



POINTE COUPEE

PARISH HAZARD MITIGATION UPDATE – 2016



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POINTE COUPEE PARISH

HAZARD MITIGATION PLAN UPDATE

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Pointe Coupee Parish



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Unincorporated Pointe Coupee Parish
Town of Fordoche
Town of Livonia
Village of Morganza
City of New Roads

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1. Introduction

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

In that regard, this plan (a) documents the Pointe Coupee 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 Pointe Coupee Parish less vulnerable and more disaster resistant. It also includes mitigation project scoping to further identify the extent 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 Pointe Coupee Parish Hazard Mitigation Plan is a multi-jurisdictional plan that includes the following jurisdictions which participated in the planning process:

- Unincorporated Pointe Coupee Parish
- Town of Fordoche
- Town of Livonia
- Village of Morganza
- City of New Roads

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 Pointe Coupee 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

Pointe Coupee Parish is located in the region of Louisiana known as the River Parishes. Pointe Coupee is bordered by several parishes: Concordia Parish to the north, West Feliciana Parish to the northeast, West Baton Rouge Parish to the east, Iberville Parish to the south, St. Martin Parish to the southwest, St. Landry Parish to the west, and Avoyelles Parish to the northwest. The parish contains a total of 591 square miles, of which 33 square miles are comprised of water.



Figure 1-1: Location of Pointe Coupee Parish within the State of Louisiana

Pointe Coupee Parish contains approximately 500 miles of highways within its borders. These include US Highway 190 and State Highways 1, 10, 15, 77, 81, and 415. Some of these roadways are significant evacuation routes for Pointe Coupee Parish, as well as surrounding parishes during states of emergency.

The John James Audubon Bridge is a new Mississippi River crossing between Pointe Coupee and West Feliciana parishes. The bridge, which is the longest cable-stayed bridge in North America, replaced an existing ferry between the communities of New Roads and St. Francisville. The bridge serves as an important artery being the only bridge structure on the Mississippi River between Natchez, Mississippi and Baton Rouge, Louisiana.

Pointe Coupee Parish is served by the Union Pacific Railroad. Union Pacific is one of the largest transportation companies in the U.S., covering 20 states with 22,000 miles of rail. More plastics are shipped on this system than any other railroad. The Kansas City Southern Railroad also runs through Pointe Coupee Parish.

The Pointe Coupee Parish Port and Industrial Park is located 15 miles north of Bachelor and connects with the Mississippi River at the Old River Locks. The depth varies from 10 to 50 feet and has a 350 foot long dock, an 80-ton crane, and a grain elevator. Approximately 100 acres of port-owned land is available for industrial and commercial development with access to water, sewerage, and electricity.

The closest deepwater port is the Port of Greater Baton Rouge, located approximately 60 miles south of the Pointe Coupee Port. It is the fifth largest port in the United States and the farthest inland deepwater port on the Gulf of Mexico via the Mississippi River. A channel depth of 40 feet and width of 500 feet is maintained by the US Army Corps of Engineers. The Port of Greater Baton Rouge has Foreign Trade Zone status which affords low-cost production and warehousing facilities for imported and export-bound products.

Pointe Coupee Parish is located in Louisiana Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP) Region 2.

As noted above, Pointe Coupee Parish is located in the south central region of Louisiana.



Figure 1-2: Louisiana Homeland Security Regions

Table 1-1: Pointe Coupee 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	22,802	22,443	22,406	-1.60%	-1.70%
Population Density (Pop/Sq. Mi.)	40.9	—	—	—	—
Total Households	8,818	8,818	—	—	—

Economy

Agriculture is the largest income-producer in Pointe Coupee Parish, with gross revenues of about \$50 million annually. Pointe Coupee is the top pecan-producing parish in the state, with some of the best quality nuts grown anywhere. The fastest expanding crops in the parish are sugar cane and cotton, while soybeans, corn, wheat, and grain sorghum (milo) are other major crops. Livestock production of beef cattle is another major agricultural force in the region.

Pointe Coupee Parish possesses a large supply of competitively priced, productive labor. Companies locating in the parish can count on both a large supply of low skilled labor, as well as an ample supply of highly skilled contract maintenance labor in the area. It is also the home of LA Generating's Big Cajun I & II electric generating stations, as well as the Nan-Ya Plastics Industrial Complex.

Industry data for business patterns in Pointe Coupee Parish can be found in the table below:

Table 1-2: Business Patterns in Pointe Coupee Parish
(Source: <http://censtats.census.gov/cqi-bin/cbpnaic/cbpsect.pl>)

Business Description	Number of Employees	Number of Establishments	Annual Payroll (\$1,000)
Retail Trade	822	76	20,083
Manufacturing	250-499	8	—
Health Care and Social Assistance	500-999	34	19,964
Mining, Quarrying, Oil and Gas Extraction	184	7	11,296
Transportation and Warehousing	320	24	10,458
Construction	135	38	3,493
Administration and Support and Waste Management and Remediation Services	44	9	1,252
Real Estate and Rental and Leasing	20-99	12	—
Wholesale Trade	171	9	7,643
Other Services (except Public Administration)	158	41	3,548
Accommodation and Food Services	307	32	3,444
Financial and Insurance	184	28	9,411
Professional, Scientific, and Technical Services	91	27	5,245
Information	0-19	2	—
Educational Services	100-249	5	—
Arts, Entertainment, and Recreation	0-19	2	—
Management of Companies and Enterprises	0-19	2	—
Agriculture, Forestry, Fishing and Hunting	20-99	7	1,440
Utilities	250-499	7	—

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 Pointe Coupee 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 Pointe Coupee 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 Pointe Coupee 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 Pointe Coupee Hazard Mitigation Plan were as follows:

- Section One Introduction
- Section Two Parish Profile
- Section Three Planning Process
- Section Four Risk Assessment
- Section Five Mitigation Action Plan
- Section Six Plan Maintenance Procedures
- 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 Pointe Coupee 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 Pointe Coupee Parish Hazard Mitigation Plan. The current goals are as follows:

- Protect the public health, safety, and welfare by increasing public awareness of hazards and by encouraging collective and individual responsibility for mitigating hazard risks
- Improve technical capability to respond to hazards and to improve the effectiveness of hazard mitigation actions
- Protect the most vulnerable populations, buildings, and critical facilities through the implementation of cost-effective and technically feasible mitigation actions
- Reduce economic impacts from natural 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 Action Plan	Section 4: Mitigation Strategy
Section 6: Plan Maintenance Procedures	Appendix B: Plan Maintenance
Appendices	Appendices

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 Pointe Coupee Parish and its municipalities. The extent of this risk is dictated primarily by its geographic location. Most significantly, Pointe Coupee Parish remains at high risk of water inundation from various sources, including flooding, tornadoes, and tropical cyclone activity. All of the 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.

2. Hazard Identification and Parish-Wide Risk Assessment

This section assesses the various hazard risks that Pointe Coupee 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 Pointe Coupee 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/Coastal Land Loss			
Drought	X		X
Earthquakes			
Expansive Soils			
Fog			
Flooding	X	X	X
Extreme Heat			
Sinkholes		X	
Thunderstorms (Hail, Lightning, & Wind)	X	X	X
Tornadoes	X	X	X
Tropical Cyclones	X	X	X
Tsunamis			
Wildfires			
Winter Storms	X		X
Dam Failure	X		+
Levee Failure	X		+

+ Data deficiency

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. Dam and levee failure are profiled, but they each have a data deficiency.

The following hazards have been selected to be included in this risk assessment:

- a) Drought
- b) Flooding (backwater, riverine, localized stormwater event)
- c) Thunderstorms (hail, lightning, wind)
- d) Tornadoes
- e) Tropical Cyclones (flooding and high winds)
- f) Winter Storms
- g) Dam Failure
- h) Levee Failure

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. Seventeen of the nineteen Presidential Declarations Pointe Coupee has received resulted from either tropical cyclones (10 declarations) or flooding (7 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 assess non-storm surge flooding as well. Flooding can also occur from non-hurricane events, as flash floods are a common occurrence due to heavy rainfall.

Hurricanes, tropical storms, and heavy storms are 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 Pointe Coupee Parish is included in the hurricane risk assessment.

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

Previous Occurrences

On the next page, [Table 2-2](#) summarizes federal disaster declarations for Pointe Coupee Parish since 1965. Information includes names, dates, and types of disaster.

Table 2-2: Pointe Coupee 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
374	4/27/1973	Severe Storms and Flooding
3031	2/22/1977	Drought and Freezing
584	5/2/1979	Severe Storms and Flooding
622	5/21/1980	Severe Storms and Flooding
679	4/20/1983	Severe Storms and Flooding
835	7/17/1989	Tropical Storm Allison
956	8/26/1992	Tropical Storm – Hurricane Andrew
1380	6/11/2001	Tropical Storm Allison
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
1786	9/2/2008	Tropical Cyclone – Hurricane Gustav
3322	5/6/2011	Flooding
4015	8/18/2011	Flooding
4080	8/29/2012	Tropical Cyclone – Hurricane Isaac

Probability of Future Hazard Events

The probability of a hazard event occurring in Pointe Coupee 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 assess 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				
	Pointe Coupee (Unincorporated)	Fordoche	Livonia	Morganza	New Roads
Drought	4%	4%	4%	4%	4%
Flooding	24%	20%	20%	24%	44%
Thunderstorms (Hail)	88%	88%	88%	88%	88%
Thunderstorms (Lightning)	16%	16%	16%	16%	16%
Thunderstorms (Wind)	100%	100%	100%	100%	100%
Tornadoes	24%	24%	24%	24%	24%
Tropical Cyclones	24%	24%	24%	24%	24%
Winter Storms	40%	40%	40%	40%	40%
Dam Failure	< 1%	< 1%	< 1%	< 1%	< 1%
Levee Failure	< 1%	< 1%	< 1%	< 1%	< 1%

As shown in [Table 2-3](#), thunderstorm winds for the entire planning area, have the highest annual chance of occurrence in the parish (100%) followed by thunderstorm hail at 88%. Flood events for the incorporated area of New Roads has a 44% chance of occurrence. Annual chances of occurrence for flood events in the unincorporated area and the incorporated areas of Fordoche, Livonia, and Morganza were slightly lower than New Roads. Winter storms have a 40% annual chance of occurrence followed by tropical cyclones and tornadoes both of which have a 24% annual chance of occurrence. Thunderstorm lightning at 16% and drought at 4% have the lowest chances of occurrence in Pointe Coupee Parish. Dam and levee failure both have less than a 1% annual chance of occurrence.

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 next page provide the total estimated value for each type of structure by occupancy.

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

Occupancy	Pointe Coupee Parish	Unincorporated Pointe Coupee	Fordoché
Agricultural	\$24,468,000	\$20,982,000	\$250,000
Commercial	\$462,412,000	\$124,062,000	\$980,000
Government	\$23,967,000	\$6,948,000	\$266,000
Industrial	\$122,242,000	\$104,712,000	\$1,358,000
Religion	\$73,730,000	\$40,806,000	\$0
Residential	\$2,820,756,000	\$1,903,104,000	\$93,032,000
Education	\$27,830,000	\$7,576,000	\$0
Total	\$3,555,405,000	\$2,208,190,000	\$95,886,000

Table 2-4: Estimated Total of Potential Losses throughout Pointe Coupee Parish (Continued)

Occupancy	Livonia	Morganza	New Roads
Agricultural	\$998,000	\$0	\$2,238,000
Commercial	\$16,158,000	\$4,512,000	\$316,700,000
Government	\$0	\$0	\$16,753,000
Industrial	\$447,000	\$500,000	\$15,225,000
Religion	\$6,158,000	\$1,000,000	\$25,766,000
Residential	\$167,458,000	\$71,550,000	\$585,612,000
Education	\$4,282,000	\$0	\$15,972,000
Total	\$195,501,000	\$77,562,000	\$978,266,000

Essential Facilities of the Parish

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

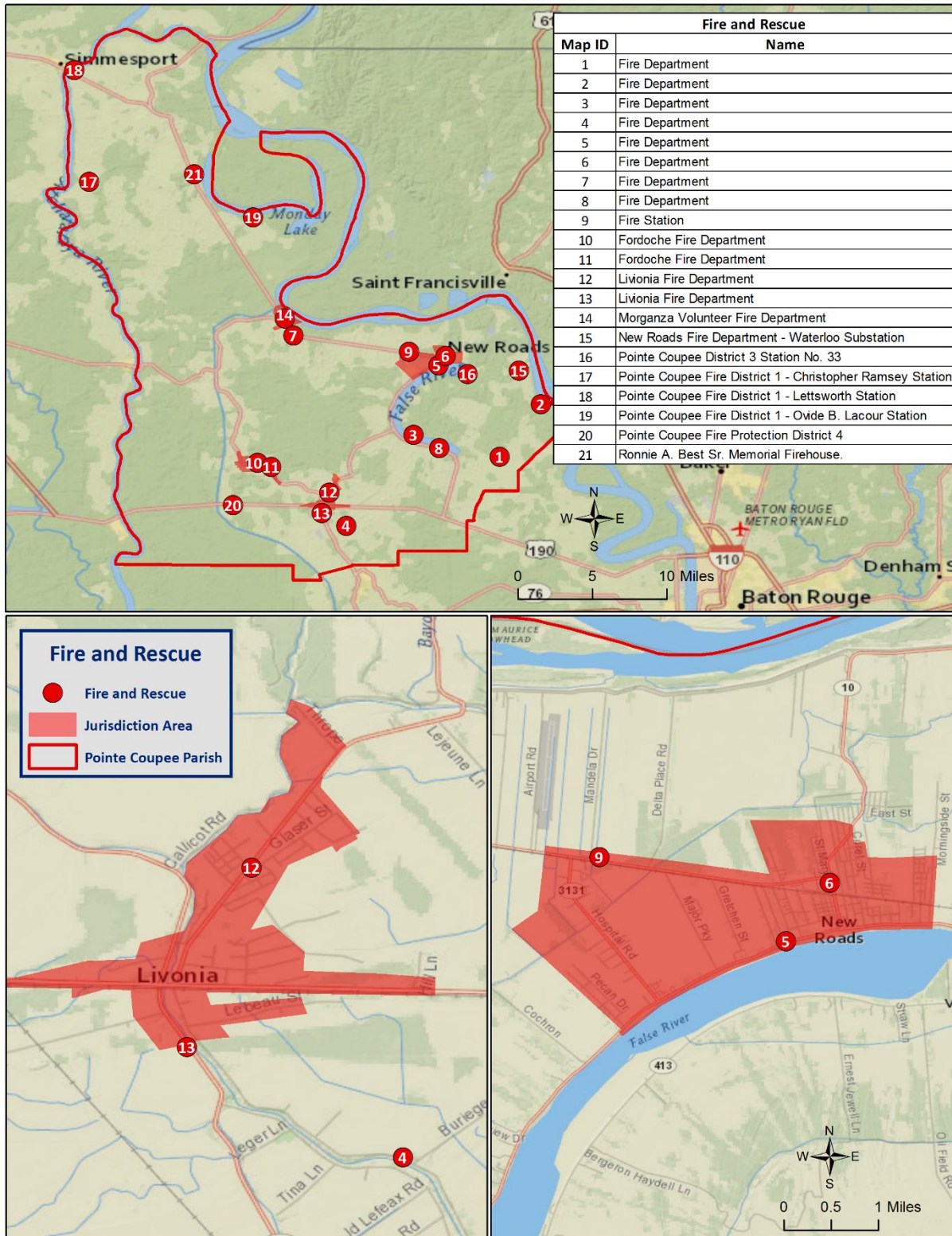


Figure 2-1: Fire and Rescue Buildings in Pointe Coupee Parish

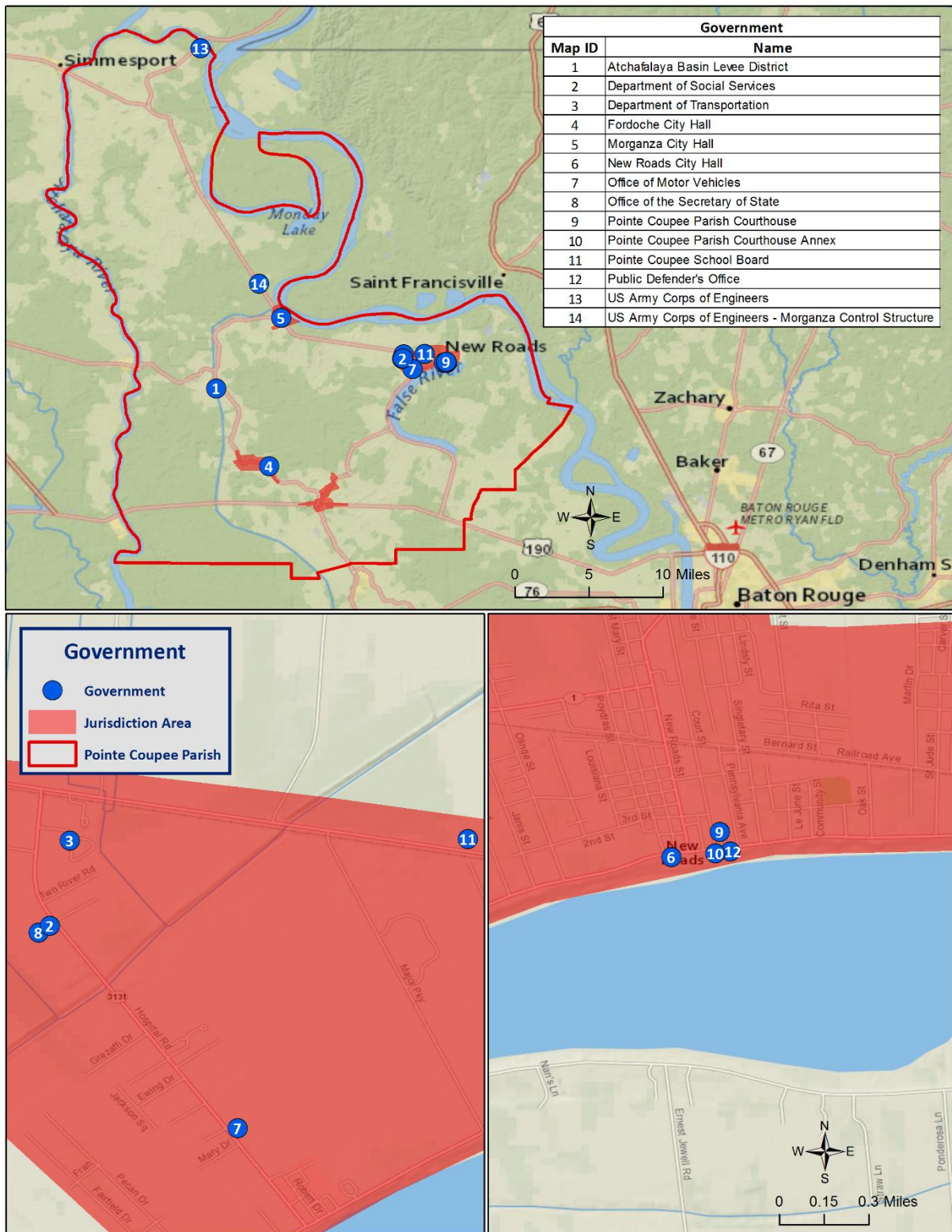


Figure 2-2: Government Buildings in Pointe Coupee Parish

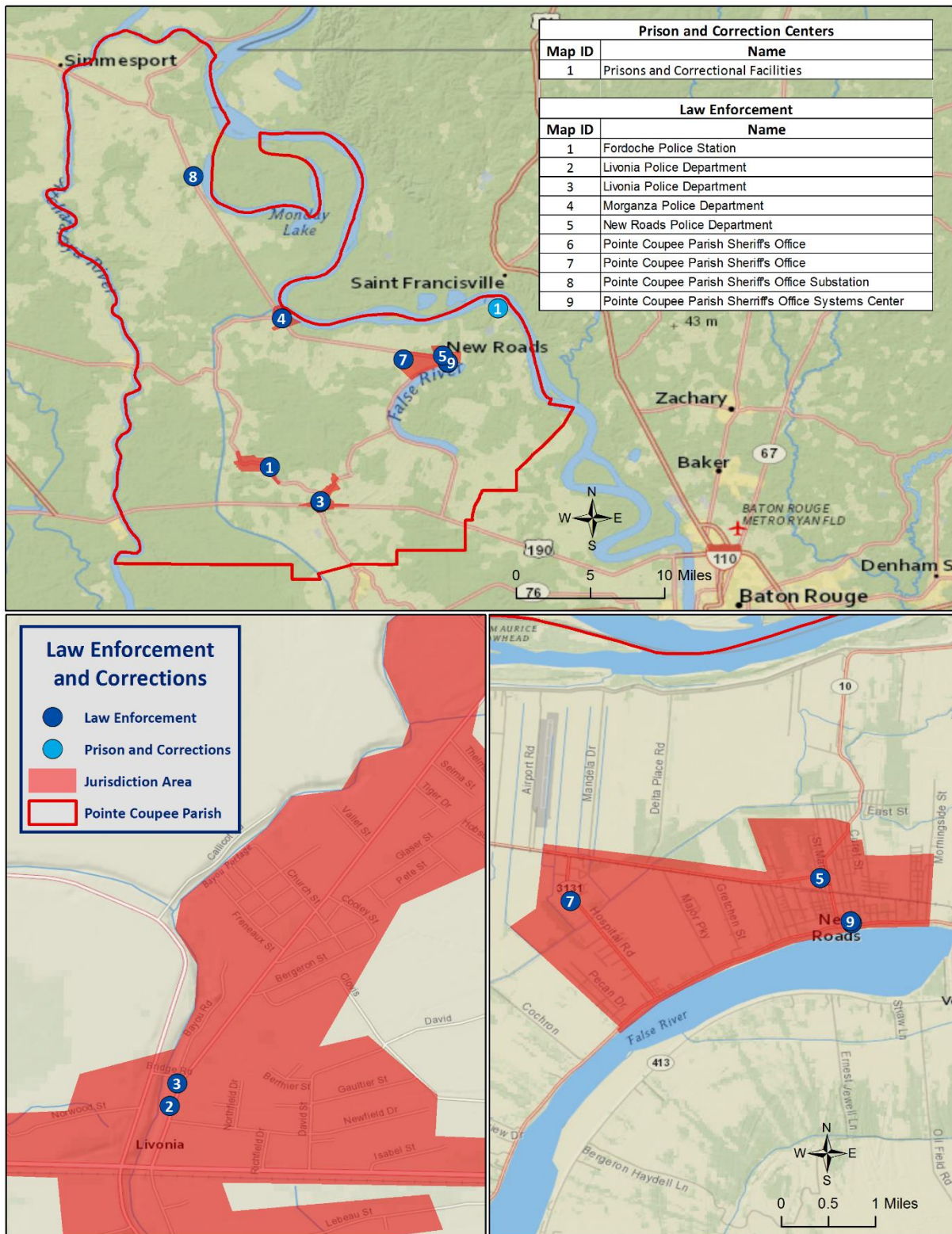


Figure 2-3: Law Enforcement and Correction Facilities in Pointe Coupee Parish

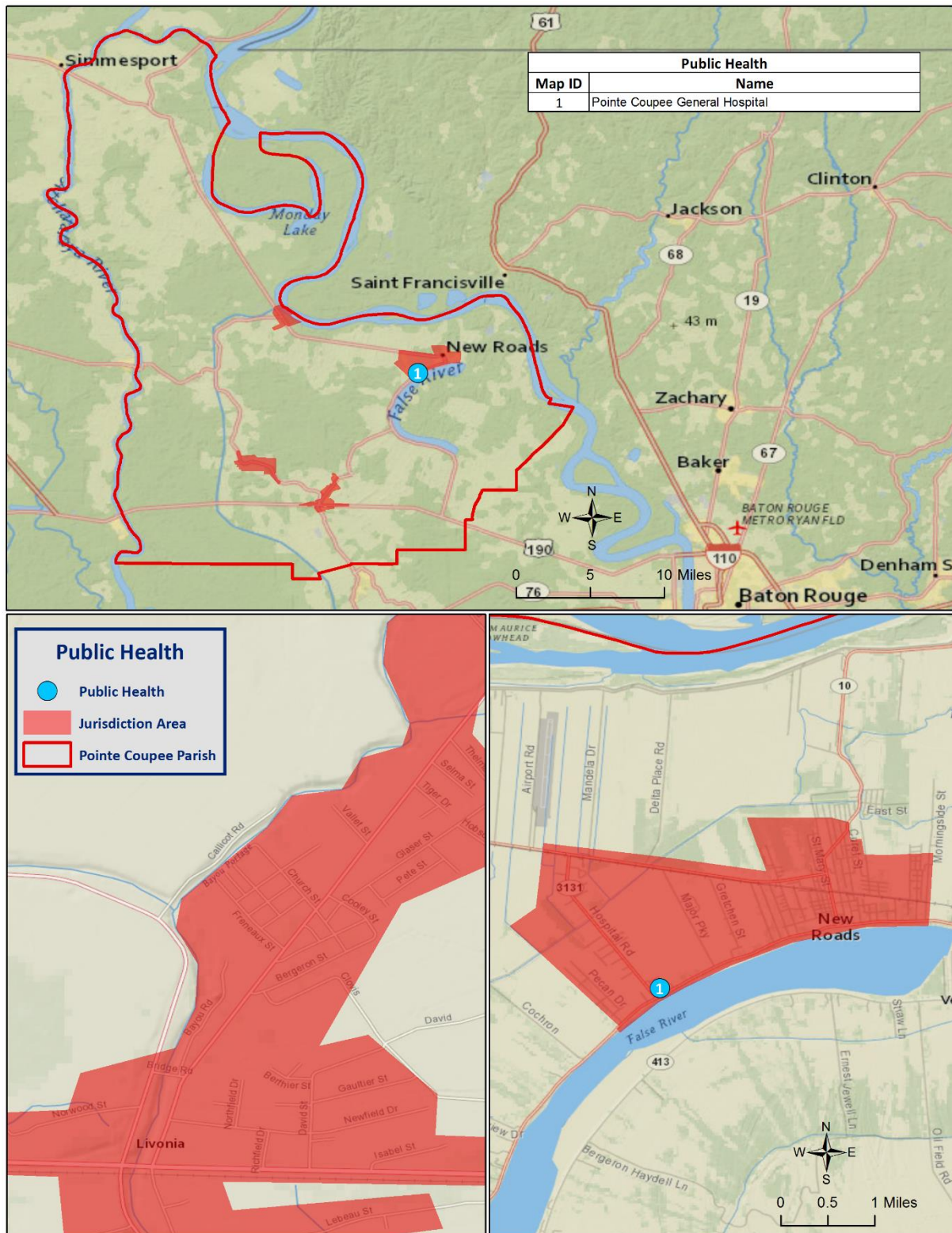
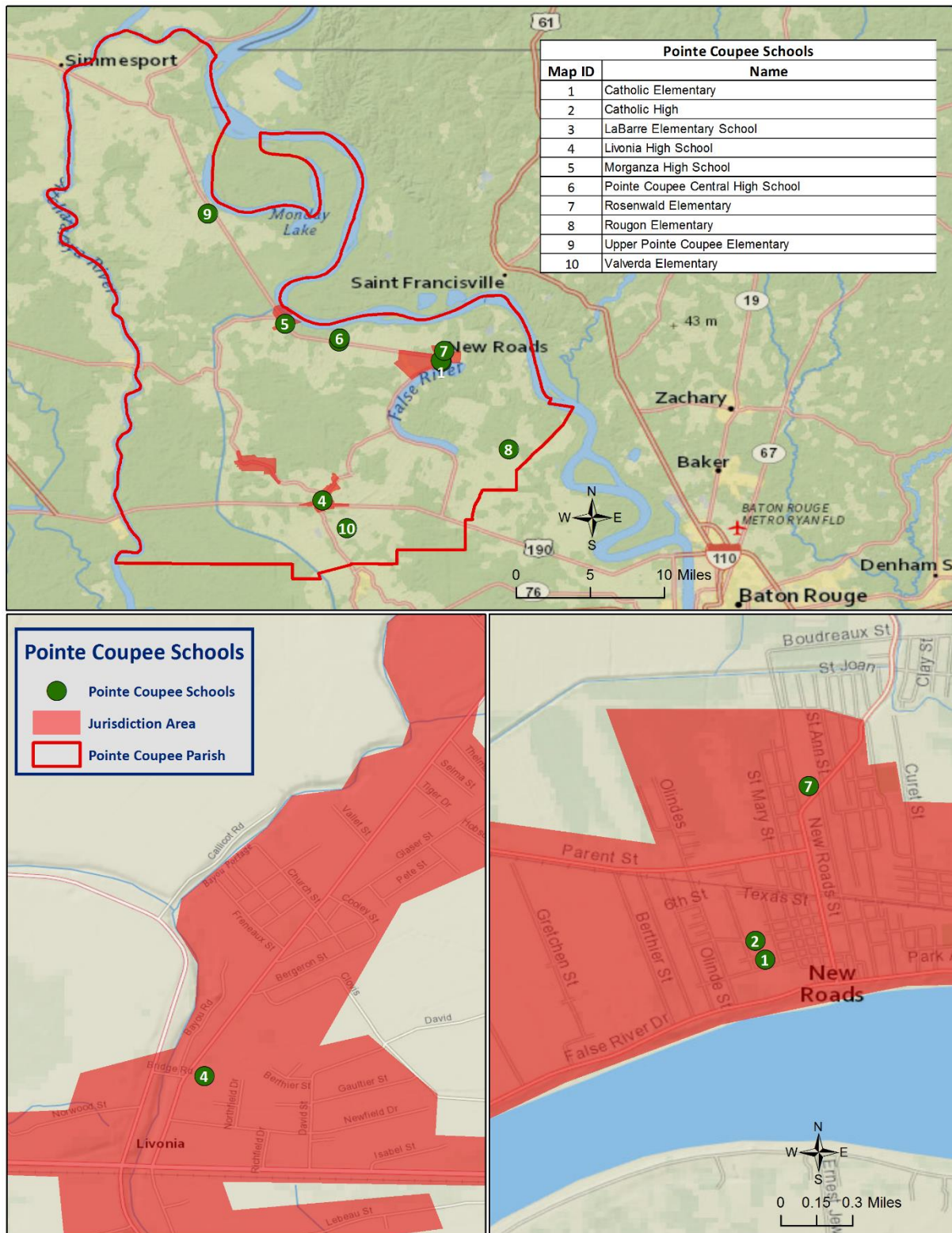


