOMELAND SECURITY & EMERGENCY PREPAREDNESS

MEETING NOTICE – March 8th, 2016

Acadia Parish to hold Public Meetings for Hazard Mitigation Plan Update

Crowley, LA – Acadia Parish Office of Homeland Security & Emergency Preparedness is in the process of updating the Acadia Parish Hazard Mitigation Plan and are required to hold public meetings on the plan update. The Public meeting will be held on March 8, 2016 in the Acadia OHSEP EOC Meeting Room located at 568 N. E. Court Circle Crowley, LA 70578 from 10:30AM to 11:30AM.

Natural hazards have the potential to cause property loss, loss of life, economic hardship, and threats to public health and safety. While an important aspect of emergency management deals with disaster recovery (the actions that a community takes to repair damages), an equally important aspect of emergency management involves hazard mitigation - sustained actions taken to reduce long-term risk to life and property. They are things we do today to be more protected in the future. For example, elevating buildings in flood hazard areas, installing hurricane clips and storm shutters, relocating critical facilities out of hazard areas, using fire-resistant construction materials in wildfire hazard areas, etc. Hazard mitigation actions are essential to breaking the typical disaster cycle of damage, reconstruction, and repeated damage. With careful selection, they can be long-term, cost-effective means of reducing risk and helping to create a more sustainable and disaster-resilient community.

A hazard mitigation plan describes an area's vulnerability to the various natural hazards that are typically present, along with an array of actions and projects for reducing key risks. While natural disasters cannot be prevented from occurring, the continued implementation of mitigation strategies identified in the plan will gradually, but steadily, make our communities more sustainable and disaster-resilient.

The Disaster Mitigation Act of 2000 (DMA 2000) requires all states and local governments to have a hazard mitigation plan in order to be eligible to apply for certain types of federal hazard mitigation project grants. Hazard mitigation plans must be: (a) implemented on an ongoing basis, and (b) updated every five years to ensure that they remain applicable representations of local risk and locally-preferred risk reduction strategies.

Acadia Parish is in the beginning stages of updating its hazard mitigation plan. Public meeting will be held on March 8th for all citizens interested in learning about and participating in discussions concerning the Acadia Parish Hazard Mitigation Plan.

Residents of Acadia 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 https://www.surveymonkey.com/r/AcadiaParish

For more information, please contact: Lee Hebert, Acadia Parish OHSEP Director

Stephenson Disaster Management Institute
Louisiana State University • 3000 Business Education Complex • Baton Rouge, Louisiana 70803

Outreach Activity #1: Public Opinion Survey

Date: Ongoing throughout planning process
Location: Web Survey
Public Initiation: Yes

Outreach Activity #2: Incident Questionnaire

Date: Public Meeting Activity
Location: Public Meeting
Public Initiation: Yes

Outreach Activity #3: Mapping Activities

Public meeting attendees were asked to identify areas on jurisdictional maps provided that were "problem areas". They were also asked to indicate any areas of new development. This activity gave the public an opportunity to interact with SDMI's GIS Mapping section, as well as provide valuable input on areas that may flood repeatedly during rain events that may not get reported to local emergency managers as significant events.

Public Plan Review Documentation

The Acadia Parish Hazard Mitigation Draft Plan was placed on the SDMI State of Louisiana Hazard Mitigation Portal/Website to collect comments and feedback from the public. A hard copy was also placed in the Parish OHSEP Office for comments. This outreach provided the public an opportunity to comment on the plan during the drafting stage and prior to plan approval. No feedback or public comment was received during this time.

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 Acadia Parish Planning 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 comprehensive or capital improvement 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

Acadia Parish has developed a method to ensure that a regular review and update of the Hazard Mitigation Plan occurs. This will be the responsibility of the steering committee, which consists of representatives from governmental organizations, local businesses, and private citizens, who will be involved in the process of monitoring, evaluating and updating the plan. All committee members in this plan will remain active in the steering committee.

Although the people filling the positions may change from year to year, the parish and its stakeholders will have representatives on the Steering Committee. The future Steering Committee will continue to be comprised of the same job functions as currently evident in the Steering Committee. However, the decision of specific job duties will be left to the Parish OHSEP Director to be assigned as deemed appropriate.

Methods for Monitoring and Evaluating the Plan and Plan Evaluation Criteria

Acadia Parish has developed a method to ensure monitoring, evaluating, and updating of the HMP occurs during the five-year cycle of the plan. The planning committee will become a permanent body and will be responsible for monitoring, evaluating, and updating of the plan. The planning committee meeting will be held annually in order to monitor, evaluate, and update the plan. The Acadia Parish OHSEP Director will be responsible for conducting the annual planning committee meetings.

The lead person of the agency responsible for the implementation of a specific mitigation action will submit a progress report to the Director at least thirty days prior to the planning committee meeting. The progress report will provide project status monitoring to include the following: whether the project has started; if not started, reason for not starting; if started, status of the project; if the project is completed, whether it has eliminated the problem; and any changes recommended to improve the implementation of the project etc. In addition, the progress report will provide status monitoring on the plan evaluation, changes to the hazard profile, changes to the risk assessment, and public input on the Hazard Mitigation Plan updates and reviews.

Progress on the mitigation action items and projects will be reviewed during the annual planning committee meeting. The criteria that would be utilized in the project review will include the following:

1) Whether the action was implemented and reasons, if the action was not implemented

2) What were the results of the implemented action

3) Were the outcomes as expected, and reasons if the outcomes were not as expected

4) Did the results achieve the stated goals and objectives

5) Was the action cost-effective

6) What were the losses avoided after completion of the project

7) In case of a structural project, did it change the hazard profile

In addition to monitoring and evaluating the progress of the mitigation plan actions and projects, the mitigation plan is required to be maintained and monitored annually, and updated every five years. The annual maintenance, monitoring and evaluation of the plan will be conducted in the annual planning committee meeting. The planning committee will review each goal and objective 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 planning 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) Are there any procedures that can be done more efficiently

4) Are there more ways to gain more diverse and widespread cooperation

5) Are there any different or additional funding sources available for mitigation planning and implementation

The HMP will be updated every five years to remain eligible for continued HMGP funding. The planning committee will be responsible for updating the HMP. The OHSEP Director will be the lead person for the HMP update. The HMP update process will commence at least one year prior to the expiration of the plan. The HMP will be updated after a major disaster if an annual evaluation of the plan indicate a substantial change in hazard profile and risk assessment in the parish.

Additionally, the public will be canvassed to solicit public input to continue Acadia 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 Public Library.

The review by the steering committee and input from the public will determine whether a plan update is needed prior to the required five-year update.

Annual Reports on the progress of actions, plan maintenance, monitoring, evaluation, incorporation into existing planning programs, and continued public involvement will be documented at each annual meeting of the committee and kept by the Parish OHSEP Director. The Steering Committee will work together as a team, with each member sharing responsibility for completing the monitoring, evaluation and updates. It is the responsibility of the Parish OHSEP Director for contacting committee members, organizing the meeting and providing public noticing for the meeting to solicit public input.

2016 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 2016 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 Acadia Parish Hazard Mitigation Plan Steering Committee and participating jurisdictions to determine additional implementation procedures when appropriate. This may include integrating the requirements of the Acadia Parish Hazard Mitigation Plan into each jurisdiction's planning documents, processes, or mechanisms as follows:

- Ordinances, Resolutions, Regulations
- Floodplain Ordinances
- Emergency Operations Plan
- Comprehensive Master Plan
- Economic Development Plan
- Capital Improvement Plan
- Transportation Plan
- Stormwater Management Plan
- Continuity of Operations Plan

Opportunities to integrate the requirements of this plan into other local planning mechanisms will continue to be identified through future meetings of the Acadia 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.). The members of the steering committee will meet with Department Heads to discuss what should be included in the changes that are necessary before the changes are introduced to the city council or police jury meetings. Steering

committee members 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 Acadia Parish Hazard Mitigation Plan, and will not contribute to increased hazard vulnerability within the parish.

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 Unincorporated Acadia, Town of Church Point, City of Crowley, Village of Estherwood, Town of Iota, Village of Mermentau, Village of Morse, City of Rayne, Acadia Parish has the authority to incorporate the contents of the Hazard Mitigation Plan into the parish's existing regulatory mechanisms. Agreements are currently in place with jurisdictions to allow for the parish incorporation mechanisms to take place.

