



RAPIDES

PARISH HAZARD MITIGATION UPDATE – 2016



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RAPIDES PARISH

HAZARD MITIGATION PLAN UPDATE

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Rapides Parish



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May 30, 2016

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ACKNOWLEDGMENTS

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

Unincorporated Rapides Parish

City of Alexandria

City of Pineville

Town of Ball

Town of Boyce

Town of Cheneyville

Town of Glenmora

Town of Lecompte

Town of Woodworth

Village of Forest Hill

Village of McNary

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

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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 Rapides 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 Rapides Parish less vulnerable and more disaster resistant. It also includes mitigation project scoping to further identify scopes of work, estimated costs, and implementation timing requirements of proposed selected mitigation projects. Information in the plan will be used to help guide and coordinate mitigation activities and local policy decisions affecting future land use.

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

- Unincorporated Rapides Parish
- City of Alexandria
- City of Pineville
- Town of Ball
- Town of Boyce
- Town of Cheneyville
- Town of Glenmora
- Town of Lecompte
- Town of Woodworth
- Village of Forest Hill
- Village of McNary

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 Rapides 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.

History

Research indicates that Paleo-Indian populations may have begun to inhabit portions of Louisiana as early as 12,000-10,000 B.C.¹ By the time of European contact in the late 15th century, there were many indigenous groups of people living throughout the area. In 1682, French explorer René-Robert Cavelier, Sieur de La Salle, descended the Mississippi River from Canada in an attempt to found a French colony near the river's mouth. As a result of his explorations, all the lands drained by the Mississippi River were claimed for France. These lands were given the name *Louisiane* in honor of King Louis XIV. In 1690, after La Salle's death by the hands of his own men, the captain from his first expedition, Henri de Tonti, set out from Canada in search of La Salle and his colony. He reached the Natchitoches Caddo villages along the Red River on February 17, 1690², just northwest of present-day Rapides Parish. The establishment of Natchitoches in 1714 would further advance the exploration of the region which would become Rapides Parish.

While under French rule, the territory located between the mouth of the Red River and Natchitoches saw no European settlement or development. The area was coined *Rapides*, the French word for "rapids", used to describe a set of silt-stone shoals extending across the river at present-day Alexandria.³ Nearly a century later, in 1804, all of the Louisiana Purchase south of the 33rd parallel became the Orleans Territory. Three years after that, Rapides Parish was formed in 1807 by the government of the Territory of Orleans.

During the early part of the nineteenth century, the city of Alexandria was established on Red River. Cotton and sugarcane became the leading economic pursuits of the area, aided in part by steamboat navigation, the

¹ Robert W. Neuman, *An Introduction to Louisiana Archaeology*, Louisiana State University Press, Baton Rouge, 1984

² Weddle, Morkovsky, & Galloway (editors), *LaSalle, the Mississippi, and the Gulf: Three Primary Documents*, Texas A&M University Press, College Station, 1987, pp. 20-25

³ Gregory & McCorkle, *Los Adaes: Historical and Archaeological Background*, Northwestern State University, 1981

naturally sandy levee deposits, and climate. Steamboat navigation along the Red River, however, was somewhat hampered by a series of naturally occurring logjams known as the “Great Raft”, until the U.S. government initiated its removal starting in 1833.⁴

Following the Civil War, the agricultural economy of Louisiana was in disarray. This was due in part to the lack of slave labor force, destroyed structures, and absence of livestock.⁵ By the turn of the 19th century, and coinciding with the emergence of the railroads, Rapides Parish reestablished itself as an economic leader in pine lumbering. Into the late 1900’s, longleaf pine exploitation began in earnest and Rapides Parish was home to several major sawmills. Northern companies had already cut the majority of timber in the northeastern U.S., and the railroad gave them access to rich forests in Louisiana. By 1925, local forests were practically flattened and the land abandoned by the timber companies who gave no thought to replanting. Not until Franklin Roosevelt’s New Deal Civilian Conservation Corps, did men trained in forestry and agriculture introduce methods to replant forests and build the nurseries that eventually revamped one of Rapides Parish’s major industries.⁶

Location, Demography, and Economy

Location

Rapides Parish is located in central Louisiana, about 100 miles northwest of Baton Rouge (*Figure 1-1*). It is surrounded by the following parishes: Vernon to the west, Natchitoches, Grant, and LaSalle to the north, Avoyelles Parish to the east, and Allen and Evangeline to the south of Rapides. The parish consists of 1,323 square miles of land area and 39 square miles of water area and is comprised of the following 10 incorporated communities: Alexandria, Pineville, Ball, Glenmora, Lecompte, Boyce, Woodworth, Cheneyville, Forest Hill, and McNary.



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

⁴ Robert H. Gudmestad, Steamboats and the removal of the Red River Raft, *Louisiana History* 52(4), 2011, pp. 389-416

⁵ Joe Gray Taylor, *Louisiana Reconstructed, 1863-1877*, Louisiana State University Press, Baton Rouge, 1974

⁶ <http://archive.thetowntalk.com/article/20060419/COMMUNITIES/50608027/-Turning-points-shaped-Rapides-history>

Rapides Parish contains four major physiographic divisions that include the Red River alluvial floodplain, nearly level upland drainages, gently sloping uplands, and strongly sloping uplands. The Red River crosses the east-central portion of Rapides Parish on a northwest/southeast trajectory dividing the upland portion of the parish into distinct east and west halves. Natural levee soils associated with Red River and its abandoned channels are loamy, exhibit high natural fertility, and are very productive agriculturally. The topography includes low-lying areas near the south of Catahoula Lake, while to the west, the area becomes hilly. Approximately one-half of Rapides Parish is located within the Atchafalaya-Teche-Rapides Basin; this includes the City of Alexandria and most of the central and southeastern part of the parish. The extreme western and southwestern sections of Rapides Parish are located in the Calcasieu-Mermentau Basin.⁷ Principal drainage systems within Rapides Parish are the Red River, Bayou Boeuf, Bayou Cocodrie, and the Calcasieu River. Almost 35 percent of the total land area of Rapides Parish is located within FEMA's 100-year floodplain.

Rapides Parish is located in Louisiana Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP) Region 6.

According to the 2013 U.S. Census, the total population in Rapides Parish was 132,552.



Figure 1-2: Louisiana Homeland Security Regions

Table 1-1: Rapides 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	131,613	132,552	132,488	0.70%	0.70%
Population Density (Pop/Sq Mi)	99.9	—	—	—	—
Total Households	47,606	47,606	—	—	—

⁷ Roger T. Saucier, *Geomorphology and Quaternary Geologic History of the Lower Mississippi Valley*, Submitted to Mississippi River Commission, Vicksburg, 1994

Economy

A hard-working labor force, abundant raw materials, and land for commercial and industrial development make Rapides Parish an ideal prospect for business investment. Although agriculture has historically been a large contributor to the local economic base, the government, education, and health sectors also provide major opportunities for economic growth in the area. In addition, the Central Louisiana Regional Port (CLRP) has a long history of contributing to the economy. Major agricultural commodities in 2014 included nursery crops, forestry, sugarcane, soybeans, feed grains, cotton, equine, rice and cattle.⁸ Much of the economy in the area is dependent upon Federal and State jobs, i.e. Fort Polk, Camp Beauregard, U.S. Forest Service, U.S. Veterans Hospital, and Pinecrest State School.⁹ Industry data for business patterns in Rapides Parish can be found in the table below:

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

Business Description	Number of Employees	Number of Establishments	Annual Payroll (\$1,000)
Retail Trade	7,884	569	186,804
Manufacturing	3,546	71	207,526
Health Care and Social Assistance	13,756	523	525,168
Mining, Quarrying, Oil and Gas Extraction	20-99	8	—
Transportation and Warehousing	965	85	36,383
Construction	3,592	183	175,755
Administration and Support and Waste Management and Remediation Services	1,574	137	39,730
Real Estate and Rental and Leasing	574	138	17,793
Wholesale Trade	1,692	140	68,011
Other Services (except Public Administration)	2,481	338	52,875
Accommodation and Food Services	4,672	235	65,466
Financial and Insurance	1,549	266	67,618
Professional, Scientific, and Technical Services	2,228	294	89,452
Information	632	38	27,323
Arts, Entertainment, Recreation	192	30	3,079
Management of Companies and Enterprises	195	10	11,888
Agriculture, Forestry, Fishing and Hunting	294	29	14,995
Utilities	500-999	21	—
Educational Services	1,003	30	20,040

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 Rapides 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.

⁸ <http://www.lfbf.org/rapides/>

⁹ http://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml

Hazard Mitigation

To fully understand hazard mitigation efforts in Rapides 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 Rapides 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 Rapides Hazard Mitigation Plan were as follows:

- Section One Introduction
- Section Two Parish Profile
- Section Three Planning Process
- Section Four Risk Assessment
- Section Five Mitigation Strategy
- Section Six Grants Program
- Section Seven Plan Implementation and Maintenance
- Section Eight Rapides Parish 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 Rapides 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 Rapides Parish Hazard Mitigation Plan. The current goals are as follows:

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

This plan update makes a number of textual changes throughout, but the most obvious changes are data related and structural edits. First, the 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 National Oceanic and Atmospheric Administration (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 Parish-Wide Risk Assessment
Section 5: Mitigation Strategy	Section 4: Mitigation Strategy
Section 6: Grants Program	N/A
Section 7: Plan Implementation and Maintenance	Appendix B: Plan Maintenance
Section 8: Rapides Parish Maps	Section 2: Hazard Identification and Parish-Wide Risk Assessment
Appendices	Appendix C: Essential Facilities; Appendix D: Plan Adoption; Appendix E: State Required Worksheets

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 Rapides Parish and its municipalities. The extent of this risk is dictated primarily by its geographic location. Most significantly, Rapides 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.

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2. Hazard Identification and Parish-Wide Risk Assessment

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

The table below provides an overview of the hazards that had been previously profiled in the Rapides Parish Hazard Mitigation Plan published in 2010, 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
Land Subsidence	X		*
Drought	X		X
Earthquakes			
Expansive Soils			
Fog			
Flooding	X	X	X
Extreme Heat	X		X
Sinkholes			
Thunderstorms (Hail, Lightning, & Wind)	X	X	X
Tornadoes	X	X	X
Tropical Cyclones	X	X	X
Tsunamis			
Wildfires	X		X
Winter Storms	X		X

* Hazard was profiled but discounted

Prevalent Hazards to the Community

While many of the hazards identified in [Table 2-1](#) occur in the parish, their occurrence was not merited for further study by the planning committee. The determination was made to focus attention and resources on the most prevalent hazards, which include the hazards previously profiled.

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

- a) Drought
- b) Extreme Heat
- c) Flooding (backwater, riverine, localized stormwater event)
- d) Land Subsidence
- e) Thunderstorms (hail, lightning, wind)
- f) Tornadoes
- g) Tropical Cyclones (flooding and high winds)
- h) Wildfires
- i) Winter Storms

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

- Flooding from rivers and waterways, rain storms, tropical cyclones, and hurricanes in the following forms:
 - a) Riverine
 - b) Stormwater
 - c) Surge
 - d) Backwater flooding (as the result of river flooding and surge)
- High wind damage most commonly resulting from hurricanes, thunderstorms, and tornadoes
- Property and crop damage resulting from drought, extreme heat, and wildfires

The potential destructive power of tropical cyclones and flooding were determined to be the most prevalent hazards to the parish. Nineteen of the twenty-one Presidential Declarations Rapides Parish has received resulted from either tropical cyclones (9 declarations) or flooding (10 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 Rapides Parish is included in the hurricane risk assessment.

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

Previous Occurrences

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

Table 2-2: Rapides Parish Major Disaster Declarations

Disaster Declaration Number	Date	Type of Disaster
208	9/10/1965	Tropical Cyclone – Hurricane Betsy
374	4/27/1973	Severe Storms, Flooding
3011	4/12/1975	Severe Storms, Flooding
470	6/6/1975	Heavy Rains, Tornadoes, and Flooding
3031	2/22/1977	Drought and Freezing
604	9/25/1979	Severe Storms, Flooding
675	1/11/1983	Severe Storms, Flooding
804	11/30/1987	Tornadoes, Flooding
835	7/17/1989	Tropical Cyclone – Hurricane Allison
902	4/23/1991	Severe Storms, Flooding
904	5/3/1991	Severe Storms, Tornadoes, and Flooding
956	8/26/1992	Tropical Cyclone – Hurricane Andrew
1437	10/3/2002	Tropical Cyclone – Hurricane Lili
3172	2/1/2003	Loss of Space Shuttle Columbia
1548	9/15/2004	Tropical Cyclone – Hurricane Ivan
1603	8/29/2005	Tropical Cyclone – Hurricane Katrina
1607	9/24/2005	Tropical Cyclone – Hurricane Rita
1668	11/2/2006	Severe Storms, Flooding
1786	9/2/2008	Tropical Cyclone – Hurricane Gustav
4080	8/19/2012	Tropical Storm – Hurricane Isaac
4228	7/13/2015	Severe Storms, Flooding

Probability of Future Hazard Events

The probability of a hazard event occurring in Rapides Parish is estimated in the table on the following page. The percent chance of an event happening during any given year was calculated by posting past events and dividing by the time period. Unless otherwise indicated, the time period used to 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 (1989 – 2014) 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 SHELDS 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						
	Rapides Parish (Unincorporated)	Alexandria	Ball	Boyce	Cheneyville	Forest Hill	Glenmora
Drought	12%	12%	12%	12%	12%	12%	12%
Extreme Heat	100%	100%	100%	100%	100%	100%	100%
Flooding	40%	72%	16%	16%	16%	16%	28%
Land Subsidence	<1%	<1%	<1%	<1%	<1%	<1%	<1%
Thunderstorms (Hail)	4%	4%	4%	4%	4%	4%	4%
Thunderstorms (Lightning)	28%	28%	28%	28%	28%	28%	28%
Thunderstorms (Wind)	100%	28%	28%	28%	28%	28%	28%
Tornadoes	100%	100%	100%	100%	100%	100%	100%
Tropical Cyclones	28%	28%	28%	28%	28%	28%	28%
Wildfires	<1%	<1%	<1%	<1%	<1%	<1%	<1%
Winter Storms	36%	36%	36%	36%	36%	36%	36%

Table 2-4: Probability of Future Hazard Reoccurrence (Continued)

Hazard	Probability			
	Lecompte	McNary	Pineville	Woodworth
Drought	12%	12%	12%	12%
Extreme Heat	100%	100%	100%	100%
Flooding	24%	20%	20%	24%
Land Subsidence	<1%	<1%	<1%	<1%
Thunderstorms (Hail)	4%	4%	4%	4%
Thunderstorms (Lightning)	28%	28%	28%	28%
Thunderstorms (Wind)	100%	100%	100%	100%
Tornadoes	100%	100%	100%	100%
Tropical Cyclones	28%	28%	28%	28%
Wildfires	<1%	<1%	<1%	<1%
Winter Storms	36%	36%	36%	36%

As shown in the tables above, extreme heat, tornadoes, and thunderstorm winds have the highest annual chance of occurrence in the parish (100%). Flood events in the incorporated area of Alexandria have a 70% chance of occurrence, followed by flood events for the unincorporated areas at 40%. Flooding events for

the remaining incorporated areas have a slightly lower chance of occurrence. Winter storms have a 36% annual chance of occurrence followed by tropical cyclones and thunderstorm lightning at a 28% annual chance of occurrence. Drought (12%), thunderstorm hail (4%), and wildfires (<1%) have the lowest annual chance of occurrence. Land subsidence was discounted since the annual chance of occurrence was calculated at less than 1% and the hazard has no impact on the Rapides Parish.

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 following tables provide the total estimated value for each type of structure by occupancy.

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

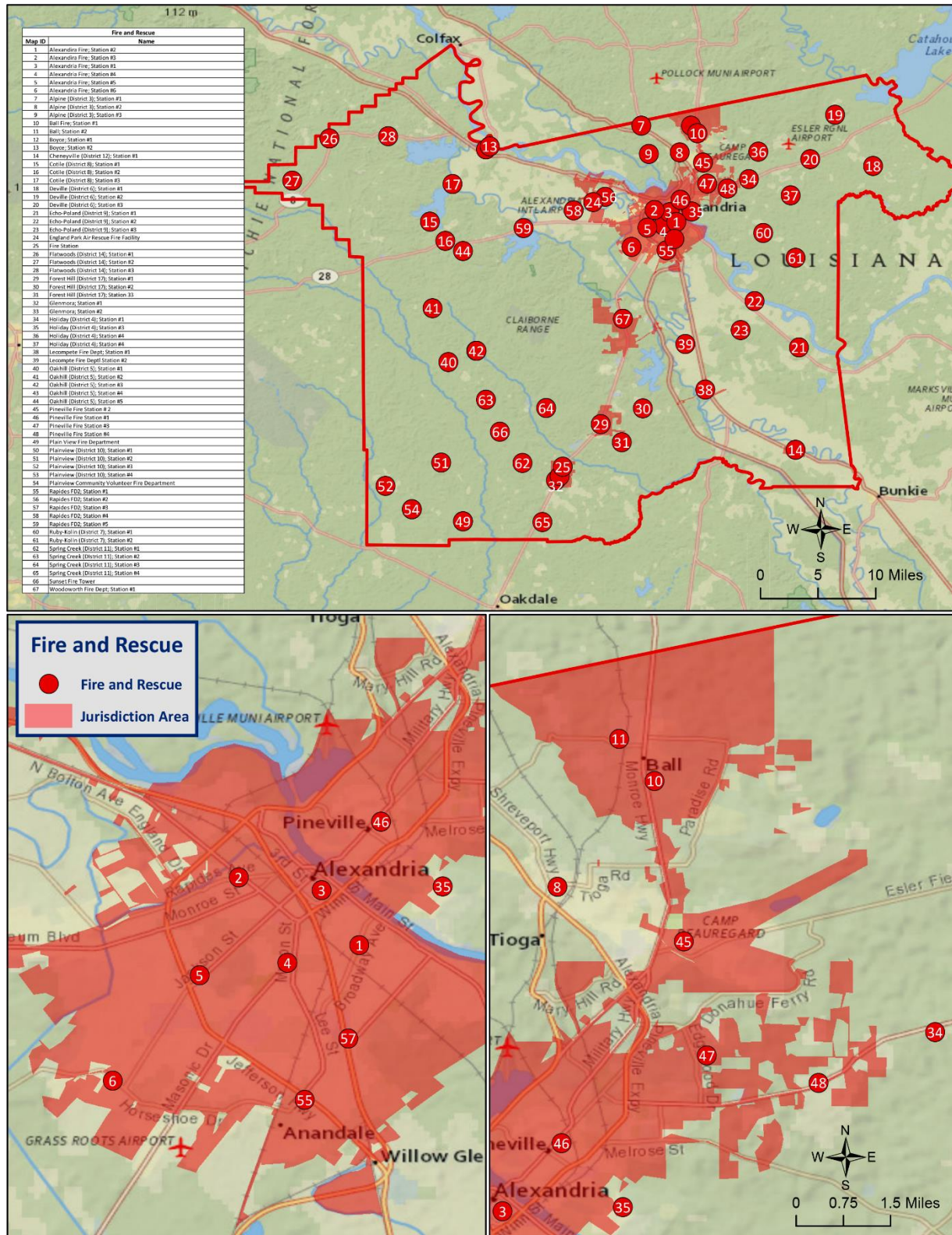
Occupancy	Rapides Parish	Unincorporated Rapides Parish	Alexandria	Ball	Boyce	Cheneyville
Agricultural	\$115,792,000	\$86,124,000	\$20,130,000	\$1,012,000	\$0	\$834,000
Commercial	\$4,881,176,000	\$1,224,835,000	\$3,503,464,000	\$66,273,000	\$22,796,000	\$9,525,000
Government	\$207,621,000	\$93,524,000	\$108,995,000	\$168,000	\$0	\$168,000
Industrial	\$766,137,000	\$400,417,000	\$352,753,000	\$10,970,000	\$238,000	\$0
Religion	\$686,512,000	\$331,528,000	\$298,556,000	\$14,944,000	\$7,714,000	\$4,674,000
Residential	\$14,977,310,000	\$8,589,152,000	\$5,471,475,000	\$387,332,000	\$95,146,000	\$75,451,000
Education	\$232,422,000	\$109,698,000	\$93,030,000	\$7,726,000	\$1,134,000	\$0
Total	\$21,866,970,000	\$10,835,278,000	\$9,848,403,000	\$488,425,000	\$127,028,000	\$90,652,000

Table 2-6: Estimated Total of Potential Losses (Continued)

Occupancy	Forest Hill	Glenmora	Lecompte	McNary	Pineville	Woodworth
Agricultural	\$2,128,000	\$618,000	\$2,074,000	\$2,872,000	\$6,846,000	\$818,000
Commercial	\$12,448,000	\$8,348,000	\$23,839,000	\$9,648,000	\$434,338,000	\$15,776,000
Government	\$2,212,000	\$1,576,000	\$978,000	\$0	\$31,053,000	\$1,224,000
Industrial	\$0	\$348,000	\$1,173,000	\$238,000	\$82,577,000	\$5,071,000
Religion	\$3,070,000	\$13,410,000	\$12,616,000	\$0	\$76,052,000	\$5,918,000
Residential	\$80,346,000	\$132,725,000	\$127,337,000	\$18,346,000	\$1,775,744,000	\$153,233,000
Education	\$6,892,000	\$9,048,000	\$3,454,000	\$1,440,000	\$43,771,000	\$0
Total	\$107,096,000	\$166,073,000	\$171,471,000	\$32,544,000	\$2,450,381,000	\$182,040,000

Essential Facilities of the Parish

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



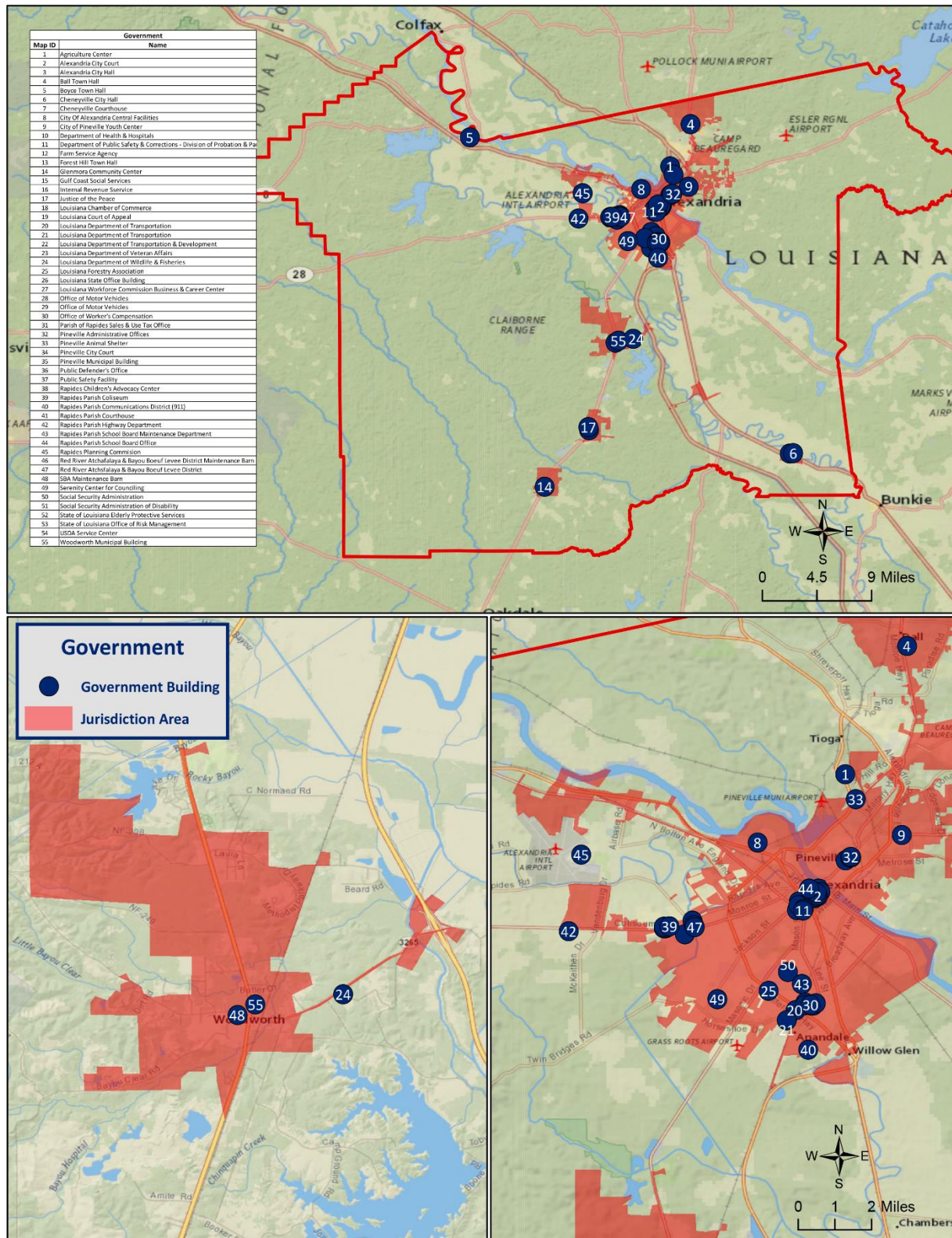
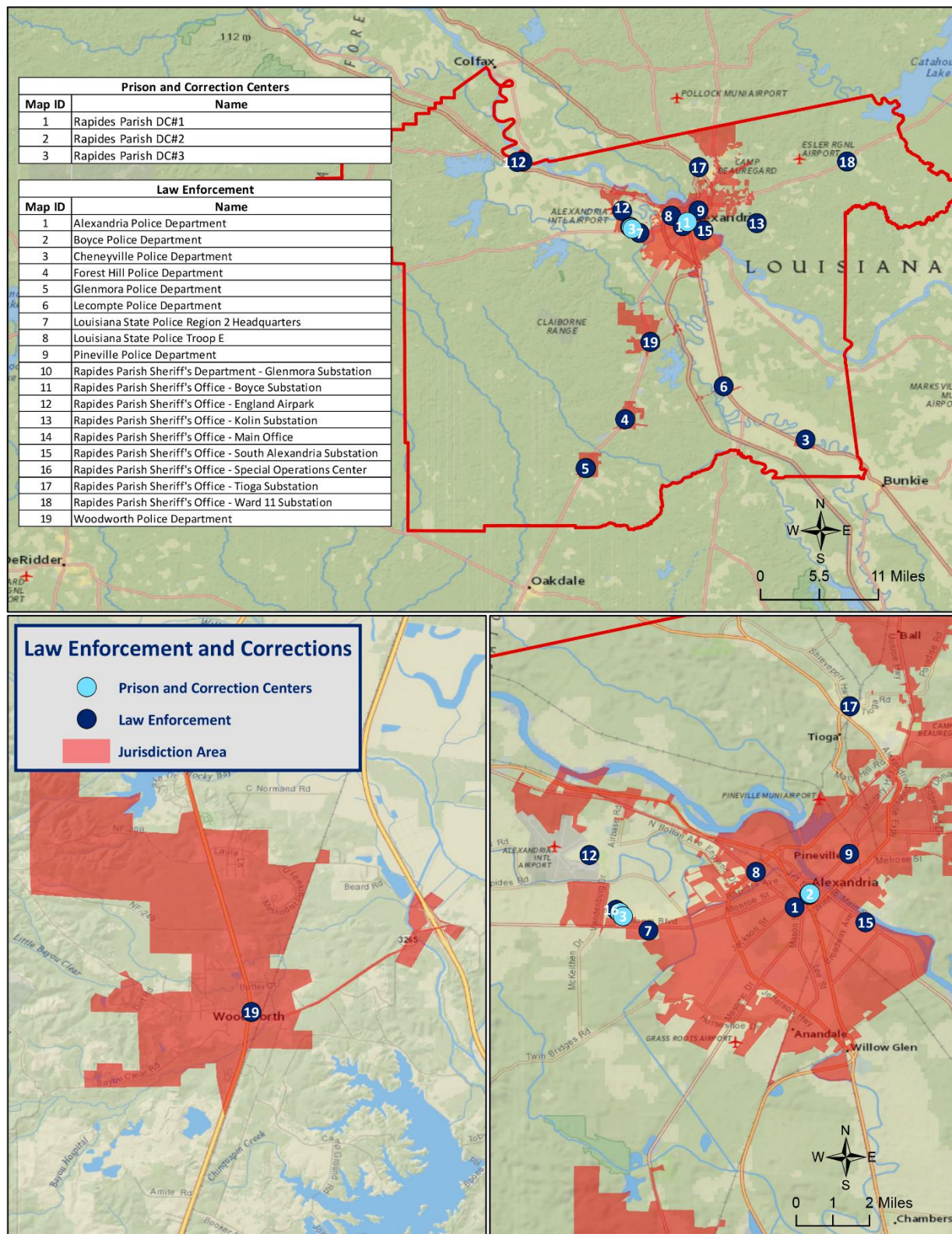
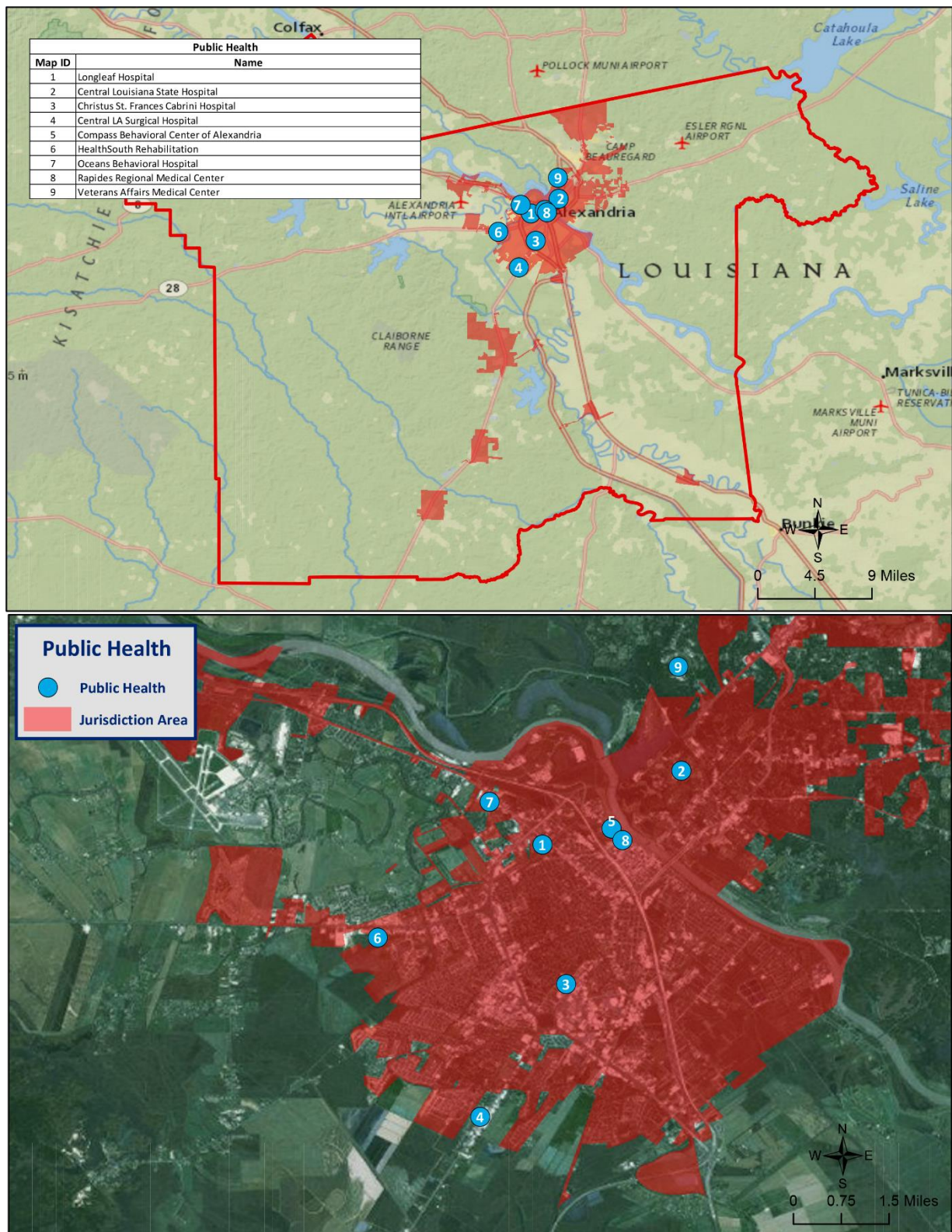


Figure 2-2: Government Buildings in Rapides Parish





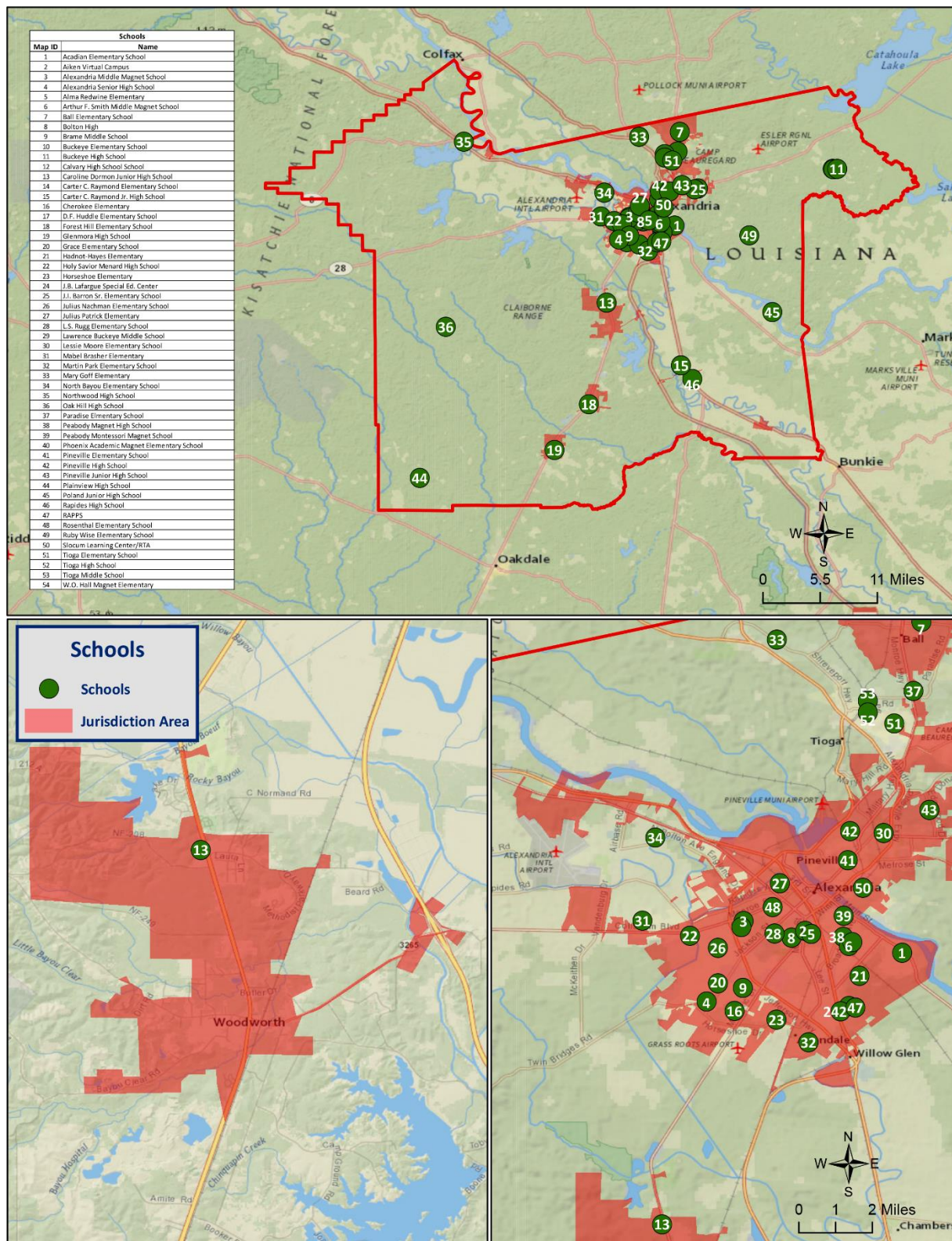


Figure 2-5: School Buildings in Rapides Parish

Future Development Trends

Rapides Parish experienced a small growth in population and housing between the years of 2000 and 2013, growing from a population of 126,390 with 52,059 housing units in 2000 to a population of 132,552 with 56,780 housing units in 2013. This growth was largely in the unincorporated areas of Rapides Parish, and in the incorporated area of Forest Hill from the years 2000 to 2010, and in the incorporated area of Alexandria and the unincorporated areas of Rapides Parish from 2010 to 2013. The incorporated areas of Boyce, Cheneyville, Glenmora, Lecompte, and Woodworth experienced a decline in population from the years of 2000 to 2010. This decline continued during the period of 2010 to 2013 for the aforementioned areas as well as the incorporated areas of Forest Hill, McNary, and Pineville. 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 2013:

Table 2-7: Population Growth Rate for Rapides Parish

Total Population	Rapides Parish	Rapides Parish (Unincorporated)	Alexandria	Ball	Boyce	Cheneyville	Forest Hill	Glenmora
1-Apr-00	126,390	70,118	46,621	3,791	1,195	898	509	1,545
1-Apr-10	131,613	74,663	47,723	4,000	1,004	625	818	1,342
1-Jul-13	132,552	75,108	48,276	4,007	992	616	806	1,334
Population Growth between 2000 – 2010	4.1%	6.5%	2.4%	5.5%	-16.0%	-30.4%	60.7%	-13.1%
Average Annual Growth Rate between 2000 – 2010	0.4%	0.6%	0.2%	0.6%	-1.6%	-3.0%	6.1%	-1.3%
Population Growth between 2010 – 2013	0.7%	0.6%	1.2%	0.2%	-1.2%	-1.4%	-1.5%	-0.6%
Average Annual Growth Rate between 2010 – 2013	0.24%	0.20%	0.39%	0.06%	-0.40%	-0.48%	-0.49%	-0.20%

Table 2-8: Population Growth Rate for Rapides Parish (Continued)

Total Population	Lecompte	McNary	Pineville	Woodworth
1-Apr-00	1,505	208	14,160	1,135
1-Apr-10	1,227	211	14,555	1,096
1-Jul-13	1,207	206	14,448	1,094
Population Growth between 2000 – 2010	-18.5%	1.4%	2.8%	-3.4%
Average Annual Growth Rate between 2000 – 2010	-1.8%	0.1%	0.3%	-0.3%
Population Growth between 2010 – 2013	-1.6%	-2.4%	-0.7%	-0.2%
Average Annual Growth Rate between 2010 – 2013	-0.54%	-0.79%	-0.25%	-0.06%

Table 2-9: Housing Growth Rate for Rapides Parish

Total Housing Units	Rapides Parish	Rapides Parish (Unincorporated)	Alexandria	Ball	Boyce	Cheneyville	Forest Hill	Glenmora
1-Apr-00	52,059	28,369	19,806	1,524	485	314	182	700
1-Apr-10	55,684	31,331	20,366	1,620	454	302	280	668
1-Jul-13	56,780	32,906	20,105	1,440	545	291	287	555
Housing Growth between 2000 – 2010	7.0%	10.4%	2.8%	6.3%	-6.4%	-3.8%	53.8%	-4.6%
Average Annual Growth Rate between 2000 – 2010	0.7%	1.0%	0.3%	0.6%	-0.6%	-0.4%	5.4%	-0.5%
Housing Growth between 2010 – 2013	2.0%	5.0%	-1.3%	-11.1%	20.0%	-3.6%	2.5%	-16.9%
Average Annual Growth Rate between 2010 – 2013	0.7%	1.7%	-0.4%	-3.7%	6.7%	-1.2%	0.8%	-5.6%

Table 2-10: Housing Growth Rate for Rapides Parish (Continued)

Total Housing Units	Lecompte	McNary	Pineville	Woodworth
1-Apr-00	586	93	5,448	408
1-Apr-10	560	103	6,105	499
1-Jul-13	566	85	6,395	640
Housing Growth between 2000 – 2010	-4.4%	10.8%	12.1%	22.3%
Average Annual Growth Rate between 2000 – 2010	-0.4%	1.1%	1.2%	2.2%
Housing Growth between 2010 – 2013	1.1%	-17.5%	4.8%	28.3%
Average Annual Growth Rate between 2010 – 2013	0.4%	-5.8%	1.6%	9.4%

As shown in previous tables, Rapides Parish has experienced slight growth in both population and housing units. Housing growth rates grew at 0.7% annually from 2000 to 2010 and from 2010 to 2013. Population growth rates for the parish were slightly lower at 0.4% annually from 2000 to 2010, and 0.24% annually from 2010 to 2013. The incorporated area of Forest Hill experienced the largest increase in housing units from 2000 to 2010 at 53.8% overall, followed by the incorporated area of Woodworth at 22.3%. From 2010 to 2013, the incorporated areas of Woodworth and Boyce experienced the largest increase in housing growth at 28.3% and 20% respectively.

Future Hazard Impacts

Hazard impacts were estimated for five years and ten years in the future (2019 and 2024). Yearly population and housing growth rates were applied to parish inventory assets for composite flood and tropical cyclones. Based on a review of available information, it is assumed that population and housing units will continue to grow slightly within Rapides 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 2-11: 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	57,153	16,240	16,780	17,451
Value of Structures	\$22,234,941,945	\$6,318,086,806	\$6,867,877,530	\$7,591,137,997
# of People	132,867	37,754	38,205	38,754
Tropical Cyclones				
Structures	57,153	57,153	59,052	61,415
Value of Structures	\$22,234,941,945	\$22,234,941,945	\$24,169,794,251	\$26,715,130,361
# of People	132,867	132,867	134,455	136,385

Land Use

The Rapides Parish Land Use table is provided below. Residential, commercial, and industrial areas account for only 10% of the parish's land use. Forest land is the largest category at 323,402 acres, accounting for 44% of parish land. At 160,403 acres, agricultural land accounts for 22% of parish lands, while 157,542 acres of wetlands account for 21% of parish lands. The parish also consists of 22,398 acres of water areas, accounting for 3% of all parish lands.

Table 2-12: Rapides Parish Land Use
(Source: USGS Land Use Map)

Land Use	Acres	Percentage
Agricultural Land, Cropland, and Pasture	160,403	22%
Wetlands	157,542	21%
Forest Land (not including forested wetlands)	323,402	44%
Urban/Development	76,634	10%
Water	22,398	3%

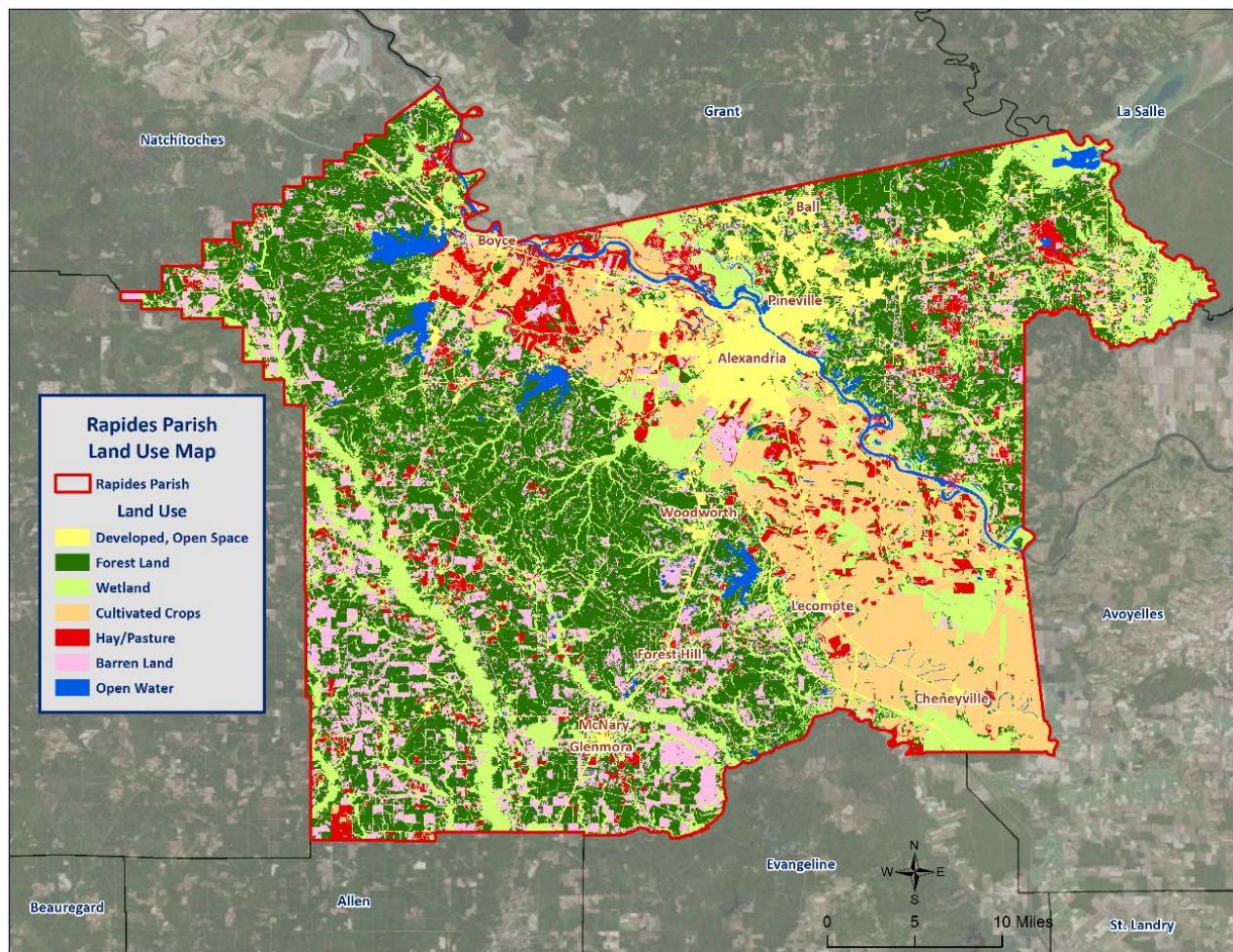


Figure 2-6: Rapides Parish Land Use Map
(Source: USGS Land Use Map)

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.

Found below, *Table 2-13* displays the range and Palmer classifications of the PDSI index. On the following page, *Figure 2-7* displays the current drought monitor for the State of Louisiana and its parishes.

Table 2-13: 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 Rapides Parish at the time this plan went to publication (*Figure 2-7*).

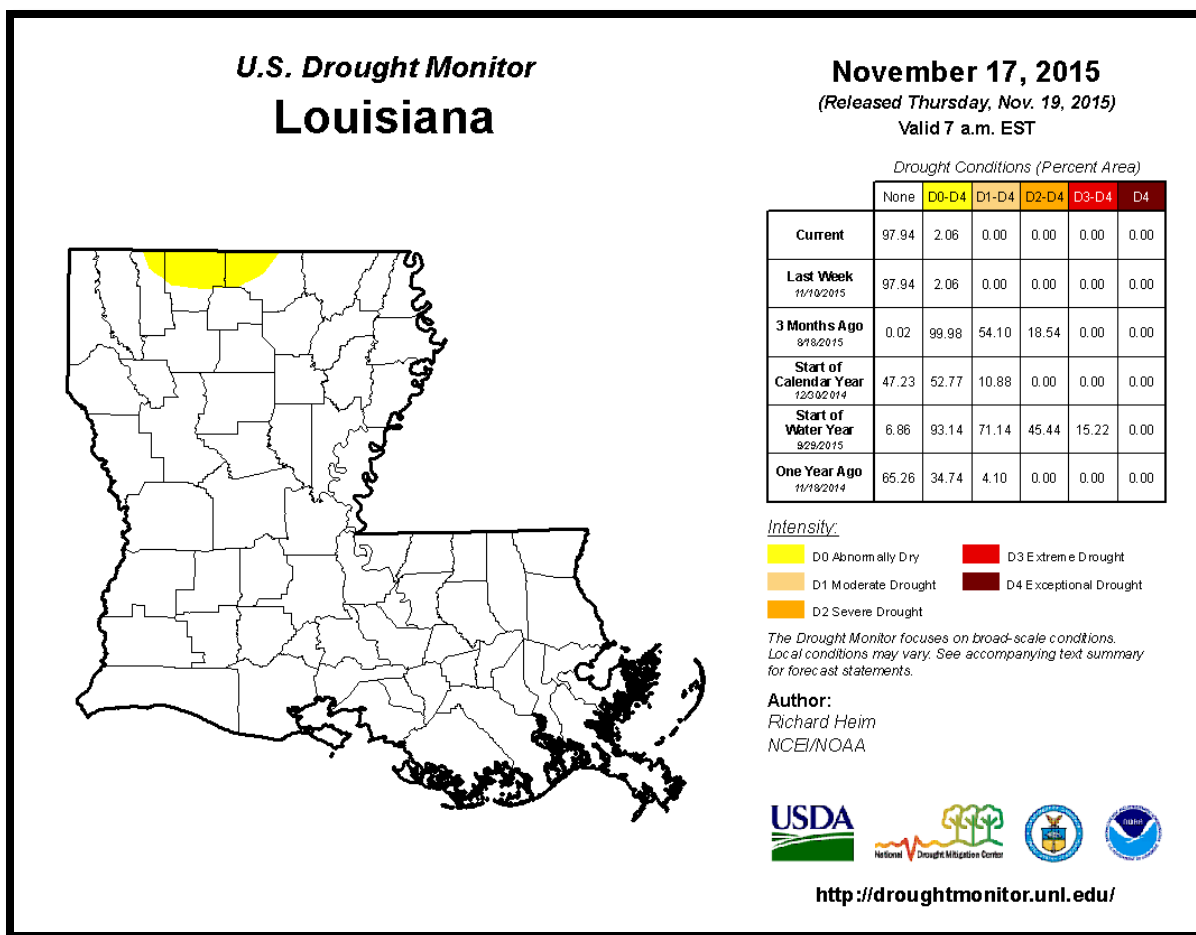


Figure 2-7: United States Drought Monitor for the State of Louisiana and its Parishes
(Source: The National Drought Mitigation Center)

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 Rapides Parish is on the agricultural community.

Previous Occurrences / Extents

The SHELDUS database reports a total of three drought events occurring within the boundaries of Rapides Parish between the years of 1989 to 2014. *Table 2-14* identifies the date of occurrence, estimated crop damage, and severity of the events that have occurred in Rapides Parish. Based on previous occurrences, and in accordance with the Palmer Drought Index, the worst case scenario for drought in Rapides Parish would be a severe drought event.