Figure 2-4: Public Health Buildings in Pointe Coupee Parish



Future Development Trends

Pointe Coupee Parish experienced a decline in population and slight growth in housing between the years of 2000 and 2014. Population declined from 22,759 in the year 2000 to 22,406 in 2014, while housing units grew from 10,297 to 11,214 from 2000 to 2014. The incorporated area of Livonia and the unincorporated areas of the parish are the only areas that experienced population growth from 2000 to 2010. From 2010 to 2014, all jurisdictions and unincorporated areas experienced a decline in population. 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 Pointe Coupee Parish

Total Population	Pointe Coupee Parish	Pointe Coupee (Unincorporated)	Fordoché	Livonia	Morganza	New Roads
1-Apr-00	22,759	14,799	943	1,379	641	4,997
1-Apr-10	22,771	14,970	927	1,440	609	4,825
1-Jul-14	22,406	14,745	910	1,419	598	4,734
Population Growth between 2000 – 2010	0.1%	1.2%	-1.7%	4.4%	-5.0%	-3.4%
Average Annual Growth Rate between 2000 – 2010	0.0%	0.1%	-0.2%	0.4%	-0.5%	-0.3%
Population Growth between 2010 – 2014	-1.6%	-1.5%	-1.8%	-1.5%	-1.8%	-1.9%
Average Annual Growth Rate between 2010 – 2014	-0.40%	-0.38%	-0.46%	-0.36%	-0.45%	-0.47%

Table 2-6: Housing Growth Rate for Pointe Coupee Parish

Total Housing Units	Pointe Coupee Parish	Pointe Coupee (Unincorporated)	Fordoché	Livonia	Morganza	New Roads
1-Apr-00	10,297	7,045	361	545	302	2,044
1-Apr-10	11,130	7,535	394	572	304	2,325
1-Jul-14	11,214	7,712	415	646	349	2,092
Housing Growth between 2000 – 2010	8.1%	7.0%	9.1%	5.0%	0.7%	13.7%
Average Annual Growth Rate between 2000 – 2010	0.8%	0.7%	0.9%	0.5%	0.1%	1.4%
Housing Growth between 2010 – 2014	0.8%	2.3%	5.3%	12.9%	14.8%	-10.0%
Average Annual Growth Rate between 2010 – 2014	0.2%	0.6%	1.3%	3.2%	3.7%	-2.5%

As shown in previous tables, Pointe Coupee Parish has experienced slight growth housing units and a decline in population. Housing growth rates grew at 0.8% annually from 2000 to 2010, and at 0.2% annually from 2010 to 2014. Population growth rates for the parish grew at an annual rate of 0.01% from 2000 to 2010, and declined at -0.4% annually from 2010 to 2014. From 2000 to 2010, the incorporated area of Livonia had the largest increase in population at 4.4%. The incorporated area of Morganza had the largest decrease in population during this time period at 5%. From 2010 to 2014, the incorporated area of New Roads experienced the largest decrease in population at -1.9%.

The incorporated area of New Roads experienced the largest increase in housing units from 2000 to 2010 at 13.7%, followed by the incorporated area of Fordoche at 9.1%. From 2010 to 2014, Morganza experienced the largest growth in housing units at an annual rate of 3.7% followed by the incorporated areas of Livonia at 3.2% annually. The incorporated area of New Roads experienced a -10% decline in population during this time period.

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 grow slightly within Pointe Coupee 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	11,235	2,159	2,180	2,196
Value of Structures	\$3,598,446,867	\$691,535,575	\$734,420,185	\$770,634,889.59
# of People	22,630	4,349	4,571	4,756
Tropical Cyclones				
Structures	11,235	11,235	11,342	11,427
Value of Structures	\$3,598,446,867	\$3,598,446,867	\$3,821,599,512	\$4,010,044,900
# of People	22,630	22,630	23,784	24,750

Land Use

The Pointe Coupee Parish Land Use table is provided on the next page. Residential, commercial, and industrial areas account for only 6% of the parish's land use. Agricultural land is the largest category at 175,481 acres, accounting for 47% of parish land. At 139,814 acres, wetlands account for 38% of parish lands, while 20,801 acres of open water account for 6% of parish lands. The parish also consists of 13,374 acres of forest land areas, accounting for 4% of all parish lands.

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

Land Use	Acres	Percentage
Agricultural Land, Cropland, and Pasture	175,481	47%
Wetlands	139,814	38%
Forest Land (not including forested wetlands)	13,374	4%
Urban/Development	20,902	6%
Water	20,801	6%

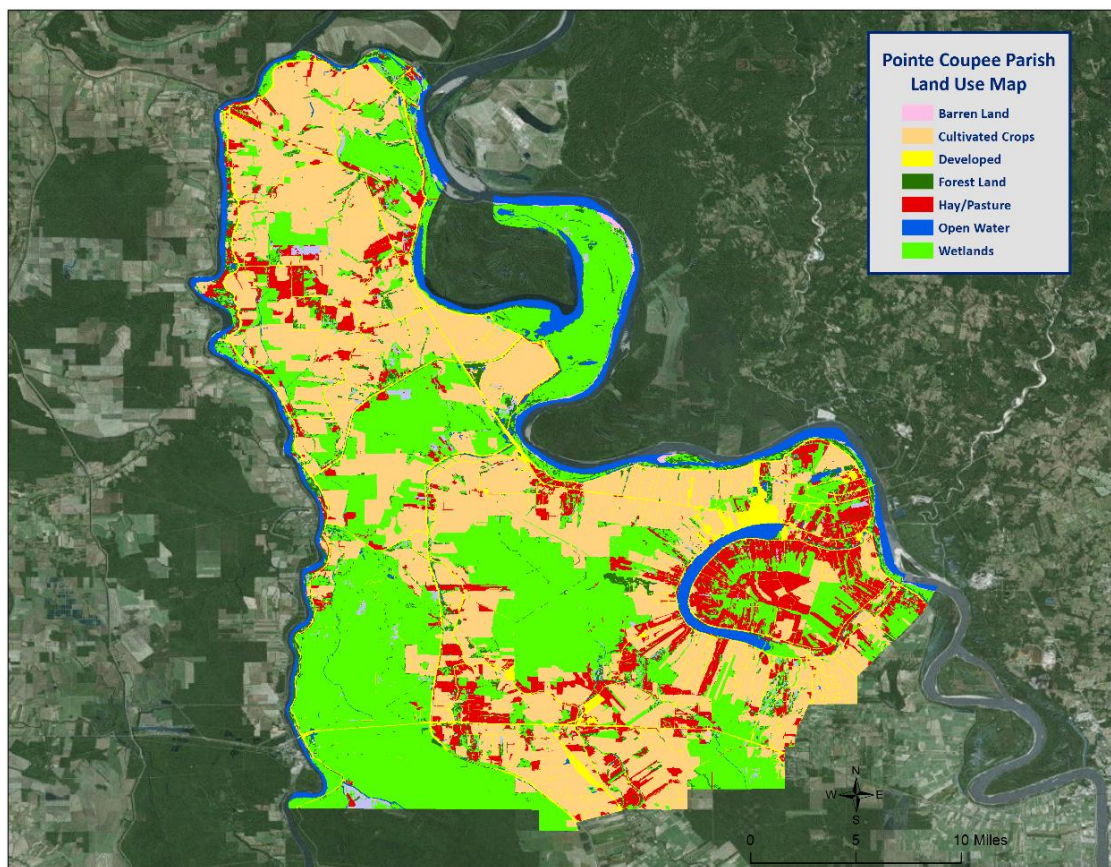


Figure 2-6: Pointe Coupee Parish Land Use Map
(Source: USGS Land Use Map)

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 Pointe Coupee Parish at the time this plan went to publication (*Figure 2-7*).

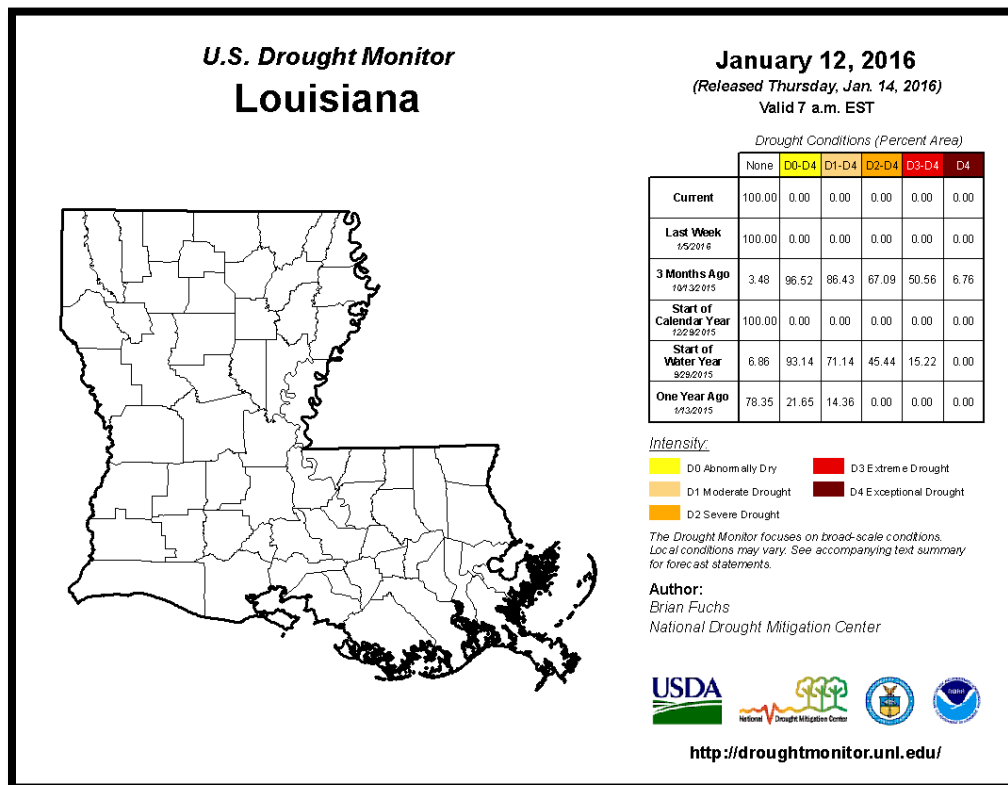


Figure 2-7: United States Drought Monitor for the State of Louisiana and its Parishes
(Source: The National Drought Mitigation Center)

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 Pointe Coupee Parish is on the agricultural community.

Previous Occurrences / Extents

The SHELDUS database reports a total of one drought event occurring within the boundaries of Pointe Coupee Parish between the years of 1990 to 2015. Below, [Table 2-10](#) identifies the date of occurrence, estimated crop damage, and severity of the event that has occurred in Pointe Coupee Parish. Based on previous occurrences, and in accordance with the Palmer Drought Index, the worst case scenario for drought in Pointe Coupee Parish would be a severe drought event.

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

Date	Crop Damage	Palmer Classification
December 2000	\$6,171,206	Severe Drought

Frequency / Probability

Based on previous occurrences of one drought event in 25 years, the probability of drought occurrence in the planning area in any given year is 4%.

Estimated Potential Losses

According to the SHELDUS database, there has been one drought event that has caused some level of crop damage. The total agricultural damage from this event is \$6,171,206, with an average cost of \$6,171,206 per drought event. When annualizing the total cost over the 25-year record, total annual losses based on drought is estimated to be \$246,848. [Table 2-11](#) presents an analysis of agricultural exposure that is susceptible to drought by major crop type for Pointe Coupee Parish.

*Table 2-11: Agricultural Exposure by Crop Type for Drought in Pointe Coupee Parish
(Source: LSU Ag Center 2014 Parish Totals)*

Agricultural Exposure by Type for Drought						
Cotton	Soybeans	Sugarcane	Pecans	Wheat	Rice	Total
\$2,248,686	\$54,916,322	\$44,352,292	\$4,653,300	\$8,329,676	\$1,491,868	\$115,992,144

There have been no reported injuries or deaths as a direct result to drought in Pointe Coupee 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](#).

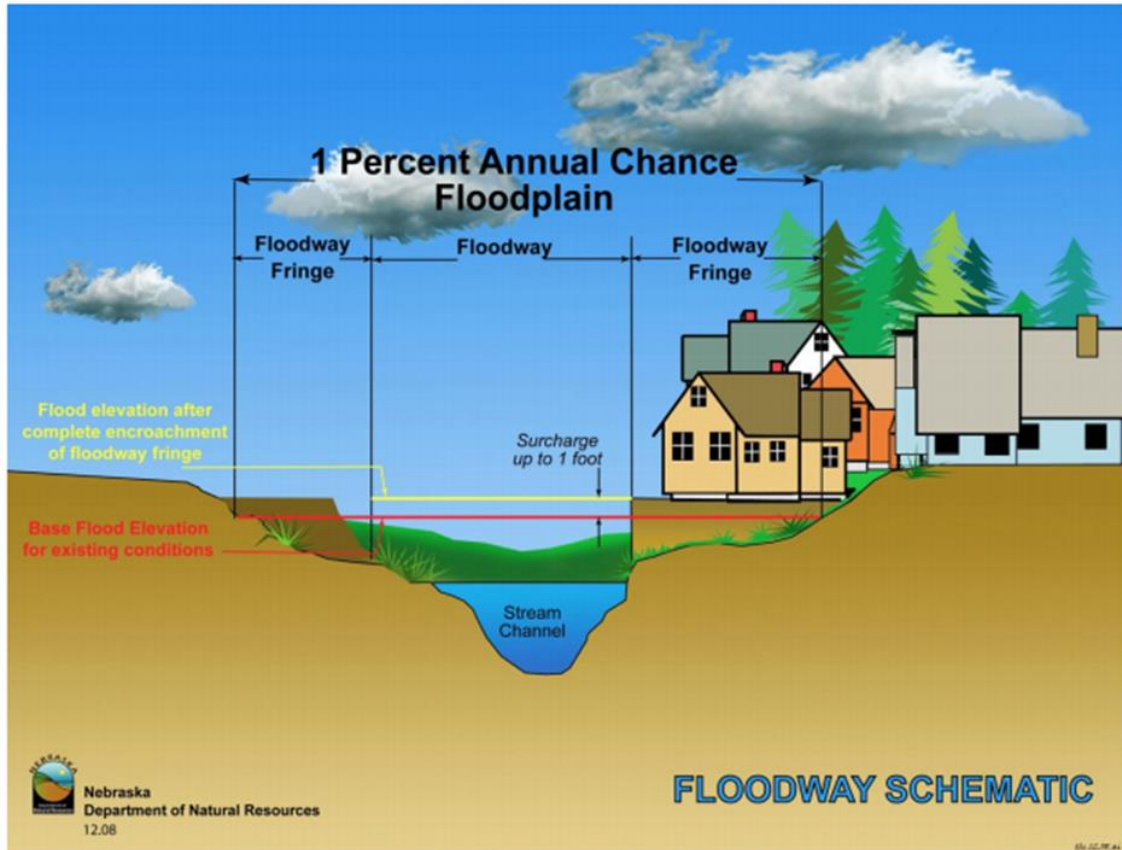


Figure 2-8: Schematic of 100-Year Floodplain. The Special Flood Hazard Area (SFHA) extends to the end of the floodway fringe.

(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 Pointe Coupee Parish are provided in the table below:

Table 2-12: Repetitive Loss Structures for Pointe Coupee Parish

Jurisdiction	Number of Structures	Residential	Commercial	Government	Total Claims	Total Claims Paid	Average Claim Paid
Pointe Coupee Parish (Unincorporated)	321	310	11	0	1,508	16,089,496	\$10,669
Fordoché	0	0	0	0	0	\$0	\$0
Livonia	1	1	0	0	2	\$43,928	\$21,964
Morganza	1	1	0	0	7	\$64,291	\$9,184
New Roads	22	22	0	0	50	\$274,573	\$5,491
Total	345	334	11	0	1,567	\$16,472,288	\$10,512

Of the 345 repetitive loss structures, 330 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 330 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 area of New Roads and in the unincorporated areas of Pointe Coupee Parish.

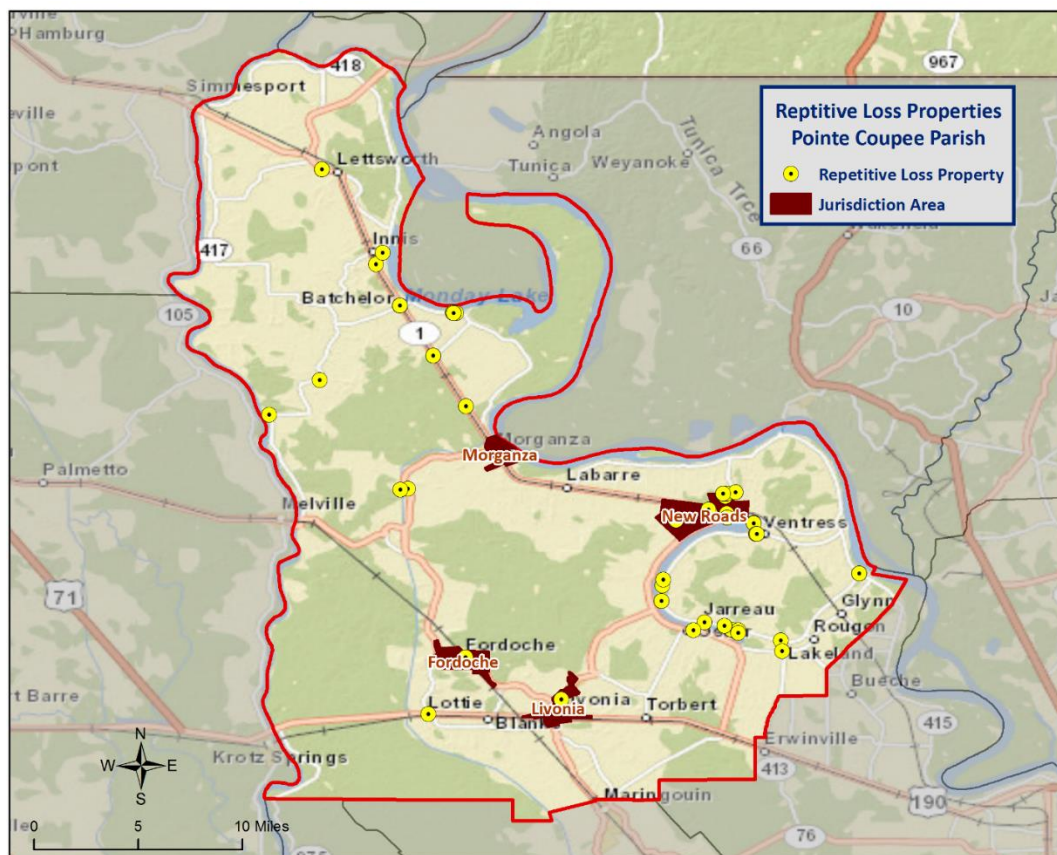


Figure 2-9: Repetitive Loss Properties in Pointe Coupee Parish

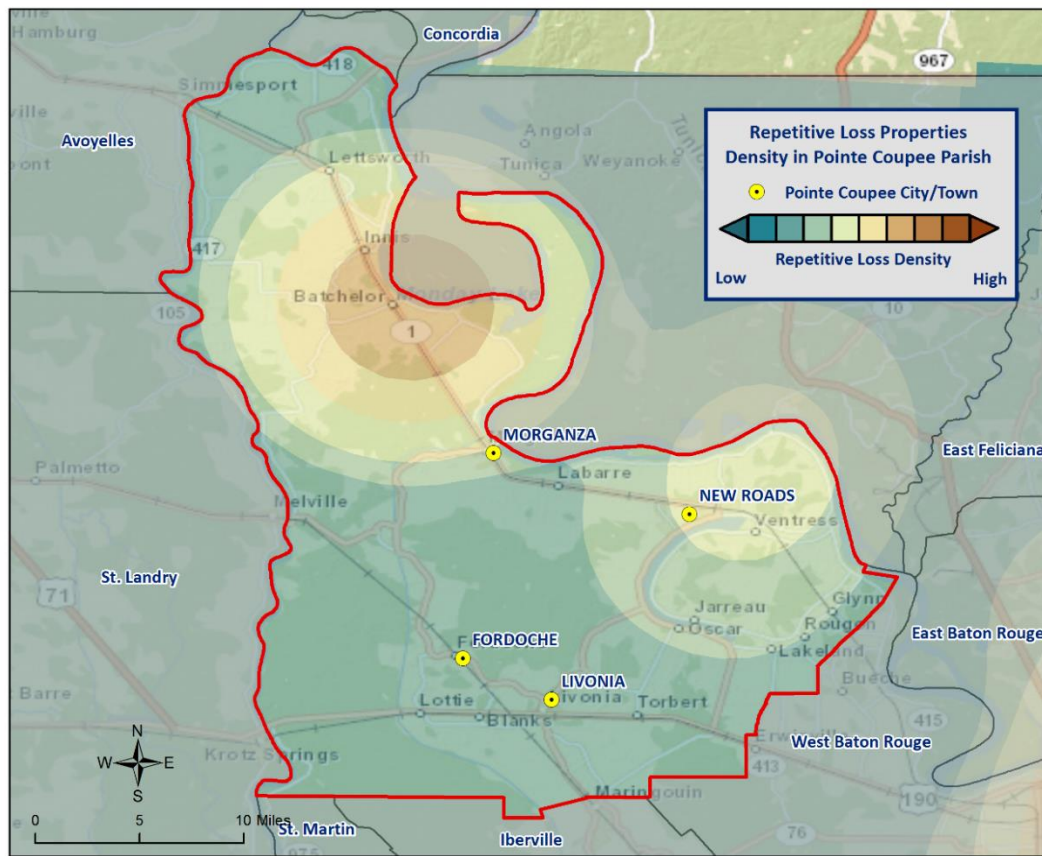


Figure 2-10: Repetitive Loss Property Densities in Pointe Coupee Parish

National Flood Insurance Program

Flood insurance statistics indicate that Pointe Coupee Parish has 1,287 flood insurance policies with the NFIP, with total annual premiums of \$789,889. Pointe Coupee Parish and the incorporated areas of Fordoche, Livonia, Morganza, and New Roads all participate in the NFIP. Pointe Coupee 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 Pointe Coupee Parish are provided in the tables on the next page.

Pointe Coupee 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 floodplain manager for the Jurisdiction of New Roads will continue to seek and attend floodplain management and NFIP continuing education.

Table 2-13: Summary of NFIP Policies for Pointe Coupee Parish

Location	No. of Insured Structures	Total Insurance Coverage Value	Annual Premiums Paid	No. of Insurance Claims Filed Since 1978	Total Loss Payments
Pointe Coupee (Unincorporated)	1,026	\$218,372,500	\$650,909	2,647	\$22,251,873
Fordoche	19	\$5,250,000	\$6,553	8	\$26,550
Livonia	37	\$9,824,900	\$17,622	2	\$43,928
Morganza	28	\$7,445,000	\$12,407	39	\$169,172
New Roads	177	\$43,028,100	\$102,398	108	\$734,037
Total	1,287	\$283,920,500	\$789,889	2,804	\$23,225,560

*While the unincorporated areas of Pointe Coupee Parish, as well as the incorporated areas of Fordoche, Livonia, Morganza, and New Roads all have active NFIP policies, the jurisdictions will continue to promote NFIP participation through education and outreach.

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

CID	Community Name	Initial FHBM Identified	Initial FIRM Identified	Current Effective Map Date	Date Joined the NFIP	Tribal
220140#	Pointe Coupee Parish	11/29/1977	7/16/1981	11/16/1995	7/16/1981	No
220141	Fordoche, Village of	7/11/1975	-	(NSFHA)	5/25/1978	No
220142	Livonia, Town of	3/5/1976	-	(NSFHA)	5/25/1978	No
220143	Morganza, Village of	1/9/1976	-	(NSFHA)	5/25/1978	No
220144#	New Roads, Town of	2/10/1974	4/15/1980	11/16/1995	4/15/1980	No

According to the Community Rating System (CRS) list of eligible communities dated June 1, 2014, Pointe Coupee Parish and the incorporated areas of Fordoche, Livonia, Morganza, and New Roads do not participate in the CRS.

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 Pointe Coupee

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 Pointe Coupee 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 False River or Mississippi River crests at flood stage levels, causing extensive flooding in low-lying areas.

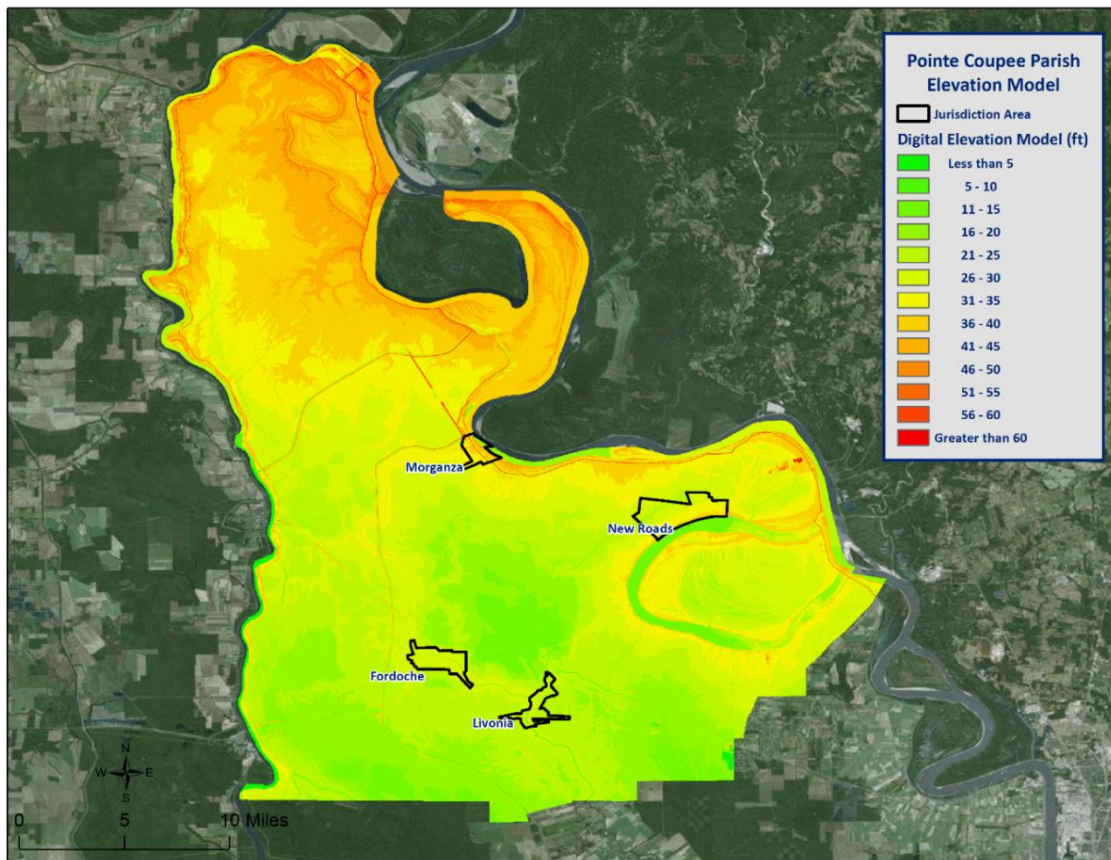


Figure 2-11: Elevation throughout Pointe Coupee Parish

Looking at the digital elevation model (DEM) for Pointe Coupee Parish on the previous page is instructive in visualizing where the low lying and high risk areas are for the parish. Elevations in the parish range from near sea level to approximately 60 feet. The highest elevations in the parish are approximately 60 feet, located in the northern unincorporated areas of the parish. The incorporated areas of the parish range in elevation from 26 feet to 36 feet, with incorporated area of Livonia averaging 26 feet, Fardoche and New Roads averaging 30 feet, and Morganza averaging 36 feet. The lowest elevations of the parish are less than 5 feet, and are located in the southern unincorporated areas of Pointe Coupee Parish.