The following parish and local plans incorporate requirements of this HMP Update as follows through steering committee member and jurisdiction representation throughout the planning process as described above:

Acadia Unincorporated
Local Emergency Operations Plan/Updated as needed/Acadia Parish OHSEP
Capital Improvement Plan/Updated as needed/Acadia Parish Police Jury
Economic Development Plan/Updated as needed/Acadia Economic Development Plan Steering Committee
Stormwater Management Plan/Updated as needed/Acadia Parish Public Works

Town of Church Point
Comprehensive Master Plan/Updated as needed/Town of Church Point
Capital Improvement Plan/Updated as needed/Acadia Parish Police Jury
Economic Development Plan/Updated as needed/Acadia Economic Development Plan Steering Committee
Stormwater Management Plan/Updated as needed/Acadia Parish Public Works
Transportation Plan/ Updated as needed/Town of Church Point

City of Crowley
Comprehensive Master Plan/Updated as needed/City of Crowley
Local Emergency Operations Plan/Updated as needed/Acadia Parish OHSEP
Continuity of Operations Plan/Updated as needed/City of Crowley
Capital Improvement Plan/Updated as needed/City of Crowley
Stormwater Management Plan/Updated as needed/City of Crowley
Transportation Plan/ Updated as needed/City of Crowley

Village of Estherwood
There are no local plans to incorporate in the Village of Estherwood

Town of Iota
Local Emergency Operations Plan/Updated as needed/Acadia Parish OHSEP
Economic Development Plan/Updated as needed/ Acadia Economic Development Plan Steering Committee
Stormwater Management Plan/Updated as needed/Town of Iota

Village of Mermentau
Stormwater Management Plan/Updated as needed/Village of Mermentau

Town of Morse
Comprehensive Master Plan/Updated as needed/Town of Morse
Continuity of Operations Plan/Updated as needed/Town of Morse
Local Emergency Operations Plan/Updated as needed/Acadia Parish OHSEP
Stormwater Management Plan/Updated as needed/Town of Morse

City of Rayne
Local Emergency Operations Plan/Updated as needed/Acadia Parish OHSEP
Capital Improvement Plan/Updated as needed/City of Rayne
Economic Development Plan/Updated as needed/Acadia Economic Development Plan Steering Committee
Stormwater Management Plan/Updated as needed/City of Rayne

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 will include at least one of the following:

- 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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Appendix C: Essential Facilities

Acadia Parish Essential Facilities – All Jurisdictions

Acadia Unincorporated Essential Facilities									
Type	**Name**	**Drought***	**Flooding**	**Hail**	**Lightning**	**Wind**	**Tornadoes**	**Tropical Cyclones**	**Winter Storms***
Fire and Rescue	Acadia Evangeline Fire District			X	X	X	X	X	
	Acadia Fire District 6			X	X	X	X	X	
	Acadia Fire District 7			X	X	X	X	X	
	Acadia Fire Substation			X	X	X	X	X	
	Acadia Parish Fire District 4			X	X	X	X	X	
	Acadia Parish Fire District 4			X	X	X	X	X	
	Branch Volunteer Fire Department			X	X	X	X	X	
	Egan Volunteer Fire Department			X	X	X	X	X	
	Eunice Fire Department			X	X	X	X	X	
	Evangeline Fire Department			X	X	X	X	X	
	Fire Protection District 8 Sub Station			X	X	X	X	X	
	Lyons Point Fire Department		X	X	X	X	X	X	
	Mire Volunteer Fire Department No 7			X	X	X	X	X	
	Richard Fire Department			X	X	X	X	X	
	Unknown		X	X	X	X	X	X	
Government	Crowley Maintenance Center		X	X	X	X	X	X	
	Egan Water Corporation			X	X	X	X	X	
	Acadia Parish Sanitary Landfill		X	X	X	X	X	X	
	Acadia Parish Maintenance Facility			X	X	X	X	X	
	UDSA-Animal and Plant Health Station			X	X	X	X	X	
Prisons	Acadia Detention Center		X	X	X	X	X	X	
Schools	Mire Elementary			X	X	X	X	X	
	Midland High School			X	X	X	X	X	
	Egan Elementary			X	X	X	X	X	

Acadia Unincorporated Essential Facilities									
Type	Name	Drought*	Flooding	Hail	Lightning	Wind	Tornadoes	Tropical Cyclones	Winter Storms*
	Evangeline Elementary			X	X	X	X	X	
	Crowley High School			X	X	X	X	X	
	Martin Petitjean Elementary		X	X	X	X	X	X	
	Branch Elementary			X	X	X	X	X	
	Richard Elementary			X	X	X	X	X	

Church Point Essential Facilities									
Type	Name	Drought*	Flooding	Hail	Lightning	Wind	Tornadoes	Tropical Cyclones	Winter Storms*
Fire and Rescue	Church Point Fire Department			X	X	X	X	X	
Government	Church Point City Hall			X	X	X	X	X	
Law Enforcement	Church Point Law Enforcement Center		X	X	X	X	X	X	
Public Health	Acadia St. Landry Hospital			X	X	X	X	X	
Schools	Church Point High School			X	X	X	X	X	
	Church Point Elementary			X	X	X	X	X	
	Our Mother of Peace Elementary			X	X	X	X	X	
	Church Point Middle School			X	X	X	X	X	

Crowley Essential Facilities									
Type	Name	Drought*	Flooding	Hail	Lightning	Wind	Tornadoes	Tropical Cyclones	Winter Storms*
Fire and Rescue	Crowley Fire Department		X	X	X	X	X	X	
	Crowley Fire Department		X	X	X	X	X	X	
	Crowley Fire Department		X	X	X	X	X	X	
	Crowley Fire Department Training		X	X	X	X	X	X	
Government	Acadia School Board Educational Center			X	X	X	X	X	
	Enterprise Center of Acadia			X	X	X	X	X	
	Crowley Public Works			X	X	X	X	X	
	Department of Motor Vehicles			X	X	X	X	X	
	Unknown			X	X	X	X	X	
	Acadia Parish School Board			X	X	X	X	X	
	Federal Programs			X	X	X	X	X	
	LA Department of Veteran Affairs		X	X	X	X	X	X	
	Acadia Parish Courthouse		X	X	X	X	X	X	
	LA Department of Ag and Forestry			X	X	X	X	X	
	Acadia Police Jury			X	X	X	X	X	
	Acadia Parish Animal Control			X	X	X	X	X	
	Acadia Parish Recycling Center			X	X	X	X	X	
	US Dept. of Social Services			X	X	X	X	X	
	Crowley Chamber of Commerce			X	X	X	X	X	
	Crowley City Court		X	X	X	X	X	X	
	Crowley City Hall		X	X	X	X	X	X	
	US Dept of Agriculture			X	X	X	X	X	
	City of Crowley Animal Shelter			X	X	X	X	X	
	Acadia Parish Dept of Social Services		X	X	X	X	X	X	
Law Enforcement	Acadia Parish Sheriff's Office		X	X	X	X	X	X	
	Crowley Police Department		X	X	X	X	X	X	
Public Health	Medical Center		X	X	X	X	X	X	

Crowley Essential Facilities									
Type	Name	Drought*	Flooding	Hail	Lightning	Wind	Tornadoes	Tropical Cyclones	Winter Storms*
	American Legion Hospital			X	X	X	X	X	
	Parish Health Center			X	X	X	X	X	
Schools	St. Michaels Catholic School			X	X	X	X	X	
	Crowley Middle School		X	X	X	X	X	X	
	North Crowley Elementary			X	X	X	X	X	
	Crowley Kindergarten		X	X	X	X	X	X	
	Ross Elementary		X	X	X	X	X	X	
	Notre Dame High School			X	X	X	X	X	
	Redemptorist Catholic School		X	X	X	X	X	X	
	South Crowley Elementary			X	X	X	X	X	

Estherwood Essential Facilities									
Type	Name	Drought*	Flooding	Hail	Lightning	Wind	Tornadoes	Tropical Cyclones	Winter Storms*
Fire and Rescue	Estherwood Fire Department		X	X	X	X	X	X	
Government	Estherwood Town Hall		X	X	X	X	X	X	
Law Enforcement	Estherwood Police Department		X	X	X	X	X	X	
Schools	Estherwood Elementary		X	X	X	X	X	X	