Table 2-14: Drought Events with Crop Damage Totals for Rapides Parish
(Source: SHELDUS)

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

Frequency/Probability

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

Estimated Potential Losses

According to the SHEL DUS database, there have been three drought events that have caused some level of crop damage. The total agricultural damage from these events is \$29,593,120, with an average cost of \$9,864,373 per drought event. When annualizing the total cost over the 25-year record, total annual losses based on drought is estimated to be \$1,183,725. *Table 2-15* presents an analysis of agricultural exposure that is susceptible to drought by major crop type for Rapides Parish.

Table 2-15: Agricultural Exposure by Crop Type for Drought in Rapides Parish
(Source: LSU Ag Center 2014 Parish Totals)

Agricultural Exposure by Type for Drought						
Cotton	Forestry	Corn	Wheat	Rice	Soybeans	Total
\$7,651,681	\$37,992,165	\$5,510,785	\$2,246,992	\$10,891,586	\$24,922,258	\$89,215,467

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

Extreme Heat

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

However, temperature alone is insufficient to describe the stress placed on humans (as well as flora and fauna) in hot weather. It is crucial to consider the effect of relative humidity since it is essential to the body's ability to perspire and cool. Once air temperature reaches 95 °F, perspiration becomes a very significant biophysical mechanism to ensure heat loss. Perspiration is ineffective as a cooling mechanism if the water cannot evaporate (i.e., sweating in high relative humidity is reduced as compared to during dry conditions). To communicate this relationship between temperature and humidity, the National Weather Service (NWS) developed the Heat Index (HI), which provides a warning system based on a combination of air temperature and relative humidity. The HI is presented in [Figure 2-8](#), and [Table 2-16](#) summarizes the HI risk levels and protective measures. The NWS devised the index for shady, light wind conditions, and thus advises that the HI value can be increased by as much as 15 °F if a person is in direct sunlight with strong, hot winds present.

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

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

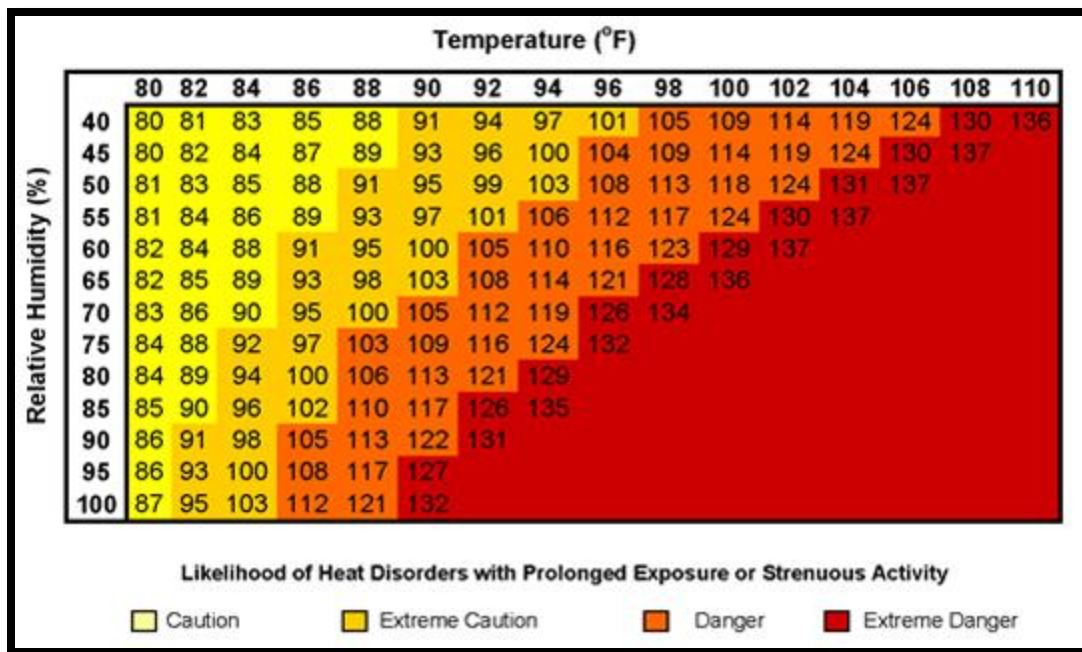


Figure 2-8: Heat Index Advisor based on Air Temperature (°F) and Relative Humidity
(Source: National Weather Service)

Table 2-16: Summary of Heat Index Risk Levels with Protective Measures
(Source: National Weather Service)

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

Location

Extreme heat typically impacts a region and not one specific parish or jurisdiction. Because extreme heat is a climatological based hazard and has the same probability of occurring in Rapides Parish as all of the adjacent parishes, the entire planning area for Rapides Parish is equally at risk for extreme heat.

Previous Occurrences / Extents

NOAA reports 55 extreme heat events occurring within the boundaries of Rapides Parish between the years of 1990 to 2015. [Table 2-17](#) provides an overview of extreme heat events that have impacted the Rapides Parish planning area since 2009. Based on historical data, the worst case scenario for Rapides Parish involving extreme heat would be a high risk level event on the HI scale with temperatures ranging from 103 °F to 115 °F.

*Table 2-17: Previous Occurrences of Extreme Heat in Rapides Parish
(Source: NOAA)*

Date	Temperature (°F)
June 27, 2009	104
June 28, 2009	106
July 1, 2009	105
July 2, 2009	107
July 31, 2010	104
August 2, 2010	105
August 3, 2010	105
June 17, 2011	104
June 18, 2011	105
June 19, 2011	105
June 20, 2011	105
August 10, 2011	104
August 16, 2011	104
August 17, 2011	105
August 18, 2011	108
August 19, 2011	108
August 20, 2011	105
August 21, 2011	106
August 23, 2011	104
June 25, 2012	104
July 30, 2015	104
August 8, 2015	104
August 10, 2015	106

Frequency/Probability

Based on the geographical location of the State of Louisiana, and Rapides Parish in particular, extreme heat events occur frequently. Based on a review of significant extreme heat data that have been in excess of 103°F, in which Rapides Parish has had 55 recorded events, the probability of occurrence is estimated at 100%.

Estimated Potential Losses

According to the SHELDUS database, crop damage due to extreme heat in Rapides Parish has totaled approximately \$21,045 since 1989. To estimate the potential losses of an extreme heat event on an annual basis, the total damages recorded for an extreme event is divided by the total number of years of available extreme heat data in SHELDUS (1989 – 2014). This provides an annual estimated potential loss of \$842. Based on the 2010 Census data, the table on the following page provides an estimate of potential crop losses for Rapides Parish.

Table 2-18: Estimated Annual Crop Losses in Rapides Parish for Extreme Heat

Estimated Annual Crop Losses from Extreme Heat for Rapides Parish										
Unincorporated Rapides Parish (56.1% of Population)	Alexandria (36.3% of Population)	Ball (3.0% of Population)	Boyce (0.8% of Population)	Cheneyville (0.5% of Population)	Forest Hill (0.6% of Population)	Glenmora (1.0% of Population)	Lecompte (0.9% of Population)	McNary (0.2% of Population)	Pineville (11.1% of Population)	Woodworth (0.8% of Population)
\$472	\$305	\$26	\$6	\$4	\$5	\$9	\$8	\$1	\$93	\$7

There has been one reported fatality as a direct result of extreme heat in Rapides Parish. In June 2010, the Beauregard Daily News reported a two-year old boy passed away due to heat exhaustion in Hineston when he was trapped inside a car.

Vulnerability

See Appendix C for parish and municipality agricultural exposure to extreme heat hazards.

Flooding

A flood is the overflow of water onto land that is usually not inundated. The National Flood Insurance Program (NFIP) 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 NWS 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 NFIP Rate Maps. The NFIP and the Federal Emergency Management Agency (FEMA) suggest insurance rates based on Special Flood Hazard Areas (SFHAs), as diagrammed in [Figure 2-9](#).

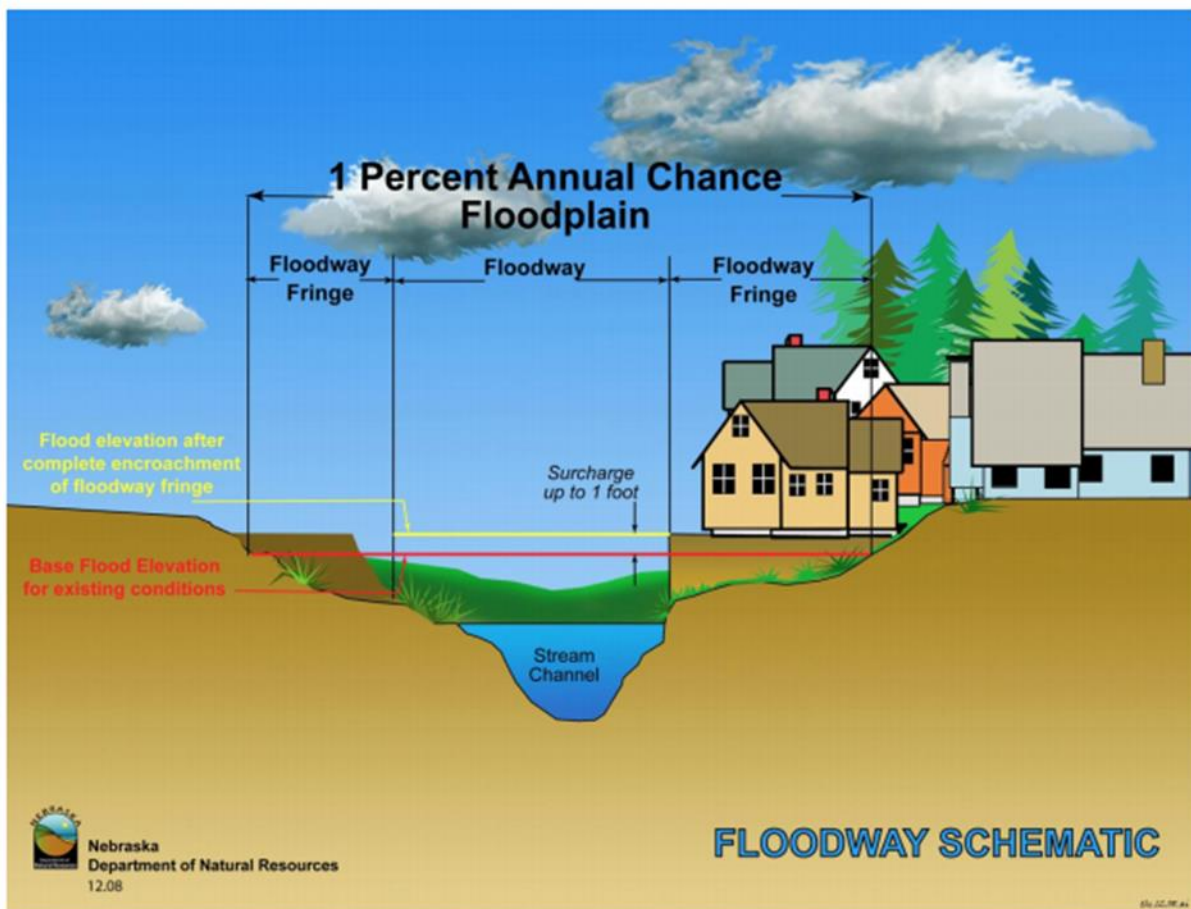


Figure 2-9: Schematic of 100-Year Floodplain. The Special Flood Hazard Area (SFHA) extends to the end of the floodway fringe.

(Source: Nebraska Department of Natural Resources)

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

Property Damage

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

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

Soaking can also cause extensive damage to household goods. Wooden furniture may become warped, making it unusable, while other furnishings such as books, carpeting, mattresses, and upholstery 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 Rapides Parish are provided in the table below:

Table 2-19: Repetitive Loss Structures for Rapides Parish

Jurisdiction	Number of Structures	Residential	Commercial	Government	Total Claims	Total Claims Paid	Average Claim Paid
Rapides Parish (Unincorporated)	160	149	11	0	594	6,946,505	\$11,694
Alexandria	121	109	12	0	337	\$6,300,516	\$18,696
Ball	0	0	0	0	0	\$0	\$0
Boyce	0	0	0	0	0	\$0	\$0
Cheneyville	1	1	0	0	4	\$35,811	\$8,953
Forest Hill	0	0	0	0	0	\$0	\$0
Glenmora	0	0	0	0	0	\$0	\$0
Lecompte	3	1	0	2	14	\$450,560	\$32,183
McNary	1	1	0	0	4	\$17,049	\$4,262
Pineville	23	21	2	0	62	\$954,584	\$15,397
Woodworth	4	4	0	0	10	\$139,013	\$13,901
Total	313	286	25	2	1,025	\$14,844,038	\$14,482

All 313 repetitive loss structures were able to be geocoded in order to provide an overview of where the repetitive loss structures were located throughout the parish. [Figure 2-10](#) shows the approximate location of the 313 structures, while [Figure 2-11](#) shows where the highest concentration of repetitive loss structures are located. Through the repetitive loss map, it is clear that the primary concentrated area of repetitive loss structures is focused in and around the incorporated areas of Alexandria and Pineville.

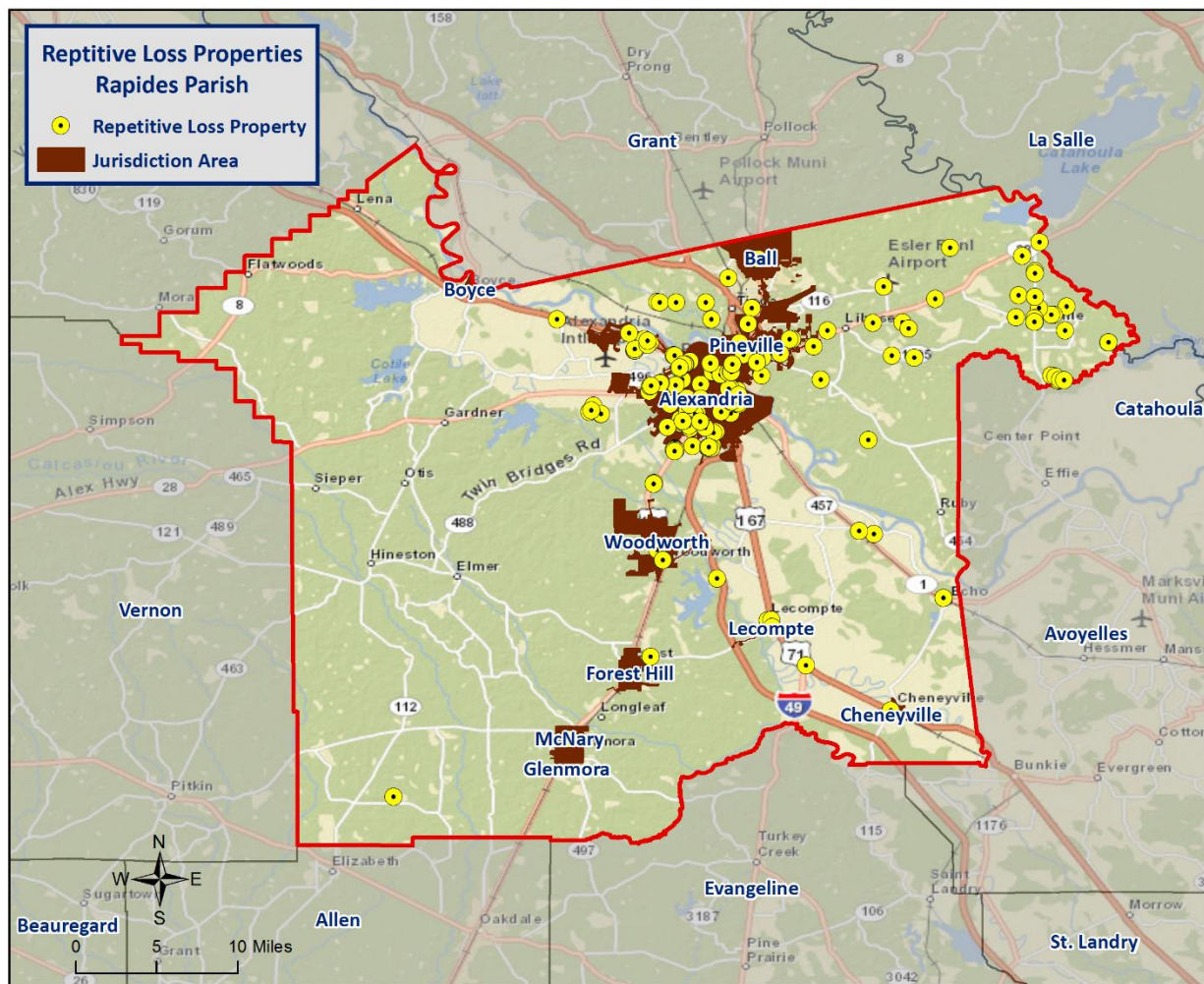


Figure 2-10: Repetitive Loss Properties in Rapides Parish

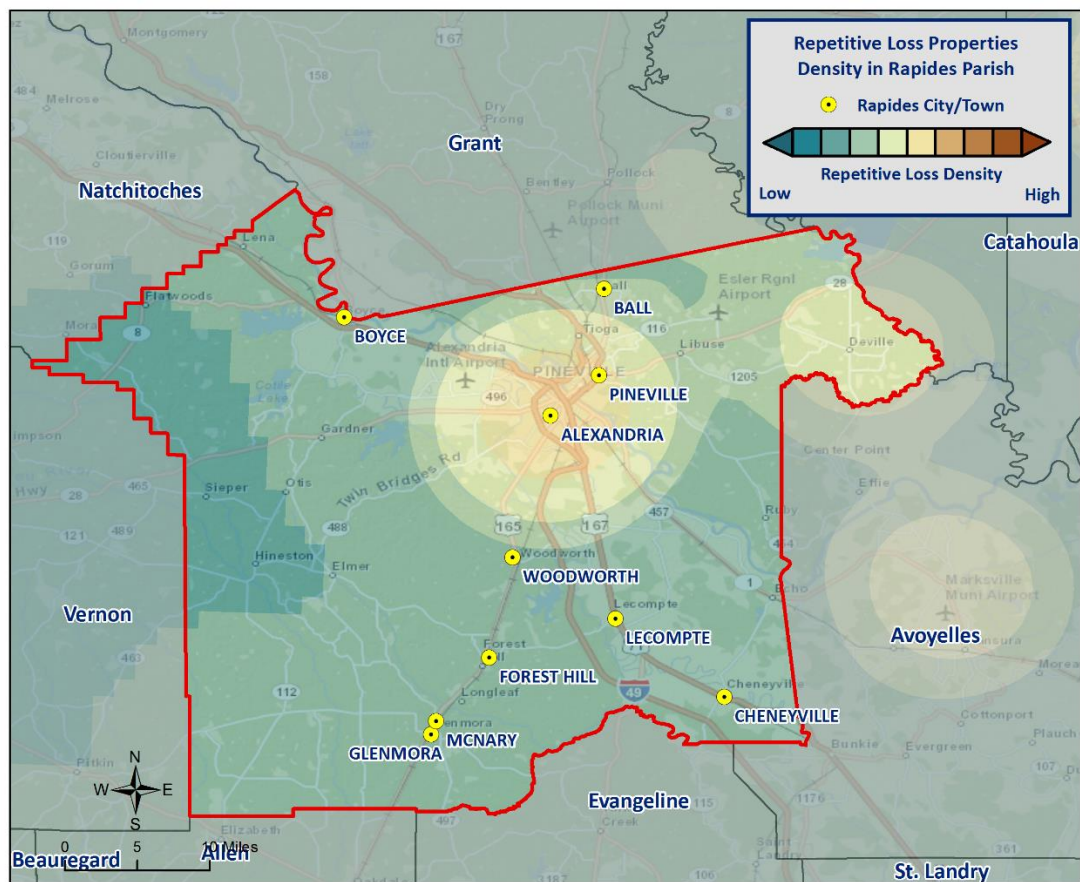


Figure 2-11: Repetitive Loss Property Densities in Rapides Parish

National Flood Insurance Program

Flood insurance statistics indicate that Rapides Parish has 3,410 flood insurance policies with the NFIP, with total annual premiums of \$2,418,333. Rapides Parish, the cities Alexandria and Pineville, the towns of Ball, Boyce, Cheneyville, Glenmora, and Lecompte, and the villages of Forest Hill, McNary and Woodworth are all participants in the NFIP. Rapides 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 Rapides Parish are provided in the tables on the following page.

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

Table 2-20: Summary of NFIP Policies for Rapides Parish

Location	No. of Insured Structures	Total Insurance Coverage Value	Annual Premiums Paid	No. of Insurance Claims Filed Since 1978	Total Loss Payments
Rapides Parish (Unincorporated)	1,336	\$255,216,400	\$854,180	1,238	\$12,718,636
Alexandria	1,808	\$397,148,400	\$1,359,880	1,173	\$18,940,404
Ball	26	\$4,456,200	\$15,854	0	\$0
Boyce	2	\$700,000	\$784	3	\$15,784
Cheneyville	6	\$246,400	\$1,794	5	\$37,686
Forest Hill*	-	-	-	-	-
Glenmora	3	\$121,400	\$808	6	\$37,673
Lecompte	39	\$5,144,600	\$29,017	24	\$724,245
McNary	1	\$210,000	\$317	0	\$0
Pineville	155	\$27,492,000	\$122,046	205	\$2,411,057
Woodworth	34	\$5,363,600	\$33,653	22	\$796,050
Total	3,410	\$696,099,000	\$2,418,333	2,676	\$35,681,535

*While the Village of Forest Hill does not have any active NFIP policies, all jurisdictions and the unincorporated areas will continue to promote NFIP participation through continued education and outreach.

Table 2-21: Summary of Community Flood Maps for Rapides Parish

CID	Community Name	Initial FHBM Identified	Initial FIRM Identified	Current Effective Map Date	Date Joined the NFIP	Tribal
220145#	Rapides Parish	1/10/1975	9/5/1984	6/2/1999	9/5/1984	No
220146#	Alexandria, City of	8/2/1974	7/17/1978	9/3/1997	7/17/1978	No
220147#	Boyce, Town of	4/5/1974	7/9/1981	(NSFHA)	7/9/1981	No
220148#	Cheneyville, Town of	6/17/1974	3/2/1981	3/2/1981	3/2/1981	No
220287	Forest Hill, Village of	11/12/1976		(NSFHA)	7/24/1981	No
220149#	Glenmora, Town of	4/12/1974	2/3/1982	2/3/1982	2/3/1982	No
220150#	Lecompte, Town of	1/16/1976	3/2/1981	6/2/1999	3/2/1981	No
220299#	McNary, Village of	4/23/1976	7/13/1982	7/13/82 (M)	7/24/1981	No
220151#	Pineville, City of	12/31/1973	9/5/1984	9/5/1984	9/5/1984	No
220260#	Woodworth, Village of	3/26/1976	1/7/1998	1/7/1998	10/25/1979	No

According to the Community Rating System (CRS) list of eligible communities dated June 1, 2014, Rapides Parish and the incorporated areas of Alexandria, Boyce, Ball, Cheneyville, Forest Hill, Glenmora, Lecompte, McNary, Pineville, and Woodworth 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 Rapides Parish

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

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

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

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

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

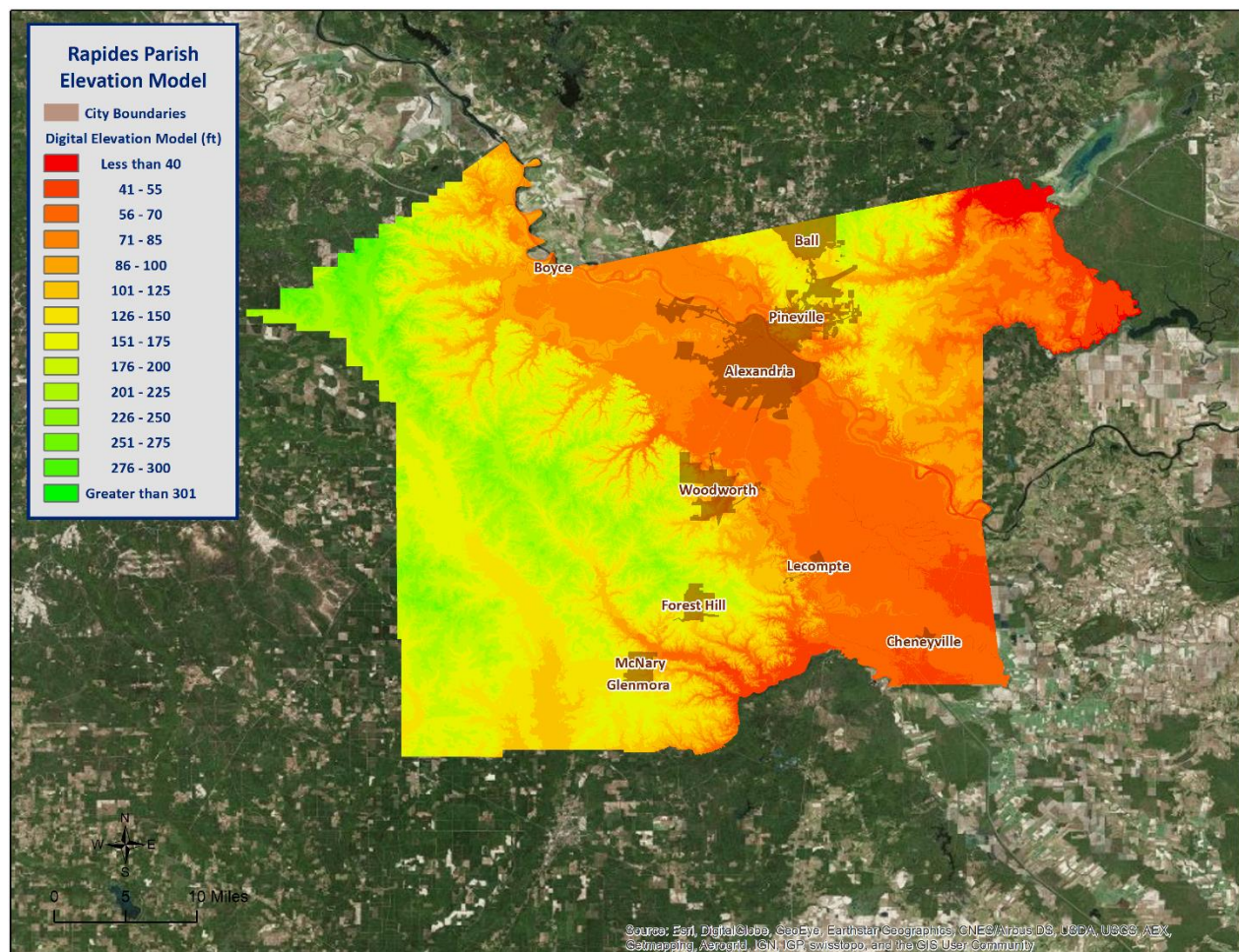


Figure 2-12: Elevation throughout Rapides Parish

Looking at the digital elevation model (DEM) for Rapides Parish in the figure above is instructive in visualizing where the low lying and high risk areas are for the parish. Elevations in the parish range from approximately 40 feet to 310 feet. The highest elevations in the parish are approximately 310 feet, located in the unincorporated area of the parish. These higher elevations are located mostly in the western portions of the unincorporated areas of the parish. The incorporated areas of the parish range in elevation from 66 to 167 feet, with the city of Alexandria averaging 75 feet, the town of Ball averaging 161 feet, the town of Boyce averaging 85 feet, the town of Cheneyville averaging 66 feet, the village of Forest Hill averaging 16 feet, the town of Glenmora averaging 135 feet, the town of Lecompte averaging 69 feet, the village of McNary averaging 125 feet, the city of Pineville averaging 118 feet, and the village of Woodworth averaging 89 feet. The lowest elevations of the parish are less than 40 feet and are located in the southern and eastern portions of unincorporated Rapides Parish.

Location

Rapides Parish has experienced significant flooding in its history and can expect more in the future. Rapides Parish is located in four different drainage basins. Two relatively small portions of Rapides Parish are located in the Red River Basin. One of these areas is the extreme northwest portion of the parish, which is primarily the hill of the Kisatchie National Forest. The second area is east of the Red River. It is a relatively flat alluvial plain between overflow from Bayou Rigolette. Flooding results from the inability of interior rainfall runoff to

move through the existing floodgates into the Red River. Vegetation in the bayous aggravates the problem. Water accumulates in the wooded areas along the bayou and then moves onto agricultural lands.

The northeast portion of Rapides Parish, including the City of Pineville, is located within the Ouachita Basin. The topography of the area consists of low-lying areas around and south of Catahoula Lake. The primary flooding problem in the eastern and northern parts of the area is backwater flooding from Catahoula Lake. The fourth basin is the Atchafalaya-Teche-Rapides Basin which includes approximately half of Rapides Parish. Flooding in this basin is caused by Bayou Rapides and is a result of poor internal drainage.