Location

Pointe Coupee Parish has experienced significant flooding in its history and can expect more in the future. Many parts of the parish are located in the 100-year floodplain. Flooding along the Mississippi and Atchafalaya Rivers results more often from upstream runoff than local rainfall. Major flooding on these waterways have serious impacts on river and barge traffic, especially along the Mississippi River.

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

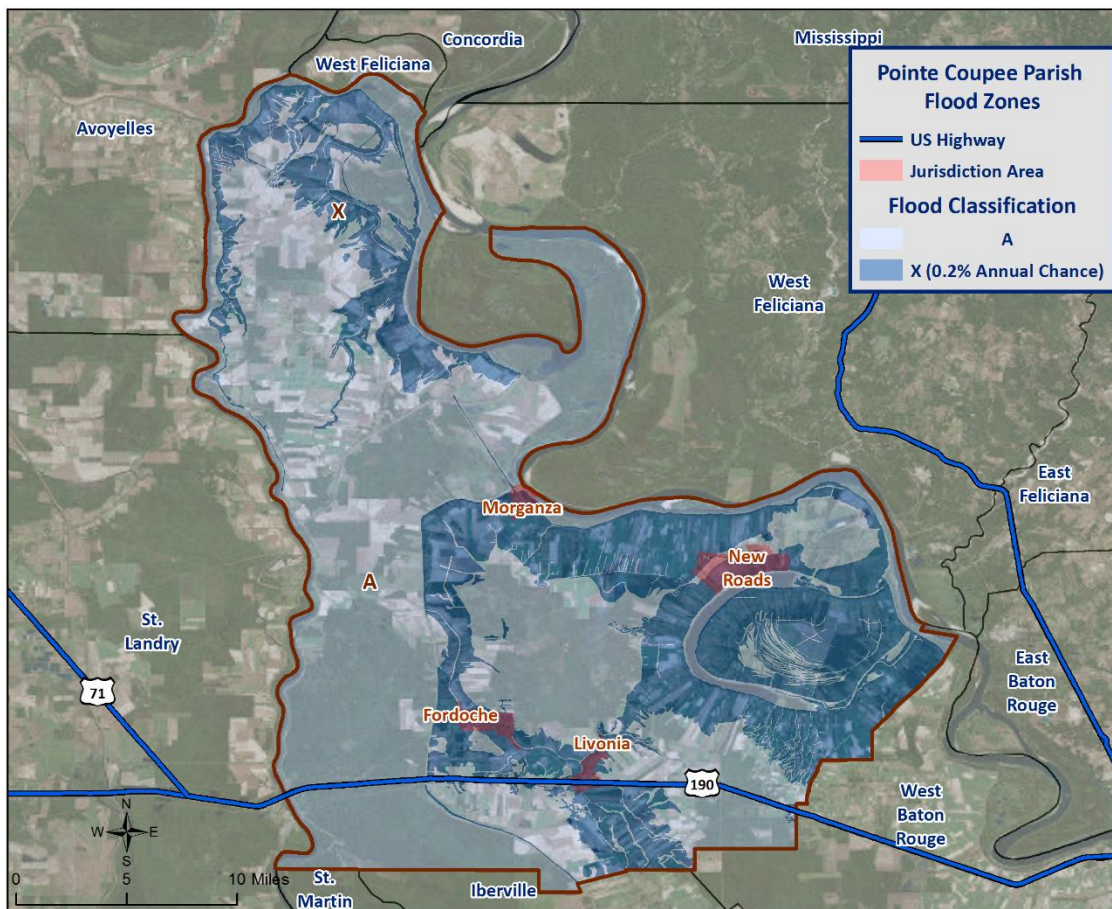


Figure 2-12: Pointe Coupee Parish Areas within the Flood Zones

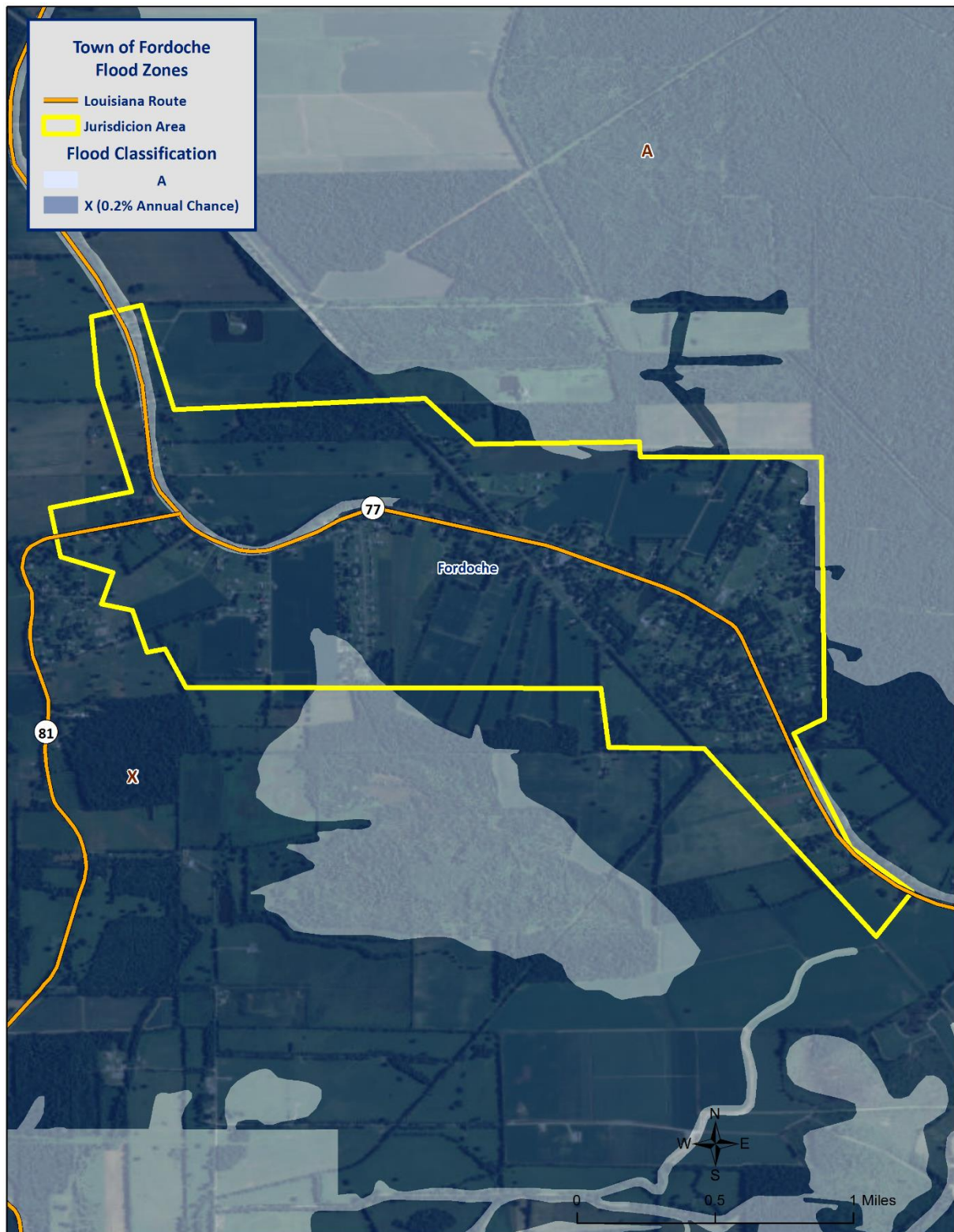


Figure 2-13: Town of Fordoche Areas within the Flood Zones

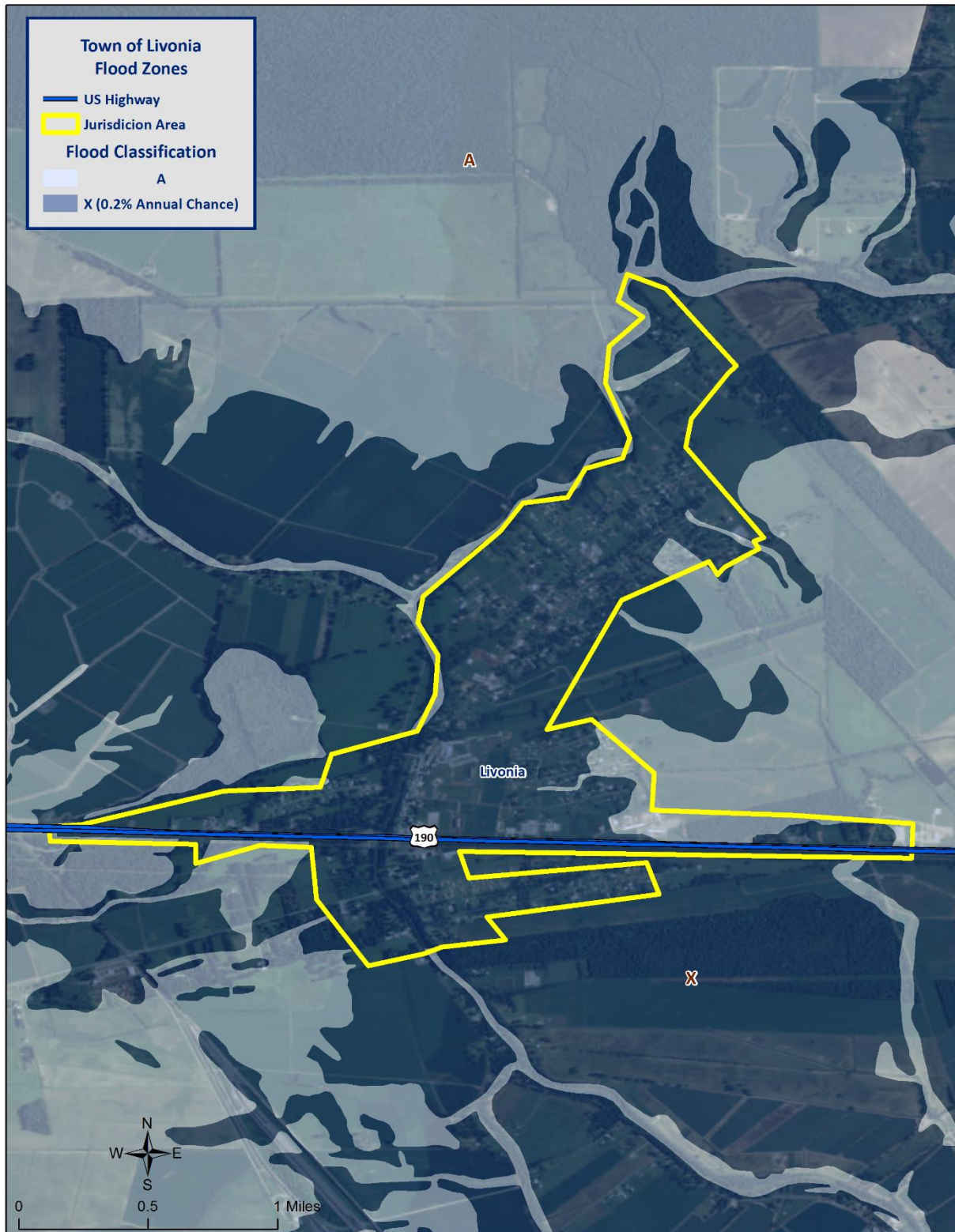


Figure 2-14: Town of Livonia Areas within the Flood Zones

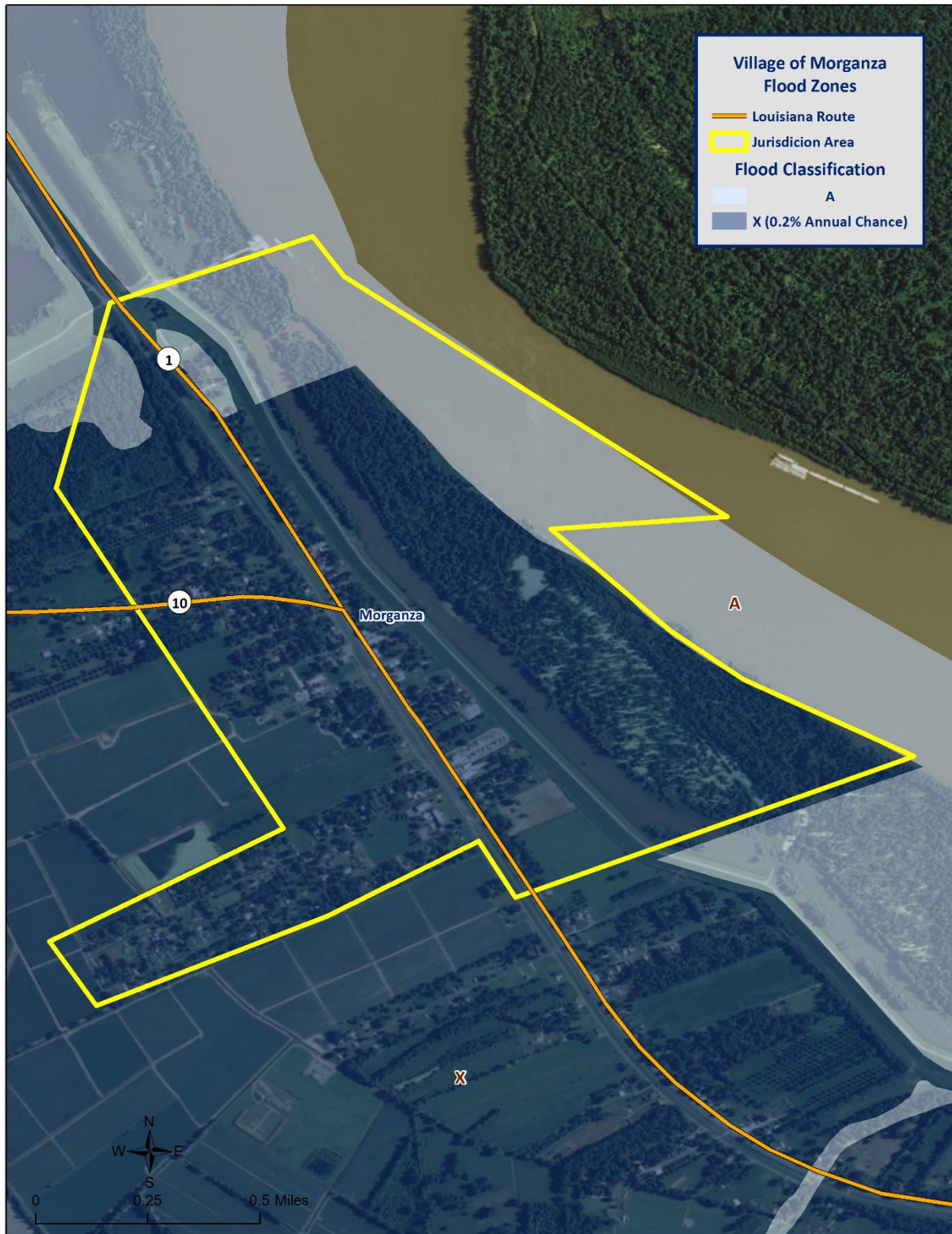


Figure 2-15: Village of Morganza Areas within the Flood Zones

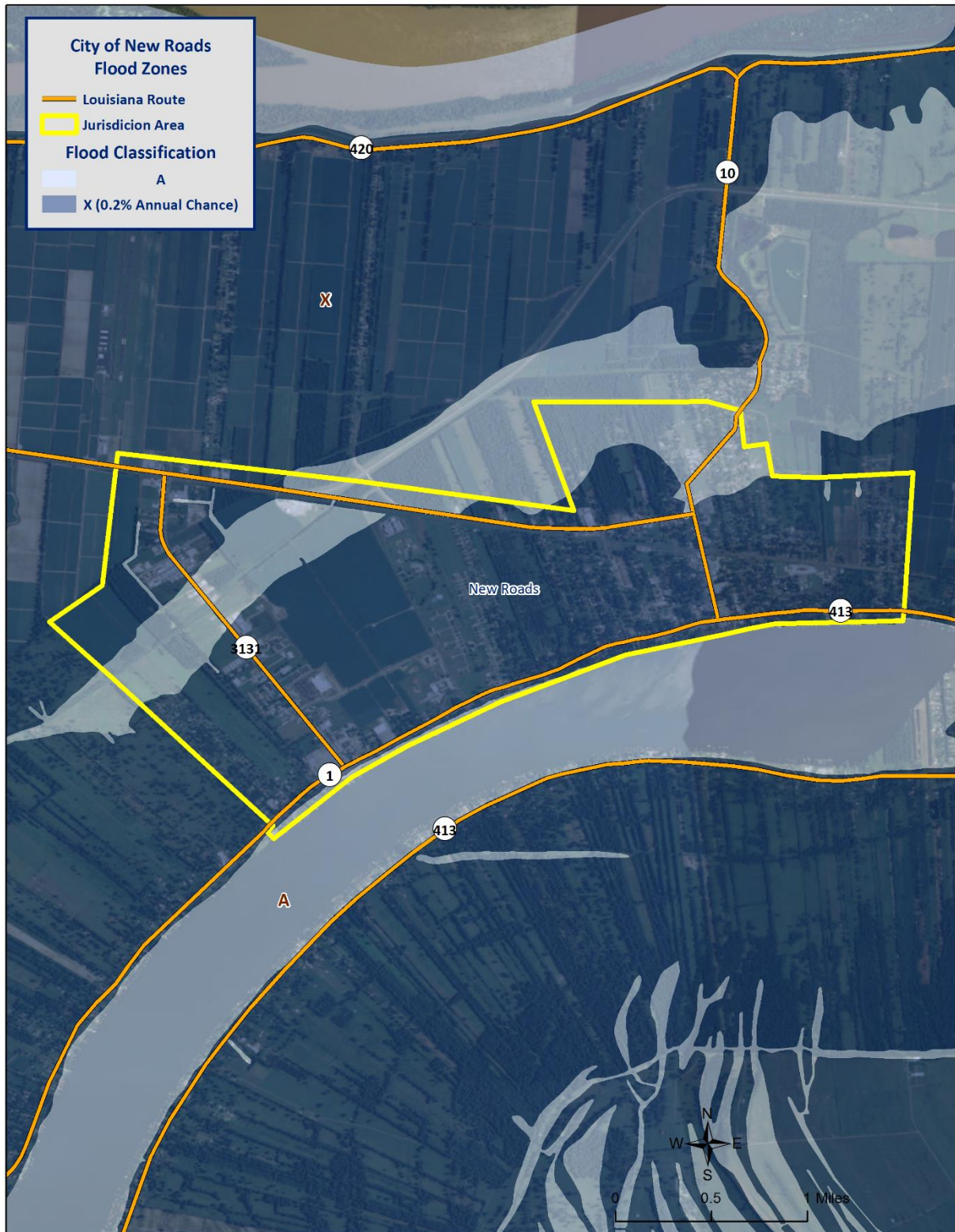


Figure 2-16: City of New Roads Areas within the Flood Zones

Previous Occurrences / Extents

Historically, there have been 13 flooding events that have created significant flooding in Pointe Coupee Parish between 1990 and 2015. Below is a brief synopsis of the three flooding events that have occurred since 2010, including flooding events that have occurred since the parish's last planning update.

Table 2-15: Historical Floods in Pointe Coupee Parish with Locations from 2010 - 2015

Date	Extents	Type of Flooding	Estimated Damages	Location
August 17, 2010	Slow moving thunderstorms caused flash flooding in the New Roads area. Street flooding and homes along several local streets were flooded including New Roads Street, Louisiana Street, Richey Street, Janis Street, and Berthier Street.	Flash Flood	\$0	NEW ROADS
August 18, 2010	Slow moving thunderstorms caused flash floods in Morganza. Louisiana Highway 10 was one of the streets flooded.	Flash Flood	\$0	MORGANZA
April 14, 2013	Thunderstorms caused flash floods in the New Roads area. Several local streets including Highway 81 and Romalice Drive were flooded.	Flash Flood	\$20,000	NEW ROADS

Since 2010, there have been no significant flooding events in the unincorporated areas of the parish and in the incorporated areas of Livonia and Fordoche.

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 four feet can be expected in the unincorporated areas of the parish. The incorporated areas of New Roads and Morganza can expect flood depths from two to four feet, while the incorporated areas of Fordoche and Livonia can expect flooding levels of approximately one to three feet.

Frequency / Probability

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

Table 2-16: Annual Flood Probabilities for Pointe Coupee

Jurisdiction	Annual Probability	Return Frequency
Pointe Coupee (Unincorporated)	24%	4 – 5 years
Fordoche	20%	5 years
Livonia	20%	5 years
Morganza	24%	4 – 5 years
New Roads	44%	2 – 3 years

Based on historical record, the overall flooding probability for the entire Pointe Coupee planning area is 52%, with 13 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. *Table 2-17* shows the total economic losses that would result from this occurrence.

*Table 2-17: Estimated Losses in Pointe Coupee Parish from a 100-Year Flood Event
(Source: Hazus 2.2)*

Jurisdiction	Estimated Total Losses from 100-Year Flood Event
Pointe Coupee (Unincorporated)	\$4,168,000
Fordoche	\$23,000
Livonia	\$8,000
Morganza	\$1,000
New Roads	\$64,000
Total	\$4,168,000

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 2-18: Estimated 100-Year Flood Losses for Unincorporated Pointe Coupee by Sector
(Source: Hazus 2.2)*

Pointe Coupee (Unincorporated)	Estimated Total Losses from 100-Year Flood Event
Agricultural	\$313,000
Commercial	\$181,000
Government	\$0
Industrial	\$1,699,000
Religious / Non-Profit	\$0
Residential	\$1,995,000
Schools	\$75,000
Total	\$4,263,000

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

Fordoche	Estimated Total Losses from 100-Year Flood Event
Agricultural	\$0
Commercial	\$0
Government	\$0
Industrial	\$0
Religious / Non-Profit	\$0
Residential	\$23,000
Schools	\$0
Total	\$23,000

*Table 2-20: Estimated 100-Year Flood Losses for Unincorporated Livonia by Sector
(Source: Hazus 2.2)*

Livonia	Estimated Total Losses from 100-Year Flood Event
Agricultural	\$0
Commercial	\$0
Government	\$0
Industrial	\$0
Religious / Non-Profit	\$0
Residential	\$8,000
Schools	\$0
Total	\$8,000

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

Morganza	Estimated Total Losses from 100-Year Flood Event
Agricultural	\$0
Commercial	\$0
Government	\$0
Industrial	\$0
Religious / Non-Profit	\$0
Residential	\$1,000
Schools	\$0
Total	\$1,000

*Table 2-22: Estimated 100-Year Flood Losses for Unincorporated New Roads by Sector
(Source: Hazus 2.2)*

New Roads	Estimated Total Losses from 100-Year Flood Event
Agricultural	\$0
Commercial	\$0
Government	\$0
Industrial	\$0
Religious / Non-Profit	\$0
Residential	\$64,000
Schools	\$0
Total	\$64,000

Threat to People

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

*Table 2-23: 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
Pointe Coupee (Unincorporated)	14,991	3,256	21.7%
Fordoche	928	41	4.4%
Livonia	1,442	78	5.4%
Morganza	610	162	26.6%
New Roads	4,831	845	17.5%
Total	22,802	4,382	19.2%

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

*Table 2-24: Vulnerable Populations Susceptible to a 100-Year Flood Event in Unincorporated Pointe Coupee Parish
(Source: Hazus 2.2)*

Pointe Coupee (Unincorporated)		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	3,256	21.7%
Persons Under 5 Years	215	6.6%
Persons Under 18 Years	778	23.9%
Persons 65 Years and Over	443	13.6%
White	2,064	63.4%
Minority	1,192	36.6%

*Table 2-25: Vulnerable Populations Susceptible to a 100-Year Flood Event in Fordoche
(Source: Hazus 2.2)*

Fordoche		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	41	4.4%
Persons Under 5 Years	2	4.7%
Persons Under 18 Years	7	17.7%
Persons 65 Years and Over	6	13.9%
White	37	90.2%
Minority	4	9.8%

*Table 2-26: Vulnerable Populations Susceptible to a 100-Year Flood Event in Livonia
(Source: Hazus 2.2)*

Livonia		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	78	5.4%
Persons Under 5 Years	4	5.2%
Persons Under 18 Years	18	22.6%
Persons 65 Years and Over	8	10.9%
White	70	90.2%
Minority	8	9.9%

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

Morganza		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	162	26.6%
Persons Under 5 Years	10	6.4%
Persons Under 18 Years	24	15.1%
Persons 65 Years and Over	31	19.2%
White	116	71.6%
Minority	46	28.4%

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

New Roads		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	845	17.5%
Persons Under 5 Years	59	6.9%
Persons Under 18 Years	137	16.3%
Persons 65 Years and Over	164	19.4%
White	332	39.3%
Minority	513	60.7%

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 following tables display the TORRO Hailstorm Intensity Scale, along with a spectrum of hailstone diameters and their everyday equivalents.

Table 2-29: 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 2-30: Spectrum of Hailstone Diameters and their Everyday Equivalent
(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 table on the next page.

*Table 2-31: High Winds Categorized by Source, Frequency, and Duration
(Source: Making Critical Facilities Safe from High Wind, FEMA)*

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

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

The table on the next page 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 2-32: 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 table on the next page outlines the lightning activity level that is a measurement of lightning activity.

Table 2-33: 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 Pointe Coupee Parish is equally at risk for hailstorms.

Previous Occurrences / Extents

The SHELDUS database reports 22 significant hailstorm events occurring within the boundaries of Pointe Coupee Parish between the years of 1990-2015. According to the National Climatic Data Center, hailstorm diameters experienced in Pointe Coupee Parish have ranged from 0.75 inches to 1.75 inches since 1990. The most frequently recorded hail size has been 1.75 inch diameters. [Figure 2-17](#) displays the density of hailstorms in Pointe Coupee Parish and adjacent parishes. Based on the National Climatic Data Center dataset, [Table 2-34](#) provides an overview of hailstorms that have impacted the Pointe Coupee Parish planning area since 2010. Pointe Coupee 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 area of Morganza.