Iota Essential Facilities									
Type	Name	Drought*	Flooding	Hail	Lightning	Wind	Tornadoes	Tropical Cyclones	Winter Storms*
Fire and Rescue	Iota Volunteer Fire Department			X	X	X	X	X	
Government	Iota City Hall			X	X	X	X	X	
Law Enforcement	Iota Police Department			X	X	X	X	X	
Schools	St. Francis School			X	X	X	X	X	
	Iota High School			X	X	X	X	X	
	Iota Middle School			X	X	X	X	X	
	Iota Elementary School			X	X	X	X	X	

Mermentau Essential Facilities									
Type	Name	Drought*	Flooding	Hail	Lightning	Wind	Tornadoes	Tropical Cyclones	Winter Storms*
Fire and Rescue	Mermentau Fire Department		X	X	X	X	X	X	
Government	Mermentau City Hall		X	X	X	X	X	X	
Law Enforcement	Mermentau Police Department		X	X	X	X	X	X	
Schools	Mermentau Elementary School		X	X	X	X	X	X	

Morse Essential Facilities									
Type	Name	Drought*	Flooding	Hail	Lightning	Wind	Tornadoes	Tropical Cyclones	Winter Storms*
Fire and Rescue	Morse Volunteer Department		X	X	X	X	X	X	
Government	Morse City Hall		X	X	X	X	X	X	
Law Enforcement	Morse Police Department		X	X	X	X	X	X	
Schools	Morse Elementary School			X	X	X	X	X	

Rayne Essential Facilities									
Type	Name	Drought*	Flooding	Hail	Lightning	Wind	Tornadoes	Tropical Cyclones	Winter Storms*
Fire and Rescue	Acadia Fire Department		X	X	X	X	X	X	
	Fire Protection District 9 Training Center		X	X	X	X	X	X	
	Volunteer Fire Department			X	X	X	X	X	
Government	Rayne City Hall			X	X	X	X	X	
	Rayne City Court			X	X	X	X	X	
	Rayne Chamber of Commerce		X	X	X	X	X	X	
Law Enforcement	City of Rayne Police Department		X	X	X	X	X	X	
Public Health	American Legion Hospital			X	X	X	X	X	
Schools	Rayne High School			X	X	X	X	X	
	Central Rayne Kindergarten			X	X	X	X	X	
	Armstrong Middle School			X	X	X	X	X	
	South Rayne Elementary			X	X	X	X	X	
	St. Josephs Edge			X	X	X	X	X	
	Rayne Catholic Elementary			X	X	X	X	X	

* There are no critical facilities vulnerable to the hazard

Appendix D: Plan Adoption

State of Louisiana

Parish of Acadia

In the Name and By the Authority of The
Acadia Parish Police Jury

RESOLUTION

BY MSSRS: ROBERT GUIDRY AND KERRY KILGORE

WHEREAS, the Acadia Parish Police Jury has received grant funds from the Federal Emergency Management Agency, through the Governor's Office of Homeland Security and Emergency Preparedness, for the update of a hazard mitigation plan and;

WHEREAS, our parish has participated in the process to update a DMA compliant Hazard Mitigation Plan based on the FEMA guidance available in the How to Guides;

WHEREAS, our parish wishes to participate in the Hazard Mitigation Plan Update prepared by the Acadia Parish government under the oversight of a Steering Committee comprised of Parish-wide representatives;

WHEREAS, Acadia Parish and local representatives and governments have participated in the mitigation planning process;

WHEREAS, appropriate opportunity for input by public and community officials has been provided through press releases, open meetings and availability of draft documents;

WHEREAS, the updated Plan has been recommended for adoption by the Acadia Parish Police Jury;

WHEREAS, adoption of the updated Plan is required prior to further consideration for FEMA funding under the following programs;

- Pre-Disaster Mitigation
- Hazard Mitigation Grant Program
- Flood Mitigation Assistance Program

THEREFORE, BE IT RESOLVED by the Acadia Parish Police Jury in regular session duly convened on this 14th day of November, 2017, does hereby adopt the Acadia Parish Hazard Mitigation Plan Update.

ADOPTED: NOVEMBER 14, 2017

ATTEST:

/s/ Donna Bertrand
DONNA BERTRAND
DELEGATED SEC-TREASURER

/s/ David Savoy
DAVID SAVOY
PRESIDENT

****

CERTIFICATE

I, DONNA BERTRAND, Delegated Secretary-Treasurer of the Acadia Parish Police Jury, do hereby certify that the foregoing is a true and correct copy of a Resolution adopted by the Acadia Parish Police Jury in regular session on the 14th day of November, 2017, at which a quorum was present.

GIVEN UNDER MY OFFICIAL SIGNATURE AND SEAL OF OFFICE ON THIS THE 15TH DAY OF NOVEMBER, 2017.

Donna Bertrand
DONNA BERTRAND
DELEGATED SECRETARY-TREASURER

The following resolution was offered by Councilmember Comeaux, seconded by

Councilmember Daigle and duly resolved

TOWN OF CHURCH POINT
RESOLUTION #120516

A RESOLUTION ADOPTING THE PARISH - WIDE HAZARD MITIGATION PLAN

WHEREAS , the Acadia Parish Police Jury has received grant funds from the Federal Emergency Management Agency, through the Louisiana Office of Homeland Security and Emergency Preparedness , for the preparation of a hazard mitigation plan and:

WHEREAS our community has participated in the process to prepare a DMA compliant Hazard Mitigation Plan based on the FEMA guidance available in the How to Guides:

WHEREAS our community wishes to participate in the Hazard Mitigation Plan prepared by the Acadia Parish government under the oversight of a Steering Committee comprised of Parish wide representatives:

WHEREAS, Acadia Parish and local city representatives and governments have participated in the mitigation planning process:

WHEREAS appropriate opportunity for input by public and community officials has been provided through press releases, open meetings and availability of draft documents:

WHEREAS the Plan has been recommended for adoption by the Steering Committee:

WHEREAS adoption of the Plan is required prior to further consideration for FEMA funding under the following programs:

- Pre-Disaster Mitigation
- Hazard Mitigation Grant Program
- Flood Mitigation Assistance Program

Therefore, the Town of Church Point does hereby adopt the Acadia Parish Hazard Mitigation Plan on 5th day of December, 2016.

****

CERTIFICATE

I, Richard, Town Clerk of the Town of Church Point, do hereby certify that the above is a true and exact copy of a resolution adopted by the Board of Aldermen of the Town of Church Point on December 05, 2015 at which time a quorum was present and voting.

TODD RICHARD
TOWN CLERK
TOWN OF CHURCH POINT

A RESOLUTION OF THE MAYOR AND BOARD OF ALDERMEN OF THE CITY OF CROWLEY, ACADIA PARISH, LOUISIANA, ADOPTING THE ACADIA PARISH HAZARD MITIGATION PLAN FOR 2016.

WHEREAS, the Acadia Parish Government has prepared a multi-parish hazard mitigation plan hereby known as the Acadia Parish Hazard Mitigation Plan 2016 in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS, the City of Crowley has participated in the process to prepare a DMA compliant Hazard Mitigation Plan based in the FEMA guidance available in the How to Guides;

WHEREAS, the City of Crowley is participating in the Hazard Mitigation Plan prepared by the Acadia Parish Government under the oversight of a Steering Committee comprised of Parish-Wide representatives;

WHEREAS Acadia Parish and local city representatives and governments have participated in the mitigation planning process;

WHEREAS appropriate opportunity for input by public and community officials has been provided through meeting notices, open meetings and availability of draft documents;

WHEREAS the plan has been recommended for adoption by the steering committee;

WHEREAS adoption of the plan is required prior to further consideration for FEMA funding under the following programs:

1) Pre - Disaster Mitigation
2) Hazard Mitigation Grant
3) Flood Mitigation Assistance Program

THEREFORE the City of Crowley does hereby adopt the Acadia Parish Hazard Mitigation Plan Update 2016.

THUS DONE AND ADOPTED in regular session duly convened on the 11th day of April, 2017, in Crowley, Acadia Parish, Louisiana, at which a quorum was present and acting throughout.

GREG A. JONES, Mayor

ATTEST:
ERIN S. CRADEUR, City Clerk

CERTIFICATE

I, ERIN S. CRADEUR, Clerk of the City of Crowley, do hereby certify that the above and foregoing Resolution is a true and correct copy of the Resolution of the Board of Aldermen of the City of Crowley, Acadia Parish, Louisiana, adopted in regular session on the 11th day of April, 2017, at which a quorum was present and acting throughout.