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

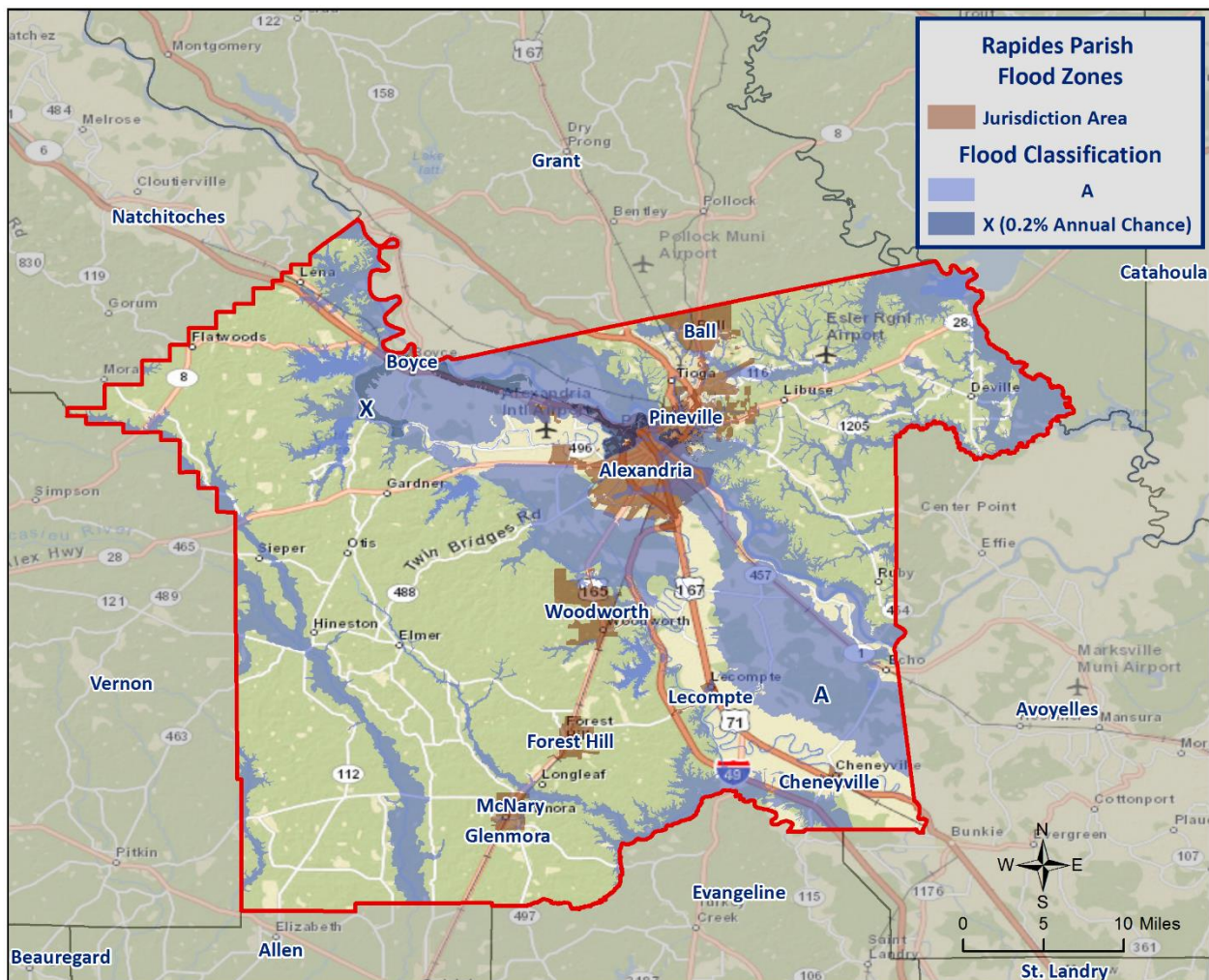


Figure 2-13: Rapides Parish Areas within the Flood Zones

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

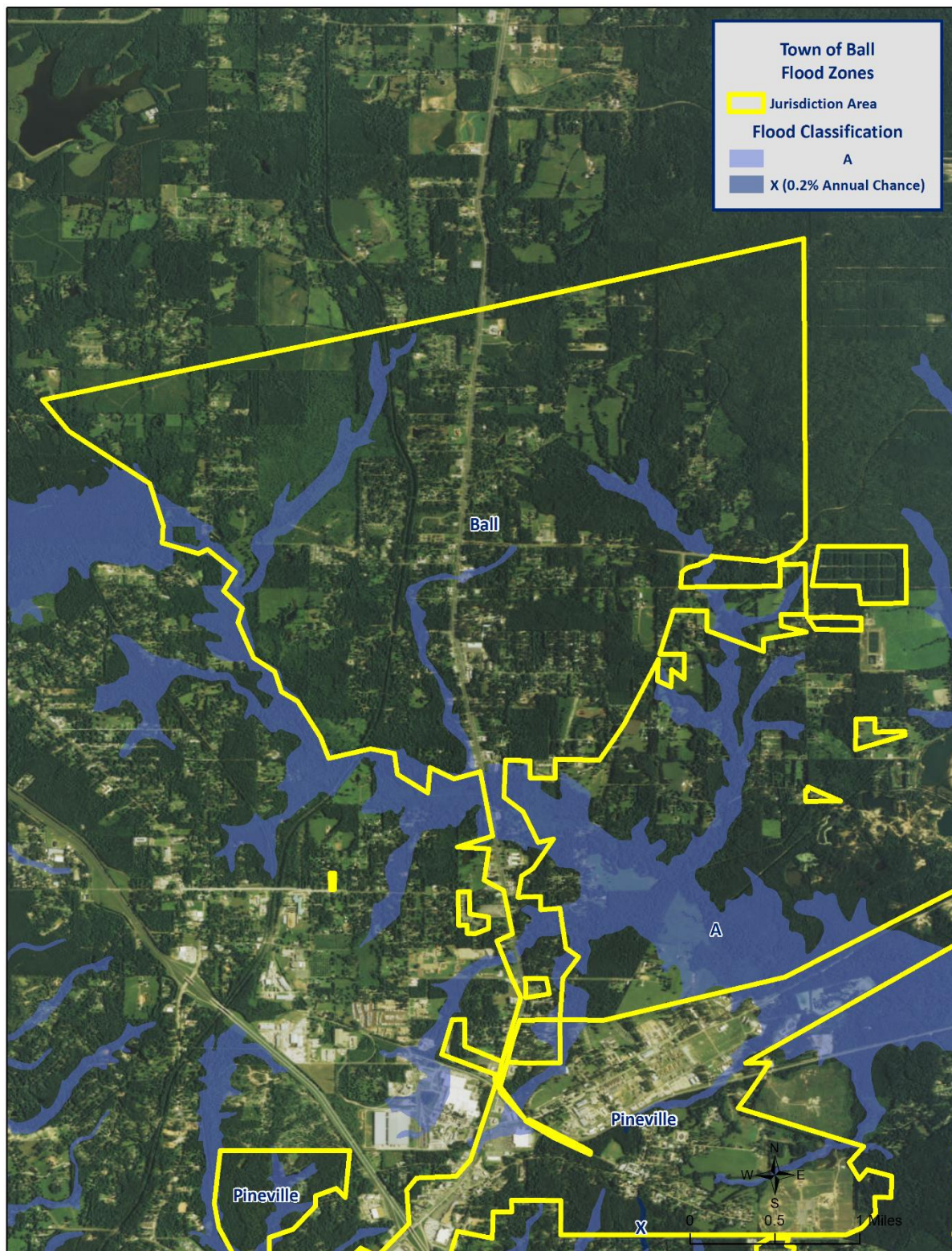


Figure 2-15: Town of Ball Areas within the Flood Zones



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

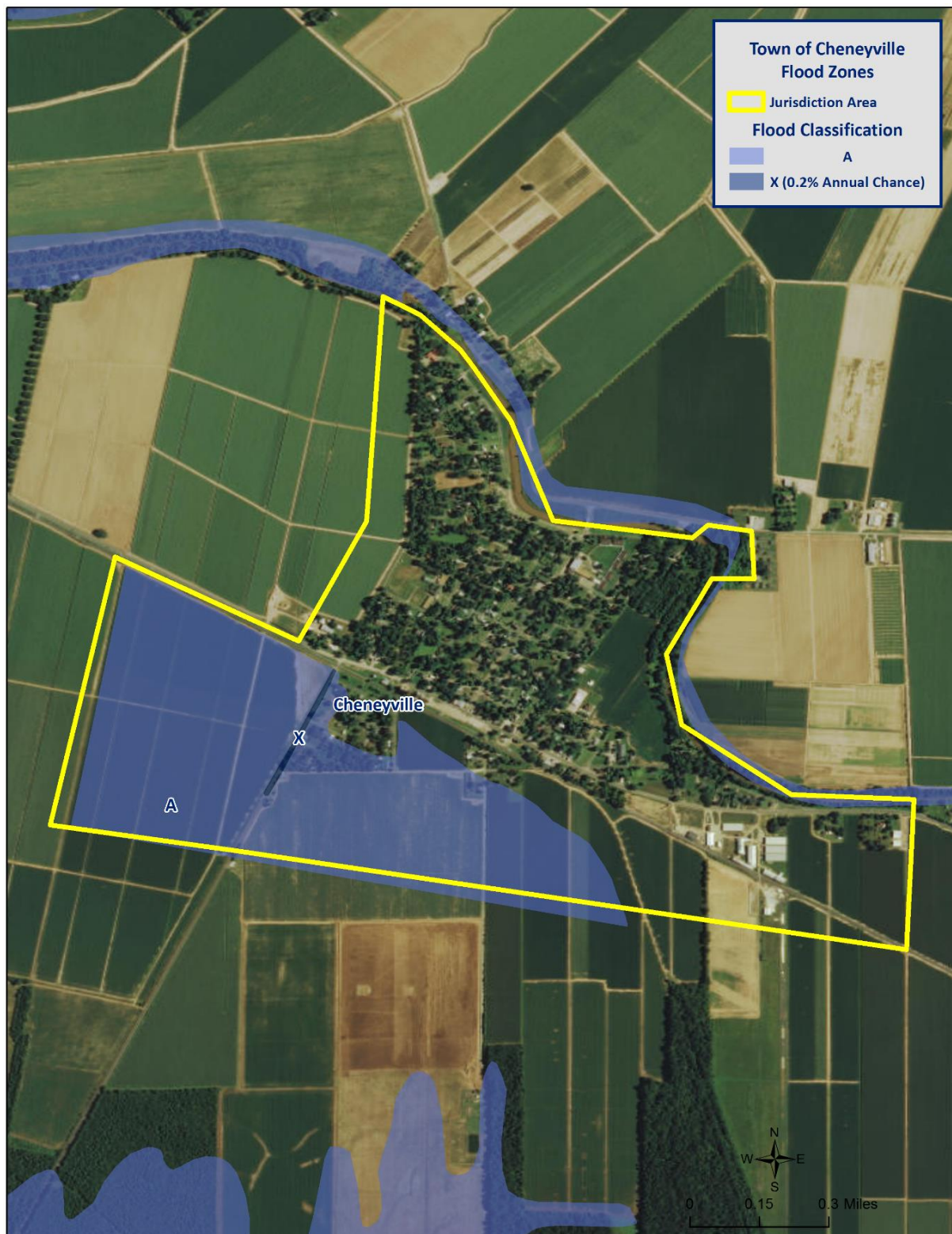


Figure 2-17: Town of Cheneyville Areas within the Flood Zones

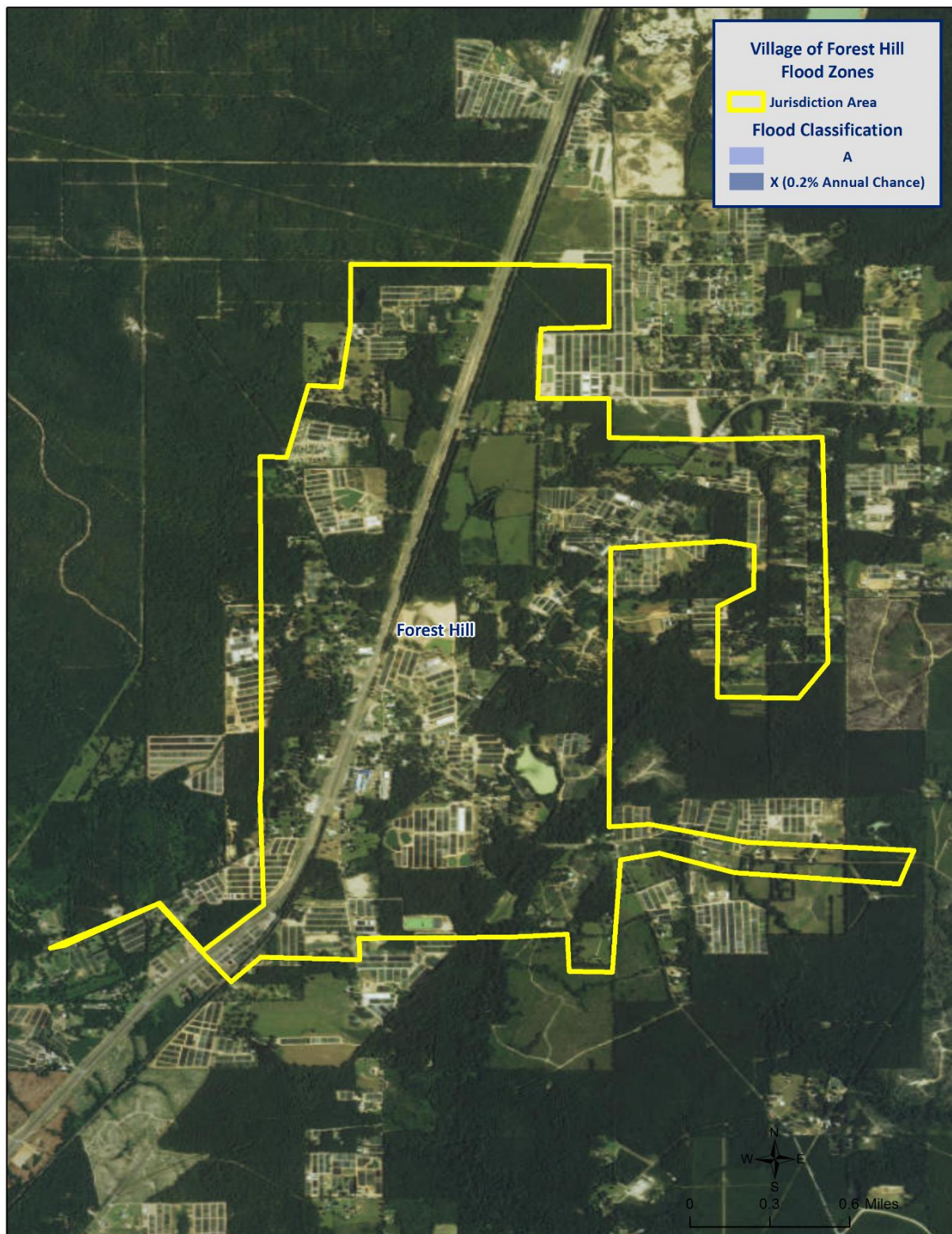


Figure 2-18: Village of Forest Hill Areas within the Flood Zones

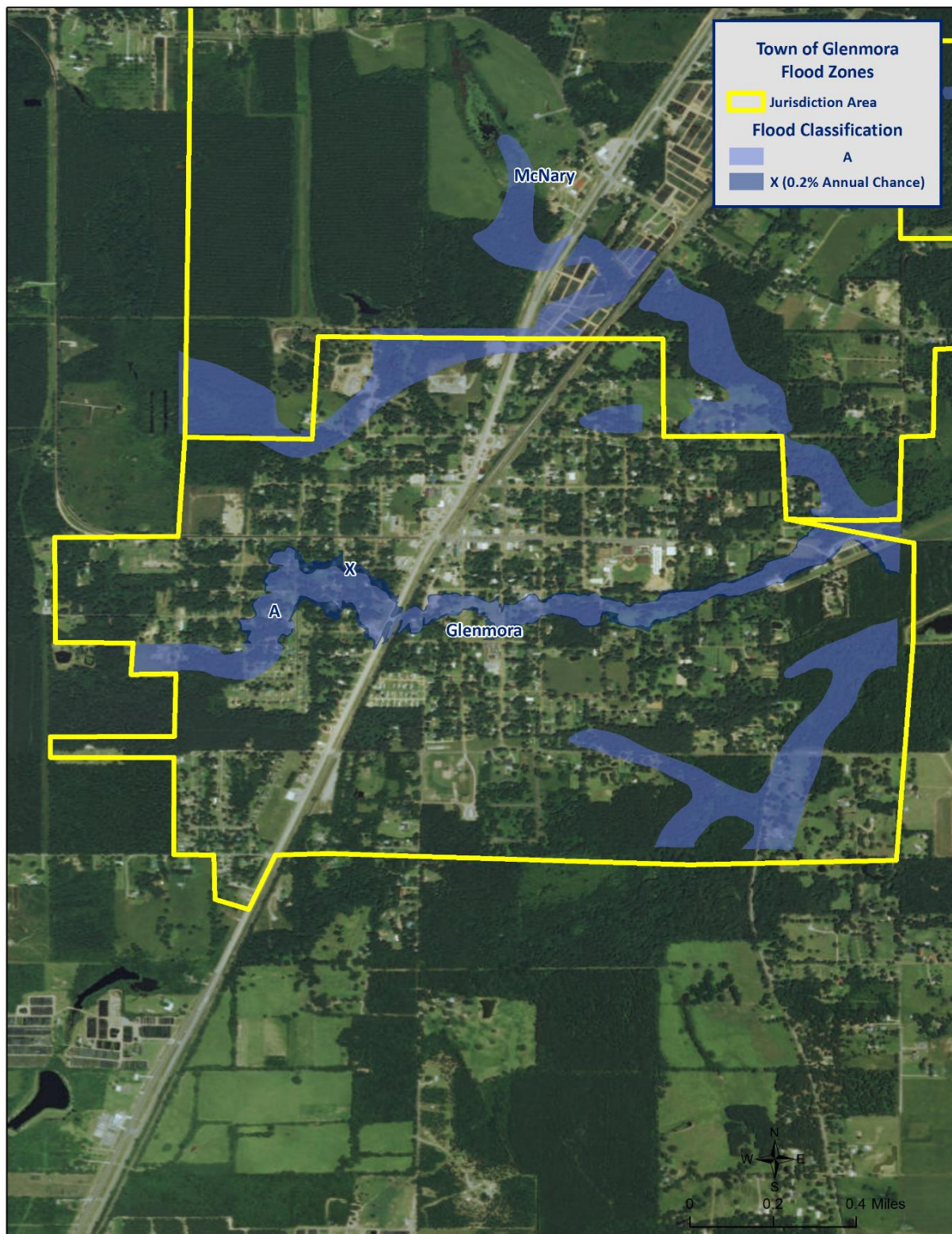


Figure 2-19: Town of Glenmora Areas within the Flood Zones



Figure 2-20 : Town of Lecompte Areas within the Flood Zones

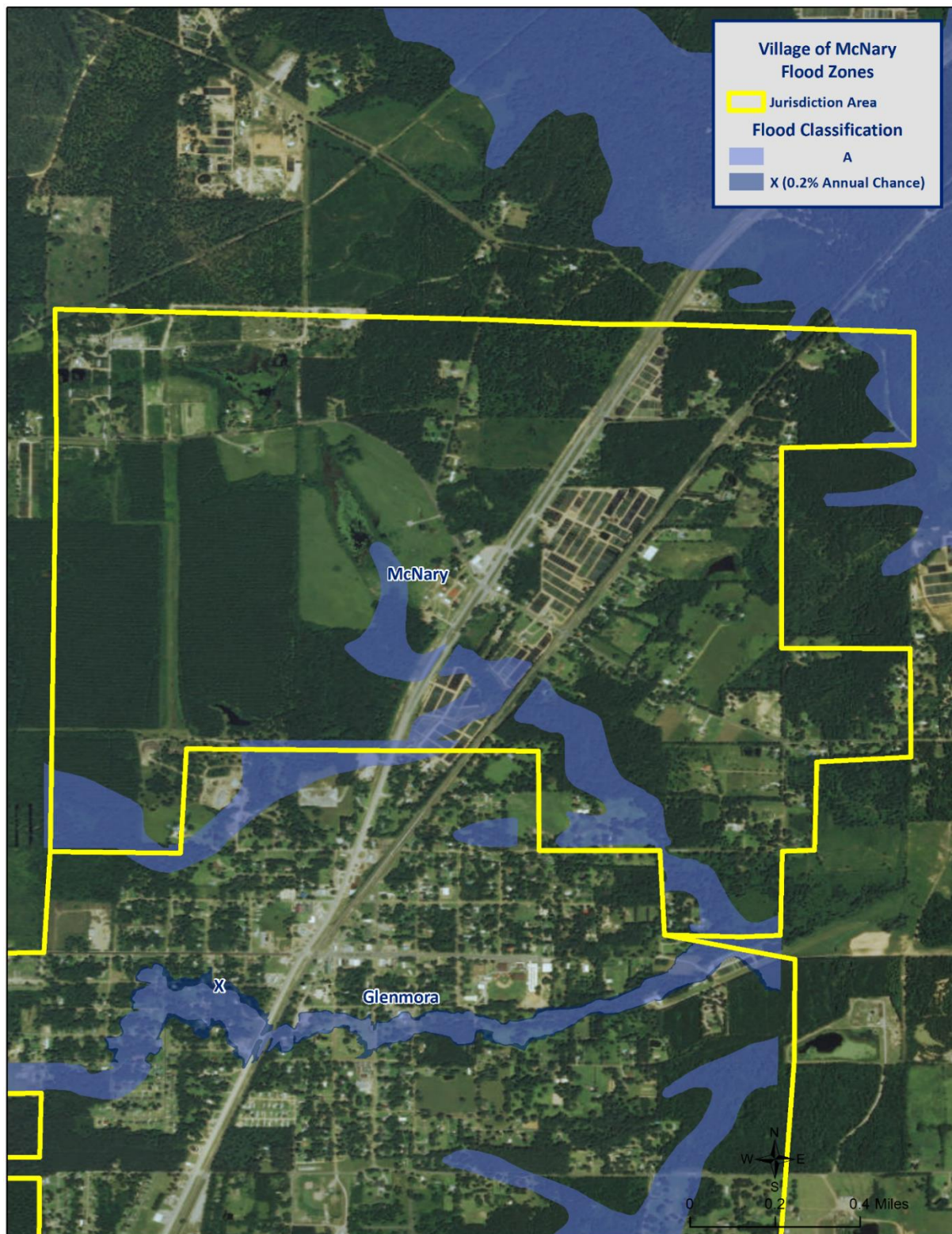


Figure 2-21: Village of McNary Areas within the Flood Zones

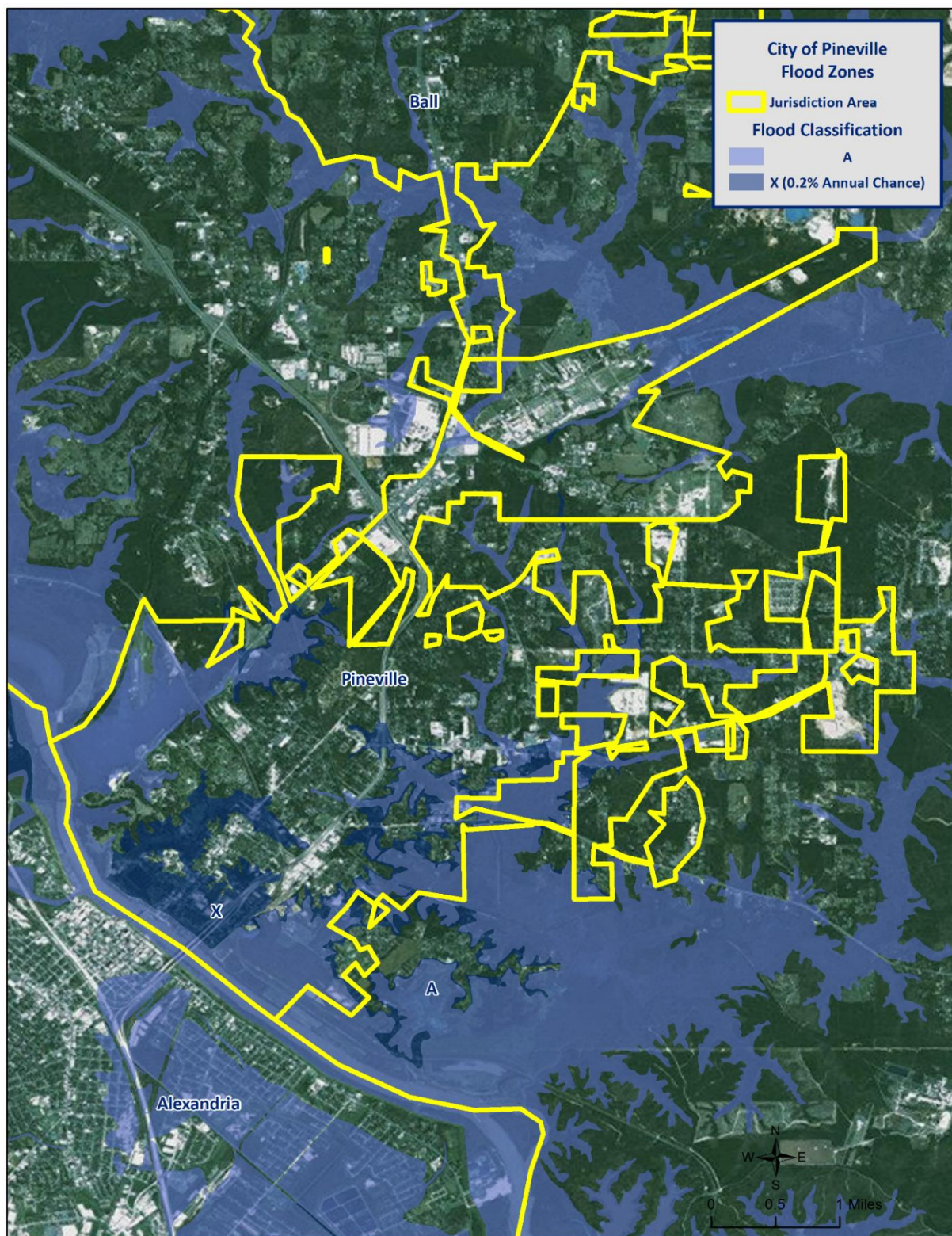


Figure 2-22: City of Pineville Areas within the Flood Zones

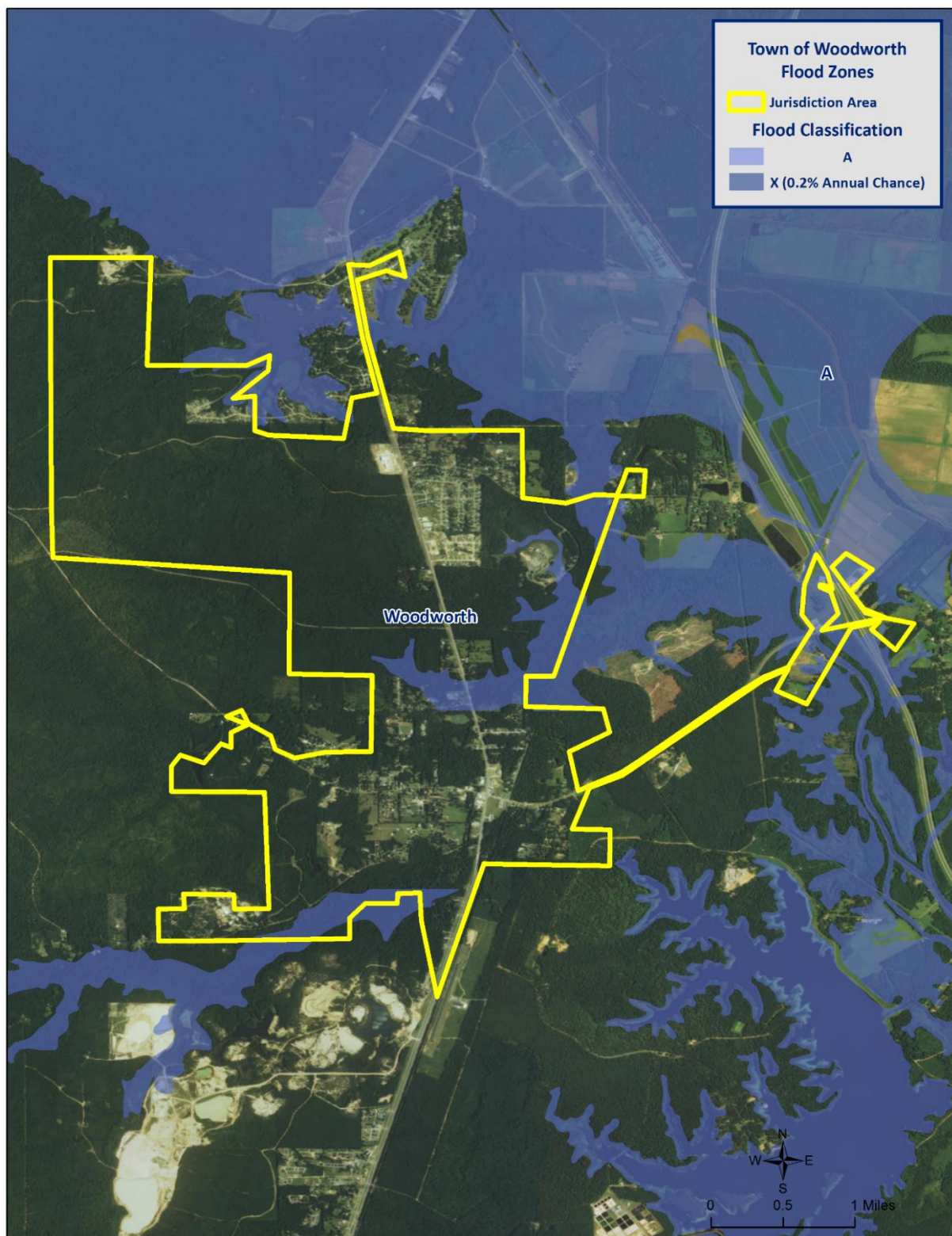


Figure 2-23: Village of Woodworth Areas within the Flood Zones

Previous Occurrences/Extents

Historically, there have been 33 flooding events that have created significant flooding in Rapides Parish between 1989 and 2014. The following table is a brief synopsis of the nine flooding events that have occurred since 2009, including flooding events that have occurred since the parish's last planning update.

Table 2-22: Historical Floods in Rapides Parish with Locations from 2009 - 2014

Date	Extent	Type of Flooding	Estimated Damages	Location
October 22, 2009	Strong thunderstorms produced heavy rains that caused significant flooding. Several underpasses across Alexandria were flooded. A 12-year old boy playing in a drainage ditch in Pineville was swept away by the fast currents.	Flash Flood	\$5,000	ALEXANDRIA AND PINEVILLE
August 29, 2010	Flash flooding caused the flooding of five homes on Cooper Road and Schoolhouse Road. Bayou Rapides Road, Cooper Road, and Schoolhouse Road were submerged by flood waters.	Flash Flood	\$25,000	WEIL
March 8, 2011	Five to eight inches of rain caused flash floods that flooded several homes. Dozens of cars stalled when attempting to cross flooded roadways. Madeline Drive, Jackson Street, MacArthur Drive, Plantation Drive, Bohannon Road, Shirley Park Place, Simmons Street, and Mohon Street were closed due to flooding.	Flash Flood	\$200,000	UNINCORPORATED AREA AND ALEXANDRIA
February 3, 2012	Extensive rainfall of 3-6 inches of rain produced widespread flooding across Rapides Parish. Some residents in Pineville had to be evacuated by boat. Water damaged a gym flood near Kolin, and entered homes in Boyce. Over 40 roads were closed due to flood waters.	Flash Flood	\$200,000	RAPIDES PARISH (INCORPORATED AND UNINCORPORATED)

Date	Extent	Type of Flooding	Estimated Damages	Location
August 31, 2012	Remnants of Hurricane Isaac caused flash flooding throughout Rapides Parish. Approximately six inches of rain fell in some locations and several roads throughout the parish were closed.	Flash Flood	\$10,000	RAPIDES PARISH (INCORPORATED AND UNINCORPORATED)
January 9, 2013	Heavy rain fell on already saturated ground causing flash floods in the parish. Numerous roads were closed across Rapides Parish. Alexandria and areas to the south and east received between six to eight inches of rain.	Flash Flood	\$0	UNINCORPORATED AREAS, ALEXANDRIA, WOODWORTH, LECOMPTE, MCNARY
January 10, 2013	Flood waters from previous rainfall slowly drained across Rapides Parish through the Red River and Bayou Boeuf. 164 homes were sustained flood damage during the event.	Flood	\$33,450,000	RAPIDES PARISH (INCORPORATED AND UNINCORPORATED)
April 16, 2015	Heavy rain caused many roads to flood with up to one foot of water across portions of the Alexandria area. Flood waters entered a furniture store and several homes. The underpass on Jackson Street was flooded.	Flash Flood	\$20,000	ALEXANDRIA
May 18, 2015	Flooding from thunderstorms closed Ida Wells and Lee Bridge Roads around Holloway and also flooded Jackson Street in Alexandria.	Flash Flood	\$0	UNINCORPORATED AND ALEXANDRIA

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 Alexandria and Pineville can expect flood depths from three to five feet, while the incorporated area of Ball, Lecompte, McNary, and Woodworth can expect flooding levels of approximately three to four feet. The incorporated areas of Boyce, Cheneyville, Forest Hill, and Glenmora can expect flood 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 SHELUS database to provide the annual probability, due to Rapides Parish having multiple jurisdictions, it was necessary to assess the historical data found in the National Climatic Data Center for Rapides Parish and its jurisdictions to properly determine probability for future flood events. The table below shows the probability and return frequency for each jurisdiction.

Table 2-23: Annual Flood Probabilities for Rapides Parish

Jurisdiction	Annual Probability	Return Frequency
Rapides Parish (Unincorporated)	40%	2 – 3 years
Alexandria	72%	1 – 2 years
Ball	16%	6 – 7 years
Boyce	16%	6 – 7 years
Cheneyville	16%	6 – 7 years
Forest Hill	16%	6 – 7 years
Glenmora	28%	3 – 4 years
Lecompte	24%	4 – 5 years
McNary	20%	5 years
Pineville	20%	5 years
Woodworth	24%	4 – 5 years

Based on historical record, the overall flooding probability for the entire Rapides Parish planning area is 100%, with 33 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. On the following page, [Table 2-22](#) shows the total economic losses that would result from this occurrence.

*Table 2-24: Estimated Losses in Rapides Parish from a 100-Year Flood Event
(Source: Hazus 2.2)*

Jurisdiction	Estimated Total Losses from 100-Year Flood Event
Rapides Parish (Unincorporated)	\$548,363,000
Alexandria	\$303,125,000
Ball	\$13,480,000
Boyce	\$1,000
Cheneyville	\$0
Forest Hill	\$0
Glenmora	\$0
Lecompte	\$4,165,000
McNary	\$48,000
Pineville	\$4,066,000
Woodworth	\$9,097,000
Total	\$882,345,000

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 2-25: Estimated 100-Year Flood Losses for Unincorporated Rapides Parish by Sector
(Source: Hazus 2.2)*

Rapides Parish (Unincorporated)	Estimated Total Losses from 100-Year Flood Event
Agricultural	\$2,420,000
Commercial	\$342,446,000
Government	\$1,423,000
Industrial	\$7,253,000
Religious / Non-Profit	\$7,630,000
Residential	\$186,006,000
Schools	\$1,185,000
Total	\$548,363,000

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

Alexandria	Estimated Total Losses from 100-Year Flood Event
Agricultural	\$1,027,000
Commercial	\$35,512,000
Government	\$34,579,000
Industrial	\$21,188,000
Religious / Non-Profit	\$28,468,000
Residential	\$173,530,000
Schools	\$8,821,000
Total	\$303,125,000

*Table 2-27: Estimated 100-Year Flood Losses for Ball by Sector
(Source: Hazus 2.2)*

Ball	Estimated Total Losses from 100-Year Flood Event
Agricultural	\$34,000
Commercial	\$3,348,000
Government	\$0
Industrial	\$403,000
Religious / Non-Profit	\$343,000
Residential	\$8,393,000
Schools	\$959,000
Total	\$13,480,000

*Table 2-28: Estimated 100-Year Flood Losses for Boyce by Sector
(Source: Hazus 2.2)*

Boyce	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 2-29: Estimated 100-Year Flood Losses for Lecompte by Sector
(Source: Hazus 2.2)*

Lecompte	Estimated Total Losses from 100-Year Flood Event
Agricultural	\$0
Commercial	\$653,000
Government	\$1,000
Industrial	\$46,000
Religious / Non-Profit	\$962,000
Residential	\$2,503,000
Schools	\$0
Total	\$4,165,000

*Table 2-30: Estimated 100-Year Flood Losses for McNary by Sector
(Source: Hazus 2.2)*

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

*Table 2-31: Estimated 100-Year Flood Losses for Pineville by Sector
(Source: Hazus 2.2)*

Pineville	Estimated Total Losses from 100-Year Flood Event
Agricultural	\$0
Commercial	\$569,000
Government	\$77,000
Industrial	\$213,000
Religious / Non-Profit	\$6,000
Residential	\$2,753,000
Schools	\$448,000
Total	\$4,066,000

*Table 2-32: Estimated 100-Year Flood Losses for Woodworth by Sector
(Source: Hazus 2.2)*

Woodworth	Estimated Total Losses from 100-Year Flood Event
Agricultural	\$1,000
Commercial	\$748,000
Government	\$353,000
Industrial	\$2,000
Religious / Non-Profit	\$948,000
Residential	\$7,045,000
Schools	\$0
Total	\$9,097,000

Threat to People

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

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

Number of People Exposed to Flood Hazards			
Location	# in Community	# in Hazard Area	% in Hazard Area
Rapides Parish (Unincorporated)	73,778	26,805	36.3%
Alexandria	47,723	8,146	17.1%
Ball	4,000	1,306	32.7%
Boyce	1,004	0	0.0%
Cheneyville	625	0	0.0%
Forest Hill	818	0	0.0%
Glenmora	1,342	0	0.0%
Lecompte	1,227	351	28.6%
McNary	211	63	29.9%
Pineville	14,555	435	3.0%
Woodworth	1,096	790	72.1%
Total	131,613	37,398	28.4%

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

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

Rapides Parish (Unincorporated)		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	26,805	36.3%
Persons Under 5 Years	1,866	7.0%
Persons Under 18 Years	6,926	25.8%
Persons 65 Years and Over	3,670	13.7%
White	16,981	63.4%
Minority	9,824	36.7%

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

Alexandria		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	8,146	17.1%
Persons Under 5 Years	589	7.2%
Persons Under 18 Years	2,166	26.6%
Persons 65 Years and Over	1,137	14.0%
White	3,122	38.3%
Minority	5,024	61.7%

*Table 2-36: Vulnerable Populations Susceptible to a 100-Year Flood Event in Ball
(Source: Hazus 2.2)*

Ball		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	1,306	32.7%
Persons Under 5 Years	89	6.8%
Persons Under 18 Years	327	25.1%
Persons 65 Years and Over	164	12.6%
White	1,171	89.7%
Minority	135	10.3%

*Table 2-37: Vulnerable Populations Susceptible to a 100-Year Flood Event in Lecompte
(Source: Hazus 2.2)*

Lecompte		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	351	28.6%
Persons Under 5 Years	22	6.4%
Persons Under 18 Years	106	30.2%
Persons 65 Years and Over	47	13.3%
White	107	30.5%
Minority	244	69.5%

*Table 2-38: Vulnerable Populations Susceptible to a 100-Year Flood Event in McNary
(Source: Hazus 2.2)*

McNary		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	63	29.9%
Persons Under 5 Years	2	3.3%
Persons Under 18 Years	10	15.6%
Persons 65 Years and Over	12	18.5%
White	49	77.7%
Minority	14	22.3%

*Table 2-39: Vulnerable Populations Susceptible to a 100-Year Flood Event in Pineville
(Source: Hazus 2.2)*

Pineville		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	435	3.0%
Persons Under 5 Years	29	6.8%
Persons Under 18 Years	100	22.9%
Persons 65 Years and Over	57	13.0%
White	281	64.6%
Minority	154	35.4%

*Table 2-40: Vulnerable Populations Susceptible to a 100-Year Flood Event in Woodworth
(Source: Hazus 2.2)*

Woodworth		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	790	72.1%
Persons Under 5 Years	47	5.9%
Persons Under 18 Years	180	22.8%
Persons 65 Years and Over	96	12.1%
White	711	90.0%
Minority	79	10.0%

Vulnerability

See Appendix C for parish and municipality buildings that are susceptible to flooding due to proximity within the 100-year floodplain.

Land Subsidence

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

Some of the worst recent contributors to coastal land loss in the state are the tropical cyclones of the past decade. Two storms that stand out in this regard are Hurricanes Katrina and Rita. These powerful cyclones completely covered large tracts of land in a very brief period, permanently altering the landscape. The disastrous legacy of these storms galvanized already ongoing efforts to combat coastal land loss. Consistent with the 2014 State Hazard Mitigation Plan Update, coastal land loss is considered in terms of two of the most dominant factors: sea level rise and subsidence.

Sea level rise and subsidence impact Louisiana in a similar manner—again making it difficult to separate impacts. Together, rising sea level and subsidence—known together as relative sea level rise—can accelerate coastal erosion and wetland loss, exacerbate flooding, and increase the extent and frequency of storm impacts. According to NOAA, global sea level rise refers to the upward trend currently observed in the average global sea level. Local sea level rise is the level that the sea rises relative to a specific location (or, benchmark) at the coastline. The most prominent causes of sea level rise are thermal expansion, tectonic actions (such as sea floor spreading), and the melting of the Earth's glacial ice caps.

The current U.S. Environmental Protection Agency (EPA) estimate of global sea level rise is ten to twelve inches per century, while future sea level rise could be within the range of one to four feet by 2100. According to the U.S. Geological Survey (USGS), the Mississippi Delta plain is subject to the highest rate of relative sea level rise of any region in the nation largely due to rapid geologic subsidence.

Subsidence results from a number of factors including:

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

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

Overall, subsidence creates three distinct problems in Louisiana:

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

Location

Historic areas of coastal land loss and gain (*Figure 2-24*) and subsidence rates (*Figure 2-25*) have been quantified for Rapides Parish using data from the U.S. Geologic Survey and Louisiana Coastal Protection and Restoration Authority (CPRA). Since 1932, the average annual land loss in Louisiana is 35 mi², while the average annual land gain has been 3 mi² for a net loss of 32 mi² per year. However, the models reflect no measurable land loss or subsidence currently in Rapides Parish (*Figure 2-24* and *Figure 2-25*).

Frequency/Probability

Subsidence, sea level rise, and coastal land loss are ongoing hazards. Based on historical subsidence rates and land loss/gain trends, the probability of future land loss in Louisiana is 100% certain, but actual rates of subsidence and land loss/gain vary along the coast based on various meteorological, geological, and human-influenced dynamics (e.g., water/resource extraction, canal dredging, saltwater intrusion, marsh restoration projects, etc.). In Rapides Parish, there have been no measurable loss estimates due to land subsidence and the annual chance of occurrence is calculated at less than 1%. Therefore, land subsidence is not carried forward into the risk assessment.

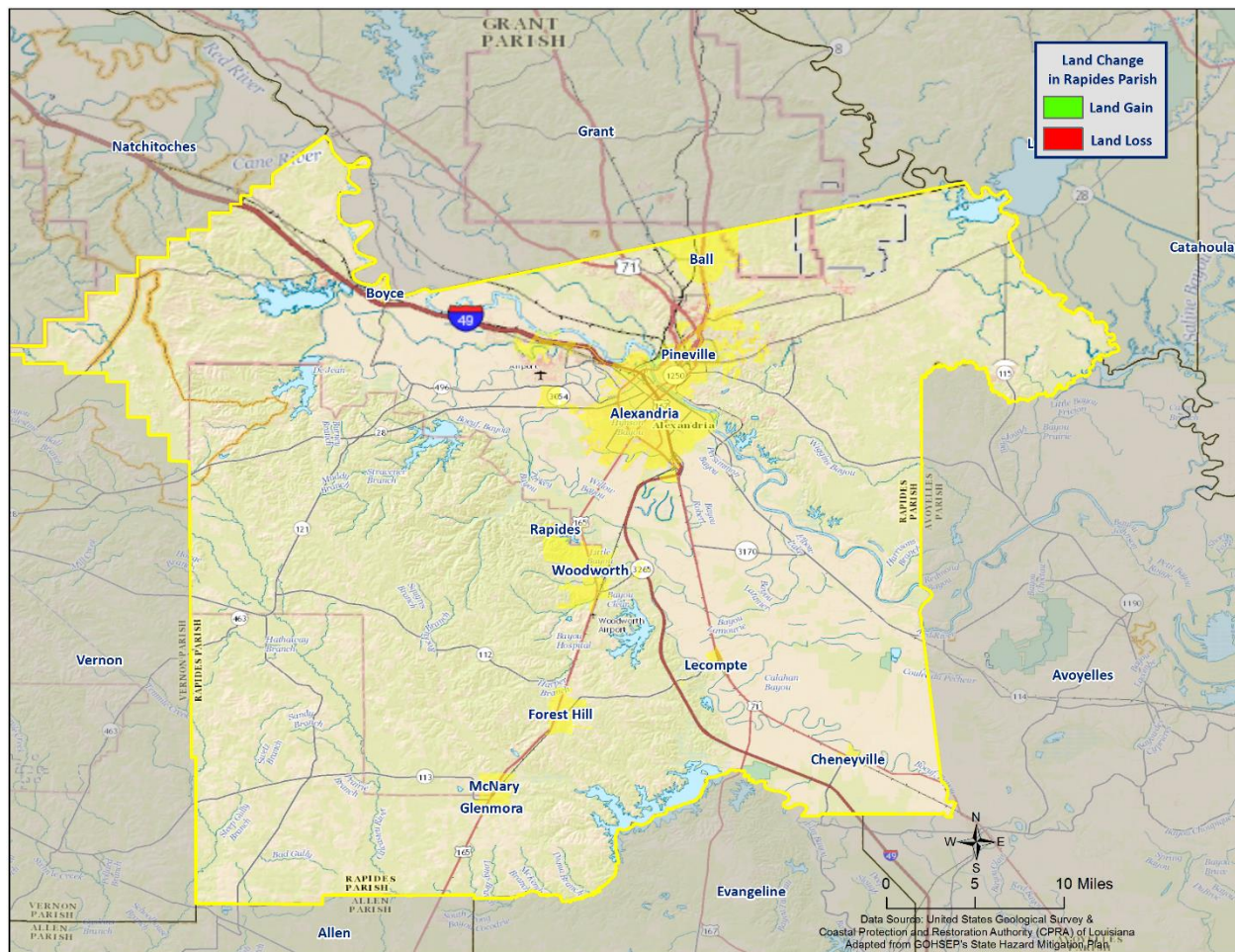


Figure 2-24: Historical Areas of Land Loss and Gain between 1932 and 2010
(Source: State of Louisiana Hazard Mitigation Plan)

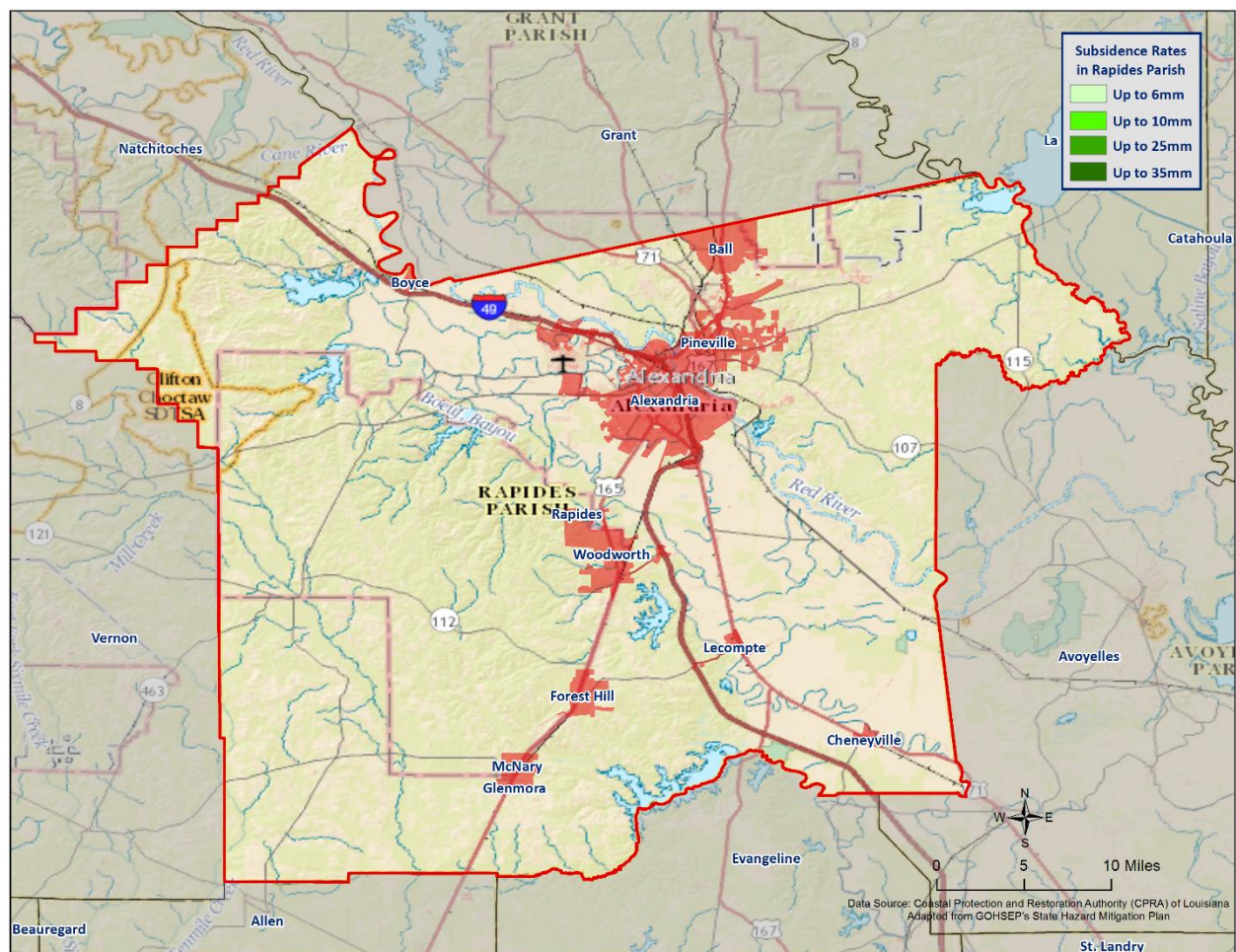


Figure 2-25: Maximum Annual Subsidence Rates Based on Subsidence Zones in Coastal Louisiana
(Source: State of Louisiana Hazard Mitigation Plan)

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, 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 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 2-41: TORRO Hailstorm Intensity Scale

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

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

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

Hailstorms can cause widespread damage to 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. FEMA distinguishes these as shown in the following table.

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

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

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

The table on the following 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 2-44: Beaufort Wind Scale
(Source: NOAA's SPC)

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

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

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

Hazard Profile

Hailstorms

Location

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

Previous Occurrences/Extents

The SHELDUS database reports one significant hailstorm events occurring within the boundaries of Rapides Parish between the years of 1989-2014. According to the National Climatic Data Center (NCDC), hailstorm diameters experienced in Rapides Parish have ranged from 0.75 inches to 2.75 inches since 1989. The most frequently recorded hail size has been 0.75 inch diameters. [Figure 2-26](#) displays the density of hailstorms in Rapides Parish and adjacent parishes. Based on the National Climatic Data Center dataset, [Table 2-46](#) provides an overview of significant hailstorm events that have impacted the Rapides Parish planning area since 1989. Rapides Parish can expect to experience hail up to 2.75 inches in diameter for future events. Since 2009, there have been no significant hailstorm events in the unincorporated areas of Rapides Parish or the incorporated areas of Alexandria, Ball, Boyce, Cheneyville, Forest Hill, Glenmora, Lecompte, McNary, Pineville, and Woodworth.

Table 2-46: Previous Occurrences of Hailstorms in Rapides Parish
(Source: NCDC)

Date	Recorded Hail Size (inches)	Location
May 5, 1991	1.75	LECOMPTE

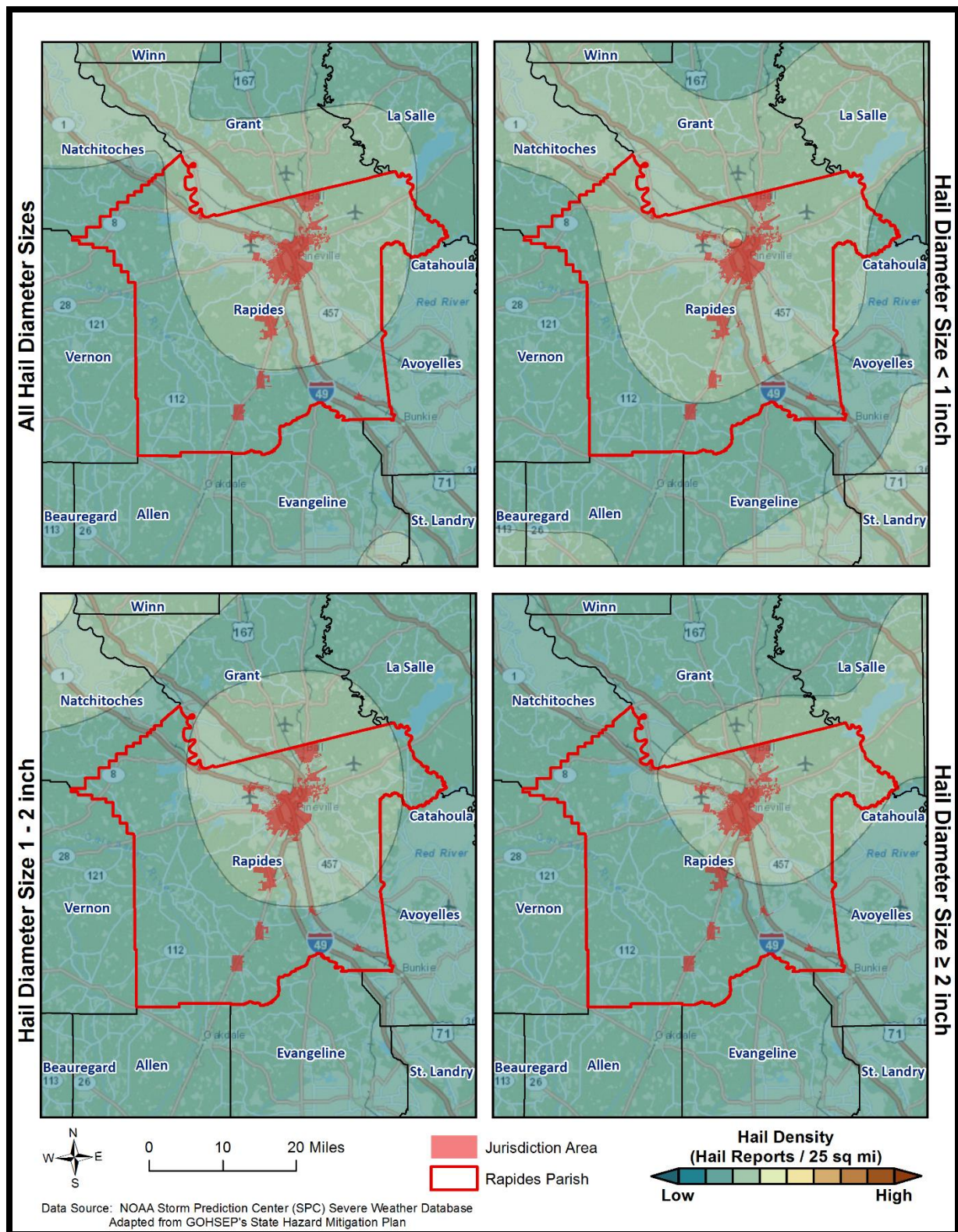


Figure 2-26: Density of Hailstorms by Diameter from 1950-2012
(Source: State of Louisiana Hazard Mitigation Plan 2014)

Frequency

Based on historical data from SHELDUS for the past 25 years, it is estimated the probability of occurrence for a significant hailstorm event is approximately 4%. The probability was determined based on a review of significant hail data that has caused damages in the last 25 years, in which Rapides Parish has had one recorded events.

Estimated Potential Losses

According to the SHELDUS database, property damage due to hailstorms in Rapides Parish have totaled approximately \$428 since 1989. A list of total damages by event can be found in [Table 2-47](#). 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 SHELDUS (1989 – 2014). This provides an annual estimated potential loss of \$17. [Table 2-48](#) provides an estimate of potential property losses for Rapides Parish.

*Table 2-47: Property Damage Caused by Hailstorms in Rapides Parish
(Source: SHELDUS)*

Date	Property Damage
May 1991	\$428

Table 2-48: Estimated Annual Property Losses in Rapides Parish from Hailstorms

Estimated Annual Potential Losses from Hailstorms for Rapides Parish										
Unincorporated Rapides Parish (56.1% of Population)	Alexandria (36.3% of Population)	Ball (3.0% of Population)	Boyce (0.8% of Population)	Cheneyville (0.5% of Population)	Forest Hill (0.6% of Population)	Glenmora (1.0% of Population)	Lecompte (0.9% of Population)	McNary (0.2% of Population)	Pineville (11.1% of Population)	Woodworth (0.8% of Population)
\$9.53	\$6.16	\$0.52	\$0.13	\$0.08	\$0.11	\$0.17	\$0.16	\$0.03	\$1.88	\$0.14

There have been no deaths or injuries due to hailstorms from 1989 – 2014 in Rapides 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 Rapides Parish is equally at risk for high winds.

Previous Occurrences/Extents

The SHELDUS database reports a total of 141 thunderstorm wind events occurring within the boundaries of Rapides Parish between the years of 1989 to 2014. The significant thunderstorm wind events experienced in Rapides Parish have ranged in wind speed from 51 mph to 90 mph. Rapides Parish can expect to receive thunderstorm winds up to 90 mph for future high wind events. The following table provides an overview of significant high wind events over the last five years:

Table 2-49: Previous Occurrences for Thunderstorm High Wind Events

Location	Date	Recorded Wind Speeds (mph)	Property Damage	Crop Damage
WEIL	January 3, 2009	64	\$27,728	\$0
BOYCE	April 2, 2009	64	\$11,091	\$0
MELDER	April 2, 2009	64	\$5,546	\$0
ALEXANDRIA	April 2, 2009	60	\$11,091	\$0
SMITHVILLE	April 2, 2009	60	\$5,546	\$0
GREEN GABLES	April 2, 2009	60	\$5,546	\$0
ALEXANDRIA	May 3, 2009	58	\$11,091	\$0
PINEVILLE	May 3, 2009	58	\$5,546	\$0
BOYCE	June 29, 2009	64	\$11,091	\$0
BOYCE	July 21, 2009	60	\$2,218	\$0
LECOMPTE	July 21, 2009	60	\$2,218	\$0
KOLIN	July 21, 2009	60	\$1,109	\$0
ALEXANDRIA	October 22, 2009	60	\$5,546	\$0
FLATWOODS	May 17, 2010	60	\$1,091	\$0
CHENEYVILLE	May 17, 2010	64	\$10,912	\$0
DEVILLE	June 27, 2010	60	\$1,091	\$0
ROXANA	June 27, 2010	60	\$5,456	\$0
LIBUSE	July 16, 2010	60	\$3,274	\$0
PINEVILLE	September 19, 2010	64	\$16,368	\$0
BUCKEYE	October 12, 2010	64	\$10,912	\$0
BUCKEYE	March 8, 2011	64	\$10,578	\$0
GREEN GABLES	April 4, 2011	60	\$1,058	\$0
ELMER	April 4, 2011	60	\$1,058	\$0
GARDNER	April 15, 2011	60	\$2,116	\$0
MCNUTT	April 26, 2011	60	\$3,173	\$0
DEVILLE	May 25, 2011	60	\$10,578	\$0

Location	Date	Recorded Wind Speeds (mph)	Property Damage	Crop Damage
CHENEYVILLE	June 2, 2011	58	\$10,578	\$0
PINEVILLE	July 23, 2011	58	\$5,289	\$0
FOREST HILL	March 11, 2012	58	\$5,182	\$0
ECHO	April 2, 2012	58	\$25,909	\$0
ALEXANDRIA	May 31, 2012	58	\$25,909	\$0
ELMER	August 10, 2012	58	\$1,036	\$0
DEVILLE	August 10, 2012	58	\$1,036	\$0
DEVILLE	October 17, 2012	58	\$2,073	\$0
LEE HGTS	December 25, 2012	58	\$10,364	\$0
SMITHVILLE	March 31, 2013	58	\$2,043	\$0
ALEXANDRIA	March 31, 2013	58	\$5,107	\$0
FOREST HILL	May 23, 2013	58	\$10,214	\$0
CHENEYVILLE	July 18, 2013	58	\$2,043	\$0
PINEVILLE	July 2, 2014	58	\$1,005	\$0
PINEVILLE	August 10, 2014	58	\$10,051	\$0
ALEXANDRIA	August 11, 2014	52	\$1,005	\$0
ALEXANDRIA	August 25, 2014	58	\$1,005	\$0
GLENMORA	October 13, 2014	58	\$1,005	\$0

Since 2009, there have been no significant high wind events in the incorporated areas of Ball and McNary.

Frequency

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

Estimated Potential Losses

Since 1989, there have been 141 significant wind events that have resulted in property damages according to the SHELUDS database. The total property damages associated with those storms have totaled \$1,625,899. 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 SHELUDS (1989 – 2014). This provides an annual estimated potential loss of \$65,036. The following table provides an estimate of potential property losses for Rapides Parish:

Table 2-50: Estimated Annual Property Losses in Rapides Parish Resulting from High Winds

Estimated Annual Potential Losses from High Winds for Rapides Parish										
Unincorporated Rapides Parish (56.1% of Population)	Alexandria (36.3% of Population)	Ball (3.0% of Population)	Boyce (0.8% of Population)	Cheneyville (0.5% of Population)	Forest Hill (0.6% of Population)	Glenmora (1.0% of Population)	Lecompte (0.9% of Population)	McNary (0.2% of Population)	Pineville (11.1% of Population)	Woodworth (0.8% of Population)
\$36,457	\$23,582	\$1,977	\$496	\$309	\$404	\$663	\$606	\$104	\$7,192	\$542

There have been 11 reported injuries and no fatalities as a result of thunderstorm wind events in Rapides Parish 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 Rapides Parish.

Previous Occurrences/Extents

The SHELDUS database reports a total of seven lightning events occurring within the boundaries of Rapides Parish between the years of 1989-2014. The SHELDUS database only records lightning events that cause death, injuries, crop damage, and/or property damage, so these numbers do not accurately reflect the number of lightning events in Rapides Parish, which occur on a nearly monthly basis. The planning area can expect to have a lightning density of 11-12 flashes per sq. mile per year. The table below provides an overview of significant lightning strikes over the last five years:

*Table 2-51: Previous Occurrences of Significant Lightning Strikes in Rapides Parish from 2009 – 2014
(Source: NCDC and SHELDUS)*

Location	Date	Summary	Property Damage
BOYCE	July 21, 2009	A man was injured by a lightning strike while moving his barbeque pit in his yard.	\$0
PINEVILLE	July 16, 2010	CLECO reported 3,626 customers lost power across northeastern Rapides Parish due to a lightning strike.	\$5,456

Since 2009, there have been no lightning events that have caused property damage or loss of life in unincorporated areas of Rapides Parish and the incorporated areas of Alexandria, Ball, Cheneyville, Forest Hill, Glenmora, Lecompte, McNary, and Woodworth.

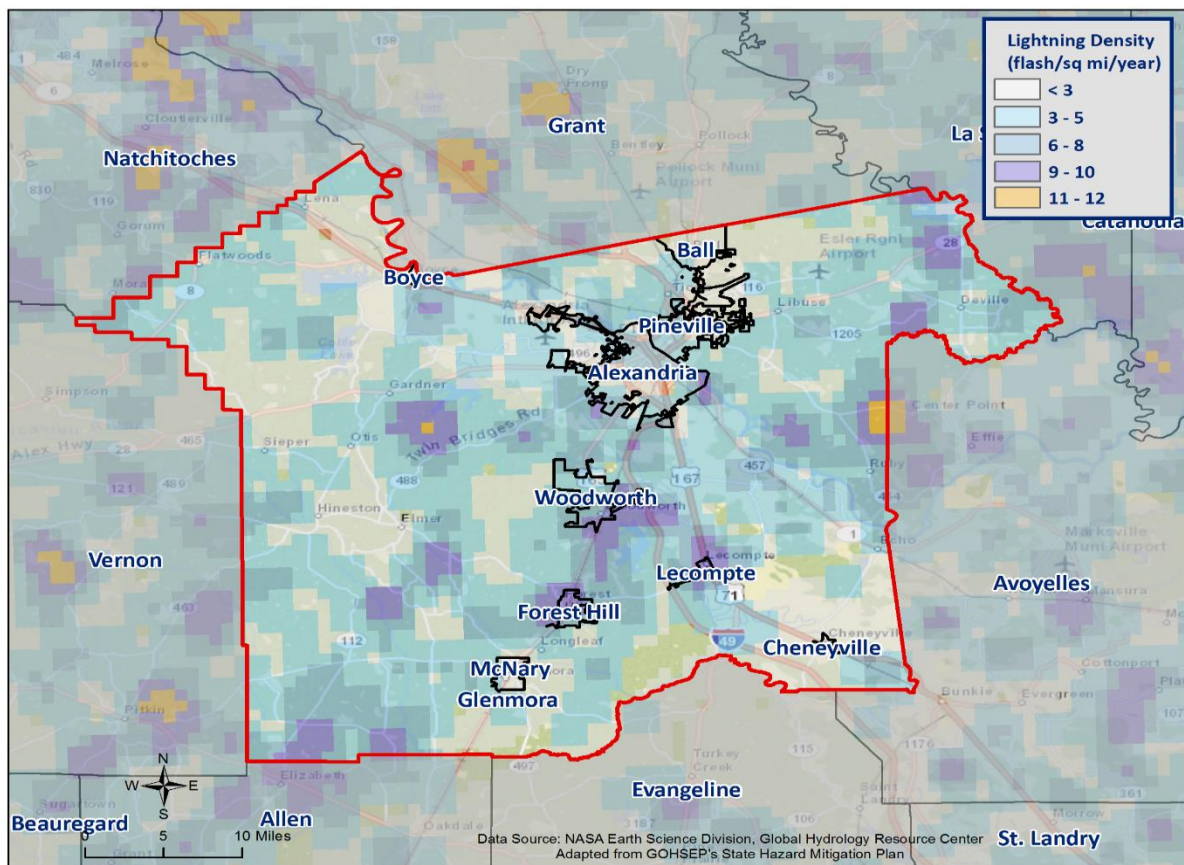


Figure 2-27: Lightning Density Reports for Rapides Parish

Frequency

Lightning can strike anywhere and is produced by every thunderstorm, so the chance of lightning occurring in Rapides Parish is high. However, lightning that meets the definition that is used by SHELUDS and the NCDC that actually results in damages to property and injury or death is a less likely event. According to SHELUDS, there have been seven lightning events that have caused property damages or injuries over the last 25 years, establishing an annual probability of 28%.

Estimated Potential Losses

Since 1989, there have been seven significant lightning events that have resulted in property damages according to the SHELUDS database. The total property damages associated with lightning events totaled \$86,185. 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 (1989 – 2014). This provides an annual estimated potential loss of \$3,447. The table on the following page provides an estimate of potential property losses for Rapides Parish.

Table 2-52: Estimated Annual Property Losses in Rapides Parish from Lightning

Estimated Annual Potential Losses from Lightning for Rapides Parish										
Unincorporated Rapides Parish (56.1% of Population)	Alexandria (36.3% of Population)	Ball (3.0% of Population)	Boyce (0.8% of Population)	Cheneyville (0.5% of Population)	Forest Hill (0.6% of Population)	Glenmora (1.0% of Population)	Lecompte (0.9% of Population)	McNary (0.2% of Population)	Pineville (11.1% of Population)	Woodworth (0.8% of Population)
\$1,933	\$1,250	\$105	\$26	\$16	\$21	\$35	\$32	\$6	\$381	\$29

There have been three reported injuries and no fatalities in Rapides 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 2-53](#) 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 2-53: 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 2-54: 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 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 Rapides Parish with actual locations, tornadoes in general are a climatological based hazard and have the same approximate probability of occurring in Rapides Parish as all of its jurisdictions. Because a tornado has a similar probability of striking anywhere within the planning area for Rapides Parish, all jurisdictions are equally at risk for tornadoes.

Previous Occurrences/Extents

SHELDUS reports a total of 25 tornadoes or waterspouts occurring within the boundaries of Rapides Parish between the years of 1989-2014. The tornadoes experienced in Rapides Parish have from ranged EF0 to EF2 on the EF scale, and ranged from F0 to F2 on the F scale. The worst case scenario Rapides Parish can expect in the future is an EF2 tornado.

The tornadoes that caused the most damage to property occurred on December 25, 2012. A National Weather Service storm survey confirmed an EF2 tornado touched down in the city of Alexandria. The tornado began in a residential area between Polk and White Streets downing trees onto homes and removing some roofing material. The tornado ripped roofs off some businesses including around the Washington Square Complex. The tornado moved across Interstate 49 and dissipated between Lee and Saint James Streets where several more homes and a church lost some roofing material. Another tornado touched down in the woods

southwest of Tioga and traveled into town. This tornado damaged approximately 43 homes with a brick home having the roof almost totally ripped off. The tornado also damaged the Tioga Elementary School and an industrial complex along Highway 167. Part of the roof of the school's gym was removed. At the industrial complex, five 18-wheeler trailers were flipped over, several large overhead doors were blown in, and a large section of the metal roof was peeled off.

Table 2-55: Historical Tornadoes in Rapides Parish with Locations from 2009-2014

Date	Impacts	Property Damage	Location	Magnitude
March 27, 2009	2.56 mile path with a width of 25 yards. Two homes had trees land on them; several cars were trapped by fallen trees.	\$27,728	WILDA	EF0
March 8, 2011	2.18 mile path with a width of 50 yards. Destroyed an RV trailer, two bards, and several pieces of farm equipment. Debris was thrown for over 1 mile.	\$105,782	MORELAND	EF1
March 8, 2011	3.47 mile path with a width of 50 yards. Many trees were uprooted and snapped which blocked several forestry roads.	\$0	(01R) AFB GNRY RNG AL	EF1
March 8, 2011	2.71 mile path with a width of 25 yards. Trees were blown down with one falling onto and crushing a mobile home.	\$26,446	LIBUSE	EF0
January 25, 2012	1.79 mile path with a width of 20 yards. Several trees were blown down or snapped in half. A patio was damaged at one house.	\$51,819	HINESTON	EF0
January 25, 2012	0.88 mile path with a width of 20 yards. Many trees were blown down or snapped in half.	\$41,455	HOTWELLS	EF0
January 25, 2012	1.35 mile path with a width of 25 yards. Damaged part of a roof at Ruby-Wise School	\$103,637	KOLIN	EF0
December 25, 2012	4.62 mile path with a width of 500 yards. Damaged approximately 43 homes.	\$2,072,746	LEE HGTS	EF2

Date	Impacts	Property Damage	Location	Magnitude
	Damaged the Tioga Elementary School and an industrial complex.			
December 25, 2012	0.77 mile path with a width of 200 yards. Ripped roofs off some businesses including around the Washington Square Complex.	\$2,072,746	ALEXANDRIA	EF2
March 28, 2014	1.52 mile path with a width of 200 yards. Several homes, barns, and outbuildings had trees fall on them.	\$100,511	BALL	EF1

The incorporated areas of Boyce, Cheneyville, Forest Hill, Glenmora, Lecompte, McNary, Pineville, and Woodworth have not experienced a tornado event from 2009 to the present. Since 2010, the year in which the last update to this hazard mitigation plan was written, Rapides Parish has had nine tornadoes touchdown in the unincorporated areas of the parish and in the incorporated areas of Alexandria and Ball. The following is a brief synopsis of these events:

March 8, 2011 – EF1 Tornado in Moreland

NWS Storm Survey found a tornado touched down at a farm along Jenkins Road, destroying an RV trailer, two barns, and several pieces of farm equipment. Metal debris was thrown for over 1 mile to the northeast across fields on both sides of US Highway 71. Several unsecured gazebos were damaged along Highway 71, and a few trees were blown down along Bayou Teche. A house suffered roof and awning damage on Old Baton Rouge Highway, and debris from the home was blown hundreds of yards across farm fields to the northeast. Several more trees were blown down before the tornado ended.