Table 2-34: Previous Occurrences of Hailstorms in Pointe Coupee Parish

(Source: NCDC)

Date	Recorded Hail Size (inches)	Location
March 29, 2011	1	LETTSWORTH
March 30, 2011	1	FORDOCHE
June 4, 2011	1	NEW ROADS
September 3, 2013	1	NEW ROADS
July 5, 2015	1.75	LIVONIA

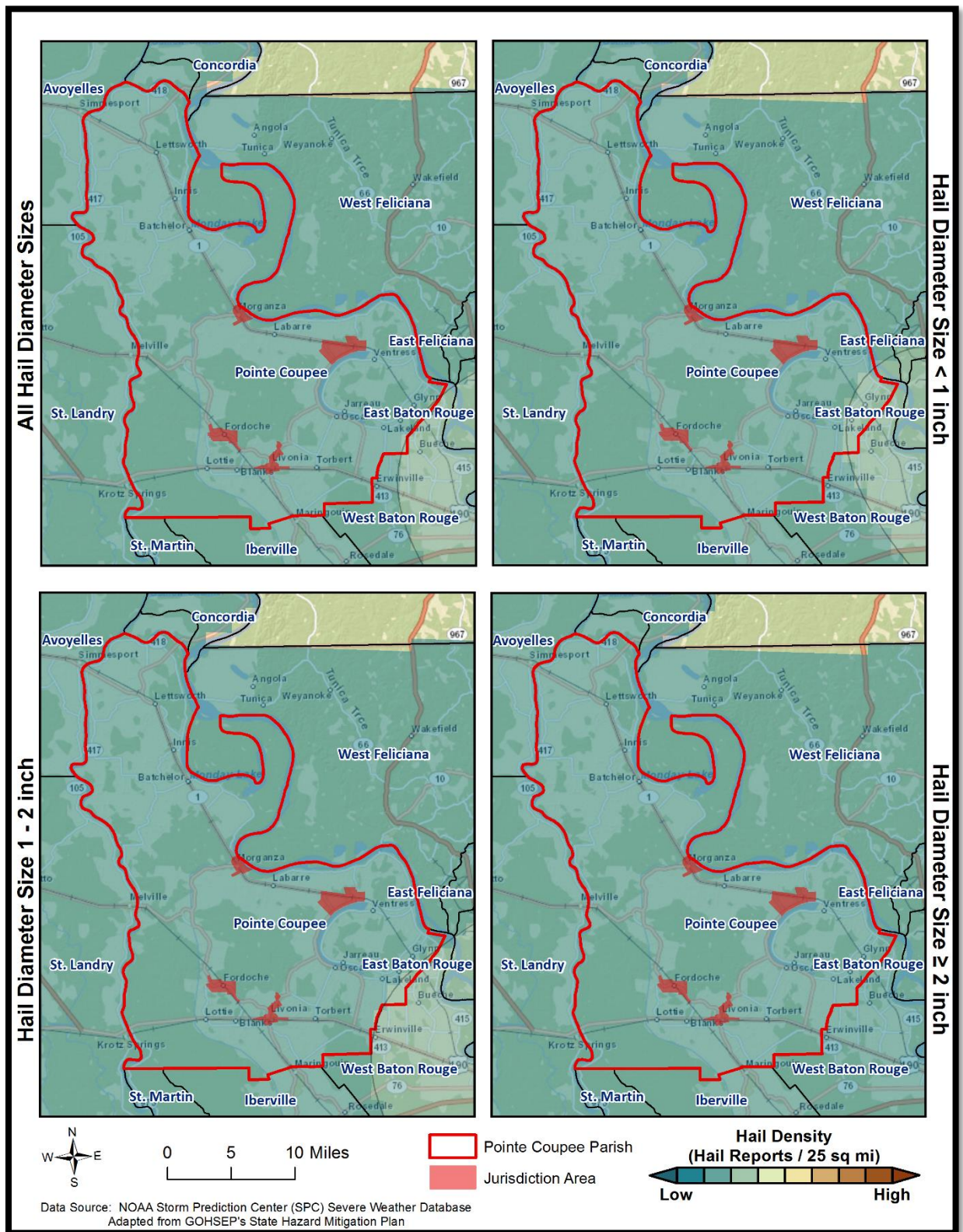


Figure 2-17: Density of Hailstorms by Diameter from 1950-2012
(Source: State of Louisiana Hazard Mitigation Plan 2014)

Frequency

Based on historical data from SHEL DUS for the past 25 years, it is estimated the probability of occurrence for a significant hailstorm event is approximately 88%. The probability was determined based on a review of significant hail data that has caused damages in the last 25 years, in which Pointe Coupee Parish has had 22 recorded events.

Estimated Potential Losses

According to the SHEL DUS database, property damage due to hailstorms in Pointe Coupee Parish have totaled approximately \$4,568 since 1990. To estimate the potential losses of a hail 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 SHEL DUS (1990 – 2015). This provides an annual estimated potential loss of \$183. *Table 2-35* provides an estimate of potential property losses for Pointe Coupee Parish.

Table 2-35: Estimated Annual Property Losses in Pointe Coupee Parish from Hailstorms

Estimated Annual Potential Losses from Hailstorms for Pointe Coupee Parish				
Unincorporated Pointe Coupee Parish (65.7% of Population)	Fordoche (4.1% of Population)	Livonia (6.3% of Population)	Morganza (2.7% of Population)	New Roads (21.2% of Population)
\$120	\$7	\$12	\$5	\$39

There have been no deaths or injuries due to hailstorms from 1990 – 2015 in Pointe Coupee 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 Pointe Coupee Parish is equally at risk for high winds.

Previous Occurrences / Extents

The SHEL DUS database reports a total of 67 thunderstorm wind events occurring within the boundaries of Pointe Coupee Parish between the years of 1990 to 2015. The significant thunderstorm wind events experienced in Pointe Coupee Parish have ranged in wind speed from 58 mph to 74 mph. Pointe Coupee Parish can expect to receive thunderstorm winds up to 75 mph for future high wind events. The table on the next page provides an overview of significant high wind events over the last five years.

Table 2-36: Previous Occurrences for Thunderstorm High Wind Events

Location	Date	Recorded Wind Speeds (mph)	Property Damage	Crop Damage
SHEXNAYDER	June 21, 2010	63	\$5,428	\$0
LIVONIA	February 1, 2011	69	\$2,631	\$0
NEW ROADS	April 4, 2011	69	\$526	\$0
NEW ROADS	June 4, 2011	69	\$3,157	\$0
VENTRESS	June 4, 2011	69	\$2,105	\$0
PARLANGE	June 11, 2011	69	\$2,105	\$0
LACOUR	June 21, 2011	69	\$2,105	\$0
NEW ROADS	August 19, 2011	63	\$1,052	\$0
OSCAR	March 31, 2013	74	\$2,541	\$0
BATCHELOR	June 10, 2014	60	\$1,000	\$0
KENMORE	June 24, 2014	60	\$2,000	\$0
INNIS	June 24, 2014	70	\$20,000	\$0
NEW ROADS	October 13, 2014	69	\$0	\$0
OSCAR	December 23, 2014	60	\$0	\$0
NEW ROADS	April 27, 2015	69	\$0	\$0
LIVONIA	May 12, 2015	63	\$0	\$0
FROGMORE	May 12, 2015	63	\$0	\$0
FALSE RIVER	July 5, 2015	63	\$0	\$0

Since 2010, there have been no significant wind events that have impacted the incorporated areas of Fardoche and Morganza.

Frequency

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

Estimated Potential Losses

Since 1990, there have been 67 significant wind events that have resulted in property damages according to the SHEL DUS database. The total property damages associated with those storms have totaled \$193,746. 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 SHEL DUS (1990 – 2015). This provides an annual estimated potential loss of \$7,750. The table on the next page provides an estimate of potential property losses for Pointe Coupee Parish.

Table 2-37: Estimated Annual Property Losses in Pointe Coupee Parish Resulting from High Winds

Estimated Annual Potential Losses from Thunderstorm Winds for Pointe Coupee Parish				
Unincorporated Pointe Coupee Parish (65.7% of Population)	Fordoche (4.1% of Population)	Livonia (6.3% of Population)	Morganza (2.7% of Population)	New Roads (21.2% of Population)
\$104,647	\$3,920	\$3,631	\$87,244	\$24,734

There have been no reported injuries or 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 Pointe Coupee Parish.

Previous Occurrences / Extents

The SHELUDS database reports a total of four lightning events occurring within the boundaries of Pointe Coupee Parish between the years of 1990-2015. The SHELUDS 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 Pointe Coupee Parish, which occur on a nearly monthly basis. The planning area can expect to have a lightning density of 9-10 flashes per sq. mile per year. The table below provides an overview of significant lightning strikes over the last five years:

*Table 2-38: Previous Occurrences of Significant Lightning Strikes in Pointe Coupee Parish from 2010-2015
(Source: NCDC and SHELUDS)*

Location	Date	Summary	Property Damage
WICKLIFFE	August 17, 2010	Pointe Coupee Law Enforcement reported a home on fire in Ventress due to lightning.	\$21,713
OSCAR	June 11, 2011	A lightning strike started a fire at a camp in Oscar.	\$1,052

Since 2010, there have been no lightning events that have caused property damage or loss of life in the incorporated areas of Fordoche, Livonia, Morganza, and New Roads.

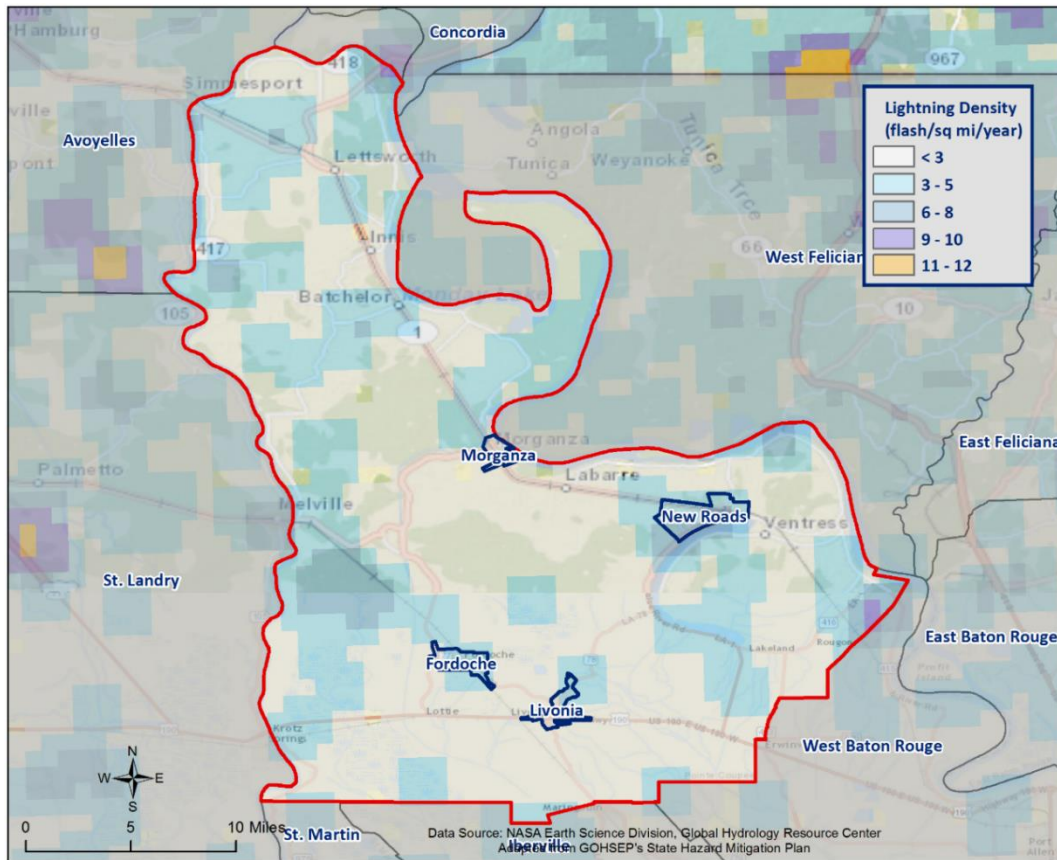


Figure 2-18: Lightning Density Reports for Pointe Coupee Parish

Frequency

Lightning can strike anywhere and is produced by every thunderstorm, so the chance of lightning occurring in Pointe Coupee Parish is high. However, lightning that meets the definition that is used by SHELUDS and the NCDL that actually results in damages to property and injury or death is a less likely event. According to SHELUDS, there have been four lightning events that have caused property damages or injuries over the last 25 years, establishing an annual probability of 16%.

Estimated Potential Losses

Since 1990, there have been four significant lightning events that have resulted in property damages according to the SHELUDS database. The total property damages associated with lightning events totaled \$32,983. 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 SHELUDS (1990 – 2015). This provides an annual estimated potential loss of \$1,319. The table on the next page provides an estimate of potential property losses for Pointe Coupee Parish.

Table 2-39: Estimated Annual Property Losses in Pointe Coupee Parish from Lightning

Estimated Annual Potential Losses from Lightning for Pointe Coupee Parish				
Unincorporated Pointe Coupee Parish (65.7% of Population)	Fordoche (4.1% of Population)	Livonia (6.3% of Population)	Morganza (2.7% of Population)	New Roads (21.2% of Population)
\$867	\$54	\$83	\$35	\$280

There have been no reported injuries or fatalities in Pointe Coupee 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 2-40* 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 2-40: Comparison of the Enhanced Fujita (EF) Scale to the Fujita (F) Scale

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

Table 2-41: 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 off 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 Pointe Coupee Parish with actual locations, tornadoes in general are a climatological based hazard and have the same approximate probability of occurring in Pointe Coupee Parish as all of its jurisdictions. Because a tornado has a similar probability of striking anywhere within the planning area for Pointe Coupee Parish, all jurisdictions are equally at risk for tornadoes.

Previous Occurrences / Extents

SHELDUS reports a total of six tornadoes or waterspouts occurring within the boundaries of Pointe Coupee Parish between the years of 1990-2015. The tornadoes experienced in Pointe Coupee Parish registered at EF1 on the EF scale, and ranged from F1 to F2 on the F scale. The worst case scenario Pointe Coupee Parish can expect in the future is an EF2 tornado.

The tornado that caused the most damage to property occurred on January 10, 2008. The tornado damaged several industrial buildings of a farm equipment dealer near the intersection of Louisiana Highway 3131 and Louisiana Highway 1 in New Roads. Several large doors were blown in and a large portion of a roof was torn off. Several windows were also broken. Pieces of debris were scattered approximately one quarter mile into an open field. A nearby railroad safety cross arm was sheared off from its mount.

Table 2-42: Historical Tornadoes in Pointe Coupee Parish with Locations from 1990-2015

Date	Impacts	Property Damage	Location	Magnitude
August 26, 1992	2 mile path with a width of 50 yards. Two homes and eight mobile homes were destroyed.	\$844	UNINCORPORATED AREA	F1
December 17, 1995	0.2 mile path with a width of 20 yards. Fifteen mobile homes were destroyed. A child was injured when struck by a Christmas tree.	\$310,677	LIVONIA	F2
October 29, 2002	0.5 mile path with a width of 30 yards. A tornado blew the roof off of one mobile home and overturned another.	\$39,478	VENTRESS	F1
January 4, 2007	1.83 mile path with a width of 75 yards. A tornado demolished one home, took the roofs off two homes, and damaged dozens of other homes.	\$570,883	OSCAR	F1
January 10, 2008	0.25 mile path with a width of 30 yards. Damaged several industrial buildings, blew in large doors, and tore a portion of a roof.	\$1,649,322	NEW ROADS	EF1
February 16, 2008	2.47 mile path with a width of 40 yards. One mobile home sustained severe damage when its roof was ripped off. Several homes and carports were damaged.	\$164,932	MORGANZA	EF1

Since 2010, there have been no tornado events in Pointe Coupee Parish or any of its jurisdictions.

Frequency / Probability

Tornadoes are a sporadic occurrence within Pointe Coupee Parish, with an annual chance of occurrence calculated at 24% based on the records for the past 25 years (1990-2015). The figure on the next page displays the density of tornado touch downs in Pointe Coupee Parish and neighboring parishes.

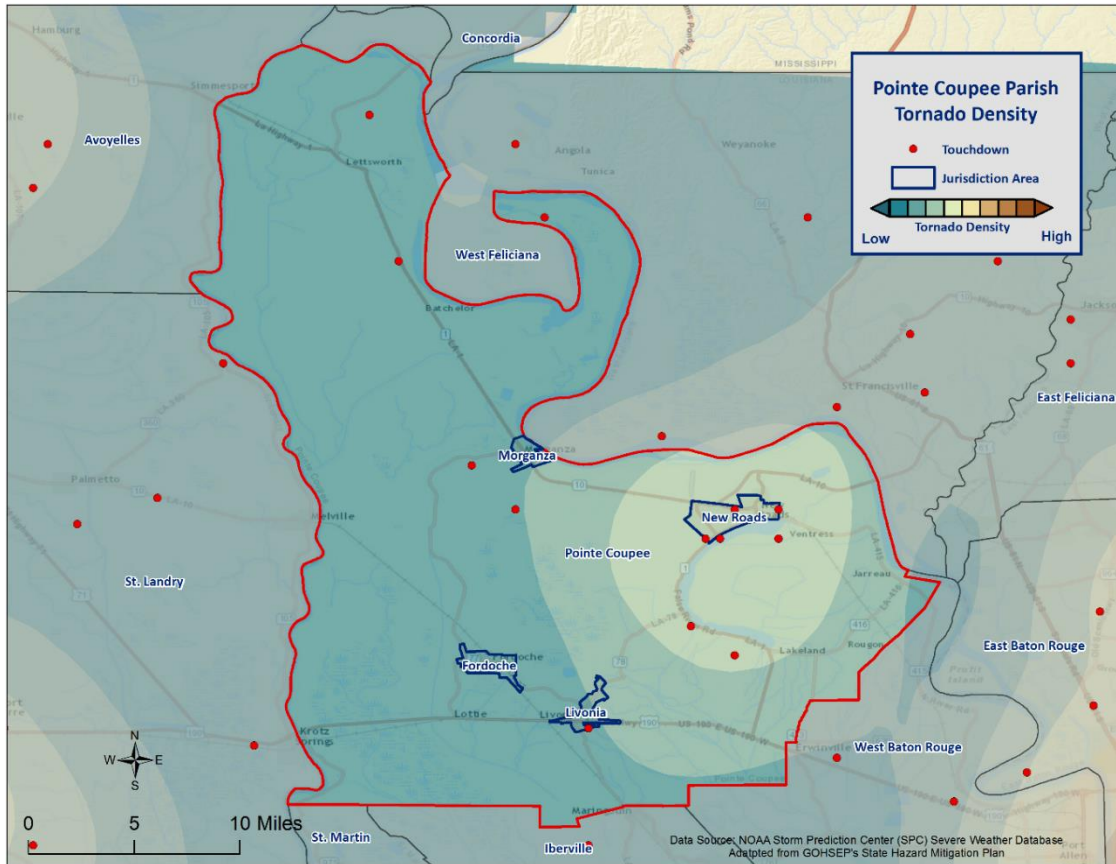


Figure 2-19: Location and Density of Tornadoes to Touch Down in Pointe Coupee Parish
(Source: NOAA/SPC Severe Weather Database)

Estimated Potential Losses

According to the SHELATUS database, there have been six tornadoes that have caused some level of property damage. The total damage from the actual claims for property is \$2,736,136, with an average cost of \$456,023 per tornado strike. When annualizing the total cost over the 25-year record, total annual losses based on tornadoes are estimated to be \$109,445. 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 following table provides an annual estimate of potential losses for Pointe Coupee Parish.

Table 2-43: Estimated Annual Losses from Tornadoes in Pointe Coupee Parish

Estimated Annual Potential Losses from Tornadoes for Pointe Coupee Parish				
Unincorporated Pointe Coupee Parish (65.7% of Population)	Fordoche (4.1% of Population)	Livonia (6.3% of Population)	Morganza (2.7% of Population)	New Roads (21.2% of Population)
\$72,954	\$4,454	\$6,921	\$2,928	\$23,188

Table 2-44 presents an analysis of building exposure that is susceptible to tornadoes by general occupancy type for Pointe Coupee Parish, along with the percentage of building stock that are mobile homes.

*Table 2-44: Building Exposure by General Occupancy Type for Tornadoes in Pointe Coupee 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 (%)
2,820,756	462,412	122,242	24,468	73,730	23,967	27,830	20.4%

The parish has suffered through a total of one day in which tornadoes or waterspouts have accounted for one injury and no fatalities during this 25-year period (Table 2-45). The average number of injuries per event for Pointe Coupee Parish is 0.17 per tornado, with an average of 0.04 per year for the 25-year period.

Table 2-45: Tornadoes in Pointe Coupee Parish by Magnitude that Caused Injuries or Deaths

Date	Magnitude	Deaths	Injuries
December 17, 1995	F2	0	1

In assessing the overall risk to population, the most vulnerable population throughout the parish are those residing in manufacturing housing. Approximately 20.4% of all housing in Pointe Coupee Parish consists of manufactured housing. Based on location data collected in a previous hazard mitigation project, there are 14 known locations where manufactured housing is concentrated. Each of those 14 locations have an overall number of manufactured houses ranging from one to 41. The location and density of manufactured houses can be seen in Figure 2-20.

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 Pointe Coupee Parish (Table 2-46). 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 2-46: Manufactured Home Distribution throughout Pointe Coupee Parish

Location	Number of Manufactured Home Parks	% of Manufactured Home Parks
Unincorporated Area	12	85.7%
Fordoche	0	0.0%
Livonia	0	0.0%
Morganza	1	7.1%
New Roads	1	7.1%

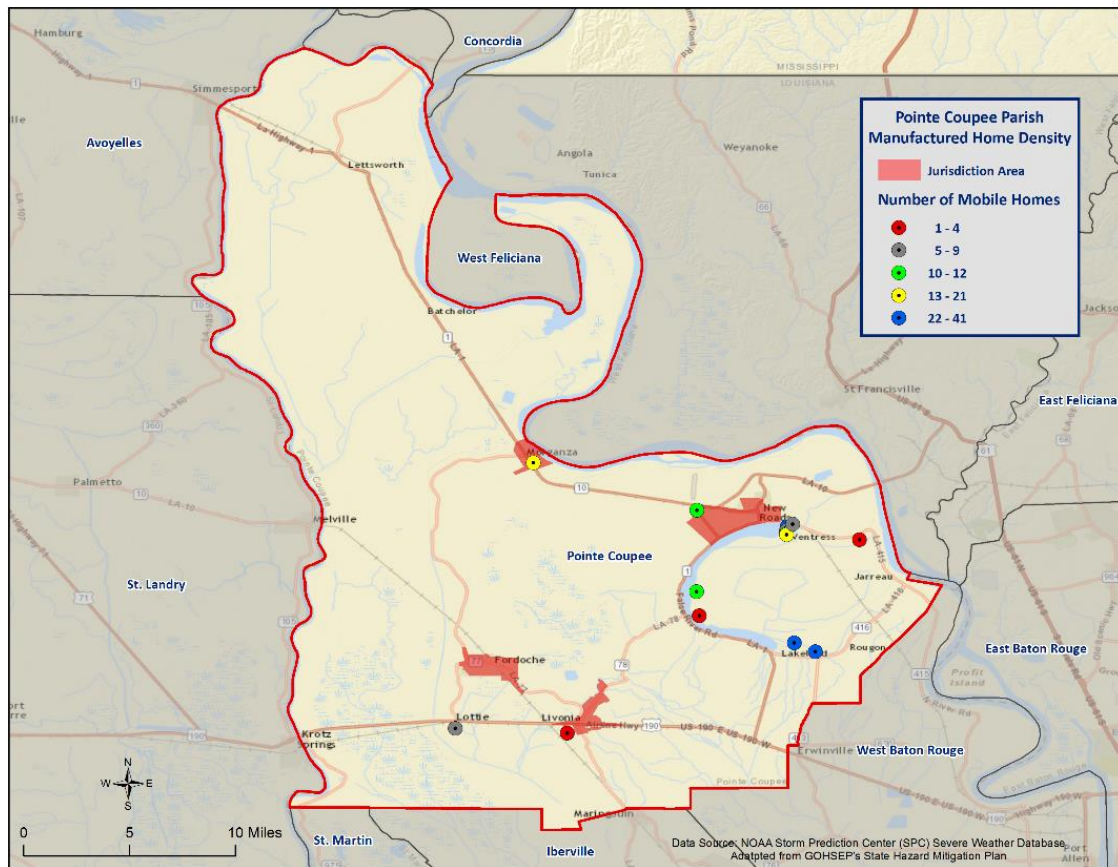


Figure 2-20: Location and Approximate Number of Units in Manufactured Housing Locations throughout Pointe Coupee Parish

Vulnerability

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

Tropical Cyclones

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

Table 2-47: 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 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 Pointe Coupee 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 Pointe Coupee Parish between the years 2002 and 2015 (*Table 2-48*). The tropical cyclone events experienced in Pointe Coupee Parish include depressions, storms, and hurricanes. As a worst case scenario, Pointe Coupee Parish can expect to experience hurricanes at the category 3 level in the future.

Table 2-48: Historical Tropical Cyclone Events in Pointe Coupee Parish from 2002-2014
(Source: SHELDUS)

Date	Name	Storm Type At Time of Impact
October 2, 2002	Lili	Tropical Storm
August 28, 2005	Katrina	Hurricane – Category 3
September 23, 2005	Rita	Hurricane – Category 1
September 1, 2008	Gustav	Hurricane – Category 2
September 2, 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.

Like much of interior Louisiana, Pointe Coupee Parish did not experience sustained hurricane force winds from Lili as a result of the storm's rapid weakening. However, winds felt within the parish were capable of damage. Pointe Coupee's emergency manager reported approximately 800 to 1,000 trees were blown down as a result of Hurricane Lili.

Hurricane Katrina (2005)

Hurricane Katrina was one of the strongest and most destructive hurricanes on record to impact the coast of the United States. The National Hurricane Center ranked Katrina as the costliest storm (both before and after adjusting for inflation) and the third deadliest in the U.S. since 1851. The hurricane initially made landfall in Plaquemines Parish on August 29, 2005, as a Category 3 storm and continued on a north-northeast track, with a second landfall occurring near the Louisiana-Mississippi border. Hurricane Katrina caused widespread devastation along the central Gulf Coast states. Following the passage of Katrina, the flooding of New Orleans was catastrophic, resulting in the displacement of more than 250,000 people.

Hurricane Katrina passed to the east of Pointe Coupee Parish, sparing the parish from most of the physical destruction encountered in the New Orleans area. The biggest burden placed on Pointe Coupee occurred as a result of the evacuation effort. Estimates suggest that approximately 5,000 new residents evacuated into Pointe Coupee parish. This figure does not include the countless others who used Pointe Coupee as part of their evacuation route.

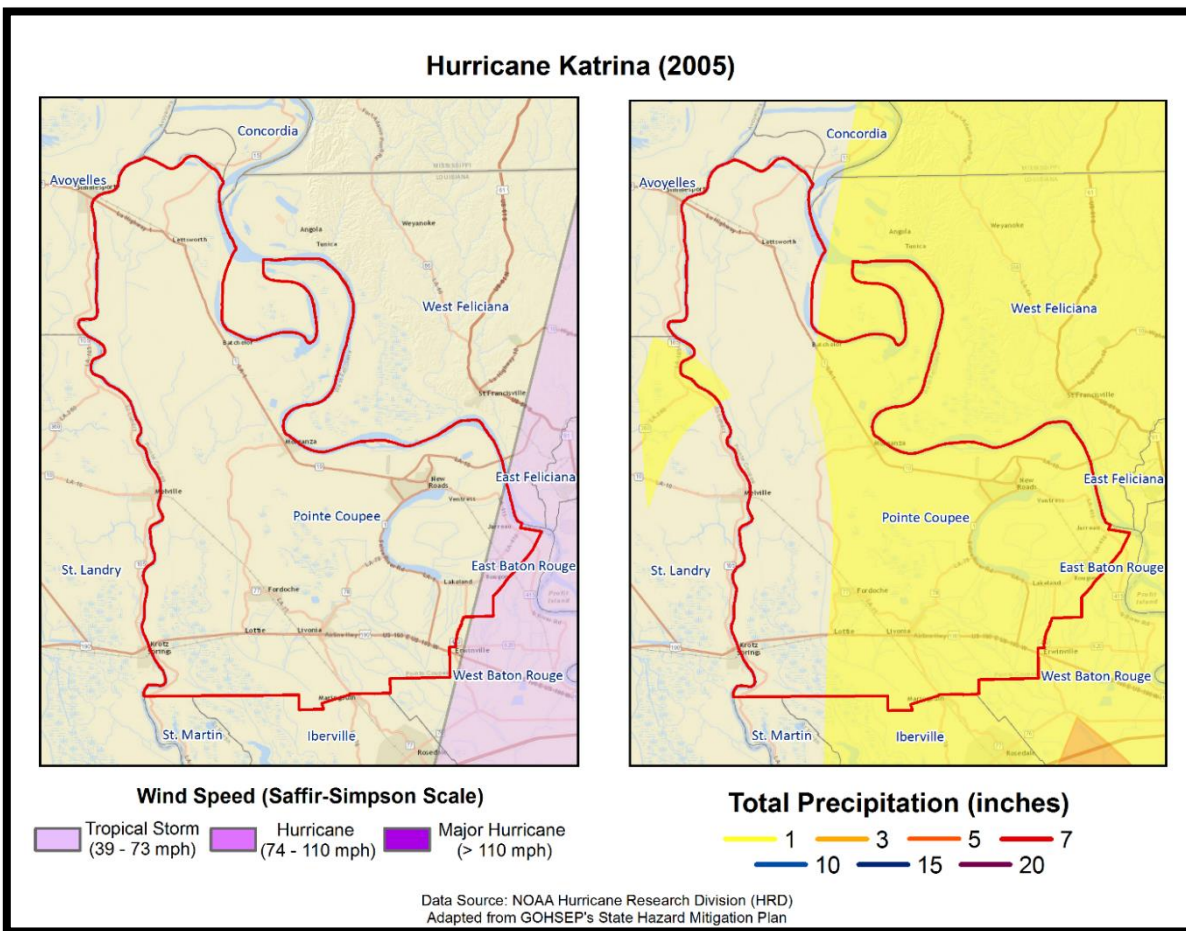


Figure 2-21: Wind Speed and Precipitation Totals in Pointe Coupee Parish for Hurricane Katrina

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.