THUS DONE AND SIGNED on this the 11TH day of April, 2017.

ERIN S. CRADEUR, City Clerk

s/2017/city/2454/legal/1.90

The following resolution was offered by Alderwoman Trahan seconded by Alderwoman Bertrand, and unanimously carried:

RESOLUTION 2017-018

A RESOLUTION ADOPTING THE PARISH-WIDE HAZARD MITIGATION PLAN

WHEREAS, the Acadia Parish Police Jury has received grant funds from the Federal Emergency Management Agency, through the Governor's Office of Homeland Security and Emergency Preparedness, for the update of a hazard mitigation plan and;

WHEREAS, the Village of Estherwood has participated in the process to update the DMA compliant Hazard Mitigation Plan based on the FEMA guidance available in the How to Guides;

WHEREAS, the Village of Estherwood wishes to participate in the Hazard Mitigation Plan Update prepared by the Acadia Parish government under the oversight of a Steering Committee comprised of Parish-wide representatives;

WHEREAS, Acadia Parish and local representatives and governments have participated in the mitigation process;

WHEREAS, appropriate opportunity for input by public and community officials has been provided through press releases, open meetings, and availability of draft documents;

WHEREAS, the updated Plan has been recommended for adoption by the Steering Committee;

WHEREAS, adoption of the updated Plan is required prior to further consideration for FEMA funding under the following programs:

- Pre-Disaster Mitigation
- Hazard Mitigation Grant Program
- Flood Mitigation Assistance Program

This resolution having been submitted to a vote, the vote thereon was as follows:

Yeas: 2
Nays: 0
Absent: 0

Therefore, the Village of Estherwood does hereby adopt the Acadia Parish Hazard Mitigation Plan on this 16th day of November, 2017.

Anthony Borill
Mayor

Attest:

Cindy W. Redlich
Village Clerk

A RESOLUTION ADOPTING THE
ACADIA PARISH HAZARD MITIGATION PLAN 2016

WHEREAS, the ACADIA PARISH GOVERNMENT has prepared a multi-hazard mitigation plan hereby known as the ACADIA PARISH HAZARD MITIGATION PLAN 2016 in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS, the TOWN OF IOTA has participated in the process to prepare a DMA compliant Hazard Mitigation Plan based in the FEMA guidance available in the How to Guides;

WHEREAS, the TOWN OF IOTA is participating in the Hazard Mitigation Plan prepared by the ACADIA PARISH GOVERNMENT under the oversight of a Steering Committee comprised of Parish-Wide representatives;

WHEREAS, Acadia Parish and local city representatives and governments have participated in the mitigation planning process;

WHEREAS, appropriate opportunity for input by public and community officials has been provided through meeting notices, open meetings and availability of draft documents;

WHEREAS, the Plan has been recommended for adoption by the steering committee;

WHEREAS, adoption of the Plan is required prior to further consideration for FEMA funding under the following programs:

- Pre-Disaster Mitigation
- Hazard Mitigation Grant Program
- Flood Mitigation Assistance Program

Therefore, the Town of Iota does hereby adopt the Acadia Parish Hazard Mitigation Plan 2016.

ADOPTED by a vote of 4 in favor and 0 against, and 1 absent, on this the 11th day of April, 2017.

DOLORES G. POUSSON, CITY CLERK

JULIA M. GRANGER, MAYOR

STATE OF LOUISIANA, PARISH OF ACADIA

RESOLUTION Village of Mermentau

A RESOLUTION ADOPTING THE ACADIA PARISH HAZARD MITIGATION PLAN 2016

WHEREAS, the Acadia Parish Government has prepared a multi-hazard mitigation plan hereby known as the Acadia Parish Hazard Mitigation Plan 2016 in accordance with the Disaster Mitigation Act of Acadia; and

WHEREAS the Village of Mermentau has participated in the process to prepare a DMA compliant Hazard Mitigation Plan based in the FEMA guidance available in the How to Guides;

WHEREAS the Village of Mermentau is participating in the Hazard Mitigation Plan prepared by the Acadia Parish Government under the oversight of a Steering Committee comprised of Parish-Wide representatives;

WHEREAS Acadia Parish and local representatives and governments have participated in the mitigation planning process;

WHEREAS appropriate opportunity for input by public and community officials has been provided through meeting notices, open meetings and availability of draft documents;

WHEREAS the Plan has been recommended for adoption by the steering committee;

WHEREAS adoption of the Plan is required prior to further consideration for FEMA funding under the following programs:

- Pre-Disaster Mitigation
- Hazard Mitigation Grant Program
- Flood Mitigation Assistance Program

THEREFORE, the Village of Mermentau does hereby adopt the Acadia Parish Hazard Mitigation Plan Update 2016.

Adopted by vote of 3 in favor and 0 against, and 0 abstaining, on this the 13th day of February, 2017.

Darla Istre

Darla Istre, Mayor
02-13-17

A RESOLUTION ADOPTING THE ACADIA PARISH HAZARD MITIGATION PLAN 2016

WHEREAS the Acadia Parish Government has prepared a multi-hazard mitigation plan hereby known as the ACADIA PARISH HAZARD MITIGATION PLAN 2016 in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS Village of Morse has participated in the process to prepare DMA complaint Hazard Mitigation Plan based in the FEMA guidance available in the How to Guides;

WHEREAS Village of Morse is participating in the Hazard Mitigation Plan prepared by the Acadia Parish Government under the oversight of a Steering Committee comprised of Parish-Wide representatives;

WHEREAS Acadia Parish and local city representatives and governments have participated in the mitigation planning process;

WHEREAS appropriate opportunity for input by public community officials has been provided through meeting notices, open meetings and availability of draft documents;

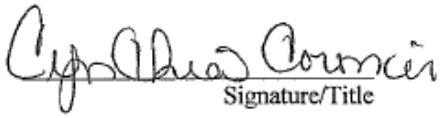
WHEREAS the Plan has been recommended for adoption by the steering committee;

WHEREAS adoption of the Plan is required prior to further consideration for FEMA funding under the following programs:

- Pre-Disaster Mitigation
- Hazard Mitigation Grant Program
- Flood Mitigation Assistance Program

Therefore, the Village of Morse does hereby adopt the Acadia Parish Hazard Mitigation Plan Update 2016.

ADOPTED by a vote of 2 in favor and 0 against, and 0 abstaining, on this the 10 day of May, 2017.



Signature/Title

May 11, 2017
Date

The following resolution was offered by **James A. "Jimmy" Fontenot** duly seconded by **Calise Michael Doucet**, and duly resolved and adopted on **13th** day of **February, 2017.**

RESOLUTION

ADOPTING THE ACADIA PARISH HAZARD MITIGATION PLAN 2016

WHEREAS, the Acadia Parish Government has prepared a multi-hazard mitigation plan hereby known as the ACADIA PARISH HAZARD MITIGATION PLAN 2016 in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS, City of Rayne has participated in the process to prepare a DMA compliant Hazard Mitigation Plan based in the FEMA guidance available in the how to Guides;

WHEREAS, City of Rayne is participating the Hazard Mitigation Plan by the Acadia Parish Government under the oversight of a Steering Committee comprised of Parish Wide representatives;

WHEREAS, Acadia Parish and local city representatives and governments have participated in the mitigation planning process;

WHEREAS, appropriated opportunity for input by public and community officials has been provided through meeting notices, open meetings and availability of draft documents;

WHEREAS, the plan has been recommended for adoption by the steering committee;

WHEREAS, adoption of the Plan is required prior to further consideration for FEMA funding under the following programs:

- Pre- Disaster Mitigation
- Hazard Mitigation Grant Program
- Flood Mitigation Assistance Program

This resolution having been submitted to a vote, the vote thereon was as follows:

YEAS: Curtrese L. Minix, Kenneth J. Guidry, Lendell J. "Pete" Babineaux, Calise Michael Doucet, and James A. "Jimmy" Fontenot.