March 8, 2011 – EF1 Tornado near AFB GNR YRNG AL

NWS Storm Survey found an EF1 tornado touched down in Kisatchie National Forest. Many trees were uprooted and snapped which blocked several forestry roads.

March 8, 2011 – EF0 Tornado in Libuse

NWS Storm Survey found an EF0 tornado began along Highway 3128 south of Libuse before ending northeast of the community. A few trees were blown down along Highway 3128 and in the far eastern portion of the Whispering Pines subdivision. Numerous trees were blown down around a home on Happy Acres Drive, with one tree falling onto and destroying an outbuilding. More trees were blown down along Philadelphia Road. Crossing Highway 28, the tornado blew down several more trees, with one falling onto and crushing a mobile home. An awning on a nearby home was also destroyed. More trees were blown down on Libuse Cutoff Road before the tornado lifted.

January 25, 2012 – EF0 Tornado in Hineston

A tornado touched down near Harper Road, before crossing LA Highway 112 and dissipating along Twin Bridge Road. Several trees were blown down or snapped in half. A patio was damaged at one house from a tree falling on it.

January 25, 2012 –EF0 Tornado in Hotwells

A tornado touched down near Cotile Lake on Vanzart and Bath House Roads, before dissipating near LA Highway 1200. Many trees were blown down or snapped in half.

January 25, 2012 –EF0 Tornado in Kolin

A tornado touched down along Palmer Chapel Road, blowing down trees. It dissipated near the Ruby-Wise School on LA Highway 107 where it damaged part of a roof at the school.

December 25, 2012 –EF2 Tornado in Lee Heights

A NWS survey confirmed an EF 2 tornado touched down in the woods southwest of in the town of Tioga and traveled into town. The tornado produced a damage path four to five miles long and 500 yards wide. The tornado damaged approximately 43 homes with a brick home having the roof almost totally ripped off. The tornado also damaged the Tioga Elementary School and an industrial complex along highway 167. At the school part of the roof of the gym was removed. At the industrial complex 5 18 wheeler trailers flipped over, several large overhead doors were blown in, and a large section of the metal roof was peeled off. One person was injured with very minor bumps and bruises when a mobile home rolled over.

December 25, 2012 –EF2 Tornado in Alexandria

A NWS storm survey confirmed an EF 2 tornado touched down in the city of Alexandria. The tornado produced a damage path near 1 mile long and 200 yards wide. The tornado began in a residential area between Polk and White Streets downing trees onto homes and removing some roofing material. It ripped roofs off some businesses including around the Washington Square Complex. The tornado moved across Interstate 49 and dissipated between Lee and Saint James Streets where several more homes and a church lost some roofing material.

March 28, 2014 –EF1 Tornado in Ball

A tornado touched down north of Highway 1204 in Ball damaging several homes, vehicles, and other property. A house on the end of Eastbrook Trace had a large tree fall through the home. On Cooley Drive a truck and a car were hit by falling trees. Several other homes, barns, and outbuildings had trees fall on them causing less severe damage on Tall Timers Lane, Highway 165, and Burma Road. Between 25 and 50 trees were snapped along the path most of which were soft wood pine.

Frequency/Probability

Tornadoes are a sporadic occurrence within Rapides Parish, with an annual chance of occurrence calculated at 100% based on the records for the past 25 years (1989-2014). The figure on the following page displays the density of tornado touch downs in Rapides Parish and neighboring parishes.

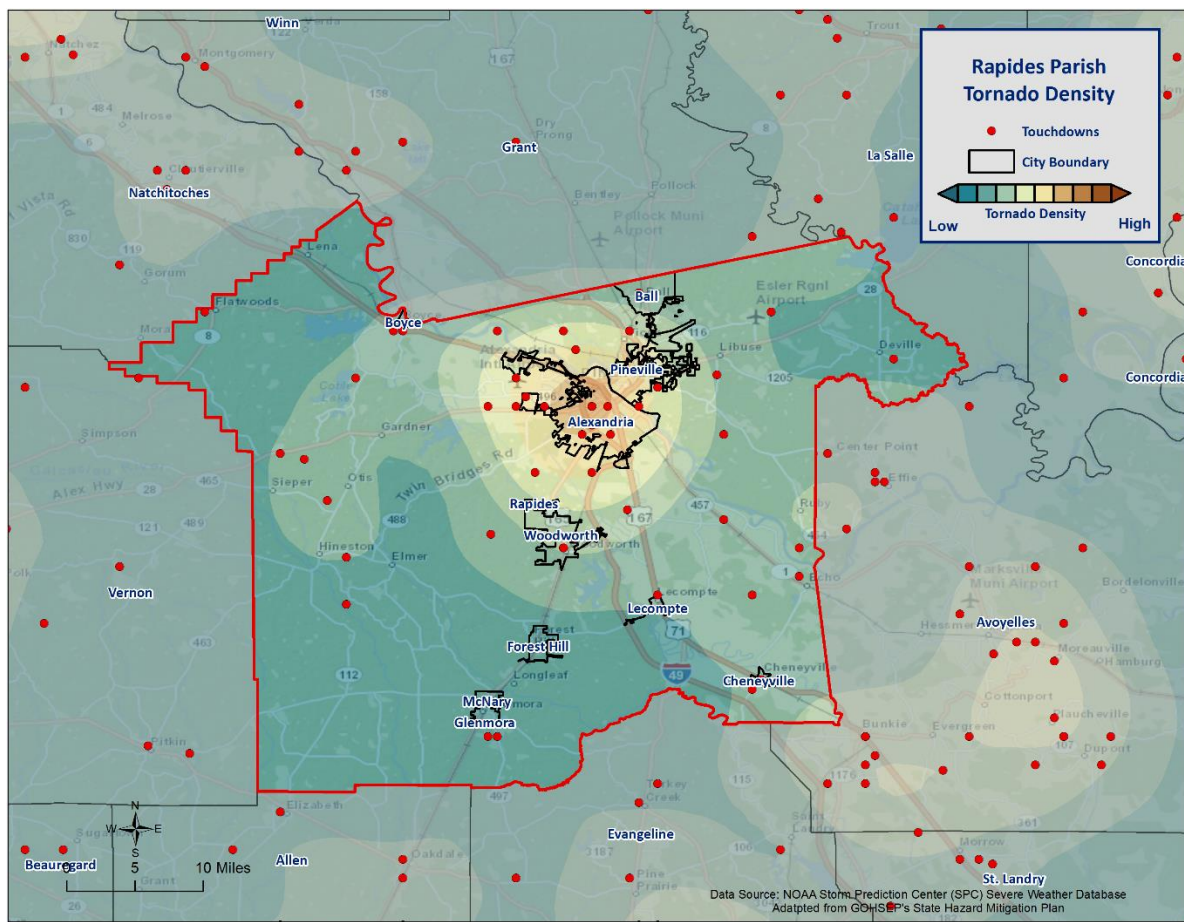


Figure 2-28: Location and Density of Tornadoes to Touch Down in Rapides Parish
(Source: NOAA/SPC Severe Weather Database)

Estimated Potential Losses

According to the SHELDES database, there have been 25 tornadoes that have caused some level of property damage. The total damage from the actual claims for property is \$6,686,352, with an average cost of \$267,454 per tornado strike. When annualizing the total cost over the 25-year record, total annual losses based on tornadoes are estimated to be \$267,454. 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 Rapides Parish.

Table 2-56: Estimated Annual Losses from Tornadoes in Rapides Parish

Estimated Annual Potential Losses from Tornadoes in Rapides Parish										
Unincorporated Rapides Parish (56.1% of Population)	Alexandria (36.3% of Population)	Ball (3.0% of Population)	Boyce (0.8% of Population)	Cheneyville (0.5% of Population)	Forest Hill (0.6% of Population)	Glenmora (1.0% of Population)	Lecompte (0.9% of Population)	McNary (0.2% of Population)	Pineville (11.1% of Population)	Woodworth (0.8% of Population)
\$149,926	\$96,979	\$8,129	\$2,040	\$1,270	\$1,662	\$2,727	\$2,493	\$429	\$29,578	\$2,227

Table 2-57 presents an analysis of building exposure that is susceptible to tornadoes by general occupancy type for Rapides Parish, along with the percentage of building stock that are mobile homes.

*Table 2-57: Building Exposure by General Occupancy Type for Tornadoes in Rapides 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 (%)
14,977,310	4,881,176	766,137	115,792	686,512	207,621	232,422	13.2%

The parish has suffered through a total of three days in which tornadoes or waterspouts have accounted for three injuries and no fatalities during this 25-year period (*Table 2-58*). The average number of injuries per event for Rapides Parish is 0.12 per tornado, with an average of 0.12 per year for the 25-year period.

Table 2-58: Tornadoes in Rapides Parish by Magnitude that Caused Injuries or Deaths

Date	Magnitude	Deaths	Injuries
January 18, 1995	F1	0	1
January 21, 1999	F2	0	1
December 25, 2012	EF2	0	1

In assessing the overall risk to population, the most vulnerable population throughout the parish are those residing in manufacturing housing. Approximately 13.2% of all housing in Rapides Parish consists of manufactured housing. Based on location data collected in a previous hazard mitigation project, there are 30 known locations where manufactured housing is concentrated. Each of those 30 locations have an overall number of manufactured houses ranging from two to 83. The location and density of manufactured houses can be seen in *Figure 2-29*.

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 Rapides Parish and the incorporated area of Alexandria (

Table 2-59). However, this does not influence the risk associated with a tornado event since they strike at random, making all structures and populations within the planning area equally vulnerable.

Table 2-59: Manufactured Home Distribution throughout Rapides Parish

Location	Number of Manufactured Home Parks	% of Manufactured Home Parks
Unincorporated Area	16	53.3%
Alexandria	6	20%
Ball	1	3.3%
Boyce	2	6.7%
Cheneyville	1	3.3%
Forest Hill	1	3.3%
Glenmora	1	3.3%
Lecompte	0	0%
McNary	0	0%
Pineville	1	3.3%
Woodworth	1	3.3%

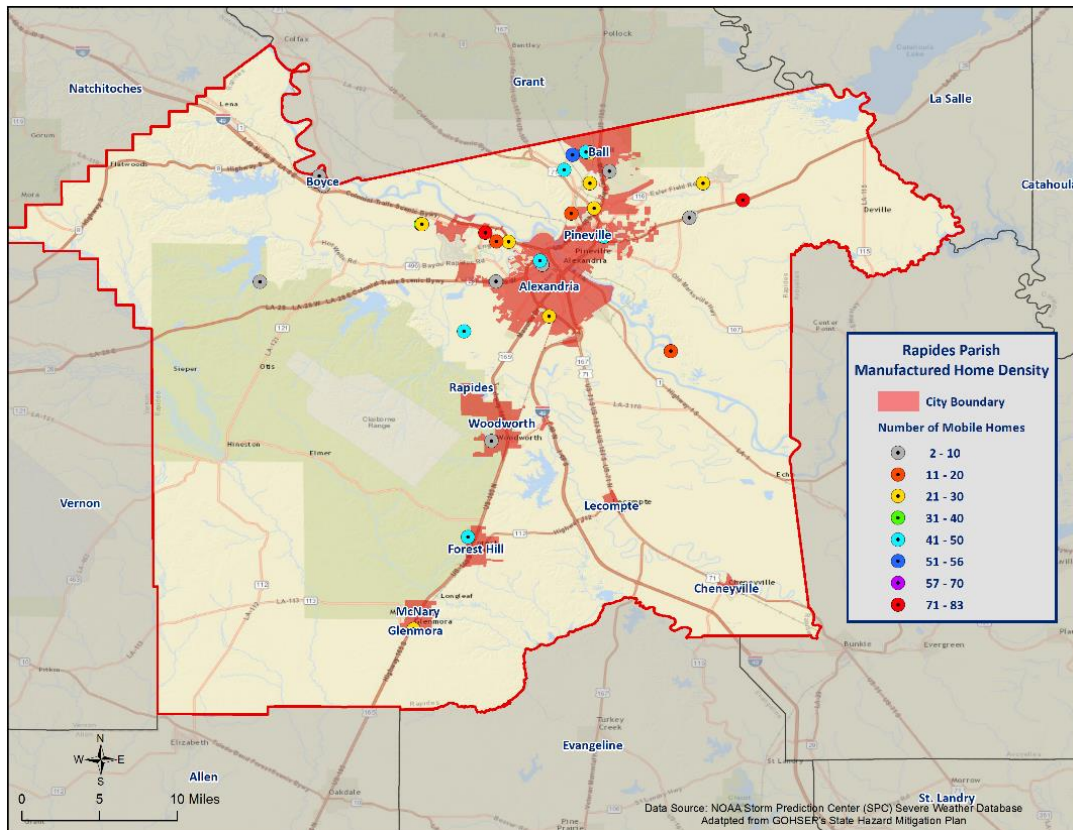


Figure 2-29: Location and Approximate Number of Units in Manufactured Housing Locations throughout Rapides Parish

Vulnerability

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

Tropical Cyclones

Tropical cyclones are among the worst hazards that Louisiana faces. These spinning, low-pressure air masses draw surface air into their centers and attain strength ranging from weak tropical waves to the most intense hurricanes. Usually, these storms begin as clusters of oceanic thunderstorms off the western coast of Africa, moving westward in the trade wind flow. The spinning of these thunderstorm clusters begins because of the formation of low pressure in a perturbation in the westerly motion of the storms associated with differential impacts of the Earth's rotation. The west-moving, counterclockwise-spinning collection of storms, now called a tropical disturbance, may then gather strength as it draws humid air toward its low-pressure center. This results in the formation of a tropical depression (defined when the maximum sustained surface wind speed is 38 mph or less), then a Tropical Cyclone (when the maximum sustained surface wind ranges from 39 mph to 73 mph), and finally a hurricane (when the maximum sustained surface wind speeds exceed 73 mph). On the next page, [Table 2-60](#) presents the Saffir-Simpson Hurricane Wind Scale, which categorizes tropical cyclones based on sustained winds.

Table 2-60: Saffir-Simpson Hurricane Wind Scale

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.

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.

Location

Hurricanes are the single biggest threat to all of south Louisiana. With any single hurricane having the potential to devastate multiple parishes at once, the risk of a tropical cyclone has the probability of impacting anywhere within the planning area for Rapides 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 Rapides Parish between the years 2002 and 2014 (*Table 2-61*). The tropical cyclone events experienced in Rapides Parish include depressions, storms, and hurricanes. As a worst case scenario, Rapides Parish can expect to experience hurricanes at the Category 1 level in the future.

*Table 2-61: Historical Tropical Cyclone Events in Rapides Parish from 2002-2014
(Source: SHELDUS)*

Date	Name	Storm Type At Time of Impact
October 3, 2002	Lili	Tropical Storm
September 23, 2005	Rita	Tropical Storm
September 13, 2007	Humberto	Tropical Storm
September 1, 2008	Gustav	Tropical Storm
September 3, 2011	Lee	Tropical Storm
September 1, 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 sugar cane 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.

In Rapides Parish, Hurricane Lili produced heavy rains and wind speeds up to 70 mph. Most of the cotton crop in Rapides Parish was destroyed, and power outages were reported in the unincorporated and incorporated areas of the parish. The parish received over \$50 million in property damage, and crop losses were estimated at \$8 million based on state figures for crop loss.

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.

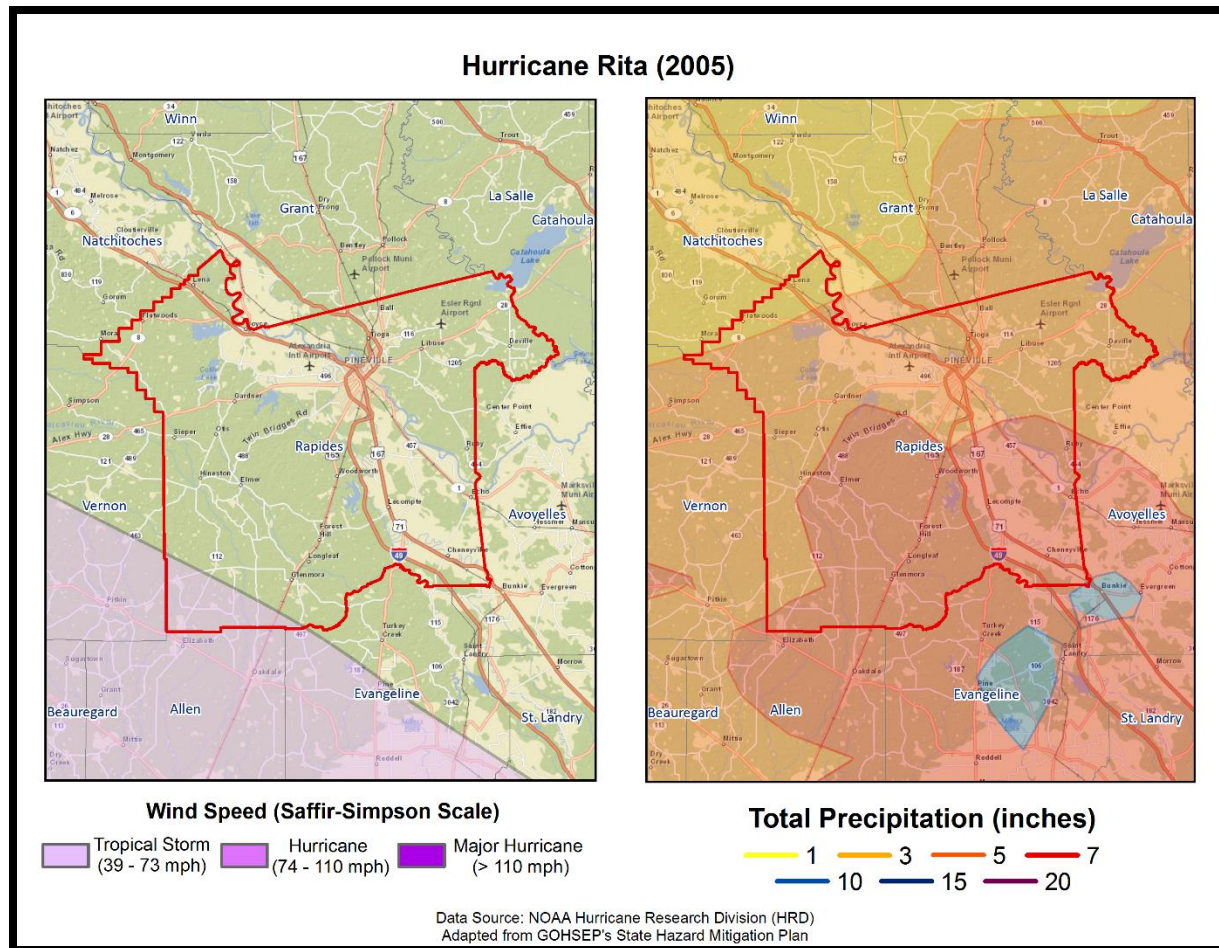


Figure 2-30: Wind Speed and Precipitation Totals in Rapides Parish for Hurricane Rita

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 Rapides Parish, peak wind gusts reached 62 mph. Rainfall totals exceeded 7.5 inches at multiple weather stations in the parish. Estimates suggest that over 250,000 people evacuated Southeast Texas and Southwest Louisiana with many using Interstate 49 through Rapides Parish as their means of exit.

Hurricane Humberto (2007)

In 2007, southeastern Texas and southwestern Louisiana were impacted by Hurricane Humberto, which was a rapidly developing storm that made landfall on September 13th as a Category 1 hurricane. Hurricane Humberto tracked into a northeasterly direction along the Texas coastline between High Island, Texas and Sea Rim State Park, then onward into the state of Louisiana. The most significant damages occurred in Jefferson, Orange, and Newton counties in Texas, with minor wind damage to trees and power lines in Rapides Parish.

Hurricane Gustav (2008)

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

The highest wind gust recorded was 117 mph (102 kts) at a USGS site at the Houma Navigational Canal and at the Pilot Station East C-MAN near the Southwest Pass of the Mississippi River. The highest sustained wind of 91 mph was recorded at the Pilot's Station East C-MAN site. However, due to the failure of equipment at some observation sites during the storm, higher winds may have occurred. The minimum sea level pressure measured was 951.6 millibars at a USGS site at Caillou Lake, southwest of Dulac, and 954.5 millibars at the LUMCON facility near Dulac. Rainfall varied considerably across southeast Louisiana, ranging from around four inches to just over 11 inches.

Gustav produced widespread wind damage across southeast Louisiana, especially in the area from Houma and Thibodaux through the greater Baton Rouge area. Hurricane force wind gusts occurred also across the inland areas, including the Baton Rouge area and surrounding parishes. A peak wind gust of 91 mph was recorded at the Baton Rouge (Ryan Field) Airport at 1:12 PM CST. This was only one mph less than the highest wind gust recorded during Hurricane Betsy in 1965. After the storm, the electric utility serving most of southeast Louisiana reported 75 to 100 percent of utility customers were without power, in areas ranging from Lafourche and Terrebonne Parishes northwest through the Baton Rouge area to southwest Mississippi and central Louisiana. 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 Rapides Parish, Hurricane Gustav caused trees and power lines to fall across the entire parish. Some of the worst wind damage was in Forest Hill, Glenmora, Cheneyville, and Woodworth. At the Alexandria Mall, part of the roof caved in, damaging many stores in the mall.

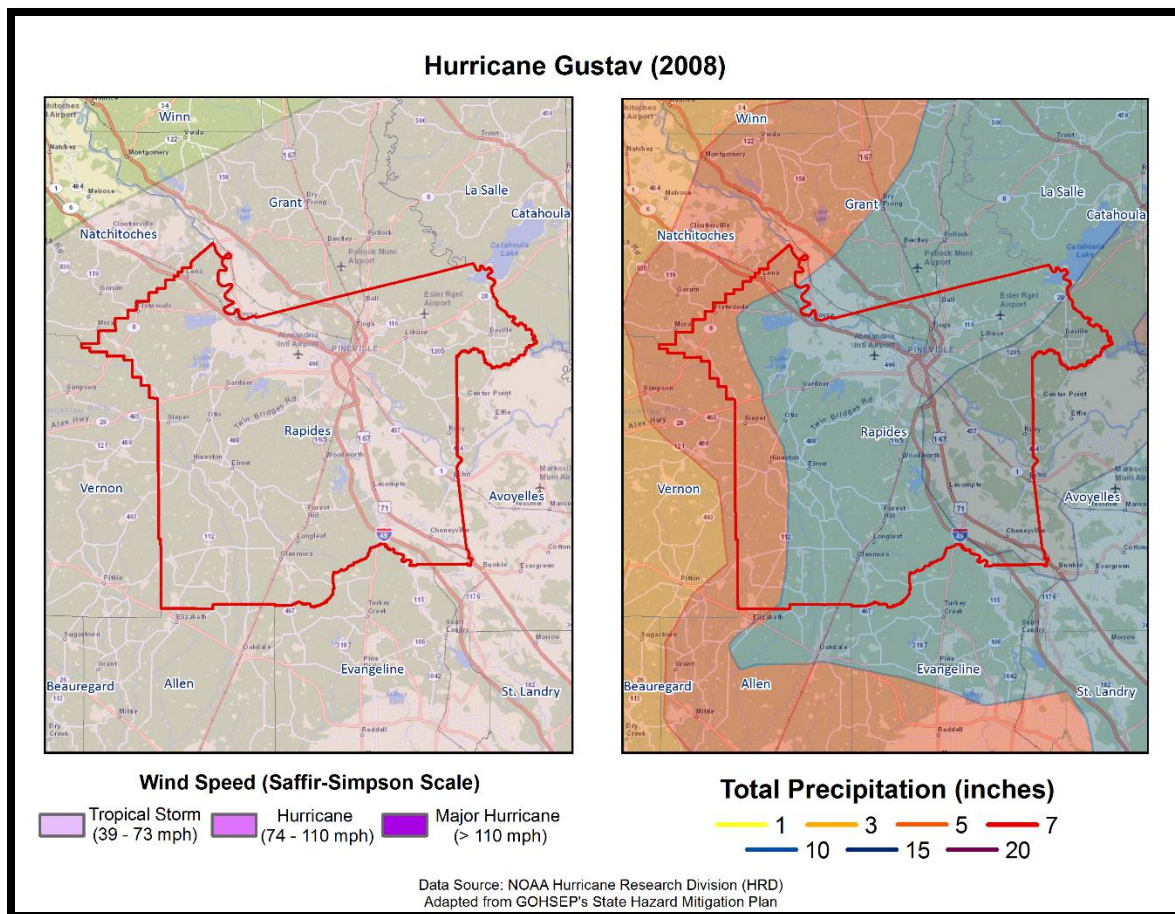


Figure 2-31: Wind Speed and Precipitation Totals in Rapides Parish for Hurricane Gustav

[Tropical Storm Lee \(2011\)](#)

Tropical Storm Lee initially developed as Tropical Depression Thirteen in the middle of the Gulf of Mexico on Thursday evening September 1st, 2011. The depression moved slowly north and gradually strengthened, eventually reaching tropical storm strength just south of the Louisiana coast on Friday afternoon September 2nd, 2011. Tropical Storm Lee made only slow and haltingly northward progress over the next 24 hours, eventually moving onshore the Louisiana coast Saturday night, September 3rd, 2011, with a maximum sustained wind estimated around 60 mph. Lee moved slowly inland to the north of Baton Rouge late Sunday September 4th, 2011, and eventually weakened to a tropical depression Sunday evening.

Tropical Depression Lee then moved steadily northeast throughout Monday, September 5th, 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 wind observed in Louisiana was a southerly wind of 40 kts (46 mph) sustained, 50 kts (58 mph) gust at New Orleans Lakefront Airport on September 4th, 2012 at 0528CST. The lowest minimum central pressure was 993.2 mb at Baton Rouge Ryan Field at Sept 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 storm. No fatalities or injuries were associated with any Tropical Lee hazards.

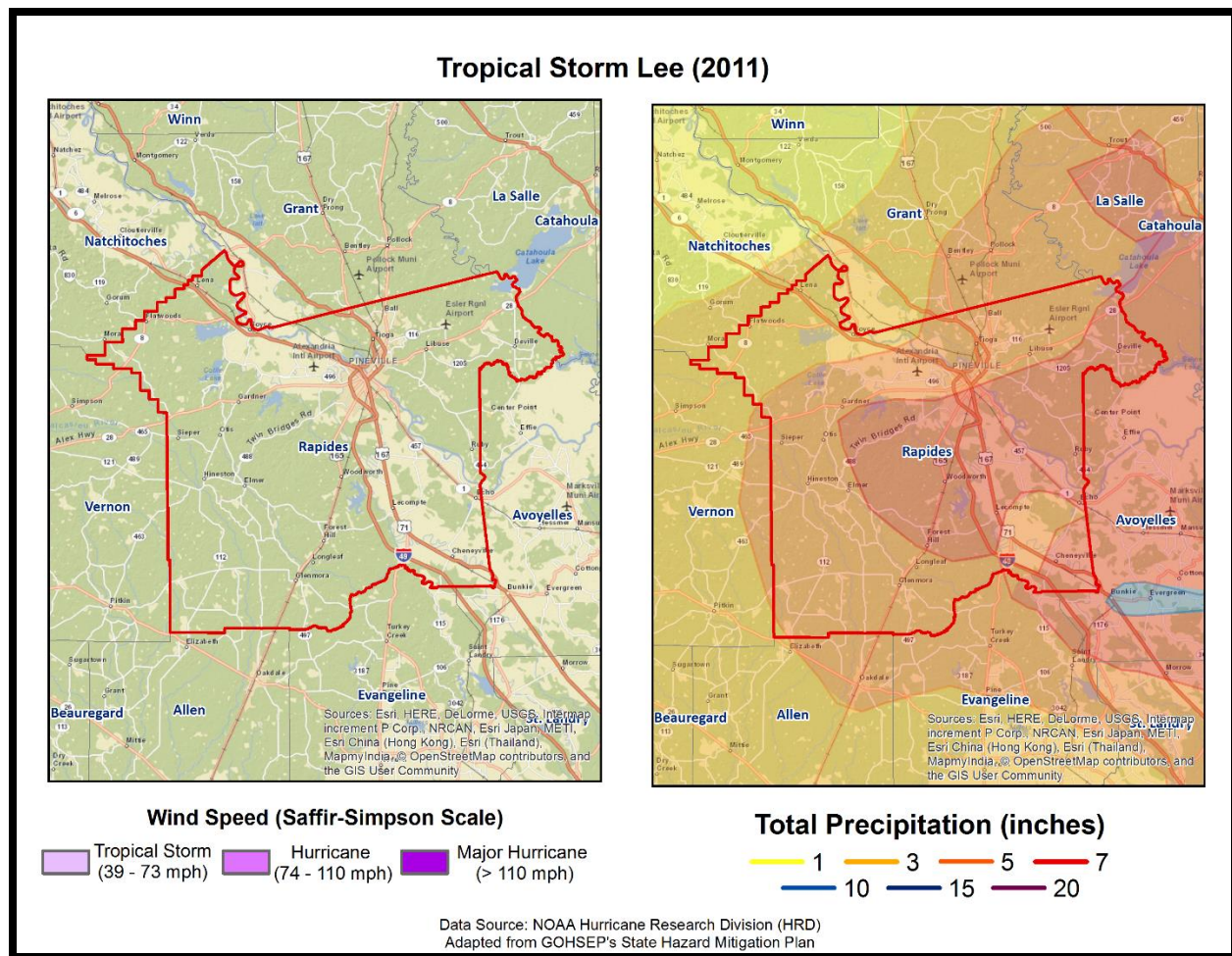


Figure 2-32: Wind Speed and Precipitation Totals in Rapides Parish for Tropical Storm Lee

The main impacts associated with Tropical Storm Lee were associated with storm surge and rainfall. Both of these impacts were related to its slow forward 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 3 to 5 feet above normal, causing lowland flooding. Additional detailed information about Tropical Storm Lee's storm surge is contained in the separate storm surge report. Four day total rainfall ranged between 7 and 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 storm strength winds being recorded, resulting in tree limbs being blown down, and weak trees toppling, causing power outages.

In Rapides Parish, Tropical Storm Lee caused scattered power outages and tree damage. Ten homes in the unincorporated areas of the parish and in the incorporated area of Alexandria sustained damage when trees fell on them.

Tropical Storm Isaac (2012)

Hurricane Isaac made landfall in Southeast sections of Louisiana, however tropical storm conditions were felt well to the west of the center. No injuries or deaths were reported. Scattered power outages and downed trees occurred. As the system lifted north of the area flash flooding occurred in Rapides Parish as rain bands

sat over the same location. The highest surge occurred at Amerada Pass where a storm tide rose to 3.46 feet resulting in a surge of 2.18 feet. Tides were actually pushed out at most coastal locations while the hurricane was making landfall resulting in tides at some locations 1 to 3 feet below normal and boats being stranded for several hours.

Scattered trees and power outages were reported across Rapides Parish. Maximum power outages were around 6,800 customers. A few homes had trees fall on them resulting in roof damage. One home and two duplexes in Pineville had flood waters enter the structures. One home on the south side of Alexandria had ankle deep water due to flooding. The LSU Alexandria campus was closed on Friday, August 31st due to six inches of standing water across the entire campus. Many roads were closed and impassable on Friday, August 31st in Alexandria and Pineville due to the heavy rain and flooding.

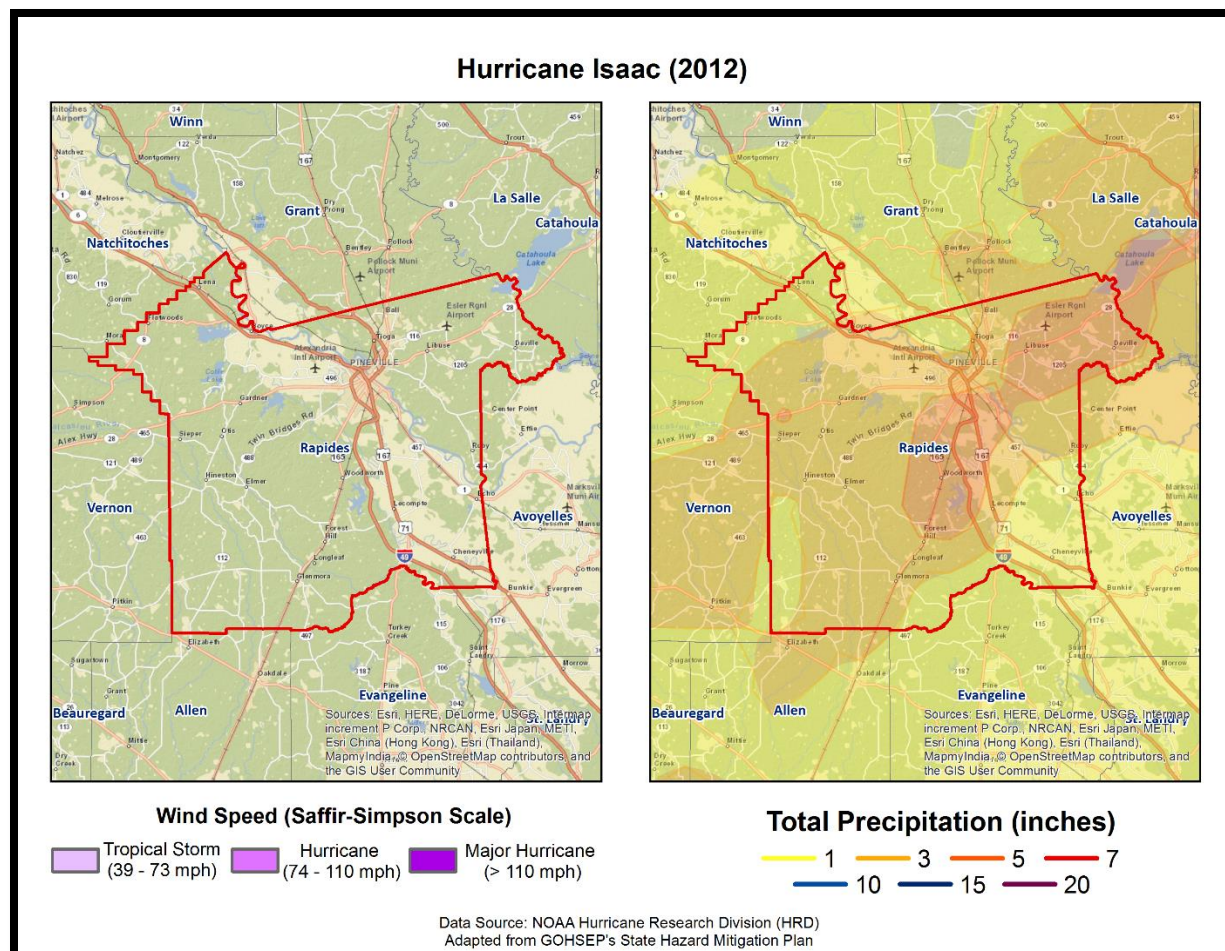


Figure 2-33: Wind Speed and Precipitation Totals in Rapides Parish for Hurricane Isaac

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

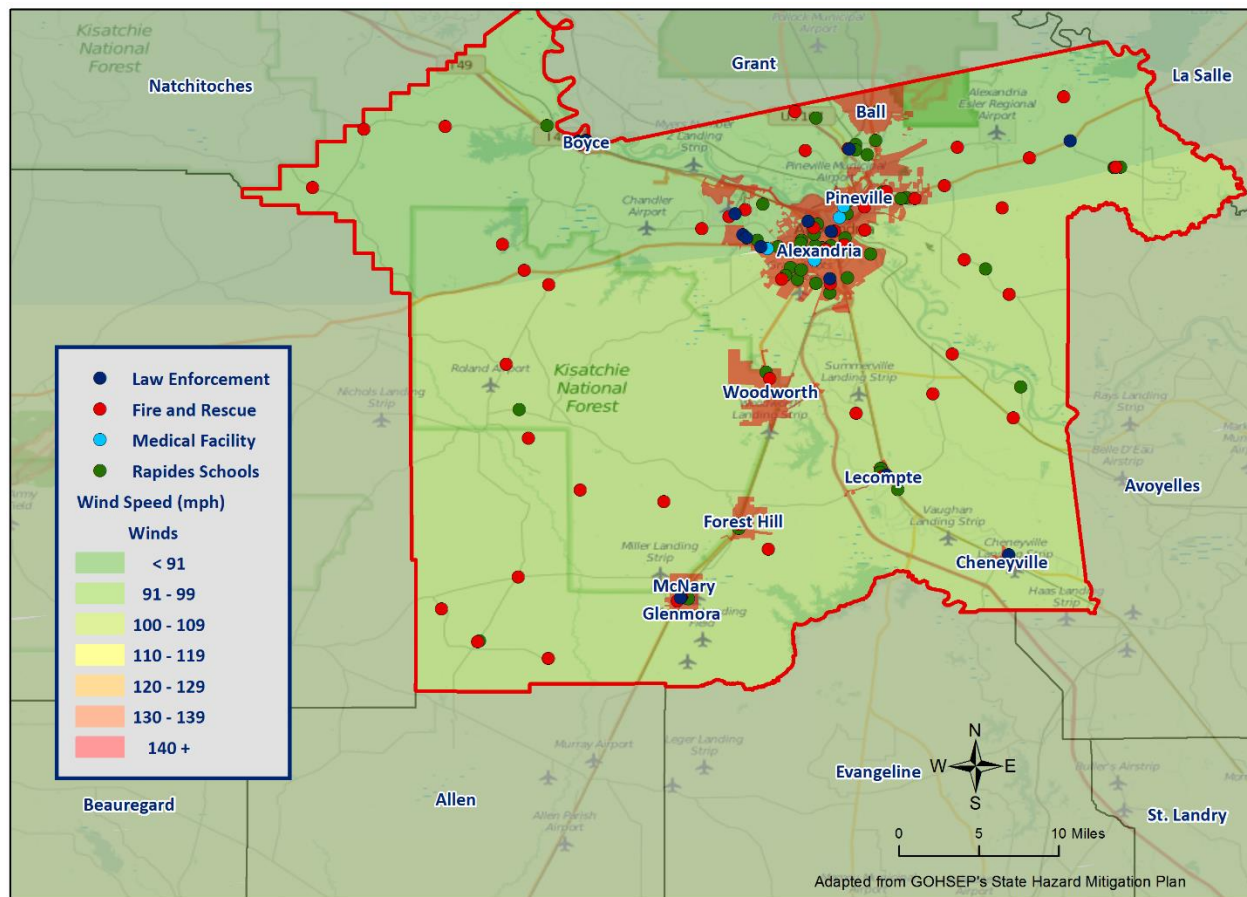


Figure 2-34: Winds Zones for Rapides Parish in Relation to Critical Facilities

Frequency/Probability

Tropical cyclones are large natural hazard events that regularly impact Rapides Parish. The annual chance of occurrence for a tropical cyclone is estimated at 28% for Rapides Parish and its municipalities, with five events occurring within 25 years. The tropical cyclone season for the Atlantic Basin is from June 1st through November 30th, with most of the major hurricanes (Saffir-Simpson Categories 3, 4, & 5) occurring between the months of August and October.

Estimated Potential Losses

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

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

Jurisdiction	Estimated Total Losses from 100-Year Hurricane Event
Rapides Parish (Unincorporated)	\$16,496,031
Alexandria	\$10,670,391
Ball	\$894,360
Boyce	\$224,484
Cheneyville	\$139,744
Forest Hill	\$182,897
Glenmora	\$300,058
Lecompte	\$274,345
McNary	\$47,178
Pineville	\$3,254,354
Woodworth	\$245,055
Total	\$32,728,897

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 2-63: Ratio of Total Losses to Total Estimated Value of Assets for each Jurisdiction in Rapides 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	\$16,496,031	\$10,835,278,000	0.2%
Alexandria	\$10,670,391	\$9,848,403,000	0.1%
Ball	\$894,360	\$488,425,000	0.2%
Boyce	\$224,484	\$127,028,000	0.2%
Cheneyville	\$139,744	\$90,652,000	0.2%
Forest Hill	\$182,897	\$107,096,000	0.2%
Glenmora	\$300,058	\$166,073,000	0.2%
Lecompte	\$274,345	\$171,471,000	0.2%
McNary	\$47,178	\$32,544,000	0.1%
Pineville	\$3,254,354	\$2,450,381,000	0.1%
Woodworth	\$245,055	\$182,040,000	0.1%

Based on the Hazus 2.2 Hurricane Model, estimated total losses range from 0.1% to 0.2% of the total estimated value of all assets for the unincorporated area of Rapides Parish and the incorporated areas of Alexandria, Ball, Boyce, Cheneyville, Forest Hill, Glenmora, Lecompte, McNary, Pineville, and Woodworth.

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

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

Rapides Parish (Unincorporated)	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	\$542
Commercial	\$261,853
Government	\$8,841
Industrial	\$30,391
Religious / Non-Profit	\$32,754
Residential	\$12,849,398
Schools	\$10,720
Total	\$13,194,500

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

Alexandria	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	\$438
Commercial	\$211,761
Government	\$7,150
Industrial	\$24,577
Religious / Non-Profit	\$26,488
Residential	\$10,391,307
Schools	\$8,669
Total	\$10,670,391

*Table 2-66: Estimated Losses in Ball for a 100-Year Hurricane Event
(Source: Hazus 2.2)*

Ball	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	\$37
Commercial	\$17,749
Government	\$599
Industrial	\$2,060
Religious / Non-Profit	\$2,220
Residential	\$870,968
Schools	\$727
Total	\$894,360

*Table 2-67: Estimated Losses in Boyce for a 100-Year Hurricane Event
(Source: Hazus 2.2)*

Boyce	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	\$9
Commercial	\$4,455
Government	\$150
Industrial	\$517
Religious / Non-Profit	\$557
Residential	\$218,613
Schools	\$182
Total	\$224,484

*Table 2-68: Estimated Losses in Cheneyville for a 100-Year Hurricane Event
(Source: Hazus 2.2)*

Cheneyville	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	\$6
Commercial	\$2,773
Government	\$94
Industrial	\$322
Religious / Non-Profit	\$347
Residential	\$136,089
Schools	\$114
Total	\$139,744

*Table 2-69: Estimated Losses in Forest Hill for a 100-Year Hurricane Event
(Source: Hazus 2.2)*

Forest Hill	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	\$8
Commercial	\$3,630
Government	\$123
Industrial	\$421
Religious / Non-Profit	\$454
Residential	\$178,113
Schools	\$149
Total	\$182,897

*Table 2-70: Estimated Losses in Glenmora for a 100-Year Hurricane Event
(Source: Hazus 2.2)*

Glenmora	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	\$12
Commercial	\$5,955
Government	\$201
Industrial	\$691
Religious / Non-Profit	\$745
Residential	\$292,210
Schools	\$244
Total	\$300,058

*Table 2-71: Estimated Losses in Lecompte for a 100-Year Hurricane Event
(Source: Hazus 2.2)*

Lecompte	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	\$11
Commercial	\$5,445
Government	\$184
Industrial	\$632
Religious / Non-Profit	\$681
Residential	\$267,170
Schools	\$223
Total	\$274,345

*Table 2-72: Estimated Losses in McNary for a 100-Year Hurricane Event
(Source: Hazus 2.2)*

McNary	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	\$2
Commercial	\$936
Government	\$32
Industrial	\$109
Religious / Non-Profit	\$117
Residential	\$45,944
Schools	\$38
Total	\$47,178

*Table 2-73: Estimated Losses in Pineville for a 100-Year Hurricane Event
(Source: Hazus 2.2)*

Pineville	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	\$134
Commercial	\$64,585
Government	\$2,181
Industrial	\$7,496
Religious / Non-Profit	\$8,079
Residential	\$3,169,236
Schools	\$2,644
Total	\$3,254,354

*Table 2-74: Estimated Losses in Woodworth for a 100-Year Hurricane Event
(Source: Hazus 2.2)*

Woodworth	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	\$10
Commercial	\$4,863
Government	\$164
Industrial	\$564
Religious / Non-Profit	\$608
Residential	\$238,645
Schools	\$199
Total	\$245,055

Threat to People

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

*Table 2-75: Number of People Susceptible to a 100-Year Hurricane Event in Rapides Parish
(Source: Hazus 2.2)*

Number of People Exposed to Hurricane Hazards			
Location	# in Community	# in Hazard Area	% in Hazard Area
Parish (Unincorporated)	73,778	73,778	100%
Alexandria	47,723	47,723	100%
Ball	4,000	4,000	100%
Boyce	1,004	1,004	100%
Cheneyville	625	625	100%
Forest Hill	818	818	100%
Glenmora	1,342	1,342	100%
Lecompte	1,227	1,227	100%
McNary	211	211	100%
Pineville	14,555	14,555	100%
Woodworth	1,096	1,096	100%
Total	131,613	131,613	100%

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 2-76: Vulnerable Populations in Unincorporated Rapides Parish for a 100-Year Hurricane Event
(Source: Hazus 2.2)*

Rapides Parish (Unincorporated)		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	73,778	100.0%
Persons Under 5 Years	5,135	7.0%
Persons Under 18 Years	19,064	25.8%
Persons 65 Years and Over	10,100	13.7%
White	46,738	63.3%
Minority	27,040	36.7%

*Table 2-77: Vulnerable Populations in Alexandria for a 100-Year Hurricane Event
(Source: Hazus 2.2)*

Alexandria		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	47,723	100.0%
Persons Under 5 Years	3,450	7.2%
Persons Under 18 Years	12,690	26.6%
Persons 65 Years and Over	6,662	14.0%
White	18,287	38.3%
Minority	29,436	61.7%

*Table 2-78: Vulnerable Populations in Ball for a 100-Year Hurricane Event
(Source: Hazus 2.2)*

Ball		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	4,000	100.0%
Persons Under 5 Years	271	6.8%
Persons Under 18 Years	1,002	25.1%
Persons 65 Years and Over	503	12.6%
White	3,586	89.7%
Minority	414	10.3%

*Table 2-79: Vulnerable Populations in Boyce for a 100-Year Hurricane Event
(Source: Hazus 2.2)*

Boyce		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	1,004	100.0%
Persons Under 5 Years	80	8.0%
Persons Under 18 Years	269	26.8%
Persons 65 Years and Over	147	14.6%
White	257	25.6%
Minority	747	74.4%

*Table 2-80: Vulnerable Populations in Cheneyville for a 100-Year Hurricane Event
(Source: Hazus 2.2)*

Cheneyville		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	625	100.0%
Persons Under 5 Years	32	5.1%
Persons Under 18 Years	126	20.2%
Persons 65 Years and Over	124	19.8%
White	167	26.7%
Minority	458	73.3%

*Table 2-81: Vulnerable Populations in Forest Hill for a 100-Year Hurricane Event
(Source: Hazus 2.2)*

Forest Hill		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	818	100.0%
Persons Under 5 Years	78	9.5%
Persons Under 18 Years	267	32.7%
Persons 65 Years and Over	70	8.6%
White	507	62.0%
Minority	311	38.0%

*Table 2-82: Vulnerable Populations in Glenmora for a 100-Year Hurricane Event
(Source: Hazus 2.2)*

Glenmora		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	1,342	100.0%
Persons Under 5 Years	96	7.2%
Persons Under 18 Years	331	24.7%
Persons 65 Years and Over	229	17.1%
White	860	64.1%
Minority	482	35.9%

*Table 2-83: Vulnerable Populations in Lecompte for a 100-Year Hurricane Event
(Source: Hazus 2.2)*

Lecompte		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	1,227	100.0%
Persons Under 5 Years	78	6.4%
Persons Under 18 Years	370	30.2%
Persons 65 Years and Over	163	13.3%
White	374	30.5%
Minority	853	69.5%

*Table 2-84: Vulnerable Populations in McNary for a 100-Year Hurricane Event
(Source: Hazus 2.2)*

McNary		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	211	100.0%
Persons Under 5 Years	7	3.3%
Persons Under 18 Years	33	15.6%
Persons 65 Years and Over	39	18.5%
White	164	77.7%
Minority	47	22.3%

*Table 2-85: Vulnerable Populations in Pineville for a 100-Year Hurricane Event
(Source: Hazus 2.2)*

Pineville		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	14,555	100.0%
Persons Under 5 Years	984	6.8%
Persons Under 18 Years	3,335	22.9%
Persons 65 Years and Over	1,892	13.0%
White	9,404	64.6%
Minority	5,151	35.4%

*Table 2-86: Vulnerable Populations in Woodworth for a 100-Year Hurricane Event
(Source: Hazus 2.2)*

Woodworth		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	1,096	100.0%
Persons Under 5 Years	65	5.9%
Persons Under 18 Years	250	22.8%
Persons 65 Years and Over	133	12.1%
White	986	90.0%
Minority	110	10.0%

Vulnerability

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

Wildfires

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

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

According to the State of Louisiana Forestry Division, most forest fires in Louisiana are caused by intentional acts (arson) or carelessness and negligence committed by people, exacerbated by human confrontation with nature. The wildland–urban interface is the area in which development meets wildland vegetation, where both vegetation and the built environment provide fuel for fires. As development near wildland settings continues, more people and property are exposed to wildfire danger. [Figure 2-35](#) displays the areas of wildland-urban interaction in Rapides Parish.

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

Table 2-87: Southern Group of State Foresters Wildfire Risk Assessment Fire Intensity Scale
(Source: Southern Wildfire Assessment Portal)

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

Location

Wildfires impact areas that are populated with forests and grasslands. The following figure displays the areas of wildland-urban interface and intermix in Rapides Parish and its jurisdictions.