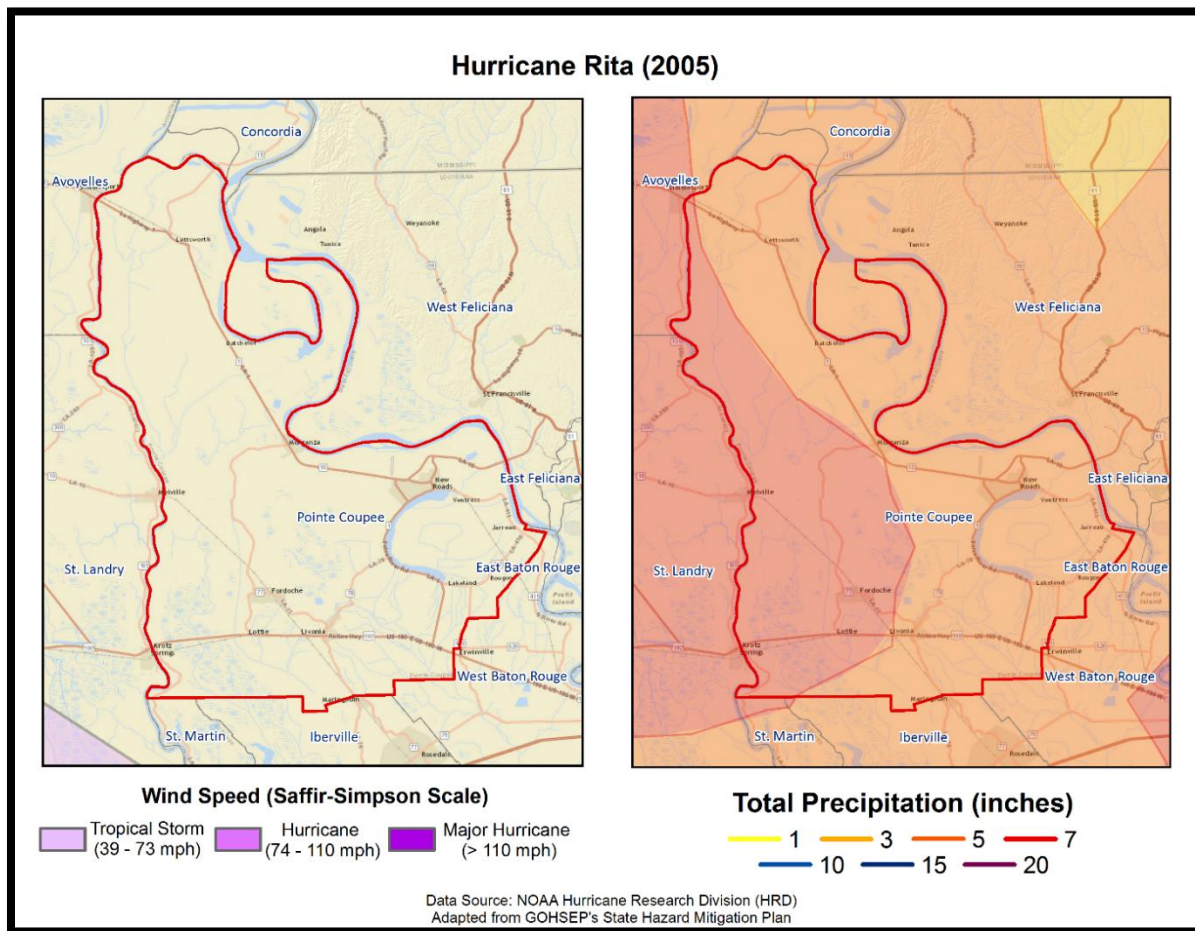


Figure 2-22: Wind Speed and Precipitation Totals in Pointe Coupee Parish for Hurricane Rita

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.

In Pointe Coupee Parish, the catastrophic effects of Hurricane Rita were also minimal. According to a study done by U.S. Department of Housing and Urban Development, less than 0.5% of all housing units in the parish experienced major damage from the storm. But as with Hurricane Katrina, the majority of the effects on Pointe Coupee came through the evacuation process.

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.

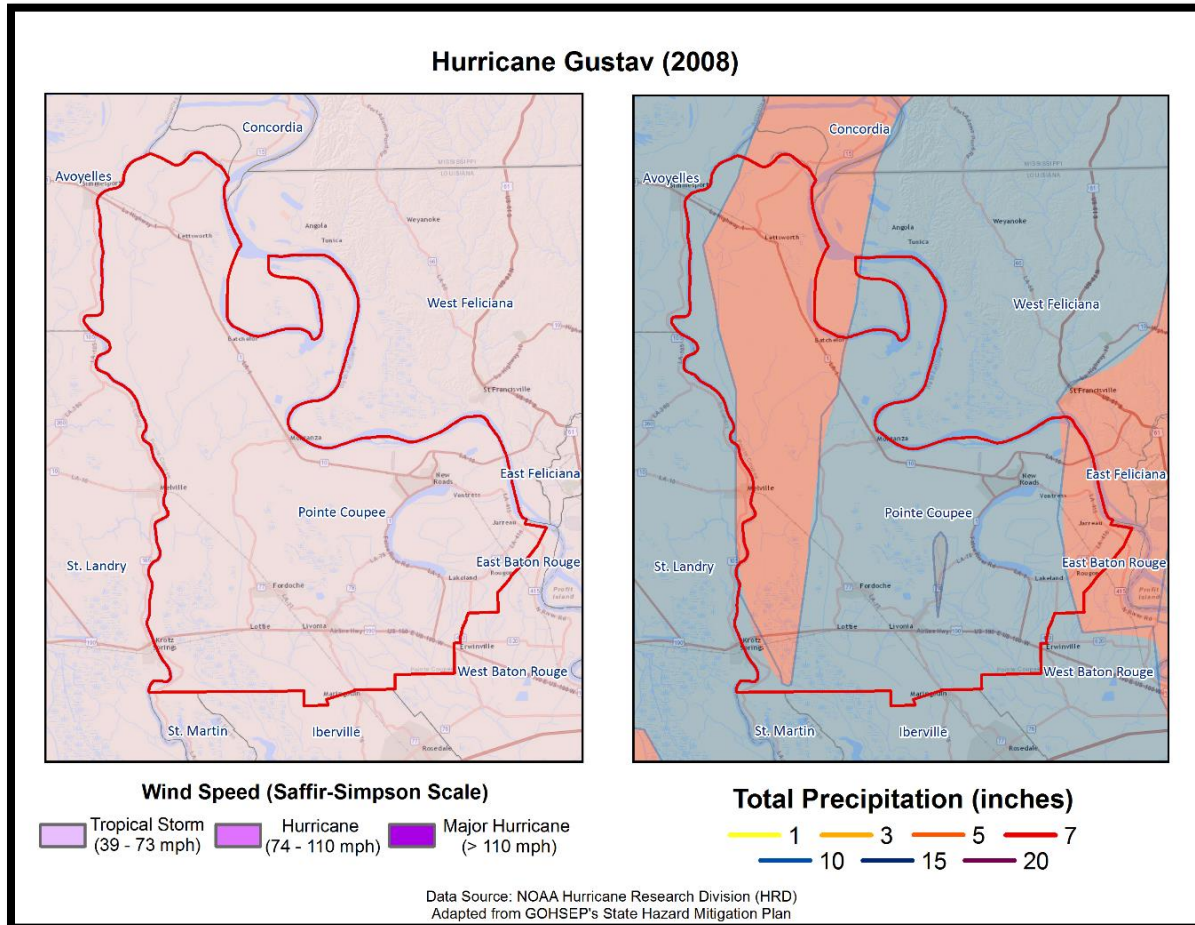


Figure 2-23: Wind Speed and Precipitation Totals in Pointe Coupee Parish for Hurricane Gustav

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.

In Pointe Coupee Parish, Hurricane Gustav affected nearly 200 homes with 4 homes being destroyed, 13 receiving major damage, and 27 receiving minor damage. A number of businesses also received damage. Numerous trees and utility poles were also knocked down.

[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.

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.

Overall, there were minimal reports of damage to residences or infrastructure in Pointe Coupee Parish. A weather station in New Roads reported over 10 inches of rainfall due to Tropical Storm Lee. Several customers reported a loss of electricity during the storm.

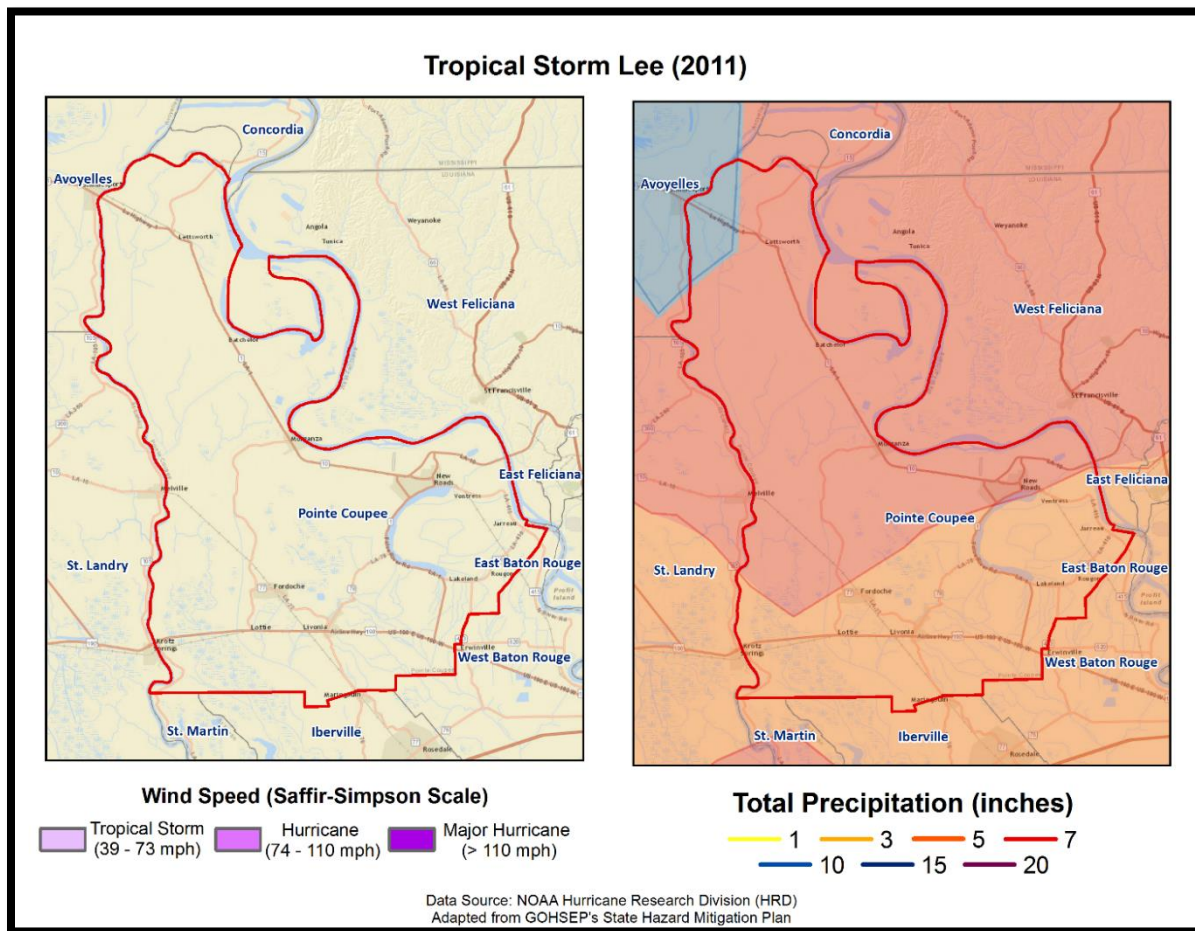


Figure 2-24: Wind Speed and Precipitation Totals in Pointe Coupee Parish for Tropical Storm Lee

Hurricane Isaac (2012)

Isaac entered the Gulf of Mexico as a tropical storm on August 26, moving northwest after crossing Haiti, Cuba and the Florida Straits. Isaac strengthened into a hurricane on the morning of the 28th when it was 75 miles south-southeast of the mouth of the Mississippi River. Isaac made landfall in Plaquemines Parish as a Category 1 Hurricane near Southwest Pass of the Mississippi River on the evening of the 28th. A second landfall occurred near Port Fourchon the following morning. The storm weakened to a tropical storm on the afternoon of the 29th about 50 miles west southwest of New Orleans, and weakened further to a tropical depression on the afternoon of the 30th near Monroe, Louisiana.

Due to Isaac's very large size, and slow forward speed, tropical storm force winds lasted in excess of 48 hours in many areas of coastal southeast Louisiana. Occasional hurricane gusts of 70 to 85 mph were recorded across southeast Louisiana during the night of the Aug 28th and early on the 29th, especially south of Lake Pontchartrain. Interior areas of southeast Louisiana such as around Baton Rouge and northward experienced tropical storm force winds. Widespread power outages occurred across the area. Local utility companies reported over 700,000 customers were without power at the peak of the storm in southeast Louisiana. Generally, most of the wind damage was limited to downed trees and power lines, and roof damage caused by wind and falling trees and tree limbs.

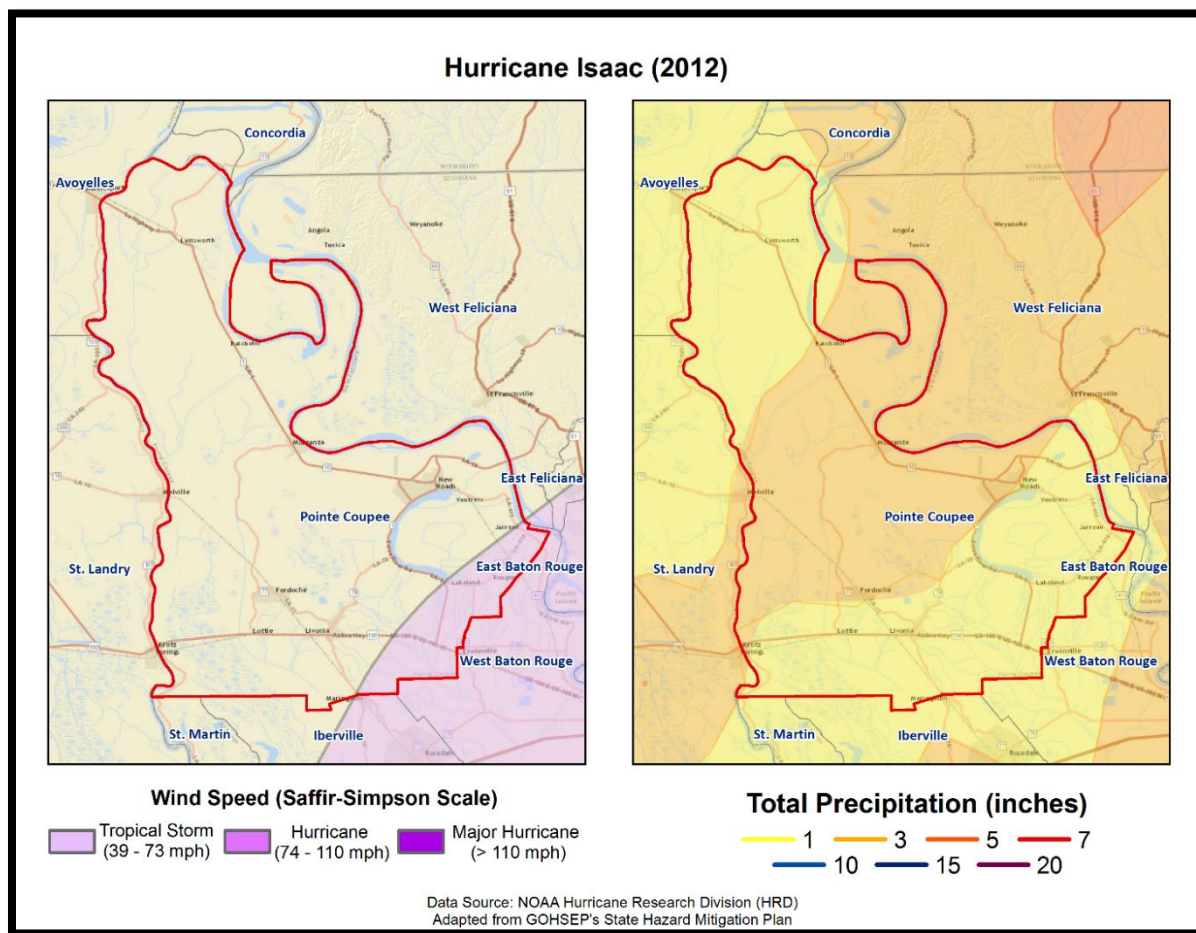


Figure 2-25: Wind Speed and Precipitation Totals in Pointe Coupee Parish for Hurricane Isaac

In preparation for Hurricane Isaac, the Pointe Coupee Parish school system ordered a shutdown of all public schools. After the storm hit, independent weather observers reported upwards of three inches of rainfall at various stations within the parish. Physical damage caused by the storm was minimal.

The figure on the next page displays the wind zones that affect Pointe Coupee Parish in relation to critical facilities throughout the parish.

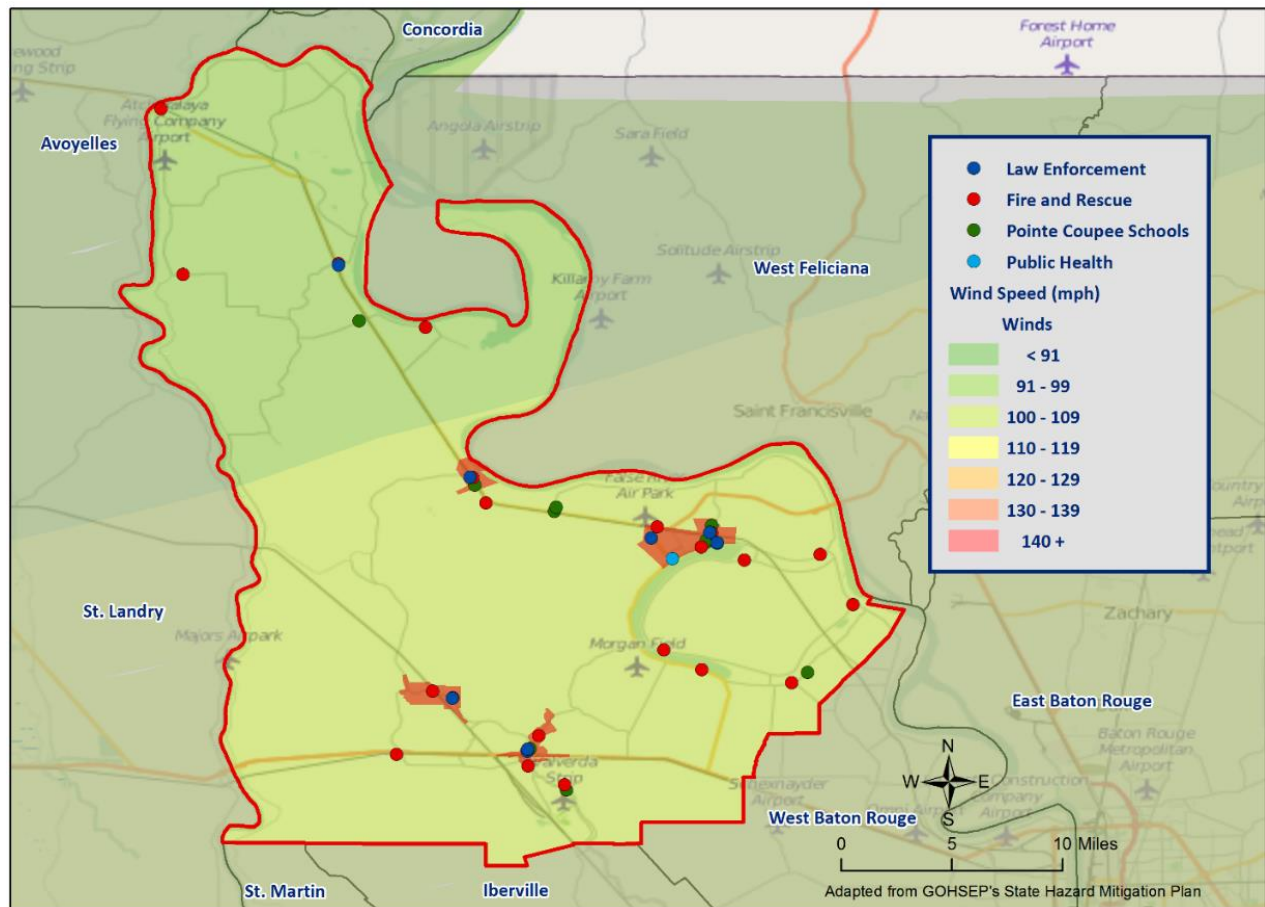


Figure 2-26: Winds Zones for Pointe Coupee Parish in Relation to Critical Facilities

Frequency / Probability

Tropical cyclones are large natural hazard events that regularly impact Pointe Coupee Parish. The annual chance of occurrence for a tropical cyclone is estimated at 24% for Pointe Coupee 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. Based on geographical location alone, Pointe Coupee Parish is highly vulnerable to tropical cyclones. This area has experienced several tropical cyclone events in the past and can expect more in the future.

Estimated Potential Losses

Using Hazus 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 next page shows the total economic losses that would result from this occurrence.

*Table 2-49: Total Estimated Losses for a 100-Year Hurricane Event
(Source: Hazus 2.2)*

Jurisdiction	Estimated Total Losses from 100-Year Hurricane Event
Pointe Coupee Parish (Unincorporated)	\$14,305,468
Fordoche	\$885,563
Livonia	\$1,376,058
Morganza	\$582,105
New Roads	\$4,610,080
Total	\$21,759,274

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 2-50: Ratio of Total Losses to Total Estimated Value of Assets for each Jurisdiction in Pointe Coupee 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	\$14,305,468	\$2,208,190,000	0.6%
Fordoche	\$885,563	\$95,886,000	0.9%
Livonia	\$1,376,058	\$195,501,000	0.7%
Morganza	\$582,105	\$77,562,000	0.8%
New Roads	\$4,610,080	\$978,266,000	0.5%

Based on the Hazus 2.2 Hurricane Model, estimated total losses range from 0.5% to 0.9% of the total estimated value of all assets for the unincorporated area of Pointe Coupee Parish, and the incorporated areas of Fordoche, Livonia, Morganza, and New Roads.

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 below and on the following pages.

*Table 2-51: Estimated Losses in Unincorporated Pointe Coupee Parish for a 100-Year Hurricane Event
(Source: Hazus 2.2)*

Pointe Coupee Parish (Unincorporated)	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	\$66,762
Commercial	\$648,511
Government	\$15,431
Industrial	\$76,748
Religious / Non-Profit	\$49,101
Residential	\$18,042,784
Schools	\$16,211
Total	\$14,305,468

*Table 2-52: Estimated Losses in Fordoche for a 100-Year Hurricane Event
(Source: Hazus 2.2)*

Fordoche	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	\$3,126
Commercial	\$30,361
Government	\$722
Industrial	\$3,593
Religious / Non-Profit	\$2,299
Residential	\$844,703
Schools	\$759
Total	\$885,563

*Table 2-53: Estimated Losses in Livonia for a 100-Year Hurricane Event
(Source: Hazus 2.2)*

Livonia	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	\$4,857
Commercial	\$47,178
Government	\$1,123
Industrial	\$5,583
Religious / Non-Profit	\$3,572
Residential	\$1,312,567
Schools	\$1,179
Total	\$1,376,058

*Table 2-54: Estimated Losses in Morganza for a 100-Year Hurricane Event
(Source: Hazus 2.2)*

Morganza	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	\$2,055
Commercial	\$19,957
Government	\$475
Industrial	\$2,362
Religious / Non-Profit	\$1,511
Residential	\$555,247
Schools	\$499
Total	\$582,105

*Table 2-55: Estimated Losses in New Roads for a 100-Year Hurricane Event
(Source: Hazus 2.2)*

New Roads	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	\$16,271
Commercial	\$158,054
Government	\$3,761
Industrial	\$18,705
Religious / Non-Profit	\$11,967
Residential	\$4,397,371
Schools	\$3,951
Total	\$4,610,080

Threat to People

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

*Table 2-56: Number of People Susceptible to a 100-Year Hurricane Event in Pointe Coupee Parish
(Source: Hazus 2.2)*

Number of People Exposed to Hurricane Hazards			
Location	# in Community	# in Hazard Area	% in Hazard Area
Parish (Unincorporated)	14,991	14,991	100.0%
Fordoche	928	928	100.0%
Livonia	1,442	1,442	100.0%
Morganza	610	610	100.0%
New Roads	4,831	4,831	100.0%
Total	22,802	22,802	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 2-57: Vulnerable Populations in Unincorporated Pointe Coupee Parish for a 100-Year Hurricane Event
(Source: Hazus 2.2)*

Pointe Coupee Parish (Unincorporated)		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	14,991	100.0%
Persons Under 5 Years	926	6.2%
Persons Under 18 Years	3,599	24.0%
Persons 65 Years and Over	2,324	15.5%
White	9,210	61.4%
Minority	5,781	38.6%

*Table 2-58: Vulnerable Populations in Fordoche for a 100-Year Hurricane Event
(Source: Hazus 2.2)*

Fordoche		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	928	100.0%
Persons Under 5 Years	44	4.7%
Persons Under 18 Years	208	22.4%
Persons 65 Years and Over	129	13.9%
White	837	90.2%
Minority	91	9.8%

*Table 2-59: Vulnerable Populations in Livonia for a 100-Year Hurricane Event
(Source: Hazus 2.2)*

Livonia		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	1,442	100.0%
Persons Under 5 Years	75	5.2%
Persons Under 18 Years	401	27.8%
Persons 65 Years and Over	157	10.9%
White	1,300	90.2%
Minority	142	9.9%

*Table 2-60: Vulnerable Populations in Morganza for a 100-Year Hurricane Event
(Source: Hazus 2.2)*

Morganza		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	610	100.0%
Persons Under 5 Years	39	6.4%
Persons Under 18 Years	131	21.5%
Persons 65 Years and Over	117	19.2%
White	437	71.6%
Minority	173	28.4%

*Table 2-61: Vulnerable Populations in New Roads for a 100-Year Hurricane Event
(Source: Hazus 2.2)*

New Roads		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	4,831	100.0%
Persons Under 5 Years	335	6.9%
Persons Under 18 Years	1,121	23.2%
Persons 65 Years and Over	938	19.4%
White	1,897	39.3%
Minority	2,934	60.7%

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 next page shows the Sperry-Piltz Ice Accumulation Index which is utilized to predict the potential damage to overhead utility systems from freezing rain and ice storms.