NAYS:

ABSENT:

Therefore, the City of Rayne does hereby adopt the Acadia Parish Hazard Mitigation Plan Update 2016; this resolution was declared adopted on this **13th** day of **February, 2017.**

Charles E. Robichaux

Charles E. Robichaux, MAYOR

Annette R. Cutrera

Annette R. Cutrera, CITY CLERK

****

CERTIFICATE

I, Annette R. Cutrera, Clerk of the City of Rayne, due hereby certify that the above and foregoing is a true and correct copy of a resolution adopted by the City of Rayne in a regular session on February 13, 2017.

By: Annette R. Cutrera

Annette R. Cutrera, CITY CLERK
City of Rayne

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 by each jurisdiction. The worksheets were presented at the Kickoff Meeting by the contractor as tools for assisting in the update of the Hazard Mitigation Plan. 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 worksheets.

Mitigation Planning Team

Member/Title	Jurisdiction/Entity	Address	Phone/Email
Lee Hebert **Director**	Acadia Parish OHSEP	568 Northeast Court Circle Crowley, LA 70526	337-783-4357 lee@apso.org
Russell Stelly **Mayor**	Town of Church Point	102 Church Blvd. Church Point, LA 70527	337-684-5692 mayor@churchpoint-LA.com
Gregory Jones **Mayor**	City of Crowley	P.O. Box 1463 Crowley, LA 70527	337-783-0824 mayor@crowley-LA.com
Anthony Borill **Mayor**	Village of Estherwood	P.O. Box 167 Estherwood, LA 70534	337-783-4063 esth_vil@bellsouth.net
Julie Granger **Mayor**	Town of Iota	P.O. Box 890 Iota, LA 70543	337-779-2597 townofiota@centurytel.net
Darla Istre **Mayor**	Village of Mermentau	P.O. Box 1 Mermentau, LA 70556	337-824-8466 villageofmermentau@gmail.com
Michael Chaisson **Mayor**	Village of Morse	P.O. Box 750 Morse, LA 70559	337-783-7555 Morse_70559@yahoo.com
Charles Robicheaux **Mayor**	City of Rayne	P.O. Box 69 Rayne, LA 70578	337-334-3121 mayor@rayne.org
Richard Latiolais **Sec./Tres.**	Acadia Parish Police Jury	P.O. Box A Crowley, LA 70527	337-788-8800 rlatiolais@appj.org
Elizabeth Myers **Assistant**	Acadia Parish OHSEP	568 Northeast Court Circle Crowley, LA 70526	337-783-4357 emyers@appj.org
Becky Broussard **Director**	Vermilion Parish OHSEP	100 North State St. Suite 211,	337-898-4308 vpoep@cox-internet.com
Liz Hill **Director**	Evangeline Parish OHSEP	415 West Cotton St, Ville Platte, LA 70586	337-363-3267 Vangy911@centurytel.net

Capability Assessment

Acadia Unincorporated

Worksheet 4.1: Capability Assessment Worksheet		
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.		
Acadia Parish Unincorporated		
Plans	Yes/No	Comments
Comprehensive / Master Plan	No	
Capital Improvements Plan	Yes	
Economic Development Plan	Yes	
Local Emergency Operations Plan	Yes	
Continuity of Operations Plan	No	
Transportation Plan	No	
Stormwater Management Plan	Yes	
Community Wildfire Protection Plan	No	
Other plans (redevelopment, recovery, coastal zone management)		
Building Code, Permitting and Inspections		
Building Code	Yes	IRC & IBC
Building Code Effectiveness Grading Schedule (BCEGS) Score	No	
Fire Department ISO/PIAL rating	Yes	PIAL Parishwide
Site plan review requirements	No	
Land Use Planning and Ordinances		
Zoning Ordinance	Yes	
Subdivision Ordinance	Yes	
Floodplain Ordinance	Yes	
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	No	
Flood Insurance Rate Maps	Yes	2010
Acquisition of land for open space and public recreation uses	Yes	
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	Yes	
Mitigation Planning Committee	Yes	
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	Yes	
Staff		
Chief Building Official	Yes	
Floodplain Administrator	Yes	
Emergency Manager	Yes	
Community Planner	No	
Civil Engineer	Yes	
GIS Coordinator	Yes	
Grant Writer	Yes	
Other		
Technical		
Warning Systems / Service (Reverse 911, outdoor warning signals)	No	
Hazard Data & Information	No	
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	Yes	
Authority to levy taxes for specific purposes	Yes	
Fees for water, sewer, gas, or electric services	No	
Impact fees for new development	Yes	
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	I Acadia
Ongoing public education or information program (responsible water use, fire safety, household preparedness, environmental	Yes	OHSEP
Natural Disaster or safety related school	Yes	Fire Departments
Storm Ready certification	Yes	
Firewise Communities certification	No	
Public/Private partnership initiatives addressing disaster-related issues	Yes	Public
Other		

Town of Church Point

Worksheet 4.1: Capability Assessment Worksheet		
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.		
Church Point		
Plans	**Yes/No**	**Comments**
Comprehensive / Master Plan	Yes	
Capital Improvements Plan	Yes	
Economic Development Plan	Yes	
Local Emergency Operations Plan	No	
Continuity of Operations Plan	Yes	
Transportation Plan	Yes	
Stormwater Management Plan	Yes	
Community Wildfire Protection Plan	No	
Other plans (redevelopment, recovery, coastal zone management)		
Building Code, Permitting and Inspections		
Building Code	Yes	
Building Code Effectiveness Grading Schedule (BCEGS) Score	No	
Fire Department ISO/PIAL rating	Yes	PIAL
Site plan review requirements	Yes	
Land Use Planning and Ordinances		
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		

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	
Staff		
Chief Building Official	Yes	
Floodplain Administrator	Yes	
Emergency Manager	Yes	
Community Planner	Yes	
Civil Engineer	Yes	
GIS Coordinator	Yes	
Grant Writer	Yes	
Other		
Technical		
Warning Systems / Service (Reverse 911, outdoor warning signals)	Yes	
Hazard Data & Information	Yes	
Grant Writing	Yes	
Hazus Analysis	Yes	
Other		

Financial		
Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.		
Funding Resource	**Yes/No**	**Comments**
Capital Improvements project funding	Yes	
Authority to levy taxes for specific purposes	Yes	
Fees for water, sewer, gas, or electric services	Yes	
Impact fees for new development	Yes	
Stormwater Utility Fee	Yes	
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	Yes	
Natural Disaster or safety related school	Yes	
Storm Ready certification	No	
Firewise Communities certification	No	
Public/Private partnership initiatives addressing disaster-related issues	No	
Other		

City of Crowley

Worksheet 4.1: Capability Assessment Worksheet		
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.		
Crowley		
Plans	**Yes/No**	**Comments**
Comprehensive / Master Plan	Yes	
Capital Improvements Plan	Yes	
Economic Development Plan	No	
Local Emergency Operations Plan	Yes	
Continuity of Operations Plan	Yes	
Transportation Plan	Yes	
Stormwater Management Plan	Yes	
Community Wildfire Protection Plan	No	
Other plans (redevelopment, recovery, coastal zone management)		
Building Code, Permitting and Inspections		
Building Code	Yes	
Building Code Effectiveness Grading Schedule (BCEGS) Score	No	
Fire Department ISO/PIAL rating	Yes	PIAL
Site plan review requirements	Yes	
Land Use Planning and Ordinances		
Zoning Ordinance	Yes	
Subdivision Ordinance	Yes	
Floodplain Ordinance	Yes	
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	Yes	
Flood Insurance Rate Maps	Yes	
Acquisition of land for open space and public recreation uses	No	
Other		

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		
Chief Building Official	Yes	
Floodplain Administrator	Yes	
Emergency Manager	Yes	
Community Planner	No	
Civil Engineer	Yes	
GIS Coordinator	No	
Grant Writer	Yes	
Other		
Technical		
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	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		

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	Yes	
Natural Disaster or safety related school	Yes	
Storm Ready certification	No	
Firewise Communities certification	No	
Public/Private partnership initiatives addressing disaster-related issues	Yes	
Other		

Village of Estherwood

Worksheet 4.1: Capability Assessment Worksheet		
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.		
Estherwood		
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)		
Building Code, Permitting and Inspections		
Building Code	Yes	
Building Code Effectiveness Grading Schedule (BCEGS) Score	No	
Fire Department ISO/PIAL rating	Yes	
Site plan review requirements	No	
Land Use Planning and Ordinances		
Zoning Ordinance	No	
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	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)	Yes	
Staff		
Chief Building Official	No	
Floodplain Administrator	Yes	
Emergency Manager	No	
Community Planner	No	
Civil Engineer	Yes	
GIS Coordinator	No	
Grant Writer	Yes	
Other		
Technical		
Warning Systems / Service (Reverse 911, outdoor warning signals)	No	
Hazard Data & Information	No	
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	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		