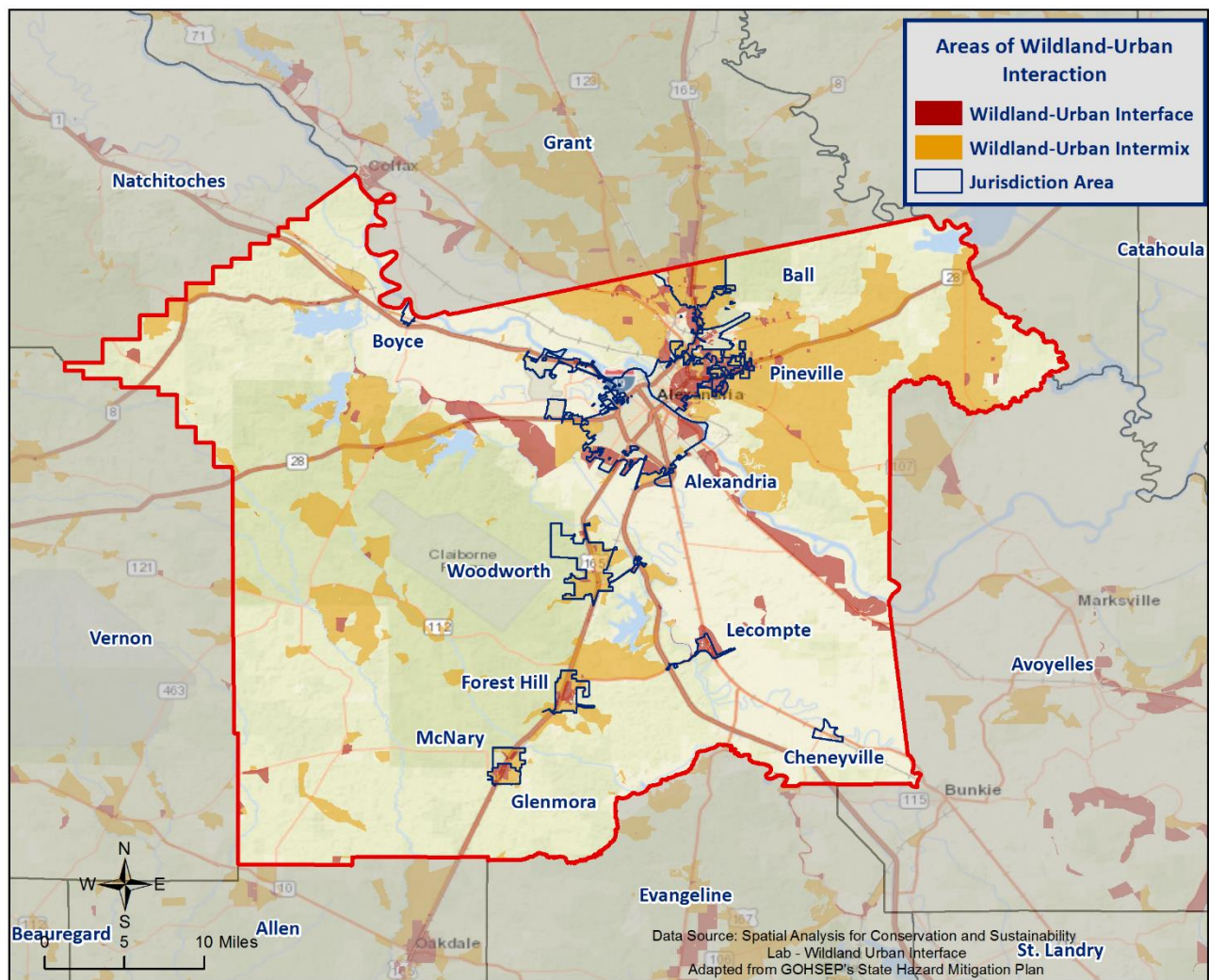


Figure 2-35: Wildland-Urban Interaction in Rapides Parish

Previous Occurrences/Extents

There have been no reported wildfire events that have occurred within the boundaries of Rapides Parish between the years of 1989 and 2014.

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

*Table 2-88: Potential Wildfire Intensity Levels for Rapides Parish
(Source: Southern Wildfire Assessment Portal)*

Potential Wildfire Intensity	
Rapides Parish (Unincorporated)	Highest Intensity Level 5
Alexandria	Moderate Intensity Level 3
Ball	Moderate Intensity Level 3
Boyce	Low to Moderate Intensity Level 2.5
Cheneyville	Lowest Intensity Level 1
Forest Hill	Low Intensity Level 2
Glenmora	Low Intensity Level 2
Lecompte	Low Intensity Level 2
McNary	Moderate Intensity Level 3
Pineville	Moderate Intensity Level 3
Woodworth	Moderate Intensity Level 3

Frequency/Probability

With no recorded events in 25 years, wildfire events within the boundaries of Rapides Parish have an annual chance of occurrence calculated at less than 1% based on the SHEL DUS dataset.

Estimated Potential Losses

There have been no wildfire events that have caused property damage, crop damage, injuries, or fatalities in Rapides Parish since 1989. In assessing the overall risk to population, the most vulnerable population throughout the parish consists of those residing in areas of wildland-urban interaction. [Figure 2-35](#) displays the areas of wildland-urban interaction in Rapides Parish.

Using Hazus 2.2, along with wildland-urban interaction areas, the table on the following page presents an analysis of total building exposure that is located within the wildland-urban interaction areas.

*Table 2-89: Total Building Exposure by Wildland-Urban Interaction Areas
(Source: Hazus 2.2)*

Jurisdiction	Estimated Total Building Exposure
Rapides Parish (Unincorporated)	\$8,859,304,000
Alexandria	\$2,116,281,000
Ball	\$488,315,000
Boyce	\$1,360,000
Cheneyville	\$0
Forest Hill	\$125,377,000
Glenmora	\$166,073,000
Lecompte	\$155,296,000
McNary	\$32,544,000
Pineville	\$2,119,505,000
Woodworth	\$174,648,000
Total	\$14,238,703,000

Hazus 2.2 also provides a breakdown by jurisdiction for seven primary sectors (Hazus occupancy) throughout the parish. Utilizing this information with the wildland-urban interaction areas allows for identifying the total exposure by jurisdiction. The total exposure for each jurisdiction by sector is listed in the following tables:

*Table 2-90: Estimated Exposure for Unincorporated Rapides Parish by Sector
(Source: Hazus 2.2)*

Rapides Parish (Unincorporated)	Estimated Total Building Exposure by Sector
Agricultural	\$65,322,000
Commercial	\$964,196,000
Government	\$42,977,000
Industrial	\$250,290,000
Religious / Non-Profit	\$244,142,000
Residential	\$7,210,922,000
Schools	\$81,455,000
Total	\$8,859,304,000

Table 2-91: Estimated Exposure for Alexandria by Sector
(Source: Hazus 2.2)

Alexandria	Estimated Total Building Exposure by Sector
Agricultural	\$2,276,000
Commercial	\$194,049,000
Government	\$10,801,000
Industrial	\$80,881,000
Religious / Non-Profit	\$35,880,000
Residential	\$1,770,874,000
Schools	\$21,520,000
Total	\$2,116,281,000

Table 2-92: Estimated Exposure for Ball by Sector
(Source: Hazus 2.2)

Ball	Estimated Total Building Exposure by Sector
Agricultural	\$1,012,000
Commercial	\$66,163,000
Government	\$168,000
Industrial	\$10,970,000
Religious / Non-Profit	\$14,944,000
Residential	\$387,332,000
Schools	\$7,726,000
Total	\$488,315,000

Table 2-93: Estimated Exposure for Boyce by Sector
(Source: Hazus 2.2)

Boyce	Estimated Total Building Exposure by Sector
Agricultural	\$0
Commercial	\$0
Government	\$0
Industrial	\$0
Religious / Non-Profit	\$0
Residential	\$1,360,000
Schools	\$0
Total	\$1,360,000

Table 2-94: Estimated Exposure for Forest Hill by Sector
(Source: Hazus 2.2)

Forest Hill	Estimated Total Building Exposure by Sector
Agricultural	\$2,128,000
Commercial	\$14,932,000
Government	\$2,212,000
Industrial	\$0
Religious / Non-Profit	\$3,070,000
Residential	\$96,143,000
Schools	\$6,892,000
Total	\$125,377,000

Table 2-95: Estimated Exposure for Glenmora by Sector
(Source: Hazus 2.2)

Glenmora	Estimated Total Building Exposure by Sector
Agricultural	\$618,000
Commercial	\$8,348,000
Government	\$1,576,000
Industrial	\$348,000
Religious / Non-Profit	\$13,410,000
Residential	\$132,725,000
Schools	\$9,048,000
Total	\$166,073,000

Table 2-96: Estimated Exposure for Lecompte by Sector
(Source: Hazus 2.2)

Lecompte	Estimated Total Building Exposure by Sector
Agricultural	\$2,060,000
Commercial	\$22,909,000
Government	\$978,000
Industrial	\$1,173,000
Religious / Non-Profit	\$12,616,000
Residential	\$112,106,000
Schools	\$3,454,000
Total	\$155,296,000

Table 2-97: Estimated Exposure for McNary by Sector
(Source: Hazus 2.2)

McNary	Estimated Total Building Exposure by Sector
Agricultural	\$2,872,000
Commercial	\$9,648,000
Government	\$0
Industrial	\$238,000
Religious / Non-Profit	\$0
Residential	\$18,346,000
Schools	\$1,440,000
Total	\$32,544,000

Table 2-98: Estimated Exposure for Pineville by Sector
(Source: Hazus 2.2)

Pineville	Estimated Total Building Exposure by Sector
Agricultural	\$6,778,000
Commercial	\$354,553,000
Government	\$14,029,000
Industrial	\$51,393,000
Religious / Non-Profit	\$59,072,000
Residential	\$1,590,563,000
Schools	\$43,117,000
Total	\$2,119,505,000

Table 2-99: Estimated Exposure for Woodworth by Sector
(Source: Hazus 2.2)

Woodworth	Estimated Total Building Exposure by Sector
Agricultural	\$818,000
Commercial	\$16,116,000
Government	\$1,224,000
Industrial	\$5,011,000
Religious / Non-Profit	\$5,918,000
Residential	\$145,561,000
Schools	\$0
Total	\$174,648,000

Threat to People

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

*Table 2-100: Populations Located within a Wildland-Urban Interaction Area
(Source: 2010 U.S. Census Data)*

Number of People Located in Wildland-Urban Interaction Areas.			
Location	# in Community	# in Area	% in Area
Rapides Parish (Unincorporated)	73,778	35,652	48.3%
Alexandria	47,723	10,567	22.1%
Ball	4,000	3,664	91.6%
Boyce	1,004	621	61.9%
Cheneyville	625	0	0.0%
Forest Hill	818	809	98.9%
Glenmora	1,342	1,342	100.0%
Lecompte	1,227	1,059	86.3%
McNary	211	196	92.9%
Pineville	14,555	10,529	72.3%
Woodworth	1,096	977	89.1%
Total	131,613	65,416	49.7%

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

*Table 2-101: Population in Unincorporated Rapides Parish Located within a Wildland-Urban Interaction Area
(Source: 2010 U.S. Census Data)*

Rapides Parish (Unincorporated)		
Category	Total Numbers	Percentage of People in Wildland-Urban Interaction Area
Number in Hazard Area	35,652	48.3%
Persons Under 5 Years	2,481	7.0%
Persons Under 18 Years	9,212	25.8%
Persons 65 Years and Over	4,881	13.7%
White	22,586	63.3%
Minority	13,066	36.7%

*Table 2-102: Population in Alexandria Located within a Wildland-Urban Interaction Area
(Source: 2010 U.S. Census Data)*

Alexandria		
Category	Total Numbers	Percentage of People in Wildland-Urban Interaction Area
Number in Hazard Area	10,567	22.1%
Persons Under 5 Years	764	7.2%
Persons Under 18 Years	2,810	26.6%
Persons 65 Years and Over	1,475	14.0%
White	4,049	38.3%
Minority	6,518	61.7%

*Table 2-103: Population in Ball Located within a Wildland-Urban Interaction Area
(Source: 2010 U.S. Census Data)*

Ball		
Category	Total Numbers	Percentage of People in Wildland-Urban Interaction Area
Number in Hazard Area	3,664	91.6%
Persons Under 5 Years	248	6.8%
Persons Under 18 Years	918	25.1%
Persons 65 Years and Over	461	12.6%
White	3,285	89.7%
Minority	379	10.3%

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

Boyce		
Category	Total Numbers	Percentage of People in Wildland-Urban Interaction Area
Number in Hazard Area	621	61.9%
Persons Under 5 Years	49	8.0%
Persons Under 18 Years	166	26.8%
Persons 65 Years and Over	91	14.6%
White	159	25.6%
Minority	462	74.4%

*Table 2-105: Population in Forest Hill Located within a Wildland-Urban Interaction Area
(Source: 2010 U.S. Census Data)*

Forest Hill		
Category	Total Numbers	Percentage of People in Wildland-Urban Interaction Area
Number in Hazard Area	809	98.9%
Persons Under 5 Years	77	9.5%
Persons Under 18 Years	264	32.7%
Persons 65 Years and Over	69	8.6%
White	501	62.0%
Minority	308	38.0%

*Table 2-106: Population in Glenmora Located within a Wildland-Urban Interaction Area
(Source: 2010 U.S. Census Data)*

Glenmora		
Category	Total Numbers	Percentage of People in Wildland-Urban Interaction Area
Number in Hazard Area	1,342	100.0%
Persons Under 5 Years	96	7.2%
Persons Under 18 Years	331	24.7%
Persons 65 Years and Over	229	17.1%
White	860	64.1%
Minority	482	35.9%

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

Lecompte		
Category	Total Numbers	Percentage of People in Wildland-Urban Interaction Area
Number in Hazard Area	1,059	86.3%
Persons Under 5 Years	67	6.4%
Persons Under 18 Years	319	30.2%
Persons 65 Years and Over	141	13.3%
White	323	30.5%
Minority	736	69.5%

*Table 2-108: Population in McNary Located within a Wildland-Urban Interaction Area
(Source: 2010 U.S. Census Data)*

McNary		
Category	Total Numbers	Percentage of People in Wildland-Urban Interaction Area
Number in Hazard Area	196	92.9%
Persons Under 5 Years	7	3.3%
Persons Under 18 Years	31	15.6%
Persons 65 Years and Over	36	18.5%
White	152	77.7%
Minority	44	22.3%

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

Pineville		
Category	Total Numbers	Percentage of People in Wildland-Urban Interaction Area
Number in Hazard Area	10,529	72.3%
Persons Under 5 Years	91	6.8%
Persons Under 18 Years	307	22.9%
Persons 65 Years and Over	174	13.0%
White	867	64.6%
Minority	475	35.4%

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

Woodworth		
Category	Total Numbers	Percentage of People in Wildland-Urban Interaction Area
Number in Hazard Area	977	89.1%
Persons Under 5 Years	63	5.9%
Persons Under 18 Years	242	22.8%
Persons 65 Years and Over	129	12.1%
White	953	90.0%
Minority	106	10.0%

Vulnerability

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

Winter Storms

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

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

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

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

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

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

Table 2-111: 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 Rapides Parish as all of the adjacent parishes, the entire planning area for Rapides Parish is equally at risk for winter storms.

Previous Occurrences / Extents

According to SHELDS, there have been nine reported winter storm events that have occurred within the boundaries of Rapides Parish between the years of 1989 and 2014. The table on the following page provides a brief synopsis of each event. Based on historic data, Rapides Parish can expect an ice damage index of 2 on the Sperry-Piltz Ice Accumulation Index.

Table 2-112: Previous Occurrences for Winter Storm Events (2009-2014)

Date	Synopsis	Property Damage	Crop Damage
February 3, 2011	Most of central Louisiana along and north of U.S. Highway 190 received over one quarter of an inch of ice accumulation, with some areas seeing up to one half inch of ice. This resulted in widespread power outages to thousands of customers. Dozens of car accidents were reported, with major roadways such as Interstate 49 in Alexandria closed due to ice accumulation.	\$1,035,645	\$0
February 6, 2014	Light snow accumulation occurred throughout the Rapides Parish. Approximately half an inch or less fell across the area. The Louisiana Highway 8 bridge across the Red River in Boyce closed for a short period while ice and snow melted.	\$0	\$0
February 11, 2014	Freezing rain fell across Central Louisiana and Rapides Parish. Approximately 0.2 inches of ice accumulation was reported at Alexandria International Airport. 0.4 inches of ice was reported in the east central sections of the parish with many downed trees reported.	\$15,000	\$0

Based on previous winter storm events, the worst-case scenario for the unincorporated area of Rapides Parish and the incorporated areas of Boyce, Ball, Alexandria, and Pineville is approximately two to three inches of snow accumulation and approximately one quarter inch of ice accumulation. The incorporated areas of Woodworth, Lecompte, Cheneyville, McNary, Forest Hill and Glenmora can expect snow accumulation of one to three inches and ice accumulation from approximately one tenth to one quarter inch.

Frequency/Probability

With nine recorded events in 25 years, winter storm events within the boundaries of Rapides Parish have an annual chance of occurrence calculated at 36% based on the SHELUS dataset.

Table 2-113: Estimated Annual Losses for Winter Weather Events in Rapides Parish

Estimated Annual Potential Losses from Winter Storms for Rapides Parish										
Unincorporated Rapides Parish (56.1% of Population)	Alexandria (36.3% of Population)	Ball (3.0% of Population)	Boyce (0.8% of Population)	Cheneyville (0.5% of Population)	Forest Hill (0.6% of Population)	Glenmora (1.0% of Population)	Lecompte (0.9% of Population)	McNary (0.2% of Population)	Pineville (11.1% of Population)	Woodworth (0.8% of Population)
\$61,070	\$39,503	\$3,311	\$831	\$517	\$677	\$1,111	\$1,016	\$175	\$12,048	\$907

From 1989 - 2014, there have been two injuries and no fatalities as a result of winter weather in Rapides Parish.

Vulnerability

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

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Financial capabilities are the resources that Rapides 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 Rapides Parish and its jurisdictions:

Table 3-3: Rapides Parish Financial Capabilities

Financial												
Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.												
	Rapides Parish	Alexandria	Ball	Boyce	Cheneyville	Forest Hill	Glenmora	Lecompte	McNary	Pineville	Woodworth	
Funding Resource	Yes / No											
Capital Improvements project funding	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes	
Authority to levy taxes for specific purposes	Yes	Yes	No	Yes	No	No	No	No	Yes	No	Yes	
Fees for water, sewer, gas, or electric services	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	
Impact fees for new development	No	No	No	No	No	No	No	No	No	No	Yes	
Stormwater Utility Fee	No	Yes	No	No	No	No	No	No	No	No	Yes	
Community Development Block Grant (CDBG)	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes	No	Yes	
Other Funding Programs	Yes	Yes	Yes	Yes	No	Yes	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.

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

Table 3-4: Rapides Parish Education and Outreach Capabilities

[illegible]

In some cases, the jurisdictions rely on Rapides Parish OHSEP and/or Rapides 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 work sheets.

As reflected in the aforementioned existing regulatory mechanisms, programs, and resources within each jurisdiction, Rapides 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 Rapides 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:

- City of Alexandria
- City of Pineville
- Town of Ball
- Town of Boyce
- Town of Cheneyville
- Town of Glenmora
- Town of Lecompte
- Town of Woodworth
- Village of Forest Hill
- Village of McNary

[Flood Insurance and Community Rating System](#)

Rapides Parish is not a participant in the Community Rating System (CRS). Obtaining the CRS rating for the parish and participating jurisdictions is recognized as an eventual goal by the Hazard Mitigation Steering Committee. Participation in the CRS strengthens local capabilities by lowering flood insurance premiums for jurisdictions that exceed NFIP minimum requirements.

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

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

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

During the last update, 38 Louisiana communities participated. 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 2011¹⁰, 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.

¹⁰ <https://www.fema.gov/national-flood-insurance-program-community-rating-system>

The upcoming changes will drive new achievements in the following six core flood loss reduction areas important to the NFIP: (1) reduce liabilities to the NFIP Fund; (2) improve disaster resiliency and sustainability of communities; (3) integrate a whole community approach to addressing emergency management; (4) promote natural and beneficial functions of floodplains; (5) increase understanding of risk, and; (6) strengthen adoption and enforcement of disaster-resistant building codes.

The 2013 CRS Coordinator's Manual changes will impact each CRS community differently. Some communities will see an increase in the points they receive since points for certain activities have increased (e.g., Activity 420 Open Space Preservation). Other communities will receive fewer points for certain activities (e.g., Activity 320 Map Information Service). It is likely that some communities with marginal CRS class 9 programs will have to identify new CRS credits in order to remain in the CRS.

Typically, CRS communities do not request credit for all the activities they are currently implementing unless it would earn enough credit to advance the community to a higher CRS class. A community that finds itself losing CRS credit with the 2013 manual could likely identify activities deserving credit they had not previously received.

Due to the changes in both activities and CRS points, community CRS coordinators should speak with their ISO/CRS Specialist to understand how and when the 2013 manual will impact their community.

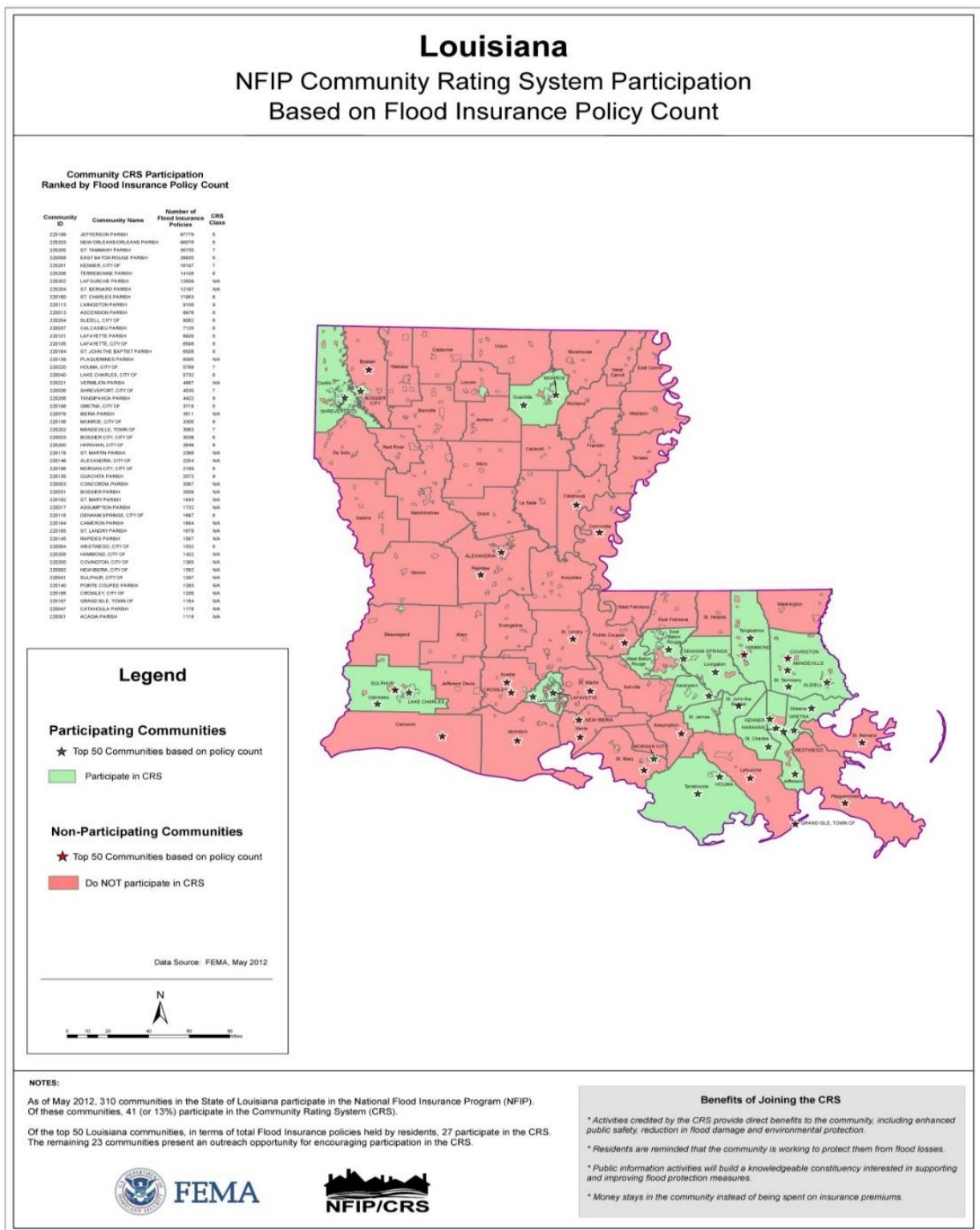


Figure 3-2: Louisiana CRS NFIP Participation
(Source: FEMA¹¹)

¹¹ 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 oftensay, “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

Rapides 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.

Rapides 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 Rapides Parish Hazard Mitigation Plan Steering Committee, under the coordination of the Rapides 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 July 2015 – December 2015.

An online public opinion survey was conducted of Rapides Parish residents between October 2015 and December 2015. The survey was designed to capture public perceptions and opinions regarding natural hazards in Rapides Parish. In addition, the survey collected information regarding the methods and techniques preferred by the respondents for reducing the risks and losses associated with local hazards.

This activity confirms that the goals and action items developed by the Rapides Parish Hazard Mitigation Plan Steering Committee are representative of the outlook of the community at large. The full Rapides Parish survey can be found at the following link:

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

During the risk assessment and public meeting in December, the committee provided a status of the projects from 2011 and discussed 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 Rapides 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, Rapides 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 Rapides 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 nine goals remain valid.

The goals are as follows:

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

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

Rapides Parish 2011 Hazard Mitigation Action Update

Rapides Parish - Action Update				
Jurisdiction-Specific Action	Action Description	Funding Source	Responsible Party, Agency, or Department	Status
R1: Rapides Parish Courthouse Complex- Wind Retrofit	The Rapides Parish Courthouse Complex will be retrofitted with new impact resistant windows and doors to provide protection from high winds.	HMGP	RPPJ, RAPC	Complete
R2: Huffman Creek Outfall	A canal outlet will be constructed to relieve excess water trapped in a surge area.	HMGP	City of Pineville	Carried over
R3: Pineville Sewer Pump Station Mitigation	Two sewer pumps stations will be modified to raise the slab, wet well, valve vault, and electrical controls approximately two feet to protect to the 500 year storm elevation.	HMGP	City of Pineville	Carried over
R4: Pineville Sewer Manhole Flood Mitigation	Improvements will be made to 72 manholes that are prone to stormwater infiltration/inflow during flood events.	HMGP	City of Pineville	Carried over
R5: Shirley Park Pump Station Dry Flood proofing	The Shirley Park Pump Station will be modified for dry-flood proofing. It will be rehabilitated with a flood control wall around the entrance and the exterior walls will be dry-flood proofed to keep flood waters out of the Pump Station.	HMGP	Wastewater Dept - City of Alexandria	Completed
R6: McAdams Ditch Stormwater Pump Station Flood Mitigation	McAdams stormwater pump station will be modified for flood protection. The pump station requires modification of the Motor Control Center and Transformer to raise them above flood levels to protect critical components against rising water.	HMGP	Wastewater Dept. City of Alexandria	Ongoing
R7: Ball Sewer Pump Station Flood Mitigation	Two Sewer Pump Stations will be modified to raise the slab, wet well, and electrical controls above the BFE in accordance with NFIP requirements and to be protected from the 100-year recurrence interval flood.	HMGP	Town of Ball	Deleted

Rapides Parish - Action Update				
Jurisdiction-Specific Action	Action Description	Funding Source	Responsible Party, Agency, or Department	Status
R8: Ball Sewer Manhole Flood Mitigation	Improvements will be made to approximately 25 manholes that are prone to storm water infiltration/inflow during flood events.	HMGP	Town of Ball	Deleted
R9: Cheneyville Pump Station Flood Mitigation	The Bayou Road Pump Station will be modified for flood protection by raising the concrete slab, wet well, and electric controls three feet, including related grading, pavement, and utility modifications.	HMGP	Town of Cheneyville	Carried Over
R10: Penny Acres Subdivision Acquisition	Fourteen residential structures (including ten repetitive loss structures) and thirteen vacant lots will be acquired by Rapides Parish. Structures will be demolished and sites cleaned.	HMGP	RPPJ, City of Alexandria	Ongoing/ Carried Over
R11: Greenway Subdivision Flood Control and Drainage Improvements	Approximately 150 structures will be protected by a floodwall constructed to the 500-year recurrence interval flood elevation. A pump station with retention pond will be constructed to pump storm water out of the neighborhood into existing ditches. The existing subsurface gravity storm drainage in Greenway Subdivision will be replaced and routed to the retention pond and pump station.	HMGP	RPPJ, RAPC	Ongoing/ Carried Over

Unincorporated Rapides New Mitigation Actions

Rapides Unincorporated - New Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
R1: Public 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.	HMGP and Parish funding	1-5 years	RPPJ, RAPC	Thunderstorms (High Wind, Hail) Tropical Cyclone, Tornado	1,2,4	New
R2: Drainage Projects	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.	HMGP and Parish funding	1-5 years	RPPJ, RAPC	Flooding, Thunderstorms (High Wind), Tropical Cyclone	1,2,3,4	New
R3: Mitigation of repetitive loss and severe repetitive loss properties and other hazard prone structures	Elevation or acquisition-demolition of properties. Benefits: Relieves property owners of the continual flooding problems. Saves flood relief and damage repayment for each property.	HMGP	1-5 years	RPPJ, RAPC	Flooding	1,2,3,4	New
R4: Safe Room Projects	Construction of a safe room for first responders located throughout the parish. Other locations will be identified based on funding availability.	HMGP and Parish	1-5 years	RPPJ, RAPC	Tornado, Tropical Cyclone	1,2	New

Rapides Unincorporated - New Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
R5: Mitigation Public Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for flooding, tropical cyclone, tornadoes, drought, thunderstorms (high wind, hail, lightning), winter weather, Extreme heat and wildfire 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.	HMPG and Parish	1-5 years	RPPJ, RAPC	Flooding, Thunderstorms (High Wind, Hail, Lightning), Tropical Cyclones, Tornado, Wildfire, Winter Weather, Drought, Extreme Heat	1,2,3,4	New
R6: Install audible and/or reverse 911 warning systems	Install reverse 911 system as an opportunity to provide emergency information through the phone system to alert the community to impending hazards. Benefits: increases public awareness and ensure timely notifications for the citizens to Rapides Parish in a rapid and accurate manner.	HMPG	1-5 years	RPPJ, RAPC	Flooding, Thunderstorms (High Wind, Hail, Lightning), Tropical Cyclones, Tornado, Wildfire, Winter Weather	1,2	New
R7: Public Shelters for Extreme Weather	Construct or enhance a facility for the Public to utilize during natural hazard events to protect life and safety of citizens. This facility will be utilized to accommodate the public with a shelter before, during and after incidents in which residents need to seek shelter. This facility will be used for public personnel only.	HMPG and Parish	1-5 years	RPPJ, RAPC	Winter Weather, Extreme Heat, Flooding, Tropical Cyclones, Wildfire	1,2	New

Rapides Unincorporated - New Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
R8: Installation of lightning rods and surge protectors at Critical Facilities	Install lightning rods and/or surge protectors; Benefits: will help to ensure Minimal down time or Equipment failures at Critical Facilities	HMPG and Parish	1-5 years	RPPJ, RAPC	Thunderstorms (Lightning)	1,2	New
R9: Generators for continuity of operations and government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA, Local	1-5 years	RPPJ, RAPC	Tornados, Winter Weather, tropical cyclone, thunderstorms (lightning, high wind, hail)	1,2	New
R10: 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, Local	1-5 years	RPPJ, RAPC	Tropical Cyclone, thunderstorms (lightning, high wind, hail), tornados, Drought	1,2	New

City of Alexandria - New Mitigation Actions

City of Alexandria - New Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
A1: Public 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.	HMGP and Parish funding	1-5 years	City of Alexandria	Thunderstorms (High Wind, Hail) Tropical Cyclone, Tornado	1,2,4	New
A2: Drainage Projects	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.	HMGP and Parish funding	1-5 years	City of Alexandria	Flooding, Thunderstorms (High Wind), Tropical Cyclone	1,2,3,4	New
A3: Mitigation of repetitive loss and severe repetitive loss properties and other hazard prone structures	Elevation or acquisition-demolition of properties. Benefits: Relieves property owners of the continual flooding problems. Saves flood relief and damage repayment for each property.	HMGP	1-5 years	City of Alexandria	Flooding	1,2,3,4	New
A4: Safe Room Projects	Construction of a safe room for first responders located in Alexandria. Other locations will be identified based on funding availability.	HMGP and Parish	1-5 years	City of Alexandria	Tornado, Tropical Cyclone	1,2	New

City of Alexandria - New Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
A5: Mitigation Public Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for flooding, tropical cyclone, tornadoes, drought, thunderstorms (high wind, hail, lightning), winter weather, Extreme heat and wildfire 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.	HMPG and Parish	1-5 years	City of Alexandria	Flooding, Thunderstorms (High Wind, Hail, Lightning), Tropical Cyclones, Tornado, Wildfire, Winter Weather, Drought, Extreme Heat	1,2,3,4	New
A6: Install audible and/or reverse 911 warning systems	Install reverse 911 system as an opportunity to provide emergency information through the phone system to alert the community to impending hazards. Benefits: increases public awareness and ensure timely notifications for the citizens to Rapides Parish in a rapid and accurate manner.	HMPG	1-5 years	City of Alexandria	Flooding, Thunderstorms (High Wind, Hail, Lightning), Tropical Cyclones, Tornado, Wildfire, Winter Weather	1,2	New
A7: Shelters for Extreme Temperatures	Construct or enhance a facility for the Public to utilize during natural hazard events to protect life and safety of citizens.	HMPG and Parish	1-5 years	City of Alexandria	Winter Weather, Extreme Heat	1,2	New
A8: Installation of lightning rods and surge protectors at	install lightning rods and/or surge protectors; Benefits: will help to ensure Minimal down time or	HMPG and Parish	1-5 years	City of Alexandria	Thunderstorms (Lightning)	1,2	New

City of Alexandria - New Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
Critical Facilities	Equipment failures at Critical Facilities						
A9: Generators for continuity of operations and government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA, Local	1-5 years	City of Alexandria	Tornados, Winter Weather, tropical cyclone, thunderstorms (lightning, high wind, hail)	1,2	New
A10: 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, Local	1-5 years	City of Alexandria	Tropical Cyclone, thunderstorms (lightning, high wind, hail), tornados, Drought	1,2	New

Town of Ball – New Mitigation Actions

Town of Ball - New Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
B1: Public 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.	HMGP and Parish funding	1-5 years	Town of Ball	Thunderstorms (High Wind, Hail) Tropical Cyclone, Tornado	1,2,4	New
B2: Drainage Projects	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.	HMGP and Parish funding	1-5 years	Town of Ball	Flooding, Thunderstorms (High Wind), Tropical Cyclone	1,2,3,4	New
B3: Residential elevations and acquisitions for severe repetitive loss and repetitive properties	Elevation or acquisition-demolition of properties. Benefits: Relieves property owners of the continual flooding problems. Saves flood relief and damage repayment for each property.	HMGP	1-5 years	Town of Ball	Flooding	1,2,3,4	New
B4: Safe Room Projects	Construction of a safe room for first responders located in Ball. Other locations will be identified based on funding availability.	HMGP and Parish	1-5 years	Town of Ball	Tornado, Tropical Cyclone	1,2	New

Town of Ball - New Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
B5: Mitigation Public Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for flooding, tropical cyclone, tornadoes, drought, thunderstorms (high wind, hail, lightning), winter weather, Extreme heat and wildfire 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.	HMPG and Parish	1-5 years	Town of Ball	Flooding, Thunderstorms (High Wind, Hail, Lightning), Tropical Cyclones, Tornado, Wildfire, Winter Weather, Drought, Extreme Heat	1,2,3,4	New
B6: Install audible and/or reverse 911 warning systems	Install reverse 911 system as an opportunity to provide emergency information through the phone system to alert the community to impending hazards. Benefits: increases public awareness and ensure timely notifications for the citizens to Rapides Parish in a rapid and accurate manner.	HMPG	1-5 years	Town of Ball	Flooding, Thunderstorms (High Wind, Hail, Lightning), Tropical Cyclones, Tornado, Wildfire, Winter Weather	1,2	New
B7: Shelters for Extreme Temperatures	Construct or enhance a facility for the Public to utilize during natural hazard events to protect life and safety of citizens.	HMPG and Parish	1-5 years	Town of Ball	Winter Weather, Extreme Heat	1,2	New
B8: Installation of lightning rods and surge protectors at	install lightning rods and/or surge protectors; Benefits: will help to ensure Minimal down time or	HMPG and Parish	1-5 years	Town of Ball	Thunderstorms (Lightning)	1,2	New

Town of Ball - New Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
Critical Facilities	Equipment failures at Critical Facilities						
B9: Generators for continuity of operations and government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA, Local	1-5 years	Town of Ball	Tornados, Winter Weather, tropical cyclone, thunderstorms (lightning, high wind, hail)	1,2	New
B10: 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, Local	1-5 years	Town of Ball	Tropical Cyclone, thunderstorms (lightning, high wind, hail), tornados, Drought	1,2	New

Town of Boyce – New Mitigation Actions

Town of Boyce - New Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
B1: Public 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.	HMGP and Parish funding	1-5 years	Town of Boyce	Thunderstorms (High Wind, Hail) Tropical Cyclone, Tornado	1,2,4	New
B2: Drainage Projects	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.	HMGP and Parish funding	1-5 years	Town of Boyce	Flooding, Thunderstorms (High Wind), Tropical Cyclone	1,2,3,4	New
B3: Residential elevations and acquisitions for severe repetitive loss and repetitive properties	Elevation or acquisition-demolition of properties. Benefits: Relieves property owners of the continual flooding problems. Saves flood relief and damage repayment for each property.	HMGP	1-5 years	Town of Boyce	Flooding	1,2,3,4	New
B4: Safe Room Projects	Construction of a safe room for first responders located in Boyce. Other locations will be identified based on funding availability.	HMGP and Parish	1-5 years	Town of Boyce	Tornado, Tropical Cyclone	1,2	New

Town of Boyce - New Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
B5: Mitigation Public Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for flooding, tropical cyclone, tornadoes, drought, thunderstorms (high wind, hail, lightning), winter weather, Extreme heat and wildfire 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.	HMPG and Parish	1-5 years	Town of Boyce	Flooding, Thunderstorms (High Wind, Hail, Lightning), Tropical Cyclones, Tornado, Wildfire, Winter Weather, Drought, Extreme Heat	1,2,3,4	New
B6: Install audible and/or reverse 911 warning systems	Install reverse 911 system as an opportunity to provide emergency information through the phone system to alert the community to impending hazards. Benefits: increases public awareness and ensure timely notifications for the citizens to Rapides Parish in a rapid and accurate manner.	HMPG	1-5 years	Town of Boyce	Flooding, Thunderstorms (High Wind, Hail, Lightning), Tropical Cyclones, Tornado, Wildfire, Winter Weather	1,2	New
B7: Shelters for Extreme Temperatures	Construct or enhance a facility for the Public to utilize during natural hazard events to protect life and safety of citizens.	HMPG and Parish	1-5 years	Town of Boyce	Winter Weather, Extreme Heat	1,2	New
B8: Installation of lightning rods and surge protectors at	install lightning rods and/or surge protectors; Benefits: will help to ensure Minimal down time or	HMPG and Parish	1-5 years	Town of Boyce	Thunderstorms (Lightning)	1,2	New

Town of Boyce - New Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
Critical Facilities	Equipment failures at Critical Facilities						
B9: Generators for continuity of operations and government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA, Local	1-5 years	Town of Boyce	Tornados, Winter Weather, tropical cyclone, thunderstorms (lightning, high wind, hail)	1,2	New
B10: 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, Local	1-5 years	Town of Boyce	Tropical Cyclone, thunderstorms (lightning, high wind, hail), tornados, Drought	1,2	New

Town of Cheneyville – New Actions

Town of Cheneyville - New Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
C1: Public 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.	HMGP and Parish funding	1-5 years	Town of Cheneyville	Thunderstorms (High Wind, Hail) Tropical Cyclone, Tornado	1,2,4	New
C2: Drainage Projects	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.	HMGP and Parish funding	1-5 years	Town of Cheneyville	Flooding, Thunderstorms (High Wind), Tropical Cyclone	1,2,3,4	New
C3: Residential elevations and acquisitions for severe repetitive loss and repetitive properties	Elevation or acquisition-demolition of properties. Benefits: Relieves property owners of the continual flooding problems. Saves flood relief and damage repayment for each property.	HMGP	1-5 years	Town of Cheneyville	Flooding	1,2,3,4	New
C4: Safe Room Projects	Construction of a safe room for first responders located in Cheneyville. Other locations will be identified based on funding availability.	HMGP and Parish	1-5 years	Town of Cheneyville	Tornado, Tropical Cyclone	1,2	New

Town of Cheneyville - New Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
C5: Mitigation Public Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for flooding, tropical cyclone, tornadoes, drought, thunderstorms (high wind, hail, lightning), winter weather, Extreme heat and wildfire 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.	HMPG and Parish	1-5 years	Town of Cheneyville	Flooding, Thunderstorms (High Wind, Hail, Lightning), Tropical Cyclones, Tornado, Wildfire, Winter Weather, Drought, Extreme Heat	1,2,3,4	New
C6: Install audible and/or reverse 911 warning systems	Install reverse 911 system as an opportunity to provide emergency information through the phone system to alert the community to impending hazards. Benefits: increases public awareness and ensure timely notifications for the citizens to Rapides Parish in a rapid and accurate manner.	HMPG	1-5 years	Town of Cheneyville	Flooding, Thunderstorms (High Wind, Hail, Lightning), Tropical Cyclones, Tornado, Wildfire, Winter Weather	1,2	New
C7: Shelters for Extreme Temperatures	Construct or enhance a facility for the Public to utilize during natural hazard events to protect life and safety of citizens.	HMPG and Parish	1-5 years	Town of Cheneyville	Winter Weather, Extreme Heat	1,2	New
C8: Installation of lightning rods and surge protectors at	install lightning rods and/or surge protectors; Benefits: will help to ensure Minimal down time or	HMPG and Parish	1-5 years	Town of Cheneyville	Thunderstorms (Lightning)	1,2	New

Town of Cheneyville - New Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
Critical Facilities	Equipment failures at Critical Facilities						
C9: Generators for continuity of operations and government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA, Local	1-5 years	Town of Cheneyville	Tornados, Winter Weather, tropical cyclone, thunderstorms (lightning, high wind, hail)	1,2	New
C10: 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, Local	1-5 years	Town of Cheneyville	Tropical Cyclone, thunderstorms (lightning, high wind, hail), tornados, Drought	1,2	New

Village of Forest Hill – New Actions

Village of Forest Hill - New Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
F1: Public 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.	HMGP and Parish funding	1-5 years	Village of Forest Hill	Thunderstorms (High Wind, Hail) Tropical Cyclone, Tornado	1,2,4	New
F2: Drainage Projects	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.	HMGP and Parish funding	1-5 years	Village of Forest Hill	Flooding, Thunderstorms (High Wind), Tropical Cyclone	1,2,3,4	New
F3: Residential elevations and acquisitions for severe repetitive loss and repetitive properties	Elevation or acquisition-demolition of properties. Benefits: Relieves property owners of the continual flooding problems. Saves flood relief and damage repayment for each property.	HMGP	1-5 years	Village of Forest Hill	Flooding	1,2,3,4	New
F4: Safe Room Projects	Construction of a safe room for first responders located in Forest Hill. Other locations will be identified based on funding availability.	HMGP and Parish	1-5 years	Village of Forest Hill	Tornado, Tropical Cyclone	1,2	New

Village of Forest Hill - New Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
F5: Mitigation Public Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for flooding, tropical cyclone, tornadoes, drought, thunderstorms (high wind, hail, lightning), winter weather, Extreme heat and wildfire 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.	HMPG and Parish	1-5 years	Village of Forest Hill	Flooding, Thunderstorms (High Wind, Hail, Lightning), Tropical Cyclones, Tornado, Wildfire, Winter Weather, Drought, Extreme Heat	1,2,3,4	New
F6: Install audible and/or reverse 911 warning systems	Install reverse 911 system as an opportunity to provide emergency information through the phone system to alert the community to impending hazards. Benefits: increases public awareness and ensure timely notifications for the citizens to Rapides Parish in a rapid and accurate manner.	HMPG	1-5 years	Village of Forest Hill	Flooding, Thunderstorms (High Wind, Hail, Lightning), Tropical Cyclones, Tornado, Wildfire, Winter Weather	1,2	New
F7: Shelters for Extreme Temperatures	Construct or enhance a facility for the Public to utilize during natural hazard events to protect life and safety of citizens.	HMPG and Parish	1-5 years	Village of Forest Hill	Winter Weather, Extreme Heat	1,2	New
F8: Installation of lightning rods and surge protectors at	install lightning rods and/or surge protectors; Benefits: will help to ensure Minimal down time or	HMPG and Parish	1-5 years	Village of Forest Hill	Thunderstorms (Lightning)	1,2	New

Village of Forest Hill - New Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
Critical Facilities	Equipment failures at Critical Facilities						
F9: Generators for continuity of operations and government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA, Local	1-5 years	Village of Forest Hill	Tornados, Winter Weather, tropical cyclone, thunderstorms (lightning, high wind, hail)	1,2	New
F10: 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, Local	1-5 years	Village of Forest Hill	Tropical Cyclone, thunderstorms (lightning, high wind, hail), tornados, Drought	1,2	New

Town of Glenmora – New Mitigation Actions

Town of Glenmora - New Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
G1: Public 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.	HMGP and Parish funding	1-5 years	Town of Glenmora	Thunderstorms (High Wind, Hail) Tropical Cyclone, Tornado	1,2,4	New
G2: Drainage Projects	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.	HMGP and Parish funding	1-5 years	Town of Glenmora	Flooding, Thunderstorms (High Wind), Tropical Cyclone	1,2,3,4	New
G3: Residential elevations and acquisitions for severe repetitive loss and repetitive properties	Elevation or acquisition-demolition of properties. Benefits: Relieves property owners of the continual flooding problems. Saves flood relief and damage repayment for each property.	HMGP	1-5 years	Town of Glenmora	Flooding	1,2,3,4	New
G4: Safe Room Projects	Construction of a safe room for first responders located in Glenmora. Other locations will be identified based on funding availability.	HMGP and Parish	1-5 years	Town of Glenmora	Tornado, Tropical Cyclone	1,2	New

Town of Glenmora - New Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
G5: Mitigation Public Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for flooding, tropical cyclone, tornadoes, drought, thunderstorms (high wind, hail, lightning), winter weather, Extreme heat and wildfire 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.	HMPG and Parish	1-5 years	Town of Glenmora	Flooding, Thunderstorms (High Wind, Hail, Lightning), Tropical Cyclones, Tornado, Wildfire, Winter Weather, Drought, Extreme Heat	1,2,3,4	New
G6: Install audible and/or reverse 911 warning systems	Install reverse 911 system as an opportunity to provide emergency information through the phone system to alert the community to impending hazards. Benefits: increases public awareness and ensure timely notifications for the citizens to Rapides Parish in a rapid and accurate manner.	HMPG	1-5 years	Town of Glenmora	Flooding, Thunderstorms (High Wind, Hail, Lightning), Tropical Cyclones, Tornado, Wildfire, Winter Weather	1,2	New
G7: Shelters for Extreme Temperatures	Construct or enhance a facility for the Public to utilize during natural hazard events to protect life and safety of citizens.	HMPG and Parish	1-5 years	Town of Glenmora	Winter Weather, Extreme Heat	1,2	New
G8: Installation of lightning rods and surge protectors at	install lightning rods and/or surge protectors; Benefits: will help to ensure Minimal down time or	HMPG and Parish	1-5 years	Town of Glenmora	Thunderstorms (Lightning)	1,2	New

Town of Glenmora - New Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
Critical Facilities	Equipment failures at Critical Facilities						
G9: Generators for continuity of operations and government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA, Local	1-5 years	Town of Glenmora	Tornados, Winter Weather, tropical cyclone, thunderstorms (lightning, high wind, hail)	1,2	New
G10: 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, Local	1-5 years	Town of Glenmora	Tropical Cyclone, thunderstorms (lightning, high wind, hail), tornados, Drought	1,2	New

Town of Lecompte – New Mitigation Actions

Town of Lecompte - New Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
L1: Public 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.	HMGP and Parish funding	1-5 years	Town of Lecompte	Thunderstorms (High Wind, Hail) Tropical Cyclone, Tornado	1,2,4	New
L2: Drainage Projects	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.	HMGP and Parish funding	1-5 years	Town of Lecompte	Flooding, Thunderstorms (High Wind), Tropical Cyclone	1,2,3,4	New
L3: Residential elevations and acquisitions for severe repetitive loss and repetitive properties	Elevation or acquisition-demolition of properties. Benefits: Relieves property owners of the continual flooding problems. Saves flood relief and damage repayment for each property.	HMGP	1-5 years	Town of Lecompte	Flooding	1,2,3,4	New
L4: Safe Room Projects	Construction of a safe room for first responders located in Lecompte. Other locations will be identified based on funding availability.	HMGP and Parish	1-5 years	Town of Lecompte	Tornado, Tropical Cyclone	1,2	New

Town of Lecompte - New Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
L5: Mitigation Public Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for flooding, tropical cyclone, tornadoes, drought, thunderstorms (high wind, hail, lightning), winter weather, Extreme heat and wildfire 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.	HMPG and Parish	1-5 years	Town of Lecompte	Flooding, Thunderstorms (High Wind, Hail, Lightning), Tropical Cyclones, Tornado, Wildfire, Winter Weather, Drought, Extreme Heat	1,2,3,4	New
L6: Install audible and/or reverse 911 warning systems	Install reverse 911 system as an opportunity to provide emergency information through the phone system to alert the community to impending hazards. Benefits: increases public awareness and ensure timely notifications for the citizens to Rapides Parish in a rapid and accurate manner.	HMPG	1-5 years	Town of Lecompte	Flooding, Thunderstorms (High Wind, Hail, Lightning), Tropical Cyclones, Tornado, Wildfire, Winter Weather	1,2	New
L7: Shelters for Extreme Temperatures	Construct or enhance a facility for the Public to utilize during natural hazard events to protect life and safety of citizens.	HMPG and Parish	1-5 years	Town of Lecompte	Winter Weather, Extreme Heat	1,2	New
L8: Installation of lightning rods and surge protectors at	install lightning rods and/or surge protectors; Benefits: will help to ensure Minimal down time or	HMPG and Parish	1-5 years	Town of Lecompte	Thunderstorms (Lightning)	1,2	New

Town of Lecompte - New Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
Critical Facilities	Equipment failures at Critical Facilities						
L9: Generators for continuity of operations and government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA, Local	1-5 years	Town of Lecompte	Tornados, Winter Weather, tropical cyclone, thunderstorms (lightning, high wind, hail)	1,2	New
L10: 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, Local	1-5 years	Town of Lecompte	Tropical Cyclone, thunderstorms (lightning, high wind, hail), tornados, Drought	1,2	New