Table 2-62: 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 Pointe Coupee Parish as all of the adjacent parishes, the entire planning area for Pointe Coupee Parish is equally at risk for winter storms.

Previous Occurrences / Extents

According to SHELUDS, there have been ten reported winter storm events that have occurred within the boundaries of Pointe Coupee Parish between the years of 1990 and 2015. The table on the next page provides a brief synopsis of each event from 2010 to the present. Based on historic data, Pointe Coupee Parish can expect an ice damage index of 2 on the Sperry-Piltz Ice Accumulation Index.

Table 2-63: Previous Occurrences for Winter Storm Events in Pointe Coupee Parish

Date	Synopsis	Property Damage	Crop Damage
February 11, 2010	A low pressure system over the Gulf of Mexico moved into Louisiana causing heavy snow in Pointe Coupee Parish. Approximately 3.5 inches of snow was recorded in Fardoche and 3 inches of snow in New Roads. US 190 bridge in Lottie was closed for approximately 3 hours.	\$0	\$0
January 23, 2014	A cold front moved into Louisiana causing snow and sleet in Pointe Coupee Parish. Approximately 0.5 inches of snow and sleet were reported in Pointe Coupee Parish. Icing was reported on bridges and roads across the parish.	\$0	\$0
January 28, 2014	Approximately one to three inches of sleet, snow, and freezing rain were reported across much of Pointe Coupee Parish.	\$0	\$0
March 4, 2014	An upper air disturbance caused freezing rain with light icing across Pointe Coupee Parish.	\$0	\$0

Based on previous winter storm events, the worst-case scenario for the unincorporated area of Pointe Coupee Parish and the incorporated areas of Fordoche and New Roads is approximately three to four inches of snow accumulation and approximately one tenth to one quarter inch of ice accumulation. The incorporated areas of Morganza and Livonia can expect two to three inches of snow and approximately one tenth inch of ice accumulation.

Frequency / Probability

With ten recorded events in 25 years, winter storm events within the boundaries of Pointe Coupee Parish have an annual chance of occurrence calculated at 40% based on the SHEL DUS dataset.

Estimated Potential Losses

Since 1990, there have been three reported winter weather events that have resulted in property and/or crop damages according to the SHEL DUS database. The total property damages associated with these storms have totaled \$3,621,201. 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 SHEL DUS (1990 – 2015). This provides an annual estimated potential loss of \$144,848. 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 Pointe Coupee Parish based on the 2010 Census data:

Table 2-64: Estimated Annual Losses from Winter Weather Events in Pointe Coupee Parish

Estimated Annual Potential Losses from Winter Weather in Pointe Coupee Parish				
Unincorporated Pointe Coupee Parish (65.7% of Population)	Fordoche (4.1% of Population)	Livonia (6.3% of Population)	Morganza (2.7% of Population)	New Roads (21.2% of Population)
\$95,229	\$5,895	\$9,160	\$3,875	\$30,689

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

Vulnerability

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

Dam Failure

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

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

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

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

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

Location

Pointe Coupee Parish is awaiting a response from the U.S. Army Corps of Engineers on dam locations within the Pointe Coupee Parish Planning area. Currently, a data deficiency exists for dam failure in Pointe Coupee Parish.

Previous Occurrences / Extents

There have been no reported dam failures in Pointe Coupee Parish from 1990 to 2015. Dam information including the extent of dam failures has been requested from the USACE. Point Coupee Parish is awaiting a response from the USACE, and will continue to work to update this information as new data is received.

Frequency / Probability

Based on the 25-year record, it is determined that a dam failure has less than a 1% annual chance of occurrence in the Pointe Coupee Parish planning area. Pointe Coupee Parish is awaiting a response from the USACE, and will continue to work to update this information as new data is received.

Levee Failure

Levees and floodwalls are flood control barriers constructed of earth, concrete, or other materials. For the purposes of this plan, levees are distinguished from smaller flood barriers (such as berms) by their size and extent. Berms are barriers that only protect a small number of structures, or at times only a single structure. Levees and floodwalls are barriers that protect significant areas of residential, commercial, or industrial development; at a minimum, they protect a neighborhood or small community. Levee failure involves the overtopping, breach, or collapse of the levee. Levee failure is especially destructive to nearby development during flood and hurricane events.

The northern half of Louisiana is protected by levees on the Ouachita River, under the authority of the Vicksburg District of the United States Army Corp of Engineers (USACE). The Vicksburg District encompasses 68,000 mi² in the states of Arkansas, Mississippi and Louisiana. They manage seven drainage basins, including the Yazoo, Pearl, Big Black, Red, Ouachita, and Mississippi Rivers; 12 locks and dams on the Pearl, Red, and Ouachita Rivers; 1,808 miles of levees, including 468 miles along the Mississippi River; and multiple lakes with 1,709 miles of shoreline.

Coastal and southern Louisiana are protected by an extensive levee system under the authority of the New Orleans District of the USACE. This system includes 30,000 mi² of Louisiana south of Alexandria, including 961 miles of river levees in the Mississippi River and Tributaries Project, 449 miles of river levees in the Atchafalaya Basin, and 340 miles of hurricane-protection levees. Other levees have been built along stretches of rivers throughout Louisiana by local levee districts and private citizens. The data regarding these non-federal levees are managed by the individual entity responsible for construction and subsequent maintenance and are not kept in a consistent format for comprehensive hazard analysis.

The effects of a levee failure on property is similar to that of a flood, as discussed in the flooding section. One major difference is that the velocity of the water is increased in the area of the breach, so the potential for property damage is higher in these areas.

A levee failure occurs during high water events, so the populace is normally alerted to the potential danger. Levees are normally monitored during these events and the population in danger is alerted to a possible levee failure. However, if people consider themselves safe once a levee has been breached and do not evacuate, the results could be deadly.

Location

Pointe Coupee Parish is awaiting a response from the U.S. Army Corps of Engineers on levee locations within the Pointe Coupee Parish Planning area. Currently, a data deficiency exists for levee failure in Pointe Coupee Parish.

Previous Occurrences / Extents

There have been no reported levee failures in Pointe Coupee Parish from 1990 to 2015. Levee information including the extent of a levee failure has been requested from the U.S. Army Corps of Engineers. Pointe Coupee Parish is awaiting a response from the USACE, and will continue to update this information as new data is received.

Frequency / Probability

Based on the 25-year record, it is determined that a levee failure has less than a 1% annual chance of occurrence in the Point Coupee Parish planning area. Pointe Coupee Parish is awaiting a response from the USACE, and will continue to work to update this information as new data is received.

3. Capability Assessment

This section summarizes the results of the Pointe Coupee 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, Pointe Coupee 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

Pointe Coupee 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 Pointe Coupee 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 Pointe Coupee Parish and its jurisdictions are shown in the table on the following page.

Table 3-1: Pointe Coupee Parish Planning and Regulatory Capabilities

Worksheet 4.1: Capability Assessment Worksheet

Local mitigation capabilities are existing authorities, policies and resources that reduce hazard impacts or that could be used to in 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.

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

Building Codes, Permitting, Land Use Planning and Ordinances

The Pointe Coupee Parish Police Jury provides oversight for building permits and codes, land use planning, and all parish ordinances where applicable.

As of the 2016 update, Pointe Coupee Parish and its jurisdictions ensure that all adopted building codes are enforced and in compliance relating to the construction of any structure within the boundaries of the parish. Building permits are required prior to beginning any type of construction or renovation projects, installation of electrical wiring, plumbing or gas piping, moving manufactured/modular or portable buildings, and reroofing or demolitions.

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

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

While local capabilities for mitigation can vary from community to community, Pointe Coupee Parish as a whole has a system in place to coordinate and share these capabilities through Pointe Coupee 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, Pointe Coupee 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 Pointe Coupee Parish and its jurisdictions.

Table 3-2: Pointe Coupee Parish Administrative and Technical Capabilities

Identify whether your community has the following administrative and technical capabilities. For smaller jurisdictions without local staff are public resources at the next higher level government that can provide technical assistance, indicate so in your comments.						
	Pointe Coupee Parish	Fordoché	Livonia	Morganza	New Roads	
Administration	Yes / No					
Planning Commission	Yes	No	Yes	No	Yes	
Mitigation Planning Committee	Yes	No	No	No	No	
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	Yes	No	Yes	No	No	
Mutual Aid Agreements						
Staff	Yes / No; FT/PT; % Hazard Mitigation					
Chief Building Official	Yes	No	No	No	Yes	
Floodplain Administrator	Yes	No	No	No	Yes	
Emergency Manager	Yes	No	Yes	No	No	
Community Planner	No	No	No	No	No	
Civil Engineer	Yes	No	No	No	No	
GIS Coordinator	Yes	No	No	No	No	
Grant Writer	No	No	No	No	Yes	
Other		No				
Technical	Yes / No					
Warning Systems / Service (Reverse 911, outdoor warning signals)	No	No	Yes	No	No	
Hazard Data & Information	Yes	No	No	No	No	
Grant Writing	No	No	No	No	No	
Hazus Analysis	No	No	No	No	No	

Financial capabilities are the resources that Pointe Coupee 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 Pointe Coupee Parish and its jurisdictions:

Table 3-3: Pointe Coupee Parish Financial Capabilities

Financial						
Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.						
	Pointe Coupee Parish	Fordoché	Livonia	Morganza	New Roads	
Funding Resource	Yes / No					
Capital Improvements project funding	Yes	No	No	No	No	
Authority to levy taxes for specific purposes	Yes	No	No	Yes	Yes	
Fees for water, sewer, gas, or electric services	Yes	No	No	Yes	Yes	
Impact fees for new development	Yes	No	No	No	No	
Stormwater Utility Fee	Yes	No	No	No	No	
Community Development Block Grant (CDBG)	Yes	No	No	No	No	
Other Funding Programs	Yes	No	No	No	No	

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.

Pointe Coupee 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 outlined in the table below.

Table 3-4: Pointe Coupee Parish Education and Outreach Capabilities

Education and Outreach						
Identify education and outreach programs and methods, already in place that could be used to implement mitigation activities and comr hazard-related information.						
	Pointe Coupee Parish	Fordoché	Livonia	Morganza	New Roads	
Program / Organization	Yes / No					
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	No	No	No	No	No	
Ongoing public education or information program (responsible water use, fire safety, household preparedness, environmental education)	Yes	Yes	No	No	Yes	
Natural Disaster or safety related school program	Yes	No	No	No	No	
Storm Ready certification	No	No	No	No	No	
Firewise Communities certification	No	No	No	No	No	
Public/Private partnership initiatives addressing disaster-related issues	Yes	No	No	No	No	

In some cases, the jurisdictions rely on Pointe Coupee Parish OHSEP and/or Pointe Coupee 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, Pointe Coupee Parish and its jurisdiction remains committed to expanding and improving on the existing capabilities within the parish. All participating jurisdictions 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 Pointe Coupee 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 Fordoche
- Town of Livonia
- Village of Morganza
- City of New Roads

Flood Insurance and Community Rating System

Pointe Coupee Parish is not a participant in the Community Rating System (CRS), nor are any of its jurisdictions. 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. 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 parish will receive CRS credit for this plan when it is adopted. To retain that credit, though, the parish must submit an evaluation report on progress toward implementing this plan to FEMA by October 1st of each year. That report must be made available to the media and the public.

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

In 2011¹, 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.

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

Typically, CRS communities do not request credit for all the activities they are currently implementing unless it would earn enough credit to advance the community to a higher CRS class. A community that finds itself losing CRS credit with the 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.

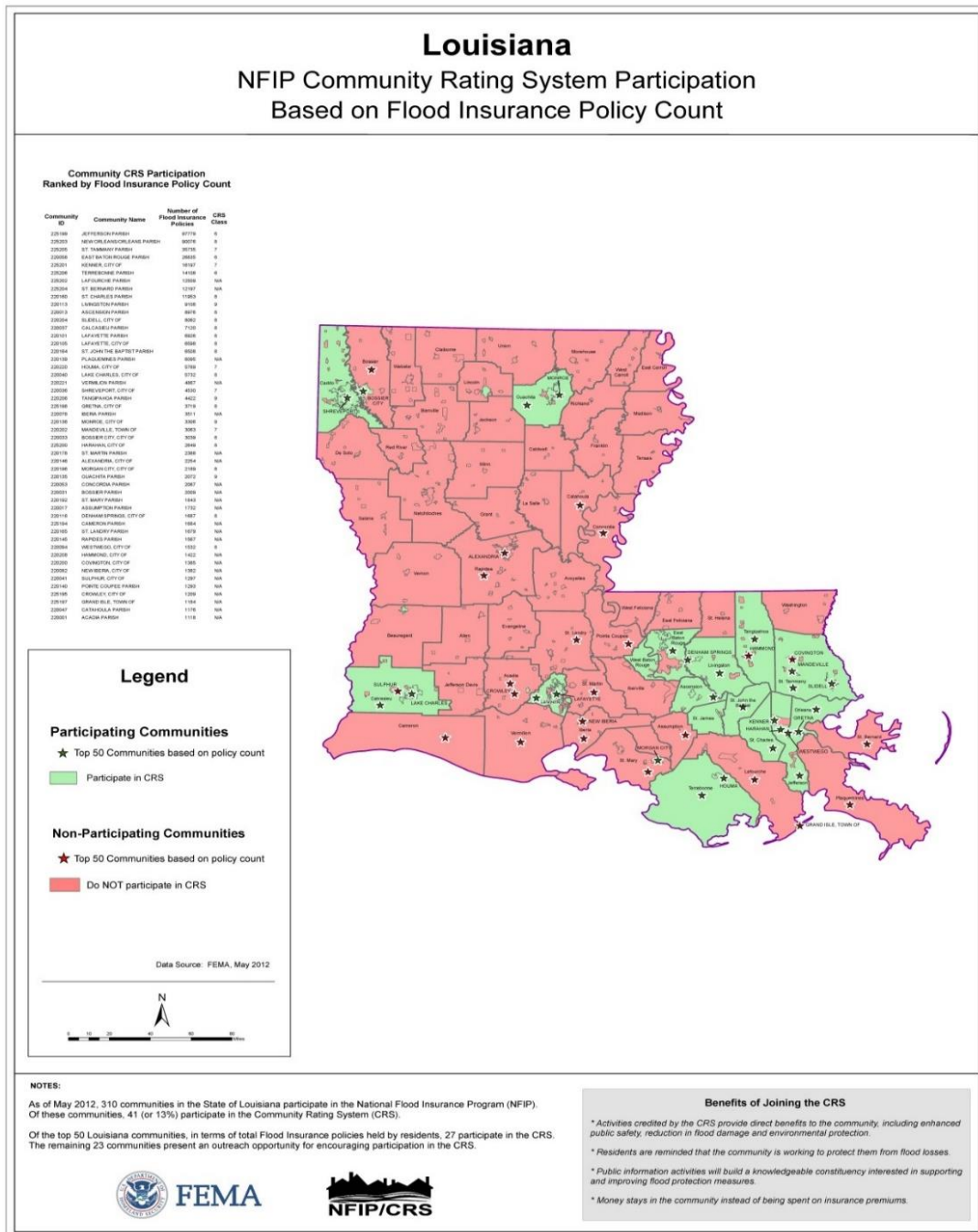


Figure 3-2: Louisiana CRS NFIP Participation
(Source: FEMA²)

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

Pointe Coupee 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.

Pointe Coupee 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 Pointe Coupee Parish Hazard Mitigation Plan Steering Committee, under the coordination of the Pointe Coupee 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 December 2015 – September 2016.

An online public opinion survey was conducted of Pointe Coupee Parish residents between January and June 2016. The survey was designed to capture public perceptions and opinions regarding natural hazards in Pointe Coupee 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 Pointe Coupee 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 Pointe Coupee Parish survey can be found at the following link:

<https://www.surveymonkey.com/r/PointeCoupee>

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 Pointe Coupee 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, Pointe Coupee 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 Pointe Coupee 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:

- Protect the public health, safety, and welfare by increasing public awareness of hazards and by encouraging collective and individual responsibility for mitigating hazard risks
- Improve technical capability to respond to hazards and to improve the effectiveness of hazard mitigation actions
- Protect the most vulnerable populations, buildings, and critical facilities through the implementation of cost-effective and technically feasible mitigation actions
- Reduce economic impacts from natural hazards

The Mitigation Action Plan focuses on actions to be taken by Pointe Coupee 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 Pointe Coupee Parish Hazard Mitigation Plan Steering Committee and participating jurisdictions each identified actions that would reduce and/or prevent future damage within Pointe Coupee 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.

Pointe Coupee Parish and All Jurisdictions 2011 Hazard Mitigation Action Update

Pointe Coupee Parish and All Jurisdictions – Old Action Update					
Jurisdiction-Specific Action	Action Description	Funding Source	Responsible Party, Agency, or Department	Hazard	Status
P1: Mitigation Objective Inclusion	At next Land Use Plan Update, review and include hazard mitigation objectives.	Local	PZ	All Hazards	Ongoing
P2: Minimize Public Services	Develop a policy to minimize public services to proposed new structures that will be located in 100-year floodplain areas.	Local	PZ	Flooding	Ongoing
P3: Update Floodplain Ordinance	Update the Floodplain Ordinance to raise the minimum flood protection level with special attention to dam and levee overtopping levels.	Local	PZ	Flooding	Ongoing
P4: Update Subdivision Ordinance	Update the Subdivision Ordinance for unincorporated areas of the parish, Livonia, Morganza, and New Roads by incorporating hazards risk factors into land-use regulations, such as flood impact and population density, and drought impacts on water supplies in developed areas.	Local	PZ	All Hazards	Ongoing
P5: Residential Lot Clustering	Review and revise the Planning Ordinance to allow for clustering of residential lots.	Local	PZ	Flooding	Ongoing
P6: Regulatory Floodplain Maps	Revise and update the regulatory floodplain maps.	Federal, State	PZ	Flooding	Ongoing

Pointe Coupee Parish and All Jurisdictions – Old Action Update					
Jurisdiction-Specific Action	Action Description	Funding Source	Responsible Party, Agency, or Department	Hazard	Status
P7: Flood Damaged Structures	Any and all portions of buildings that have been submerged for any length of time will be inspected for flood related damage as well as other conditions that may be dangerous to life, health or other property. Plan for Damaged Structures: 1. Overall damage assessment/data collection (visual inspection from roadways). 2. Data compiled and geographical areas assigned to teams. 3. Second detailed assessment by area teams. 4. Portions of walls, floors, ceilings, etc. that have been exposed to water will be opened for evaluation. 5. All construction that is repaired, replaced, dried or sealed will be inspected before covered. 6. Structure inspected for certificate of compliance.	Local	INSP	Flooding	Ongoing
P8: Policy and Plan Development	Develop policy, procedures, and contingency plans related to storm damage and disconnected utility services, including limited water supplies from drought such as: 1) informing public via television, radio and newspaper of the necessary steps for utilities restoration and conservation of existing supplies; 2) expediting utility reconnections, water supply augmentation, and/or developing alternate supplies.	Local	INSP	All Hazards	Ongoing
P9: Zoning Map	Create a zoning map (digital) that can be easily reproduced and updated for staff and public use.	Local	PZ	All Hazards	Ongoing
P10: Stringent Building Codes	Develop more stringent building codes to exceed the International Building Code in unincorporated areas of the Parish, New Roads, Livonia, Fardoche, and Morganza.	Local	PZ	All Hazards	Ongoing
P11: Hospital Safe Rooms	Safe rooms will be constructed in the hospital to provide occupants with protection from high winds. The project consists of improvements to selected areas of the structure thus protecting the occupants from wind borne debris.	Local	PZ	Hurricanes Thunderstorms Winter Storms Tornado	carried over
P12: Scott Civic Center Windows	Harden windows and doors at the Scott Civic Center.	Local	PZ	Hurricanes Thunderstorms Winter Storms Tornado	carried over
P13: NFIP Requirement Compliance	The structure (#175) will be elevated to the BFE to be in compliance with NFIP requirements and thus protected from the 100 year recurrence interval flood.	Local	PZ	Flooding	carried over

Pointe Coupee Parish and All Jurisdictions – Old Action Update					
Jurisdiction-Specific Action	Action Description	Funding Source	Responsible Party, Agency, or Department	Hazard	Status
P14: EOC Safe Rooms	Safe rooms will be constructed in the EOC to provide occupants with protection from high winds. The project consists of improvements to selected areas of the structure thus protecting the occupants from wind borne debris.	Local	PZ	Hurricanes Thunderstorms Winter Storms Tornado	carried over
P15: Tornado Warning System	This tornado warning system will cover the entire Parish ensuring that residents can be quickly alerted of tornadoes and will be able to seek shelter.	Local	PZ	Tornadoes	carried over
P16: Repetitive Flood Loss Property List	Create and maintain a list of repetitive flood loss properties (as needed).	Local	PZ	Flooding	ongoing
P17: Repetitive Loss Property Acquisition	Pursue elevation and/or acquisition of repetitive loss properties in unincorporated areas of the Parish, New Roads, Livonia, Fordoche, and Morganza with priority given to any properties determined as in an identified or suspected inundation zone.	Local	PZ	Flooding	ongoing
P18: Wind Retrofitting	Pursue the wind retrofitting of critical facilities in unincorporated areas of the Parish, New Roads, Livonia, Fordoche and Morganza.	Local	PZ	Hurricanes Thunderstorms Winter Storms Tornado	carried over
P19: Pointe Coupee General Hospital Retrofitting	Pointe Coupee General Hospital will be retrofitted to provide protection from high winds. The project consists of improvements to the windows and doors to protect the structure from wind borne debris resulting from high wind events.	Local	PZ	Hurricanes Thunderstorms Winter Storms Tornado	carried over
P20: Innis Clinic Retrofitting	Innis clinic will be retrofitted to provide protection from high winds. The project consists of improvements to the windows and doors and roof infrastructure to protect the structure from wind borne debris resulting from high wind events.	Local	PZ	Hurricanes Thunderstorms Winter Storms Tornado	carried over
P21: Livonia Clinic and Sheriff Substation Retrofitting	Livonia Clinic and Sheriff Substation will be retrofitted to provide protection from high winds. The project consists of improvements to the windows and doors to protect the structure from wind borne debris resulting from high wind events.	Local	PZ	Hurricanes Thunderstorms Winter Storms Tornado	carried over
P22: Parish Courthouse Retrofitting	Harden Parish Courthouse by retrofitting it to provide protection from high winds. The project consists of improvements to the windows and doors and roof to protect the structure from wind borne debris resulting from high wind events.	Local	PZ	Hurricanes Thunderstorms Winter Storms Tornado	carried over

Pointe Coupee Parish and All Jurisdictions – Old Action Update					
Jurisdiction-Specific Action	Action Description	Funding Source	Responsible Party, Agency, or Department	Hazard	Status
P23: Flood Data	Through the Freedom of Information Act, continue to pursue flood depth data, dam and levee flood levels, overtopping and inundation data from the Army Corps of Engineers for use in dedicated studies and possible future mitigation actions.	Local	PZ	Flooding	ongoing
P24: River Depth Gauge Monitoring Stations	Ensure adequate evacuation warning in case of major hazard event with the instillation of river depth gauge monitoring stations.	Local	ES	All Hazards	carried over
P25: Public Warning System	Ensure adequate evacuation warning in case of a major hazard event with the instillation of a public warning siren system integrated with emergency services organizations.	Local	PZ	Flooding	carried over
P28: Shelter Power Sources	Improve shelter capacities with alternate power/heat sources.	Local	ES	Winter Storms	carried over
P29: Continuity of Government Operations	Establish program to maintain continuity of government operations.	Local	ES	All Hazards	ongoing
P30: Alternate Emergency Operations Center	Identify alternate Emergency Operations Center locations.	Local	ES	All Hazards	ongoing
P31: Alternate Detour Routes	Identify alternate detour routes from major arteries in the Parish.	Local	ES	All Hazards	deleted
P32: Water Supply Generator	M&S Water Supply generator will help ensure that over 500 families continue to have access to water during a disaster.	Local	PZ	All Hazards	carried over
P33: Flood Data Resource Library	Working with the Army Corps of Engineers, develop strategy for producing an online historic stream and flood inundation data resource library. This will provide local entities valid data to make informed decisions on flood control and storm water management initiatives.	Local	AM/CE PZ	Flooding	ongoing
P34: Drainage and Erosion Problems	The Pointe Coupee Parish Assistant Manager/Parish Engineer has received training on erosion and sedimentation control methods and on floodplain surveying certification. On an annual basis, this Parish Representative makes numerous site visits to assist property owners and developers with problems and potential problems associated with drainage, erosion, and flooding. Site visits are made at the request of the property owner or developer and are usually handled through the Planning and Zoning Department.	Local	AM/CE PZ	Flooding	Ongoing

Unincorporated Pointe Coupee - New Mitigation Actions

Pointe Coupee Unincorporated - New Mitigation Actions						
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Status
P1: 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	Pointe Coupee Parish OHSEP	High Wind, Hail, Tropical Cyclones, Tornadoes	New
P2: 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	Pointe Coupee Parish OHSEP	Flooding, High Wind, Tropical Cyclone	New
P3: Mitigation of repetitive loss and severe repetitive loss properties and other hazard prone structures	Elevation, acquisition-demolition, acquisition-relocations, and reconstruction of repetitive loss or flooding or other hazard prone properties.	FEMA HMGP, Local	1-5 years	Pointe Coupee Parish OHSEP	Flooding, Tropical Cyclones, Dam Failure, Levee Failure	New
P4: Safe Room Projects	Construction of a safe room for first responders located in Pointe Coupee Parish. Other locations will be identified based on funding availability.	FEMA HMGP, Local	1-5 years	Pointe Coupee Parish OHSEP	Tornadoes, High Wind, Tropical Cyclones	New
P5: 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, Dam Failure, Levee Failure and Winter Storms 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	Pointe Coupee Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes, Thunderstorms (lightning, high wind, hail), Winter Storms, Drought, Dam Failure, Levee Failure	New

Pointe Coupee Unincorporated - New Mitigation Actions						
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Status
P6: Generators for continuity of operations and government	Procurement and Installation of generators at parish and local critical facilities to ensure continued operations during and after events.	FEMA HMGP, Local	1-5 years	Pointe Coupee Parish OHSEP	Tornados, Winter Storms, Tropical Cyclones, Thunderstorms (lightning, high wind, hail)	New
P7: 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	Pointe Coupee Parish OHSEP	Lightning	New
P8: Warning Systems	Update/upgrade public warning system components throughout Pointe Coupee Parish as necessary. Install audible and/or reverse 911 warning system(s)	FEMA HMGP, Local	1-5 years	Pointe Coupee Parish OHSEP	Winter Storms, Tornadoes, Tropical Cyclones, Dam Failure, Levee Failure	New
P9: 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	Pointe Coupee Parish OHSEP	Tropical Cyclones, Thunderstorms (lightning, high wind, hail), Tornadoes, Dam Failure, Levee Failure	New
P10: 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	Pointe Coupee Parish OHSEP	Tropical Cyclones, Flooding, Dam Failure, Levee Failure	New
P11: Dam and Levee Failure Working Group	Create a working group in order to assess the extent and determine the possible effects of a dam and/or levee failure.	FEMA HMGP, Local	1-5 years	Pointe Coupee Parish OHSEP	Dam Failure, Levee Failure	New
P12: Drought Ordinances	Adopt ordinances requiring water-saving measures in time of drought	FEMA HMGP, Local	1-5 years	Pointe Coupee Parish OHSEP	Drought	New

Town of Fordoche - New Mitigation Actions

Town of Fordoche						
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Status
F1: 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 Fordoche/Pointe Coupee Parish OHSEP	High Wind, Hail, Tropical Cyclones, Tornado	New
F2: 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 Fordoche/Pointe Coupee Parish OHSEP	Flooding, High Wind, Tropical Cyclones	New
F3: Mitigation of repetitive loss and severe repetitive loss properties and other hazard prone structures	Elevation, acquisition-demolition, acquisition-relocations, and reconstruction of repetitive loss or flooding or other hazard prone properties.	FEMA HMGP, Local	1-5 years	Town of Fordoche/Pointe Coupee Parish OHSEP	Flooding, Tropical Cyclones, Dam Failure, Levee Failure	New
F4: Safe Room Projects	Construction of a safe room for first responders located in Fordoche. Other locations will be identified based on funding availability.	FEMA HMGP, Local	1-5 years	Town of Fordoche/Pointe Coupee Parish OHSEP	Tornado, High Wind, Tropical Cyclones	New
F5: 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, Dam Failure, Levee Failure and Winter Storms 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 Fordoche/Pointe Coupee Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes, Thunderstorms (lightning, high wind, hail), Winter Storms, Drought, Dam Failure, Levee Failure	New