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	yes	
Natural Disaster or safety related school	yes	
Storm Ready certification	no	
Firewise Communities certification	no	
Public/Private partnership initiatives addressing disaster-related issues	no	
Other		

Town of Iota

Worksheet 4.1: Capability Assessment Worksheet		
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.		
Iota		
Plans	**Yes/No**	**Comments**
Comprehensive / Master Plan	No	
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	No	
Other plans (redevelopment, recovery, coastal zone management)		
Building Code, Permitting and Inspections		
Building Code	Yes	
Building Code Effectiveness Grading Schedule (BCEGS) Score	No	
Fire Department ISO/PIAL rating	Yes	PIAL
Site plan review requirements	Yes	
Land Use Planning and Ordinances		
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		

Administration and Technical		
Identify whether your community has the following administrative and technical capabilities. For smaller jurisdictions without local staff resources, if there are public resources at the next higher level government that can provide technical assistance, indicate so in your comments.		
Administration	**Yes/No**	**Comments**
Planning Commission	No	
Mitigation Planning Committee	No	
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	Yes	
Staff		
Chief Building Official	Yes	
Floodplain Administrator	Yes	
Emergency Manager	No	
Community Planner	No	
Civil Engineer	Yes	
GIS Coordinator	No	
Grant Writer	Yes	
Other		
Technical		
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	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		

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	Yes	
Natural Disaster or safety related school	Yes	
Storm Ready certification	No	
Firewise Communities certification	No	
Public/Private partnership initiatives addressing disaster-related issues	No	
Other		

Village of Mermentau

Worksheet 4.1: Capability Assessment Worksheet		
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.		
Mermentau		
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	Yes	
Community Wildfire Protection Plan	No	
Other plans (redevelopment, recovery, coastal zone management)		
Building Code, Permitting and Inspections		
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		
Zoning Ordinance	Yes	
Subdivision Ordinance	No	
Floodplain Ordinance	Yes	
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	No	
Flood Insurance Rate Maps	Yes	
Acquisition of land for open space and public recreation uses	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)	Yes	
Staff		
Chief Building Official	Yes	
Floodplain Administrator	Yes	
Emergency Manager	No	
Community Planner	No	
Civil Engineer	Yes	
GIS Coordinator	No	
Grant Writer	Yes	
Other		
Technical		
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	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		

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	Yes	
Storm Ready certification	No	
Firewise Communities certification	No	
Public/Private partnership initiatives addressing disaster-related issues	No	
Other		

Village of Morse

Worksheet 4.1: Capability Assessment Worksheet		
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.		
Morse		
Plans	Yes/No	Comments
Comprehensive / Master Plan	Yes	
Capital Improvements Plan	No	
Economic Development Plan	No	
Local Emergency Operations Plan	Yes	
Continuity of Operations Plan	Yes	
Transportation Plan	No	
Stormwater Management Plan	Yes	
Community Wildfire Protection Plan	No	
Other plans (redevelopment, recovery, coastal zone management)		
Building Code, Permitting and Inspections		
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		
Zoning Ordinance	No	
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	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	Yes	
Mitigation Planning Committee	No	
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	Yes	
Staff		
Chief Building Official	Yes	
Floodplain Administrator	Yes	
Emergency Manager	Yes	
Community Planner	Yes	
Civil Engineer	Yes	
GIS Coordinator	No	
Grant Writer	Yes	
Other		
Technical		
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	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		

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		

City of Rayne

Worksheet 4.1: Capability Assessment Worksheet		
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.		
Rayne		
Plans	Yes/No	Comments
Comprehensive / Master Plan	No	
Capital Improvements Plan	Yes	
Economic Development Plan	Yes	
Local Emergency Operations Plan	Yes	
Continuity of Operations Plan	No	
Transportation Plan	No	
Stormwater Management Plan	Yes	
Community Wildfire Protection Plan	No	
Other plans (redevelopment, recovery, coastal zone management)		
Building Code, Permitting and Inspections		
Building Code	Yes	
Building Code Effectiveness Grading Schedule (BCEGS) Score	No	
Fire Department ISO/PIAL rating	Yes	PIAL 5
Site plan review requirements	Yes	
Land Use Planning and Ordinances		
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		

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		
Chief Building Official	Yes	
Floodplain Administrator	Yes	
Emergency Manager	No	
Community Planner	Yes	
Civil Engineer	Yes	
GIS Coordinator	Yes	
Grant Writer	Yes	
Other		
Technical		
Warning Systems / Service (Reverse 911, outdoor warning signals)	Yes	
Hazard Data & Information	No	
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	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		

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	Yes	
Natural Disaster or safety related school	Yes	
Storm Ready certification	No	
Firewise Communities certification	No	
Public/Private partnership initiatives addressing disaster-related issues	No	
Other		

Building Inventory

Critical Facility (If Yes, Mark X)	Name of Building	Purpose of Building	Address	City	Latitude	Longitude	Assessed Value	Date Built	Construction Type
Acadia Unincorporated									
	Branch Elementary	Education	Branch	Branch	30.3488951	-92.26981496	$3,782,295.00	1937	Concrete
	Egan Elementary	Education	Egan	Egan	30.23603175	-92.51039056	$4,436,370.00	1953	Concrete
	Evangeline Elementary	Education	1448 Old Evangeline Highway	Evangeline	30.26507125	-92.57027539	$5,263,515.00	1967	Concrete
X	Branch Vol Fire Department	Fire Search and Rescue	173 Doctor Parrot Avenue	Branch	30.34592714	-92.26735571	$310,800.00	1977	Metal
X	Acadia Fire District 6	Fire Search and Rescue	104 West Hutchinson Avenue	Branch	30.34871032	-92.35099463	$532,710.00	2000	Concrete
X	Egan Volunteer Fire Department	Fire Search and Rescue	2340 Egan Highway	Egan	30.23631962	-92.5067557	$371,325.00	1980	Metal
X	Acadia Evangeline Fire District	Fire Search and Rescue	1st Street	Eunice	30.41468462	-92.55107022	$91,355.00	1997	Metal
X	Acadia Parish Fire District 4	Fire Search and Rescue	100 Park Avenue	Eunice	30.46965772	-92.38341087	$803,790.00	2006	Concrete
	Acadia Parish Sanitary Landfill	Civil Government	319 Petal Road	Egan	30.25389419	-92.53276052	$161,810.00	1985	Metal
X	Acadia Parish Emergency Management Center	Emergency Operations Center	Nearby: 500 North Parkerson Avenue	Crowley	30.21533762	-92.37342017	$751,815.00	2000	Concrete
X	Acadia Parish Sheriff's Office	Law Enforcement	Nearby: 1546 West 2nd Street	Crowley	30.20312059	-92.38672932	$1,185,705.00	1990	Concrete

X	Acadia Detention Center	Prisons and Correctional Facilities	Nearby: 1037 Capitol Avenue	Crowley	30.20768895	-92.3987261	$1,250,000.00	2000	Metal
	Acadia School Board Educational Center	Civil Government	2402 North Parkerson Avenue	Crowley	30.23176886	-92.38104215	$4,767,390.00	1973	Concrete
X	Acadia Parish Courthouse	Civil Government	500 North Parkerson Avenue	Crowley	30.21446182	-92.37356689	$747,090.00	1950	Concrete
X	Acadia Police Jury	Civil Government	505 Northeast Court Circle #3	Crowley	30.20308789	-92.38737107	$721,035.00	2010	Concrete
	Acadia Parish Animal Control	Civil Government	1534 West 2nd Street	Crowley	30.20287155	-92.38776744	$134,175.00	2010	Metal
	Acadia Parish Recycling Center	Civil Government	1552 West 2nd Street	Crowley	30.20266679	-92.38818043	$503,175.00	2003	Metal
Church Point									
	Church Point High School	Education	305 E Lougarre Street	Church Point	None	None	$5,623,020.00	1954	Concrete
	Mire Elementary	Education	5484 Mire Highway	Church Point	30.29938884	-92.19294428	$3,171,075.00	1938	Metal
	Church Point Elementary	Education	415 East Lougarre Street	Church Point	30.4008796	-92.20880049	$10,181,295.00	1995	Concrete
	Church Point Middle School	Education	340 West Martin Luther King Drive	Church Point	30.41082601	-92.22537237	$6,681,555.00	1965	Concrete
	Richard Elementary	Education	Church Point	Church Point	30.42235959	-92.31165036	$4,931,700.00	1938	Concrete
X	Church Point Fire Department	Fire Search and Rescue	1740 Charlene Highway	Church Point	30.40449359	-92.21829828	$475,350.00	1967	Metal