Village of McNary – New Mitigation Actions

Village of McNary - New Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
M1: Public 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.	HMGP and Parish funding	1-5 years	Village of McNary	Thunderstorms (High Wind, Hail) Tropical Cyclone, Tornado	1,2,4	New
M2: Drainage Projects	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.	HMGP and Parish funding	1-5 years	Village of McNary	Flooding, Thunderstorms (High Wind), Tropical Cyclone	1,2,3,4	New
M3: Residential elevations and acquisitions for severe repetitive loss and repetitive properties	Elevation or acquisition-demolition of properties. Benefits: Relieves property owners of the continual flooding problems. Saves flood relief and damage repayment for each property.	HMGP	1-5 years	Village of McNary	Flooding	1,2,3,4	New
M4: Safe Room Projects	Construction of a safe room for first responders located in McNary. Other locations will be identified based on funding availability.	HMGP and Parish	1-5 years	Village of McNary	Tornado, Tropical Cyclone	1,2	New

Village of McNary - New Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
M5: Mitigation Public Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for flooding, tropical cyclone, tornadoes, drought, thunderstorms (high wind, hail, lightning), winter weather, Extreme heat and wildfire 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.	HMPG and Parish	1-5 years	Village of McNary	Flooding, Thunderstorms (High Wind, Hail, Lightning), Tropical Cyclones, Tornado, Wildfire, Winter Weather, Drought, Extreme Heat	1,2,3,4	New
M6: Install audible and/or reverse 911 warning systems	Install reverse 911 system as an opportunity to provide emergency information through the phone system to alert the community to impending hazards. Benefits: increases public awareness and ensure timely notifications for the citizens to Rapides Parish in a rapid and accurate manner.	HMPG	1-5 years	Village of McNary	Flooding, Thunderstorms (High Wind, Hail, Lightning), Tropical Cyclones, Tornado, Wildfire, Winter Weather	1,2	New
M7: Shelters for Extreme Temperatures	Construct or enhance a facility for the Public to utilize during natural hazard events to protect life and safety of citizens.	HMPG and Parish	1-5 years	Village of McNary	Winter Weather, Extreme Heat	1,2	New
M8: Installation of lightning rods and surge protectors at	install lightning rods and/or surge protectors; Benefits: will help to ensure Minimal down time or	HMPG and Parish	1-5 years	Village of McNary	Thunderstorms (Lightning)	1,2	New

Village of McNary - New Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
Critical Facilities	Equipment failures at Critical Facilities						
M9: Generators for continuity of operations and government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA, Local	1-5 years	Village of McNary	Tornados, Winter Weather, tropical cyclone, thunderstorms (lightning, high wind, hail)	1,2	New
M10: 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, Local	1-5 years	Village of McNary	Tropical Cyclone, thunderstorms (lightning, high wind, hail), tornados, Drought	1,2	New

City of Pineville – New Mitigation Actions

City of Pineville - New Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
P1: Public 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.	HMGP and Parish funding	1-5 years	City of Pineville	Thunderstorms (High Wind, Hail) Tropical Cyclone, Tornado	1,2,4	New
P2: Drainage Projects	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.	HMGP and Parish funding	1-5 years	City of Pineville	Flooding, Thunderstorms (High Wind), Tropical Cyclone	1,2,3,4	New
P3: Residential elevations and acquisitions for severe repetitive loss and repetitive properties	Elevation or acquisition-demolition of properties. Benefits: Relieves property owners of the continual flooding problems. Saves flood relief and damage repayment for each property.	HMGP	1-5 years	City of Pineville	Flooding	1,2,3,4	New
P4: Safe Room Projects	Construction of a safe room for first responders located in Pineville. Other locations will be identified based on funding availability.	HMGP and Parish	1-5 years	City of Pineville	Tornado, Tropical Cyclone	1,2	New

City of Pineville - New Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
P5: Mitigation Public Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for flooding, tropical cyclone, tornadoes, drought, thunderstorms (high wind, hail, lightning), winter weather, Extreme heat and wildfire 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.	HMPG and Parish	1-5 years	City of Pineville	Flooding, Thunderstorms (High Wind, Hail, Lightning), Tropical Cyclones, Tornado, Wildfire, Winter Weather, Drought, Extreme Heat	1,2,3,4	New
P6: Install audible and/or reverse 911 warning systems	Install reverse 911 system as an opportunity to provide emergency information through the phone system to alert the community to impending hazards. Benefits: increases public awareness and ensure timely notifications for the citizens to Rapides Parish in a rapid and accurate manner.	HMPG	1-5 years	City of Pineville	Flooding, Thunderstorms (High Wind, Hail, Lightning), Tropical Cyclones, Tornado, Wildfire, Winter Weather	1,2	New
P7: Shelters for Extreme Temperatures	Construct or enhance a facility for the Public to utilize during natural hazard events to protect life and safety of citizens.	HMPG and Parish	1-5 years	City of Pineville	Winter Weather, Extreme Heat	1,2	New
P8: Installation of lightning rods and surge protectors at	install lightning rods and/or surge protectors; Benefits: will help to ensure Minimal down time or	HMPG and Parish	1-5 years	City of Pineville	Thunderstorms (Lightning)	1,2	New

City of Pineville - New Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
Critical Facilities	Equipment failures at Critical Facilities						
P9: Generators for continuity of operations and government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA, Local	1-5 years	City of Pineville	Tornados, Winter Weather, tropical cyclone, thunderstorms (lightning, high wind, hail)	1,2	New
P10: 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, Local	1-5 years	City of Pineville	Tropical Cyclone, thunderstorms (lightning, high wind, hail), tornados, Drought	1,2	New

Town of Woodworth – New Mitigation Actions

Town of Woodworth - New Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
W1: Public 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.	HMGP and Parish funding	1-5 years	Town of Woodworth	Thunderstorms (High Wind, Hail) Tropical Cyclone, Tornado	1,2,4	New
W2: Drainage Projects	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.	HMGP and Parish funding	1-5 years	Town of Woodworth	Flooding, Thunderstorms (High Wind), Tropical Cyclone	1,2,3,4	New
W3: Residential elevations and acquisitions for severe repetitive loss and repetitive properties	Elevation or acquisition-demolition of properties. Benefits: Relieves property owners of the continual flooding problems. Saves flood relief and damage repayment for each property.	HMGP	1-5 years	Town of Woodworth	Flooding	1,2,3,4	New
W4: Safe Room Projects	Construction of a safe room for first responders located in Woodworth. Other locations will be identified based on funding availability.	HMGP and Parish	1-5 years	Town of Woodworth	Tornado, Tropical Cyclone	1,2	New

Town of Woodworth - New Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
W5: Mitigation Public Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for flooding, tropical cyclone, tornadoes, drought, thunderstorms (high wind, hail, lightning), winter weather, Extreme heat and wildfire 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.	HMPG and Parish	1-5 years	Town of Woodworth	Flooding, Thunderstorms (High Wind, Hail, Lightning), Tropical Cyclones, Tornado, Wildfire, Winter Weather, Drought, Extreme Heat	1,2,3,4	New
W6: Install audible and/or reverse 911 warning systems	Install reverse 911 system as an opportunity to provide emergency information through the phone system to alert the community to impending hazards. Benefits: increases public awareness and ensure timely notifications for the citizens to Rapides Parish in a rapid and accurate manner.	HMPG	1-5 years	Town of Woodworth	Flooding, Thunderstorms (High Wind, Hail, Lightning), Tropical Cyclones, Tornado, Wildfire, Winter Weather	1,2	New
W7: Shelters for Extreme Temperatures	Construct or enhance a facility for the Public to utilize during natural hazard events to protect life and safety of citizens.	HMPG and Parish	1-5 years	Town of Woodworth	Winter Weather, Extreme Heat	1,2	New
W8: Installation of lightning rods and surge	install lightning rods and/or surge protectors; Benefits: will help to ensure	HMPG and Parish	1-5 years	Town of Woodworth	Thunderstorms (Lightning)	1,2	New

Town of Woodworth - New Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
protectors at Critical Facilities	Minimal down time or Equipment failures at Critical Facilities						
W9: Generators for continuity of operations and government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA, Local	1-5 years	Town of Woodworth	Tornados, Winter Weather, tropical cyclone, thunderstorms (lightning, high wind, hail)	1,2	New
W10: 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, Local	1-5 years	Town of Woodworth	Tropical Cyclone, thunderstorms (lightning, high wind, hail), tornados, Drought	1,2	New

Action Prioritization

During the prioritization process, each jurisdiction and the steering committee considered the costs and relative benefits of each new action. Costs can usually be listed in terms of dollars, although at times it involves staff time rather than the purchase of equipment or services that can be readily measured in dollars. In most cases, benefits, such as lives saved or future damage prevented, are hard to measure in dollars, many projects were prioritized with these factors in mind.

In all cases, the jurisdictions concluded that the benefits (in terms of reduced property damage, lives saved, health problems averted and/or economic harm prevented) outweighed the costs for the recommended action items.

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

Rapides 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.

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 Rapides Parish Hazard Mitigation Plan Update

The Rapides Parish Hazard Mitigation Plan Update process began in June 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.

Rapides Parish includes 10 incorporated municipalities and Rapides Unincorporated that participated in the plan update process – Rapides Parish Office of Homeland Security and Emergency Preparedness (OHSEP) invited communities' representatives to meetings through email invitations and calendar invites, 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
6/29/2015	Initial Coordination	Telephone/ Email	No	Discuss with Parish HM coordinator and any Steering Committee members expectations and requirements of the project.
8/11/2015	Kick-Off Meeting	Rapides OHSEP, Alexandria, LA	No	Discuss with the plan steering committee expectations and requirements of the project. Assign plan worksheets to jurisdictions.
12/3/2015	Risk Assessment Overview	Police Jury Meeting Room Alexandria, LA	No	Discuss and review the risk assessment with the steering committee discuss and review expectations for public meeting.
12/3/2015	Public Meeting	Police Jury Meeting Room, Alexandria, 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 Rapides 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 Rapides 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/RapidesOHSEP
2 Week Period	Public Plan Review (Digital)		Yes	Parish Website

Planning

The plan update process consisted of several phases:

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

Coordination

The Rapides Parish OHSEP oversaw the coordination of the 2016 Hazard Mitigation Plan Update Steering Committee during the update process. The Rapides 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 through email 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:

- Rapides Parish Government
- Rapides Office of Homeland Security and Emergency Preparedness
- City of Alexandria
- City of Pineville
- Town of Ball
- Town of Boyce
- Town of Cheneyville
- Town of Glenmora
- Town of Lecompte
- Town of Woodworth
- Village of Forest Hill
- Village of McNary
- Department of Health and Hospitals/Office of Public Health

The Parishes of LaSalle and Franklin Parish were invited by the SDMI 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 6 Coordinator during the process also contributed to neighboring community representation.

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

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

Member/Title	Jurisdiction/Entity	Address	Phone/Email
Sonya Wiley-Gremillion Director	Rapides Parish OHSEP	4216 Ellis St Alexandria, La 71302	318-445-0391 swiley@rapides911.org mailto:dgregmillion@cnpj.net
Angie Branton Admin Assistant	Rapides Parish OHSEP	4216 Ellis St Alexandria, La 71302	318-445-0391 abranton@rapides911.org
Richard Billings Police Jury President	Rapides Parish Police Jury	P.O. Box 1150 Alexandria, La 71301	318-473-6660 lsmith@rppj.com
Dennis Woodward Public Works Director	Rapides Parish Police Jury	8051 Hwy 28W Alexandria, La 71303	318-473-6603 dwoodward@rppj.com
Paul Fuselier Governmental and Community Relations Manager	Acadian Ambulance Service	702 Monroe St Alexandria, La 71301	318-441-2262 pfuselier@acadian.com
Neil Kavanagh Mayor	Town of Ball	P.O. Box 800 Ball, La 71405	318-640-9605 nkavanagh@townofball.com
Wes Anders, Fire Chief	Town of Ball	P.O. Box 800 Ball, La 71405	318-640-9283 wanders@townofball.com
Glenn Aaron Superintendent of Utilities	Town of Boyce	P.O Box 598 Boyce, La 71409	318-793-2175 boyceclerk@gmail.com
Summer Lemoine Town Clerk	Town of Cheneyville	P.O. Box 322	318-279-2155 townofcheneyville@startelco.net
Elizabeth A Jeter Mayor	Village of Forest Hill	P.O. Box 309 Forest Hill, L a 71430	318-748-6300 info@foresthill-la.com
Bryan Laird Public Works	Town of Glenmora	P.O. Box 265 Glenmora, La 71433	318-787-9187 Maintenanceglenmorala@aol.com
Joey Mott Mayor	Town of Glenmora	P.O. Box 265 Glenmora, La 71433	318-748-4882 mayorglenmorala@aol.com
Lonnell Clark Alderman	Town of Lecompte	P.O. Box 649 Lecompte, La 71346	318-776-5488 tolmayor@bellsouth.net
Don Parker Mayor	Village of McNary	P.O. Box 1197	318-748-8264 Parker.dg@pg.com

		Glenmora, La 71433	
Charlie Moore Public Works Director	City of Pineville	P.O. Box 3820 Pineville, La 71360	318-449-5668 cmoore@pineville.net
James E Guffey Fire Chief	Town of Woodworth	P.O. Box 228 Woodworth, La 71485	318-442-8861 woodworthfd@thetow.org
Curtis Fogleman, GIS Manager	City of Alexandria	2021 Industrial Park Rd Alexandria, La 71303	318-441-6037 Curtis.fogleman@cityofalex.com
Richard Williamson	City of Alexandria	2021 Industrial Park Rd Alexandria, La 71303	318-441-6037 Richard.williamson@cityofalex.com
Eric Duck	City of Alexandria	2021 Industrial Park Rd Alexandria, La 71303	318-441-6037 Eric.ducki@cityofalex.com
Melissa Becker Floodplain Manager	Rapides Area Planning Commission	1405 Frank Andrews Blvd Alexandria, La 71303	318-487-5401 mbecker@rapc.info
Carrie Robinette	Rapides Area Planning Commission	1405 Frank Andrews Blvd Alexandria, La 71303	318-487-5401 carrie@rapc.info
Patricia White	Office of Public Health	5604 B Coliseum Blvd Alexandria, La 71303	318-487-5262 pwhite@dhh.la.gov
William Brister Captain	Rapides Parish Sheriff's Office	P.O. Box 1510 Alexandria, La 71301	318-442-9229 cbrister@rpso.la.gov
Mary Tarver RM/Safety Coordinator	Christus Cabrini Hospital	3330 Masonic Dr Alexandria, La 71301	318-448-6796 Mary.tarver@christushealth.org

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 Rapides 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 Rapides 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 (Parish and Jurisdictions)
- Capital Improvements Plan (Parish and Jurisdictions)
- Continuity of Operations Plan (Parish and Jurisdictions)
- State of Louisiana Hazard Mitigation Plan

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 Rapides Parish.

Meeting #1: Coordination Discussion

Date: June 29, 2015

Location: Email

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

Public Initiation: No

Invitees Included: Rapides Parish OHSEP, SDMI Staff

Meeting #2: Hazard Mitigation Plan Update Kick-Off

Date: August 11, 2015**Location:** Alexandria, Louisiana – Rapides Parish OHSEP

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

Public Initiation: No**Invitees Included:**

Member/Title	Jurisdiction/Entity
Sonya Wiley-Gremillion Director	Rapides Parish OHSEP
Angie Branton Admin Assistant	Rapides Parish OHSEP
Richard Billings Police Jury President	Rapides Parish Police Jury
Dennis Woodward Public Works Director	Rapides Parish Police Jury
Paul Fuselier Governmental and Community Relations Manager	Acadian Ambulance Service
Neil Kavanagh Mayor	Town of Ball
Wes Anders Fire Chief	Town of Ball
Glenn Aaron Superintendent of Utilities	Town of Boyce
Summer Lemoine Town Clerk	Town of Cheneyville
Elizabeth A Jeter Mayor	Village of Forest Hill
Bryan Laird Public Works	Town of Glenmora
Joey Mott Mayor	Town of Glenmora
Lonnell Clark Alderman	Town of Lecompte
Don Parker Mayor	Village of McNary
Charlie Moore Public Works Director	City of Pineville
James E Guffey Fire Chief	Town of Woodworth
Curtis Fogleman, GIS Manager	City of Alexandria
Richard Williamson	City of Alexandria
Eric Duck	City of Alexandria
Melissa Becker Floodplain Manager	Rapides Area Planning Commission
Patricia White	Office of Public Health
Carrie Robinette	Rapides Area Planning Commission
William Brister Captain	Rapides Parish Sheriff’s Office
Mary Tarver RM/Safety Coordinator	Christus Cabrini Hospital

Meeting #3: Risk Assessment Overview

Date: December 3, 2015**Location:** Alexandria, LA, Rapides Parish Police Jury Meeting Room**Purpose:** Members of the Hazard Mitigation Plan Update Steering Committee were invited and were presented the results of the most recent risk assessment and an overview of the public meeting presentation during this overview. The assessment was conducted based on hazards identified during previous plans.**Public Initiation:** No**Invitees Included:**

Member/Title	Jurisdiction/Entity
Sonya Wiley-Gremillion Director	Rapides Parish OHSEP
Angie Branton Admin Assistant	Rapides Parish OHSEP
Richard Billings Police Jury President	Rapides Parish Police Jury
Dennis Woodward Public Works Director	Rapides Parish Police Jury
Paul Fuselier Governmental and Community Relations Manager	Acadian Ambulance Service
Neil Kavanagh Mayor	Town of Ball
Wes Anders Fire Chief	Town of Ball
Glenn Aaron Superintendent of Utilities	Town of Boyce
Summer Lemoine Town Clerk	Town of Cheneyville
Elizabeth A Jeter Mayor	Village of Forest Hill
Bryan Laird Public Works	Town of Glenmora
Joey Mott Mayor	Town of Glenmora
Lonnell Clark Alderman	Town of Lecompte
Don Parker Mayor	Village of McNary
Charlie Moore Public Works Director	City of Pineville
James E Guffey Fire Chief	Town of Woodworth
Curtis Fogleman, GIS Manager	City of Alexandria
Richard Williamson	City of Alexandria
Eric Duck	City of Alexandria
Melissa Becker Floodplain Manager	Rapides Area Planning Commission
Patricia White	Office of Public Health
Carrie Robinette	Rapides Area Planning Commission
William Brister Captain	Rapides Parish Sheriff's Office
Mary Tarver RM/Safety Coordinator	Christus Cabrini Hospital

Meeting #4: Public Meeting

Date: December 3, 2015**Location:** Alexandria, LA, Rapides Parish Police Jury Meeting Room**Purpose:** The public meeting allowed the public and community stakeholders to participate and provide input into the hazard mitigation planning process. Maps of the Rapides Parish communities were provided for the meeting attendees to identify specific areas where localized hazards occur.**Public Initiation:** Yes**Invitees Included:**

Member/Title	Jurisdiction/Entity
Sonya Wiley-Gremillion Director	Rapides Parish OHSEP
Angie Branton Admin Assistant	Rapides Parish OHSEP
Richard Billings Police Jury President	Rapides Parish Police Jury
Dennis Woodward Public Works Director	Rapides Parish Police Jury
Paul Fuselier Governmental and Community Relations Manager	Acadian Ambulance Service
Neil Kavanagh Mayor	Town of Ball
Wes Anders Fire Chief	Town of Ball
Glenn Aaron Superintendent of Utilities	Town of Boyce
Summer Lemoine Town Clerk	Town of Cheneyville
Elizabeth A Jeter Mayor	Village of Forest Hill
Bryan Laird Public Works	Town of Glenmora
Joey Mott Mayor	Town of Glenmora
Lonnell Clark Alderman	Town of Lecompte
Don Parker Mayor	Village of McNary
Charlie Moore Public Works Director	City of Pineville
James E Guffey Fire Chief	Town of Woodworth
Curtis Fogleman, GIS Manager	City of Alexandria
Richard Williamson	City of Alexandria
Eric Duck	City of Alexandria
Melissa Becker Floodplain Manager	Rapides Area Planning Commission
Patricia White	Office of Public Health
Carrie Robinette	Rapides Area Planning Commission
William Brister Captain	Rapides Parish Sheriff's Office
Mary Tarver RM/Safety Coordinator	Christus Cabrini Hospital
Dana Chapman Assistant Director	LaSalle Parish OHSEP
Mitch Reynolds Director	Franklin Parish

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

Meeting Public Notice

Outreach Activity #1: Public Opinion Survey

Date: Ongoing throughout planning process

Location: Web Survey

Public Initiation: Yes

Outreach Activity #2: Incident Questionnaire

Date: Public Meeting Activity

Location: Public Meeting

Public Initiation: Yes

Outreach Activity #3: Mapping Activities

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

Public Plan Review Documentation

The Rapides Parish Hazard Mitigation Draft Plan was placed on the Rapides 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.

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

By law, the plan must be updated every five years prior to re-submittal to the Federal Emergency Management Agency (FEMA) for re-approval. The first part of this subsection describes the whole update process, including the responsible parties, methods to be used, evaluation criteria to be applied, and, scheduling for monitoring and evaluating the plan. These descriptions are followed by an explanation of how and when the plan will be periodically updated. The plan must be updated every five years prior to re-submittal to FEMA for re-approval. The first part of this subsection describes the whole update process, including sections on the following:

- Responsible parties
- Methods to be used
- Evaluation criteria to be applied
- Scheduling for monitoring and evaluating the plan

Responsible Parties

Rapides 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 jurisdictions participating in this plan will remain active in the steering committee. Each of the jurisdictions are listed below:

- Unincorporated Rapides
- City of Alexandria
- City of Pineville
- Town of Ball
- Town of Boyce
- Town of Cheneyville
- Town of Glenmora
- Town of Lecompte
- Town of Woodworth
- Village of Forest Hill
- Village of McNary

Although the people filling the positions may change from year to year, each jurisdiction will have a representative 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 Emergency Manager to be assigned as deemed appropriate.

Methods for Monitoring and Evaluating the Plan and Plan Evaluation Criteria

Rapides 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 Rapides Parish OHSEP Director will be responsible for conducting the annual planning committee meetings.

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

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

- 1) Whether the action was implemented and reasons, if the action was not implemented
- 2) What were the results of the implemented action
- 3) Were the outcomes as expected, and reasons if the outcomes were not as expected
- 4) Did the results achieve the stated goals and objectives
- 5) Was the action cost-effective
- 6) What were the losses avoided after completion of the project
- 7) In case of a structural project, did it change the hazard profile

In addition to monitoring and evaluating the progress of the mitigation plan actions and projects, the mitigation plan is required to be maintained and monitored annually, and updated every five years. The annual maintenance, monitoring and evaluation of the plan will be conducted in the annual planning committee meeting. The planning committee will review each goal and objective to determine their relevance to changing situations in the parish, as well as changes to state or federal policy, and to ensure that they are addressing current and expected conditions. The planning committee will evaluate if any change in hazard profile and risk in the parish occurred during the past year. In addition, the evaluation will include the following criteria in respect of plan implementation:

- 1) Any local staffing changes that would warrant inviting different members to the planning committee
- 2) Any new organizations that would be valuable in the planning process or project implementation need to be included in the planning committee

- 3) Are there any procedures that can be done more efficiently
- 4) Are there more ways to gain more diverse and widespread cooperation
- 5) Are there any different or additional funding sources available for mitigation planning and implementation

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

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

- Ordinances, Resolutions, Regulations (Parish and Jurisdictions)
- 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 (Parish and Jurisdictions)
- Continuity of Operations Plan (Parish and Jurisdictions)

Opportunities to integrate the requirements of this plan into other local planning mechanisms will continue to be identified through future meetings of the 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 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 Rapides 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 City of Alexandria, City of Pineville, Town of Ball, Town of Boyce, Town of Cheneyville, Town of Glenmora, Town of Lecompte, Town of Woodworth, Village of Forest Hill, Village of McNary Rapides 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:

Rapides Unincorporated

Comprehensive Master Plan (Under development)/Updated as needed/Rapides Parish Police Jury
Capital Improvement Plan /Updated as needed/Rapides Parish Police Jury
Local Emergency Operations Plan/Updated as needed/Rapides Parish OHSEP

City of Alexandria

Comprehensive Master Plan/Updated as needed/City of Alexandria
Local Emergency Operations Plan/Updated as needed/City of Alexandria
Capital Improvements Plan/Updated as needed/City of Alexandria
Continuity of Operations Plan/Updated as needed/City of Alexandria
Transportation Plan/Updated as Needed/City of Alexandria
Stormwater Management Plan/Updated as needed/City of Alexandria
Resiliency Program/Updated as needed/City of Alexandria

City of Pineville

Capital Improvement Plan/Updated as needed/City of Pineville
Local Emergency Operations Plan/Updated as needed/City of Pineville/Rapides OHSEP
Stormwater Management Plan/Updated as needed/Pineville Public Works

Town of Ball

Comprehensive Master Plan Updated as needed/Town of Ball
Local Emergency Operations Plan/Updated as needed/Town of Ball/Rapides OHSEP
Capital Improvement Plan/Updated as needed/Town of Ball
Continuity of Operations Plan/Updated as needed/Town of Ball
Economic Development Plan/Updated as needed/Town of Ball
Stormwater Management Plan/Updated as needed/Town of Ball

Town of Boyce

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

Town of Cheneyville

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

Town of Glenmora

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

Town of Lecompte

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

Town of Woodworth

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

Village of Forest Hill

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

Village of McNary

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

Continued Public Participation

Public involvement will continue to be a high priority in Rapides Parish. As the parish maintains and updates this plan, the public will have the opportunity to assist in the development of the changes. This plan will be updated every five years with the steering committee responsible for the reviews and updates. In addition, the public will have an opportunity to make comments, suggestions, and provide feedback to updates and changes as they occur. Prior to the steering committee meetings, a public notice announcement will be issued inviting anyone who would like to participate in the HMP review or update is welcome to attend. The public notice will include all local jurisdictions. The public notice will be displayed in the newspapers, as well as in the main government buildings of all participating jurisdictions.

The meeting agenda format will include the opportunity for anyone to make comments concerning updates/changes to the HMP. This will be the time for the public to present any concerns or new ideas that may be beneficial to maintaining an effective HMP.

All of the local jurisdictions represented in this plan will be responsible for the incorporation of mitigation items into other local planning mechanisms through the procedures discussed in the section. There will be copies of this plan available at all of the parish local libraries. Information related to this plan will be available and publicized in the —The Town Talk. The parish OHSEP will be responsible for maintaining the public comments on the plan. In addition, the public comments will be reviewed and incorporated in the five-year plan update if appropriate. Significant changes or amendments to the Plan require a public hearing prior to any adoption procedures.

Other efforts to involve the public in the maintenance, evaluation, and revision process will be made as necessary. These efforts may include:

- Advertising meetings of the Mitigation Committee in the local newspaper, public bulletin boards, and/or city and county office buildings
- Designating willing and voluntary citizens and private sector representatives as official members of the Mitigation Committee
- Utilizing local media to update the public of any maintenance and/or periodic review activities taking place
- Utilizing city and parish web sites to advertise any maintenance and/or periodic review activities taking place
- Keeping copies of the plan in appropriate public locations

Appendix C: Essential Facilities

Rapides Parish Essential Facilities – All Jurisdictions

Rapides Parish Unincorporated Essential Facilities											
Type	Name	Drought*	Extreme Heat*	Flooding	Hail	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storms*
Fire and Rescue	Plainview District 10-4 Bethel				X	X	X	X	X		
	Plainview Community Fire Department				X	X	X	X	X		
	Fire Department				X	X	X	X	X		
	Flatwoods Fire Department				X	X	X	X	X		
	Deville Fire Station 2				X	X	X	X	X		
	Deville Fire Station 6				X	X	X	X	X		
	Alpine Volunteer Fire Department				X	X	X	X	X		
	Alpine Volunteer Fire Station				X	X	X	X	X		
	Alpine Fire Department				X	X	X	X	X		
	Cotile Dire Department Station #1				X	X	X	X	X		

Rapides Parish Unincorporated Essential Facilities											
Type	Name	Drought*	Extreme Heat*	Flooding	Hail	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storms*
	Oakhill Fire Department				X	X	X	X	X		
	Cotile Fire Department Station #2				X	X	X	X	X		
	Oakhill Fire Department				X	X	X	X	X		
	Holiday Village Fire Department				X	X	X	X	X		
	Charlie Cummings Memorial Fire Station				X	X	X	X	X		
	Deville Fire Department No 1				X	X	X	X	X		
	Ruby-Kolin Fire Department				X	X	X	X	X		
	Fire Department				X	X	X	X	X		
	Echo-Poland VFD Station 2				X	X	X	X	X		
	Echo-Poland VFD Station 1				X	X	X	X	X		
	Echo-Poland VFD Station 3				X	X	X	X	X		
	Holiday Village Volunteer Fire Dept.				X	X	X	X	X		

Rapides Parish Unincorporated Essential Facilities											
Type	Name	Drought*	Extreme Heat*	Flooding	Hail	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storms*
	Rapides Fire District 10				X	X	X	X	X		
	Spring Creek Volunteer Fire Department				X	X	X	X	X		
	Spring Creek Volunteer Fire Department				X	X	X	X	X		
	Oak Hill Fire Department				X	X	X	X	X		
	Plainview Fire Department				X	X	X	X	X		
	England Park Air Rescue Fire Facility				X	X	X	X	X		
	Fire Station 3				X	X	X	X	X		
	Lachney-Goldstein Memore Fire Stat 4				X	X	X	X	X		
	Rapides Fire Station No 2				X	X	X	X	X		
	Rapides Parish Fire District 2 Station 4				X	X	X	X	X		
Government	Agriculture Center				X	X	X	X	X	X	

Rapides Parish Unincorporated Essential Facilities											
Type	Name	Drought*	Extreme Heat*	Flooding	Hail	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storms*
	LA Dept of Wildlife and Fisheries				X	X	X	X	X		
	Rapides Parish Highway Department			X	X	X	X	X	X		
	Rapides Planning Commission				X	X	X	X	X		
	USDA Service Center				X	X	X	X	X		
Law Enforcement	LA State Police Region 2				X	X	X	X	X		
	Rapides Parish Sheriff's Department				X	X	X	X	X		
	Rapides Sherriff's Office				X	X	X	X	X		
	Rapides Sherriff's Office				X	X	X	X	X		
	Rapides Sherriff's Office				X	X	X	X	X		
	Rapides Sherriff - Special Ops				X	X	X	X	X		
	Rapides Sherriff - Ward 11 Substation				X	X	X	X	X	X	

Rapides Parish Unincorporated Essential Facilities											
Type	Name	Drought*	Extreme Heat*	Flooding	Hail	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storms*
Schools	Buckeye Elementary School				X	X	X	X	X		
	Buckeye High School				X	X	X	X	X	X	
	Lawrence Buckeye Middle School				X	X	X	X	X		
	Mabel Brasher Elementary				X	X	X	X	X		
	Mary's Goff Elementary				X	X	X	X	X	X	
	North Bayou Elementary School			X	X	X	X	X	X		
	Northwood High School				X	X	X	X	X		
	Oak Hill High School				X	X	X	X	X		
	Plainview High School				X	X	X	X	X		
	Poland Junior High School				X	X	X	X	X	X	
	Rapides High School				X	X	X	X	X		
	Ruby Wise Elementary School				X	X	X	X	X	X	

Rapides Parish Unincorporated Essential Facilities											
Type	Name	Drought*	Extreme Heat*	Flooding	Hail	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storms*
	Tioga Elementary School				X	X	X	X	X		
	Tioga High School				X	X	X	X	X		
	Tioga Middle School				X	X	X	X	X		

Alexandria Essential Facilities											
Type	Name	Drought*	Extreme Heat*	Flooding	Hail	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storms*
Fire and Rescue	Alexandria's Fire Department				X	X	X	X	X		
	Alexandria Fire Department Station 4				X	X	X	X	X		
	Broadway Fire Station				X	X	X	X	X		
	Central Station Fire Department				X	X	X	X	X		
	Fire Station				X	X	X	X	X		
	Fire Station 3				X	X	X	X	X		
	Rapides Fire Department				X	X	X	X	X		
Government	Alexandria City Court				X	X	X	X	X		

Alexandria Essential Facilities											
Type	Name	Drought*	Extreme Heat*	Flooding	Hail	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storms*
	Alexandria City Hall				X	X	X	X	X		
	City of Alexandria Central Facilities			X	X	X	X	X	X		
	Department of Health and Hospitals				X	X	X	X	X		
	Farm Service Agency				X	X	X	X	X		
	Gulf Coast Social Services				X	X	X	X	X		
	Internal Revenue Service				X	X	X	X	X		
	Louisiana Chamber of Commerce				X	X	X	X	X		
	Louisiana Court of Appeal				X	X	X	X	X		
	Louisiana Department of Transportation				X	X	X	X	X	X	
	Louisiana Department of Transportation				X	X	X	X	X		
	LA Dept of Transportation & Development				X	X	X	X	X		
	LA Department of Veteran Affairs				X	X	X	X	X		

Alexandria Essential Facilities											
Type	Name	Drought*	Extreme Heat*	Flooding	Hail	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storms*
	Louisiana Forestry Association				X	X	X	X	X		
	Louisiana State Office Building				X	X	X	X	X		
	LA Workforce Commission Business				X	X	X	X	X		
	Office of Motor Vehicles				X	X	X	X	X		
	Office of Worker's Compensation				X	X	X	X	X		
	Parish of Rapides Sales and Use Tax				X	X	X	X	X		
	Public Defender's Office				X	X	X	X	X		
	Public Safety Facility				X	X	X	X	X		
	Rapides Children's Advocacy Center				X	X	X	X	X		
	Rapides Parish Courthouse				X	X	X	X	X		
	Rapides School Board Maintenance			X	X	X	X	X	X		
	Rapides School Board Office				X	X	X	X	X		

Alexandria Essential Facilities											
Type	Name	Drought*	Extreme Heat*	Flooding	Hail	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storms*
	Red River Levee District Maintenance				X	X	X	X	X		
	Rev River Levee District				X	X	X	X	X		
	Serenity Center for Counseling			X	X	X	X	X	X		
	Social Security Administration				X	X	X	X	X		
	SS Administration Disability				X	X	X	X	X		
	LA Elderly Protective Services				X	X	X	X	X		
	LA Office of Risk Management				X	X	X	X	X		
Law Enforcement	LA State Police Troop E			X	X	X	X	X	X		
	LA State Police Troop E				X	X	X	X	X		
	Rapides Parish Sheriff's Office				X	X	X	X	X		
Corrections	Rapides Parish Detention Center				X	X	X	X	X		
Public Health	Central Louisiana State Hospital				X	X	X	X	X		
	Christus St. Frances Cabrini Hospital				X	X	X	X	X		

Alexandria Essential Facilities											
Type	Name	Drought*	Extreme Heat*	Flooding	Hail	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storms*
	Crossroads Hospital				X	X	X	X	X		
	Huey P. Long Hospital				X	X	X	X	X		
Schools	Acadian Elementary School				X	X	X	X	X	X	
	Alexandria Middle Magnet School				X	X	X	X	X		
	Alexandria Senior High School				X	X	X	X	X	X	
	Alma Redwine Elementary				X	X	X	X	X		
	Arthur F. Smith Middle Magnet School			X	X	X	X	X	X		
	Bolton High				X	X	X	X	X		
	Brame Middle School			X	X	X	X	X	X		
	Cherokee Elementary				X	X	X	X	X		
	D.F. Huddle Elementary School				X	X	X	X	X		
	Grace Elementary School				X	X	X	X	X		

Alexandria Essential Facilities											
Type	Name	Drought*	Extreme Heat*	Flooding	Hail	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storms*
	Holy Savior Menard High School				X	X	X	X	X		
	Horseshoe Elementary				X	X	X	X	X		
	Julius Nachman Elementary School				X	X	X	X	X		
	Julius Patrick Elementary				X	X	X	X	X		
	L.S. Rugg Elementary School				X	X	X	X	X		
	Martin Park Elementary School				X	X	X	X	X		
	Peabody Magnet High School			X	X	X	X	X	X		
	Peabody Montessori Magnet School				X	X	X	X	X		
	Phoenix Academic Magnet Elementary				X	X	X	X	X		
	Rosenthal Elementary School				X	X	X	X	X		
	W.O. Hall Magnet Elementary			X	X	X	X	X	X		

Boyce Essential Facilities											
Type	Name	Drought*	Extreme Heat*	Flooding	Hail	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storms*
Fire and Rescue	Boyce Station 2				X	X	X	X	X		
	Boyce Volunteer Fire Department				X	X	X	X	X		
Government	Boyce Town Hall				X	X	X	X	X		
Law Enforcement	Rapides Sheriff's Office - Boyce Substation			X	X	X	X	X	X	X	
	Boyce Police Department				X	X	X	X	X		

Ball Essential Facilities											
Type	Name	Drought*	Extreme Heat*	Flooding	Hail	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storms*
Fire and Rescue	Ball Volunteer Fire Department				X	X	X	X	X		
Schools	Ball Elementary School				X	X	X	X	X	X	
	Paradise Elementary School				X	X	X	X	X	X	

Cheneyville Essential Facilities											
Type	Name	Drought*	Extreme Heat*	Flooding	Hail	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storms*
Fire and Rescue	District 12 Fire Department				X	X	X	X	X		
Government	Cheneyville City Hall				X	X	X	X	X		
	Cheneyville Courthouse				X	X	X	X	X		
Law Enforcement	Cheneyville Police Department				X	X	X	X	X		

Forest Hill Essential Facilities											
Type	Name	Drought*	Extreme Heat*	Flooding	Hail	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storms*
Fire and Rescue	Forest Hill Fire Station				X	X	X	X	X		
Government	Forest Hill Town Hall										
	Justice of the Peace				X	X	X	X	X	X	
Schools	Forest Hill Elementary School				X	X	X	X	X	X	

Glenmora Essential Facilities											
Type	Name	Drought*	Extreme Heat*	Flooding	Hail	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storms*
Fire and Rescue	Glenmora Fire Station				X	X	X	X	X		
	Glenmora Station 2				X	X	X	X	X		
Government	Glenmora Community Center				X	X	X	X	X		
Law Enforcement	Glenmora Police Department				X	X	X	X	X	X	
	Rapides Parish Sheriff Substation				X	X	X	X	X		
Schools	Glenmore Elementary School				X	X	X	X	X	X	
	Glenmora High School				X	X	X	X	X	X	

Lecompte Essential Facilities											
Type	Name	Drought*	Extreme Heat*	Flooding	Hail	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storms*
Fire and Rescue	Lecompte Fire Department				X	X	X	X	X		
	Lecompte Fire Department				X	X	X	X	X		
Law Enforcement	Lecompte Police Department				X	X	X	X	X	X	
Schools	Carter C. Raymond Elementary School			X	X	X	X	X	X		
	Carter C. Raymond Jr High School			X	X	X	X	X	X		
	Lecompte High School				X	X	X	X	X		

Pineville Essential Facilities											
Type	Name	Drought*	Extreme Heat*	Flooding	Hail	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storms*
Fire and Rescue	Fire Department Admin Office				X	X	X	X	X		
	Pineville Fire Station No 4				X	X	X	X	X		
	Pineville Fire Station No 3				X	X	X	X	X		
Government	City of Pineville Youth Center				X	X	X	X	X	X	

Pineville Essential Facilities											
Type	Name	Drought*	Extreme Heat*	Flooding	Hail	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storms*
	Office of Motor Vehicles				X	X	X	X	X		
	Pineville Animal Shelter				X	X	X	X	X		
	Pineville City Court				X	X	X	X	X	X	
	Pineville Municipal Building				X	X	X	X	X	X	
Schools	Calvary High School				X	X	X	X	X	X	
	J.I. Barron Senior Elementary School				X	X	X	X	X	X	
	Lessie Moore Elementary School				X	X	X	X	X	X	
	Pineville Elementary School				X	X	X	X	X		
	Pineville High School				X	X	X	X	X		
	Pineville Junior High School				X	X	X	X	X	X	

Woodworth Essential Facilities											
Type	Name	Drought*	Extreme Heat*	Flooding	Hail	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storms*
Fire and Rescue	J.D. Glass Memorial Fire Station				X	X	X	X	X		
Government	SBA Maintenance Barn				X	X	X	X	X	X	
	Woodworth Municipal Building				X	X	X	X	X	X	
Schools	Caroline Domon Junior High School				X	X	X	X	X		

*No essential facilities are vulnerable to the hazard.

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Appendix D: Plan Adoption

RESOLUTION NO. 9542-2016**A RESOLUTION ADOPTING THE
RAPIDES PARISH HAZARD MITIGATION PLAN 2016**

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

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

WHEREAS Alexandria is participating in the Hazard Mitigation Plan prepared by the Rapides Parish Police Jury under the oversight of a Steering Committee comprised of Parish-Wide representatives;

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

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

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

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

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

SECTION I. BE IT RESOLVED by the City Council of the City of Alexandria, Louisiana that the City of Alexandria does hereby adopt the Rapides Parish Hazard Mitigation Plan Update 2016.

THIS RESOLUTION having been submitted in writing was then submitted to a final vote as a whole, the vote thereon being as follows:

YEAS: Villard, Green, Larvadain, Johnson

NAYS: None

ABSENT: Rubin, Fowler, Silver.

AND THE RESOLUTION was declared adopted on this the 31st day of May, 2016

/S/ Donna P. Jones
City Clerk

RESOLUTION # 707-2016**STATE OF LOUISIANA****PARISH OF RAPIDES**

At a regular scheduled council meeting of the Ball Town Council held at the Ball Town Hall on June 21, 2016, a quorum of the Town Council were present and voting. Upon motion by Alderman Gene Decker, seconded by Alderwoman Kimberley Krischke, the following resolution to adopt Rapides Parish Hazard Mitigation Plan 2016 as adopted by the Rapides Parish Police Jury, was approved by majority vote.

The Town of Ball agrees to adopt and enact certain standards relating to multi-hazard mitigation plan adopted by the Rapides Parish Police Jury affecting the all municipalities in Rapides Parish. These standards named the "Rapides Parish Hazard Mitigation Plan – 2016" are necessary in order to remain in compliance with FEMA regulation and to insure continued federal funding.

THEREFORE, be it known that the Town of Ball adopts the Rapides Parish Hazard Mitigation Plan – 2016 update as of this date: June 21, 2016.

The above and foregoing Resolution was adopted on the 21st day of June, 2016 by the following votes:

YEAS: Alderpersons: Wilking, Duncan-Furby, Poteet, Krischke, Decker

NAYS:

ABSENT:

ABSTAIN:


Neil Kavanagh, Mayor
Krisina Frazier, Town Clerk**CERTIFICATE**

I, Krisina Frazier, Clerk of the Town of Ball, Louisiana, certify that the above and foregoing constitutes a true and correct copy of a Resolution passed and adopted by the Mayor and Board of Aldermen of Ball, Louisiana on the 21st day of June, 2016.


Krisina Frazier, Town Clerk

RESOLUTION 644-2016
A RESOLUTION ADOPTING THE RAPIDES PARISH HAZARD MITIGATION PLAN
2016

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

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

WHEREAS the Town of Boyce is participating in the Hazard Mitigation Plan prepared by the Rapides Parish Police Jury under the oversight of a steering committee comprised of parish-wide representatives;

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

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

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

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

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

Therefore, the Town of Boyce does hereby adopt the Rapides Parish Hazard Mitigation Plan Update 2016.

ADOPTED by a vote of 5 in favor and 0 against, and 0 abstaining, on this the 13th day of June, 2016.


Mayor Alma Moore

6/19/16
Date

Attest:

Mary Juneau, Clerk

6/13/16
Date

Town of Cheneyville
Rapides Parish

RESOLUTION 16-001

**RESOLUTION ADOPTINE THE
PARISH-WIDE HAZARD MITIGATION PLAN**

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

AND WHEREAS, the Parish of Rapides has participated in the process to prepare a DMA complaint Hazard Mitigation Plan based on the FEMA guidance available in the How to Guides;

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

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

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

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

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

- Pre-Disaster Mitigation
- Hazard Mitigation Grant Program
- Flood Mitigation Assistance Program
- Severe Repetitive Loss
- Repetitive Flood Claims

BE IT HEREBY RESOLVED, that the Mayor and Board of Alderman of the Town of Cheneyville, do hereby adopt the Rapides Parish Hazard Mitigation Plan Update in the 12th day of May, 2016


Summer Lemoine
Town Clerk


Derrick Johnson
Mayor

VILLAGE OF FOREST HILL
RESOLUTION 2016-09

**A RESOLUTION ADOPTING THE
RAPIDES PARISH HAZARD MITIGATION PLAN 2016**

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

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

WHEREAS, the Village of Forest Hill is participating in the Hazard Mitigation Plan prepared by the Rapides Parish Police Jury under the oversight of a Steering Committee comprised of Parish-wide representatives;

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

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

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

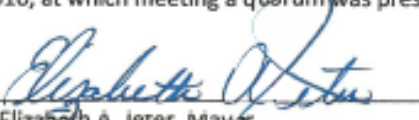
WHEREAS, adoption of the Plan is required prior to further consideration for FEMA funding under the following programs:

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

Therefore, the Village of Forest Hill does hereby adopt the Rapides Parish Hazard Mitigation Plan Update 2016.

CERTIFICATE

I certify that the following resolution is a true and correct copy of resolution adopted at a regular meeting held on the 14th day of June, 2016, at which meeting a quorum was present and voting.


Elizabeth A. Jeter, Mayor

ATTEST:


Diane Perry, Town Clerk

RESOLUTION
2016-24

"A Resolution adopting the Parish Wide Hazard Mitigation Plan"

WHEREAS, the Rapides Parish Police Jury has prepared a multi-hazard mitigation plan hereby known as the RAPIDES PARISH HAZARD MITIGATION PLAN-2016 update in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS the Town of Lecompte has participated in the process to prepare a DMA compliant Hazard Mitigation Plan based on the FEMA guidance available in the How to Guides; and,

WHEREAS the Town of Lecompte wishes to participate in the Hazard Mitigation Plan Update prepared by the Rapides Parish government under the oversight of a Steering Committee comprised of Parish-wide Representatives; and,

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

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

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

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

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

THEREFORE, BE IT RESOLVED, that the Town of Lecompte does hereby adopt the Rapides Parish Hazard Mitigation Plan Update on 6th day of June, 2016.


Angelique Tharp, Clerk
Town of Lecompte


Robert L. Baxter, Mayor
Town of Lecompte



Town of Glenmora

1000 7th Avenue
P.O. Box 265
Glenmora, Louisiana 71433

Resolution No. 2016 - 011

A resolution of the Board of Alderman of the Town of Glenmora that, the Mayor is authorized, on behalf of the Town of Glenmora, to execute and otherwise enter into an agreement to adopt the Rapides Parish Hazard Mitigation Plan for 2016.

Whereas, the Parish of Rapides has prepared a multi-hazard mitigation plan hereby known as the Rapides Parish Hazard Mitigation Plan-2016 updated in accordance with the Disaster Mitigation Act of 2000,

Whereas, the Town of Glenmora has participated in the process to prepare a DMA compliant Hazard Mitigation Plan based in the FEMA guidance available in the How to Guides;

Whereas, the Town of Glenmora is participating in the Hazard Mitigation Plan prepared by the Rapides Parish Police Jury under the oversight of a Steering Committee comprised of Parish-Wide representatives;

Whereas, Rapides Parish and local city representatives and governments have participated in the mitigation planning process;

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

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

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

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

Therefore, the Town of Glenmora does hereby adopt the Rapides Parish hazard Mitigation Plan Update 2016.

This resolution shall become effective immediately upon its adoption.

The foregoing resolution was offered by Rivers who moved its adoption. The motion was seconded by Billings and upon being put to a vote the vote was as follows:

Alderman Joseph "Coach" Rivers: ☒ Yes/No

Alderman Glynn Dixon: ☒ Yes/No

Alderman Willie Moore: ☒ Yes/No

Alderman Clyde "Red" Myers: ☒ Yes/No

Alderman Darla Billings: ☒ Yes/No

Joe Rivers
Glynn R. Dixon
Willie E. Moore
Clyde Red Myers
Darla A. Billings

Passed and adopted this 13th day of June 2016.

Joey Motz
Joey Motz, Mayor

I, Ronda Laird, Clerk of the Town of Glenmora, certify that the above and foregoing constitutes a true and correct copy of a Resolution passed and adopted by the Town of Glenmora on June 13, 2016.

Ronda Laird
Ronda Laird, Clerk

RAPIDES PARISH
RESOLUTION 2016-01

A RESOLUTION ADOPTING THE
PARISH-WIDE HAZARD MITIGATION PLAN

WHEREAS, the Rapides Parish Police Jury has prepared a multi-hazard mitigation plan hereby known as the RAPIDES PARISH HAZARD MITIGATION PLAN – 2016 update in accordance with the Disaster Mitigation Act of 2000; and

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

WHEREAS, Parish of Rapides is participating in the Hazard Mitigation Plan prepared by the Rapides Police Jury under the oversight of a Steering Committee comprised of Parish-Wide representatives;

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

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

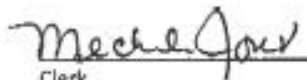
WHEREAS the Plan has been recommended for adoption by the steering committee;

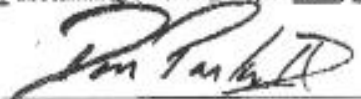
WHEREAS adoption of the Plan is required prior to further consideration for FEMA funding under the following programs:

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

Therefore, the Village of McNary does hereby adopt the Rapides Parish Hazard Mitigation Plan Update 2016

ADOPTED by a vote of 2 in favor and 0 against, and 0 abstaining, on this 6 day of June, 2016.


Clerk


Mayor's Signature

2016-0614-09

**A RESOLUTION ADOPTING THE
PARISH-WIDE HAZARD MITIGATION PLAN 2016**

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

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

WHEREAS, the CITY OF PINEVILLE is participating in the Hazard Mitigation Plan prepared by the Rapides Parish Police Jury government under the oversight of a Steering Committee comprised of Parish-wide representatives; and

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

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

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

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

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

NOW THEREFORE BE IT RESOLVED, that the CITY OF PINEVILLE does hereby adopt the Rapides Parish Hazard Mitigation Plan Update 2016 on the 14th day of June, 2016.



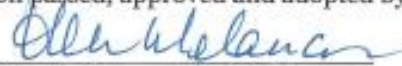
Ellen Melancon, City Clerk



Clarence R. Fields, Mayor

CERTIFICATE

I, Ellen Melancon, Clerk of the City of Pineville, Louisiana do hereby certify that the above and foregoing constitutes a true and correct copy of a Resolution passed, approved and adopted by the City of Pineville on June 14, 2016



Ellen Melancon, City Clerk

**TOWN OF WOODWORTH**

POST OFFICE BOX 228
WOODWORTH, LOUISIANA 71485
(318) 442-1198
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www.townofwoodworth.com
woodworth@thetow.org



KISATCHIE NATIONAL FOREST

**RESOLUTION
NO. 1658-16**

At the regular council meeting held on June 6, 2016, the following resolution was introduced by Council Member Reich, seconded by Council Member Cranford, and was unanimously passed.