Town of Fordoche						
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Status
F6: Generators for continuity of operations and government	Procurement and Installation of generators at parish and local critical facilities to ensure continued operations during and after events.	FEMA HMGP, Local	1-5 years	Town of Fordoche/Pointe Coupee Parish OHSEP	Tornadoes, Winter Storms, Tropical Cyclones, Thunderstorms (lightning, high wind, hail)	New
F7: 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 Fordoche/Pointe Coupee Parish OHSEP	Lightning	New
F8: Warning Systems	Update/upgrade public warning system components throughout Fordoche as necessary. Install audible and/or reverse 911 warning system(s)	FEMA HMGP, Local	1-5 years	Town of Fordoche/Pointe Coupee Parish OHSEP	Winter Storms, Tornadoes, Tropical Cyclones, Dam Failure, Levee Failure	New
F9: 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 Fordoche/Pointe Coupee Parish OHSEP	Tropical Cyclones, Thunderstorms (lightning, high wind, hail), Tornadoes, Dam Failure, Levee Failure	New
F10: 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 Fordoche/Pointe Coupee Parish OHSEP	Tropical Cyclones, Flooding, Dam Failure, Levee Failure	New
F11: Dam and Levee Failure Working Group	Create a working group in order to assess the extent and determine the possible effects of a dam and/or levee failure.	FEMA HMGP, Local	1-5 years	Town of Fordoche/Pointe Coupee Parish OHSEP	Dam Failure, Levee Failure	New
F12: Drought Ordinances	Adopt ordinances requiring water-saving measures in time of drought	FEMA HMGP, Local	1-5 years	Town of Fordoche/Pointe Coupee Parish OHSEP	Drought	New

Town of Livonia – New Mitigation Actions

Town of Livonia						
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Status
L1: 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 Livonia/Pointe Coupee Parish OHSEP	High Wind, Hail, Tropical Cyclones, Tornado	New
L2: Drainage Improvements	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation. Benefits: Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.	FEMA HMGP, Local	1-5 years	Town of Livonia/Pointe Coupee Parish OHSEP	Flooding, High Wind, Tropical Cyclones	New
L3: Mitigation of repetitive loss and severe repetitive loss properties and other hazard prone structures	Elevation, acquisition-demolition, acquisition-relocations, and reconstruction of repetitive loss or flooding or other hazard prone properties.	FEMA HMGP, Local	1-5 years	Town of Livonia/Pointe Coupee Parish OHSEP	Flooding, Tropical Cyclones, Dam Failure, Levee Failure	New
L4: Safe Room Projects	Construction of a safe room for first responders located in City of Livonia. Other locations will be identified based on funding availability.	FEMA HMGP, Local	1-5 years	Town of Livonia/Pointe Coupee Parish OHSEP	Tornado, High Wind, Tropical Cyclones	New
L5: 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, Dam Failure, Levee Failure and Winter Storms 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 Livonia/Pointe Coupee Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes, Thunderstorms (lightning, High Wind, hail), Winter Storms, Drought, Dam Failure, Levee Failure	New

Town of Livonia						
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Status
L6: Generators for continuity of operations and government	Procurement and Installation of generators at parish and local critical facilities to ensure continued operations during and after events.	FEMA HMGP, Local	1-5 years	Town of Livonia/Pointe Coupee Parish OHSEP	Tornados, Winter Storms, Tropical Cyclones, Thunderstorms (lightning, high wind, hail)	New
L7: 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 Livonia/Pointe Coupee Parish OHSEP	Lightning	New
L8: Warning Systems	Update/upgrade public warning system components throughout Livonia as necessary. Install audible and/or reverse 911 warning system(s)	FEMA HMGP, Local	1-5 years	Town of Livonia/Pointe Coupee Parish OHSEP	Winter Storms, Tornadoses, Tropical Cyclones, Dam Failure, Levee Failure	New
L9: 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 Livonia/Pointe Coupee Parish OHSEP	Tropical Cyclones, Thunderstorms (lightning, high wind, hail), Tornadoses, Dam Failure, Levee Failure	New
L10: 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 Livonia/Pointe Coupee Parish OHSEP	Tropical Cyclones, Flooding, Dam Failure, Levee Failure	New
L11: Dam and Levee Failure Working Group	Create a working group in order to assess the extent and determine the possible effects of a dam and/or levee failure.	FEMA HMGP, Local	1-5 years	Town of Livonia/Pointe Coupee Parish OHSEP	Dam Failure, Levee Failure	New
L12: Drought Ordinances	Adopt ordinances requiring water-saving measures in time of drought	FEMA HMGP, Local	1-5 years	Town of Livonia/Pointe Coupee Parish OHSEP	Drought	New

Village of Morganza – New Mitigation Actions

Village of Morganza						
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	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 Morganza/Pointe Coupee Parish OHSEP	High Wind, Hail, Tropical Cyclones, Tornadoes	New
M2: Drainage Improvements	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation. Benefits: Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.	FEMA HMGP, Local	1-5 years	Village of Morganza/Pointe Coupee Parish OHSEP	Flooding, High Wind, Tropical Cyclones	New
M3: Mitigation of repetitive loss and severe repetitive loss properties and other hazard prone structures	Elevation, acquisition-demolition, acquisition-relocations, and reconstruction of repetitive loss or flooding or other hazard prone properties.	FEMA HMGP, Local	1-5 years	Village of Morganza/Pointe Coupee Parish OHSEP	Flooding, Tropical Cyclones, Dam Failure, Levee Failure	New
M4: Safe Room Projects	Construction of a safe room for first responders located in City of Morganza. Other locations will be identified based on funding availability.	FEMA HMGP, Local	1-5 years	Village of Morganza/Pointe Coupee Parish OHSEP	Tornado, High Wind, Tropical Cyclones	New
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, Dam Failure, Levee Failure and Winter Storms 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 Morganza/Pointe Coupee Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes, Thunderstorms (lightning, high wind, hail), Winter Storms, Drought, Dam Failure, Levee Failure	New

Village of Morganza						
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Status
M6: Generators for continuity of operations and government	Procurement and Installation of generators at parish and local critical facilities to ensure continued operations during and after events.	FEMA HMGP, Local	1-5 years	Village of Morganza/Pointe Coupee Parish OHSEP	Tornadoes, Winter Storms, Tropical Cyclones, Thunderstorms (lightning, high wind, hail)	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 Morganza/Pointe Coupee Parish OHSEP	Lightning	New
M8: Warning Systems	Update/upgrade public warning system components throughout Morganza as necessary. Install audible and/or reverse 911 warning system(s)	FEMA HMGP, Local	1-5 years	Village of Morganza/Pointe Coupee Parish OHSEP	Winter Storms, Tornadoes, Tropical Cyclones, Dam Failure, Levee Failure	New
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 Morganza/Pointe Coupee Parish OHSEP	Tropical Cyclones, Thunderstorms (lightning, high wind, hail), Tornadoes, Dam Failure, Levee Failure	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 Morganza/Pointe Coupee Parish OHSEP	Tropical Cyclones, Flooding, Dam Failure, Levee Failure	New
M11: Dam and Levee Failure Working Group	Create a working group in order to assess the extent and determine the possible effects of a dam and/or levee failure.	FEMA HMGP, Local	1-5 years	Village of Morganza/Pointe Coupee Parish OHSEP	Dam Failure, Levee Failure	New
M12: Drought Ordinances	Adopt ordinances requiring water-saving measures in time of drought	FEMA HMGP, Local	1-5 years	Village of Morganza/Pointe Coupee Parish OHSEP	Drought	New

City of New Roads – New Mitigation Actions

City of New Roads						
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Status
N1: 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 New Roads/Pointe Coupee Parish OHSEP	High Wind, Hail, Tropical Cyclones, Tornado	New
N2: Drainage Improvements	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation. Benefits: Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.	FEMA HMGP, Local	1-5 years	City of New Roads/Pointe Coupee Parish OHSEP	Flooding, High Wind, Tropical Cyclones	New
N3: Mitigation of repetitive loss and severe repetitive loss properties and other hazard prone structures	Elevation, acquisition-demolition, acquisition-relocations, and reconstruction of repetitive loss or flooding or other hazard prone properties.	FEMA HMGP, Local	1-5 years	City of New Roads/Pointe Coupee Parish OHSEP	Flooding, Tropical Cyclones, Dam Failure, Levee Failure	New
N4: Safe Room Projects	Construction of a safe room for first responders located in City of New Roads. Other locations will be identified based on funding availability.	FEMA HMGP, Local	1-5 years	City of New Roads/Pointe Coupee Parish OHSEP	Tornado, High Wind, Tropical Cyclones	New
N5: 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, Dam Failure, Levee Failure and Winter Storms 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 New Roads/Pointe Coupee Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes, Thunderstorms (lightning, high wind, hail), Winter Storms, Drought, Dam Failure, Levee Failure	New

City of New Roads						
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Status
N6: Generators for continuity of operations and government	Procurement and Installation of generators at parish and local critical facilities to ensure continued operations during and after events.	FEMA HMGP, Local	1-5 years	City of New Roads/Pointe Coupee Parish OHSEP	Tornadoes, Winter Storms, Tropical Cyclones, Thunderstorms (lightning, high wind, hail)	New
N7: 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 New Roads/Pointe Coupee Parish OHSEP	Lightning	New
N8: Warning Systems	Update/upgrade public warning system components throughout New Roads as necessary. Install audible and/or reverse 911 warning system(s)	FEMA HMGP, Local	1-5 years	City of New Roads/Pointe Coupee Parish OHSEP	Winter Storms, Tornadoes, Tropical Cyclones, Dam Failure, Levee Failure	New
N9: 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 New Roads/Pointe Coupee Parish OHSEP	Tropical Cyclones, Thunderstorms (lightning, high wind, hail), Tornadoes, Dam Failure, Levee Failure	New
N10: 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 New Roads/Pointe Coupee Parish OHSEP	Tropical Cyclones, Flooding, Dam Failure, Levee Failure	New
N11: Dam and Levee Failure Working Group	Create a working group in order to assess the extent and determine the possible effects of a dam and/or levee failure.	FEMA HMGP, Local	1-5 years	City of New Roads/Pointe Coupee Parish OHSEP	Dam Failure, Levee Failure	New
N12: Drought Ordinances	Adopt ordinances requiring water-saving measures in time of drought	FEMA HMGP, Local	1-5 years	City of New Roads/Pointe Coupee Parish OHSEP	Drought	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 Pointe Coupee 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, or political priorities within the past 5 years, with the methodology and prioritization process remaining the same.

Pointe Coupee Parish and the participating jurisdictions will implement and administer the identified actions based off of 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's hazard mitigation planning process per the FEMA Local Mitigation Planning Handbook. This planning process assured public involvement and the participation of interested agencies and private organizations. Documentation of the planning process for the updated plan is addressed in this section.

The Pointe Coupee Parish Hazard Mitigation Plan Update

The Pointe Coupee Parish Hazard Mitigation Plan Update process began in November 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.

Pointe Coupee Parish includes the unincorporated areas of the parish, as well as the four incorporated municipalities that participated in the plan update process – the Town of Fordoche, Town of Livonia, Village of Morganza, and City of New Roads. Pointe Coupee 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
5/26/2015	Initial Coordination	Telephone/ Email	No	Discuss with Parish HM coordinator and any Steering Committee members expectations and requirements of the project.
12/7/2015	Kick-Off Meeting	Pointe Coupee Parish, Morganza, LA	No	Discuss with the plan Steering Committee expectations and requirements of the project. Assign plan worksheets to jurisdictions.
3/31/2015	Risk Assessment Overview	Pointe Coupee Parish, Morganza, LA	No	Discuss and review the risk assessment with the Steering Committee discuss and review expectations for public meeting.
3/31/2015	Public Meeting	Pointe Coupee Parish, Morganza, 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 Pointe Coupee 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 Pointe Coupee Parish. In addition, we asked about the methods and techniques preferred for reducing the risks and losses associated with these hazards. Survey Results: https://www.surveymonkey.com/r/PointeCoupee
2 Week Period	Public Plan Review (Digital)		Yes	Parish Website and Pointe Coupee Parish OHSEP

Planning

The plan update process consisted of several phases:

Phase	Month 1-2	Month 3-4	Month 5-6	Month 7-8	Month 9-10	Month 11-12	Month 12-13	Month 13-14	Month 15-17
Plan Revision									
Data Collection									
Risk Assessment									
Public Input									
Mitigation Strategy and Actions									
Plan Review by GOHSEP and FEMA									
Plan Adoption									
Plan Approval									

Coordination

The Pointe Coupee Parish OHSEP oversaw the coordination of the 2016 Hazard Mitigation Plan Update Steering Committee during the update process. The Pointe Coupee 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

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

- Pointe Coupee Parish Government
- Pointe Coupee Office of Homeland Security and Emergency Preparedness
- Town of Fordoche
- Town of Livonia
- Village of Morganza
- City of New Roads

The parish director of West Feliciana was invited by the Pointe Coupee Parish OHSEP via email invitation 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 2 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:

Name	Title	Agency	Address	Phone
Robert Myer	Mayor of New Roads	City of New Roads	211 West Main St. New Roads, LA	(225) 638-5360
Teddy Gros	Mayor of Fordoche	Town of Fordoche	5390 Fordoche Rd. Fordoche, LA	(225) 637-3112
Troy Chustz	Mayor of Livonia	Town of Livonia	P.O. Box 307 Livonia, LA	(225) 637-2981
SJ Tuminello	Mayor of Morganza	Village of Morganza	112 S LA 3050 Morganza, LA	(225) 694-3655
Mark Ward	OHSEP Director	Pointe Coupee OHSEP	PO Box 248 New Roads, LA	(225) 694-3737
Darren Guidry	Region 2 Coordinator	GOHSEP	7667 Independence Blvd	(225) 925-7500
Brian Spillman	Director	West Feliciana OHSEP	PO Box 796 St Francisville, LA	(225) 635-6428
Cornell Dukes	Parish President	Parish Police Jury	PO Box 290 New Roads, LA	(225) 638-9556

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 Pointe Coupee 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 Pointe Coupee 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, 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 2005 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 Plan
- 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 Pointe Coupee Parish.

Meeting #1: Coordination Discussion

Date: May 26, 2015

Location: Email

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 an initial project timeline.

Public Initiation: No

Invitees Included: Pointe Coupee Parish OHSEP, SDMI Staff

Meeting #2: Hazard Mitigation Plan Update Kick-Off

Date: December 7, 2015

Location: Morganza, Louisiana

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:

Name	Title	Agency
Robert Myer	Mayor of New Roads	City of New Roads
Teddy Gros	Mayor of Fordoche	Town of Fordoche
Troy Chustz	Mayor of Livonia	Town of Livonia
SJ Tuminello	Mayor of Morganza	Village of Morganza
Mark Ward	OHSEP Director	Point Coupee OHSEP
Darren Guidry	Region 2 Coordinator	GOHSEP
Brian Spillman	West Feliciana OHSEP Director	West Feliciana OHSEP
Cornell Dukes	Parish President	Parish Police Jury

Meeting #3: Risk Assessment Overview

Date: March 31, 2016

Location: Morganza, 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:

Name	Title	Agency
Robert Myer	Mayor of New Roads	City of New Roads
Teddy Gros	Mayor of Fordoche	Town of Fordoche
Troy Chustz	Mayor of Livonia	Town of Livonia
SJ Tuminello	Mayor of Morganza	Village of Morganza
Mark Ward	OHSEP Director	Point Coupee OHSEP
Darren Guidry	Region 2 Coordinator	GOHSEP
Brian Spillman	West Feliciana OHSEP Director	West Feliciana OHSEP
Cornell Dukes	Parish President	Parish Police Jury

Meeting #4: Public Meeting**Date:** March 31, 2016**Location:** Morganza, 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 Pointe Coupee Parish communities were provided for the meeting attendees to identify specific areas where localized hazards occur.

Public Initiation: Yes**Invitees Included:**

Name	Title	Agency
Robert Myer	Mayor of New Roads	City of New Roads
Teddy Gros	Mayor of Fordoche	Town of Fordoche
Troy Chustz	Mayor of Livonia	Town of Livonia
SJ Tuminello	Mayor of Morganza	Village of Morganza
Mark Ward	OHSEP Director	Point Coupee OHSEP
Darren Guidry	Region 2 Coordinator	GOHSEP
Brian Spillman	West Feliciana OHSEP Director	West Feliciana OHSEP
Cornell Dukes	Parish President	Parish Police Jury

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

Meeting Public Notice

POINTE COUPEE PARISH OFFICE OF HOMELAND SECURITY & EMERGENCY PREPAREDNESS

PUBLIC MEETING NOTICE**Pointe Coupee Parish to hold Public Meetings for Hazard Mitigation Plan Update**

Morganza, LA – Pointe Coupee Parish Office of Homeland Security & Emergency Preparedness is in the process of updating the Pointe Coupee Parish Hazard Mitigation Plan and are required to hold public meetings on the plan update. The Public meeting will be held from 10:30am – 11:30am on Thursday, March 31st, at the Pointe Coupee Parish Sheriff's Training Facility.

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.

Pointe Coupee Parish is in the beginning stages of updating its hazard mitigation plan. Public meeting will be held on March 31st for all citizens interested in learning about and participating in discussions concerning the Pointe Coupee Parish Hazard Mitigation Plan.

Residents of Pointe Coupee 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/PointeCoupee>

For more information, please contact: Mark Ward – mward@pcpsa.org

Outreach Activity #1: Public Opinion Survey

Date: Ongoing throughout planning process

Location: Web Survey

Public Initiation: Yes

No comments were collected through this activity.

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. However, because no members of the public attended, no comments were collected.

Public Plan Review Documentation

The Pointe Coupee Parish Hazard Mitigation Draft Plan was placed on the Pointe Coupee Parish website to collect comments and feedback from the public. This outreach provided the public an opportunity to comment on the plan during the drafting stage and prior to plan approval. No feedback was received at this time.

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Appendix B: Plan Maintenance

Purpose

The section of the Code of Federal Regulations (CFR) pertaining to Local Mitigation Plans lists five required components for each plan: a description of the planning process; risk assessments; mitigation strategies; a method and system for plan maintenance; and documentation of plan adoption. This section details the method and system for plan maintenance, following the CFR's guidelines that the Plan Update must include (1) "a section describing the method and schedule of monitoring, evaluating, and updating the mitigation plan within a five-year cycle," (2) "a process by which local governments incorporated the requirements of the mitigation plan into other planning mechanisms such as comprehensive or capital improvement plans", and (3) "discussion on how the community will continue public participation in the plan maintenance process."

Monitoring, Evaluating, and Updating the Plan

The Pointe Coupee 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 library 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

Pointe Coupee 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

Pointe Coupee 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 Pointe Coupee 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 indicates a substantial change in hazard profile and risk assessment in the parish.

Additionally, the public will be canvassed to solicit public input to continue Pointe Coupee 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 Pointe Coupee Parish Hazard Mitigation Plan Steering Committee and participating jurisdictions to determine additional implementation procedures when appropriate. This may include integrating the requirements of the Pointe Coupee Parish Hazard Mitigation Plan into each jurisdiction's planning documents, processes, or mechanisms as follows:

- Ordinances, Resolutions, Regulations
- Floodplain Ordinances (Parish and Jurisdictions)
- Emergency Operations Plan (Parish and Jurisdictions)
- Comprehensive Master Plan (Entire Parish)
- Economic Development Plan (Parish and Jurisdictions)
- 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 Pointe Coupee 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

Pointe Coupee 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 the jurisdictions of Unincorporated Pointe Coupee Parish, Town of Fordoche, Town of Livonia, Village of Morganza, and City of New Roads, Pointe Coupee 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:

Unincorporated Pointe Coupee

Comprehensive Master Plan/Updated as needed/ Pointe Coupee Parish Police Jury
Local Emergency Operations Plan/Updated as needed/Pointe Coupee Parish OHSEP
Capital Improvements Plan/Updated as needed/ Pointe Coupee Parish Police Jury
Economic Development Plan/Updated as needed/ Pointe Coupee Parish Police Jury
Continuity of Operations Plan/Updated as needed/Pointe Coupee Parish OHSEP
Transportation Plan/Updated as needed/Pointe Coupee Parish Sheriff's Office
Stormwater Management Plan/Updated as needed/Pointe Coupee OHSEP

Town of Fordoche

There are no additional plans within this jurisdiction for the Hazard Mitigation Plan to be integrated.

Town of Livonia

There are no additional plans within this jurisdiction for the Hazard Mitigation Plan to be integrated.

Village of Morganza

There are no additional plans within this jurisdiction for the Hazard Mitigation Plan to be integrated.

City of New Roads

Comprehensive Master Plan/Updated as needed/ Pointe Coupee Parish Police Jury and Mayor of New Roads

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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Fordoche Essential Facilities											
Type	Name	Drought*	Flooding	Hail	Lightning	Wind	Tornado	Tropical Cyclones	Winter Storms*	Dam Failure+	Levee Failure+
Fire and Rescue	Fordoche Fire Department			X	X	X	X	X			
	Fordoche Fire Department			X	X	X	X	X			
Government	Fordoche City Hall			X	X	X	X	X			
Law Enforcement	Fordoche Police Station										

Livonia Essential Facilities											
Type	Name	Drought*	Flooding	Hail	Lightning	Wind	Tornado	Tropical Cyclones	Winter Storms*	Dam Failure+	Levee Failure+
Fire and Rescue	Livonia Fire Department			X	X	X	X	X			
Law Enforcement	Livonia Police Department			X	X	X	X	X			
	Livonia Police Department			X	X	X	X	X			
Schools	Livonia High School			X	X	X	X	X			

Morganza Essential Facilities											
Type	Name	Drought*	Flooding	Hail	Lightning	Wind	Tornado	Tropical Cyclones	Winter Storms*	Dam Failure+	Levee Failure+
Fire and Rescue	Morganza Volunteer Fire Department			X	X	X	X	X			
Government	Morganza City Hall			X	X	X	X	X			
Law Enforcement	Morganza Police Department			X	X	X	X	X			
Schools	Morganza High School			X	X	X	X	X			

New Roads Essential Facilities											
Type	Name	Drought*	Flooding	Hail	Lightning	Wind	Tornado	Tropical Cyclones	Winter Storms*	Dam Failure+	Levee Failure+
Fire and Rescue	Fire Department			X	X	X	X	X			
	Fire Department			X	X	X	X	X			
	Fire Station			X	X	X	X	X			
Government	Pointe Coupee Parish Courthouse			X	X	X	X	X			
	Courthouse Annex			X	X	X	X	X			
	Pointe Coupee School Board			X	X	X	X	X			
	Public Defender's Office			X	X	X	X	X			
Law Enforcement	New Roads Police Department			X	X	X	X	X			
	Pointe Coupee Parish Sheriff's Office			X	X	X	X	X			
	Pointe Coupee Parish Sheriff's Office			X	X	X	X	X			
	Pointe Coupee Parish Sheriff's Office Systems Center			X	X	X	X	X			
Schools	Rosenwald Elementary			X	X	X	X	X			

*There are no critical facilities vulnerable to this hazard

+Unknown due to data deficiency

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Appendix D: Plan Adoption

A RESOLUTION

Approving participation in the Parish Mitigation process and adoption of the parishwide Hazard Mitigation Plan.

WHEREAS, the Pointe Coupee Parish Police Jury has received grant funds from the Federal Emergency Management Agency for the preparation of a Parishwide Hazard Mitigation Plan; and

WHEREAS, the Disaster Mitigation Act of 2000, specifically Section 322 addresses local mitigation planning and requires local government to develop, submit, and maintain plans as a condition of receiving Hazard Mitigation Grant Program (HMGP) funds; and

WHEREAS, the post disaster mitigation funds are only available to those communities with an approved Hazard Mitigation Plan; and

WHEREAS, the Louisiana Office of Homeland Security and Emergency Preparedness focuses local mitigation planning at the Parish level and encourages local governments to participate in the Parish mitigation planning process;

NOW THEREFORE BE IT RESOLVED THAT the City of New Roads does hereby approve participation in the parish mitigation planning process in developing a parish-wide hazard mitigation plan and adoption of the final Federal Emergency Management Agency approved plan.

The above resolution was offered by Mr. Kellerman and seconded by Mr. Davis and having been submitted to a vote, the vote thereon was as follows:

YEAS:	Daisy, Davis, Kellerman and St. Cyr
NAYS:	None
ABSENT:	None
ABSTAIN:	White

And the resolution was declared adopted on this 21st day of February, 2017

ATTEST


MAYOR


CITY CLERK



CERTIFICATE

I hereby certify that the foregoing is a true and correct copy of a resolution adopted by the City Council of the City of New Roads, Louisiana, on the 21st day of February, 2017 and that said resolution has not been amended or rescinded and is still in full force and effect.

New Roads, Louisiana this 6th day of MARCH, 2017


City Clerk



Parish of Pointe Coupee
In the Name and By the Authority of
The Police Jury of Pointe Coupee Parish

RESOLUTION

A RESOLUTION ADOPTING THE POINTE COUPEE
PARISH HAZARD MITIGATION PLAN 2016

WHEREAS, the Pointe Coupee Parish Police Jury recognizes the threat that natural hazards pose to people and property within Pointe Coupee Parish; and

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

WHEREAS, the Pointe Coupee Parish Hazard Mitigation Plan 2016 identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in Pointe Coupee Parish from the impacts of future hazards and disasters; and

WHEREAS, adoption by the Pointe Coupee Parish Police Jury demonstrates their commitment to the hazard mitigation and achieving the goals outlined in the Pointe Coupee Parish Hazard Mitigation Plan 2016: Therefore be it

RESOLVED, That the Pointe Coupee Parish Police Jury hereby adopts the Pointe Coupee Parish Hazard Mitigation Plan 2016.

STATE OF LOUISIANA

PARISH OF POINTE COUPEE

I, GERRIE P. MARTIN, Secretary of the Police Jury of the Parish of Pointe Coupee, Louisiana, certify that the above and foregoing constitutes a true and correct copy of a resolution from the minutes of a special meeting of the Pointe Coupee Parish Police Jury held on February 20, 2017.

IN WITNESS WHEREOF, I have subscribed my official signature and impressed the official seal of the Police Jury of the Parish of Pointe Coupee, Louisiana, this 20th day of February, 2017.


Secretary



**Town of Fordoche
Louisiana**

RESOLUTION

A RESOLUTION ADOPTING THE POINTE COUPEE PARISH HAZARD MITIGATION PLAN 2016

WHEREAS, the Fordoche Mayor and Town Council recognize the threat that natural hazards pose to people and property within Fordoche; and

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

WHEREAS, Pointe Coupee Parish Hazard Mitigation Plan 2016 identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in Fordoche from the impacts of future hazards and disasters; and

WHEREAS, adoption by the Fordoche Town Council demonstrates their commitment to the hazard mitigation and achieving the goals outlined in the Pointe Coupee Parish Hazard Mitigation Plan 2016.

NOW THEREFORE, BE IT RESOLVED that the Fordoche Town Council hereby adopts the Pointe Coupee Hazard Mitigation Plan 2016.

The above resolution having been submitted to the Town Council and discussed at a public meeting on Thursday, February 23, 2017; after a motion by Robin Cashio and seconded by Don Sonnier, and having been submitted for a vote, the vote was as follows:

YEAS: Robin Cashio, Lonnie Kimble, Don Sonnier

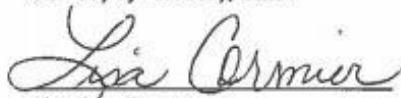
NAYS: None

ABSTAIN: None

ABSENT: Callie Meche, Karen Kimble


Teddy P. Gros, Mayor

I, Lisa Cormier, Town Clerk of the Town of Fordoche, do hereby certify that the foregoing resolution is a true and exact copy adopted by the Fordoche Town Council at a meeting therefore legally held on the 23rd day of February, 2017.