X	Richard Fire Department	Fire Search and Rescue	1740 Charlene Highway	Church Point	30.42666	-92.31225618	$381,420.00	1989	Metal
X	Church Point Law Enforcement Center	Law Enforcement	Nearby: 110 West Plaquemine Street	Church Point	30.40859335	-92.22033681	$1,761,075.00	2010	Concrete
X	Church Point City Hall	Civil Government	118 South Court Street #121	Church Point	30.40670088	-92.21775104	$547,290.00	2000	Concrete
Crowley									
	Crowley Middle School	Education	263 Hengsens Road	Crowley	30.21953792	-92.38194697	$20,303,190.00	1941	Concrete
	North Crowley Elementary	Education	820 West 15th Street	Crowley	30.22068912	-92.38764278	$6,427,080.00	1964	Concrete
	Crowley Kindergarten	Education	1119 North Parkerson Avenue	Crowley	30.21906495	-92.3770849	$3,496,500.00	1937	Concrete
	Ross Elementary	Education	1809 West Hutchinson Avenue	Crowley	30.20626283	-92.39104312	$8,248,365.00	1964	Concrete
	South Crowley Elementary	Education	1102 South Parkerson Avenue	Crowley	30.20192568	-92.37069094	$6,244,560.00	1971	Concrete
	Crowley High School	Education	263 Hengsens Road	Crowley	30.25888476	-92.40267137	$19,939,500.00	1973	Concrete
X	Crowley Fire Department	Fire Search and Rescue	104 West Hutchinson Avenue	Crowley	30.21441456	-92.37443863	$528,795.00	1948	Concrete
X	Crowley Fire Department	Fire Search and Rescue	104 West Hutchinson Avenue	Crowley	30.22334624	-92.37421863	$237,300.00	1949	Concrete

X	Crowley Fire Department	Fire Search and Rescue	104 West Hutchinson Avenue	Crowley	30.20421862	-92.36830237	$119,880.00	1965	Concrete
X	Lyons Point Fire Department	Fire Search and Rescue	5801 Louisiana 13	Crowley	30.0945591	-92.36116024	$171,000.00	UNK	Metal
X	Fire Protection District 8 Sub Station	Fire Search and Rescue	6501-7099 Louisiana 13	Crowley	30.16605128	-92.36288739	$118,250.00	1990	Metal
X	Crowley Police Department	Law Enforcement	426 N Avenue F	Crowley	30.21289166	-92.3737584	$912,600.00	1950	Concrete
X	Crowley City Court	Civil Government	426 North Avenue F	Crowley	30.21291952	-92.37374459	$912,600.00	2010	Concrete
X	Crowley City Hall	Civil Government	425 N. Parkerson Avenue	Crowley	30.21322012	-92.37328584	$2,779,140.00	2010	Concrete
Estherwood									
	Estherwood Elementary	Education	214 Jefferson Avenue	Estherwood	30.18751585	-92.46436134	$4,606,065.00	1932	Concrete
X	Estherwood Fire Department	Fire Search and Rescue	351 Douglas Street	Estherwood	30.18071104	-92.46383157	$149,220.00	1960	Metal
X	Estherwood Town Hall	Civil Government	205-213 Morris Avenue	Estherwood	30.18155754	-92.46429454	$260,000.00	1970	Concrete
Iota									
	Iota High School	Education	405 South 5th Street	Iota	30.32567119	-92.49527701	$8,527,005.00	1965	Concrete
	Iota Middle School	Education	426 South 5th Street	Iota	30.32657007	-92.49454382	$3,547,530.00	1945	Concrete
	Iota Elementary School	Education	West Kennedy Avenue	Iota	30.3348652	-92.50079163	$6,011,820.00	1977	Concrete

X	Iota Volunteer Fire Department	Fire Search and Rescue	1st Street	Iota	30.33009096	-92.49670217	$692,250.00	UNK	Metal
X	Iota Police Department	Law Enforcement	None	Iota	30.33084518	-92.49467559	$796,500.00	2010	Concrete
	Acadia Parish Maintenance Facility	Civil Government	1707 Evangeline Road	Iota	30.33379044	-92.48733875	$217,750.00	2003	Metal
X	Iota City Hall	Civil Government	116 Doson Ave	Iota	30.33097933	-92.49483414	$693,225.00	2010	Concrete
Mermentau									
	Mermentau Elementary School	Education	Mermentau	Mermentau	30.19184753	-92.58428609	$3,380,805.00	1984	Concrete
X	Mermentau Police Department	Law Enforcement	104 7th St	Mermentau	30.18756218	-92.5821549	$345,060.00	1950	Concrete
Morse									
	Morse Elementary School	Education	Morse	Morse	30.12670897	-92.49961579	$3,650,400.00	1928	Concrete
	Midland High School	Education	735 South Crocker Street	Morse	30.16798289	-92.49747563	$11,926,170.00	1956	Concrete
X	Morse Volunteer Department	Fire Search and Rescue	2340 Egan Highway	Morse	30.12251382	-92.49746644	$342,000.00	1990	Metal
Rayne									
	Rayne High School	Education	1200 North Polk Street	Rayne	30.2481327	-92.2658833	$12,862,125.00	1936	Concrete
	Central Rayne Kindergarten	Education	507 North Polk Street	Rayne	30.24067927	-92.26823479	$3,905,280.00	1925	Concrete

	Armstrong Middle School	Education	700 Martin Luther King Drive	Rayne	30.2460608	-92.27444767	$7,482,645.00	1954	Concrete
	South Rayne Elementary	Education	None	Rayne	30.22699261	-92.26877755	$5,156,730.00	1953	Concrete
	Martin Petitjean Elementary	Education	4039 Crowley Rayne Highway	Rayne	30.22816575	-92.28105927	$5,817,555.00	1978	Concrete
X	Rayne Volunteer Fire Dept.	Fire Search and Rescue	5431 Standard Mill Road	Rayne	30.24799675	-92.27011396	$521,370.00	2000	Concrete
X	Volunteer Fire Department	Fire Search and Rescue	200 Oak Street	Rayne	30.23346055	-92.26906809	$442,650.00	2000	Metal
	Fire Protection District 9 Training Center	Fire Search and Rescue	300-398 Bella Avenue	Rayne	30.23832006	-92.27756174	$165,975.00	2000	Metal
X	Mire Volunteer Fire Department No. 7	Fire Search and Rescue	5248 Mire Highway	Rayne	30.29356092	-92.19318916	$198,000.00	UNK	Metal
X	City of Rayne Police Department	Law Enforcement	Nearby: 1200-1598 Section Street	Rayne	30.24793773	-92.27049568	$657,450.00	1960	Concrete
X	Rayne City Hall	Civil Government	801 The Boulevard	Rayne	30.24339568	-92.27027872	$1,238,490.00	1980	Concrete
X	Rayne City Court	Civil Government	301 East Louisiana Avenue	Rayne	30.23617245	-92.26670059	$761,265.00	1980	Concrete
	Rayne Chambers of Commerce	Civil Government	1010-1198	Rayne	30.24754827	-92.27052747	$358,290.00	1980	Concrete