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

WHEREAS, the Parish of Rapides has participated in the process to prepare a DMA compliant Hazard Mitigation Plan based on the FEMA guidance available in the How to Guides; and,

WHEREAS, the Parish of Rapides wishes to participate in the Hazard Mitigation Plan update prepared by the Rapides Parish government under the oversight of a Steering Committee comprised of Parish-wide representatives; and,

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

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

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

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

- Pre-Disaster Mitigation
- Hazard Mitigation Grant Program
- Flood Mitigation Assistance Program
- Severe Repetitive Loss
- Repetitive Flood Claims

THEREFORE BE IT RESOLVED, that the Mayor and Town Council does hereby adopt the Rapides Parish Hazard Mitigation Plan Update 6th day of June 2016.

This resolution shall become effective immediately upon its passage.

Passed and adopted by the Mayor and Town Council of the Town of Woodworth, Parish of Rapides, State of Louisiana, on this 6th day of June 2016, by the following votes:

Yeas: Reich, Doiron, Cranford, Melder, Aymond Abstained: None

Nays: None Absent: None

I, David C. Butler, II, do hereby certify that the above is a true and correct copy of the **RESOLUTION** duly passed and adopted by the Town of Woodworth, Parish of Rapides, State of Louisiana, on the 6th day of June 2016.

ATTEST: Mary D. Pringle, CMMC
Clerk, Town of Woodworth

David C. Butler, II
Mayor, Town of Woodworth

On motion by Mr. Richard Billings, seconded by Mr. Ollie Overton, the following resolution was presented and unanimously adopted:

RESOLUTION
RAPIDES PARISH HAZARD MITIGATION PLAN 2016

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

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

WHEREAS, RAPIDES PARISH is participating in the Hazard Mitigation Plan prepared by the Rapides Parish Police Jury under the oversight of a Steering Committee comprised of Parish-Wide representatives;

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

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

WHEREAS, the Plan has been recommended for adoption by the steering committee;
WHEREAS, adoption of the Plan is required prior to further consideration for FEMA funding under the following programs:

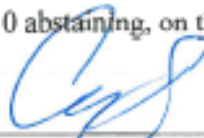
- Pre-Disaster Mitigation
- Hazard Mitigation Grant Program
- Flood Mitigation Assistance Program

Therefore, the RAPIDES PARISH POLICE JURY does hereby adopt the Rapides Parish Hazard Mitigation Plan Update 2016.

ADOPTED by a vote of 9 in favor and 0 against, and 0 abstaining, on this the 13th day of 2016.



Laurel Smith, Secretary
Rapides Parish Police Jury



Craig Smith, President
Rapides Parish Police Jury

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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.

Capability Assessment

Rapides Unincorporated

Worksheet 4.1: Capability Assessment Worksheet		
Local mitigation capabilities are existing authorities, polices and resources that reduce hazard impacts or that could be used to implement hazard mitigation activities. Please complete the tables and questions in the worksheet as completely as possible.		
Planning and Regulatory		
Please indicate which of the following plans and regulatory capabilities your jurisdiction has in place.		
Rapides Unincorporated Areas		
Plans	Yes/No	Comments
Comprehensive / Master Plan	Yes	Under Development
Capital Improvements Plan	Yes	
Economic Development Plan	No	
Local Emergency Operations Plan	Yes	
Continuity of Operations Plan	No	
Transportation Plan	No	
Stormwater Management Plan	No	
Community Wildfire Protection Plan	No	
Other plans (redevelopment, recovery, coastal zone management)	No	
Building Code, Permitting and Inspections		
Building Code	Yes	

Building Code Effectiveness Grading Schedule (BCEGS) Score	No	
Fire Department ISO/PIAL rating	Yes	
Site plan review requirements	Yes	
Land Use Planning and Ordinances		
Zoning Ordinance	No	
Subdivision Ordinance	Yes	
Floodplain Ordinance	Yes	
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	No	
Flood Insurance Rate Maps	Yes	
Acquisition of land for open space and public recreation uses	No	
Other	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	
Staff		
Chief Building Official	Yes	
Floodplain Administrator	Yes	
Emergency Manager	Yes	
Community Planner	No	

Civil Engineer	Yes	
GIS Coordinator	Yes	
Grant Writer	Yes	
Other	No	
Technical		
Warning Systems / Service (Reverse 911, outdoor warning signals)	No	
Hazard Data & Information	No	
Grant Writing	Yes	
Hazus Analysis	No	
Other	No	
Financial		
Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.		
Funding Resource	Yes/No	Comments
Capital Improvements project funding	Yes	
Authority to levy taxes for specific purposes	Yes	
Fees for water, sewer, gas, or electric services	No	
Impact fees for new development	No	
Stormwater Utility Fee	No	
Community Development Block Grant (CDBG)	Yes	
Other Funding Programs	Yes	
Education and Outreach		
Identify education and outreach programs and methods, already in place that could be used to implement mitigation activities and communicate hazard-related information.		
Program / Organization	Yes/No	Comments

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

City of Alexandria

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.		
Alexandria		
Plans	Yes/No	Comments
Comprehensive / Master Plan	Yes	HMP
Capital Improvements Plan	Yes	Budget & Capital Budget
Economic Development Plan	No	In Progress
Local Emergency Operations Plan	Yes	
Continuity of Operations Plan	Yes	

Transportation Plan	Yes	
Stormwater Management Plan	Yes	
Community Wildfire Protection Plan	No	
Other plans (redevelopment, recovery, coastal zone management)	Yes	Resiliency Program
Building Code, Permitting and Inspections		
Building Code	Yes	Land Development Code - Chapter 28
Building Code Effectiveness Grading Schedule (BCEGS) Score	No	
Fire Department ISO/PIAL rating	Yes	
Site plan review requirements	Yes	Planning & Engineering
Land Use Planning and Ordinances		
Zoning Ordinance	Yes	COA Planning
Subdivision Ordinance	Yes	Part of Land Development Code; Chapter 28; Section 28-5.4
Floodplain Ordinance	Yes	COA Engineering
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	No	
Flood Insurance Rate Maps	Yes	COA Engineering/FIRM Maps
Acquisition of land for open space and public recreation uses	No	
Other		
Administration and Technical		
Identify whether your community has the following administrative and technical capabilities. For smaller jurisdictions without local staff resources, if there are public resources at the next higher level government that can provide technical assistance, indicate so in your comments.		
Administration	Yes/No	Comments
Planning Commission	Yes	Rapides Parish Planning Commission

Mitigation Planning Committee		
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)		
Staff		
Chief Building Official	Yes	Chief Building Officer/City Engineer
Floodplain Administrator	Yes	COA Engineering
Emergency Manager	Yes	COA Utility Director/Incident Commander
Community Planner	Yes	COA Planning Director
Civil Engineer	Yes	COA Engineer
GIS Coordinator	Yes	GIS Manager
Grant Writer	Yes	CJ
Other		
Technical		
Warning Systems / Service (Reverse 911, outdoor warning signals)	Yes	
Hazard Data & Information	Yes	Hazard Mitigation Plan
Grant Writing	Yes	
Hazus Analysis	Yes	Parish HMP
Other		
Financial		
Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.		
Funding Resource	Yes/No	Comments
Capital Improvements project funding	Yes	
Authority to levy taxes for specific purposes	Yes	
Fees for water, sewer, gas, or electric services	Yes	
Impact fees for new development	No	
Stormwater Utility Fee	Yes	
Community Development Block Grant (CDBG)	Yes	Entitlement City/No Projects for Hazard
Other Funding Programs	Yes	Usage Forms

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

City of Pineville

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.		
Pineville		
Plans	Yes/No	Comments
Comprehensive / Master Plan	NO	
Capital Improvements Plan	YES	
Economic Development Plan	NO	
Local Emergency Operations Plan	YES	
Continuity of Operations Plan	NO	
Transportation Plan	NO	
Stormwater Management Plan	YES	PUBLIC WORKS JR. SIMPSON
Community Wildfire Protection Plan	NO	
Other plans (redevelopment, recovery, coastal zone management)		
Building Code, Permitting and Inspections		
Building Code	YES	KENNY ANDREWS-RAPC
Building Code Effectiveness Grading Schedule (BCEGS) Score	NO	
Fire Department ISO/PIAL rating	YES	CLASS 3
Site plan review requirements	YES	KENNY ANDREWS-RAPC
Land Use Planning and Ordinances		
Zoning Ordinance	YES	
Subdivision Ordinance	YES	
Floodplain Ordinance	YES	

Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	NO	
Flood Insurance Rate Maps	YES	
Acquisition of land for open space and public recreation uses	NO	
Other		
Administration and Technical		
Identify whether your community has the following administrative and technical capabilities. For smaller jurisdictions without local staff resources, if there are public resources at the next higher level government that can provide technical assistance, indicate so in your comments.		
Administration	YES	Comments
Planning Commission	YES	
Mitigation Planning Committee	YES	Parish
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	YES	PUBLIC WORKS DEPARTMENT
Staff		
Chief Building Official	YES	KENNY ANDREWS
Floodplain Administrator	YES	MELISSA BECKER-RAPC
Emergency Manager	YES	DARRELL BASCO POLICE DEPT
Community Planner	NO	
Civil Engineer	YES	TOM DAVID
GIS Coordinator	YES	BLAKE POWELL-RAPC
Grant Writer	YES	JOE SALMON & STEPHEN MOSS
Other		
Technical		
Warning Systems / Service (Reverse 911, outdoor warning signals)	NO	
Hazard Data & Information	YES	STEPHEN MOSS

Grant Writing	YES	STEPHEN MOSS & JOE SALMON
Hazus Analysis	NO	
Other		
Financial		
Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.		
Funding Resource	Yes/No	Comments
Capital Improvements project funding	YES	
Authority to levy taxes for specific purposes	NO	
Fees for water, sewer, gas, or electric services	YES	WATER & SEWER
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		

Town of Ball

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

Site plan review requirements	Yes	
Land Use Planning and Ordinances		
Zoning Ordinance	Yes	
Subdivision Ordinance	Yes	
Floodplain Ordinance	Yes	
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	No	
Flood Insurance Rate Maps	Yes	
Acquisition of land for open space and public recreation uses	Yes	
Other		
Administration and Technical		
Identify whether your community has the following administrative and technical capabilities. For smaller jurisdictions without local staff resources, if there are public resources at the next higher level government that can provide technical assistance, indicate so in your comments.		
Administration	Yes/No	Comments
Planning Commission	Yes	
Mitigation Planning Committee	Yes	
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	Yes	
Staff		
Chief Building Official	Yes	
Floodplain Administrator	Yes	
Emergency Manager	Yes	
Community Planner	No	
Civil Engineer	Yes	
GIS Coordinator	Yes	
Grant Writer	No	

Other		
Technical		
Warning Systems / Service (Reverse 911, outdoor warning signals)	Yes	
Hazard Data & Information	No	
Grant Writing	No	
Hazus Analysis	No	
Other		
Financial		
Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.		
Funding Resource	Yes/No	Comments
Capital Improvements project funding	Yes	
Authority to levy taxes for specific purposes	No	
Fees for water, sewer, gas, or electric services	Yes	
Impact fees for new development	No	
Stormwater Utility Fee	No	
Community Development Block Grant (CDBG)	No	
Other Funding Programs	Yes	
	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	Yes	
Storm Ready certification	No	
Firewise Communities certification	No	
Public/Private partnership initiatives addressing disaster-related issues	No	

Town of Boyce

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.		
Boyce		
Plans	Yes/No	Comments
Comprehensive / Master Plan	NO	
Capital Improvements Plan	NO	
Economic Development Plan	NO	
Local Emergency Operations Plan	NO	PART OF PARISH PLAN
Continuity of Operations Plan	NO	
Transportation Plan	NO	
Stormwater Management Plan	NO	
Community Wildfire Protection Plan	NO	
Other plans (redevelopment, recovery, coastal zone management)	NO	

Building Code, Permitting and Inspections		
Building Code	NO	
Building Code Effectiveness Grading Schedule (BCEGS) Score	NO	
Fire Department ISO/PIAL rating	NO	
Site plan review requirements	NO	
Land Use Planning and Ordinances		
Zoning Ordinance	NO	
Subdivision Ordinance	NO	
Floodplain Ordinance	YES	
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	NO	
Flood Insurance Rate Maps	YES	PRELIMINARY RATE MAPS NOT APPROVED YET
Acquisition of land for open space and public recreation uses	NO	
Other	NO	
Administration and Technical		
Identify whether your community has the following administrative and technical capabilities. For smaller jurisdictions without local staff resources, if there are public resources at the next higher level government that can provide technical assistance, indicate so in your comments.		
Administration	Yes/No	Comments
Planning Commission	NO	
Mitigation Planning Committee	YES	
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	YES	
Staff		
Chief Building Official	NO	
Floodplain Administrator	YES	

Emergency Manager	NO	
Community Planner	NO	
Civil Engineer	NO	CONTRACTS WITH PAN AMERICAN ENGINEERS
GIS Coordinator	NO	
Grant Writer	NO	
Other	NO	
Technical		
Warning Systems / Service (Reverse 911, outdoor warning signals)	YES	OUTDOOR WARNING SYSTEM
Hazard Data & Information	NO	
Grant Writing	NO	
Hazus Analysis	NO	
Other	NO	
Financial		
Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.		
Funding Resource	Yes/No	Comments
Capital Improvements project funding	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)	YES	
Other Funding Programs	YES	LGAP/CWEF
Education and Outreach		
Identify education and outreach programs and methods, already in place that could be used to implement mitigation		
activities and communicate hazard-related information.		
Program / Organization	Yes/No	Comments

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

Town of Cheneyville

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.		
Cheneyville		
Plans	Yes/No	Comments
Comprehensive / Master Plan	No	
Capital Improvements Plan	No	
Economic Development Plan	No	
Local Emergency Operations Plan	No	
Continuity of Operations Plan	No	

Transportation Plan	No	
Stormwater Management Plan	No	
Community Wildfire Protection Plan	No	
Other plans (redevelopment, recovery, coastal zone management)	No	
Building Code, Permitting and Inspections		
Building Code	Yes	Privately-Owned Housing Units
Building Code Effectiveness Grading Schedule (BCEGS) Score	No	
Fire Department ISO/PIAL rating	Yes	
Site plan review requirements	No	
Land Use Planning and Ordinances		
Zoning Ordinance	Yes	Mobile Homes
Subdivision Ordinance	No	
Floodplain Ordinance	YES	
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	No	
Flood Insurance Rate Maps	Yes	
Acquisition of land for open space and public recreation uses	No	
Other		
Administration and Technical		
Identify whether your community has the following administrative and technical capabilities. For smaller jurisdictions without local staff resources, if there are public resources at the next higher level government that can provide technical assistance, indicate so in your comments.		
Administration	Yes/No	Comments
Planning Commission	No	
Mitigation Planning Committee	Yes	

Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	No	
Staff		
Chief Building Official	NA	
Floodplain Administrator	NA	Utilize Parish
Emergency Manager	NA	
Community Planner	NA	
Civil Engineer	NA	
GIS Coordinator	NA	
Grant Writer	NA	
Other		
Technical		
Warning Systems / Service (Reverse 911, outdoor warning signals)	No	
Hazard Data & Information	No	
Grant Writing	No	
Hazus Analysis	No	
Other		
Financial		
Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.		
Funding Resource	Yes/No	Comments
Capital Improvements project funding	Yes	
Authority to levy taxes for specific purposes	No	
Fees for water, sewer, gas, or electric services	Yes	
Impact fees for new development	No	
Stormwater Utility Fee	No	
Community Development Block Grant (CDBG)	Yes	
Other Funding Programs	No	

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

Town of Glenmora

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.		
Glenmora		
Plans	Yes/No	Comments
Comprehensive / Master Plan	No	No written plan currently, 2016
Capital Improvements Plan	No	
Economic Development Plan	No	No written plan currently, 2016
Local Emergency Operations Plan	No	No written plan currently, 2016
Continuity of Operations Plan	No	No written plan currently, 2016
Transportation Plan	No	No written plan currently, 2016
Stormwater Management Plan	No	
Community Wildfire Protection Plan	No	No written plan currently, 2016
Other plans (redevelopment, recovery, coastal zone management)	No	
Building Code, Permitting and Inspections		
Building Code	yes	Planning Commission Requirements
Building Code Effectiveness Grading Schedule (BCEGS) Score	no	
Fire Department ISO/PIAL rating	yes	5
Site plan review requirements	yes	
Land Use Planning and Ordinances		
Zoning Ordinance	No	Currently under review
Subdivision Ordinance	No	Currently under review
Floodplain Ordinance	Yes	

Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	No	Currently under review
Flood Insurance Rate Maps	Yes	Currently under review
Acquisition of land for open space and public recreation uses	No	Currently under review
Other		
Administration and Technical		
Identify whether your community has the following administrative and technical capabilities. For smaller jurisdictions without local staff resources, if there are public resources at the next higher level government that can provide technical assistance, indicate so in your comments.		
Administration	Yes/No	Comments
Planning Commission	yes	Rapides Parish Planning Comm.
Mitigation Planning Committee	Yes	
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	yes	
Staff	Yes / No; FT/PT; % Hazard Mitigation	
Chief Building Official	No	
Floodplain Administrator	yes	Town Clerk
Emergency Manager	Yes	Mayor
Community Planner	no	
Civil Engineer	no	
GIS Coordinator	yes/parish	
Grant Writer	No	
Other		
Technical	Yes / No	
Warning Systems / Service (Reverse 911, outdoor warning signals)	No	
Hazard Data & Information	No	

Grant Writing	No	
Hazus Analysis	No	
Other		
Financial		
Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.		
Funding Resource	Yes/No	Comments
Capital Improvements project funding	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	Yes	LGAP \$10,000.00 2015
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 Prevention/Fire Chief
Natural Disaster or safety related school program	yes	
Storm Ready certification	no	
Firewise Communities certification	no	

Public/Private partnership initiatives addressing disaster-related issues	No	
Other		

Town of Lecompte

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.		
Lecompte		
Plans	Yes/No	Comments
Comprehensive / Master Plan	No	
Capital Improvements Plan	No	
Economic Development Plan	No	
Local Emergency Operations Plan	No	Not specific to Town - but are a part of the Parish EOP
Continuity of Operations Plan	No	
Transportation Plan	No	
Stormwater Management Plan	No	
Community Wildfire Protection Plan	No	
Other plans (redevelopment, recovery, coastal zone management)	No	
Building Code, Permitting and Inspections		
Building Code	No	

Building Code Effectiveness Grading Schedule (BCEGS) Score	No	
Fire Department ISO/PIAL rating	YES	
Site plan review requirements	No	
Land Use Planning and Ordinances		
Zoning Ordinance	YES	
Subdivision Ordinance	No	
Floodplain Ordinance	YES	
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	No	
Flood Insurance Rate Maps	YES	
Acquisition of land for open space and public recreation uses	No	
Other		
Administration and Technical		
Identify whether your community has the following administrative and technical capabilities. For smaller jurisdictions without local staff resources, if there are public resources at the next higher level government that can provide technical assistance, indicate so in your comments.		
Administration	Yes/No	Comments
Planning Commission	YES	
Mitigation Planning Committee	Yes	
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	YES	
Staff		
Chief Building Official	No	
Floodplain Administrator	No	
Emergency Manager	No	
Community Planner	No	

Civil Engineer	No	
GIS Coordinator	No	
Grant Writer	No	
Other		
Technical		
Warning Systems / Service (Reverse 911, outdoor warning signals)	No	
Hazard Data & Information	No	
Grant Writing	No	
Hazus Analysis	No	
Other		
Financial		
Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.		
Funding Resource	Yes/No	Comments
Capital Improvements project funding	Yes	
Authority to levy taxes for specific purposes	No	
Fees for water, sewer, gas, or electric services	Yes	
Impact fees for new development	No	
Stormwater Utility Fee	No	
Community Development Block Grant (CDBG)	Yes	
Other Funding Programs		
Education and Outreach		
Identify education and outreach programs and methods, already in place that could be used to implement mitigation		
activities and communicate hazard-related information.		
Program / Organization	Yes/No	Comments

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

Town of Woodworth

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.		
Woodworth		
Plans	Yes/No	Comments
Comprehensive / Master Plan	NO	
Capital Improvements Plan	NO	
Economic Development Plan	NO	
Local Emergency Operations Plan	NO	RAPIDES PARISH EOP
Continuity of Operations Plan	NO	

Transportation Plan	NO	
Stormwater Management Plan	NO	
Community Wildfire Protection Plan	NO	
Other plans (redevelopment, recovery, coastal zone management)	NO	
Building Code, Permitting and Inspections		
Building Code	YES	RAPC
Building Code Effectiveness Grading Schedule (BCEGS) Score	NO	
Fire Department ISO/PIAL rating	4	PIAL
Site plan review requirements	YES	RAPC
Land Use Planning and Ordinances		
Zoning Ordinance	NO	
Subdivision Ordinance	YES	RAPC
Floodplain Ordinance	YES	RAPC
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	NO	
Flood Insurance Rate Maps	YES	FEMA
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	RAPC
Mitigation Planning Committee	YES	Rapides Parish Mitigation

Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	NO	
Staff		
Chief Building Official	YES	RAPC
Floodplain Administrator	YES	RAPC
Emergency Manager	YES	David Butler II, Mayor
Community Planner	YES	Pan American Engineers
Civil Engineer	YES	Pan American Engineers
GIS Coordinator	YES	RAPC
Grant Writer	YES	Pan American Engineers
Other	NO	
Technical		
Warning Systems / Service (Reverse 911, outdoor warning signals)	NO	
Hazard Data & Information	NO	
Grant Writing	YES	Pan American Engineers
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	General Fund
Authority to levy taxes for specific purposes	YES	Town Council
Fees for water, sewer, gas, or electric services	YES	Town Council
Impact fees for new development	YES	Town Council
Stormwater Utility Fee	YES	Town Council
Community Development Block Grant (CDBG)	YES	State of Louisiana
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	WFD
Natural Disaster or safety related school program	YES	WFD
Storm Ready certification	NO	
Firewise Communities certification	NO	
Public/Private partnership initiatives addressing disaster-related issues	NO	
Other	NO	

Village of Forest Hill

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.		
Forest Hill		
Plans	Yes/No	Comments
Comprehensive / Master Plan	N	

Capital Improvements Plan	Y	UNDER CONSTRUCTION
Economic Development Plan	N	
Local Emergency Operations Plan	N	PARISH PLAN
Continuity of Operations Plan	N	
Transportation Plan	N	
Stormwater Management Plan	N	
Community Wildfire Protection Plan	N	
Other plans (redevelopment, recovery, coastal zone management)	N	
Building Code, Permitting and Inspections		
Building Code	Y	PARISH PLAN
Building Code Effectiveness Grading Schedule (BCEGS) Score	Y	PARISH PLAN
Fire Department ISO/PIAL rating	4	
Site plan review requirements	Y	PARISH PLAN
Land Use Planning and Ordinances		
Zoning Ordinance	Y	
Subdivision Ordinance	Y	
Floodplain Ordinance	Y	
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	N	
Flood Insurance Rate Maps	Y	
Acquisition of land for open space and public recreation uses	Y	
Other		
Administration and Technical		
Identify whether your community has the following administrative and technical capabilities. For smaller jurisdictions without local staff resources, if there are public resources at the next higher level government that can provide technical assistance,		

indicate so in your comments.		
Administration	Yes/No	Comments
Planning Commission	Y	PARISH PLAN
Mitigation Planning Committee	Y	PARISH PLAN
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	Y	LOCAL
Staff		
Chief Building Official	Y	PARISH PLAN
Floodplain Administrator	Y	PARISH PLAN
Emergency Manager	Y	
Community Planner	N	
Civil Engineer	N	
GIS Coordinator	N	
Grant Writer	Y	ENGINEER
Other		
Technical		
Warning Systems / Service (Reverse 911, outdoor warning signals)	N	
Hazard Data & Information	N	
Grant Writing	Y	ENGINEER
Hazus Analysis	N	
Other		
Financial		
Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.		
Funding Resource	Yes/No	Comments
Capital Improvements project funding	Y	UNDER CONSTRUCTION
Authority to levy taxes for specific purposes	N	
Fees for water, sewer, gas, or electric services	Y	
Impact fees for new development	N	

Stormwater Utility Fee	N	
Community Development Block Grant (CDBG)	Y	AS NEEDED
Other Funding Programs	Y	AS NEEDED
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.	Y	
Ongoing public education or information program (responsible water use, fire safety, household preparedness, environmental education)	Y	
Natural Disaster or safety related school program	Y	
Storm Ready certification	Y	
Firewise Communities certification	Y	
Public/Private partnership initiatives addressing disaster-related issues	Y	AS NEEDED
Other		

Village of McNary

Worksheet 4.1: Capability Assessment Worksheet - Village of McNary

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.

McNary

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

Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	No	
Flood Insurance Rate Maps	Yes	
Acquisition of land for open space and public recreation uses	No	
Other		
Administration and Technical		
Identify whether your community has the following administrative and technical capabilities. For smaller jurisdictions without local staff resources, if there are public resources at the next higher level government that can provide technical assistance, indicate so in your comments.		
Administration	Yes/No	Comments
Planning Commission	Yes	Rapides Parish Area Planning Commission
Mitigation Planning Committee	Yes	
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	No	
Staff		
Chief Building Official	No	
Floodplain Administrator	Yes	
Emergency Manager	Yes	
Community Planner	No	
Civil Engineer	Yes	Aligned with local firm not on staff
GIS Coordinator	No	
Grant Writer	No	
Other		
Technical		

Warning Systems / Service (Reverse 911, outdoor warning signals)	No	
Hazard Data & Information	No	
Grant Writing	No	
Hazus Analysis	No	
Other		
Financial		
Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.		
Funding Resource	Yes/No	Comments
Capital Improvements project funding	Yes	
Authority to levy taxes for specific purposes	Yes	
Fees for water, sewer, gas, or electric services	Water	
Impact fees for new development	No	
Stormwater Utility Fee	No	
Community Development Block Grant (CDBG)	Yes	
Other Funding Programs	No	
Education and Outreach		
Identify education and outreach programs and methods, already in place that could be used to implement mitigation		
activities and communicate hazard-related information.		
Program / Organization	Yes/No	Comments
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	No	
Ongoing public education or information program (responsible water use, fire safety, household preparedness, environmental education)	No	

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

Building Inventory

Critical Facility (If Yes, Mark X)	Name of Building	Purpose of Building	Address	City	Latitude	Longitude	Assessed Value	Date Built	Construction Type
Rapides Unincorp									
X	Rapides Parish Highway Department	Public Works	8051 Hwy 28 West	Alexandria	31.2952	-92.5434	\$2,500,000	1972	Metal
X	Echo-Poland Volunteer Fire Department Station 1	Fire Service	9887 Hwy 1 South	Alexandria	31.1392	-92.2820	\$225,000	2008	Metal
X	Echo-Poland Volunteer Fire Department Station 3	Fire Service	1518 Latanier Road	Alexandria	31.1610	-92.3554	\$175,000	2008	Metal
X	Echo-Poland Volunteer Fire Department Station 2	Fire Service	2421 Latanier Road	Alexandria	31.1973	-92.3378	\$175,000	2008	Metal
X	Rapides Parish Fire District 2 Station 1	Fire Service	5104 Ransbottom Drive	Alexandria	N/A	N/A	\$600,000	1953	Reinforced Masonry
X	Rapides Parish Fire District 2 Station 2	Fire Service	6850 England Drive	Alexandria	N/A	N/A	\$650,000	1999	Reinforced Masonry
X	Rapides Parish Fire District 2 Station 3	Fire Service	3722 Church Street	Alexandria	N/A	N/A	\$350,000	1994	Metal
X	Rapides Parish Fire District 2 Station 4	Fire Service	6613 Hot Wells Road	Boyce	N/A	N/A	\$175,000	1984	Metal
X	Rapides Parish Fire District 2 Station 5	Fire Service	20 Kincaid Road	Boyce	N/A	N/A	\$800,000	2003	Reinforced Masonry
X	Rapides Parish Fire District 7 (Ruby-Kolin) Station 1	Fire Service	5717 Old Marksville Hwy	Deville	31.2514	-92.2865	\$175,000	2001	Metal

X	Rapides Parish Fire District 7 (Ruby-Kolin) Station 2	Fire Service	163 Palmer Chapel Road	Pineville	31.2829	-92.3271	\$850,000	1998	Reinforced Masonry
X	Rapides Parish Fire District 8 (Coltile/Gardner) Station 1	Fire Service	55 Parker Road	Boyce	N/A	N/A	\$350,000	1976	Metal
X	Rapides Parish Fire District 8 (Coltile/Gardner) Station 2	Fire Service	415 St Clair Road	Boyce	N/A	N/A	\$175,000	2003	Metal
X	Rapides Parish Fire District 6 (Denville) Station 1	Fire Service	660 Hwy 1207	Denville	N/A	N/A	N/A	2008	Metal
X	Rapides Parish Fire District 6 (Denville) Station 2	Fire Service	7557 Hickory Grove Road	Denville	N/A	N/A	N/A	1993	Metal
X	Rapides Parish Fire District 6 (Denville) Station 3	Fire Service	10315 Hwy 28 East	Denville	N/A	N/A	N/A		Metal
X	Rapides Parish Fire District 5 (Oak Hill) Station 1	Fire Service	261 Havens Road	Elmer	N/A	N/A	\$239,000	1987	Metal
X	Rapides Parish Fire District 5 (Oak Hill) Station 2	Fire Service	2258 Hwy 121	Elmer	N/A	N/A	\$149,000	1987	Metal
X	Rapides Parish Fire District 5 (Oak Hill) Station 3	Fire Service	6740 Hwy 112	Elmer	N/A	N/A	\$118,000	1987	Metal
X	Rapides Parish Fire District 5 (Oak Hill) Station 4	Fire Service	16 Morrison Road	Elmer	N/A	N/A	\$118,000	1987	Metal
X	Rapides Parish Fire District 5	Fire Service	3569 Hwy 121	Elmer	N/A	N/A	\$95,000	1988	Metal

	(Oak Hill) Station 5								
X	Rapides Parish Fire District 14 (Flatwoods) Station 1	Fire Service	2051 Hwy 8	Flatwoods	N/A	N/A	N/A	2008	Metal
X	Rapides Parish Fire District 14 (Flatwoods) Station 2	Fire Service	255 Mora Road	Flatwoods	N/A	N/A	N/A	2008	Metal
X	Rapides Parish Fire District 14 (Flatwoods) Station 3	Fire Service	1082 Hwy 8	Flatwoods	N/A	N/A	\$175,000	2008	Metal
X	Forest Hill Volunteer Fire Department Station 1	Fire Service	4300 Hwy 112	Forest Hill	N/A	N/A	N/A	N/A	Metal
X	Forest Hill Volunteer Fire Department Station 2	Fire Service	22 Fish Hatchery Road	Forest Hill	N/A	N/A	N/A	N/A	Metal
X	Forest Hill Volunteer Fire Department Station 3	Fire Service	751 Butler Cemetery Road	Forest Hill	N/A	N/A	N/A	N/A	Metal
X	Rapides Parish Fire District 10 (Plainview) Station 1	Fire Service	10941 Hwy 112	Glenmora	N/A	N/A	N/A	N/A	Metal
X	Rapides Parish Fire District 10 (Plainview) Station 2	Fire Service	10016 Hwy 112	Glenmora	N/A	N/A	N/A	N/A	Metal
X	Rapides Parish Fire District 10 (Plainview) Station 3	Fire Service	110 David Doyle Road	Glenmora	N/A	N/A	N/A	N/A	Metal
X	Rapides Parish Fire District 10 (Plainview) Station 4	Fire Service	1799 Hwy 462	Glenmora	N/A	N/A	N/A	N/A	Metal

X	Rapides Parish Fire District 11 (Spring Creek) Station 1	Fire Service	757 Hwy 113	Glenmora	N/A	N/A	N/A	2001	Metal
X	Rapides Parish Fire District 11 (Spring Creek) Station 2	Fire Service	71 Peniel Loop Road	Glenmora	N/A	N/A	N/A	2001	Metal
X	Rapides Parish Fire District 11 (Spring Creek) Station 3	Fire Service	401 Athus Melder Road	Glenmora	N/A	N/A	N/A	2001	Metal
X	Rapides Parish Fire District 11 (Spring Creek) Station 4	Fire Service	13282 Hwy 165	Glenmora	N/A	N/A	N/A	2002	Metal
X	Lecompte Volunteer Fire Department Station 1	Fire Service	113 Wall Street	Lecompte	N/A	N/A	\$149,000	1950	Metal
X	Lecompte Volunteer Fire Department Station 2	Fire Service	778 Hwy 470	Lecompte	N/A	N/A	\$49,000	2000	Metal
X	Rapides Parish Fire District 3 (Alpine) Station 1	Fire Service	8056 Old Shreveport Hwy	Pineville	N/A	N/A	\$261,000	2004	Metal
X	Rapides Parish Fire District 3 (Alpine) Station 2	Fire Service	1420 Tioga Road	Pineville	N/A	N/A	\$748,000	1988	Reinforced Masonry
X	Rapides Parish Fire District 3 (Alpine) Station 3	Fire Service	3710 Rigolette Road	Pineville	N/A	N/A	\$172,000	1997	Metal
X	Rapides Parish Fire District 4 (Holiday Village) Station 1	Fire Service	5400 Hwy 28 East	Pineville	N/A	N/A	\$853,000	1978	Reinforced Masonry
X	Rapides Parish Fire District 4	Fire Service	6970 Hwy 116	Pineville	N/A	N/A	\$245,000	1983	Metal

	(Holiday Village) Station 2								
X	Rapides Parish Fire District 4 (Holiday Village) Station 3	Fire Service	201 Radio Road	Pineville	N/A	N/A	\$93,000	1990	Metal
X	Rapides Parish Fire District 4 (Holiday Village) Station 4	Fire Service	597 Philadelphia Road	Pineville	N/A	N/A	\$93,000	1978	Metal
X	Rapides Parish Courthouse	Government Administration	701 Murray St	Alexandria	N/A	N/A	\$50,000,000	N/A	Reinforced Masonry
X	Rapides Parish Coliseum	Shelter	5600 Coliseum Blvd	Alexandria	N/A	N/A	\$30,000,000	N/A	Concrete
Alexand.									
	Bleachers & Concessions Bringham Baseball Stadium	Baseball Field	1 Babe Ruth Drive	Alexandria	31.286629	-92.458773	\$1,165,600	1992	Concrete
	Home Team Clubhouse Bringham Baseball Stadium	Home Team Clubhouse	1 Babe Ruth Drive	Alexandria	31.286113	-92.458023	\$186,600	1992	Wood
	Visitors Clubhouse Bringham Baseball Stadium	Visitors Clubhouse	1 Babe Ruth Drive	Alexandria	31.287301	-92.458188	\$162,500	1988	Wood
	Amphitheater (Owner Red River Waterway)		1 Johnston Street	Alexandria	31.311942	-92.442981	N/A	N/A	
	Beagle Club	Recreational Building	100 Block Harold Miles Park Road	Alexandria	31.345627	-92.549965	\$95,000	1940	Wood
	Main Building (Harold Miles Park)	Recreational Building	100 Block Harold Miles Park Road	Alexandria	31.343584	-92.538623	\$122,700	1940	Concrete
	Pit Building (Harold Miles Park)	Pit Building	100 Block Harold Miles Park Road	Alexandria	31.343597	-92.538996	\$5,800	1940	Concrete

	Restrooms (Harold Miles Park)	Restrooms @ Harold Miles Park	100 Block Harold Miles Park Road	Alexandria	31.343877	-92.539025	\$19,600	1960	Concrete
	Storage Shed (Harold Miles Park)	Storage Shed	100 Block Harold Miles Park Road	Alexandria	31.343725	-92.539044	\$15,500	1960	Wood
XX	Water Station (McNutt Avenue)	Water Station	100 Block Harold Miles Park Road	Alexandria	31.340919	-92.53931	\$21,400	1950	Reinforced Masonry
XX	Public Safety Complex	Police & Fire Offices	1000 Bolton Avenue	Alexandria	31.303332	-92.453177	\$6,086,000	1999	Reinforced Masonry
	Bus Station	Bus Station	1001 Main Street	Alexandria	31.311772	-92.443633	\$427,100	1987	Reinforced Masonry
XX	D.G. Hunter Electric Generating Station	Generating Station	1011 N. Third Street	Alexandria	31.320964	-92.461771	\$89,161,300	1957 Upgrade d 1976	Concrete
	Generating Station Storage Building	Storage Building	1011 N. Third Street	Alexandria	31.320964	-92.461771	\$39,600	1950	Metal
	Generating Station Storage Shed	Storage Building	1011 N. Third Street	Alexandria	31.320964	-92.461771	\$12,400	1950	Metal
	Generating Station Maintenance	Maintenance Building	1011 N. Third Street	Alexandria	31.320964	-92.461771	\$78,000	1968	Metal
XX	Generating Station Water Treatment	Water Treatment Station	1011 N. Third Street	Alexandria	31.320114	-92.462306	\$180,000	1950	Reinforced Masonry
	Generating Station Yard	Yard	1011 N. Third Street	Alexandria	31.320964	-92.461771	\$10,321,000	1960	
XX	D.G. Hunter Electric Generating Station Cooling Towers	Cooling Towers	1011 N. Third Street	Alexandria	31.32105	-92.463014	\$4,200,000	1957/1988	Metal
XX	Electrical Distribution Office Building	Electrical Distribution Office Building	1015 N. Third Street	Alexandria	31.321957	-92.463743	\$1,494,825	1970	Metal
XX	Electrical Distribution Office (Old)	Electrical Distribution Office (Old)	1015 N. Third Street	Alexandria	31.321957	-92.463743	\$24,000	1988	Metal

XX	Electrical Distribution Building	Electrical Distribution Building	1015 N. Third Street	Alexandria	31.321957	-92.463743	\$15,000	1950	Metal
XX	Electrical Distribution Storage Building	Electrical Distribution Storage Building	1015 N. Third Street	Alexandria	31.321957	-92.463743	\$30,000	1950	Metal
XX	Storage Tank (Willow Glen)	Water Storage Tank	1100 Block of Willow Glen River Road	Alexandria	31.287264	-92.423952	\$926,000	1956	
XX	Fire Station No. 2	Fire Station	1103 Broadway Avenue	Alexandria	31.296052	-92.436075	\$395,050	1962	Reinforced Masonry
XX	Lift Station Pump House (Willow Glen River Road)	Pump House	1155 Willow Glen	Alexandria	31.28682	-92.425797	\$846,500	1957 Upgrade d 1974	Reinforced Masonry
XX	Lift Station Storage (Old Office)	Storage	1155 Willow Glen	Alexandria	31.28682	-92.425797	\$49,000	1957	Metal
XX	Lift Station Sulfuric Dioxide Building	Building	1155 Willow Glen	Alexandria	31.28682	-92.425797	\$26,300	1960	Metal
	Yard (Willow Glen River Road)	Yard	1155 Willow Glen	Alexandria	31.28682	-92.425797	\$53,500	1957	
XX	Storage Tank (McKeithen Dr.)	Water Storage Tank	1200 Block of McKeithen Drive	Alexandria	31.271114	-92.537031	\$1,030,000	1989	
	Coughlin-Sanders Performing Arts Center	Performing Arts Center	1202 Third Street	Alexandria	31.309892	-92.443474	\$8,353,689	2004	Steel
XX	Waste Treatment Pump House	Pump House	1212 Hudson Blvd.	Alexandria	31.278204	-92.418642	\$1,070,000	1974	Reinforced Masonry
XX	Waste Treatment Administration, Operations & Lab Testing	Office Building	1212 Hudson Blvd.	Alexandria	31.278871	-92.417195	\$3,994,000	1974	Reinforced Masonry
	Waste Treatment Vehicle Storage & Shop	Vehicle Storage & Shop	1212 Hudson Blvd.	Alexandria	31.278039	-92.418968	\$80,000	1974	

XX	Waste Treatment Sludge Handling	Waste Treatment	1212 Hudson Blvd.	Alexandria	31.278871	-92.417195	\$694,500	1989	
	Yard (Waste Treatment)	Yard	1212 Hudson Blvd.	Alexandria	31.278871	-92.417195	\$20,000,000	1974	
XX	Fire Station No. 5	Fire Station	1237 Texas Avenue	Alexandria	31.289136	-92.472628	\$435,500	1983	Reinforced Masonry
	Cheatham Park Sparypark/Restroom	Sparypark/Restroom	1315 Broadway Avenue	Alexandria	31.294025	-92.436849	\$269,179	2009	Steel
	Bolton House-River Oak Square	Art Studios & Display	1330 Main Street	Alexandria	31.309859	-92.44261	\$690,000	1990	Reinforced Masonry
	River Oaks Arts Center	Art Studio & Gallery	1330 Main Street	Alexandria	31.309859	-92.44261	\$1,700,000	2000	Reinforced Masonry
	Cultural Arts/Treehouse (The Rapides Exploratory House)	Occupied by Cultural Arts/Treehouse	1403 Third Street	Alexandria	31.309445	-92.441752	\$2,600,000	1960	Steel
	Old Jake's Building	Leased	1501 Wimbledon	Alexandria	31.27658	-92.4758	\$4,416,400	1984	Concrete
XX	Lift Station Pump House (Atwood)	Pump House	1704 Atwood Street	Alexandria	31.277497	-92.447529	\$589,500	1985	Reinforced Masonry
XX	Lift Station Pump House (Atwood A)	Pump House	1704 Atwood Street	Alexandria	31.277681	-92.44762	\$373,000	1957	Reinforced Masonry
	Yard (Atwood)	Yard	1704 Atwood Street	Alexandria	31.277497	-92.447529	\$13,500	1957	
	Boys & Girls Club	Boys & Girls Club	1801 Sylvester Street	Alexandria	31.288765	-92.453243	\$1,237,500	1987	Concrete
XX	Fire Station No. 3	Fire Station	1830 Rapides Avenue	Alexandria	31.311407	-92.463649	\$419,500	1944	Reinforced Masonry
XX	Storage Tank (Industrial Park Rd.)	Water Storage Tank	2000 Block of Industrial Park Road	Alexandria	31.337219	-92.464619	\$553,000	1983	
	Cheatham Park Building	Office Building	2000 Jones Avenue	Alexandria	31.292268	-92.435723	\$251,000	1956 Upgrade 2000	Concrete
	CORP of Engineers Building	CORP of Engineers Offices	2010 Industrial Park Road	Alexandria	31.328084	-92.482286	\$113,000	1990	Reinforced Masonry

XX	Administration Building (CF-A)	Administration Building	2021 Industrial Park Road	Alexandria	31.329574	-92.46935	\$2,927,100	1996	Concrete
XX	Building Services Building (CF-R)	Building Services Building	2021 Industrial Park Road	Alexandria	31.329935	-92.469156	\$561,100	1996	Concrete
XX	Carpentry Shop Building (CF-C)	Carpentry Shop	2021 Industrial Park Road	Alexandria	31.330187	-92.46867	\$336,600	1996	Concrete
XX	Employee Facility Building (CF-E)	Employee Building	2021 Industrial Park Road	Alexandria	31.329846	-92.468747	\$597,400	1996	Concrete
XX	Fire Training Building (CF-F)	Fire Training Building	2021 Industrial Park Road	Alexandria	31.332955	-92.466315	\$49,500	1996	Concrete
XX	Gas Department Building (CF-G)	Gas Department	2021 Industrial Park Road	Alexandria	31.329708	-92.468382	\$524,620	1996	Concrete
XX	Streets & Drainage Department Building (CF-S)	Street & Drainage Department	2021 Industrial Park Road	Alexandria	31.329474	-92.468868	\$618,800	1996	Concrete
XX	Traffic Department Building (CF-P)	Traffic Department	2021 Industrial Park Road	Alexandria	31.330086	-92.468907	\$603,500	1996	Concrete
XX	Water Department Building (CF-W)	Water Department	2021 Industrial Park Road	Alexandria	31.329578	-92.468603	\$523,600	1996	Concrete
XX	Vehicle Maintenance Department Building (CF-S)	Vehicle Maintenance	2021 Industrial Park Road	Alexandria	31.330329	-92.46711	\$6,951,300	1996	Concrete
XX	Vehicle Fueling Center	Vehicle Fueling Center	2021 Industrial Park Road	Alexandria	31.329451	-92.466507	\$164,000	1996	Steel
	Vehicle Wash Facility	Vehicle Wash Facility	2021 Industrial Park Road	Alexandria	31.328504	-92.467248	\$66,500	1996	Concrete
XX	Warehouse Building (CF-CW)	Warehouse	2021 Industrial Park Road	Alexandria	31.331703	-92.466276	\$1,740,600	1996	Concrete
	Compound Yard	Compound Yard	2021 Industrial Park Road	Alexandria	31.329471	-92.467485	\$71,000	1996	
XX	Yard Coverings	Yard Coverings	2021 Industrial Park Road	Alexandria	31.329471	-92.467485	\$221,000	1996	Metal
	Yard Storage Building	Yard Storage Building	2021 Industrial Park Road	Alexandria	31.329471	-92.467485	\$51,500	1996	Concrete
	Yard Storage Structure	Yard Storage Structure	2021 Industrial Park Road	Alexandria	31.329471	-92.467485	\$30,500	1996	Metal

XX	Purchasing Storage Facility	Surplus Storage	2021 Industrial Park Road	Alexandria	31.332273	-92.46688	\$500,000	1999	Concrete
XX	Print Shop	Print Shop	2021 Industrial Park Road	Alexandria	31.332019	-92.466187	\$452,000	1996	Concrete
XX	Recreation Building	Recreation Building	2021 Industrial Park Road	Alexandria	31.328509	-92.467801	\$500,000	2011	Concrete
XX	Utility Services Building (CF-US)	Utility Services Department	2021 Industrial Park Road	Alexandria	31.329009	-92.467959	\$835,000	1999	Concrete
	Martin Community Center	Community Center/Offices	2301 Mill Street	Alexandria	31.293604	-92.444745	\$2,750,000	2004	Reinforced Masonry
	Airpark Repair Building	Repair Building	2416 Lee Street	Alexandria	31.292329	-92.452327	\$93,600	1957	Metal
	Recreation Dept./Sign Shop	Recreation Dept./Sign Shop	2418 Lee Street	Alexandria	31.292519	-92.452599	\$106,150	1960	Steel
	Recreation Dept. Storage Shed	Storage Shed	2418 Lee Street	Alexandria	31.292543	-92.452462	\$6,750	1994	Steel
	Fire Department Storage	Fire Department Storage	2419 Hickory Street	Alexandria	31.292273	-92.452863	\$141,000	1957	Concrete
XX	Fire Alarm Headquarters Shed	Fire Alarm Headquarters Shed	2419 Hickory Street	Alexandria	31.292273	-92.452863	\$17,400	1957	Metal
	Fire Training Academy	Training Academy	2420 Lee Street	Alexandria	31.292138	-92.452553	\$198,650	1940	Wood
XX	Lift Station Pump House (Parkway)	Pump House	2500 Block of Los Angeles Street	Alexandria	31.286117	-92.436907	\$190,000	1989	Metal
	Multi-Purpose Building	Concession Stand/Restrooms/Multi purpose	2500 Block of Willow Glen River Road	Alexandria	31.281293	-92.428683	\$534,000	2004	Concrete
XX	Fire Station No. 4 (A)	Fire Station	2500 Lee Street	Alexandria	31.291988	-92.452466	\$785,150	1944	Reinforced Masonry
XX	Fire Station No. 4 (B)	Snorkel Shed	2500 Lee Street	Alexandria	31.291988	-92.452466	\$51,200	1944	Metal
XX	Fire Station No. 4 (C)	Possum House	2500 Lee Street	Alexandria	31.291988	-92.452466	\$5,950	1963	Concrete
	Ben Bradford Field	Baseball Field	2500 Sylvester Street	Alexandria	31.290263	-92.452603	\$200,800	1992	Concrete
XX	Pump Station (Lee Street)	Pump Station	2502 Lee Street	Alexandria	31.291559	-92.452246	\$357,200	1950	Concrete

XX	Pump Station and Storage Tank (City Park)	Water Storage Tank	2502 Lee Street	Alexandria	31.29107	-92.452437	\$352,700	1966	
	Harmon Park Sparypark/Restroom	Sparypark/Restroom	2510 Monroe Street	Alexandria	31.303903	-92.470476	\$313,638	2009	Steel
	Pavilion Structure @ Cheatham Park	Pavilion Structure	2700 Block of Jones Street	Alexandria	31.292393	-92.436909	\$242,000	1994	Concrete
	Restrooms @ Cheatham Park	Restrooms	2700 Block of Jones Street	Alexandria	31.292341	-92.436566	\$36,000	1994	Concrete
	Handi-Works Productions	Former Sheltered Workshop	2700 Lee Street	Alexandria	31.288827	-92.45219	\$546,000	1968	Reinforced Masonry
	Golf Course Club House	Golf Club House	271 Vandenburg Drive	Alexandria	31.304717	-92.537386	\$1,488,000	2002	Metal
	Golf Maintenance Building	Maintenance Building	271 Vandenburg Drive	Alexandria	31.304104	-92.536103	\$280,301	2001	Concrete
	Golf Half-way Buildings (3)	Golf Half-way Houses	271 Vandenburg Drive	Alexandria			\$25,000	2004	Metal
	Johnny Downs Complex (Baseball)	Baseball Press Box	271 Vandenburg Drive	Alexandria	31.297857	-92.532301	\$450,000	2004	Concrete
	Johnny Downs Complex (Soccer)	Soccer Press Box	271 Vandenburg Drive	Alexandria	31.298979	-92.534021	\$250,00	2004	Concrete
	Johnny Downs Complex (Softball)	Softball Press Box	271 Vandenburg Drive	Alexandria	31.297311	-92.534076	\$450,000	2004	Concrete
	Alexandria Men's Softball Field (Diamond #1)	Softball Field	2726 Masonic Drive	Alexandria	31.290373	-92.452703	\$153,500	1970	Metal
	Bringhurst Park Sparypark/Restroom	Sparypark/Restroom	2800 Masonic Drive	Alexandria	31.289832	-92.455235	\$691,204	2009	Steel
	Youth Playground	Gazebo & Restrooms @ Park	2800 Masonic Drive	Alexandria	31.289737	-92.455093	\$155,500	1986	Concrete
	Alexandria Tennis Complex	Tennis Complex	2801 Masonic Drive	Alexandria	31.289589	-92.453518	\$205,000	1992	Concrete