Lisa Cormier, LMMC
Town Clerk

Mayor and Town Council
Libonia, Louisiana
Resolution

A RESOLUTION ADOPTING THE POINTE COUPEE PARISH HAZARD MITIGATION PLAN UPDATE 2016

WHEREAS, the Mayor and Town Council recognizes the threat that natural hazards pose to people and property within Livonia; and

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

WHEREAS, Pointe Coupee Parish Hazard Mitigation Plan Update 2016 identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in Livonia from the impacts of future hazards and disasters; and


WHEREAS, adoption by the Livonia Town Council demonstrates their commitment to the hazard mitigation and achieving the goals outlined in the Pointe Coupee Parish Hazard Mitigation Plan Update 2016.

NOW THEREFORE, BE IT RESOLVED that the Livonia Town Council hereby adopts the Pointe Coupee Parish Hazard Mitigation Plan Update 2016.

The above Resolution was offered by James Bergeron, Jr., seconded by Ron LeBlanc, and Resolved. The following votes were recorded:

YEAS:	Bergeron, G. Jarreau, T. Jarreau, LeBlanc, W. Pourciau
NAYS:	None
ABSTAIN:	None
ABSENT:	None

WHEREUPON, the presiding officer declared the Resolution adopted on this 13th day of February, 2017.


RHETT POURCIAU, MAYOR

CERTIFICATE

I, Donna Bergeron, Master Municipal Clerk of the Town of Livonia, do hereby certify that the above and foregoing is a true and correct copy of a Resolution adopted by said governing body at its regular meeting on February 13, 2017.


DONNA BERGERON, MMC
TOWN CLERK

RESOLUTION

Approving participation in the Parish Mitigation process and adoption of the parishwide Hazard Mitigation Plan.

WHEREAS, the Pointe Coupee Parish Police Jury has received grant funds from the Federal Emergency Management Agency for the preparation of a Parishwide Hazard Mitigation Plan; and

WHEREAS, the Disaster Mitigation Act of 2000, specifically Section 322 addresses local mitigation planning and requires local governments to develop, submit, and maintain plans as a condition of receiving Hazard Mitigation Grant Program (HMGP) funds; and

WHEREAS, post disaster mitigation funds are only available to those communities with an approved Hazard Mitigation Plan; and

WHEREAS, the Louisiana Office of Homeland Security and Emergency Preparedness focuses local mitigation planning at the Parish level and encourages local governments to participate in the Parish mitigation planning process:
Therefore be it

RESOLVED, That the Village of Morganza does hereby approve the Final Draft of the Parish Hazard Mitigation Plan which has been given clearance by the Federal Emergency Management Agency.

The vote on the resolution resulted as follows:

YEAS: Stephanie Savoy, Clarence Wells

NAYS: NONE

ABSENT: Chris Guedry

I certify that the above constitutes a true and correct copy of a resolution from the minutes of the regular meeting of the Village of Morganza held on February 21, 2017


Mayor


Municipal Clerk

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Appendix E: State Required Worksheets

During the planning process (Appendix A) the Hazard Mitigation Plan Update Steering Committee was provided state-required plan update process worksheets to be filled out 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

Name	Title	Agency	Address	Phone
Robert Myer	Mayor of New Roads	City of New Roads	211 West Main St. New Roads, LA	(225) 638-5360
Teddy Gros	Mayor of Fordoche	Town of Fordoche	5390 Fordoche Road Fordoche, LA	(225) 637-3112
Troy Chustz	Mayor of Livonia	Town of Livonia	P.O. Box 307 Livonia, LA	(225) 637-2981
SJ Tuminello	Mayor of Morganza	Village of Morganza	112 S LA 3050 Morganza, LA	(225) 694-3655
Mark Ward	OHSEP Director	Point Coupee OHSEP	PO Box 248 New Roads, LA	(225) 694-3737
Darren Guidry	Region 2 Coordinator	GOHSEP	7667 Independence Blvd	(225) 925-7500
Brian Spillman	West Feliciana OHSEP Director	West Feliciana OHSEP	PO Box 796 St Francisville, LA	(225) 635-6428
Cornell Dukes	Parish President	Parish Police Jury	PO Box 290 New Roads, LA	(225) 638-9556

Capability Assessment

Pointe Coupee Unincorporated

Worksheet 4.1: Capability Assessment Worksheet

Local mitigation capabilities are existing authorities, policies 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.

Pointe Coupee Unincorporated Areas

Plans	Yes/No	Comments
Comprehensive / Master Plan	Yes	
Capital Improvements Plan	Yes	
Economic Development Plan	Yes	Pointe Coupee Chamber of Commerce
Local Emergency Operations Plan	Yes	OHSEP
Continuity of Operations Plan	Yes	
Transportation Plan	Yes	
Stormwater Management Plan	Yes	Flood Plain Administrator
Community Wildfire Protection Plan	No	
Other plans (redevelopment, recovery, coastal zone management)	No	
Building Code, Permitting and Inspections		
Building Code	Yes	Police Jury
Building Code Effectiveness Grading Schedule (BCEGS) Score	Yes	Fire Departments
Fire Department ISO/PIAL rating	Yes	5 districts with different ratings (District 1-Class 5, District 2-Class 5, District 3- Class 6, District 4- Class 4 out of town/3 inside Fordoche and Livonia, District 5- Class 5)
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	Flood Plain Administrator
Acquisition of land for open space and public recreation uses	No	
Other	No	
Administration and Technical		
Identify whether your community has the following administrative and technical capabilities. For smaller jurisdictions without local staff resources, if there are public resources at the next higher level government that can provide technical assistance, indicate so in your comments.		
Administration	Yes/No	Comments
Planning Commission	Yes	
Mitigation Planning Committee	Yes	
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	Yes	PCPJ Maint.
Staff		
Chief Building Official	Yes	
Floodplain Administrator	Yes	Patin Engineers
Emergency Manager	Yes	
Community Planner	No	
Civil Engineer	Yes	Patin Engineers
GIS Coordinator	Yes	PC Tax Assessor
Grant Writer	No	
Other		
Technical		
Warning Systems / Service (Reverse 911, outdoor warning signals)	No	
Hazard Data & Information	Yes	

Grant Writing	No	
Hazus Analysis	No	
Other	No	
Financial		
Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.		
Funding Resource	Yes/No	Comments
Capital Improvements project funding	Yes	
Authority to levy taxes for specific purposes	Yes	
Fees for water, sewer, gas, or electric services	Yes	
Impact fees for new development	Yes	
Stormwater Utility Fee	Yes	
Community Development Block Grant (CDBG)	Yes	
Other Funding Programs	Yes	Capital Outlay/LGAP
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	Local Fire Districts
Natural Disaster or safety related school program	Yes	PCPSB
Storm Ready certification	No	
Firewise Communities certification	No	
Public/Private partnership initiatives addressing disaster-related issues	Yes	Red Cross/ Food Bank
Other	No	

Town of Fordoche

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.

Fordoche

Plans	Yes/No	Comments
Comprehensive / Master Plan	No	Rely on Parish
Capital Improvements Plan	No	Rely on Parish
Economic Development Plan	No	Rely on Parish
Local Emergency Operations Plan	No	Rely on Parish
Continuity of Operations Plan	No	Rely on Parish
Transportation Plan	No	Rely on Parish
Stormwater Management Plan	No	Rely on Parish
Community Wildfire Protection Plan	No	Rely on Parish
Other plans (redevelopment, recovery, coastal zone management)	No	Rely on Parish
Building Code, Permitting and Inspections		
Building Code	No	Rely on Parish
Building Code Effectiveness Grading Schedule (BCEGS) Score	No	Rely on Parish
Fire Department ISO/PIAL rating	Yes	Class 3
Site plan review requirements	No	Rely on Parish
Land Use Planning and Ordinances		
Zoning Ordinance	No	Rely on Parish
Subdivision Ordinance	No	Rely on Parish
Floodplain Ordinance	Yes	
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	No	Rely on Parish

Flood Insurance Rate Maps	No	Use FHBM Instead
Acquisition of land for open space and public recreation uses	No	Rely on Parish
Other	No	Rely on Parish
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	Rely on Parish
Mitigation Planning Committee	No	Rely on Parish
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	No	Rely on Parish
Staff		
Chief Building Official	No	Rely on Parish
Floodplain Administrator	No	Rely on Parish
Emergency Manager	No	Rely on Parish
Community Planner	No	Rely on Parish
Civil Engineer	No	Rely on Parish
GIS Coordinator	No	Rely on Parish
Grant Writer	No	Rely on Parish
Other	No	Rely on Parish
Technical		
Warning Systems / Service (Reverse 911, outdoor warning signals)	No	Rely on Parish
Hazard Data & Information	No	Rely on Parish
Grant Writing	No	Rely on Parish
Hazus Analysis	No	Rely on Parish
Other	No	Rely on Parish

Financial		
Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.		
Funding Resource	Yes/No	Comments
Capital Improvements project funding	No	Rely on Parish
Authority to levy taxes for specific purposes	No	Rely on Parish
Fees for water, sewer, gas, or electric services	No	Rely on Parish
Impact fees for new development	No	Rely on Parish
Stormwater Utility Fee	No	Rely on Parish
Community Development Block Grant (CDBG)	No	Rely on Parish
Other Funding Programs	No	Rely on Parish
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	Rely on Parish
Ongoing public education or information program (responsible water use, fire safety, household preparedness, environmental education)	Yes	Local FD
Natural Disaster or safety related school program	No	Rely on Parish
Storm Ready certification	No	Rely on Parish
Firewise Communities certification	No	Rely on Parish
Public/Private partnership initiatives addressing disaster-related issues	No	Rely on Parish
Other	No	Rely on Parish

Town of Livonia

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.

Livonia

Plans	Yes/No	Comments
Comprehensive / Master Plan	No	Rely on Parish
Capital Improvements Plan	No	Rely on Parish
Economic Development Plan	No	Rely on Parish
Local Emergency Operations Plan	No	Rely on Parish
Continuity of Operations Plan	No	Rely on Parish
Transportation Plan	No	Rely on Parish
Stormwater Management Plan	No	Rely on Parish
Community Wildfire Protection Plan	No	Rely on Parish
Other plans (redevelopment, recovery, coastal zone management)	No	Rely on Parish
Building Code, Permitting and Inspections		
Building Code	No	Rely on Parish
Building Code Effectiveness Grading Schedule (BCEGS) Score	No	Rely on Parish
Fire Department ISO/PIAL rating	Yes	Class 4
Site plan review requirements	No	Rely on Parish
Land Use Planning and Ordinances		
Zoning Ordinance	Yes	
Subdivision Ordinance	Yes	
Floodplain Ordinance	Yes	

Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	No	Rely on Parish
Flood Insurance Rate Maps	No	Use FHBM Instead
Acquisition of land for open space and public recreation uses	No	Rely on Parish
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	Zoning
Mitigation Planning Committee	No	
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	Yes	
Staff		
Chief Building Official	No	
Floodplain Administrator	No	Rely on Parish
Emergency Manager	Yes	Mayor
Community Planner	No	
Civil Engineer	No	Rely on Parish
GIS Coordinator	No	Rely on Parish
Grant Writer	No	
Other		
Technical		
Warning Systems / Service (Reverse 911, outdoor warning signals)	Yes	Telephone Call System
Hazard Data & Information	No	
Grant Writing	No	
Hazus Analysis	No	

Financial		
Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.		
Funding Resource	Yes/No	Comments
Capital Improvements project funding	No	
Authority to levy taxes for specific purposes	No	
Fees for water, sewer, gas, or electric services	No	
Impact fees for new development	No	
Stormwater Utility Fee	No	
Community Development Block Grant (CDBG)	No	
Other Funding Programs	No	
Education and Outreach		
Identify education and outreach programs and methods, already in place that could be used to implement mitigation activities and communicate hazard-related information.		
Program / Organization	Yes/No	Comments
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	No	
Ongoing public education or information program (responsible water use, fire safety, household preparedness, environmental education)	No	
Natural Disaster or safety related school program	No	
Storm Ready certification	No	
Firewise Communities certification	No	
Public/Private partnership initiatives addressing disaster-related issues	No	
Other	No	

Village of Morganza

Worksheet 4.1: Capability Assessment Worksheet

Local mitigation capabilities are existing authorities, policies 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.

Morganza

Plans

	Yes/No	Comments
Comprehensive / Master Plan	No	Rely on Parish
Capital Improvements Plan	No	Rely on Parish
Economic Development Plan	No	Rely on Parish
Local Emergency Operations Plan	No	Rely on Parish
Continuity of Operations Plan	No	Rely on Parish
Transportation Plan	No	Rely on Parish
Stormwater Management Plan	No	Rely on Parish
Community Wildfire Protection Plan	No	Rely on Parish
Other plans (redevelopment, recovery, coastal zone management)	No	Rely on Parish
Building Code, Permitting and Inspections		
Building Code	No	Rely on Parish
Building Code Effectiveness Grading Schedule (BCEGS) Score	No	Rely on Parish
Fire Department ISO/PIAL rating	Yes	Class 5
Site plan review requirements	No	Rely on Parish
Land Use Planning and Ordinances		
Zoning Ordinance	No	Rely on Parish
Subdivision Ordinance	No	Rely on Parish
Floodplain Ordinance	Yes	
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	No	Rely on Parish

Flood Insurance Rate Maps	No	Use FHBM Instead
Acquisition of land for open space and public recreation uses	No	Rely on Parish
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	Rely on Parish
Mitigation Planning Committee	No	Rely on Parish
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	No	Rely on Parish
Staff		
Chief Building Official	No	Rely on Parish
Floodplain Administrator	No	Rely on Parish
Emergency Manager	No	Rely on Parish
Community Planner	No	Rely on Parish
Civil Engineer	No	Rely on Parish
GIS Coordinator	No	Rely on Parish
Grant Writer	No	Rely on Parish
Technical		
Warning Systems / Service (Reverse 911, outdoor warning signals)	No	Rely on Parish
Hazard Data & Information	No	Rely on Parish
Grant Writing	No	Rely on Parish
Hazus Analysis	No	Rely on Parish
Other	no	
Financial		
Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.		
Funding Resource	Yes/No	Comments
Capital Improvements project funding	No	Rely on Parish

Authority to levy taxes for specific purposes	Yes	
Fees for water, sewer, gas, or electric services	Yes	
Impact fees for new development	No	Rely on Parish
Stormwater Utility Fee	No	Rely on Parish
Community Development Block Grant (CDBG)	No	Rely on Parish
Other Funding Programs	No	
Education and Outreach		
Identify education and outreach programs and methods, already in place that could be used to implement mitigation activities and communicate hazard-related information.		
Program / Organization	Yes/No	Comments
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	No	Rely on Parish
Ongoing public education or information program (responsible water use, fire safety, household preparedness, environmental education)	No	Rely on Parish
Natural Disaster or safety related school program	No	Rely on Parish
Storm Ready certification	No	Rely on Parish
Firewise Communities certification	No	Rely on Parish
Public/Private partnership initiatives addressing disaster-related issues	No	Rely on Parish

City of New Roads

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.

New Roads		
Plans	Yes/No	Comments
Comprehensive / Master Plan	Yes	
Capital Improvements Plan	No	Rely on Parish
Economic Development Plan	No	Rely on Parish
Local Emergency Operations Plan	No	Rely on Parish
Continuity of Operations Plan	No	Rely on Parish
Transportation Plan	No	Rely on Parish
Stormwater Management Plan	No	Rely on Parish
Community Wildfire Protection Plan	No	Rely on Parish
Other plans (redevelopment, recovery, coastal zone management)	No	Rely on Parish
Building Code, Permitting and Inspections		
Building Code	Yes	
Building Code Effectiveness Grading Schedule (BCEGS) Score	Yes	
Fire Department ISO/PIAL rating	Yes	Class 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	Rely on Parish

Flood Insurance Rate Maps	Yes	
Acquisition of land for open space and public recreation uses	No	Rely on Parish
Other	No	
Administration and Technical		

Identify whether your community has the following administrative and technical capabilities. For smaller jurisdictions without local staff resources, if there are public resources at the next higher level government that can provide technical assistance, indicate so in your comments.

Administration	Yes/No	Comments
Planning Commission	Yes	
Mitigation Planning Committee	No	Rely on Parish
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	No	
Staff		
Chief Building Official	Yes	
Floodplain Administrator	Yes	
Emergency Manager	No	Rely on Parish
Community Planner	No	Rely on Parish
Civil Engineer	No	Rely on Parish
GIS Coordinator	No	Rely on Parish
Grant Writer	Yes	
Other	No	
Technical		
Warning Systems / Service (Reverse 911, outdoor warning signals)	No	Rely on Parish
Hazard Data & Information	No	Rely on Parish
Grant Writing	No	Rely on Parish
Hazus Analysis	No	Rely on Parish
Other	No	

Financial

Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.

Funding Resource	Yes/No	Comments
Capital Improvements project funding	No	
Authority to levy taxes for specific purposes	Yes	
Fees for water, sewer, gas, or electric services	Yes	
Impact fees for new development	No	
Stormwater Utility Fee	No	
Community Development Block Grant (CDBG)	No	
Other Funding Programs	No	

Education and Outreach

Identify education and outreach programs and methods, already in place that could be used to implement mitigation activities and communicate hazard-related information.

Program / Organization	Yes/No	Comments
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	No	
Ongoing public education or information program (responsible water use, fire safety, household preparedness, environmental education)	Yes	Fire Department
Natural Disaster or safety related school program	No	
Storm Ready certification	No	
Firewise Communities certification	No	
Public/Private partnership initiatives addressing disaster-related issues	No	
Other	No	

Building Inventory

Critical Facility (If Yes, Mark X)	Name of Building	Purpose of Building	Address	City	Latitude	Longitude	Assessed Value	Date Built	Const. Type
Pointe Coupee									
	Upper Pointe Coupee High School	Education	4739 Louisiana 419	Batchelor	30.83915646	-91.66647735	\$1,730,000.00	1958	Concrete
X	Pointe Coupee Parish Sheriff's Office Substation	Law Enforcement	Nearby: 4259-4303 Nichols Street	Batchelor	30.87565294	-91.67978726	\$41,000.00	1950	Concrete
	Innis Community Health Center	Hospital or Medical Center	6450 LA-1	Batchelor	30.87622447	-91.67919954	\$812,000.00	1975	Metal
X	Fire Dept.	Fire Search and Rescue	Nearby: 15839 Chenal Road	Glynn	30.6534613	-91.34328625	\$67,536.00	1980	Concrete
	Valverde Elementary	Education	1653 Valverde Road	Maringouin	30.53221929	-91.53059592	\$200,700.00	1960	Concrete
X	Morganza Volunteer Fire Department	Fire Search and Rescue	516 Church Street	Melville	30.73662866	-91.59204871	\$200,000.00	1970	Metal
	Rougon Elementary	Education	13258 Louisiana 416	Rougon	30.60931286	-91.37285622	\$755,000.00	1940	Concrete
X	Fire Dept.	Fire Search and Rescue	Nearby: 12841 Louisiana 416	Rougon	30.60255828	-91.38325042	\$239,296.00	1950	Metal
X	New Roads Fire Department - Waterloo Substation	Fire Search and Rescue	Nearby: 14275-14339 Patin Dyke Road	Ventress	30.68631685	-91.36453252	\$200,000.00	1975	Concrete
	Fordoche Fire Dept.	Fire Search and Rescue	4310 Harry Street	Fordoche	30.59682212	-91.61833847	\$270,381.00	1940	Concrete
	Livonia High School	Education	3118 LA-78	Livonia	30.5592947	-91.55473643	\$950,000.00	1936	Concrete
X	Livonia Fire Dept.	Fire Search and Rescue	3696 LA-78	Livonia	30.56771265	-91.54878403	\$40,000.00	1940	Metal

X	Livonia Fire Dept.	Fire Search and Rescue	Nearby: 2610-2620 Maringouin Rd W	Livonia	30.54786657	-91.55595428	\$93,550.00	1940	Metal
X	Pointe Coupee Fire Protection District 4	Fire Search and Rescue	Nearby: 2954-2960 Louisiana 81	Livonia	30.55563749	-91.64202264	\$80,000.00	1950	Metal
X	Pointe Coupee District 3 Station No. 33	Fire Search and Rescue	Nearby: 7609-7631 Lance St	Livonia	30.68277928	-91.41441845	\$90,000.00	1950	Metal
X	Fire Station	Fire Search and Rescue		Livonia			\$253,090.00	1984	Metal
	Rosenwald Elementary	Education	1100 New Roads Street	New Roads	30.70523157	-91.43578709	\$600,000.00	1940	Concrete
X	Fire Dept.	Fire Search and Rescue	1008 West Main Street	New Roads	30.69138449	-91.44263272	\$70,000.00	1950	Concrete
X	Fire Dept.	Fire Search and Rescue	807 New Roads Street	New Roads	30.70040316	-91.43586284	\$75,000.00	1950	Concrete
X	Fire Station	Fire Search and Rescue	Nearby: 2261 2884 LA 1 Business	New Roads	30.70433617	-91.47122665	\$75,000.00	1960	Metal
X	Pointe Coupee Parish Detention Center	Prisons and Correctional Facilities	Nearby: 8801-8809 Louisiana 981	New Roads	30.74714774	-91.38347551	\$2,600,000.00	1940	Concrete
	Pointe Coupee Parish Courthouse Annex	Civil Government	Nearby: 160 Main Street	New Roads	30.69316738	-91.43275923	\$1,000,000.00	1960	Concrete
	Pointe Coupee School Board	Civil Government	337 Napoleon Street	New Roads	30.70177151	-91.45391439	\$400,000.00	1950	Concrete
X	Pointe Coupee Parish Courthouse	Civil Government	120 Alamo Street	New Roads	30.69421427	-91.43255243	\$800,000.00	1805	Concrete
	Pointe Coupee Airport	Airports and Airfields	Nearby: Airport Road	New Roads	30.7147181	-91.48052733	\$1,800,000.00	1960	Concrete
X	Point Coupee Communications		7011 Mitchell Ln	Morganza			\$2,083,850.00	1990	Concrete
	S.O. Civil Office	Civil Government	128 Court St	New Roads			\$307,000.00	1950	Concrete

Fordoche									
X	Fordoche Police Station	Law Enforcement	5390 LA-77	Fordoche			\$300,000.00	1965	Concrete
X	Fordoche City Hall	Civil Government	5390 Fordoche Rd	Fordoche	30.59230024	-91.60535808	\$250,000.00	1961	Concrete
Livonia									
X	Livonia Police Department	Law Enforcement	3065 Louisiana 78	Livonia	30.55781754	-91.55647217	\$100,000.00	1965	Metal
X	Livonia Police Department	Law Enforcement	3065 Mississippi River Trail	Livonia	30.55895884	-91.55610309	\$100,000.00	1960	Concrete
X	Town Hall	Civil Government	3111 LA-78	Livonia	30.55895884	-91.55610309	\$278,970.00	1963	Concrete
	Tractor Warehouse			Livonia			\$31,490.00	1991	Concrete
	Council Room & Office	Civil Government		Livonia			\$177,730.00	1965	Concrete
X	Police Station	Law Enforcement		Livonia			\$138,480.00	1986	Concrete
	Community Center	Civil Government		Livonia			\$328,460.00	1980	Concrete
	Supply Warehouse			Livonia			\$19,130.00	1965	Metal
	Tractor Shed			Livonia			\$25,880.00	2010	Metal
Morganza									
X	Morganza Police Department	Law Enforcement	112 LA-3050	Morganza			\$200,000.00	1950	Concrete
X	Morganza City Hall	Civil Government	112 South LA 3050	Morganza	30.73697923	-91.59378495	\$45,550.00	1950	Concrete
New Roads									
X	New Roads City Hall	Civil Government	Nearby: 211 Main Street	New Roads	30.69299524	-91.43490613	\$570,000.00	1940	Concrete

Vulnerable Populations

Vulnerable Populations Worksheet

Pointe Coupee Parish

Name	Street	City	Zip Code	Latitude	Longitude
All Hospitals (Private or Public)					
Pointe Coupee General Hospital	2202 False River Drive	New Roads	70760	30.68369071	-91.46153865
Eye Medical Center	250 Hospital Road	New Roads	70760	30.68412105	-91.4630698
General Hospital Medical Park	230 Roberts Drive # G	New Roads	70760	30.68394799	-91.4622117
General Hospital Health Park	230 Roberts Drive # G	New Roads	70760	30.68497194	-91.46374041
Nursing Homes (Private or Public)					
Homebound Health and Hospice	350 Hospital Road	New Roads	70760	30.6844167	-91.4632717
Mobile Home Parks					
Trailer Park	Nearby: Main Street	Lottie	70756	30.55211118	-91.6425134
Trailer Park	Nearby: 7911 Louisiana 81	Livonia	70756	30.54903448	-91.56597439
Bergeron's on the Bayou Campground	4876 Zach Road	Oscar	70749	30.60466718	-91.39611859
Belmont Estates	Nearby: 5338 Island Road	Oscar	70749	30.61067442	-91.41052252
Bueche Gardens	Bueche Rd	Oscar	None	30.62927545	-91.47546296
Mobile Park	9762 Louisiana 965	Oscar	70775	30.64587128	-91.47733786
Maxey Care RV Park	641 Louisiana 1	Morganza	70759	30.73405122	-91.58912336
Unknown	Nearby: 7913 Park Street	Ventress	70783	30.69024118	-91.41545198
Unknown	Nearby: 7811 Park Street	Ventress	70783	30.6875506	-91.41594259
Unknown	Nearby: 7730-7924 Park Street	Ventress	70783	30.6854101	-91.41594081
Unknown	Nearby: Bradville Lane	Ventress	70783	30.68470654	-91.41588245
Unknown	Nearby: Gosserand Road	Ventress	70783	30.69205031	-91.41157333
Ted Davis Mobile Home Park	Nearby: Ted Davis Trailer Park	Ventress	70783	30.68134242	-91.36590811
Mobile Home Park	9762 Louisiana 965	New Roads	70775	30.70143372	-91.47712942

National Flood Insurance Program (NFIP)

Pointe Coupee Parish

National Flood Insurance Program (NFIP)

Jurisdiction: Pointe Coupee Parish

	Pointe Coupee Parish	Fordoché	Livonia	Morganza	New Roads
Insurance Summary					
How many NFIP policies are in the community? What is the total premium and coverage?	1,026; \$650,909 Premium, \$218,372,500 Coverage	19; \$6,553 Premium, \$5,250,000 Coverage	37, \$17,622 Premium, \$9,824,900 Coverage	28, \$12,407 Premium, \$7,445,000 Coverage	177, \$102,398 Premium, \$43,028,100 Coverage
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?	2,647, \$22,251,873, Unknown	8, \$26,550, Unknown	2, \$43,928, Unknown	39, \$169,172, Unknown	108, \$734,037, Unknown
How many structures are exposed to flood risk with in the community?	1,026	19	37	28	177
Describe any areas of flood risk with limited NFIP policy coverage.	None Known	None Known	None Known	None Known	None Known
Staff Resources					
Is the Community FPA or NFIP Coordinator certified?	yes	Yes	Yes	Yes	yes
Is flood plain management an auxiliary function?	yes	yes	yes	yes	yes
Provide an explanation of NFIP administration services (e.g., permit review, GIS, education or outreach, inspections, engineering capability)	permit review and inspections. Outreach to citizens	permit review and inspections. Outreach to citizens	permit review and inspections. Outreach to citizens	permit review and inspections. Outreach to citizens	permit review and inspections. Outreach to citizens

What are the barriers to running an effective NFIP program in the community, if any?	staffing and funding	staffing and funding	staffing and funding	staffing and funding	staffing and funding
Compliance History					
Is the community in good standing with the NFIP?	Yes	Yes	Yes	Yes	Yes
Are there any outstanding compliance issues(i.e., current violations)?	None Known	None Known	None Known	None Known	None Known
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact(CAC)?	Unknown	Unknown	Unknown	Unknown	Unknown
Is a CAV or CAC scheduled or needed? If so when?	No	No	No	No	No
Regulation					
When did the community enter the NFIP?	7/16/1981	5/25/1978	5/25/1978	5/25/1978	4/15/1980
Are the FIRMs digital or paper?	Paper	Neither (NSFHA)	Neither (NSFHA)	Neither (NSFHA)	Paper
Do floodplain development regulations meet or exceed FEMA or State minimum requirements? If so, in what ways?	Meet Minimums	Meet Minimums	Meet Minimums	Meet Minimums	Meet Minimums
Community Rating System (CRS)					
Does the community participate in CRS?	No	No	No	No	No
What is the community's CRS Class Ranking?	N/A	N/A	N/A	N/A	N/A
Does the plan include CRS planning requirements?	N/A	N/A	N/A	N/A	N/A