Vulnerable Populations

Vulnerable Populations Worksheet

Acadia Parish

Name	Street	City	Zip Code	Latitude	Longitude
All Hospitals (Private or Public)					
Acadia St Landry Hospital	810 South Broadway Street	Church Point	70525	30.39564877	-92.21117597
Felton Family Care Center	814 South Broadway Street	Church Point	70525	30.39493295	-92.21112371
Acadia General	Crowley Rayne Hwy	Crowley	70526		
Compass Behavioral Center	N. Ave. I	Crowley	70526		
Crowley Rehab Hospital	N. Ave. L	Crowley	70526		
Medical Center	1455 Wright Avenue	Crowley	70526	30.21980801	-92.36955381
American Legion Hospital	Nearby: 1301-1399 East Northern Avenue	Crowley	70526	30.22604958	-92.36365296
Parish Health Center	1029 Capitol Avenue	Crowley	70526	30.20636892	-92.37410947
Acadiana Family Medical	717 Curtis Drive	Rayne	70578	30.24477398	-92.25535954
American Legion Hospital	Nearby: 600 East Perrodin Street	Rayne	70578	30.23344026	-92.26338148
Pride Plaza Medical Center	626 East Perrodin Street	Rayne	70578	30.23275183	-92.26236811
Nursing Homes (Private or Public)					
Acadia St. Landry	S. Broadway	Church Point	70525		
Camelot Place	Crowley Rayne Hwy.	Crowley	70526		
Encore	Crowley Rayne Hwy.	Crowley	70526		
Southward	Crowley Rayne Hwy.	Crowley	70526		
Rayne Guest Home	Amelia	Rayne	70578		
Oddfellows & Rebekah's Retirement Home	529 Odd Fellows Road	Crowley	70526	30.23110193	-92.37018196
Mobile Home Parks					

Unknown	Cainen Lane	Branch	70516	30.35145749	-92.31068386
Unknown	100-304 Cotton Gin Court	Branch	70516	30.34748588	-92.26732884
Unknown	142 True Magnolia Lane	Church Point	70525	30.29789537	-92.1899265
Unknown	9421-9433 Grand Prairie Highway	Church Point	70525	30.29951862	-92.15070858
Unknown	169 Canadian Lane	Church Point	70525	30.30139447	-92.14755329
Unknown	101-237 Gayle Drive	Church Point	70525	30.37561265	-92.21026283
Unknown	100-198 Volton Costille Lane	Church Point	70525	30.35078625	-92.2041987
Lois Mobile Home Park	916-1098 South Broadway Street	Church Point	70525	30.39230637	-92.2089428
Unknown	809 East Venable Street	Church Point	70525	30.40558578	-92.20845272
Unknown	Cross Street	Church Point	70525	30.40833128	-92.20785663
Unknown	100-162 North Broadway	Church Point	70525	30.40448698	-92.21958563
Unknown	200 Jason Drive	Crowley	70526	30.24294375	-92.37085307
Unknown	100-448 Conrad Road	Crowley	70526	30.21506664	-92.39904999
Unknown	201-205 Mabel Drive	Crowley	70526	30.19445072	-92.33198079
Unknown	100-198 Dorn Street	Crowley	70526	30.21285302	-92.35636851
Unknown	300-310 South Avenue M	Crowley	70526	30.20945914	-92.36201868
Unknown	100-198 Mouton Vincent Lane	Crowley	70526	30.32092181	-92.39838107
Unknown	236 Martha	Crowley	70526	30.32088614	-92.38577461
Unknown	224-276 Patricia Drive	Crowley	70526	30.16665191	-92.36906858
Cajun Haven RV Park	434 Trumps Road	Egan	70531	30.23314545	-92.52662598
La Pay E Bas RV Park	1099 Belle Terre Drive	Eunice	70535	30.4419574	-92.49156284
Shady Acres	Shady Acres Loop	Eunice	70535	30.4561159	-92.4669557
Lake Felix RV Park	4273-4691 Louisiana 91	Eunice	70535	30.40023597	-92.50606428
Iota Mobile Park	2221 Jeff Davis Academy Road	Iota	70543	30.33475479	-92.49683516
Oakwood Mobile Home Park	100-214 Oakwood Lane	Iota	70543	30.33549128	-92.55262509
Unknown	5174 Grand Prairie Highway	Rayne	70578	30.29204238	-92.22553074
Unknown	207 Foreman Drive	Rayne	70578	30.26385987	-92.26593822
Unknown	225 Saint Charles Avenue	Rayne	70578	30.26506042	-92.25821495
Unknown	904 The Boulevard	Rayne	70578	30.24527558	-92.2689831

Unknown	247-287 Llama Road	Rayne	70578	30.23594002	-92.24861626
Unknown	506 East Harrop Street	Rayne	70578	30.23734912	-92.26450666
Unknown	611 3rd Street	Rayne	70578	30.23054665	-92.27158466
Unknown	1356 East Texas Avenue	Rayne	70578	30.23484752	-92.24719235
Unknown	922 Hilda Street	Rayne	70578	30.22562952	-92.27736526
Amy's Mobile Park	905 West Branche Street	Rayne	70578	30.22682721	-92.2775832
Country Acres Mobile Park	2-98 Country Acres Lane	Rayne	70578	30.21781446	-92.25199442
Bayou Village Mobile Park	101-299 Kristie Drive	Rayne	70578	30.21718999	-92.24793463
Unknown	151 J West Lane	Rayne	70578	30.2445633	-92.23594935
Mallard Bay Community	2-98 Pinto Lane	Rayne	70578	30.24360959	-92.21345085
Frog City RV Park	3003 Daulaut Drive	Rayne	70578	30.24469444	-92.19558737

National Flood Insurance Program (NFIP)

Acadia Parish

ELEMENT F: STATE REQUIREMENT - ACADIA PARISH

National Flood Insurance Program (NFIP)

	Acadia Parish	Church Point	Crowley	Estherwood	Iota	Mermentau	Morse	Rayne
Insurance Summary								
How many NFIP polices are in the community? What is the total premium and coverage?	Policies: 1,191; Premium Coverage:$222,955,000	Policies: 66; Premium Coverage: $12,604,800	Policies: 1,034; Premium Coverage:$134,303,800	Policies: 71; Premium Coverage: $7,399,300	Policies:18; Premium Coverage:$2,712,300	Policies: 66; Premium Coverage: $7,147,600	Policies: 38; Premium Coverage: $3,932,200	268, $47,747,300
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?	Claims paid: 254; Loss Payments: $5,016,116	Claims paid:53 ; Loss Payments: $10,161,385	Claims paid: 314; Loss Payments: $1,797,549	Claims paid: 8; Loss Payments: $129,638	Claims paid: 8; Loss Payments: $148,471	Claims paid: 8; Loss Payments: $54,965	Claims paid: 5; Loss Payments: $350,547	84 Claims, 3 Substantial Damage, $523, 687
How many structures are exposed to flood risk with in the community?	There are many structures exposed throughout the parish to flood risks	There are many structures exposed throughout the parish to flood risks	There are many structures exposed throughout the parish to flood risks	There are many structures exposed throughout the parish to flood risks	There are many structures exposed throughout the parish to flood risks	There are many structures exposed throughout the parish to flood risks	There are many structures exposed throughout the parish to flood risks	860
Describe any areas of flood risk with limited NFIP policy coverage.	unknown	unknown	unknown	unknown	unknown	unknown	unknown	unknown
Staff Resources								
Is the Community FPA or NFIP Coordinator certified?	No	No	No	No	No	No	no	No
Is flood plain management an auxiliary	Yes	Yes	Yes	Yes	Yes	Yes	yes	Yes
Provide an explanation of NFIP administration services (e.g., permit review, GIS, education or outreach, inspections,	permit review, education and outreach	permit review, education and outreach	permit review, education and outreach	permit review, education and outreach	permit review, education and outreach	permit review, education and outreach	permit review, education and outreach	permit review, education and outreach
What are the barriers to running an effective NFIP program in the community, if any?	Man Power	Lack of Resources	lack of resources and funding	lack of resources and funding	Lack of Funding	lack of resources and funding	lack of resources and funding	Man Power
Compliance History								
Is the community in good standing with the NFIP?	Yes	Yes	Yes	Yes	Yes	Yes	yes	Yes
Are there any outstanding compliance issues(i.e., current violations)?	No	No	No	No	No	No	mo	No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact(CAC)?	2014	2010	2013	N/A	N/A	N/A	N/A	2015
Is a CAV or CAC scheduled or needed? If so when?								No
Regulation								
When did the community enter the NFIP?	Year 1981	Year 1980	Year 1980		Year 1974		Year 1980	Year 1980
Are the FIRMs digital or paper?	Both	Both	Both	Yes	Paper	Paper	Yes	Paper
Do floodplain development regulations meet or exceed FEMA or State minimum requirements? If so, in what ways?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Meet
Community Rating System (CRS)								
Does the community participate in CRS?	No	No	No	No	No	No	No	Yes
What is the community's CRS Class	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9
Does the plan include CRS planning requirements?	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Yes