	Cheatham Park Baseball Field	Baseball Field	2808 Jones Avenue	Alexandria	31.290996	-92.434808	\$304,500	1955 Upgrade d 2000	Concrete
	Bringinghurst Golf Club	Club House	2822 Masonic Drive	Alexandria	31.288856	-92.455271			
	Storage Tank (N. Bolton Ave.)	Water Storage Tank	2900 Block of N. Bolton Avenue	Alexandria	31.327177	-92.481213	\$432,000	1956	
XX	138 kV Substation (Bayou Rapides)	Electric Substation	3010 Rapides Avenue	Alexandria	31.307132	-92.476099	\$3,327,200	1974 Upgrade d 1998	
XX	Zoo Kitchen Building	Kitchen Operations for Zoo	3016 Cotton Wright Road	Alexandria	31.288881	-92.460178	\$575,000	2008	Concrete
XX	Animal Hospital	Animal Hospital for Zoo	3016 Masonic Drive	Alexandria	31.288803	-92.45714	\$310,450	1976	Concrete
	Restroom Building	Restrooms @ Zoo	3016 Masonic Drive	Alexandria	31.288803	-92.45714	\$40,000	1992	Concrete
	Concession Stand	Concession Stand	3016 Masonic Drive	Alexandria	31.288404	-92.45902	\$12,700	1960 Upgrade d 1986	Wood
XX	Education Building	Zoo Education Building	3016 Masonic Drive	Alexandria	31.288803	-92.45714	\$66,200	1974	Wood
XX	Far Side Maintenance Office	Maintenance Office @ Zoo	3016 Masonic Drive	Alexandria	31.288803	-92.45714	\$103,150	1997	Metal
XX	Fotaz Storage Building	Storage Building @ Zoo	3016 Masonic Drive	Alexandria	31.288803	-92.45714	\$36,600	1939	Metal
XX	John Knox Bathhouse Building	Alligator Pen	3016 Masonic Drive	Alexandria	31.288803	-92.45714	\$994,000	1939	Reinforced Masonry
XX	John Knox Pool Filter Building	Pool Filter Building	3016 Masonic Drive	Alexandria	31.288803	-92.45714	\$88,000	1971	Reinforced Masonry
XX	Kitchen Building (Old)	Kitchen Building (Old)	3016 Masonic Drive	Alexandria	31.288803	-92.45714	\$73,000	1996	Wood
XX	MacDonald's Farm Barn	Barn	3016 Masonic Drive	Alexandria	31.288803	-92.45714	\$21,000	1971	Wood
	Maintenance Vehicle Canopy	Vehicle Canopy	3016 Masonic Drive	Alexandria	31.288803	-92.45714	\$10,700	1995	
XX	Zoo Entrance Buildings (New)	Zoo Entrance - Office, Gift Shop, Ticket Booth & Restrooms	3016 Masonic Drive	Alexandria	31.287725	-92.457295	\$495,550	1993	Concrete

XX	Zoo Entrance (Old)	Zoo Entrance (Old)	3016 Masonic Drive	Alexandria	31.287396	-92.458855	\$196,000	1989	Wood
	Pavilion Structure	Pavilion Structure	3016 Masonic Drive	Alexandria	31.288579	-92.458344	\$54,100	1997	Metal
XX	Snake House	Snake House	3016 Masonic Drive	Alexandria			\$18,000	1992	Wood
	Train Depot	Train Depot	3016 Masonic Drive	Alexandria	31.287793	-92.457706	\$314,700	1990	Wood
XX	Louisiana Habitat - Zoo	Louisiana Habitat	3016 Masonic Drive	Alexandria	31.28912	-92.458067	\$2,510,500	1996	
XX	138 kV Substation (Willow Glen)	Electric Substation	3031 Willow Glen River Road	Alexandria	31.278547	-92.433021	\$3,800,000	1960 Upgrade d 1995	
XX	John Eskew Training Center- BLDG. No. 1	Training Center	3136 Cotton Wright Road	Alexandria	31.287358	-92.457557	\$349,000	1960	Concrete
XX	John Eskew Training Center- BLDG. No. 2	Training Center	3136 Cotton Wright Road	Alexandria	31.287596	-92.45776	\$309,000	1960	Concrete
XX	John Eskew Training Center- BLDG. No. 3	Training Center	3136 Cotton Wright Road	Alexandria	31.287675	-92.457546	\$358,000	2000	Steel
	Youth Baseball Complex	Baseball Field	3150 Masonic Drive	Alexandria	31.285041	-92.459732	\$660,500	1988	Concrete
	Alexandria Community Center	Community Center	317 Bolton Avenue	Alexandria	31.307949	-92.457293	\$1,736,700	1979	Reinforced Masonry
XX	Storage Tank (Rosalino St.)	Water Storage Tank	3400 Block of Rosalino Street	Alexandria	31.289907	-92.474647	\$927,000	1956	
XX	233 kV & 138 kV Substation (Twin Bridges)	Electric Substation	341 Twin Bridges Road	Alexandria	31.268473	-92.513446	\$27,251,500	1983 Upgrade d 2002	
XX	Pump Station (Standpipe Road)	Pump Station	3410 Horseshoe Drive	Alexandria	31.235055	-92.462331	\$327,600	1968	Reinforced Masonry
XX	Chlorine Building (Adams Pump Station)	Chlorine Building	3410 Horseshoe Drive	Alexandria	31.235213	-92.462334	\$18,000	1968	
XX	Pump Station Storage Building (Adams)	Storage Building	3410 Horseshoe Drive	Alexandria	31.235337	-92.462105	\$19,000	1968	Metal
	Yard (Adams Pump Station)	Yard	3410 Horseshoe Drive	Alexandria	31.235211	-92.462699	\$1,360,000	1968	

XX	Storage Tank (Roadway Station)	Water Storage Tank	3410 Horseshoe Drive	Alexandria	31.234756	-92.462478	\$120,000	1998	
XX	138 kV Substation (Sterks)	Electric Substation	3803 Sterks Road	Alexandria	31.272485	-92.44229	\$3,950,000	1980 Upgrade d 1995	
	Martin Luther King Center	Community Center	3807 Smash Avenue	Alexandria	31.278083	-92.432512	\$395,800	1957	Reinforced Masonry
XX	Lift Station Pump House (Prescott)	Pump House	3811 Prescott Road	Alexandria	31.277211	-92.468089	\$156,000	1974	Reinforced Masonry
XX	138 kV Substation (Prescott)	Electric Substation	3925 Prescott Road	Alexandria	31.273182	-92.470832	\$3,326,600	1967 Upgrade d 1973	
XX	2400 Volt Substation (Prescott)	Electric Substation	3925 Prescott Road	Alexandria	31.276623	-92.468218	\$175,000	1950	
XX	Lift Station Pump House (Casson)	Pump House	431 Casson Street	Alexandria	31.306724	-92.441298	\$676,000	1974	Reinforced Masonry
XX	Lift Station Pump House (Masonic)	Pump House	4711 Masonic Drive	Alexandria	31.271714	-92.467872	\$561,700	1974	Reinforced Masonry
	Farmer Market	Farmer's Market	500 N. Third Street	Alexandria	31.320471	-92.454709	\$312,750	1974	Concrete
	Old Naval Reserve Center	Unoccupied (Except for Police Training)	501 Casson Street	Alexandria	31.306374	-92.441643	\$100,000	1940	Concrete
	Genealogical & Historical Library	Historical Library	503 Washington Street	Alexandria	31.309008	-92.444673	\$640,000	1907 Restore d 1965	Reinforced Masonry
	Riverfront Center Parking Garage	Parking Garage	505 Fourth Street	Alexandria	31.31223	-92.447561	\$2,821,026	1995	Concrete
XX	Pump Station (Monroe Street)	Pump Station	505 Monroe Street	Alexandria	31.314614	-92.451386	\$863,500	1956	Reinforced Masonry
XX	City Court Building	City Court Building	515 Washington Street	Alexandria	31.308788	-92.444988	\$2,134,700	1999	Concrete
XX	Fire Station No. 1 (A)	Fire Station	518 Lee Street	Alexandria	31.308571	-92.444724	\$1,326,100	1957	Reinforced Masonry
XX	Fire Station No. 1 (B)	Truck Repair Garage	518 Lee Street	Alexandria	31.308571	-92.444724	\$152,000	1957	Reinforced Masonry

XX	Animal Shelter	Housing for Animals	530 N. Third Street	Alexandria	31.321506	-92.454343	\$253,500	1996	Concrete
XX	Animal Shelter	Office Building	531 N. Third Street	Alexandria	31.321506	-92.454343	\$39,200	1997	Concrete
	Rapides Parish Police Jury Offices	Former Utility Offices / Parking Lot for COA	607, 617, 621 Johnston Street	Alexandria	31.308991	-92.445937	\$210,000	1962	Reinforced Masonry
XX	Utility Office, Engineering & Planning Division (Former Regions Bank Building)	Utility Office, Engineering & Planning Division	625 Murray Street	Alexandria	31.309396	-92.446459	\$9,600,000	1981	Concrete
	Fulton Convention Complex	Convention Center, Dining Capabilities & Meeting Rooms	701 Fourth Street	Alexandria	31.312767	-92.446698	\$8,265,000	1984	Reinforced Masonry
	Alexander Fulton Hotel Tower	Offices & Guest Rooms	701 Fourth Street	Alexandria	31.312767	-92.446698	\$16,849,435	1984	Reinforced Masonry
	Riverfront Convention Center	Convention Center	707 Main Street	Alexandria	31.313413	-92.445915	\$17,059,650	1995	Concrete
	Broadway Resource Center	Public Use Community Center	712 Broadway Avenue	Alexandria	31.299034	-92.435804	\$970,000	2004	
XX	Elliot & Foisy Substation	Electric Substation	725 Elliott Street	Alexandria	31.311263	-92.450192	\$3,191,179	1998	
XX	Storage Tank (Monore St.)	Water Storage Tank	742 Hamilton Street	Alexandria	31.314777	-92.45327	\$926,000	1956	
	Alexandria Teen Center	Teen Center	815 Casson Street	Alexandria	31.304934	-92.443103	\$429,900	1978	Concrete
XX	City Hall	City Hall	913 Third Street	Alexandria	31.311874	-92.444788	\$10,365,100	1963	Concrete
	Vietnam War Memorial	Memorial Wall	915 Third Street	Alexandria	31.311874	-92.444788	\$3,000	1990	
XX	Fire Station No. 6	Fire Station	916 Twin Bridges Road	Alexandria	31.265199	-92.492362	\$501,650	1940	Reinforced Masonry
XX	Storage Tanks & Control House (Castor Plunge Road)	Storage Tank & Control House	Castor Plunge Road (National Forest Sec. 287)	Woodworth	31.177388	-92.550646	\$37,800	1968	Reinforced Masonry
XX	Yard - Storage Tanks (Castor Plunge)	Water Storage Tank	Castor Plunge Road (National Forest Sec. 287)	Woodworth	31.177388	-92.550646	\$840,000	1968	N/A

XX	Lift Station Pump House (Upper 3rd)	Pump House	Under I-49 @ Power Plant (1000 Block of N. Third Street)	Alexandria	31.3246	-92.460321	\$203,000	1974	Reinforced Masonry
XX	Well # R-425	Water Well	235 Harold Miles	Alexandria	31.340914	-92.539308	N/A	1942	N/A
XX	Well # R-464	Water Well	6145 Hwy 1 North	Alexandria	31.345235	-92.52554	N/A	1952	N/A
XX	Well # R-610	Water Well	1005 N 3rd Street	Alexandria	31.322	-92.4608	N/A	1956	N/A
XX	Well # R-612	Water Well			31.341309	-92.513289	N/A	1956	N/A
XX	Well # R-748	Water Well	2612 Lee Street	Alexandria	31.290861	-92.45226	N/A		N/A
XX	Well # R-823, R-825 & R-1203	Water Wells	N/A	N/A	31.270263	-92.45159	N/A	1963, 1963 & 1982	N/A
XX	Well # R-833 & R-838	Water Well	5909 Coty	Alexandria	31.264839	-92.497884	N/A		N/A
XX	Well # R-837	Water Well	5512 Coliseum Boulevard	Alexandria	31.297892	-92.500127	N/A		N/A
XX	Well # R-839	Water Well	5516 Coliseum Boulevard	Alexandria	31.297892	-92.500127	N/A		N/A
XX	Well # R-875	Water Well	4931 Betty Street	Alexandria	31.259211	-92.443705	N/A	1967	N/A
XX	Well # R-905	Water Well	N/A	N/A	31.131342	-92.607411	N/A	1967	N/A
XX	Well # R-906	Water Well	N/A	N/A	31.136307	-92.613301	N/A	1967	N/A
XX	Well # R-907	Water Well	N/A	N/A	31.141441	-92.619148	N/A	1967	N/A
XX	Well # R-909 & R-937	Water Wells	N/A	N/A	31.144977	-92.626023	N/A	1967	N/A
XX	Well # R-910	Water Well	N/A	N/A	31.144909	-92.642631	N/A	1967	N/A
XX	Well # R-912 & R-914	Water Wells	N/A	N/A	31.144477	-92.65918	N/A	1968	N/A
XX	Well # R-915 & R-932	Water Wells	N/A	N/A	31.138609	-92.662685	N/A	1967	N/A
XX	Well # R-916	Water Well	N/A	N/A	31.133169	-92.655569	N/A	1967	N/A
XX	Well # R-918	Water Well	N/A	N/A	31.126874	-92.652127	N/A	1967	N/A
XX	Well # R-920	Water Well	N/A	N/A	31.126741	-92.625612	N/A	1967	N/A
XX	Well # R-921	Water Well	N/A	N/A	31.127346	-92.633517	N/A	1967	N/A
XX	Well # R-922	Water Well	N/A	N/A	31.124475	-92.620818	N/A	1967	N/A
XX	Well # R-923	Water Well	N/A	N/A	31.118216	-92.619979	N/A	1967	N/A
XX	Well # R-924	Water Well	N/A	N/A	31.114604	-92.609295	N/A	1967	N/A
XX	Well # R-925	Water Well	N/A	N/A	31.109619	-92.604823	N/A	1967	N/A
XX	Well # R-927	Water Well	N/A	N/A	31.115752	-92.598859	N/A	1967	N/A
XX	Well # R-928	Water Well	N/A	N/A	31.120678	-92.606043	N/A	1967	N/A
XX	Well # R-929	Water Well	N/A	N/A	31.127228	-92.602917	N/A	1967	N/A

XX	Well # R-930	Water Well	N/A	N/A	31.102527	-92.598382	N/A	1967	N/A
XX	Well # R-933 & R-936	Water Wells	N/A	N/A	31.144592	-92.654524	N/A	1967	N/A
XX	Well # R-934	Water Well	N/A	N/A	31.14496	-92.634291	N/A	1967	N/A
XX	Well # R-1202	Water Well	1723 Beech Street	Alexandria	31.293675	-92.453202	N/A	1982	N/A
XX	Well # R-1209	Water Well	N/A	N/A	31.125985	-92.661317	N/A	1986	N/A
XX	Well # R-1210	Water Well	N/A	N/A	31.141441	-92.619148	N/A	1982	N/A
XX	Well # R-1292 & R-1432	Water Wells	N/A	N/A	31.141743	-92.58452	N/A	1982 & 1997	N/A
XX	Well # R-1329	Water Well	7211 Beagle Culb Road	Alexandria	31.337033	-92.553584	N/A	1989	N/A
XX	Well # R-1343 & R-1356	Water Wells	7880 Hwy 28 West	Alexandria	31.296675	-92.537471	N/A	1990	N/A
XX	Well # R-1406	Water Well	2721 Masonic Drive	Alexandria	31.291035	-92.452797	N/A		N/A
XX	Well # R-1430	Water Well			31.126876	-92.643756	N/A	1997	N/A
XX	Well # R-1431	Water Well			31.141441	-92.619148	N/A	1997	N/A
XX	Well # R-1357	Water Well	2722 Jones Avenue	Alexandria	31.291483	-92.436089	N/A	1991	N/A
XX	Well # R-1475	Water Well			31.126876	-92.643756	N/A	2000	N/A
XX	Well # R-1542	Water Well	10 Harold Miles Road	Alexandria	31.346922	-92.535669	N/A	2013	N/A
XX	Well # R-1543	Water Well	4726 Sterkx Road	Alexandria	31.270304	-92.45171	N/A	2013	N/A
XX	Well # R-1566	Water Well	2909 N Bolton Avenue	Alexandria	31.327688	-92.481072	N/A	2014	N/A
XX	Alexandria #1	Gas Gate Station	Casson & Main	Alexandria	31.308353	-92.43931	N/A	N/A	N/A
XX	Alexandria #2	Gas Gate Station	Willow Glen & 15th	Alexandria	31.284661	-92.428586	N/A	N/A	N/A
XX	Alexandria #3	Gas Gate Station	New York & Elaine	Alexandria	31.254618	-92.434649	N/A	N/A	N/A
XX	Alexandria #4	Gas Gate Station	New York & Broadway	Alexandria	31.284607	-92.440688	N/A	N/A	N/A
XX	Alexandria #5	Gas Gate Station	Twin Bridges Road	Alexandria	31.25677	-92.528021	N/A	N/A	N/A
Ball									
X	Ball Town Hall	Administration, Police Department, Fire Station	100 Municipal Lane	Ball	N/A	N/A	N/A	N/A	N/A
X	Ball Community Center	Emergency Shelter	100 Municipal Lane	Ball	N/A	N/A	N/A	N/A	N/A
X	Ball Sewer Treatment Plant	Sewer System	115 Gayle Lane	Ball	N/A	N/A	N/A	N/A	N/A
X	Ball Public Works Department	Street, sanitation, and sewer administration	115 Gayle Lane	Ball	N/A	N/A	N/A	N/A	N/A
X	Public Works Maintenance Depot	Equipment maintenance	115 Gayle Lane	Ball	N/A	N/A	N/A	N/A	N/A

	Harmony Civic Center	Public gathering	121 Camp Livingston Rd	Ball	N/A	N/A	N/A	N/A	N/A
X	Evie Morrow Fire Training Facility	Volunteer Fire department Training	5502 Pinebrook Trace	Ball	N/A	N/A	N/A	N/A	N/A
X	Pinebrook Fire Station	Fire Station	5508 Pinebrook Trace	Ball	N/A	N/A	N/A	N/A	N/A
X	SEWER SYSTEM LIFT STATIONS	Lift Station	163 TALL TIMBERS LN	Ball	N/A	N/A	N/A	N/A	N/A
X	SEWER SYSTEM LIFT STATIONS	Lift Station	6404 SPRINGHILL RD	Ball	N/A	N/A	N/A	N/A	N/A
X	SEWER SYSTEM LIFT STATIONS	Lift Station	520 HWY 1204	Ball	N/A	N/A	N/A	N/A	N/A
X	SEWER SYSTEM LIFT STATIONS	Lift Station	7006 HWY 165 (HAMMACK LN)	Ball	N/A	N/A	N/A	N/A	N/A
X	SEWER SYSTEM LIFT STATIONS	Lift Station	6 BENTON RD	Ball	N/A	N/A	N/A	N/A	N/A
X	SEWER SYSTEM LIFT STATIONS	Lift Station	50 BURMA ROAD (SMITH RD.)	Ball	N/A	N/A	N/A	N/A	N/A
X	SEWER SYSTEM LIFT STATIONS	Lift Station	112 MYLEE DR	Ball	N/A	N/A	N/A	N/A	N/A
X	SEWER SYSTEM LIFT STATIONS	Lift Station	1101 HONEYSUCKLE LANE (BURMA RD)	Ball	N/A	N/A	N/A	N/A	N/A
X	SEWER SYSTEM LIFT STATIONS	Lift Station	410 DANIELS RD	Ball	N/A	N/A	N/A	N/A	N/A
X	SEWER SYSTEM LIFT STATIONS	Lift Station	201 CAMP LIVINGSTON RD	Ball	N/A	N/A	N/A	N/A	N/A
X	SEWER SYSTEM LIFT STATIONS	Lift Station	12 KLINES RD	Ball	N/A	N/A	N/A	N/A	N/A
X	SEWER SYSTEM LIFT STATIONS	Lift Station	127 MICHELL DR	Ball	N/A	N/A	N/A	N/A	N/A
X	SEWER SYSTEM LIFT STATIONS	Lift Station	6038 MOORE DR.	Ball	N/A	N/A	N/A	N/A	N/A
X	SEWER SYSTEM LIFT STATIONS	Lift Station	181 BEESON DRIVE	Ball	N/A	N/A	N/A	N/A	N/A
X	SEWER SYSTEM LIFT STATIONS	Lift Station	5926 WANDA TRL LOT 16	Ball	N/A	N/A	N/A	N/A	N/A
X	SEWER SYSTEM LIFT STATIONS	Lift Station	352 SHANGHAI ROAD	Ball	N/A	N/A	N/A	N/A	N/A
X	SEWER SYSTEM LIFT STATIONS	Lift Station	119 POWELL DRIVE (Covington)	Ball	N/A	N/A	N/A	N/A	N/A

X	SEWER SYSTEM LIFT STATIONS	Lift Station	970 PARADISE RD	Ball	N/A	N/A	N/A	N/A	N/A
X	SEWER SYSTEM LIFT STATIONS	Lift Station	HWY 165 AT LUCKY WHEELS	Ball	N/A	N/A	N/A	N/A	N/A
X	SEWER SYSTEM LIFT STATIONS	Lift Station	26 PINEBROOK TRACE	Ball	N/A	N/A	N/A	N/A	N/A
X	SEWER SYSTEM LIFT STATIONS	Lift Station	HWY 165 AT RED RIVER BANK	Ball	N/A	N/A	N/A	N/A	N/A
X	SEWER SYSTEM LIFT STATIONS	Lift Station	ROBERTSON ROAD-LIVE OAK SUB.	Ball	N/A	N/A	N/A	N/A	N/A
X	SEWER SYSTEM LIFT STATIONS	Lift Station	WARD 10	Ball	N/A	N/A	N/A	N/A	N/A
X	SEWER SYSTEM LIFT STATIONS	Lift Station	4304 YORK STREET	Ball	N/A	N/A	N/A	N/A	N/A
X	SEWER SYSTEM LIFT STATIONS	Lift Station	21 WILFORD ROAD	Ball	N/A	N/A	N/A	N/A	N/A
X	SEWER SYSTEM LIFT STATIONS	Lift Station	HWY 165/GAYVEN DRIVE	Ball	N/A	N/A	N/A	N/A	N/A
X	SEWER SYSTEM LIFT STATIONS	Lift Station	POWELL DR/TIMBERVIEW APTS.	Ball	N/A	N/A	N/A	N/A	N/A
X	SEWER SYSTEM LIFT STATIONS	Lift Station	SINGER DRIVE (6/29/10)	Ball	N/A	N/A	N/A	N/A	N/A
X	SEWER SYSTEM LIFT STATIONS	Lift Station	57 BURMA ROAD	Ball	N/A	N/A	N/A	N/A	N/A
X	SEWER SYSTEM LIFT STATIONS	Lift Station	7 BURMA ROAD (WEST)	Ball	N/A	N/A	N/A	N/A	N/A
X	SEWER SYSTEM LIFT STATIONS	Lift Station	9 DOGWOOD CT	Ball	N/A	N/A	N/A	N/A	N/A
X	SEWER SYSTEM LIFT STATIONS	Lift Station	10 EVERGREEN CT	Ball	N/A	N/A	N/A	N/A	N/A
X	SEWER SYSTEM LIFT STATIONS	Lift Station	1157 HONEYSUCKLE RD	Ball	N/A	N/A	N/A	N/A	N/A
X	SEWER SYSTEM LIFT STATIONS	Lift Station	927 HWY 1204 (Campbell Dr)	Ball	N/A	N/A	N/A	N/A	N/A
X	SEWER SYSTEM LIFT STATIONS	Lift Station	216 JUNE ST.	Ball	N/A	N/A	N/A	N/A	N/A
X	SEWER SYSTEM LIFT STATIONS	Lift Station	5705 SHELTON DRIVE	Ball	N/A	N/A	N/A	N/A	N/A
X	SEWER SYSTEM LIFT STATIONS	Lift Station	8 CALLIE STREET	Ball	N/A	N/A	N/A	N/A	N/A
X	SEWER SYSTEM LIFT STATIONS	Lift Station	606 SHANGHAI ROAD (BUD'S COURT)	Ball	N/A	N/A	N/A	N/A	N/A

X	TOWN HALL	MUNICIPAL COMPLEX	4300 HWY 112	FOREST HILL	N/A	N/A	100,000	PRE 1970	Concrete
	PAVILIAN	RECREATION	4300 HWY 112	FOREST HILL	N/A	N/A	75,000	2013	Metal
	PARK BATHROOM	RECREATION	138 BLUE LAKE ROAD	FOREST HILL	N/A	N/A	50,000	2007	Metal
	LARGE PARK PAVILLIAN	RECREATION	138 BLUE LAKE ROAD	FOREST HILL	N/A	N/A	50,000	2007	Metal
	SMALL PARK PAVILLIAN	RECREATION	138 BLUE LAKE ROAD	FOREST HILL	N/A	N/A	35,000	2007	Metal
	MUNICIPAL COMPLEX GYM	ASSEMBLY	138 BLUE LAKE ROAD	FOREST HILL	N/A	N/A	200,000	1972	Metal
X	MUNICIPAL COMPLEX CENTER	SENIOR CENTER & MAINTENANCE SHOP	138 BLUE LAKE ROAD	FOREST HILL	N/A	N/A	350,000	1972	Metal
	WATER TOWER SHED	EQUIPMENT & STORAGE	4300 HWY 112	FOREST HILL	N/A	N/A	15,000	PRE 1970	Concrete
	POLICE PARKING	EQUIPMENT & STORAGE	4300 HWY 112	FOREST HILL	N/A	N/A	15,000	1972	Metal
	STORAGE BUILDING	STORAGE & EQUIPMENT	HWY 497	FOREST HILL	N/A	N/A	25,000	PRE 1970	Wood
	WATER TOWER SHED	EQUIPMENT & STORAGE	HWY 112	FOREST HILL	N/A	N/A	15,000	PRE 1970	Concrete
Glenmora									
X	Glenmora Town Hall	Town Hall, Operations Center/Command Center	1000 7th Ave	Glenmora	N/A	N/A	80,000	1958	Unreinforced Masonry
X	Glenmora Community Center	EOC, Evacuation Center	718 8th Street	Glenmora	N/A	N/A	812,000	2000	Unreinforced Masonry
X	Glenmora Fire Station	Fire Station, Secondary Command Center	817 10th Ave	Glenmora	N/A	N/A	95,000	1978	Unreinforced Masonry
X	Glenmora Fire Station #2	Fire Station	1103 6th Ave	Glenmora	N/A	N/A	50,000	1990	Metal
X	Glenmora Maintenance Building	Equipment operations	1000 Turkey Creek Road	Glenmora	N/A	N/A	150,000	2000	Metal
X	Glenmora Water Tower	Water supply for Town	726 7th Street	Glenmora	N/A	N/A	500,000	1978	Steel
X	Glenmora Waster Water Treatment	Sewer Treatment for Town	Turkey Creek Road	Glenmora	30.973862	92.565223	500,000.00	1999	Concrete

Lecompte									
x	Lecompte Town Hall	City Administrative Office	1302 Weems Ave	Lecompte	N/A	N/A	N/A	N/A	N/A
X	Lecompte Police Station	Holds Administrative and Force for Lecompte PD	1103 Wall St (Hwy 112)	Lecompte	N/A	N/A	N/A	N/A	N/A
x	Lecompte Fire Department	Holds Fire Truck, Rescue Vehicle, associated equipment	1305 Wall St (Hwy 112)	Lecompte	N/A	N/A	N/A	N/A	N/A
	Lecompte High School (old)	Houses Rapides Parish Library-Johnson Branch, Museum, Community Room; Senior Citizens Program, etc	2204 St. Charles St	Lecompte	N/A	N/A	N/A	N/A	N/A
				Lecompte	N/A	N/A	N/A	N/A	N/A
	Lecompte Youth Gym	Houses the Youth Program	Canal St	Lecompte	N/A	N/A	N/A	N/A	N/A
	Lecompte Holly Street Park	Covered Pavilion and Restrooms	Dead end of Holly St	Lecompte	N/A	N/A	N/A	N/A	N/A
x	Pump Station	N/A	1717 Hwy 71S	Lecompte	N/A	N/A	N/A	N/A	N/A
x	Pump Station at Sugar Street	N/A	Sugar St	Lecompte	N/A	N/A	N/A	N/A	N/A
x	Pump Station at Hwy 112	N/A	Hwy 112	Lecompte	N/A	N/A	N/A	N/A	N/A
x	Pump Station - Hardy St	N/A	2905 Hardyst	Lecompte	N/A	N/A	N/A	N/A	N/A
x	Pump Station - Hardy St	N/A	1707 Hardy St	Lecompte	N/A	N/A	N/A	N/A	N/A
x	Lift Station at Hwy 112	N/A	Hwy 112	Lecompte	N/A	N/A	N/A	N/A	N/A
x	Sewer Station	N/A	Hwy 457	Lecompte	N/A	N/A	N/A	N/A	N/A
McNary									
X	Town Hall	Conduct Business of the Village of McNary	52 West Cady	McNary	N/A	N/A	N/A	N/A	N/A
Pineville									
X	MARTIN PUBLIC LIBRARY	PUBLIC LIBRARY	802 W. SHAMROCK	PINEVILLE	N/A	N/A	230,580	1950	Concrete
X	PINEVILL CITY GARAGE	REPAIR CITY VEHICLES	405 SANDERS	PINEVILLE	N/A	N/A	324,938	1930	Concrete

X	CITY HALL	CITY HALL, MAYORS OFFICE, ADMIN OFFICE, POLICE DEPT	910 MAIN STREET	PINEVILLE	N/A	N/A	1,534,195	1974	Concrete
X	PINEVILLE KEES PARK	COMMUNITY CENTER	2450 HIGHWAY 28 EAST	PINEVILLE	N/A	N/A	443,976	1973	Concrete
X	BATH HOUSE	PUBLIC RESTROOMS	2450 HIGHWAY 28 EAST	PINEVILLE	N/A	N/A	118,102	2001	Concrete
X	CENTRAL FIRE STATION	FIRE HOUSE, TRUCK, EMT'S VEHICLES	909 COLLEGE STREET	PINEVILLE	N/A	N/A	213,897	1974	Concrete
X	CITY MUSEUM	PUBLIC MUSEUM	729 MAIN STREET	PINEVILLE	N/A	N/A	329,662	1976	Concrete
X	PINEVILLE ANIMAL SHELTER	STRAY ANIMALS	1700 JEFFERSON	PINEVILLE	N/A	N/A	157,215	1983	Concrete
X	PINEVILLE PUBLIC WORKS	PUBLIC WORKS ADMINISTRATIVE OFFICES	402 SANDERS STREET	PINEVILLE	N/A	N/A	62,700	2000	Concrete
X	PUMP HOUSE	TO PUMP WATER THRU CITY	405 SANDERS STREET	PINEVILLE	N/A	N/A	15,750	2000	Metal
X	FIRE STATION	FIRE HOUSE, TRUCK, EMT'S VEHICLES	1055 SUSEK DRIVE	PINEVILLE	N/A	N/A	112,840	1988	Concrete
X	PINEVILLE CITY COURT	CITY COURT/OFFICES	906 MAIN STREET	PINEVILLE	N/A	N/A	344,840	1991	Concrete
X	PINEVILLE SENIOR CITIZEN	OFFICES FOR SENIOR CITIZENS	801 MAIN STREET	PINEVILLE	N/A	N/A	379,910	1992	Concrete
X	PINEVILLE COMMUNITY CENTER	COMMUNITY CENTER	708 MAIN STREET	PINEVILLE	N/A	N/A	62,374	1996	Concrete
x	PINEVILLE UTILITY STORAGE	UTILITY WAREHOUSE/STORAGE BUILDING	300 HICKORY	PINEVILLE	N/A	N/A	100,050	1980	Concrete
X	PINEVILLE SEWER	SEWER TREATMENT PLANT	390 A HILCREST	PINEVILLE	N/A	N/A	35,240	1971	Metal
X	RECREATION	PAVILLION	317 A JONES STREET	PINEVILLE	N/A	N/A	236,250	1986	Metal
X	PINEVILLE REPAIR SHOP	PAINT & BODY SHOP	405 SANDERS STREET	PINEVILLE	N/A	N/A	31,500	2005	Metal
X	PINEVILLE TANK	WATER TANK ON GROUND	1059A SUSEK DRIVE	PINEVILLE	N/A	N/A	52,500	1983	Concrete
X	STATION	WATER PUMPING STATION	1059D SUSEK DRIVE	PINEVILLE	N/A	N/A	53,500	1990	Concrete

X	TREATMENT	WATER TREATMENT PLANT	390E HILLCREST	PINEVILLE	N/A	N/A	26,000	1969	Metal
X	TREATMENT	WATER TREATMENT PLANT	390F HILLCREST	PINEVILLE	N/A	N/A	26,000	1965	Metal
X	PINEVILLE GALLERY	ART QUEST/GALLERY	117 REGAN STREET	PINEVILLE	N/A	N/A	67,150	1998	Wood
X	PINEVILLE AIRPORT	HANGER	200 AIRPORT ROAD	PINEVILLE	N/A	N/A	860,553	1988	Metal
X	PINEVILLE TANK	ELEVATED WATER TANK	301 EXPRESSWAY DRIVE	PINEVILLE	N/A	N/A	52,500	1999	Concrete
X	LIFT STATION	SEWER LIFT STATION	600 GREER STREET	PINEVILLE	N/A	N/A	21,000	1969	Concrete
X	PINEVILLE DMV	MOTOR VEHICLE OFFICE	831A MAIN STREET	PINEVILLE	N/A	N/A	471,450	2000	Concrete
X	PINEVILLE BOILER	CITY HALL BOILER HOUSE	910 A MAIN STREET	PINEVILLE	N/A	N/A	73,500	1974	Concrete
X	PINEVILLE PUMPS	CITY GAS PUMPS	402 E SANDERS	PINEVILLE	N/A	N/A	10,500	1996	Metal
X	CONTROL HOUSE	ELECTRICK CONTROL HOUSE	390 B HILCREST STREET	PINEVILLE	N/A	N/A	21,000	1970	Concrete
X	CLUB HOUSE	BOYS & GIRLS CLUB HOUSE	2480 HIGHWAY 28 EAST	PINEVILLE	N/A	N/A	173,000	1984	Concrete
X	DETECTIVE HOUSE	DETECTIVE BUILDING	115 REGAIN STREET	PINEVILLE	N/A	N/A	118,000	2004	Wood
X	PLANT	SEWER PLANT	390 HILLCREST	PINEVILLE	N/A	N/A	537,340	2007	Concrete
X	FIRE STATION	FIRE HOUSE, TRUCK, EMT'S VEHICLES	4127 HIGHWAY 28 EAST	PINEVILLE	N/A	N/A	1,015,000	2010	Concrete
X	TUDOR CENTER	COMMUNITY CENTER	344 BRAGG STREET	PINEVILLE	N/A	N/A	821,645	2010	Wood
X	PINEVILLE FIRE HOUSE	FIRE ADMINISTRATION BUILDING	908 COLLEGE DRIVE	PINEVILLE	N/A	N/A	60,500	2012	Wood
Woodworth									
X	Woodworth Municipal Complex	Town Hall/Police Department	9363 Hwy. 165 South	Woodworth	31.149004	-92.496772	\$ 2,400,000.00	2011	Reinforced Masonry
X	J.D. Glass Memorial Fire Station	Woodworth Fire Station #1	9059 Hwy. 165 South	Woodworth	31.174935	-92.503998	\$ 1,000,000.00	2001	Reinforced Masonry
X	Richard A. Butler Memorial Fire Station	Woodworth Fire Station #2	764 Robinson Bridge Rd.	Woodworth	31.148045	-92.486792	\$ 800,000.00	2014	Reinforced Masonry

X	J.W. McDonald Community Center	Community Center/Town Activities/Evacuation Center for Town	878 Robinson Bridge Rd.	Woodworth	31.147009	-92.494705	\$ 750,000.00	1998	Reinforced Masonry
X	Town of Woodworth Maintenance Compound	Vehicle Maintenance/Town Water System/Town Fuel Depot	27 Castor Plunge Rd.	Woodworth	31.147552	-92.499007	\$ 200,000.00	1995	Steel
X	Town of Woodworth Sewer Treatment Plant	Sewer Treatment Facility	Hwy. 165 South/Brookwood Dr.	Woodworth	31.156648	-92.500803	\$ 1,000,000.00	2004	Reinforced Masonry
	Town of Woodworth Utility Work Center	Utility Equipment/Parts Compound	Lamonthe Ln./Hwy. 165 South	Woodworth	31.147853	-92.496473	\$ 175,000.00	1989	Steel
	U.S. Post Office	Town of Woodworth Owned/ U.S. Post Office	28 Castor Plunge Rd.	Woodworth	31.147773	-92.498574	\$ 800,000.00	2009	Reinforced Masonry
	J.W. Davidson Memorial Park	Town Recreational Complex	84 Dan Triplett	Woodworth	31.152639	-92.505281	\$ 1,500,000.00	1991	Steel
X	Water Pump Station #1	Fresh Water Pump Station	300 Castor Plunge Rd.	Woodworth	31.154777	-92.522749	N/A	N/A	N/A
X	Water Pump Station #2	Fresh Water Pump Station	9500 Hwy. 165 South	Woodworth	31.137072	-92.499122	N/A	N/A	N/A
	Sewer Pump Station #1	Sewer Pump Lift Station	300 N. Spring Dr.	Woodworth	31.563362	-92.502448	N/A	N/A	N/A
	Sewer Pump Station #3	Sewer Pump Lift Station	N. Lake Drive	Woodworth	31.199209	-92.513293	N/A	N/A	N/A
	Sewer Pump Station #4	Sewer Pump Lift Station	1000 Rambleview	Woodworth	31.17806	-92.498500	N/A	N/A	N/A
	Sewer Pump Station #9	Sewer Pump Lift Station	1100 Lake Drive	Woodworth	31.192699	-92.514188	N/A	N/A	N/A
	Sewer Pump Station #11	Sewer Pump Lift Station	1300 Lake Drive	Woodworth	31.185113	-92.513276	N/A	N/A	N/A
	Sewer Pump Station #12	Sewer Pump Lift Station	1000 Hidden Ridge	Woodworth	31.206189	-92.499781	N/A	N/A	N/A
	Sewer Pump Station #13	Sewer Pump Lift Station	2300 Methodist Parkway	Woodworth	31.170294	-92.492841	N/A	N/A	N/A
	Sewer Pump Station	Sewer Pump Lift Station	1380 Lake Drive	Woodworth	31.185276	-92.521264	N/A	N/A	N/A

	Sewer Pump Station	Sewer Pump Lift Station	8906 Hwy. 165 South	Woodworth	31.181313	-92.507906	N/A	N/A	N/A
	Sewer Pump Station	Sewer Pump Lift Station	3000 Wesley Circle	Woodworth	31.171598	-92.498333	N/A	N/A	N/A
	Gas Regulator Station #3	Natural Gas Regulator Station	700 Robinson Bridge Rd.	Woodworth	31.150326	-92.481620	N/A	N/A	N/A
	Gas Regulator Station	Natural Gas Regulator Station	800 Hwy. 470	LeCompte	31.139775	-92.423305	N/A	N/A	N/A
	Gas Regulator Station	Natural Gas Regulator Station	400 Chickamaw Rd.	LeCompte	31.123214	-92.438279	N/A	N/A	N/A
	Gas Main Reducing Station	Natural Gas Reducing Station	900 Hwy. 470	LeCompte	31.134793	-92.414492	N/A	N/A	N/A

Vulnerable Populations

Vulnerable Populations Worksheet

Rapides Parish

Name	Street	City	Zip Code	Latitude	Longitude
All Hospitals (Private or Public)					
Veteran Affairs Medical Center	2495 Shreveport Hwy 71 North	Pineville	71360		
Christus St. Frances Cabrini Hospital	3330 Masonic Drive	Alexandria	71301	31.283169	-92.461936
Central LA Surgical Hospital	651 North Bolton Avenue	Alexandria	71301	31.313822	-92.467881
Compass Behavioral Center of Alexandria	6410 Masonic Drive	Alexandria	71301	31.252254	-92.482018
Dubuis Hospital of Alexandria	3330 Masonic Drive	Alexandria	71301	31.283169	-92.461936
Health South Rehabilitation of Alexandria	104 North 3rd Street	Alexandria	71301	31.317553	-92.452206
Longleaf Hospital	44 Versailles	Alexandria	71303	31.291902	-92.504863
Oceans Behavioral Hospital	2621 Bolton Avenue	Alexandria	71301	31.323844	-92.479684
Rapides Regional Medical Center	211 4th Street	Alexandria	71301	31.315054	-92.449875
Riverside Hospital of Louisiana	211 4th Street	Alexandria	71301	31.315054	-92.449875
Chenvert Family Clinic	501 Front St	Cheneyville	71325	N/A	N/A
Rapides Regional Physician Group Primary Care	1610 Water ST	Lecompte	71346	N/A	N/A
Red River Academy LLC	2810 Hwy 71 S	Lecompte	71346	N/A	N/A
Community Homes					
Adam's Community Home	1214 Presidents Drive	Alexandria	71301	31.324907	-92.48385
Bouef Trace Community Home	6465 Bouef Trace	Alexandria	71301	31.250559	-92.484422
Buchanan Community Home	1292 Presidents Drive	Alexandria	71301	31.322207	-92.485054
Charles P Greco Community Home	6721 Highway 1 North	Alexandria	71306	31.347382	-92.5468
Cleveland Community Home	5621 Hera Street	Alexandria	71301	31.270013	-92.493332
Evergreen Prescott Road Community Home	3705 Prescott Road	Alexandria	71301	31.278277	-92.467591

Fillmore Community Home	1155 Presidents Drive	Alexandria	71301	31.324766	-92.483933
Friendship House Adult Day Care	114 6th Street	Alexandria	71301	31.314084	-92.45233
Fulton Road Community	3207 Madonna Drive	Alexandria	71301	31.29477	-92.47398
Garfield Community Home	1263 Enterprise Road	Alexandria	71301	31.321311	-92.468469
Grant Community Home	1212 Wilshire Drive	Alexandria	71303	31.28877	-92.47829
Greco Community Home	444 Brown's Bend Road	Alexandria	71301	31.313715	-92.495044
Harding Community Home	520 Westwind Drive	Alexandria	71303	31.29878	-92.517686
Harrison Group Home	5708 North Drive	Alexandria	71301	31.26034	-92.46591
Hayes Community Home	3811 Lisa Street	Alexandria	71301	31.251671	-92.453971
Heyman Lane Community Home	307 Heyman Lane	Alexandria	71301	31.295898	-92.486019
Hope House	5115 South MacArthur Drive	Alexandria	71302	31.25475	-92.43945
Jefferson Community Home	1109 Presidents Drive	Alexandria	71303	31.325126	-92.483721
John Tyler Community Home	3906 Briarwood Boulevard	Alexandria	71303	31.29548	-92.485814
Johnson Community Home	1103 Lancaster Drive	Alexandria	71303	31.290266	-92.479457
Madison Community Home	1315 Presidents Drive	Alexandria	71315	31.322798	-92.485096
McKinley Community Home	6500 Masonic Drive	Alexandria	71301	31.2509	-92.482672
Monroe Community Home	3902 Jennifer	Alexandria	71301	31.250357	-92.453567
Peach Community Home	528 Bobwhite	Alexandria	71303	31.278129	-92.49204
Pediatric Health Choice	5505 Jackson Street	Alexandria	71303	31.269914	-92.485359
Pierce Community Home	1269 Presidents Drive	Alexandria	71301	31.32328	-92.484751
Precious Beginnings Academy	3908 South MacArthur Drive	Alexandria	71302	31.260994	-92.448972
Rapides Association for Retarded Citizens	1700 Ashley Street	Alexandria	71301	31.312713	-92.461737
Rapides PDHC	1707 Metro Drive, Suite B	Alexandria	71301	31.276035	-92.473758
Renzi Community Home	347 Brown's Bend Road	Alexandria	71303	31.307701	-92.494444
Roosevelt Community Home	1605 Texas Avenue	Alexandria	71301	31.28683	-92.4678
Ross Day Care Center	8 Ross Lane	Alexandria	71303	31.295309	-92.54437
Saint James Episcopal Day School	1620 Murray Street	Alexandria	71301	31.30412	-92.4533
Sharon Smith Home	401 Windermere Boulevard	Alexandria	71303	31.28863	-92.48969
Summerwood Head Start	2913 Summerwood Lane	Alexandria	71303	31.315217	-92.480633

Taft Community Home	4314 Whitefield	Alexandria	71301	31.283964	-92.486802
Taylor Community Home	5635 Navaho Trail	Alexandria	71303	31.267089	-92.481043
The Grace House	2807 Levin Street	Alexandria	71301	31.30347	-92.47241
The Ponderosa Community Home	830 McKeithen Drive	Alexandria	71303	31.278273	-92.537695
Transitional Family Life Center	5400 Coliseum Boulevard	Alexandria	71303	31.296348	-92.497265
Van Buren Community Home	508 Heyman Lane	Alexandria	71303	31.291753	-92.484818
Verni Community Home	347 Browns Bend Road	Alexandria	71303	31.307701	-92.494444
Washington Community Home	1008 Presidents Drive	Alexandria	71303	31.32535	-92.483481
We Care Residential Services	1404 5th Street	Alexandria	71301	31.30801	-92.44351
Westside Habilitation	2987 North Bolton	Alexandria	71303	31.327342	-92.482657
Windermere Group Home	404 Windermere Boulevard	Alexandria	71303	31.28731	-92.49086
Windsor Head Start	1225 Windsor Place	Alexandria	71303	31.281202	-92.481558
Nursing Homes (Private or Public)					
Tioga Community Care Center	5201 Shreveport Hwy	Pineville	71360	N/A	N/A
St Christina	122 Hillsdale Drive	Pineville	71360	N/A	N/A
Jude Community Home	2560 Hickory Hill Road	Pineville	71360	N/A	N/A
Brookdale Alexandria	351 Windermere Blvd	Alexandria	71303	31.291526	-92.490099
Canterbury House	1101 16th Street	Alexandria	71301	31.304348	-92.451922
Lexington House	16 Heyman Lane	Alexandria	71303	31.300504	-92.489233
Marigold House	5723 Jackson Street	Alexandria	71303	31.266678	-92.486803
Matthews Memorial Health Care	5100 Jackson Street	Alexandria	71303	31.273747	-92.484031
Naomi Heights Nursing Home	2421 East Texas Avenue	Alexandria	71301	31.283208	-92.458875
Regency House	5131 Masonic Drive	Alexandria	71301	31.268079	-92.470347
The Summit	2200 Memorial Drive	Alexandria	71301	31.287634	-92.458506
West Side Rehabilitation Center (Group Home)	300 Third St	Cheneyville	71325	N/A	N/A
Oak Wood Apartments (Retirement Center)	101 McNutt St	Cheneyville	71325	N/A	N/A
West Side Rehabilitation Center (Group Home)	502 Boyd St	Cheneyville	71325	N/A	N/A
Glenmora Senior Apartments	12550 Hwy 165	Glenmora	71433	N/A	N/A

National Flood Insurance Program (NFIP)

Rapides Parish

ELEMENT F: STATE REQUIREMENT

National Flood Insurance Program (NFIP)

Jurisdiction: Rapides
Unincorporated

	Rapides Parish	Alexandria	Ball	Boyce	Cheneyville	Forest Hill	Glenmora	Lecompte	McNary	Pineville	Woodworth
Insurance Summary											
How many NFIP policies are in the community? What is the total premium and coverage?	1,353 Policies, \$853,864 Total Premium, \$251,727,800 Total Coverage	1,850 Policies, \$1,385,460 Total Premium, \$397,780,400 Total Coverage	26 Policies, \$15,738 Total Premium, \$4,421,200 Total Coverage	3 Policies, \$1,650 Total Premium, \$820,000 Total Coverage	6 Policies, \$1,816 Total Premium, \$246,000 Total Coverage	None	3 Policies, \$834 Total Premium, \$121,400 Total Coverage	39 Policies, \$28,647 Total Premium, \$5,195,500 Total Coverage	1 Policy, \$317 Total Premium, \$210,000 Total Coverage	149 Policies, \$110,712 Total Premium, \$25,970,800 Total Coverage	35 Policies, \$33,541 Total Premium, \$5,613,600 Total 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?	1,236 Claims, \$12,459,546	1,083 Claims, \$17,048, No Known Substantial Damage Claims	None	3 Claims, \$15,800	5 Claims, \$37,686.35, 1 Substantial Damage	None	6 Claims, \$37,673	19 Claims, \$724,245, 1 Substantial Damage	None	205 Claims, \$2,393,460	22 Claims, \$796,049
How many structures are exposed to flood risk with in the community?	Approximately 5,093	Approximately 3,500	Unknown	Unknown	Unknown	None	Approximately 58	Unknown	Unknown	Approximately 688	Approximately 89
Describe any areas of flood risk with limited NFIP policy coverage.	None Known	None Known	None Known	None Known	None Known	None Known	None Known	None Known	None Known	None Known	None Known
Staff Resources											
Is the Community FPA or NFIP Coordinator certified?	Yes	Yes	Unknown	No	Unknown	No	No	No	No	Yes	Yes
Is flood plain management an auxiliary function?	No	Yes	Unknown	Yes	Unknown	Yes	Yes	No	No	No	Yes
Provide an explanation of NFIP administration services (e.g., permit review, GIS, education or outreach, inspections, engineering capability)	Review & Issue Permits, Utilize FIS Study & Profile Data, Coordinate with Surveyors, Lendors, Realtors, Map Addresses on GIS, Inspect to Building Code. Parish Engineer.	Provide Assistance to the Public for Questions Concerning Flooding, LOMA's, LOMR-F, Elevation Certificates & Review All Building Permits for Compliance	Unknown	Glenn Aaron, Superintendent of Utilities, is the Floodplain Manager. He is not certified. Inspections provided by RAPC, contracts with Pan American for engineering services.	Unknown	Issue Permit	Permits applications reviewed by the town. Contracted with RAPC for building permit, inspection services and GIS. Engineering services are contracted with	No	N/A	Review & Issue Permits, Utilize FIS Study & Profile Data, Coordinate with Surveyors, Lendors, Realtors, Map Addresses on GIS, Inspect to Building Code. Engineering by Pan American	Review & Issue Permits, Utilize FIS Study & Profile Data, Coordinate with Surveyors, Lendors, Realtors, Map Addresses on GIS, Inspect to Building Code. Engineering by Pan American
What are the barriers to running an effective NFIP program in the community, if any?	Old Maps and Unnumbered A Zones with No BFE's Established	No Known Barriers	Limited Staff and Resources	Old Maps, Limited Resources, Limited Staff	Limited Staff and Resources	Resources are Limited	Resources are Limited, Education	Unknown	Funding and Education	Old Maps and Unnumbered A Zones with No BFE's Established	Old Maps and Unnumbered A Zones with No BFE's Established

[illegible]